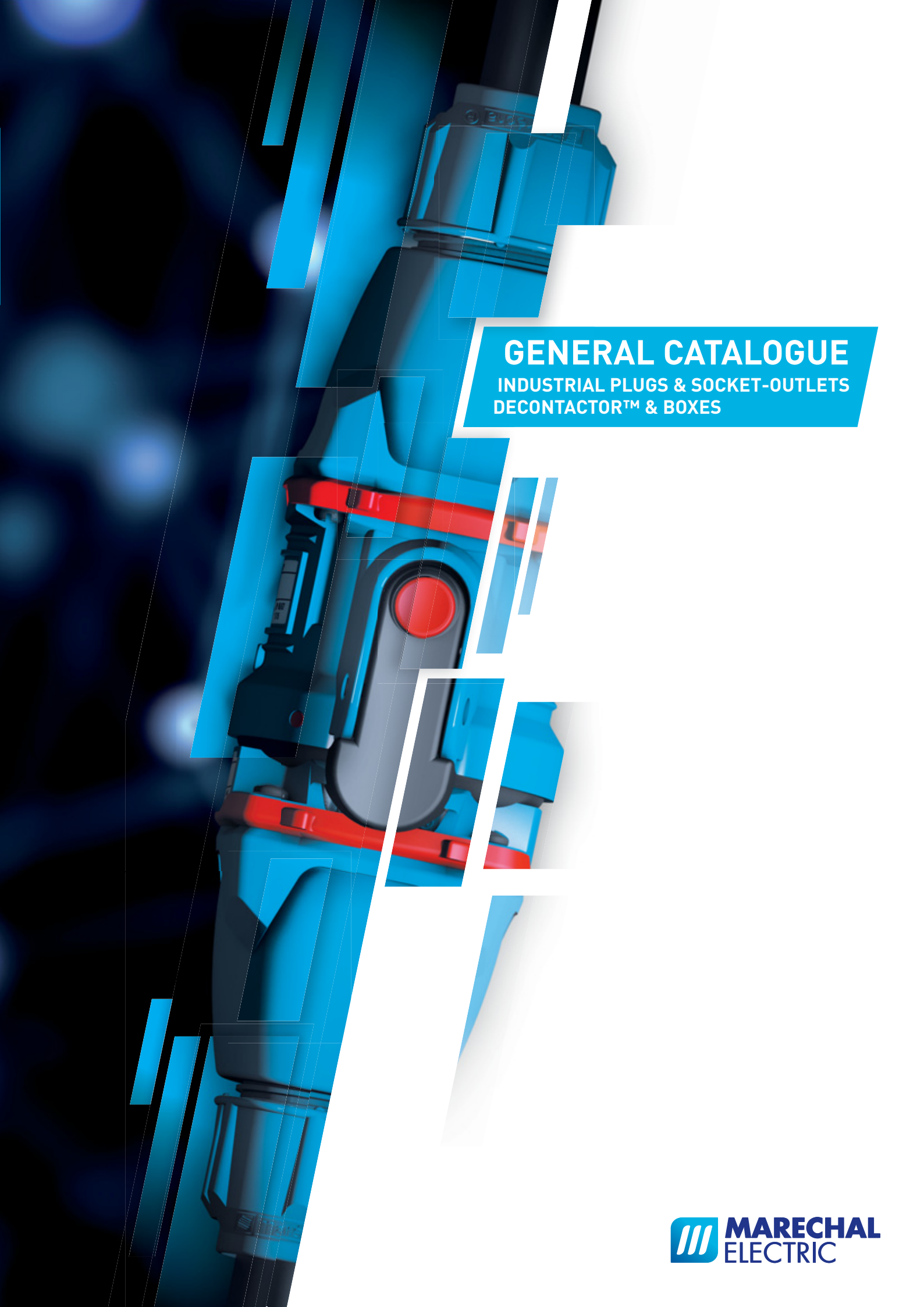




# GENERAL CATALOGUE

INDUSTRIAL PLUGS & SOCKET-OUTLETS  
DECONTACTOR™ & BOXES



More informations page 16

# EVO

The first separable  
switch-disconnector





## EVO, THE FIRST SEPARABLE SWITCH DISCONNECTOR

|       |                                                                                                                                                                                                                                |         |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| EVO40 | EVO40 guarantees breaking and closing under load, and isolating of any low-voltage electrical circuit.<br>Breaking capacity AC-23 (18.5 kW) / AC-3 (11kW).<br>Load breaking capacity up to 40 A Icc: 10 kA.<br>Umax 1000 V AC. | Page 16 |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|

## DECONTACTOR™ = SWITCH + INDUSTRIAL SOCKET-OUTLET

|                                           |                                                                                                                                                                                                                                                                                                                                |         |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| DSN<br>RETTBOX®<br>DS<br>DSHT<br>DN<br>DB | DECONTACTOR™ range = industrial socket with integrated switch.<br>Switching capability AC22/23 or AC2/3.<br>GRP or Metal casing with automatic IP55/66/67/69 dust & liquid tightness.<br>Full load breaking till 250 A Umax 1000 V.<br>Option : padlocking, self-ejection, auxiliary contact.<br>Vibration & Shock resistance. | Page 26 |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|

## MULTICONTACT

|                                |                                     |                                                                                                                                                                                                                                                                 |         |
|--------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| PN7C<br>DN9C<br>PN12C<br>DN20C | DSN12C<br>DSN24C<br>DSN37C<br>DS7C3 | Multipin connector range from 7 to 37 pin.<br>Solid silver-nickel contacts assure superior conductivity and fulfill up to 2000 mating.<br>GRP or Metal casing with automatic IP55/66/67 dust & liquid.<br>Option : padlocking.<br>Vibration & Shock resistance. | Page 82 |
|--------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|

## INDUSTRIAL SOCKET-OUTLET

|                                 |                                                                                                                                                                                                        |         |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| PNC<br>PN<br>PNHT<br>PFQ<br>PFC | Industrial socket outlet range from 16 A to 600 A 1000 V.<br>Temperature range : -40°C to 240°C.<br>Reliable & compact in GRP or Metal casing.<br>Option : padlocking, up to 6 auxiliaries + 2 pilots. | Page 98 |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|

## SINGLE POLE POWER CONNECTOR

|                       |                                                                                                                                                                |          |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| CS2/3<br>CS1000<br>SP | Single-Pole power connectors from 75 A to 700 A-1000 V.<br>High reliability, resistant to strong starting currents.<br>Option : padlocking, auxiliary contact. | Page 124 |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

## CUSTOMIZED SOLUTIONS

|                               |                                                                                                                                                                                                                                          |          |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| BM<br>CD<br>TUNNELS<br>CUSTOM | Distribution, Services & potable boxes with or without MCB, equipped with MARECHAL® connectors or DECONTACTOR™<br>Several type of casing: GRP, metal, stainless steel, rubber, ...<br>On request : cable assembly, electric winder, etc. | Page 142 |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

DECONTACTOR™ = SWITCH + SOCKET-OUTLET/  Zone

|                   |                                                                                                                                                                                                                                                                                                                                                                   |          |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| DXN<br>DXA1<br>DX | Available under ATEX/ IECEx for Zone 1, 2, 21, 22 : DECONTACTOR™ range = socket with integrated switch, switching capability AC22/23.<br>GRP or Metal casing with automatic IP55/66/67 dust & liquid tightness.<br>Full load breaking from 20 A till 200 A Umax 750 V,<br>Option : padlocking, self-ejection, auxiliary contact.<br>Vibration & Shock resistance. | Page 160 |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

MULTICONTACT CONNECTORS/  Zone

|                            |                                                                                                                                                                                                                                                                                                                           |          |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| PXN12C<br>DXN25C<br>DXN37C | Available under ATEX/ IECEx for Zone 1, 2, 21, 22.<br>Multipin connector range from 12 to 37 pin.<br>Solid silver-nickel contacts assure superior conductivity and fulfill up to 2000 mating.<br>Metal casing with automatic IP55/66/67 dust & liquid tightness.<br>Option : padlocking.<br>Vibration & Shock resistance. | Page 188 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

COMPACT CONNECTOR/  Zone

|      |                                                                                                                                                                       |          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| PNCX | Available under ATEX/ IECEx for Zone 1, 2, 21, 22.<br>5 PIN Compact connector 5 A 250 V.<br>Temperature range : -20°C to + 70°C.<br>Reliable & compact in GRP casing. | Page 198 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

SINGLE POLE POWER CONNECTOR/  Zone

|      |                                                                                                                                                                                                              |          |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| SPeX | Available under ATEX/ IECEx for Zone 1, 2, 21, 22.<br>Single-Pole power connectors till 680 A-1000 V.<br>High reliability, resistant to strong starting currents.<br>Option : padlocking, auxiliary contact. | Page 200 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

CUSTOMIZED SOLUTIONS/  Zone

|                                 |                                                                                                                                                                                                                                                                                                            |          |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| MXBS<br>MXBJ<br>B2X<br>TECHNOR® | Available under ATEX/ IECEx for Zone 1, 2, 21, 22.<br>Customized socket distribution, junction or control enclosures.<br>In several type of casing: GRP, aluminium or stainless steel.<br>In several sizes.<br>Technor brand can offer also the full EX lighting solution with fluorescent, LED, HID lamp. | Page 204 |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

## MAIN OPTIONS

- Description of the main products option.
- Introduction to Hazardous areas.
- Accessories correlation table between old and new references.

Page 216



# MARECHAL ELECTRIC GROUP



Founded in 1952, the MARECHAL ELECTRIC group counts among the major players in Low Voltage LT electrical connection systems in industrial environments with or without the presence of an EX explosive atmosphere. With a consolidated turnover of nearly €100 million, its operational and/or sales subsidiaries in Europe, America, Asia, the Middle East, Africa and Australia, offer the best products and local services to the most demanding customers. A workforce of nearly 500 worldwide includes R&D, manufacturing and commercial development skills. The product range is intended for all sectors of industrial activity where safety and endurance are required.

## MARECHAL®

For more than 65 years MARECHAL® has been the brand of low voltage electrical connectors designed, manufactured and controlled in France in strict compliance with the requirements of international standards (IEC and UL). Thanks to the butt-contact technology, the dozens of patents (filed in more than 50 countries) and the choice of the highly advanced materials, MARECHAL® connectors are the most reliable in the world. They guarantee the best safety for users and equipment in accordance with the requirements of the European Low Voltage Directive (LVD no. 2014/35/EU since April 20, 2016).

They are available for non-ATEX or ATEX environments (IECex) Areas 1, 21, 2, 22:

- DECONTACTOR™ = plug + industrial switch (up to 250 A),
- multi-contact sockets (up to 37 contacts),
- industrial connectors (up to 600 A),
- single pole connectors (up to 700 A with pilots),
- socket, distribution, break-out, junction, boxes.

## TECHNOR®

Part of the Marechal Group since 2013, this brand dedicated to ATEX/IECex products has built its reputation over more than 30 years on exceptional product quality. All the products are designed, manufactured and tested in France and Italy.

A wide range of products conforming to the ATEX or/and IECex standards:

- explosion-proof distribution and control boxes,
- explosion-proof cast aluminium, steel, stainless steel or GRP/thermoset resin boxes,
- lighting (luminaires, spot lights with fluorescent or LEDs),
- stainless steel or GRP control and junction units,
- warning/indicator lights,
- earthing systems,

These products comply with European, international (IEC) and North American (UL, CSA) standards and regulations.





## MARKETS & REFERENCES

MARECHAL® and TECHNOR® products are ideal for the most demanding users, installers, integrators (EPC, OEM, etc.). Where **safety, reliability** and **endurance** are required. Each year, our teams provide advice, technical follow-up and design of custom solutions as part of projects or sites in more than 100 countries.

The offer is segmented by areas of activity and by types of site/project: NEW or RENOVATION, industrial or ATEX areas. This is in order to meet the requirements of the multiple and varied configurations of electrical installations: more than 40,000 products references are supplied every year.

In all industrial installations there are critical areas or processes where **reliability, strength** and safety are essential. The main industries using our products are:

- the agri-food industry (safety),
- water treatment (reliability),
- chemicals and refineries (safety and reliability),
- heavy industry (strength),
- construction and building (strength and safety),
- energy (reliability),
- transport and airports (safety and reliability),
- entertainment and medias (safety),
- fire emergency services (safety and reliability),
- mines and quarries (safety and toughness),
- ports, marinas, offshore and shipyards (toughness and safety),
- tunnels (safety),
- towns and infrastructure (safety).

Companies such as Technip, Total, Nestlé, Pepsi, Aramco, Sasol, SNCF, EDF, CEPSA, Actavis, Transnet, Arcelor, Universal Studios, Airbus, Boeing, McDonald's, Rio Tinto and BHP Billiton trust us.

## MEANS

Since its inception, MARECHAL ELECTRIC Group's R&D has filed nearly 100 patent in more than 50 countries. It has a laboratory approved by LCIE (Central Laboratory of Electrical Industries in France) Bureau Veritas for pre-testing and qualification of products. 5% of turnover is invested every year in R&D to create, develop and adapt.

With a total surface area of almost 34,000 m<sup>2</sup>, 9 sites are dedicated to production, assembly, inspection and shipment: France (3), Germany, Italy, Singapore, Australia, South Africa and the United States.

Our sites are certified:

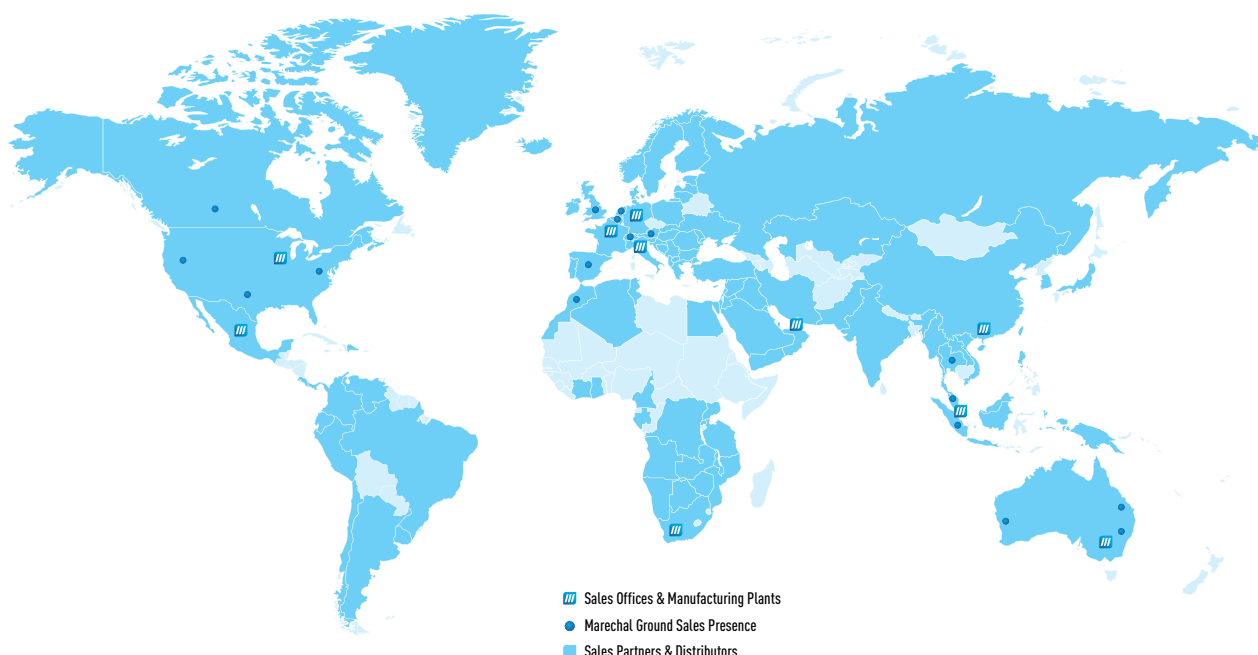
- ISO 9001 (France),
- DIN EN ISO 9001 (Germany),
- UL (QLHN.E145931 for power sockets/plugs and QLIW.E85952 for bases/connectors - United States).

## INVOLVEMENT IN INTERNATIONAL STANDARDS

In its capacity as an expert and recognized participant in the industry at the international level, the MARECHAL ELECTRIC Group actively participates in standardization work by providing the Secretariat for the technical committees SC 23H of the IEC - "Power sockets for industrial uses" and SC 31-2 of the CENELEC - "Explosion-proof "d" casing", as well as chairing the French UF 23H research committee.

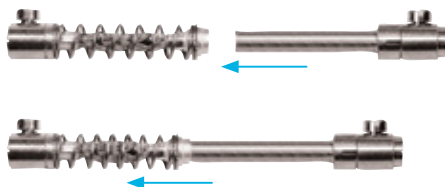
MARECHAL® also participates in the work of study committees (IEC and CENELEC) such as TC64, TC18 and TC69.

MARECHAL® power socket international charter: for the development and standardization of ranges internationally, a charter has been created to ensure the quality, compatibility and performance of power sockets with butt contacts.





## TECHNOLOGY



Split terminal  
(allows constant force)

Elliptical Deforming Ring  
(Prevents loosening)

Conductor



### DECONTACTOR™, A ONE OF A KIND DESIGN IN THE WORLD

The DECONTACTOR™ is a connector which combines

- the advantages of a **power socket**,
- and the performance of a **switch**.

With more than 65 years of research and innovations behind it, the DECONTACTOR™ range offers a level of reliability and safety never yet equalled in the world. It allows you to connect and disconnect devices thousands of times in the most severe environments in perfect safety for the user!

### BUTT CONTACT ON A SILVER-NICKEL TIP

The MARECHAL® DECONTACTOR™ and connectors are all fitted with butt contacts with silver-nickel tips. They provide exceptional connection quality by eliminating the damage due to electric arcs and wear seen with pin and sleeve sockets. Silver is an excellent conductor of current even when oxidized. Conductivity is optimal even in the presence of vibration and temperature variation thanks to the pressure of the springs.

### CRIMPED BRAIDS

The MARECHAL® contact uses a crimped braid with a spring which provides contact performance and tolerances superior to pin and sleeve contacts. The flexibility of the braid and the spring allows the base contact tip to always be perfectly aligned with the plug contact tip. These contacts, which are silver and anti-corrosion treated, offer very good corrosion resistance.

### ELASTIC LOCK TERMINALS

MARECHAL® contacts are fitted with "elastic lock" connection terminals. The wire clamp is split and surrounded by an elliptical deforming ring. This method allows the tightening force on the wire to be constant. Hence despite the creep of the copper or aluminium, the variations of temperature and vibration, the conductor wire is perfectly connected to the contact terminal.

### SAFETY SHUTTER

DECONTACTOR™ sockets are fitted with an interlocked safety shutter which prevents access to live contacts. This shutter only unlocks at the time of connection of the plug into its base.

### CASING MADE FROM ADVANCED MATERIALS

MARECHAL® range connectors and DECONTACTOR™ have casings made from fibre glass- or metal-reinforced GRP, depending on the models. This choice of material contributes to the excellent mechanical performance and longevity of the socket.

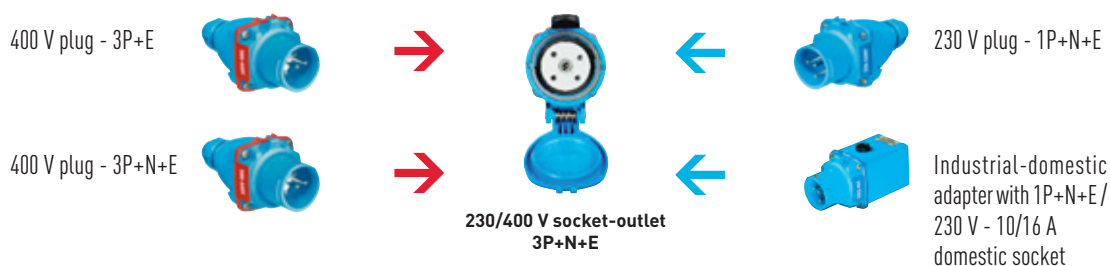


## ECONOMY OF INSTALLATION: DUAL-VOLTAGE

With a single base (e.g.: 3 PNE - 230/400 V) it is possible to feed 3 plugs indifferently:

- a 3 PNE - 400 V plug,
- a 3 PE - 400 V plug,
- a PNE - 230 V.

This compatibility provides real savings on the installation of these sockets for the user.



## ADVANTAGES

These technical choices provide MARECHAL® connectors and DECONTACTOR™ with unparalleled performance:

- Absolute safety after thousands of connections/disconnections,
- The ability to withstand repeated overloads, particularly on power supplies to motors with frequent starting,
- Perfect operation in the presence of vibration and variations in temperatures,
- Resistance to shocks, falls and climatic variations,
- A perfect resistance to corrosion and the most severe chemical agents.





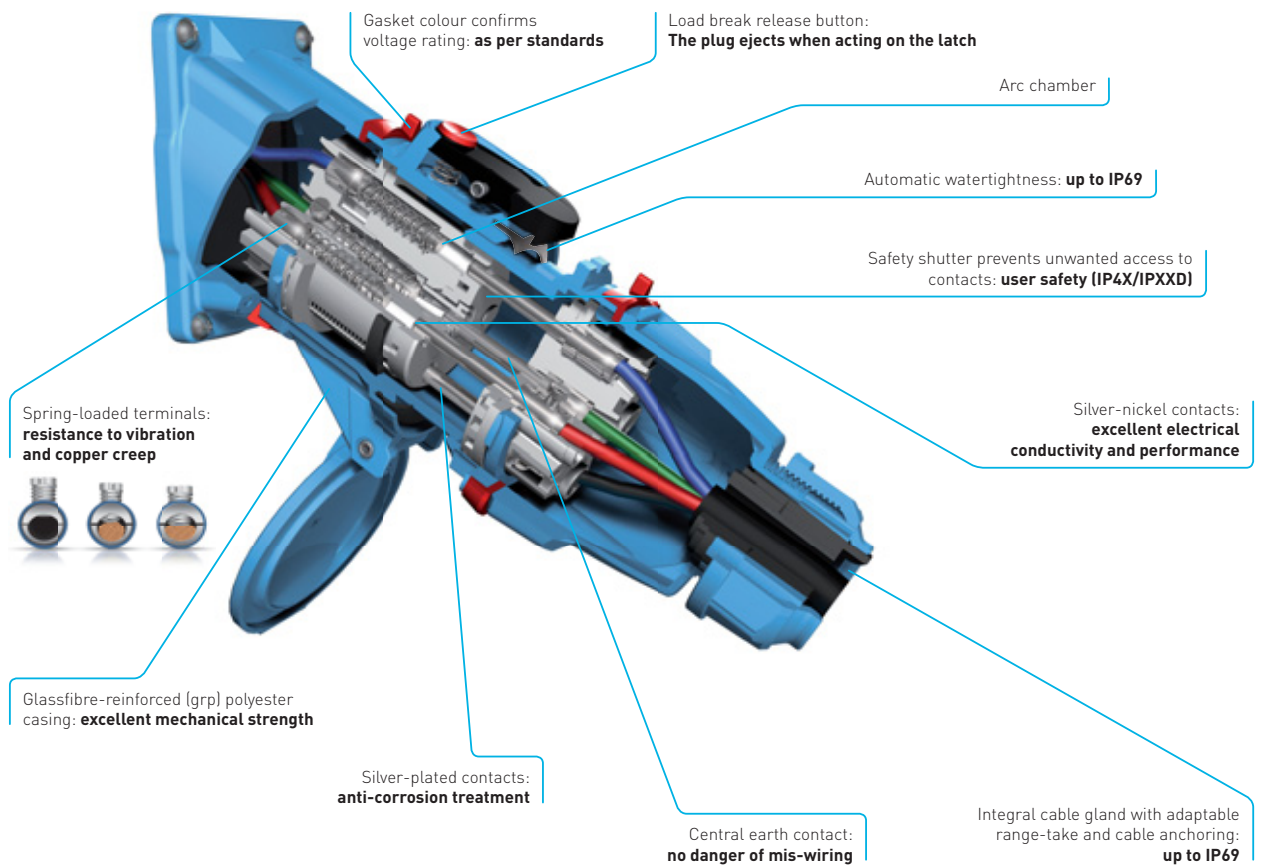


## TECHNOLOGY

### A CONCENTRATE OF FEATURES TO ENSURE YOUR SAFETY

The quality of the material, the design, the assembly and the inspection of each component are at the core of our know-how and the MARECHAL® technology.

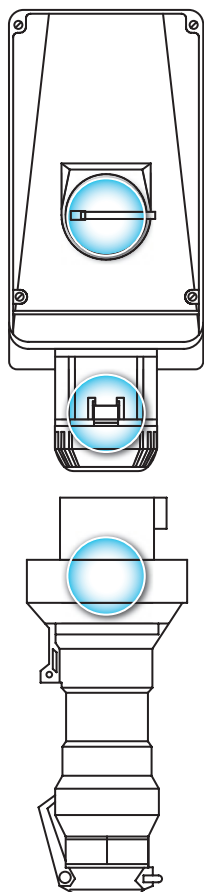
They each provide a precise function that optimizes the performance, safety and sustainability of our sockets and your installations.





## COMPETITIVE ADVANTAGE, FOR A 63 A PRODUCT (SCALE PROPORTION PRESERVED)

Industrial socket  
with external switch



DECONTACTOR™ =  
socket outlet + integrated switch



On Load switch  
compulsory from 32 A or 1000 W

Socket-outlet

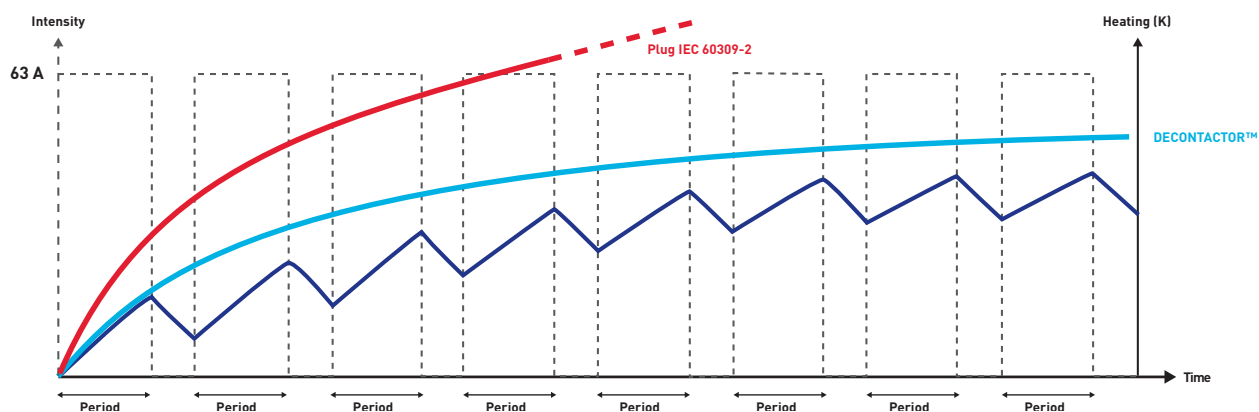
Plug

### Advantage for the DECONTACTOR™:

- Ease of installation: no additional pilot wire or switch upstream.
- No compulsory switch required, even beyond 32 A.
- More compact.
- Cable extension possibility.

i

## Comparative heating curve



■ Heating curve of a 60309-2 socket at a constant 63 A current.

■ Heating curve of a DECONTACTOR™ at a constant 63 A current.

■ Successive heating curves of a DECONTACTOR™ at a particular current cycle of 63 A. The DECONTACTOR™ stabilized.



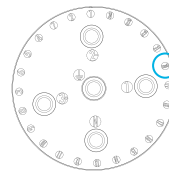
## TECHNOLOGY

### 24 POSSIBILITIES FOR VOLTAGE/FREQUENCY INTERLOCKING

The interlock device is associated with coding positions on the electrical connectors. It enables 24 different positions that are distinguished by volt-age/frequency. This is achieved by machining the relevant 'notch' on the coding ring. The colours in the rows of the table below correspond to the international voltage standard. These are the colours of the rings and labels on the bases and connectors.



Socket-outlet



Inlet

Keying example

| Keying positions       |           |                             |       | Keying positions       |          |                                                           |       |
|------------------------|-----------|-----------------------------|-------|------------------------|----------|-----------------------------------------------------------|-------|
| 20-24 V AC             | AC        | 2P+E, 2P+N+E<br>3P+E, 3+N+E | 08    | 220-250 V              | AC       | 1P+N+E                                                    | 01    |
| 20-24 V AC             | AC 60 Hz  | 2P+E, 2P+N+E<br>3P+E, 3+N+E | UL 02 | 220-250 V<br>380-440 V | AC       | 2P+N+E,<br>3P+N+E                                         | 01    |
| 25-28 V                | AC        | 2P+E, 2P+N+E<br>3P+E, 3+N+E | 06    | 220-250 V              | AC 60 Hz | 2P+E, 3P+E                                                | UL 07 |
| 40-48 V                | AC        | 2P+E, 2P+N+E<br>3P+E, 3+N+E | 13    | 220-250 V              | DC       | 2P+E                                                      | 20    |
| 110-125 V              | AC 60 Hz  | 1P+N+E                      | UL 07 | 255-277 V              | AC 60 Hz | 1P+N+E                                                    | UL 04 |
| 110-125 V<br>220-250 V | AC 60 Hz  | 2P+N+E,<br>3P+N+E           | UL 07 | 255-277 V<br>440-480 V | AC 60 Hz | 2P+N+E,<br>3P+N+E                                         | UL 04 |
| 110-130 V              | AC        | 1P+N+E                      | 03    | 347 V                  | AC 60 Hz | 1P+N+E                                                    | UL 14 |
| 110-130 V<br>190-230 V | AC        | 2P+N+E,<br>3P+N+E           | 03    | 347 V<br>600 V         | AC 60 Hz | 2P+N+E,<br>3P+N+E                                         | UL 14 |
| 110-130 V              | DC        | 2P+E                        | 10    | 380-400 V<br>660-690 V | AC       | 2P+N+E,<br>3P+N+E                                         | 19    |
| 115-127 V              | AC 200 Hz | 1P+N+E                      | 12    | 380-440 V              | AC       | 2P+E, 3P+E                                                | 01    |
| 115-127 V<br>200-220 V | AC 200 Hz | 2P+N+E,<br>3P+N+E           | 12    | 380-440 V              | AC       | 1P+N+E                                                    | 19    |
| 115-127 V              | AC 400 Hz | 1P+N+E                      | 11    | 440-480 V              | AC 60 Hz | 2P+E, 3P+E                                                | UL 04 |
| 115-127 V<br>200-220 V | AC 400 Hz | 2P+N+E,<br>3P+N+E           | 11    | 480-500 V              | AC       | 2P+E, 3P+E                                                | 09    |
| 120-127 V              | AC 60 Hz  | 1P+N+E                      | 16    | 600 V                  | AC 60 Hz | 2P+E, 3P+E                                                | UL 14 |
| 120-127 V<br>208-220 V | AC 60 Hz  | 2P+N+E,<br>3P+N+E           | 16    | 660-690 V              | AC       | 2P+E, 3P+E                                                | 19    |
| 190-230 V              | AC        | 2P+E, 3P+E                  | 03    | 1 000 V                | AC       | 1P+N+E,<br>2P+E,<br>2P+N+E,<br>2P+N+E,<br>3P+E,<br>3P+N+E | 22    |
| 200-220 V              | AC 200 Hz | 2P+E, 3P+E                  | 12    |                        |          |                                                           |       |
| 200-220 V              | AC 400 Hz | 2P+E, 3P+E                  | 11    |                        |          |                                                           |       |
| 208-220 V              | AC 60 Hz  | 2P+E, 3P+E                  | UL 16 |                        |          |                                                           |       |

AC = 50/60 Hz



# APPLICABLE STANDARDS AND DIRECTIVES



## EUROPEAN DIRECTIVES

The European texts aim to align the laws of the Member States to facilitate the movement of products while ensuring the protection of persons and property. All products put on the market must be consistent with the guidelines applicable to them and carry the CE mark.

For the power sockets designed to be used in potentially explosive atmospheres, the applicable Directive is the ATEX Directive 2014/34/EU.

For power sockets for industrial uses, the Directive applicable is the Low Voltage Directive (LVD) N°2014/35/EU.

The LVD lays down essential safety requirements: " Equipment may only be put on the market if it is built in accordance with the rules of good practice, and if when installed and maintained properly and used for the purpose intended it does not compromise the safety of persons, or domestic animals or property ".

The Directive requires manufacturers to:

- design and manufacture a product that complies with the safety requirements of the Directive (when equipment complies with the requirements of a product standard, it receives only a presumption of compliance with the essential safety requirements) ;
- follow the procedure of evaluation and then of attestation of this compliance;
- gather all the elements of the design and evaluation of this compliance in "Technical Documentation";
- manufacture appliances within the framework of a system of internal inspection of the manufacture, in order to ensure their conformity to the Technical Documentation, even when bought-in products and/or external services are used.

**All MARECHAL® appliances are consistent with the LVD and are manufactured within the framework of an ISO 9001 quality control system.**

CE marking constitutes a guarantee that MARECHAL® appliances do not compromise the safety of persons or property. If MARECHAL® appliances are associated with devices or spare parts that are not of MARECHAL® origin, the CE marking is invalidated and the responsibility of MARECHAL® cannot be engaged.

**MINISTERIAL  
DECREE DATED  
20/12/2011**

### Order relating to removable electrical devices and their conditions of connection and use.

This Order was published in the Official Journal on 27 January 2012. It stipulates:

Art. 6. - The joining or separation of the two parts of power sockets, extension cords and current connectors with a rating higher than 32 amps, must

only be able to be performed off load.

Art. 8. - This order is applicable with effect from the day following the day of its publication.

**All MARECHAL® appliances comply with this order.**

## INTERNATIONAL STANDARDS

MARECHAL® devices comply with the following standards:

- IEC/EN 60309-1 Ed. 4.2 :  
power outlets for industrial uses - Part 1: General rules
- IEC/EN 60309-4 Ed. 1.1 :  
Power outlets for industrial uses - Part 4: Switched socket-outlets and connectors with or without interlock.

The break capacity of the MARECHAL® DECONTACTOR™ is tested according to the following standard:

- IEC/EN 60947-3 : low voltage appliances - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units.

For specific uses, the MARECHAL® appliances comply with the following standard:

- CEI 61984 : connectors.

## AMERICAN STANDARDS

MARECHAL® devices comply with the following standards:

- UL 2682 (United States) : power sockets with break capacity for motor connection.
- UL 1682 (United States) and CSA C22.2 No. 182.1-07 (Canada) : power sockets and connectors.

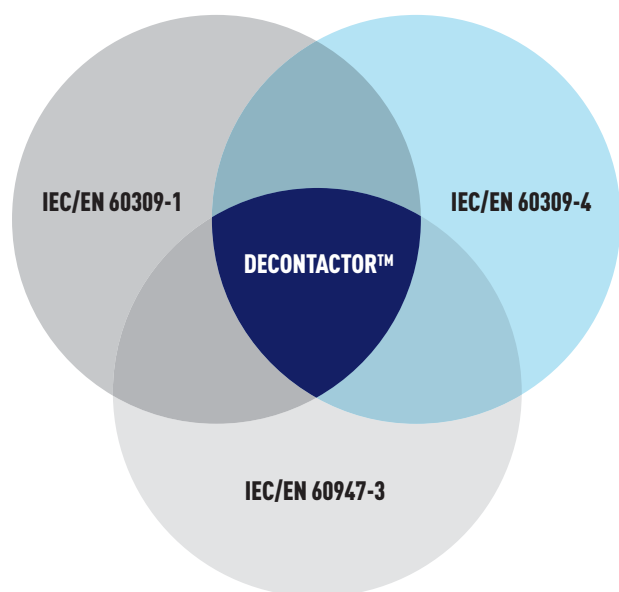
## OTHER STANDARDS



STANDARDS  
AUSTRALIA



UNDERWRITERS  
LABORATORIES  
INC.





## INDUSTRIAL APPLICATION

| I max                                                                    | Nb max contact | Nb aux. max | (AC/DC)<br>U max | IP max   | Material   | Temperature  |                 |
|--------------------------------------------------------------------------|----------------|-------------|------------------|----------|------------|--------------|-----------------|
| <b>DECONTACTOR™ = SWITCH + SOCKET-OUTLET</b>                             |                |             |                  |          |            |              | <b>Page 26</b>  |
| 20-63 A                                                                  | 5              | 4           | 1000 V           | 66/67/69 | Poly       | -40 °+60 °C  | DSN             |
| 30-400 A                                                                 | 5              | 6           | 1000 V           | 55       | Poly/Metal | -40 °+60 °C  | DS              |
| 125 A                                                                    | 4              | 2           | 440 V            | 66       | Metal      | +400 °C      | DSHT            |
| 20-90 A                                                                  | 5              | 4           | 500 V            | 55       | Metal      | -40 °+60 °C  | DN              |
| <b>MULTICONTACT</b>                                                      |                |             |                  |          |            |              | <b>Page 82</b>  |
| 25 A                                                                     | 7              |             | 500 V            | 66/67    | Poly/Metal | -40 °+60 °C  | PN7C            |
| 30 A                                                                     | 9              |             | 415 V            | 54/55    | Metal      | -40 °+60 °C  | DN9C            |
| 16 A                                                                     | 12             |             | 480 V            | 66/67    | Poly/Metal | -40 °+60 °C  | PN12C           |
| 25 A                                                                     | 20             |             | 415 V            | 54/55    | Metal      | -40 °+60 °C  | DN20C           |
| 16 A                                                                     | 24             |             | 480 V            | 66/67    | Poly       | -40 °+60 °C  | DSN24C          |
| 16 A                                                                     | 37             |             | 480 V            | 66/67    | Poly       | -40 °+60 °C  | DSN37C          |
| <b>INDUSTRIAL PLUGS</b>                                                  |                |             |                  |          |            |              | <b>Page 98</b>  |
| 16 A                                                                     | 5              |             | 480 V            | 66/67/68 | Poly       | -40 °+100 °C | PNC             |
| 30 A                                                                     | 5              |             | 500 V            | 66/67    | Poly/Metal | -40 °+60 °C  | PN              |
| 30 A                                                                     | 5              |             | 500 V            | 44       | Metal      | 240 °C       | PNHT            |
| 315-400 A                                                                | 5              | 8           | 690 V            | 66/67    | Metal      | -40 °+60 °C  | PFQ             |
| 500-600 A                                                                | 5              | 4           | 1000 V           | 66/67    | Metal      | -40 °+60 °C  | PFC             |
| <b>SINGLE POLE POWER CONNECTOR</b>                                       |                |             |                  |          |            |              | <b>Page 124</b> |
| 75-250 A                                                                 | 1              |             | 50 V             |          | Poly       | -40 °+60 °C  | CS2/3           |
| 400 A                                                                    | 1              |             | 1000 V           |          | Poly       | -40 °+60 °C  | CS1000          |
| 700 A                                                                    | 1              |             | 1000 V           |          | Poly       | -40 °+60 °C  | SP              |
| <b>CUSTOMIZED SOLUTIONS</b>                                              |                |             |                  |          |            |              | <b>Page 142</b> |
| Distribution boxes, service boxes, with or without MCB, cable extension. |                |             |                  |          |            |              |                 |

## ZONE APPLICATION

| I max                                        | Nb max contact | Nb aux. max | (AC/DC)<br>U max | IP max | Material                | Temperature |                                                                                       |
|----------------------------------------------|----------------|-------------|------------------|--------|-------------------------|-------------|---------------------------------------------------------------------------------------|
| <b>DECONTACTOR™ = SWITCH + SOCKET-OUTLET</b> |                |             |                  |        |                         |             | <b>Page 160</b>                                                                       |
| 20-63 A                                      | 4              | 2           | 750 V            | 66/67  | GRP                     | -40 °+60 °C | DXN                                                                                   |
| 20 A                                         | 4              |             | 550 V            | 66/67  | Metal                   | -55 °+60 °C | DXA1                                                                                  |
| 20-200 A                                     | 4              |             | 750 V            | 65     | Metal                   | -40 °+60 °C | DX                                                                                    |
| <b>MULTICONTACT CONNECTORS</b>               |                |             |                  |        |                         |             | <b>Page 188</b>                                                                       |
| 10 A                                         | 12             |             | 220 V            | 65/66  | Metal                   | -40 °+55 °C | PXN12C                                                                                |
| 10 A                                         | 25             |             | 440 V            | 66/67  | Metal                   | -40 °+55 °C | DXN25C                                                                                |
| 10 A                                         | 37             |             | 230 V            | 66/67  | Metal                   | -40 °+55 °C | DXN37C                                                                                |
| <b>PRISE ZONES EX</b>                        |                |             |                  |        |                         |             | <b>Page 198</b>                                                                       |
| 5 A                                          | 5              |             | 250 V            | 66/67  | GRP                     | -40 °+60 °C | PNCX                                                                                  |
| <b>SINGLE POLE POWER CONNECTOR</b>           |                |             |                  |        |                         |             | <b>Page 200</b>                                                                       |
| 680 A                                        | 1              |             | 1000 V           | 65/66  | GRP                     | -20 °+60 °C | SPeX                                                                                  |
| <b>CUSTOMIZED SOLUTIONS</b>                  |                |             |                  |        |                         |             | <b>Page 204</b>                                                                       |
| Socket-Outlet combination boxes              |                |             |                  | 66     | GRP/ALU/STAINLESS STEEL | -55 °+60 °C | MXBS                                                                                  |
| Junction boxes                               |                |             |                  | 66     | GRP/ALU/STAINLESS STEEL | -55 °+60 °C | MXBJ                                                                                  |
| Junction & socket boxes                      |                |             |                  | 66/67  | GRP                     | -50 °+60 °C | B2X                                                                                   |
| TECHNOR® products                            |                |             |                  |        |                         | -50 °+60 °C |  |

### LEGEND FOR OPTIONAL ACCESSORIES



Angle



Threading or gland size



EMC option



HT 240° C



Self-ejection

INFO +

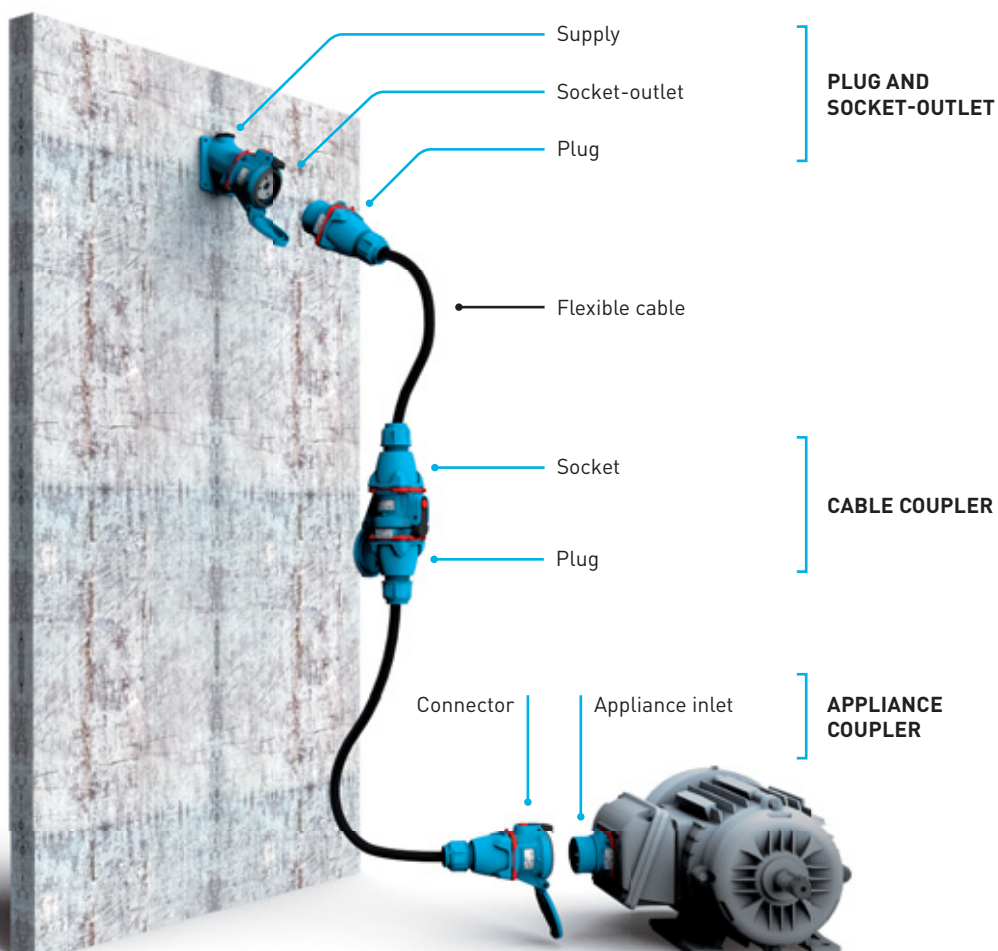
## A MODULAR SYSTEM TO SUIT A MAXIMUM NUMBER OF DIFFERENT COMBINATIONS

By combining 2 products and 3 assembly accessories, 6 additional products can be obtained.

|                                                                                   |                   |                                                                                   |   |                                                                                     |                                |
|-----------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------|--------------------------------|
|  | + Wall box        |  | = |  | Wall mounting socket           |
|                                                                                   | + Inclined sleeve |  | = |  | Inclined socket                |
|                                                                                   | + Handles         |  | = |  | Coupler socket*                |
|  | + Wall box        |  | = |  | Wall mounting appliance inlet* |
|                                                                                   | + Inclined sleeve |  | = |  | Inclined appliance inlet*      |
|                                                                                   | + Handles         |  | = |  | Plug                           |

\*Link to the application, IP66 option is recommended.

## IEC 60309-1 NORM TERMINOLOGY





# SIMPLIFIED DIGIT CODING OF COMMERCIAL PART NUMBERS

## 7 DIGITS FOR BASIC PRODUCTS + 3 DIGITS FOR SPECIALS PRODUCTS

Main option combination suffixes page 232.

| 1 <sup>ST</sup> DIGIT                                                                                                                                                                                                                                                    | 2 <sup>ND</sup> DIGIT                                                                                                                                                                    | 3 <sup>RD</sup> DIGIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>PRODUCT LINE</b></p> <p>0 = PN - PNC<br/>           1 = DN<br/>           2 = DX - DXN - DXA<br/>           3 = DS<br/>           4 = PF - SP - CS- SPeX<br/>           5 = ACCESSORIES<br/>           6 = DSN<br/>           8 = EVO<br/>           9 = BOXES</p> | <p><b>CASING</b></p> <p>IEC : 1 = BLUE POLY<br/>           5 = BLACK POLY<br/>           9 = METAL</p> <p>UL : 3 = BLUE POLY<br/>           7 = METAL<br/>           6 = BLACK METAL</p> | <p><b>RATING</b></p> <p>16 A E = PNC<br/>           30 A N/2 = PN<br/>           20 A 8 }<br/>           30 A 1 } = DN<br/>           50 A 3 }<br/>           90 A 6 }<br/>           30 A 1 }<br/>           50 A 3 } = DS/DX<br/>           90 A 6 }<br/>           150 A 9 }<br/>           250 A 2 }<br/>           400 A 4 }<br/>           20 A 1 }<br/>           32 A 3 } = DSN/DXN/DXA<br/>           63 A 6 }<br/>           315 A 3 } = PFQ<br/>           400 A 4 }<br/>           500 A 5 } = PFC<br/>           600 A 6 }<br/>           40 A 4 = EVO<br/>           400A 3 = CS1000<br/>           680A 4 = SPeX<br/>           700A 4 = SP</p> |

#### 4<sup>TH</sup> DIGIT



#### FORME

##### MALE

- 1 = Plug (with handle)
- 6 = Wall mounting appliance inlet (with box)
- 8 = Appliance inlet (male) semi-recessed
- 9 = Inclined appliance inlet (with sleeve)

##### FEMELLE

- 0 = Wall mounting socket (with box)
- 3 = Coupler socket (with handle)
- 7 = Inclined socket (with sleeve)
- 4 = Socket-outlet (female) semi-recessed

#### 5<sup>TH</sup> & 6<sup>TH</sup> DIGIT



#### TENSION

|      |                   |        |
|------|-------------------|--------|
| 08 = | 20-24 V           | AC     |
| 06 = | 25-28 V           | AC     |
| 13 = | 40-48 V           | AC     |
| 03 = | 110-130/190-230 V | AC     |
| 01 = | 220-250/380-440 V | AC     |
| 09 = | 480-500 V         | AC     |
| 19 = | 400/690 V         | AC     |
| 22 = | 1 000 V           | AC     |
| 02 = | 20-24 V           | 60 Hz  |
| 16 = | 120-208 V         | 60 Hz  |
| 07 = | 110-125/220-250 V | 60 Hz  |
| 04 = | 255-277/440-480 V | 60 Hz  |
| 14 = | 347-600 V         | 60 Hz  |
| 12 = | 115-127/200-220 V | 200 Hz |
| 11 = | 115-127/200-220 V | 400 Hz |

|      |           |    |
|------|-----------|----|
| 10 = | 110-130 V | DC |
| 20 = | 220-250 V | DC |
| 03 = | 220-250 V | AC |
| 01 = | 380-480 V | AC |
| 05 = | 500-690 V | AC |

Other voltages and frequencies are available on request, see table page 10.

#### 7<sup>TH</sup> DIGIT



#### POLARITÉ

##### Alternating current (AC)

|     |             |
|-----|-------------|
| 5 = | 1P+N+E      |
| 3 = | 3P+E        |
| 4 = | 4P+E (EVO)  |
| 7 = | 3P+N+E      |
| D = | 1P+N        |
| A = | 2P (L1, L2) |
| E = | 2P (L1, L3) |
| G = | 2P+N        |
| B = | 3P          |
| C = | 3P+N        |
| L = | 2P+2P       |
| H = | 1P+E        |
| 2 = | 2P+E        |
| 6 = | 2P+N+E      |
| 6 = | 6P+E (EVO)  |
| M = | 2P+2P+E     |

##### Direct current (DC)

|     |         |                       |
|-----|---------|-----------------------|
| 8 = | 2P+E    | Double breaking point |
| 9 = | 2P+E    |                       |
| J = | 3P      | (-/+/0 V)             |
| K = | 3P+E    | (-/+/0 V/T)           |
| N = | 2P+2P   |                       |
| P = | 2P+2P+E |                       |
| Z = | 2P      |                       |



# SUMMARY

## EVO

### A UNIQUE PRODUCT.

Once again, **MARECHAL ELECTRIC** is at the heart of innovation with the invention of the first separable switch-disconnector.

For even more safety, **EVO** facilitates the compliance of your machines and equipments.

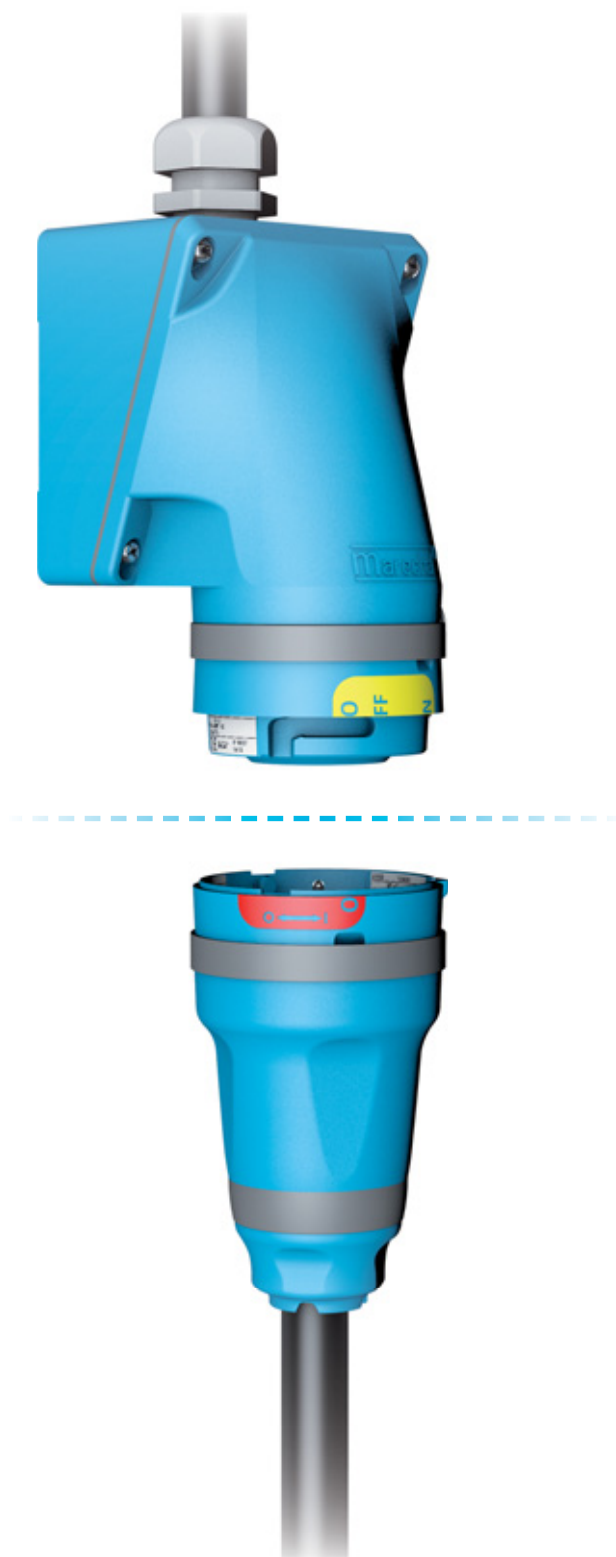
Discover "**EVO**", our new ergonomic and modern invention, created for you.

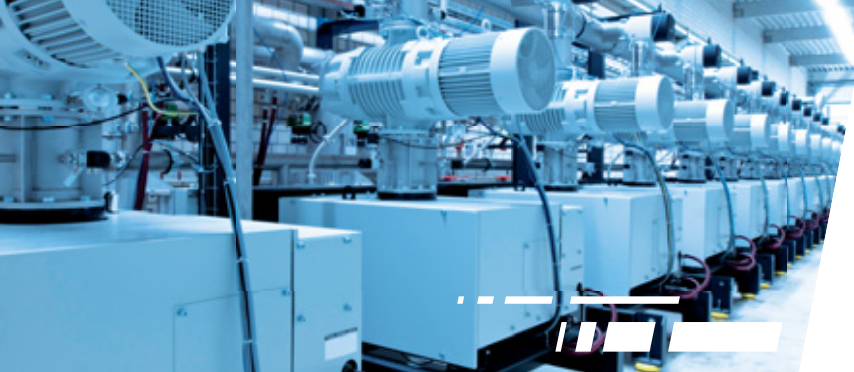




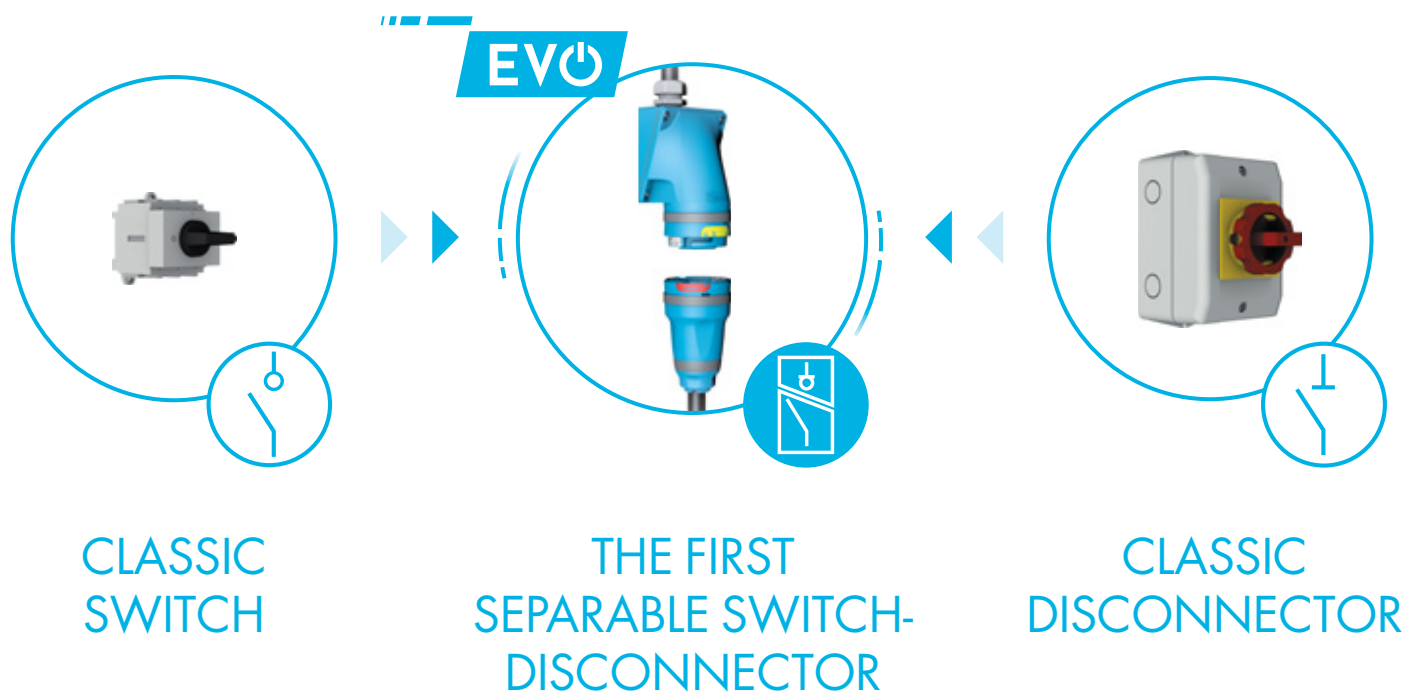
# EVO TWIST & SWITCH

A SEPARABLE  
SWITCH-  
DISCONNECTOR





**ITS**  
PARTICULARITY



#### TWIST & SWITCH

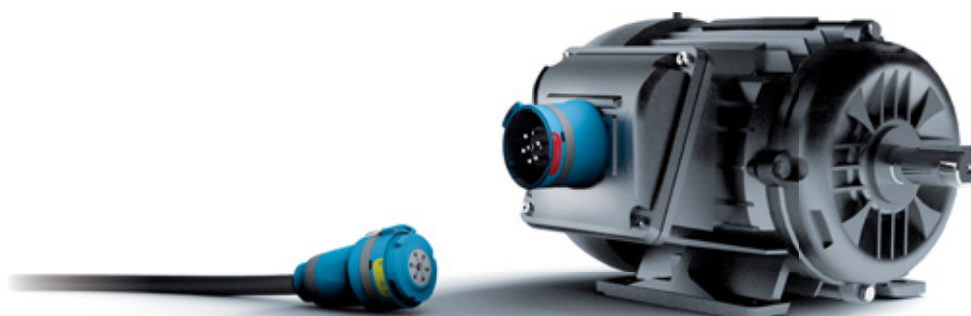
POSITIVE AND CLEARLY VISIBLE BREAKING

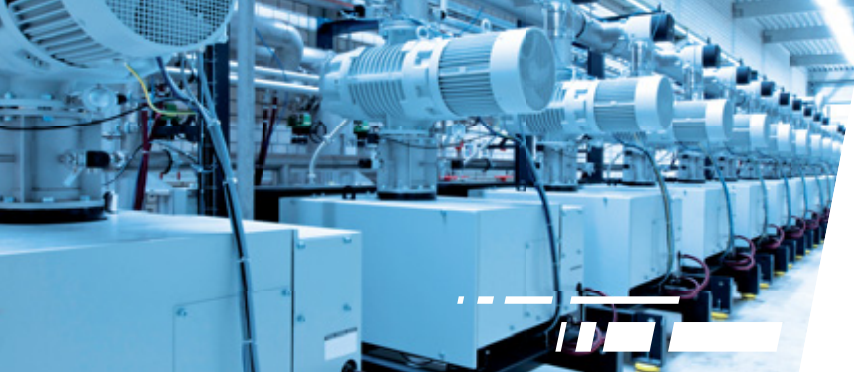
AUTOMATIC IP66/IP67 WATERPROOFING IN THE ON AND OFF POSITIONS

SLEEK DESIGN

REDUCES SPACE REQUIREMENTS

REDUCES INSTALLATION COSTS AND DOWNTIMES



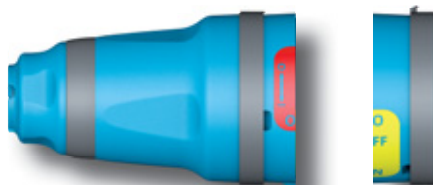


ITS  
USE

## LOAD BREAK ROTARY SWITCH

- Simple operation
- Waterproof in ON and OFF positions

Separated position



Position 00



Position OFF



Position ON





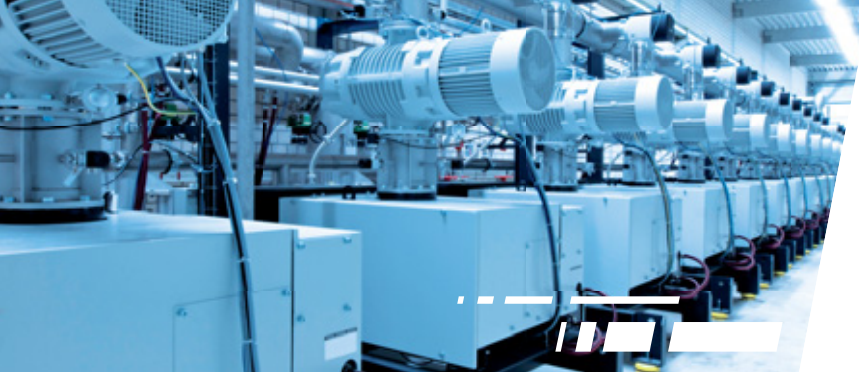
# ITS CONFIGURATIONS

## EVO

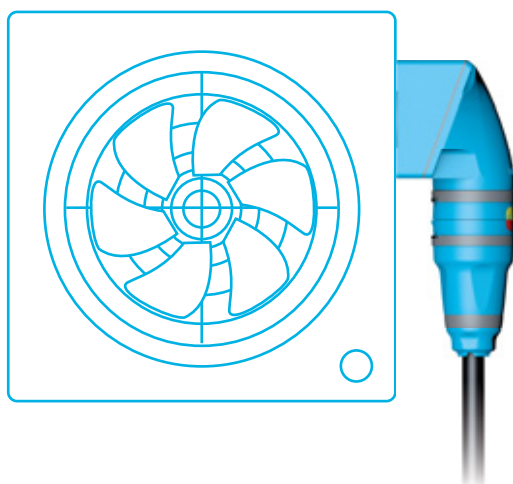
### POSSIBLE INSTALLATIONS



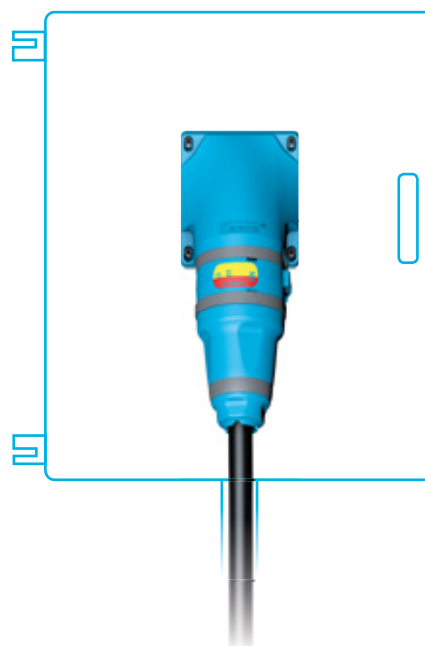
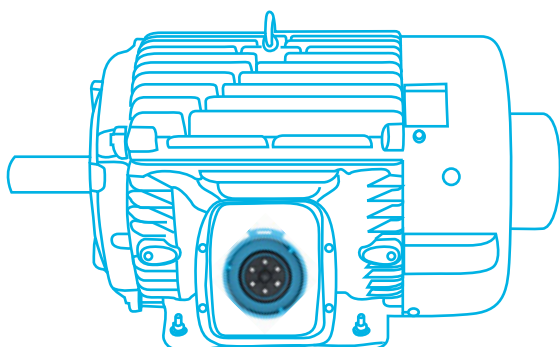




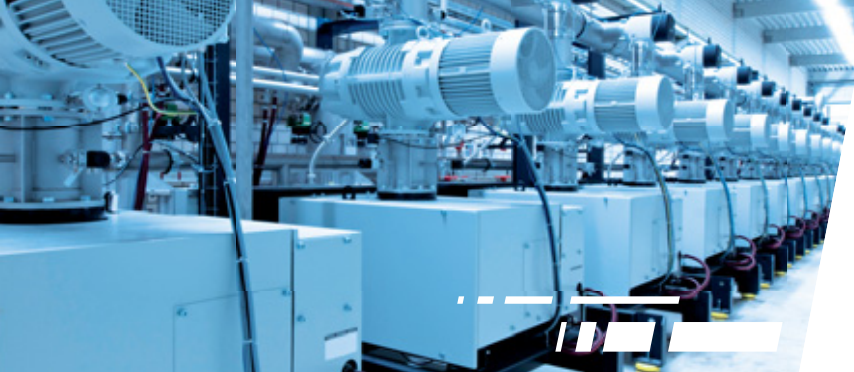
## ITS APPLICATIONS



EVO40 is particularly appropriate for all industrial applications such as motor power supply.





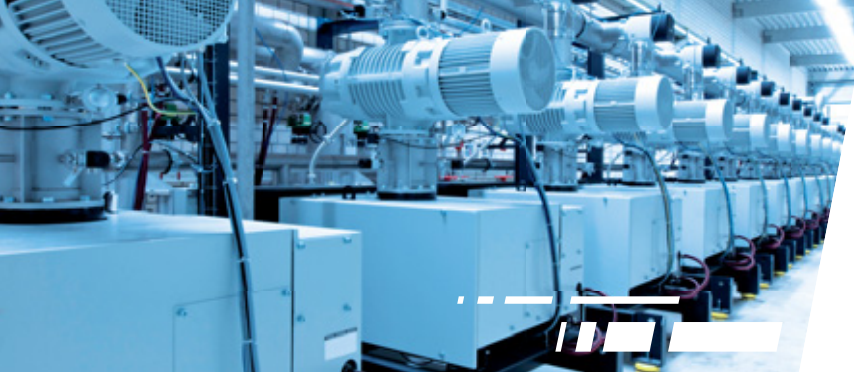


## KEY FEATURES

## THE BENEFITS

|                                                                  |                                                 |
|------------------------------------------------------------------|-------------------------------------------------|
| Separable switch-disconnector                                    | Simplification and economy                      |
| Positive and visible breaking                                    | 100% ensured safety                             |
| Disconnection speed independent of operator use                  | Reliability<br>Ease of use                      |
| Automatic IP66/IP67 sealing in ON and OFF positions and with cap | Suitable for harsh industrial environments      |
| IP4X on source side                                              | User safety and compliance with standards       |
| Smooth crevice free design, no visible fixing screws             | Easy to clean                                   |
| Up to 6 poles + earth                                            | Ability to connect power and/or control signals |
| Surface mounting dimension limited to 120 mm                     | Compact design (50° or 90° version wall box)    |





## ITS TECHNOLOGY

Double break per pole  
AC-22A/AC-23A (18,5 kW)  
AC-3 (11 kW)

Cage terminals improving conductivity  
and vibration resistance

Colour Coded terminals  
1, 2, 3, 4/N, 5, 6

Ergonomic handle  
Screwless fixings

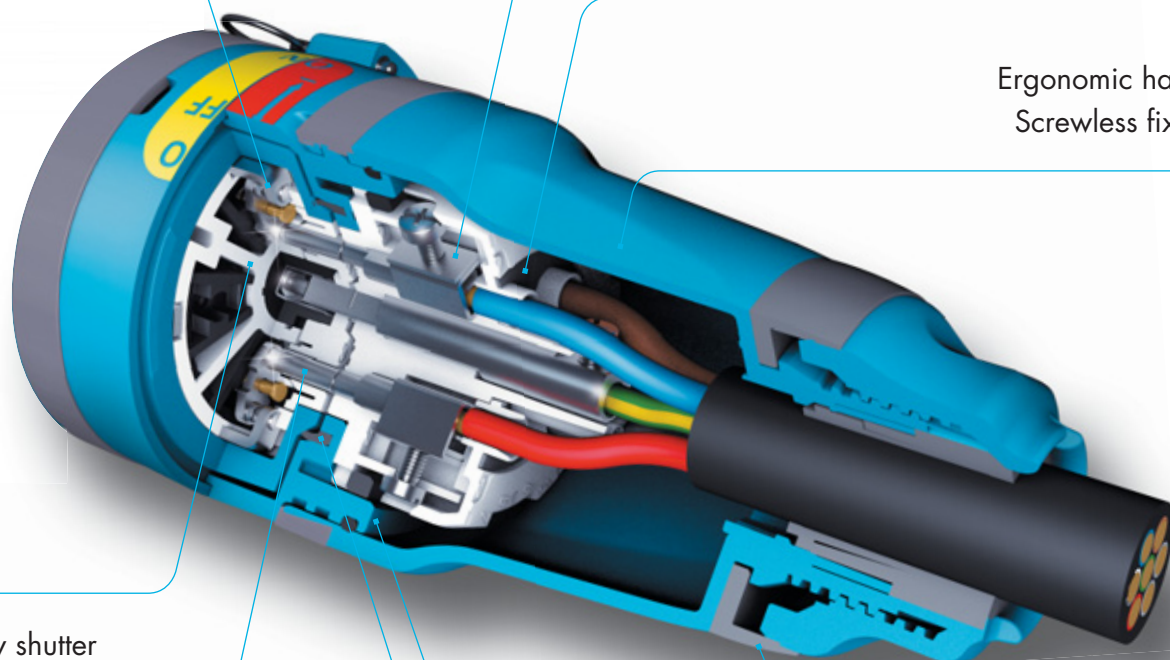
IP4X safety shutter  
Protection from live  
parts

Contacts on silver alloy  
tips (anti-corrosion  
treatment)

Protective cover

Glass reinforced poly enclosure

IP66/IP67 automatic waterproofing  
in ON and OFF positions



## TECHNICAL CHARACTERISTICS

|                                                                                    |                                   |
|------------------------------------------------------------------------------------|-----------------------------------|
| Mechanical endurance                                                               | > 10 000 cycles                   |
| Electrical endurance                                                               | 1 500 cycles                      |
| $U_i$ : Rated insulation voltage                                                   | 1 000 V AC                        |
| $U_{max}$ : Operational voltage                                                    | 690 V                             |
| $I_{the}$ : Conventional enclosed thermal current                                  | 40 A                              |
| $U_{imp}$ : Rated impulse withstand voltage                                        | 8 kV                              |
| $I_{cc}$ : Rated short-circuit breaking current capacity with gG fuses and aM fuse | 100 kA                            |
| $I_{cm}$ : Rated short-circuit making current capacity                             | 1 kA                              |
| Cable cross-section Cu                                                             | 2,5 - 10 mm <sup>2</sup> flexible |
|                                                                                    | 2,5 - 16 mm <sup>2</sup> stranded |
| Degree of protection (IEC 60529)                                                   | IP66/IP67                         |
| Shock resistance (IEC 62262)                                                       | IK09                              |
| Ambient air temperature                                                            | - 25 °C/+ 60 °C                   |

### SWITCHING CAPACITY

| kW/V          | 230 V  | 400 V   | 690 V   |
|---------------|--------|---------|---------|
| AC-21A/AC-22A | 40 A   | 40 A    | 40 A    |
| AC-23A        | 11 kW  | 18,5 kW | 18,5 kW |
| AC-3          | 7,5 kW | 11 kW   | 11 kW   |

## COMPLIANT WITH IEC STANDARDS

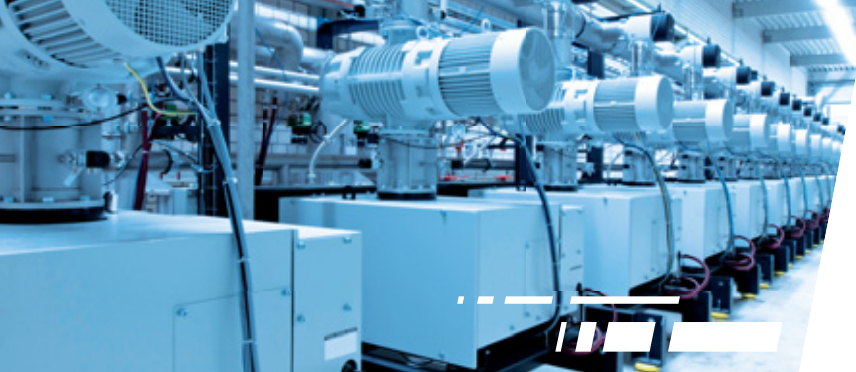
- IEC/EN 60947-1/-3/-4/-5 :

Low-voltage switchgear and control gear:  
Switches, disconnectors, switch-disconnectors  
and fuse-combination units.

- Facilitates compliance:

- of electrical machinery to the European Machinery Directive 2006/42/CE, to EN 12100 and EN 60204-1 standards,
- of electrical installations to IEC/HD 60364 and NF C 15-100 standards.



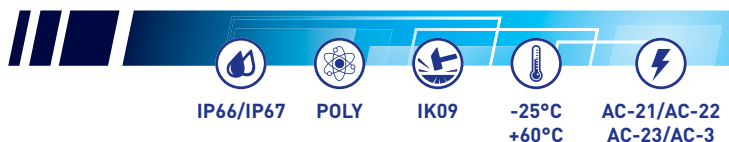


# PART NUMBERS

# 40 A

## 690 V U MAX

### SEPARABLE SWITCH-DISCONNECTOR



| Voltage                             | Poles | Supply   | Load     | Straight sleeve | 70° inclined sleeve | Handle                  | 90° wall box <sup>(1)</sup> |
|-------------------------------------|-------|----------|----------|-----------------|---------------------|-------------------------|-----------------------------|
| 200-250 V AC                        | 2P+E  | 8144032  | 8148032  | 51LM0           | 51LM7               | 51LP0D21 <sup>(2)</sup> | 51LC9000                    |
|                                     | 3P+E  | 8144033  | 8148033  |                 |                     |                         |                             |
|                                     | 4P+E  | 8144034  | 8148034  |                 |                     |                         |                             |
|                                     | 6P+E  | 8144036  | 8148036  |                 |                     |                         |                             |
| 380-480 V AC                        | 2P+E  | 8144012  | 8148012  | 51LM0           | 51LM7               | 51LP0D21 <sup>(2)</sup> | 51LC9000                    |
|                                     | 3P+E  | 8144013  | 8148013  |                 |                     |                         |                             |
|                                     | 4P+E  | 8144014  | 8148014  |                 |                     |                         |                             |
|                                     | 6P+E  | 8144016  | 8148016  |                 |                     |                         |                             |
| 500-690 V AC                        | 2P+E  | 8144052  | 8148052  | 51LM0           | 51LM7               | 51LP0D21 <sup>(2)</sup> | 51LC9000                    |
|                                     | 3P+E  | 8144053  | 8148053  |                 |                     |                         |                             |
|                                     | 4P+E  | 8144054  | 8148054  |                 |                     |                         |                             |
|                                     | 6P+E  | 8144056  | 8148056  |                 |                     |                         |                             |
| Umax 690 V AC                       | 2P+E  | 8144122  | 8148122  | 51LM0           | 51LM7               | 51LP0D21 <sup>(2)</sup> | 51LC9000                    |
|                                     | 3P+E  | 8144123  | 8148123  |                 |                     |                         |                             |
|                                     | 4P+E  | 8144124  | 8148124  |                 |                     |                         |                             |
|                                     | 6P+E  | 8144126  | 8148126  |                 |                     |                         |                             |
| Load side cap IP66/IP67 padlockable |       | Included | 814A426G |                 |                     |                         |                             |

(1) Without drilling, top entry. Reversible wall box for 50° angle with bottom entry.

(2) Gland size 5-21 mm.

Additional  
padlocking keys

814A541

Packaging = 10



# DECONTACTOR™



## SWITCH WITH SOCKET-OUTLET

This extensive and comprehensive product range covers all industrial applications. With sizes up to 400 A, it offers a wide range of mounting and installation options.



FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates




**DSN P. 26**

### COMPACT AND WATERTIGHT DECONTACTOR™ GRP

- Automatic IP66/IP67/IP69 water- and dust-tight
- AC-22 and ac-23 breaking capacity
- IK08 Impact-resistant GRP casing


**RETTBOX® P. 40**

### COUPLER SOCKET/INLET ELECTROMAGNETIC SELF-EJECT

- RETTBOX® & RETTBOX®-Air ranges on emergency vehicles
- Integrated self-eject


**DS P. 46**

### DECONTACTOR™ FOR INDUSTRY GRP AND METAL

- Safe and simple connection, even at 400 A
- Safety shutter
- IK08 GRP or IK09 metal casing


**DSHT P. 66**

### DECONTACTOR™ HIGH TEMPERATURE

- 240 °C permanent et 400 °C (2 hours)
- 125 A/690 V
- IP66 Watertight


**DN P. 68**

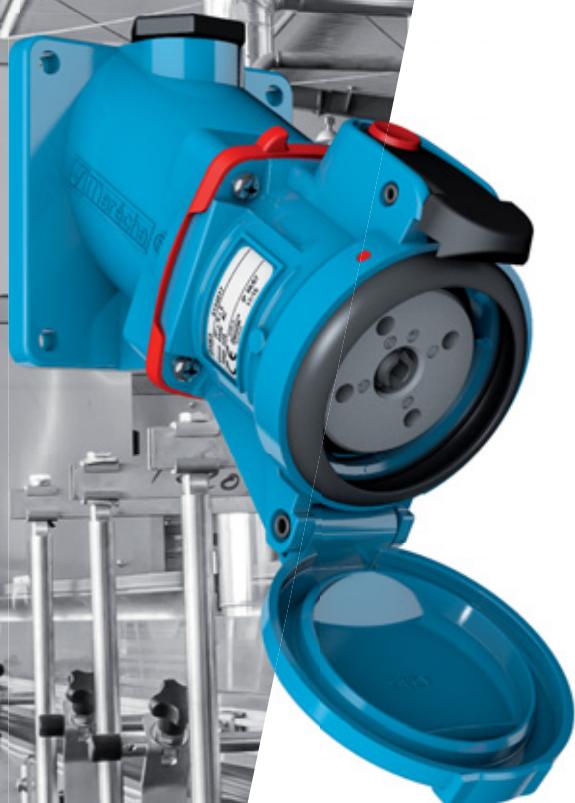
### METAL DECONTACTOR™

- Automatic IP55 water- and dust-tight (IP66/IP67 in option)
- IK09 Impact-resistant metal casing
- Suitable for heavy industry

# DSN



## COMPACT AND WATERTIGHT DECONTACTOR™ GRP



**20 A/32 A/63 A**

- ▶ Automatic IP66/IP67/IP69
- ▶ AC-22 and ac-23 breaking capacity
- ▶ Chemical resistant GRP UL 94 casing
- ▶ Impact resistance IK08, vibration resistance
- ▶ -40 °C +60 °C temperature
- ▶ With safety shutter, up to 4 auxiliaries/pilots

## TECHNICAL FEATURES

Plugs and sockets with integral load-break switching capability complying with IEC/EN 60309-1 and IEC/EN 60309-4 standards.

|                               | DSN1                   | DSN3       | DSN6       |
|-------------------------------|------------------------|------------|------------|
| Rated current (In)            | 20 A                   | 32 A       | 63 A       |
| Umax                          | 500 V                  | 690 V      | 1 000 V    |
| Power kW AC-22/AC-23          | 10 kW                  | 15 kW      | 30 kW      |
| AC-22 switching capability    | 20 A/500 V             | 32 A/690 V | 50 A/690 V |
| AC-23 switching capability    | 20 A/400 V             | 32 A/400 V | 63 A/400 V |
| Auxiliary contacts (optional) | 2 pil                  | 2 aux      | 4 aux      |
| Keying positions              | <<< 24 >>>             |            |            |
| Ambient temperature           | <<< -40°C to +60°C >>> |            |            |
| Short-circuit current Icc     | <<< 10 kA >>>          |            |            |

## MOUNTING: LOAD BREAK RELEASE BUTTON SHOULD BE AT THE TOP



## IP66/IP67/IP69 WATER- AND DUST-TIGHT



STANDARDS  
AUSTRALIA



UNDERWRITERS  
LABORATORIES  
INC®

## DSN DECONTACTOR™ complies with (download our certificates on [marechal.com](http://marechal.com)):

- IEC/EN 60309-1 et IEC/EN 60309-4 European and International standards (plugs and socket-outlets for industrial purposes),
- The European Low Voltage Directive 2014/35/UE, conformity with the CE marking,
- The European 'Machine Directive' 2006/42/CE regarding equipment isolation,
- The French NF C 15-100 standard,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses,
- The decrees relating to workers' protection in Belgium, Spain and Italy,
- The switch utilization categories AC-22 A and AC-23 A described in IEC/EN 60947-3,
- The UL 1682 and 2682 (USA) and CSA C22.2 N° 182.1-07 (Canada) standards for plugs and socket-outlets.

Also certified by VERITAS LCIE, UL, AS, VDE, TR CU (GOST) and cCSAus and Specification of Military Naval Standard MIL-S-901D (French, American, Australian, German, Russian and Canadian inspection laboratories), and by BUREAU VERITAS MARINE.



### WALL MOUNTING SOCKET DSN1



Wall box poly 30°  
511B3M20



Socket-outlet  
6114017

### PLUG DSN1



Straight handle poly  
511P0D18



Inlet  
6118017

## MAIN FEATURES

|                                                   |                |                           |                       |
|---------------------------------------------------|----------------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 20 A           | Ambient temperature       | -40 °C to +60 °C      |
| Maximum voltage                                   | 500 V          | Flexible wiring (min-max) | 1-2,5 mm <sup>2</sup> |
| IP protection lid closed                          | IP66/IP67/IP69 | Stranded wiring (min-max) | 1,5-4 mm <sup>2</sup> |
| IP protection plug connected                      | IP66/IP67/IP69 | Other wiring              | on request            |
| Shock resistance                                  | IK08           | Keying positions          | 24                    |

### LOAD-BREAK CAPABILITY OF THE DECONTACTOR™

|                                                           |            |
|-----------------------------------------------------------|------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | 20 A/500 V |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | 20 A/500 V |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 20 A/400 V |
| Short-circuit current I <sub>cc</sub>                     | 10 kA      |
| Power kW AC-22/AC-23                                      | 10 kW      |

### SOCKET- OUTLET female DSN1 (20 A)



### INLET male DSN1 (20 A)



Dual-voltage socket-outlet (see p. 7)

|                           |            |            |         |
|---------------------------|------------|------------|---------|
| 20-24 V AC                | 2P         | 611408A    | 611808A |
| 220-250 V AC              | 1P+N+E     | 6114015    | 6118015 |
| 380-440 V AC              | 3P+E       | 6114013    | 6118013 |
| 220-250 V AC 380-440 V AC | 3P+N+E     | 6114017    | 6118017 |
| 480-500 V AC              | 3P+E       | 6114093    | 6118093 |
| 480-500 V AC              | 3P+N+E     | 6114097    | 6118097 |
| Pilots 2 A/250 V AC       | + 2 pilots | Ref. + 972 | NA      |

► Other voltages, frequencies and contact configurations are available (see page 10).



For a black colour GRP housing replace the second reference character 1 with 5.

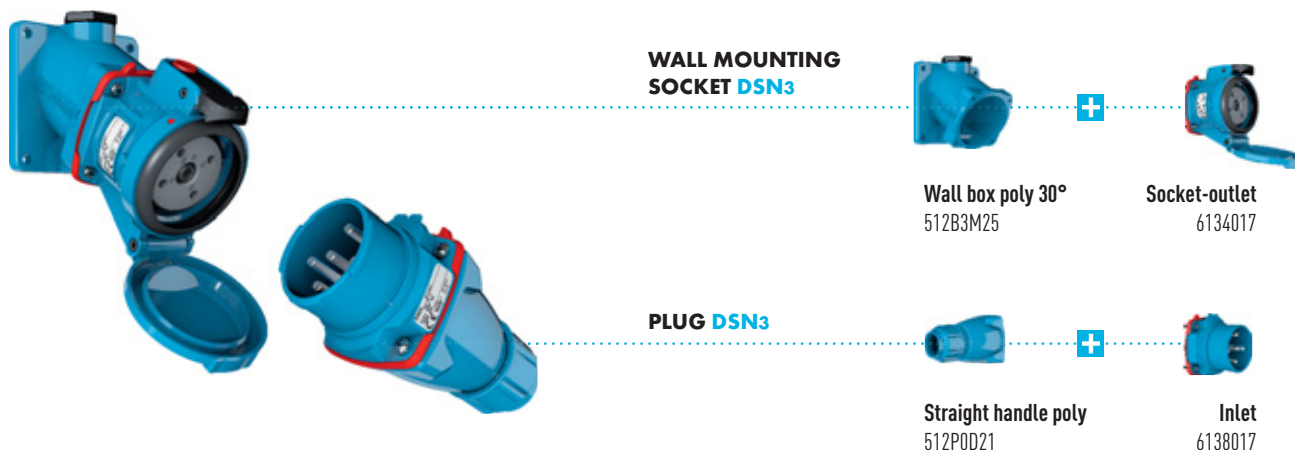
### INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 34.







### MAIN FEATURES

|                                                   |                |                           |                        |
|---------------------------------------------------|----------------|---------------------------|------------------------|
| Rated current (with wiring according to standard) | 32 A           | Ambient temperature       | -40 °C to +60 °C       |
| Maximum voltage                                   | 690 V          | Flexible wiring (min-max) | 2,5-6 mm <sup>2</sup>  |
| IP protection lid closed                          | IP66/IP67/IP69 | Stranded wiring (min-max) | 2,5-10 mm <sup>2</sup> |
| IP protection plug connected                      | IP66/IP67/IP69 | Other wiring              | on request             |
| Shock resistance                                  | IK08           | Keying positions          | 24                     |

### Load-break capability of the DECONTACTOR™

|                                                           |            |
|-----------------------------------------------------------|------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | 32 A/690 V |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | 32 A/690 V |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 32 A/400 V |
| Short-circuit current I <sub>cc</sub>                     | 10 kA      |
| Power kW AC-22/AC-23                                      | 15 kW      |

**SOCKET-  
OUTLET** female  
**DSN3 (32 A)**

**INLET** male  
**DSN3 (32 A)**

Dual-voltage socket-  
outlet (see p. 7)

|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| 20-24 V AC                | 2P           | 613408A    | 613808A    |
| 220-250 V AC              | 1P+N+E       | 6134015    | 6138015    |
| 380-440 V AC              | 3P+E         | 6134013    | 6138013    |
| 220-250 V AC 380-440 V AC | 3P+N+E       | 6134017    | 6138017    |
| 660-690 V AC              | 3P+E         | 6134193    | 6138193    |
| 380-400 V AC 660-690 V AC | 3P+N+E       | 6134197    | 6138197    |
| Auxiliaries 30 A/500 V AC | + 2 contacts | Ref. + 972 | Ref. + 972 |

► Other voltages, frequencies and contact configurations are available (see page 10).

i

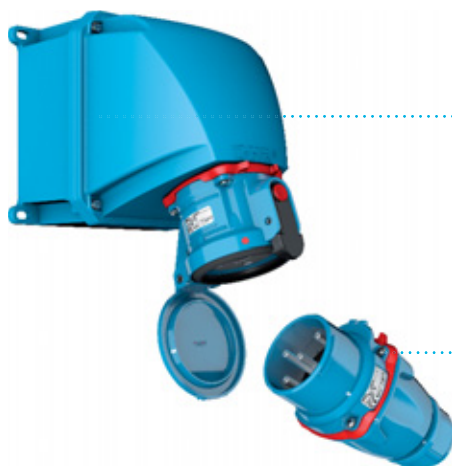
For a black colour GRP housing replace the second reference character 1 with 5.

INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 34.





### WALL MOUNTING SOCKET DSN6



Wall box poly 70°  
513C7M25



Socket-outlet  
6164017

### PLUG DSN6



Straight handle poly  
513P0D30



Inlet  
6168017

## MAIN FEATURES

|                                                   |                |                           |                       |
|---------------------------------------------------|----------------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 63 A           | Ambient temperature       | -40 °C to +60 °C      |
| Maximum voltage                                   | 1 000 V        | Flexible wiring (min-max) | 6-16 mm <sup>2</sup>  |
| IP protection lid closed                          | IP66/IP67/IP69 | Stranded wiring (min-max) | 10-25 mm <sup>2</sup> |
| IP protection plug connected                      | IP66/IP67/IP69 | Other wiring              | on request            |
| Shock resistance                                  | IK08           | Keying positions          | 24                    |

### Load-break capability of the DECONTACTOR™

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | (63 A/690 V) or (45 A/1 000 V) |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | 50 A/690 V                     |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 63 A/400 V                     |
| Short-circuit current I <sub>cc</sub>                     | 10 kA                          |
| Power kW AC-22/AC-23                                      | 30 kW                          |

### SOCKET- OUTLET female DSN6 (63 A)



### INLET male DSN6 (63 A)



Dual-voltage socket-  
outlet (see p. 7)

|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| 20-24 V AC                | 2P           | 616408A    | 616808A    |
| 190-230 V AC              | 3P+E         | 6164033    | 6168033    |
| 220-250 V AC              | 1P+N+E       | 6164015    | 6168015    |
| 380-440 V AC              | 3P+E         | 6164013    | 6168013    |
| 220-250 V AC 380-440 V AC | 3P+N+E       | 6164017    | 6168017    |
| 660-690 V                 | 3P+E         | 6164193    | 6168193    |
| 380-400 V 660-690 V       | 3P+N+E       | 6164197    | 6168197    |
| Auxiliaries 16 A/400 V AC | + 2 contacts | Ref. + 972 | Ref. + 972 |
| Auxiliaries 16 A/400 V AC | + 4 contacts | Ref. + 264 | Ref. + 264 |

► Other voltages, frequencies and contact configurations are available (see page 10).



For a black colour GRP housing replace the second reference character 1 with 5.

## INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 34.







## OPTIONS (DETAILS ON PAGE 216)

|                                                                                     | DSN1<br>size 1                                                                                                               | DSN3<br>size 2              | DSN6<br>size 3              |    |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|----|
| INDUSTRIAL-DOMESTIC ADAPTERS                                                        |                                                                                                                              |                             |                             |    |
|    | Industrial inlet MARECHAL® 1P+N+E domestic socket-outlet 10/16 A 230 V fuse protection 10 A and 16 A (with integrated fuse). | 6118015D11*                 | 6138015D11*                 | NA |
|    | * Adapters are available in foreign standards : replace D11 by D40 for UK, D30 for Germany/NL/Lux, D06 for Italy.            |                             |                             |    |
| LOCKING PIN FOR 2 PADLOCKS Ø 8 mm (PADLOCKS NOT SUPPLIED)                           |                                                                                                                              |                             |                             |    |
|    | Socket-outlet<br>ref. + 843                                                                                                  | Socket-outlet<br>ref. + 843 | Socket-outlet<br>ref. + 843 |    |
| SAFETY HASP FOR UP TO 6 PADLOCKS                                                    |                                                                                                                              |                             |                             |    |
|    | 873A541                                                                                                                      | 873A541                     | 873A541                     |    |
| LARGER RELEASE BUTTON                                                               |                                                                                                                              |                             |                             |    |
|   | Socket-outlet<br>ref. + 453                                                                                                  | Socket-outlet<br>ref. + 453 | Socket-outlet<br>ref. + 453 |    |
| INLET CAP IP66/IP67                                                                 |                                                                                                                              |                             |                             |    |
|  | 611A426                                                                                                                      | 613A426                     | 616A426                     |    |
| IN-LINE CONNECTIONS (A PAIR OF FINGER DRAW PLATES TO AID CLOSING)                   |                                                                                                                              |                             |                             |    |
|  | 611A346                                                                                                                      | 613A346                     | 616A346                     |    |
| 180° OPENING LID                                                                    |                                                                                                                              |                             |                             |    |
|                                                                                     | Metal socket ref. + 10                                                                                                       | Metal socket ref. + 10      | Metal socket ref. + 10      |    |
| SELF-RETURNING LID (WITHOUT FULL CLOSURE IP40)                                      |                                                                                                                              |                             |                             |    |
|  | Socket-outlet ref. + R                                                                                                       | Socket-outlet ref. + R      | Socket-outlet ref. + R      |    |
| 180° OPENING & SELF-RETURNING LID                                                   |                                                                                                                              |                             |                             |    |
|                                                                                     | Socket-outlet ref. + 18                                                                                                      | Socket-outlet ref. + 18     | Socket-outlet ref. + 18     |    |
| SELF-CLOSING LID FOR INLET LOCKABLE (IP54)                                          |                                                                                                                              |                             |                             |    |
|  | NA                                                                                                                           | 613A226                     | 616A226                     |    |
| SELF-EJECTING (SEE REFERENCES AND OPTIONS DETAILS PAGE 228)                         |                                                                                                                              |                             |                             |    |
|  |                                                                                                                              |                             |                             |    |





## ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| SLEEVE                                                                                   |  | DSN1<br>size 1 | DSN3<br>size 2 | DSN6<br>size 3 |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|----------------|----------------|
| POLY SLEEVE                                                                              |                                                                                   |                |                |                |
|  DSN1   | 30°                                                                               | 511M3          | 512M3          | 513M3          |
|         | 70°                                                                               | 511M7          | 512M7          | 513M7          |
|         | 30°                                                                               | 551M3          | 552M3          | 553M3          |
|         | 70°                                                                               | 551M7          | 552M7          | 553M7          |
| METAL SLEEVE                                                                             |                                                                                   |                |                |                |
|        | 0°                                                                                | 591M0          | 592M0          | 593M0          |
|  DSN1 | 30°                                                                               | 591M3          | 592M3          | 593M3          |
|       | 70°                                                                               |                |                | 593M7          |

### TPM ELECTRICAL INLET WITH FLAP

DSN1  
size 1

#### BLACK POLY HOUSING (IP55) WITH LID FOR MECHANICAL EJECTION SOCKET



Dimensions (LxHxD)

121 x 136 x 60

551B0065 Size 1 case without indicator light  
551B0165 Size 1 case with 1+1 indicator lights  
551B0265 Size 1 case with 1+2 indicator lights



## ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| HANDLE                                                                                                                                   |          | DSN1<br>size 1 | DSN3<br>size 2 | DSN6<br>size 3 |                           |
|------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------------|----------------|---------------------------|
| <b>POLY HANDLE WITH GLAND</b>                                                                                                            |          |                |                |                |                           |
| <br>* Short                                             | 9-18 mm  | 511P0D18*      |                |                |                           |
|                                                                                                                                          | 5-21 mm  | 511P0D21       | 512P0D21       |                |                           |
|                                                                                                                                          | 10-30 mm |                |                | 513P0D30       |                           |
| <br>* Short                                             | 9-18 mm  | 551P0D18*      |                |                |                           |
|                                                                                                                                          | 5-21 mm  |                | 552P0D21       |                |                           |
|                                                                                                                                          | 10-30 mm |                |                | 553P0D30       |                           |
| <br>60° angle                                           | 9-18 mm  | 511P6D18       |                |                |                           |
| <br>60° angle                                           | 9-18 mm  | 551P6D18       |                |                |                           |
| <b>POLY HANDLE WITH POLY CABLE GLAND (FOR A BLACK COLOUR HANDLE REPLACE THE SECOND REFERENCE CHARACTER 1 WITH 5)</b>                     |          |                |                |                |                           |
|                                                        | 5-12 mm  | 511P020P       | 512P020P       | 513P020P       | Ref. +443 (DSN1 10-14 mm) |
|                                                                                                                                          | 9-18 mm  | 511P025P       | 512P025P       | 513P025P       | Ref. +443 (DSN1 12-18 mm) |
|                                                                                                                                          | 14-25 mm | 511P032P       | 512P032P       | 513P032P       | Ref. +443                 |
|                                                                                                                                          | 18-32 mm |                | 512P040P       | 513P040P       | Ref. +443                 |
| <b>METAL HANDLE WITH METAL GLAND (+ EARTHING WIRE)</b>                                                                                   |          |                |                |                |                           |
|                                                       | 7-13 mm  |                | 592P020M       | 593P020M       |                           |
|                                                                                                                                          | 8-16 mm  |                | 592P025M       | 593P025M       |                           |
|                                                                                                                                          | 16-24 mm |                | 592P032M       | 593P032M       |                           |
|                                                                                                                                          | 22-32 mm |                |                | 593P040M       |                           |
| <b>POLY HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY, (FOR A BLACK COLOUR HANDLE REPLACE THE SECOND REFERENCE CHARACTER 1 WITH 5)</b> |          |                |                |                |                           |
|                                                       | M20      | 511P0M20       | 512P0M20       | 513P0M20       | Ref. +443                 |
|                                                                                                                                          | M25      | 511P0M25       | 512P0M25       | 513P0M25       | Ref. +443                 |
|                                                                                                                                          | M32      | 511P0M32       | 512P0M32       | 513P0M32       | Ref. +443                 |
|                                                                                                                                          | M40      |                | 512P0M40       | 513P0M40       | Ref. +443                 |
| <b>METAL HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY)</b>                                                                            |          |                |                |                |                           |
|                                                       | M20      |                | 592P0M20       | 593P0M20       |                           |
|                                                                                                                                          | M25      |                | 592P0M25       | 593P0M25       |                           |
|                                                                                                                                          | M32      |                | 592P0M32       | 593P0M32       |                           |
|                                                                                                                                          | M40      |                |                | 593P0M40       |                           |

## BOXES

DSN1  
size 1DSN3  
size 2DSN6  
size 3

## POLY BOX (FOR A BLACK COLOUR HANDLE REPLACE THE SECOND REFERENCE CHARACTER 1 WITH 5)



DSN1

|     |     |          |          |          |
|-----|-----|----------|----------|----------|
| 30° | M20 | 511B3M20 | 512B3M20 |          |
| 30° | M25 | 511B3M25 | 512B3M25 | 513B3M25 |

## METAL BOX (+ EARTHING WIRE)



|     |     |  |          |          |
|-----|-----|--|----------|----------|
| 20° | M20 |  | 592B2M20 | 593B2M20 |
| 20° | M25 |  | 592B2M25 | 593B2M25 |
| 20° | M32 |  |          | 593B2M32 |

## POLY BOX + POLY SLEEVE (BLACK VERSION SEE ACCESSORIES DXN PAGE 169)

Extra earth bar ref:  
51AA089

|     |              |          |          |          |
|-----|--------------|----------|----------|----------|
| 70° | Without Hole | 511C7000 | 512C7000 | 513C7000 |
| 70° | Ø M20        | 511C7M20 | 512C7M20 |          |
| 70° | Ø M25        | 511C7M25 | 512C7M25 | 513C7M25 |
| 70° | Ø M32        | 511C7M32 | 512C7M32 | 513C7M32 |
| 70° | Ø M40        |          | 512C7M40 | 513C7M40 |

## METAL BOX (+ EARTHING WIRE) + POLY SLEEVE



|     |     |          |          |          |
|-----|-----|----------|----------|----------|
| 30° | M20 | 511C3M20 | 512C3M20 | 513C3M20 |
| 30° | M25 |          | 512C3M25 | 513C3M25 |
| 30° | M32 |          | 512C3M32 | 513C3M32 |
| 30° | M40 |          | 512C3M40 | 513C3M40 |

## METAL BOXES WITH METAL SLEEVE (+ EARTHING WIRE)



|     |     |  |          |          |
|-----|-----|--|----------|----------|
| 30° | M20 |  | 592C3M20 | 593C3M20 |
| 30° | M25 |  | 592C3M25 | 593C3M25 |
| 30° | M32 |  | 592C3M32 | 593C3M32 |
| 30° | M40 |  |          | 593C3M40 |



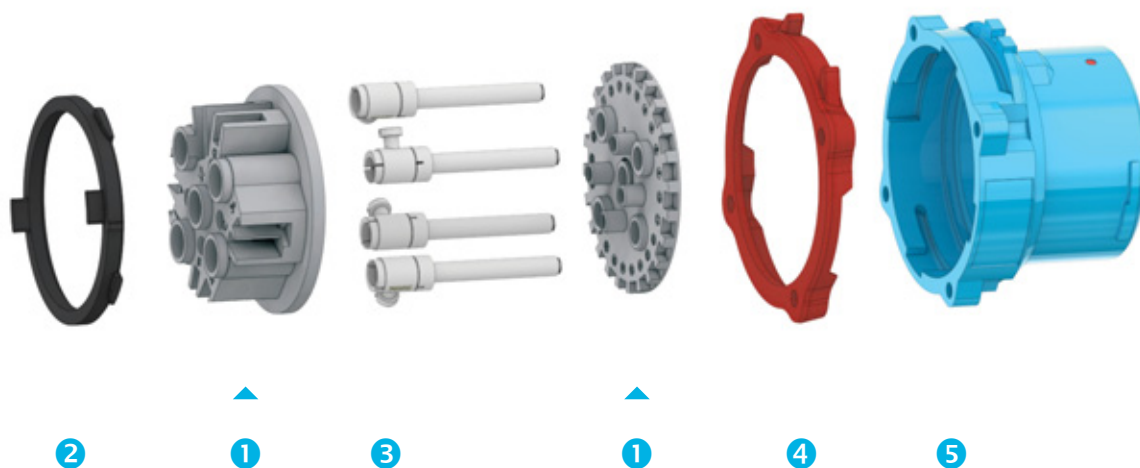
|    |     |  |          |          |
|----|-----|--|----------|----------|
| 0° | M20 |  | 592C0M20 | 593C0M20 |
| 0° | M25 |  | 592C0M25 | 593C0M25 |
| 0° | M32 |  | 592C0M32 | 593C0M32 |
| 0° | M40 |  |          | 593C0M40 |



|     |     |  |  |          |
|-----|-----|--|--|----------|
| 70° | M20 |  |  | 593C7M20 |
| 70° | M25 |  |  | 593C7M25 |
| 70° | M32 |  |  | 593C7M32 |
| 70° | M40 |  |  | 593C7M40 |



## SPARE PARTS



| PLUG |                            | DSN1    | DSN3    | DSN6    |
|------|----------------------------|---------|---------|---------|
| 1    | Plug interior              | 611A010 | 311A010 | 313A010 |
| 2    | Locking ring               | 611A583 | 311A583 | 616A583 |
| 3    | Plug contact               | 611A011 | 311A011 | 616A011 |
| 4    | Color-coded voltage gasket |         |         |         |
|      |                            | 611AB26 | 613AB26 | 313AB26 |
|      |                            | 611AR26 | 613AR26 | 313AR26 |
|      |                            | 611AV26 | 613AV26 | 313AV26 |
|      |                            | 611AN26 | 613AN26 | 313AN26 |
| 5    | Plug casing                | 611A501 | 613A501 | 616A501 |



Remember to order  
the special removal key



Yellow disassembly key  
31-A500-1

Contact us for spare parts.

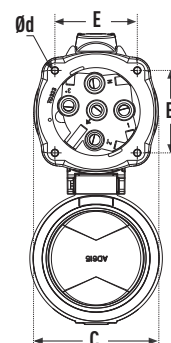
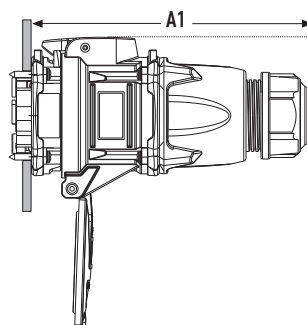
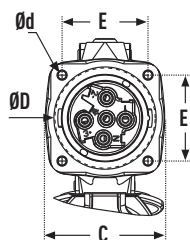
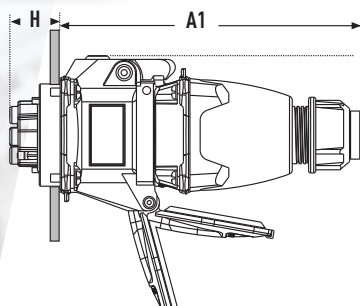




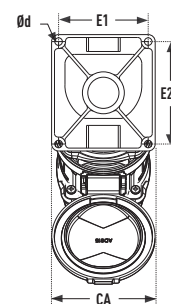
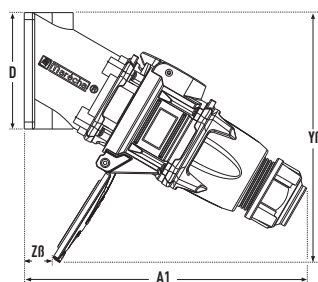
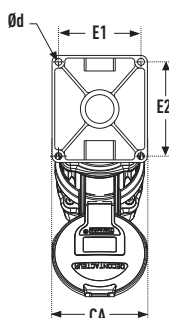
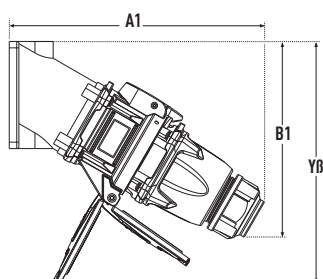
| SOCKET |                            | DSN1    | DSN3    | DSN6    |
|--------|----------------------------|---------|---------|---------|
| 1      | Socket Interior            | 611A020 | 311A020 | 313A020 |
| 2      | Locking ring               | 611A583 | 311A583 | 616A583 |
| 3      | Socket contact             | 611A021 | 311A021 | 616A021 |
| 4      | Color-coded voltage gasket | 611AB26 | 613AB26 | 313AB26 |
|        |                            | 611AR26 | 613AR26 | 313AR26 |
|        |                            | 611AV26 | 613AV26 | 313AV26 |
|        |                            | 611AN26 | 613AN26 | 313AN26 |
| 5      | Socket Casing              | 611A524 | 613A524 | 616A524 |
| 6      | Casing gasket              | 611A074 | 613A074 | 616A074 |



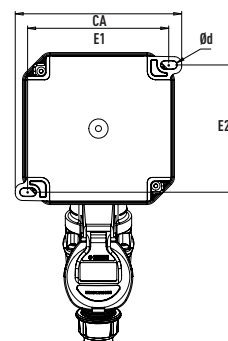
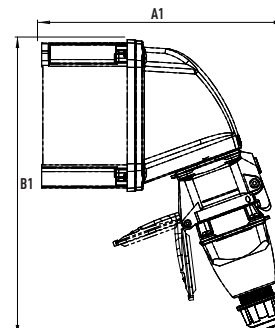
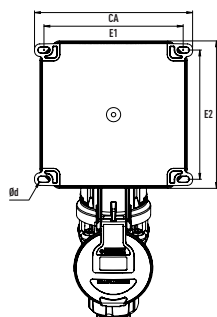
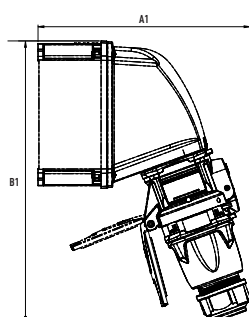
## DIMENSIONS



|             | A1  | C  | E  | H  | Ød* | ØD* |
|-------------|-----|----|----|----|-----|-----|
| <b>DSN1</b> | 147 | 58 | 42 | 25 | 4,5 | 51  |
| <b>DSN3</b> | 171 | 74 | 48 | 14 | 5   | 58  |
| <b>DSN6</b> | 184 | 84 | 55 | 16 | 5   | 68  |

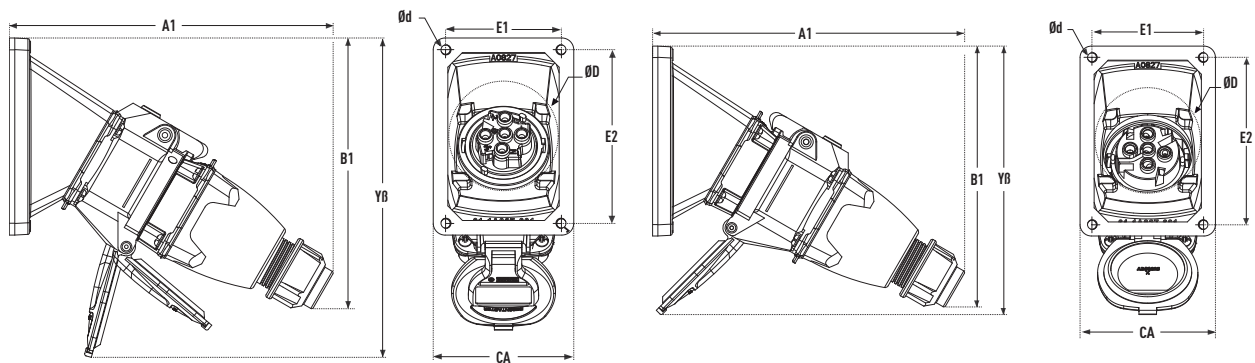


|             | A1  | B1  | CA | E1    | E2 | Ød* |
|-------------|-----|-----|----|-------|----|-----|
| <b>DSN1</b> | 196 | 154 | 68 | 36/56 | 78 | 4,5 |
| <b>DSN3</b> | 213 | 159 | 84 | 70    | 70 | 6   |
| <b>DSN6</b> | 238 | 182 | 89 | 77    | 88 | 6,5 |

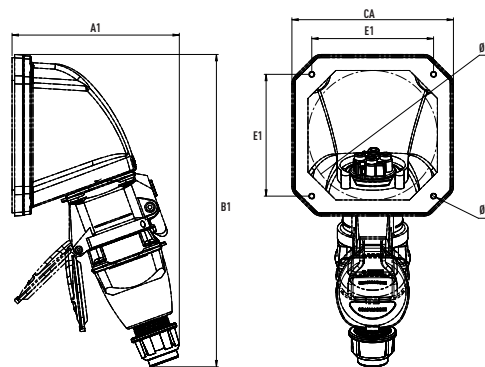


|             | A1  | B1  | CA  | E1  | E2    | Ød* |
|-------------|-----|-----|-----|-----|-------|-----|
| <b>DSN1</b> | 200 | 244 | 138 | 117 | 105,5 | 6,5 |
| <b>DSN3</b> | 207 | 262 | 138 | 117 | 105,5 | 6,5 |
| <b>DSN6</b> | 239 | 300 | 178 | 157 | 145,5 | 6,5 |

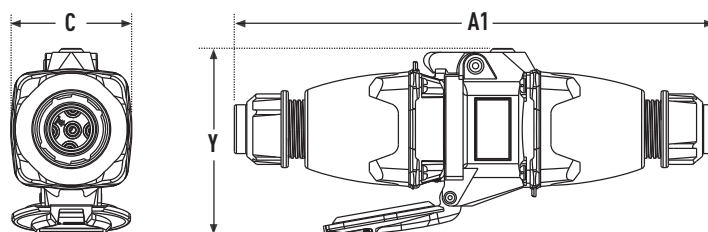
\*Ød : maximum drilling diameter.



|             | A1  | B1  | CA | E1 | E2 | Ød* | ØD* |
|-------------|-----|-----|----|----|----|-----|-----|
| <b>DSN1</b> | 177 | 148 | 77 | 63 | 95 | 5   | 51  |
| <b>DSN3</b> | 197 | 165 | 77 | 63 | 95 | 5,5 | 58  |
| <b>DSN6</b> | 212 | 178 | 77 | 63 | 95 | 5,5 | 68  |



|             | A1  | B1  | CA  | E1  | Ød* | ØD* |
|-------------|-----|-----|-----|-----|-----|-----|
| <b>DSN1</b> | 131 | 244 | 126 | 95  | 3.6 | 51  |
| <b>DSN3</b> | 138 | 262 | 126 | 95  | 3.6 | 58  |
| <b>DSN6</b> | 170 | 317 | 166 | 135 | 3,6 | 68  |



|             | A1  | C  | Y   |
|-------------|-----|----|-----|
| <b>DSN1</b> | 231 | 58 | 89  |
| <b>DSN3</b> | 265 | 74 | 116 |
| <b>DSN6</b> | 286 | 84 | 122 |

\*Ød : maximum drilling diameter.

# RETTBOX®



## ELECTROMAGNETIC SELF-EJECT DECONTACTOR™



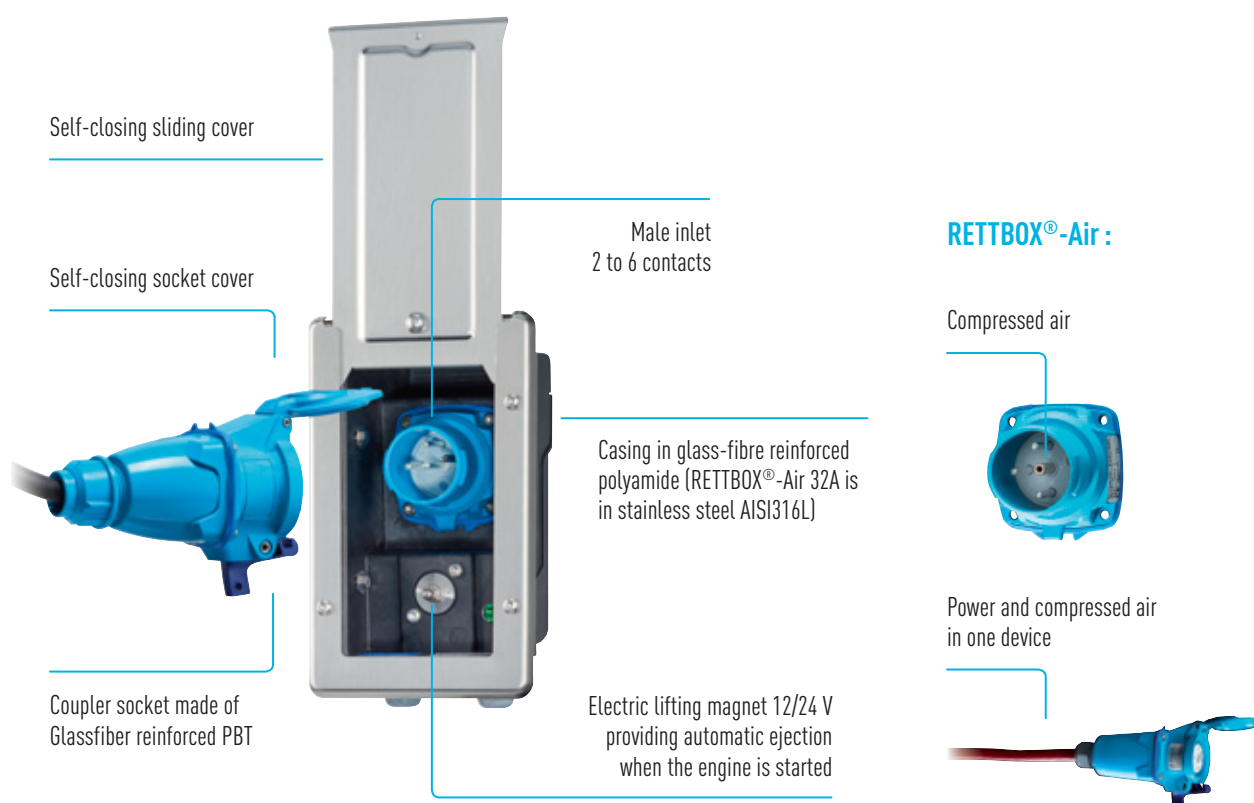
**20 A/32 A**

- For all types of emergency vehicles
- DECONTACTOR™ for power supply with secure/automatic ejection RETTBOX® or power supply with compressed air RETTBOX®-Air
- AISI 316 L stainless steel housing with electromagnetic coil (12 V DC-24 V DC)
- Automatic ejection of the coupler socket upon start-up of the vehicle
- 5 pin connector for Anti-start function
- Voltage presence indicator
- RETTBOX®-Air : Compressed air supply up to 13 bar
- More than 10,000 matings tested (20 A)

## MAIN FEATURES

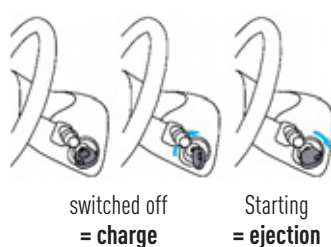
|                                                     | RETTBOX® (20 A)                 | RETTBOX®-Air (20 A)             | RETTBOX® (32 A) | RETTBOX®-Air (32 A) |
|-----------------------------------------------------|---------------------------------|---------------------------------|-----------------|---------------------|
| Front                                               | stainless steel                 | stainless steel                 | stainless steel | stainless steel     |
| Box                                                 | glassfiber reinforced polyamide | glassfiber reinforced polyamide | stainless steel | stainless steel     |
| Protection mode (closed cover)                      | IP55                            | IP55                            | IP55            | IP55                |
| Self-closing coupler socket                         | IP55                            | IP55                            | IP55            | IP55                |
| Front dimensions (LxH) in mm                        | 114 x 184                       | 114 x 184                       | 132 x 188       | 132 x 188           |
| Cut-out dimensions on vehicle's frame (LxHxP) in mm | 83 x 163 x 94                   | 83 x 163 x 94                   | 103 x 173 x 145 | 103 x 173 x 145     |
| Coupler socket cable supplied                       | 4 m                             | 4 m*                            | 4 m             | 4 m*                |
| Auxiliary contacts (optional)                       | 2 aux                           | 1 aux                           | 3 aux           | 3 aux               |
| Weight (excluding coupler socket)                   | 1 200 g                         | 1 200 g                         | 3 200 g         | 3 200 g             |
| Built-in DECONTACTOR™                               | 20 A                            | 20 A                            | 32 A            | 32 A                |
| Compressed air duct                                 | no                              | up to 13 bars                   | no              | up to 13 bars       |

\* with duct for compressed air



## ENSURE SPEED AND SAFETY

- 1 Loading box connected to the electrical system of the vehicle.
- 2 Automatic ejection of the coupler socket upon start-up of the vehicle by way of an electric lifting magnet.
- 3 Protection against water and dust by means of a self-closing cover.







## ENCLOSURE WITH INLET RETTBOX®



Box  
6116015RK412U

## COUPLER SOCKET RETTBOX®



Coupler socket  
6113015RK4L

### RETTBOX® (20 A)

**ENCLOSURE WITH INLET**  
supplied with 4 m cable



**COUPLER SOCKET**  
pre-wired, cable  
4 m included



|          |               |                                         |               |             |
|----------|---------------|-----------------------------------------|---------------|-------------|
| 230 V AC | 1P+N+E        | RETTBOX® with 12 V relay and male inlet | 6116015RK412U | 6113015RK4L |
| 230 V AC | 1P+N+E        | RETTBOX® with 24 V relay and male inlet | 6116015RK424U | 6113015RK4L |
| 230 V AC | 1P+N+E+2 aux. | RETTBOX® with 12 V relay and male inlet | 6116175RK412U | 6113175RK4L |
| 230 V AC | 1P+N+E+2 aux. | RETTBOX® with 24 V relay and male inlet | 6116175RK424U | 6113175RK4L |
| 24 V AC  | 2P DC*        | RETTBOX® with 24 V relay and male inlet | 6116089RK424U | 6113089RK4L |
| 12 V AC  | 2P DC*        | RETTBOX® with 12 V relay and male inlet | 6116059RK412U | 6113059RK4L |

\*LED not available for these configurations.

### RETTBOX®-Air (20 A)

**ENCLOSURE WITH INLET**  
supplied with 4 m cable - compressed air conduct up  
to 13 bars



**COUPLER SOCKET**  
pre-wired, cable  
4 m included



|          |               |                                         |               |             |
|----------|---------------|-----------------------------------------|---------------|-------------|
| 230 V AC | 1P+N+E        | RETTBOX® with 12 V relay and male inlet | 6116015AK412U | 6113015AK4L |
| 230 V AC | 1P+N+E        | RETTBOX® with 24 V relay and male inlet | 6116015AK424U | 6113015AK4L |
| 230 V AC | 1P+N+E+1 aux. | RETTBOX® with 12 V relay and male inlet | 6116215AK412U | 6113215AK4L |
| 230 V AC | 1P+N+E+1 aux. | RETTBOX® with 24 V relay and male inlet | 6116215AK424U | 6113215AK4L |
| 24 V AC  | 2P DC*        | RETTBOX® with 24 V relay and male inlet | 6116089AK424U | 6113089AK4L |
| 12 V AC  | 2P DC*        | RETTBOX® with 12 V relay and male inlet | 6116059AK412U | 6113059AK4L |

\*LED not available for these configurations.  
All versions are available in 4, 8 and 12m.

FIND ALL INFORMATION  
ON OUR WEBSITE:



RETTBOX®  
USER GUIDE

## INFOS +

### LED CONTROL LIGHT

RETTBOX® (20 A, 230 V) and RETTBOX®-Air (20 A, 230 V) feature a LED signal light that indicates the presence of charging voltage.





ENCLOSURE WITH INLET **RETTBOX®**



**Box**  
3816187AK424U

COUPLER SOCKET **RETTBOX®**



**Coupler socket**  
3813187AK4L

### RETTBOX® (32 A)

**ENCLOSURE WITH INLET**  
supplied with 4 m cable



**COUPLER SOCKET**  
pre-wired, cable 4 m  
included



|          |               |                                         |               |             |
|----------|---------------|-----------------------------------------|---------------|-------------|
| 230 V AC | 1P+N+E+3 aux. | RETTBOX® with 24 V relay and male inlet | 3816187RK424U | 3813187RK4L |
| 400 V AC | 3P+N+E+1 aux. | RETTBOX® with 24 V relay and male inlet | 3816247RK424U | 3813247RK4L |

### RETTBOX®-Air (32 A)

**ENCLOSURE WITH INLET**  
supplied with 4 m cable - compressed air conduct up  
to 13 bars



**COUPLER SOCKET**  
pre-wired, cable 4 m  
included



|          |               |                                         |               |             |
|----------|---------------|-----------------------------------------|---------------|-------------|
| 230 V AC | 1P+N+E+3 aux. | RETTBOX® with 24 V relay and male inlet | 3816187AK424U | 3813187AK4L |
| 400 V AC | 3P+N+E+1 aux. | RETTBOX® with 24 V relay and male inlet | 3816247AK424U | 3813247AK4L |

## ADDITIONAL EQUIPMENT

**LEATHER PULL-GRIP** (coupler socket)



611AZIE

**CEILING BRACKET** made of stainless steel



**RETTBOX®**  
20 A

**RETTBOX®-Air**  
20 A

**RETTBOX®-Air**  
32 A

611AHUTRRR L

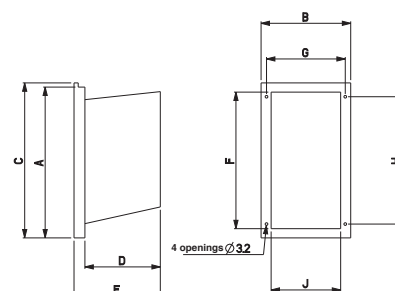
611AHUTAAA L

381AHUTAAA L

All versions are available in 4, 8 and 12m.

## DIMENSIONS

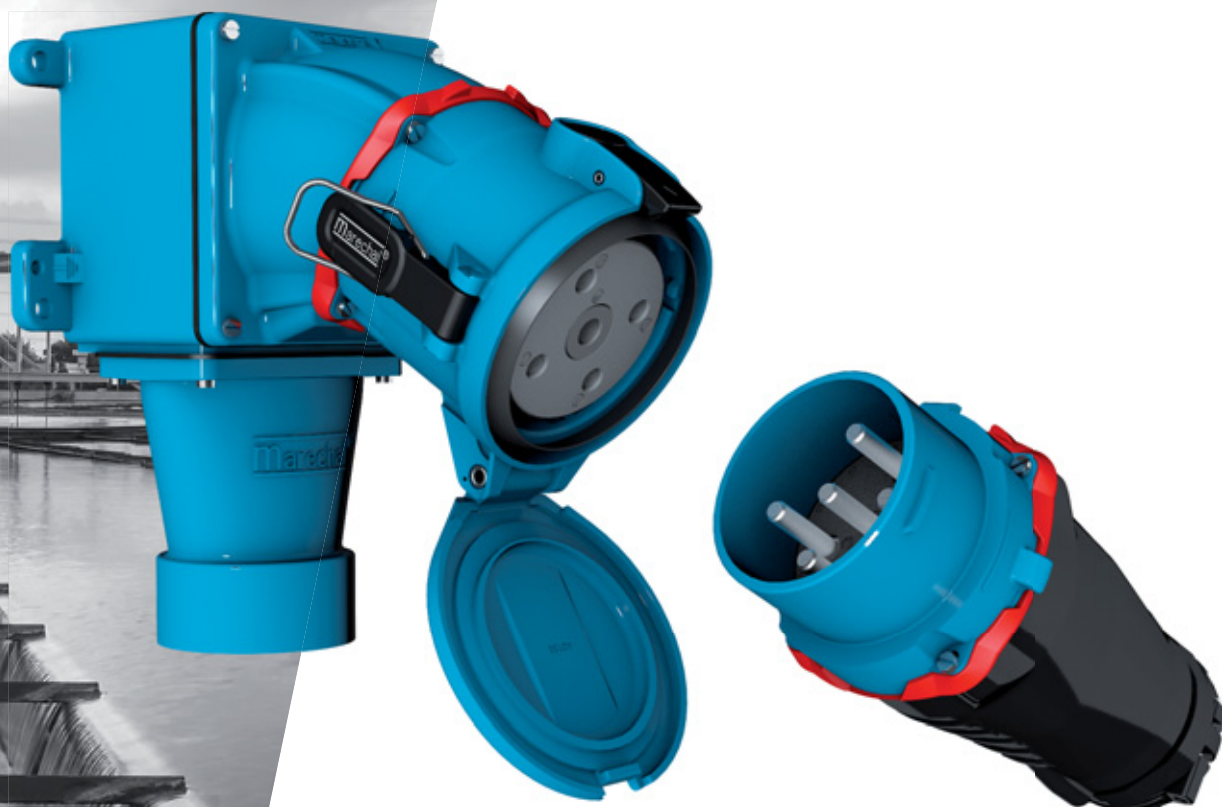
|                          | A   | B   | C   | D   | E   | F   | G   | H   | J   |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>RETTBOX® 20 A</b>     | 184 | 114 | 184 | 89  | 114 | 163 | 94  | 152 | 83  |
| <b>RETTBOX®-Air 20 A</b> | 184 | 114 | 184 | 89  | 114 | 163 | 94  | 152 | 83  |
| <b>RETTBOX® 32 A</b>     | 188 | 132 | 197 | 140 | 151 | 173 | 116 | 169 | 103 |
| <b>RETTBOX®-Air 32 A</b> | 188 | 132 | 197 | 140 | 151 | 173 | 116 | 169 | 103 |



# DS



## DECONTACTOR™ FOR INDUSTRY



**30 A/50 A/90 A/150 A/250 A/ 400 A**

- ▶ Automatic IP54/55
- ▶ Optional IP66 from 90 A
- ▶ Integrated load break switch: AC-22 and AC-23 breaking capacity
- ▶ Chemical resistant GRP UL 94 casing up to 150 A
- ▶ Metal casing (IK09) from 90 A to 400 A with epoxy paint

## TECHNICAL FEATURES

Plugs and sockets with integral load-break switching capability complying with IEC/EN 60309-1 and IEC/EN 60309-4 standards

|                                      | DS1                    | DS3        | DS6        | DS9         | DS2                   | DS4     |
|--------------------------------------|------------------------|------------|------------|-------------|-----------------------|---------|
| <b>Rated current (In)</b>            | 30 A                   | 50 A       | 90 A       | 150 A       | 250 A                 | 400 A   |
| <b>Umax</b>                          | 690 V                  | 1 000 V    | 1 000 V    | 1 000 V     | 1 000 V               | 1 000 V |
| <b>Power kW AC-22/AC-23</b>          | 15 kW                  | 30 kW      | 45 kW      | 80 kW       | 100 kW <sup>(1)</sup> |         |
| <b>AC-22 switching capability</b>    | 16 A/690 V             | 32 A/690 V | 63 A/690 V | 150 A/400 V | 250 A/400 V           |         |
| <b>AC-23 switching capability</b>    | 30 A/400 V             | 50 A/400 V | 90 A/400 V | 100 A/440 V | 160 A/440 V           |         |
| <b>Auxiliary contacts (optional)</b> | 2                      | 4          | 4          | 6           | 6                     |         |
| <b>Keying positions</b>              | 24                     | 24         | 24         | 24          | 12                    | 12      |
| <b>Ambient temperature</b>           | <<< -40°C to +60°C >>> |            |            |             |                       |         |
| <b>Short-circuit current Icc</b>     | <<< 10 kA >>>          |            |            |             |                       |         |

(1) 200 A 440 V

## MOUNTING: LOAD BREAK RELEASE BUTTON SHOULD BE AT THE TOP



### DS DECONTACTOR™ complies with:

- IEC/EN 60309-1 & IEC/EN 60309-4 European and International standards (plugs and socket-outlets for industrial purposes),
- The European Low Voltage Directive 2014/35/EU, conformity with the CE marking,
- The European 'Machine Directive' 2006/42/CE regarding equipment isolation,
- The French NF C 15-100 standard,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses,
- The decrees relating to workers' protection in Belgium, Spain and Italy,
- The switch utilization categories AC-22 A and AC-23 A described in IEC/EN 60947-3.
- The UL 1682 and 2682 (USA) and CSA C22.2 N° 182.1-07 (Canada) standards for plugs and socket-outlets.

Also certified by UL, TR CU (GOST), CCC and cCSAus (French, American, German, Russian, Chinese and Canadian inspection laboratories).



► 180° opening lid as standard

### WALL MOUNTING SOCKET DS1



Wall box poly 30°  
512B3M20



Socket-outlet  
3114017

### PLUG DS1



Straight handle poly  
512P0D21



Inlet  
3118017

## MAIN FEATURES

|                                                   |       |                           |                        |
|---------------------------------------------------|-------|---------------------------|------------------------|
| Rated current (with wiring according to standard) | 30 A  | Ambient temperature       | -40 °C to +60 °C       |
| Maximum voltage                                   | 690 V | Flexible wiring (min-max) | 2,5-6 mm <sup>2</sup>  |
| IP protection lid closed                          | IP55  | Stranded wiring (min-max) | 2,5-10 mm <sup>2</sup> |
| IP protection plug connected                      | IP54  | Other wiring              | on request             |
| Shock resistance                                  | IK08  | Keying positions          | 24                     |

### Load-break capability of the DECONTACTOR™

|                                                           |                              |
|-----------------------------------------------------------|------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | 30 A/690 V                   |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | (30 A/500 V) or (16 A/690 V) |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 30 A/400 V                   |
| Short-circuit current I <sub>cc</sub>                     | 10 kA                        |
| Power kW AC-22/AC-23                                      | 15 kW                        |

### SOCKET-OUTLET female DS1 (30 A)



### INLET male DS1 (30 A)



Dual-voltage socket-outlet (see p. 7)

|                                   |              |            |            |
|-----------------------------------|--------------|------------|------------|
| 20-24 V AC                        | 2P           | 311408A    | 311808A    |
| 220-250 V AC                      | 1P+N+E       | 3114015    | 3118015    |
| 380-440 V AC                      | 3P+E         | 3114013    | 3118013    |
| 220-250 V AC 380-440 V AC         | 3P+N+E       | 3114017    | 3118017    |
| 660-690 V AC                      | 3P+E         | 3114193    | 3118193    |
| 380-400 V AC 660-690 V AC         | 3P+N+E       | 3114197    | 3118197    |
| Up to 500 V AC - Auxiliaries 30 A | + 2 contacts | Ref. + 972 | Ref. + 972 |

► Other voltages, frequencies and contact configurations are available (see page 10).



For a black colour GRP housing replace the second reference character 1 with 5.

## INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 57.







▶ 180° opening lid as standard

## WALL MOUNTING SOCKET DS3



Wall box poly 30°  
513B3M25



Socket-outlet  
3134017

## PLUG DS3



Straight handle poly  
513POD30



Inlet  
3138017

## MAIN FEATURES

|                                                   |         |                           |                  |
|---------------------------------------------------|---------|---------------------------|------------------|
| Rated current (with wiring according to standard) | 50 A    | Ambient temperature       | -40 °C to +60 °C |
| Maximum voltage                                   | 1 000 V | Flexible wiring (min-max) | 6-16 mm²         |
| IP protection lid closed                          | IP55    | Stranded wiring (min-max) | 10-25 mm²        |
| IP protection plug connected                      | IP54    | Other wiring              | on request       |
| Shock resistance                                  | IK08    | Keying positions          | 24               |

## Load-break capability of the DECONTACTOR™

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | [50 A/690 V] or [45 A/1 000 V] |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | 32 A/690 V                     |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 50 A/400 V                     |
| Short-circuit current I <sub>cc</sub>                     | 10 kA                          |
| Power kW AC-22/AC-23                                      | 30 kW                          |

## SOCKET-OUTLET female DS3 (50 A)



## INLET male DS3 (50 A)



Dual-voltage socket-outlet (see p. 7)

|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| 20-24 V AC                | 2P           | 313408A    | 313808A    |
| 220-250 V AC              | 1P+N+E       | 3134015    | 3138015    |
| 380-440 V AC              | 3P+E         | 3134013    | 3138013    |
| 220-250 V AC 380-440 V AC | 3P+N+E       | 3134017    | 3138017    |
| 660-690 V AC              | 3P+E         | 3134193    | 3138193    |
| 380-400 V AC 660-690 V AC | 3P+N+E       | 3134197    | 3138197    |
| 1 000 V AC                | 3P+E         | 3134223    | 3138223    |
| Auxiliaries 16 A/400 V AC | + 2 contacts | Ref. + 972 | Ref. + 972 |
| Auxiliaries 16 A/400 V AC | + 4 contacts | Ref. + 264 | Ref. + 264 |

▶ Other voltages, frequencies and contact configurations are available (see page 10).

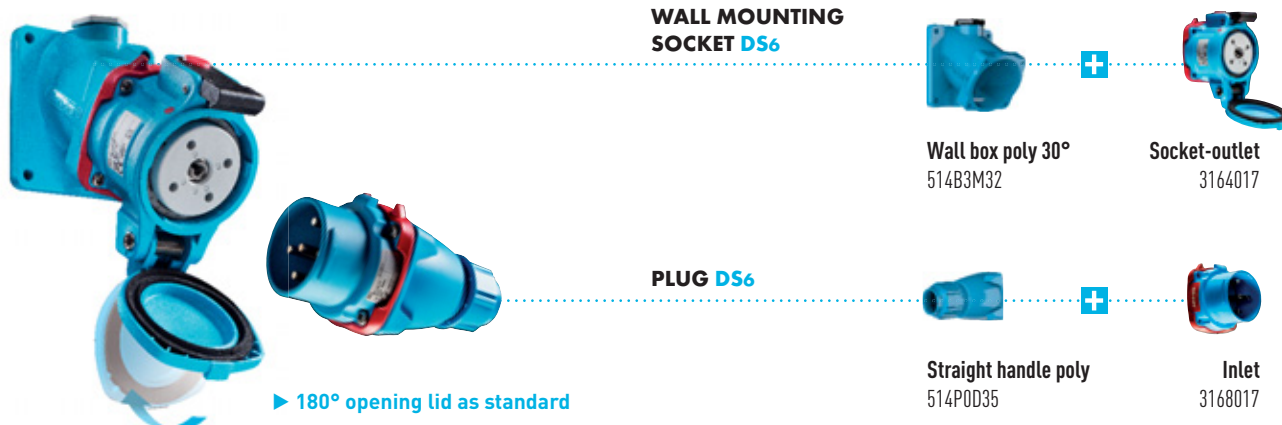


For a black colour GRP housing replace the second reference character 1 with 5.

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 57.





### MAIN FEATURES

|                                                   |         |                           |                       |
|---------------------------------------------------|---------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 90 A    | Ambient temperature       | -40 °C to +60 °C      |
| Maximum voltage                                   | 1 000 V | Flexible wiring (min-max) | 10-25 mm <sup>2</sup> |
| IP protection lid closed                          | IP55    | Stranded wiring (min-max) | 10-35 mm <sup>2</sup> |
| IP protection plug connected                      | IP54    | Other wiring              | on request            |
| Shock resistance (poly casing)                    | IK08    | Keying positions          | 24                    |

### Load-break capability of the DECONTACTOR™

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | (90 A/690 V) or (63 A/1 000 V) |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | 63 A/690 V                     |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 90 A/400 V                     |
| Short-circuit current I <sub>cc</sub>                     | 10 kA                          |
| Power kW AC-22/AC-23                                      | 45 kW                          |

**SOCKET-  
OUTLET** female  
**DS6 (90 A)**



**INLET** male  
**DS6 (90 A)**



Dual-voltage socket-outlet (see p. 7)

|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| 220-250 V AC              | 1P+N+E       | 3164015    | 3168015    |
| 380-440 V AC              | 3P+E         | 3164013    | 3168013    |
| 220-250 V AC 380-440 V AC | 3P+N+E       | 3164017    | 3168017    |
| 660-690 V AC              | 3P+E         | 3164193    | 3168193    |
| 380-400 V AC 660-690 V AC | 3P+N+E       | 3164197    | 3168197    |
| 1 000 V AC                | 3P+E         | 3164223    | 3168223    |
| Auxiliaries 5 A/500 V AC  | + 2 contacts | Ref. + 972 | Ref. + 972 |
| Auxiliaries 5 A/500 V AC  | + 4 contacts | Ref. + 264 | Ref. + 264 |
| For IP66/IP67             |              | Ref. + 600 | Ref. + 600 |

► Other voltages, frequencies and contact configurations are available (see page 10).

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For a black colour GRP housing replace the second reference character 1 with 5.

INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 57.





## WALL MOUNTING SOCKET DS6



Wall box metal 30°  
594B2M25



Socket-outlet  
3964017

## PLUG DS6



Straight handle poly  
514POD35



Inlet  
3968017

## MAIN FEATURES

|                                                   |         |                           |                  |
|---------------------------------------------------|---------|---------------------------|------------------|
| Rated current (with wiring according to standard) | 90 A    | Ambient temperature       | -40 °C to +60 °C |
| Maximum voltage                                   | 1 000 V | Flexible wiring (min-max) | 10-25 mm²        |
| IP protection lid closed                          | IP55    | Stranded wiring (min-max) | 10-35 mm²        |
| IP protection plug connected                      | IP54    | Other wiring              | on request       |
| Shock resistance (metal casing)                   | IK09    | Keying positions          | 24               |

## Load-break capability of the DECONTACTOR™

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | (90 A/690 V) or (63 A/1 000 V) |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | 63 A/690 V                     |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 90 A/400 V                     |
| Short-circuit current Icc                                 | 10 kA                          |
| Power kW AC-22/AC-23                                      | 45 kW                          |



GRP devices are not compatible with metal devices.

Dual-voltage socket-outlet (see p. 7)

## SOCKET-OUTLET female DS6 (90 A)



## INLET male DS6 (90 A)



|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| 220-250 V AC              | 1P+N+E       | 3964015    | 3968015    |
| 380-440 V AC              | 3P+E         | 3964013    | 3968013    |
| 220-250 V AC 380-440 V AC | 3P+N+E       | 3964017    | 3968017    |
| 660-690 V AC              | 3P+E         | 3964193    | 3968193    |
| 380-400 V AC 660-690 V AC | 3P+N+E       | 3964197    | 3968197    |
| 1 000 V AC                | 3P+E         | 3964223    | 3968223    |
| Auxiliaries 5 A/500 V AC  | + 2 contacts | Ref. + 972 | Ref. + 972 |
| Auxiliaries 5 A/500 V AC  | + 4 contacts | Ref. + 264 | Ref. + 264 |
| For IP66/IP67             |              | Ref. + 600 | Ref. + 600 |

► Other voltages, frequencies and contact configurations are available (see page 10).

## INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 57.





► 180° opening lid as standard



### WALL MOUNTING SOCKET DS9



Wall box metal 30°  
595E3M50



Socket-outlet  
3194017

### PLUG DS9



Straight elastomer  
555P0D35



Inlet  
3198017

## MAIN FEATURES

|                                                   |                |                           |                       |
|---------------------------------------------------|----------------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 150 A          | Ambient temperature       | -40 °C to +60 °C      |
| Maximum voltage                                   | 1 000 V        | Flexible wiring (min-max) | 25-70 mm <sup>2</sup> |
| IP protection lid closed                          | IP66/IP67/IP69 | Stranded wiring (min-max) | 25-95 mm <sup>2</sup> |
| IP protection plug connected                      | IP66/IP67/IP69 | Keying positions          | 24                    |
| Shock resistance (poly casing)                    | IK08           |                           |                       |

### Load-break capability of the DECONTACTOR™

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | [150 A/500 V] or [150 A/690 V] |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | [90 A/690 V] or [150 A/400 V]  |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 100 A/440 V                    |
| Short-circuit current I <sub>cc</sub>                     | 10 kA                          |
| Power kW AC-22/AC-23                                      | 80 kW                          |

### SOCKET-OUTLET female DS9 (150 A)



### INLET male DS9 (150 A)



Dual-voltage socket-outlet (see p. 7)

|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| 220-250 V AC              | 1P+N+E       | 3194015    | 3198015    |
| 380-440 V AC              | 3P+E         | 3194013    | 3198013    |
| 220-250 V AC 380-440 V AC | 3P+N+E       | 3194017    | 3198017    |
| 660-690 V AC              | 3P+E         | 3194193    | 3198193    |
| 380-400 V AC 660-690 V AC | 3P+N+E       | 3194197    | 3198197    |
| 1 000 V AC                | 3P+E         | 3194223    | 3198223    |
| Auxiliaries 10 A/400 V AC | + 2 contacts | Ref. + 262 | Ref. + 262 |
| Auxiliaries 10 A/400 V AC | + 4 contacts | Ref. + 264 | Ref. + 264 |
| Auxiliaries 10 A/400 V AC | + 6 contacts | Ref. + 976 | Ref. + 976 |

► Other voltages, frequencies and contact configurations are available (see page 10).

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For a black colour GRP housing replace the second reference character 1 with 5.

INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 57.





## MAIN FEATURES

|                                                   |                           |                           |                  |
|---------------------------------------------------|---------------------------|---------------------------|------------------|
| Rated current (with wiring according to standard) | 150 A                     | Ambient temperature       | -40 °C to +60 °C |
| Maximum voltage                                   | 1 000 V                   | Flexible wiring (min-max) | 25-70 mm²        |
| IP protection lid closed                          | IP55 (optional IP66/IP67) | Stranded wiring (min-max) | 25-95 mm²        |
| IP protection plug connected                      | IP54 (optional IP66/IP67) | Keying positions          | 24               |
| Shock resistance (metal casing)                   | IK09                      |                           |                  |

### Load-break capability of the DECONTACTOR™

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | (150 A/500 V) or (150 A/690 V) |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | (90 A/690 V) or (150 A/400 V)  |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 100 A/440 V                    |
| Short-circuit current Icc                                 | 10 kA                          |
| Power kW AC-22/AC-23                                      | 80 kW                          |



GRP devices are not compatible with metal devices.

Dual-voltage socket-outlet (see p. 7)

SOCKET-OUTLET female DS9 (150 A)



INLET male DS9 (150 A)



|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| 220-250 V AC              | 1P+N+E       | 3994015    | 3998015    |
| 380-440 V AC              | 3P+E         | 3994013    | 3998013    |
| 220-250 V AC 380-440 V AC | 3P+N+E       | 3994017    | 3998017    |
| 660-690 V AC              | 3P+E         | 3994193    | 3998193    |
| 380-400 V AC 660-690 V AC | 3P+N+E       | 3994197    | 3998197    |
| 1 000 V AC                | 3P+E         | 3994223    | 3998223    |
| Auxiliaries 10 A/400 V AC | + 2 contacts | Ref. + 262 | Ref. + 262 |
| Auxiliaries 10 A/400 V AC | + 4 contacts | Ref. + 264 | Ref. + 264 |
| Auxiliaries 10 A/400 V AC | + 6 contacts | Ref. + 976 | Ref. + 976 |
| For IP66/IP67             |              | Ref. + 600 | Ref. + 600 |

► Other voltages, frequencies and contact configurations are available (see page 10).

INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 57.







### MAIN FEATURES

|                                                   |           |                           |                        |
|---------------------------------------------------|-----------|---------------------------|------------------------|
| Rated current (with wiring according to standard) | 250 A     | Ambient temperature       | -40 °C to +60 °C       |
| Maximum voltage                                   | 1 000 V   | Flexible wiring (min-max) | 70-95 mm <sup>2</sup>  |
| IP protection lid closed                          | IP66/IP67 | Stranded wiring (min-max) | 70-120 mm <sup>2</sup> |
| IP protection plug connected                      | IP66/IP67 | Keying positions          | 12                     |
| Shock resistance                                  | IK10      |                           |                        |

### Load-break capability of the DECONTACTOR™

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | (250 A/500 V) or (200 A/690 V) |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | (250 A/400 V) or (125 A/690 V) |
| Load-break capability according to IEC/EN 60947-3/AC-23 A | 160 A/440 V                    |
| Short-circuit current I <sub>cc</sub>                     | 10 kA                          |

### SOCKET-OUTLET female DS<sub>2</sub> (250 A)

### INLET male DS<sub>2</sub> (250 A)

Dual-voltage socket-outlet (see p. 7)

|                           |                     |            |            |
|---------------------------|---------------------|------------|------------|
| 380-440 V AC              | 3P+E                | 3924013    | 3928013    |
| 220-250 V AC 380-440 V AC | 3P+N+E              | 3924017    | 3928017    |
| 660-690 V AC              | 3P+E                | 3924193    | 3928193    |
| 380-400 V AC 660-690 V AC | 3P+N+E              | 3924197    | 3928197    |
| 1 000 V AC                | 3P+E                | 3924223    | 3928223    |
| Auxiliaries 5 A/400 V AC  | 3P+N+E + 2 contacts | Ref. + 972 | Ref. + 972 |
| Auxiliaries 5 A/400 V AC  | 3P+E + 4 contacts   | Ref. + 174 | Ref. + 174 |
| Auxiliaries 5 A/400 V AC  | 3P+E + 6 contacts   | Ref. + 976 | Ref. + 976 |

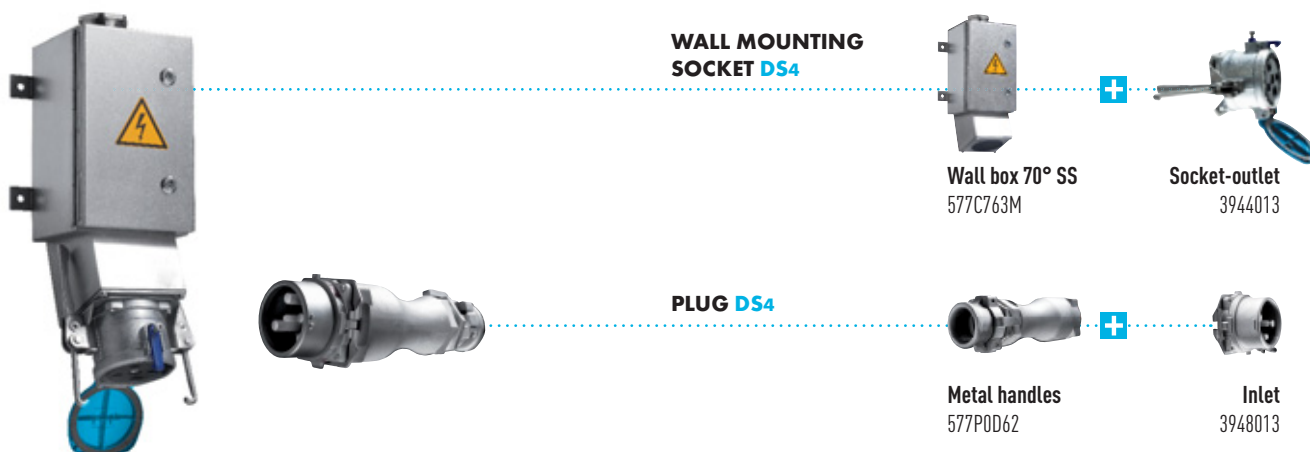
► Other voltages, frequencies and contact configurations are available (see page 10).

For more than 2 auxiliary contacts, please contact us.

### INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 57.



### MAIN FEATURES

|                                                   |                           |                                                        |             |
|---------------------------------------------------|---------------------------|--------------------------------------------------------|-------------|
| Rated current (with wiring according to standard) | 400 A                     | Flexible wiring (min-max)                              | 95-150 mm²  |
| Maximum voltage                                   | 1 000 V                   | Stranded wiring (min-max)                              | 95-185 mm²  |
| Protection                                        | IP54 (optional IP66/IP67) | Connector only: not to be disconnected while energised |             |
| Shock resistance                                  | IK09                      | Pilot contacts 5 A/400 V AC for electrical interlock   | 2           |
| Ambient temperature                               | -40 °C to +60 °C          | Mechanical interlock                                   | as standard |
| Keying positions                                  | 12                        | Inlet closing device in stainless steel                | as standard |

**SOCKET-OUTLET** female  
**DS4 (400 A)**



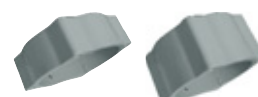
**INLET** male  
**DS4 (400 A)**



|              |             |         |         |
|--------------|-------------|---------|---------|
| 380-440 V AC | 3P+E+ 2pil. | 3944013 | 3948013 |
| 660-690 V AC | 3P+E+ 2pil. | 3944193 | 3948193 |
| 1 000 V AC   | 3P+E+ 2pil. | 3944223 | 3948223 |

### REMEMBER TO ORDER AN OPTIONAL SPACER

Creates more space for easier wiring,  
thickness 68 mm : 577M0-68,  
thickness 115 mm : 577M0-115.



INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 57.





## OPTIONS (DETAILS ON PAGE 216)

|                                                                                                                                                                                                                   | DS1<br>size 2                        | DS3<br>size 3                        | DS6<br>size 4                               | DS9<br>size 5                             | DS2<br>size 6                             | DS4<br>size 7                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| <b>INDUSTRIAL-DOMESTIC ADAPTERS</b>                                                                                                                                                                               |                                      |                                      |                                             |                                           |                                           |                                           |
|  Industrial inlet MARECHAL®<br>1P+N+E domestic socket-outlet<br>10/16 A 230 V fuse protection 10 A<br>and 16 A.                  | 3118015D11*                          | NA                                   | NA                                          | NA                                        | NA                                        | NA                                        |
|  * All these plug adapters are available to foreign standards: replace D11 by D40 for UK, D30 for Germany/NL/Lux, D06 for Italy. |                                      |                                      |                                             |                                           |                                           |                                           |
| <b>LOCKING PIN FOR 2 PADLOCKS Ø 8 mm (PADLOCKS NOT SUPPLIED)</b>                                                                                                                                                  |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                  | Socket-outlet<br>ref. + 843          | Socket-outlet<br>ref. + 843          | Socket-outlet<br>ref. + 843                 | Socket-outlet<br>ref. + 843               | Socket-outlet<br>ref. + 843               | Socket-outlet<br>ref. + 843               |
| <b>SAFETY HASP FOR UP TO 6 PADLOCKS</b>                                                                                                                                                                           |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                  | 873A541                              | 873A541                              | 873A541                                     | 873A541                                   | 873A541                                   | 873A541                                   |
| <b>LARGER RELEASE BUTTON</b>                                                                                                                                                                                      |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                  | Socket-outlet<br>ref. + 453          | Socket-outlet<br>ref. + 453          | Socket-outlet<br>ref. + 453                 | Socket-outlet<br>ref. + 453               |                                           |                                           |
| <b>INLET CAP</b>                                                                                                                                                                                                  |                                      |                                      |                                             |                                           |                                           |                                           |
|  IP66/IP67                                                                                                                     | 311A426                              | 313A426                              | 316A426                                     |                                           |                                           |                                           |
|  IP66/IP67                                                                                                                     |                                      |                                      |                                             | 319A426                                   | 392A426                                   | 392A426                                   |
| <b>IN-LINE CONNECTIONS (A PAIR OF FINGER DRAW PLATES TO AID CLOSING)</b>                                                                                                                                          |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                | 613A346                              | 616A346                              | 316A346                                     |                                           |                                           |                                           |
| <b>180° OPENING LID</b>                                                                                                                                                                                           |                                      |                                      |                                             |                                           |                                           |                                           |
| Standard on poly housing                                                                                                                                                                                          | Standard                             | Standard                             | Metal socket<br>ref. + 10                   | Metal socket<br>ref. + 10                 | Metal socket<br>ref. + 10                 | NA                                        |
| <b>SELF CLOSING/SELF RETURNING LID (ACCORDING TO MODEL)</b>                                                                                                                                                       |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                | Socket-outlet<br>+ R<br>Closing IP55 | Socket-outlet<br>+ R<br>Closing IP55 | GRP<br>Socket-outlet<br>+ R<br>Closing IP55 | Socket-outlet<br>+ R<br>Returning<br>IP40 | Socket-outlet<br>+ R<br>Returning<br>IP40 | Socket-outlet<br>+ R<br>Returning<br>IP40 |
| <b>METAL SOCKET CASING WITH SELF RETURN &amp; 180° OPENING LID</b>                                                                                                                                                |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                                                                                                   |                                      |                                      | Socket-outlet<br>ref. + 18                  | Socket-outlet<br>ref. + 18                | Socket-outlet<br>ref. + 18                |                                           |
| <b>SELF-CLOSING LID FOR INLET LOCKABLE (IP54)</b>                                                                                                                                                                 |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                | 311A226                              | 313A226                              | 316A226 DS6 GRP<br>396A226 DS6 metal        |                                           |                                           |                                           |
| <b>IP66/IP67 SOCKET-OUTLET AND INLET (RECOMMENDED IN THE CASE OF COUPLER SOCKET)</b>                                                                                                                              |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                                                                                                   | NA                                   | NA                                   | Ref. + 600                                  | Ref. metal<br>+ 600                       | Ref. + 600                                | Ref. + 600                                |
| <b>SELF-EJECTING (SEE REFERENCES AND OPTIONS DETAILS PAGE 228)</b>                                                                                                                                                |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                |                                      |                                      |                                             |                                           |                                           |                                           |
| <b>ELECTROMAGNETIC COMPATIBILITY (EMC) (SEE DETAIL PAGE 223)</b>                                                                                                                                                  |                                      |                                      |                                             |                                           |                                           |                                           |
|                                                                                                                                                                                                                   |                                      |                                      | Metal socket<br>ref. +EMC                   | Metal socket<br>ref. +EMC                 | Metal socket<br>ref. +EMC                 |                                           |



# ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| BOXES                                                                               |  |  | DS1<br>size 2 | DS3<br>size 3 | DS6<br>size 4 | DS9<br>size 5 | DS2<br>size 6 | DS4<br>size 7 |  |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------------------------------------------------------------------|
| <b>POLY BOX</b>                                                                     |                                                                                   |                                                                                   |               |               |               |               |               |               |                                                                                     |
|    | 30°                                                                               | M20                                                                               | 512B3M20      |               |               |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M25                                                                               | 512B3M25      | 513B3M25      |               |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M32                                                                               |               |               | 514B3M32      |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M40                                                                               |               |               | 514B3M40      |               |               |               |                                                                                     |
|    | 30°                                                                               | M20                                                                               | 552B3M20      |               |               |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M25                                                                               | 552B3M25      | 553B3M25      |               |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M32                                                                               |               |               | 554B3M32      |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M40                                                                               |               |               | 554B3M40      |               |               |               |                                                                                     |
| <b>METAL BOX (+ EARTHING WIRE)</b>                                                  |                                                                                   |                                                                                   |               |               |               |               |               |               |                                                                                     |
|    | 20°                                                                               | M20                                                                               | 592B2M20      | 593B2M20      |               |               |               |               |                                                                                     |
|                                                                                     | 20°                                                                               | M25                                                                               | 592B2M25      | 593B2M25      | 594B2M25      |               |               |               | Ref. +EMC                                                                           |
|                                                                                     | 20°                                                                               | M32                                                                               |               | 593B2M32      | 594B2M32      |               |               |               | Ref. +EMC                                                                           |
|                                                                                     | 20°                                                                               | M40                                                                               |               |               | 594B2M40      |               |               |               | Ref. +EMC                                                                           |
| <b>POLY BOX + POLY SLEEVE (BLACK VERSION SEE ACCESSORIES DXN PAGE 169)</b>          |                                                                                   |                                                                                   |               |               |               |               |               |               |                                                                                     |
|   | 70°                                                                               | Without Hole                                                                      | 512C7000      | 513C7000      | 514C7000      |               |               |               |                                                                                     |
|                                                                                     | 70°                                                                               | Ø M20                                                                             | 512C7M20      |               |               |               |               |               |                                                                                     |
|                                                                                     | 70°                                                                               | Ø M25                                                                             | 512C7M25      | 513C7M25      |               |               |               |               |                                                                                     |
|                                                                                     | 70°                                                                               | Ø M32                                                                             | 512C7M32      | 513C7M32      | 514C7M32      |               |               |               |                                                                                     |
|                                                                                     | 70°                                                                               | Ø M40                                                                             | 512C7M40      | 513C7M40      | 514C7M40      |               |               |               |                                                                                     |
| <b>METAL BOX (+ EARTHING WIRE) + POLY SLEEVE</b>                                    |                                                                                   |                                                                                   |               |               |               |               |               |               |                                                                                     |
|  | 30°                                                                               | M20                                                                               | 512C3M20      | 513C3M20      |               |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M25                                                                               | 512C3M25      | 513C3M25      | 514C3M25      |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M32                                                                               | 512C3M32      | 513C3M32      | 514C3M32      | 515C3M32      |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M40                                                                               | 512C3M40      | 513C3M40      | 514C3M40      | 515C3M40      |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M50                                                                               |               |               | 514C3M50      | 515C3M50      |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M63                                                                               |               |               |               | 515C3M63      |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M63                                                                               |               |               |               |               |               |               |                                                                                     |
| <b>METAL BOXES WITH METAL SLEEVE (+ EARTHING WIRE)</b>                              |                                                                                   |                                                                                   |               |               |               |               |               |               |                                                                                     |
|  | 30°                                                                               | M20                                                                               | 592C3M20      | 593C3M20      |               |               |               |               |                                                                                     |
|                                                                                     | 30°                                                                               | M25                                                                               | 592C3M25      | 593C3M25      | 594C3M25      |               |               |               | Ref. +EMC                                                                           |
|                                                                                     | 30°                                                                               | M32                                                                               | 592C3M32      | 593C3M32      | 594C3M32      | 595C3M32      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 30°                                                                               | M40                                                                               |               | 593C3M40      | 594C3M40      | 595C3M40      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 30°                                                                               | M50                                                                               |               |               | 594C3M50      | 595C3M50      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 30°                                                                               | M63                                                                               |               |               |               | 595C3M63      |               |               | Ref. +EMC                                                                           |
|  | 0°                                                                                | M20                                                                               | 592C0M20      | 593C0M20      |               |               |               |               |                                                                                     |
|                                                                                     | 0°                                                                                | M25                                                                               | 592C0M25      | 593C0M25      | 594C0M25      |               |               |               | Ref. +EMC                                                                           |
|                                                                                     | 0°                                                                                | M32                                                                               | 592C0M32      | 593C0M32      | 594C0M32      | 595C0M32      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 0°                                                                                | M40                                                                               |               | 593C0M40      | 594C0M40      | 595C0M40      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 0°                                                                                | M50                                                                               |               |               | 594C0M50      | 595C0M50      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 0°                                                                                | M63                                                                               |               |               |               | 595C0M63      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 0°                                                                                | M63                                                                               |               |               |               |               |               |               |                                                                                     |
|  | 70°                                                                               | M20                                                                               |               | 593C7M20      |               |               |               |               |                                                                                     |
|                                                                                     | 70°                                                                               | M25                                                                               |               | 593C7M25      | 594C7M25      |               |               |               | Ref. +EMC                                                                           |
|                                                                                     | 70°                                                                               | M32                                                                               |               | 593C7M32      | 594C7M32      | 595C7M32      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 70°                                                                               | M40                                                                               |               | 593C7M40      | 594C7M40      | 595C7M40      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 70°                                                                               | M50                                                                               |               |               | 594C7M50      | 595C7M50      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 70°                                                                               | M63                                                                               |               |               |               | 595C7M63      |               |               | Ref. +EMC                                                                           |
|                                                                                     | 70°                                                                               | M63                                                                               |               |               |               |               |               |               |                                                                                     |



## ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| BOXES                                                                             |  |  | DS1<br>size 2 | DS3<br>size 3 | DS6<br>size 4 | DS9<br>size 5 | DS2<br>size 6 | DS4<br>size 7 |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------------------------------------------------------------------|
| METAL BOXES WITH METAL SLEEVE (+ EARTHING WIRE)                                   |                                                                                   |                                                                                   |               |               |               |               |               |               |                                                                                     |
|  | 0°                                                                                | M50                                                                               |               |               |               | 595E0M50      |               |               | Ref. +EMC                                                                           |
|                                                                                   | 30°                                                                               | M50                                                                               |               |               |               | 595E3M50      |               |               | Ref. +EMC                                                                           |
|                                                                                   | 30°                                                                               | M63                                                                               |               |               |               | 595E3M63      |               |               | Ref. +EMC                                                                           |
|  | 70°                                                                               | M50                                                                               |               |               |               | 595E7M50      |               |               | Ref. +EMC                                                                           |
|                                                                                   | 70°                                                                               | M63                                                                               |               |               |               | 595E7M63      |               |               | Ref. +EMC                                                                           |
|  | 60°                                                                               | M50                                                                               |               |               |               |               | 596E6M50      |               | Ref. +EMC                                                                           |
|                                                                                   | 60°                                                                               | M63                                                                               |               |               |               |               | 596E6M63      |               | Ref. +EMC                                                                           |
|                                                                                   | 60°                                                                               | M75                                                                               |               |               |               |               | 596E6M75      |               | Ref. +EMC                                                                           |
| METAL BOXES WITH METAL SLEEVE AND METAL CABLE GLAND (+ EARTHING WIRE)             |                                                                                   |                                                                                   |               |               |               |               |               |               |                                                                                     |
|  | 70°                                                                               | 35-46 mm                                                                          |               |               |               |               |               | 577C763M      |                                                                                     |
|                                                                                   | 70°                                                                               | 48-65 mm                                                                          |               |               |               |               |               | 577C775M      |                                                                                     |

| SLEEVE                                                                              |  | DS1<br>size 2 | DS3<br>size 3 | DS6<br>size 4 | DS9<br>size 5 | DS2<br>size 6 | DS4<br>size 7 |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------------------------------------------------------------------------|
| POLY SLEEVE                                                                         |                                                                                     |               |               |               |               |               |               |                                                                                       |
|  | 30°                                                                                 | 512M3         | 513M3         | 514M3         | 515M3         |               |               |                                                                                       |
|  | 30°                                                                                 | 552M3         | 553M3         | 554M3         | 555M3         |               |               |                                                                                       |
|  | 70°                                                                                 | 512M7         | 513M7         | 514M7         |               |               |               |                                                                                       |
|  | 70°                                                                                 | 552M7         | 553M7         |               |               |               |               |                                                                                       |
| METAL SLEEVE                                                                        |                                                                                     |               |               |               |               |               |               |                                                                                       |
|  | 0°                                                                                  | 592M0         | 593M0         | 594M0         | 595M0         | 596M0         |               | Ref. +EMC                                                                             |
|  | 30°                                                                                 | 592M3         | 593M3         | 594M3         | 595M3         |               |               | Ref. +EMC                                                                             |
|  | 60°                                                                                 |               |               |               |               | 596M6         |               | Ref. +EMC                                                                             |
|  | 60°                                                                                 |               |               |               |               |               | 597M6         |                                                                                       |
|  | 70°                                                                                 |               | 593M7         | 594M7         | 595M7         |               |               | Ref. +EMC                                                                             |



| HANDLE                                                                                                                        |  | DS1<br>size 2 | DS3<br>size 3 | DS6<br>size 4 | DS9<br>size 5 | DS2<br>size 6 | DS4<br>size 7 |  |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------------------------------------------------------------------|
| <b>POLY HANDLE WITH GLAND</b>                                                                                                 |                                                                                   |               |               |               |               |               |               |                                                                                     |
|                                              | 5-21 mm                                                                           | 512P0D21      |               |               |               |               |               |                                                                                     |
|                                                                                                                               | 10-30 mm                                                                          |               | 513P0D30      |               |               |               |               |                                                                                     |
|                                                                                                                               | 13-35 mm                                                                          |               |               | 514P0D35      |               |               |               |                                                                                     |
|                                              | 5-21 mm                                                                           | 552P0D21      |               |               |               |               |               |                                                                                     |
|                                                                                                                               | 10-30 mm                                                                          |               | 553P0D30      |               |               |               |               |                                                                                     |
|                                                                                                                               | 13-35 mm                                                                          |               |               | 554P0D35      |               |               |               |                                                                                     |
| <br>For mechanical<br>mooring,<br>without IP | 40-63 mm                                                                          |               |               |               |               | 516P0D63      |               |                                                                                     |
| <b>ELASTOMER HANDLE WITH GLAND</b>                                                                                            |                                                                                   |               |               |               |               |               |               |                                                                                     |
|                                              | 18-25 mm                                                                          |               |               |               | 555P0D25      |               |               | Ref. +443                                                                           |
|                                                                                                                               | 25-35 mm                                                                          |               |               |               | 555P0D35      | 556P0D35      |               | Ref. +443                                                                           |
|                                                                                                                               | 35-45 mm                                                                          |               |               |               | 555P0D45      | 556P0D45      |               | Ref. +443                                                                           |
|                                                                                                                               | 45-49 mm                                                                          |               |               |               | 555P0D49      | 556P0D49      |               | Ref. +443                                                                           |
| <b>POLY HANDLE WITH POLY CABLE GLAND (BLACK COLOR VERSION REPLACE 1 BY 5)</b>                                                 |                                                                                   |               |               |               |               |               |               |                                                                                     |
|                                            | 5-12 mm                                                                           | 512P020P      |               |               |               |               |               | Ref. +443                                                                           |
|                                                                                                                               | 9-18 mm                                                                           | 512P025P      | 513P025P      |               |               |               |               | Ref. +443                                                                           |
|                                                                                                                               | 14-25 mm                                                                          | 512P032P      | 513P032P      | 514P032P      | 515P032P      |               |               | Ref. +443                                                                           |
|                                                                                                                               | 18-32 mm                                                                          | 512P040P      | 513P040P      | 514P040P      | 515P040P      |               |               | Ref. +443                                                                           |
|                                                                                                                               | 24-38 mm                                                                          |               |               | 514P050P      | 515P050P      |               |               | Ref. +443                                                                           |
|                                                                                                                               | 35-48 mm                                                                          |               |               |               | 515P063P      | 516P063P      |               |                                                                                     |
| <b>POLY HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY, BLACK COLOR VERSION REPLACE 1 BY 5)</b>                              |                                                                                   |               |               |               |               |               |               |                                                                                     |
|                                            | M20                                                                               | 512P0M20      | 513P0M20      |               |               |               |               | Ref. +443                                                                           |
|                                                                                                                               | M25                                                                               | 512P0M25      | 513P0M25      |               |               |               |               | Ref. +443                                                                           |
|                                                                                                                               | M32                                                                               | 512P0M32      | 513P0M32      | 514P0M32      |               |               |               | Ref. +443                                                                           |
|                                                                                                                               | M40                                                                               | 512P0M40      | 513P0M40      | 514P0M40      |               |               |               | Ref. +443                                                                           |
|                                                                                                                               | M50                                                                               |               |               | 514P0M50      | 515P0M50      |               |               |                                                                                     |
|                                                                                                                               | M63                                                                               |               |               |               | 515P0M63      | 516P0M63      |               |                                                                                     |
|                                                                                                                               | M75                                                                               |               |               |               |               | 516P0M75      |               |                                                                                     |

### LEGEND FOR OPTIONAL ACCESSORIES



Angle



Threading or gland size



EMC option



HT 240° C



Self-ejection

INFO +



## ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| HANDLE                                                 |          | DS1<br>size 2 | DS3 - DSHT<br>size 3 | DS6<br>size 4 | DS9<br>size 5 | DS2<br>size 6 | DS4<br>size 7 |                      |
|--------------------------------------------------------|----------|---------------|----------------------|---------------|---------------|---------------|---------------|----------------------|
| METAL HANDLE WITH METAL GLAND (+ EARTHING WIRE)        |          |               |                      |               |               |               |               |                      |
|                                                        | 7-13 mm  | 592P020M      | 593P020M             |               |               |               |               |                      |
|                                                        | 8-16 mm  | 592P025M      | 593P025M             | 594P025M      |               |               |               | Ref. +EMC (9-16 mm)  |
|                                                        | 16-24 mm | 592P032M      | 593P032M             | 594P032M      | 595P032M      |               |               | Ref. +EMC (11-21 mm) |
|                                                        | 22-32 mm |               | 593P040M             | 594P040M      | 595P040M      |               |               | Ref. +EMC (19-28 mm) |
|                                                        | 34-44 mm |               |                      | 594P050M      | 595P050M      |               |               | Ref. +EMC (27-35 mm) |
|                                                        | 35-48 mm |               |                      |               | 595P063M      |               |               | Ref. +EMC (34-45 mm) |
|                                                        | 12-20 mm |               | 573P025M185          |               |               |               |               |                      |
|                                                        | 16-24 mm |               | 573P032M185          |               |               |               |               |                      |
| METAL HANDLE WITH INTEGRATED CABLE CLAMP               |          |               |                      |               |               |               |               |                      |
|                                                        | 40-54 mm |               |                      |               |               | 596P0D54      |               |                      |
|                                                        | 54-63 mm |               |                      |               |               | 596P0D63      |               |                      |
|                                                        | 53-57 mm |               |                      |               |               |               | 577P0D57      |                      |
|                                                        | 58-62 mm |               |                      |               |               |               | 577P0D62      |                      |
|                                                        | 62-68 mm |               |                      |               |               |               | 577P0D68      |                      |
|                                                        | 69-73 mm |               |                      |               |               |               | 577P0D73      |                      |
| METAL HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY) |          |               |                      |               |               |               |               |                      |
|                                                        | M20      | 592P0M20      | 593P0M20             |               |               |               |               |                      |
|                                                        | M25      | 592P0M25      | 593P0M25             | 594P0M25      |               |               |               | Ref. +EMC            |
|                                                        | M32      | 592P0M32      | 593P0M32             | 594P0M32      | 595P0M32      |               |               | Ref. +EMC            |
|                                                        | M40      |               | 593P0M40             | 594P0M40      | 595P0M40      |               |               | Ref. +EMC            |
|                                                        | M50      |               |                      | 594P0M50      | 595P0M50      | 596P0M50      |               | Ref. +EMC            |
|                                                        | M63      |               |                      |               | 595P0M63      | 596P0M63      |               | Ref. +EMC            |
|                                                        | M75      |               |                      |               |               | 596P0M75      |               | Ref. +EMC            |

### LEGEND FOR OPTIONAL ACCESSORIES



Angle



Threading or gland size



EMC option



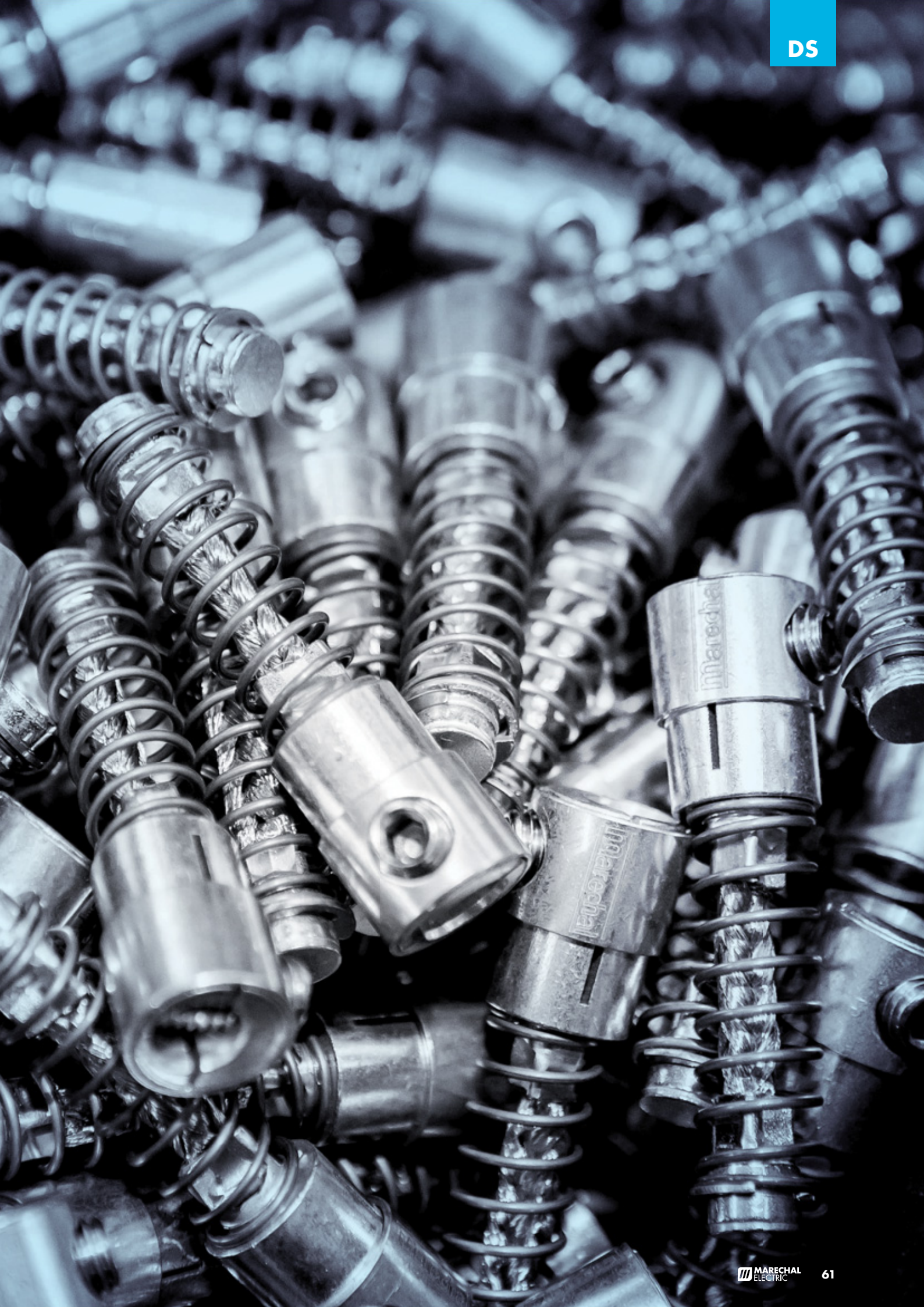
HT 240° C



Self-ejection

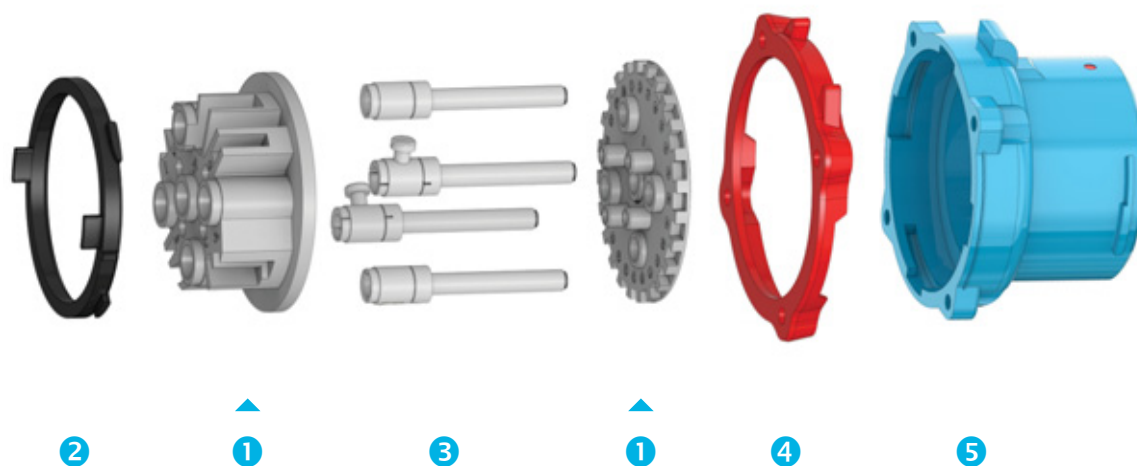
INFO +







## SPARE PARTS



| PLUG                         |  | DS1     | DS3     | DS6     | DS9     | DS2     | DS4     |
|------------------------------|--|---------|---------|---------|---------|---------|---------|
| 1 Plug interior              |  | 311A010 | 313A010 | 316A010 | 619A010 | –       | –       |
| 1 Plug interior metal + E    |  | –       | –       | 396A110 | 699A110 | 392A110 | 394A110 |
| 2 Locking ring               |  | 311A583 | 313A583 | 316A583 | 319A583 | –       | –       |
| 2 Locking ring metal         |  | –       | –       | 396A583 | 399A583 | 392A583 | 394A583 |
| 3 Plug contact (P or N)      |  | 311A011 | 616A011 | 316A011 | 619A011 | 392A011 | 394A011 |
| 4 Color-coded voltage gasket |  | 311AB26 | 313AB26 | 316AB26 | 319AB26 | 392AB26 | –       |
|                              |  | 311AR26 | 313AR26 | 316AR26 | 319AR26 | 392AR26 | –       |
|                              |  | 311AV26 | 313AV26 | –       | –       | –       | –       |
|                              |  | 311AN26 | 313AN26 | 316AN26 | 319AN26 | 392AN26 | –       |
| 5 Plug casing poly           |  | 311A501 | 313A501 | 316A501 | 619A501 | –       | –       |
| 5 Plug casing metal          |  | –       | –       | 396A501 | 399A501 | 392A501 | 394A501 |



Remember to order  
the special removal key



Yellow disassembly key  
For poly casing  
31-A500-1

Contact us for spare parts.





| SOCKET |                            | DS1     | DS3     | DS6     | DS9                               | DS2     | DS4     |
|--------|----------------------------|---------|---------|---------|-----------------------------------|---------|---------|
| 1      | Socket Interior poly       | 311A020 | 313A020 | 316A020 | 619A020                           | –       | –       |
| 1      | Socket Interior metal +E   |         |         | 396A220 | 699A220                           | 392A220 | 394A220 |
| 2      | Locking ring               | 311A583 | 313A583 | 316A583 | 319A583                           | –       | –       |
| 2      | Locking ring metal         | –       | –       | 396A583 | 399A583                           | 392A583 | 394A583 |
| 3      | Socket contact (P or N)    | 311A021 | 616A021 | 316A021 | 619A021                           | 392A021 | 394A021 |
| 4      | Color-coded voltage gasket |         |         |         |                                   |         |         |
|        |                            | 311AB26 | 313AB26 | 316AB26 | 319AB26                           | 392AB26 | –       |
|        |                            | 311AR26 | 313AR26 | 316AR26 | 319AR26                           | 392AR26 | –       |
|        |                            | 311AV26 | 313AV26 | –       | –                                 | –       | –       |
|        |                            | 311AN26 | 313AN26 | 316AN26 | 319AN26                           | 392AN26 | –       |
| 5      | Plug casing poly           | 311A524 | 313A524 | 316A524 | 619A524                           | –       | –       |
| 5      | Metal Socket Lid Gasket    | –       | –       | 396A524 | 399A524                           | 392A524 | 394A524 |
| 6      | Lid gasket                 | 311A563 | 313A563 | 316A563 | 399A563 (metal)<br>619A074 (poly) | 392A563 | 392A563 |

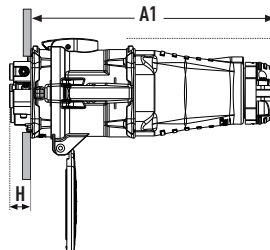
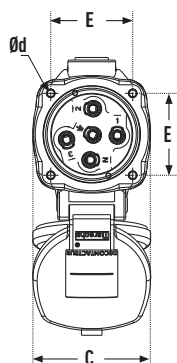
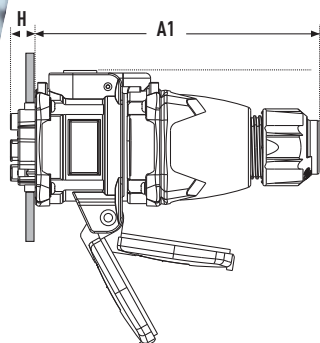
Contact us for spare parts.



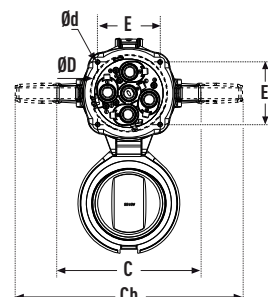


## DIMENSIONS

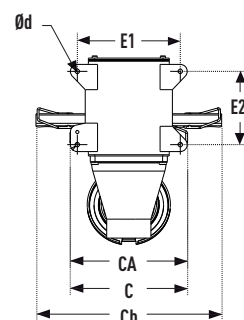
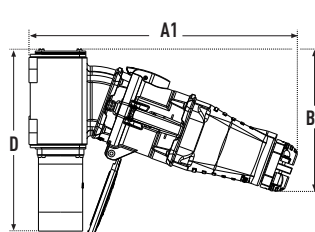
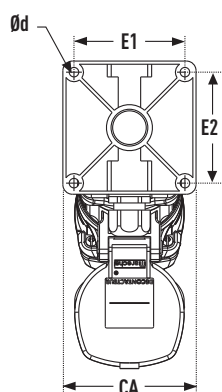
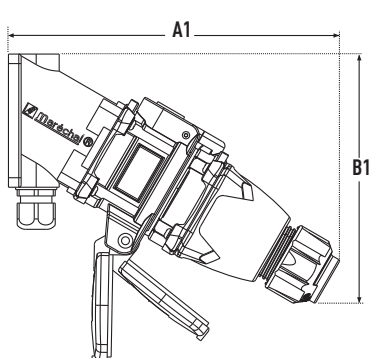
DS1/DS3/DS6



DS9/DS2



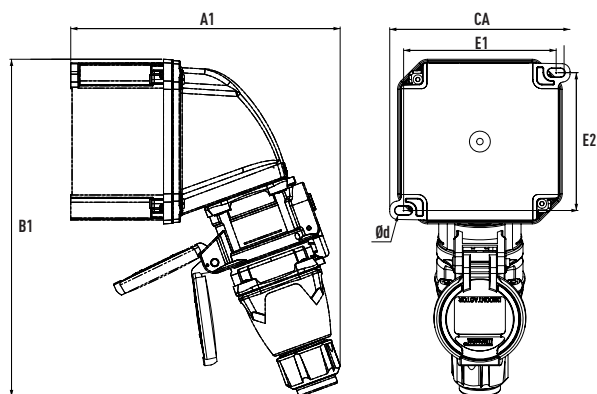
|          | A1  | C   | Cb  | E  | H  | Ød* |
|----------|-----|-----|-----|----|----|-----|
| DS1      | 166 | 69  | /   | 48 | 15 | 5   |
| DS3      | 179 | 80  | /   | 55 | 17 | 5   |
| DS6      | 203 | 95  | /   | 66 | 25 | 5,5 |
| DS9 POLY | 315 | 186 | 294 | 81 | 26 | 6   |
| DS2      | 360 | 192 | 304 | 98 | 38 | 6,5 |



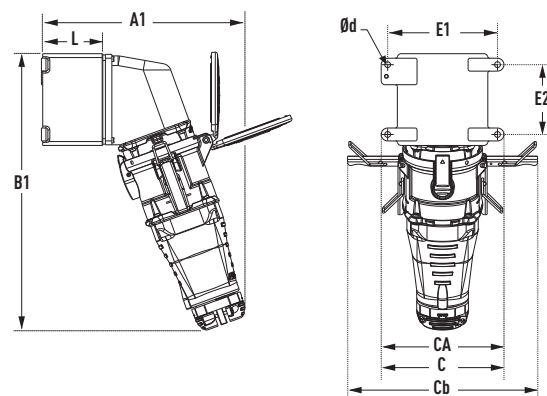
|                | A1  | B1  | CA  | E1  | E2  | Ød* |
|----------------|-----|-----|-----|-----|-----|-----|
| DS1            | 209 | 157 | 84  | 70  | 70  | 6   |
| DS3            | 235 | 181 | 89  | 77  | 88  | 6,5 |
| DS6            | 283 | 215 | 105 | 89  | 112 | 7,5 |
| DS9 POLY (20°) | 425 | 225 | 185 | 163 | 116 | 7   |
| DS2 (60°)      | 414 | 460 | 226 | 202 | 154 | 10  |

\*Ød : maximum drilling diameter.

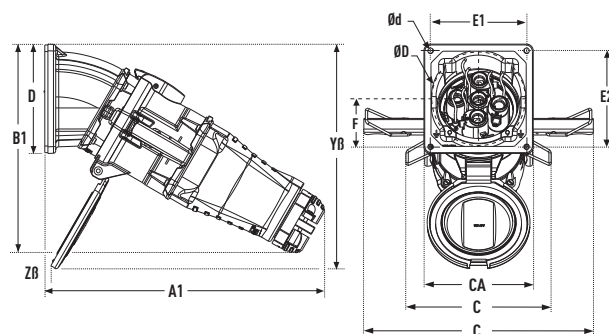
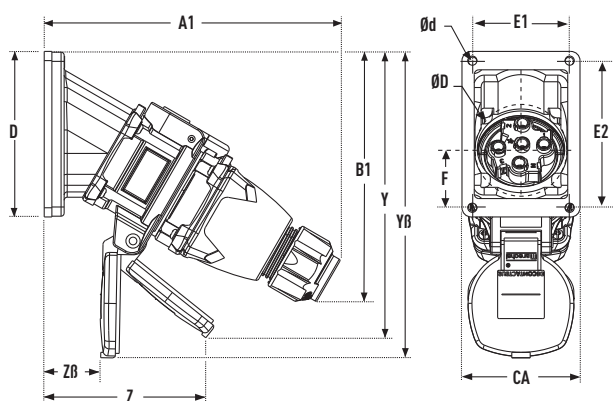
## DS1/DS3/DS6



## DS9



|                 | A1  | B1  | Cb  | CA  | E1  | E2    | Ød* |
|-----------------|-----|-----|-----|-----|-----|-------|-----|
| <b>DS1</b>      | 207 | 259 |     | 136 | 117 | 105.5 | 6.5 |
| <b>DS3</b>      | 236 | 313 |     | 176 | 157 | 145.5 | 6.5 |
| <b>DS6</b>      | 243 | 336 |     | 176 | 157 | 145.5 | 6.5 |
| <b>DS9 POLY</b> | 315 | 430 | 294 | 190 | 170 | 108   | 9   |

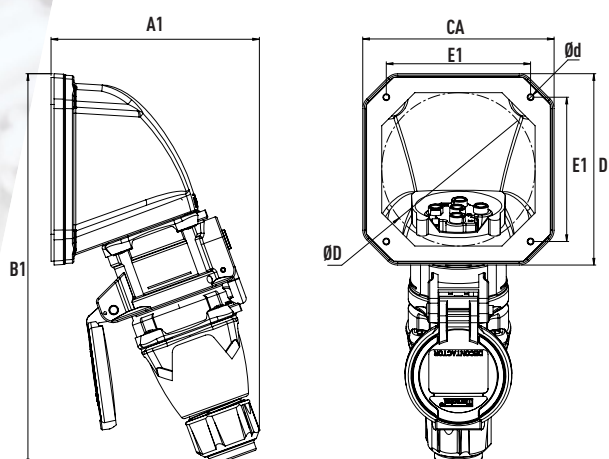


|            | A1  | B1  | CA  | D   | E1 | E2  | Ød* | ØD max |
|------------|-----|-----|-----|-----|----|-----|-----|--------|
| <b>DS1</b> | 193 | 163 | 77  | 108 | 63 | 95  | 5,5 | 60     |
| <b>DS3</b> | 208 | 174 | 77  | 108 | 63 | 95  | 5,5 | 60     |
| <b>DS6</b> | 233 | 205 | 102 | 136 | 87 | 122 | 6,5 | 70     |

|                       | A1  | B1  | C   | CB  | CA  | D   | E1  | E2  | Ød* | ØD max |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| <b>DS9 POLY (30°)</b> | 358 | 267 | 186 | 294 | 140 | 140 | 124 | 124 | 7   | 120    |
| <b>DS2 (60°)</b>      | 295 | 460 | 192 | 304 | 191 | 191 | 165 | 165 | 7   | 145    |

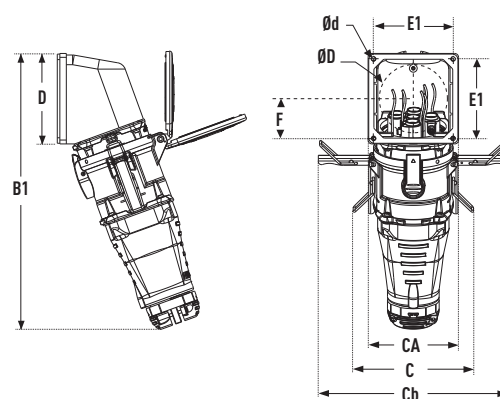
\*Ød : maximum drilling diameter.

## DS1/DS3/DS6

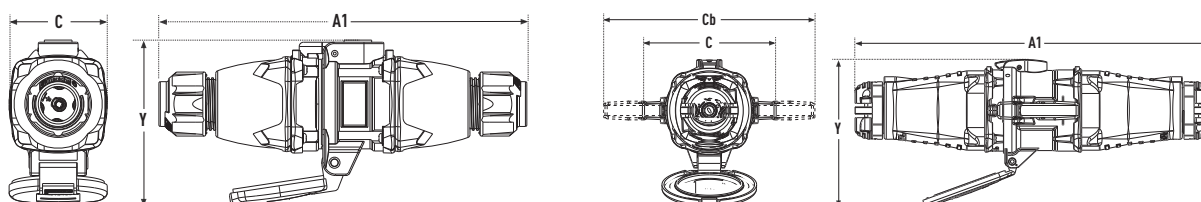


|            | A1  | B1  | CA  | D   | E1  | Ød* |
|------------|-----|-----|-----|-----|-----|-----|
| <b>DS1</b> | 136 | 259 | 126 | 126 | 95  | 3.6 |
| <b>DS3</b> | 169 | 313 | 166 | 166 | 135 | 3.6 |
| <b>DS6</b> | 174 | 336 | 166 | 166 | 135 | 5   |

## DS9



|                 | A1  | B1  | C   | Cb  | CA  | D   | E1  | Ød* |
|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>DS9 POLY</b> | 220 | 427 | 186 | 294 | 140 | 140 | 124 | 7   |

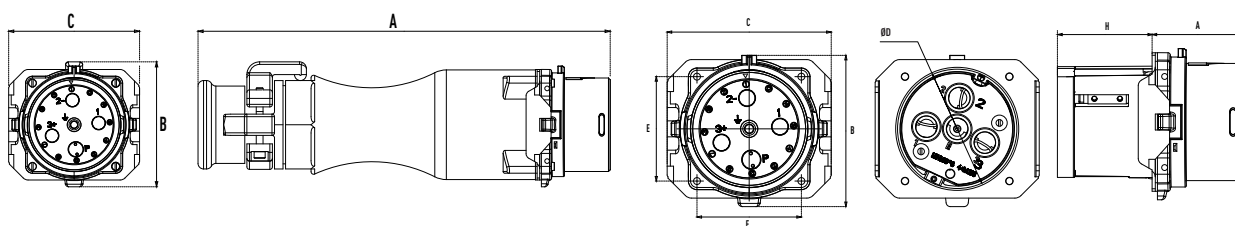


|            | A1  | C  | Y   |
|------------|-----|----|-----|
| <b>DS1</b> | 259 | 69 | 117 |
| <b>DS3</b> | 277 | 80 | 145 |
| <b>DS6</b> | 309 | 95 | 167 |

|                 | A1  | C   | Cb  | Y   |
|-----------------|-----|-----|-----|-----|
| <b>DS9 POLY</b> | 496 | 186 | 294 | 204 |
| <b>DS2</b>      | 588 | 192 | 304 | 203 |

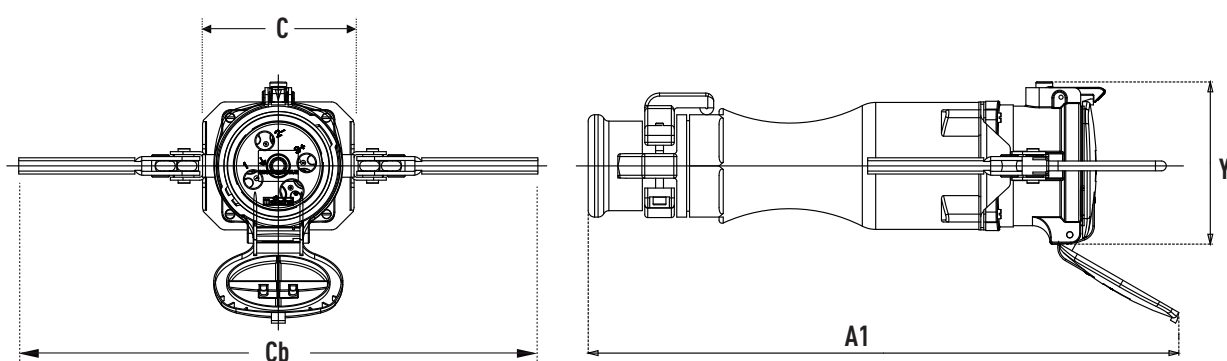
\*Ød : maximum drilling diameter.

## DS4

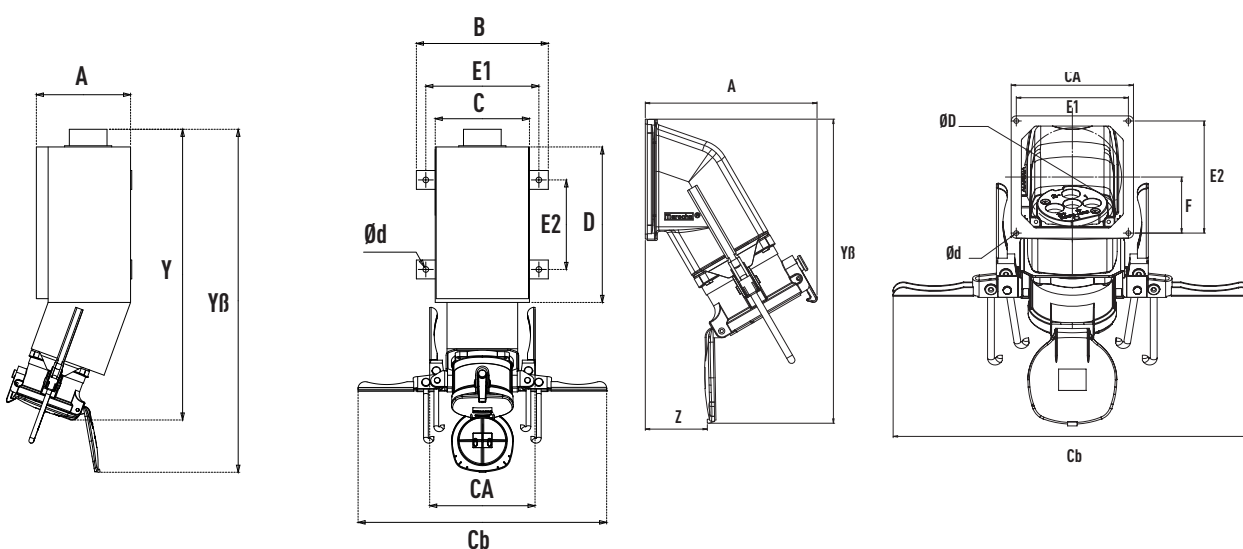


|            | A   | B   | C   |
|------------|-----|-----|-----|
| <b>DS4</b> | 485 | 147 | 154 |

|            | A  | B  | C   | E  | H  | ØD max |
|------------|----|----|-----|----|----|--------|
| <b>DS4</b> | 86 | 89 | 154 | 98 | 89 | 112    |



|            | A1  | C   | Cb  | Y   |
|------------|-----|-----|-----|-----|
| <b>DS4</b> | 600 | 224 | 528 | 165 |



|            | A   | B   | C   | CA  | Cb  |
|------------|-----|-----|-----|-----|-----|
| <b>DS4</b> | 200 | 280 | 200 | 224 | 528 |

|            | E1  | E2  | Y   | YB  | Ød* |
|------------|-----|-----|-----|-----|-----|
| <b>DS4</b> | 240 | 190 | 627 | 779 | 12  |

|            | A   | CA  | Cb  | E1  | E2  |
|------------|-----|-----|-----|-----|-----|
| <b>DS4</b> | 255 | 191 | 528 | 165 | 165 |

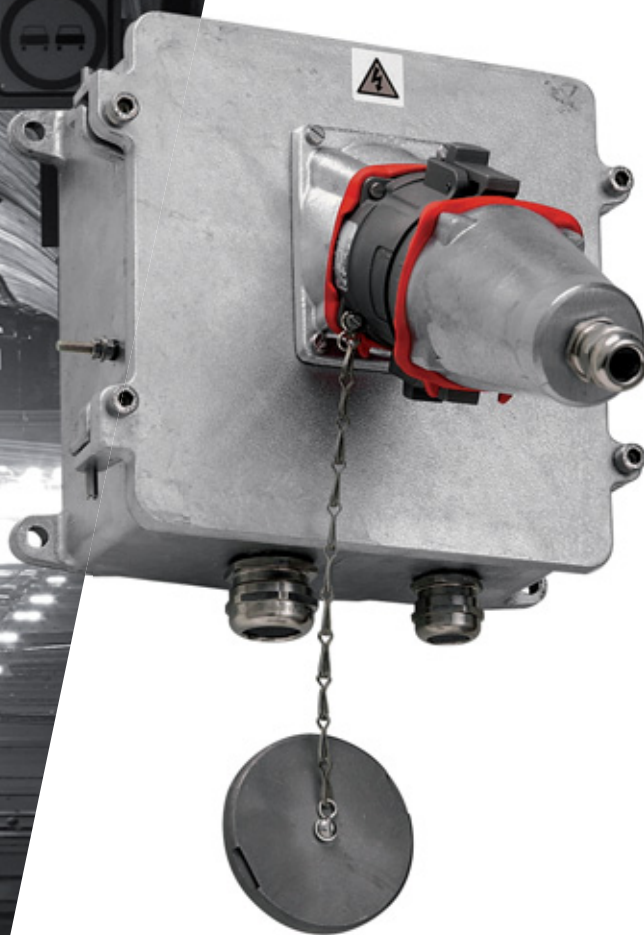
|            | F    | YB  | Z  | Ød* | ØD max |
|------------|------|-----|----|-----|--------|
| <b>DS4</b> | 82,5 | 448 | 85 | 7   | 145    |

\*Ød : maximum drilling diameter.

# DSHT



## DECONTACTOR™ HIGH TEMPERATURE



**30 A → 125 A**

- ▶ Proximity power supply of smoke accelerators or in high temperature environment up to 240 °C
- ▶ DECONTACTOR™ 3P+E+2 aux 125 A – 690 V AC - AC 22 IEC 60947-3
- ▶ Continuous use at 240 °C or 400 °C - EN 12101-3
- ▶ IP66 & IK09 for Metal casing
- ▶ Complies with machine directive EN 60204-1 (Art 5.3 & 5.4 proximity emergency stop)



## MAIN FEATURES

|                                   |                                                                                                                         |                                                |                                  |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------|
| Max. operating temperature steady | 240 °C/400 °C (2h)                                                                                                      | Protection                                     | IP66                             |
| Rated current In                  | 125 A                                                                                                                   | Robustness                                     | IK09                             |
| Umax                              | 690 V                                                                                                                   | Crimp cable wiring from 6 to 35 mm²            |                                  |
| Maximum no. of contacts           | 3P+E                                                                                                                    | Terminal Wiring on socket side of 10 to 95 mm² |                                  |
| Auxiliary contacts (optional)     | 2                                                                                                                       | Shock resistance                               | IK09 according to NF EN 50102    |
| Breaking capacity                 | AC-22 (NF EN 60947-3)                                                                                                   | Ingress Protection                             | IP66 (NF EN 60529)               |
| Service terminals                 | 3 terminals usually mounted on a steel base fire                                                                        | Internal and external Earth point              | Inside and outside the enclosure |
| Fire resistance                   | Electrical continuity of the main cable guaranteed to 400°C for 2 hours as the test program 5 of NF EN 12101-3 standard |                                                |                                  |



|                   |      |              |              |
|-------------------|------|--------------|--------------|
| 380-440 V AC      | 3P+E | 3934013Zxxxx | 3938013Zxxxx |
| 660-690 V AC 63 A | 3P+E | 3934193Zxxxx | 3938193Zxxxx |

\* 400 °C for 2 hours/240 °C permanently

Contact us for configurations and references.

|      | A   | A1  | D   | D1  | D2  | E1  | E2  | Ød max |
|------|-----|-----|-----|-----|-----|-----|-----|--------|
| DSHT | 260 | 343 | 108 | 116 | 232 | 240 | 190 | 10     |

# DN



## DECONTACTOR™ METAL



**20 A/30 A/50 A/90 A**

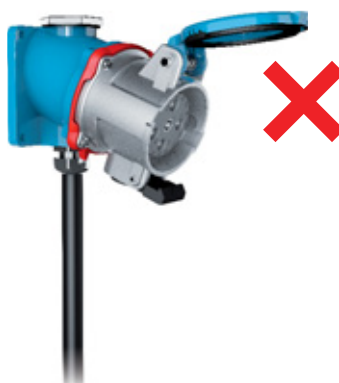
- ▶ IP55 automatic (IP66/IP67 optional)
- ▶ AC-22 and AC-23 Integrated Breaking Capacity (IEC/EN 60947-3)
- ▶ Impact resistant metal casing - IK09
- ▶ Suitable for heavy industry

## TECHNICAL FEATURES

Plugs and sockets with integral load-break switching capability according to IEC/EN 60947-3.

|                               | DN8                      | DN1        | DN3        | DN6        |
|-------------------------------|--------------------------|------------|------------|------------|
| Rated current (In)            | 20 A                     | 30 A       | 50 A       | 90 A       |
| U <sub>max</sub>              | 500 V                    | 500 V      | 500 V      | 500 V      |
| AC-22 switching capability    | 20 A/400 V               | 30 A/400 V | 50 A/400 V | 90 A/400 V |
| Auxiliary contacts (optional) | –                        | –          | –          | 4          |
| Keying positions              | <<< 16 >>>               |            |            |            |
| Ambient temperature           | <<< -40 °C to +60 °C >>> |            |            |            |

## MOUNTING: LOAD BREAK RELEASE BUTTON SHOULD BE AT THE TOP



### DN DECONTACTOR™ complies with:

- The essential requirements of IEC/EN 60309-1 & IEC/EN 60309-4 European and International standards (plugs and socket-outlets for industrial purposes),
- The European Low Voltage Directive 2014/35/EU, conformity with the CE marking,
- The European 'Machine Directive' 2006/42/CE regarding equipment isolation,
- The French NF C 15-100 standard,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses,
- The decrees relating to workers' protection in Belgium, Spain and Italy,
- The load-break capability for AC-22 category described in IEC/EN 60947-3.

Also certified by TR CU (GOST) (Russian inspection laboratory).



## WALL MOUNTING SOCKET DN8



Wall box metal 20°  
592B2M20



Socket-outlet  
1984017

## PLUG DN8



Straight handle poly  
512P0D21



Inlet  
1988017

## MAIN FEATURES

|                                                   |       |                           |                        |
|---------------------------------------------------|-------|---------------------------|------------------------|
| Rated current (with wiring according to standard) | 20 A  | Ambient temperature       | -40 °C to +60 °C       |
| Maximum voltage                                   | 500 V | Flexible wiring (min-max) | 1-6 mm <sup>2</sup>    |
| IP protection lid closed                          | IP55  | Stranded wiring (min-max) | 1,5-10 mm <sup>2</sup> |
| IP protection plug connected                      | IP54  | Other wiring              | on request             |
| Shock resistance (metal casing)                   | IK09  | Keying positions          | 16                     |

## Load-break capability of the DECONTACTOR™

|                                                           |                              |
|-----------------------------------------------------------|------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | 20 A/500 V                   |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | (20 A/400 V) or (10 A/500 V) |

## SOCKET- OUTLET female DN8 (20 A)



## INLET male DN8 (20 A)



Dual-voltage socket-  
outlet (see p. 7)

|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 20-24 V AC                | 2P     | 198408A | 198808A |
| 220-250 V AC              | 1P+N+E | 1984015 | 1988015 |
| 380-440 V AC              | 3P+E   | 1984013 | 1988013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 1984017 | 1988017 |
| 480-500 V AC              | 3P+E   | 1984093 | 1988093 |
| 480-500 V AC              | 3P+N+E | 1984097 | 1988097 |

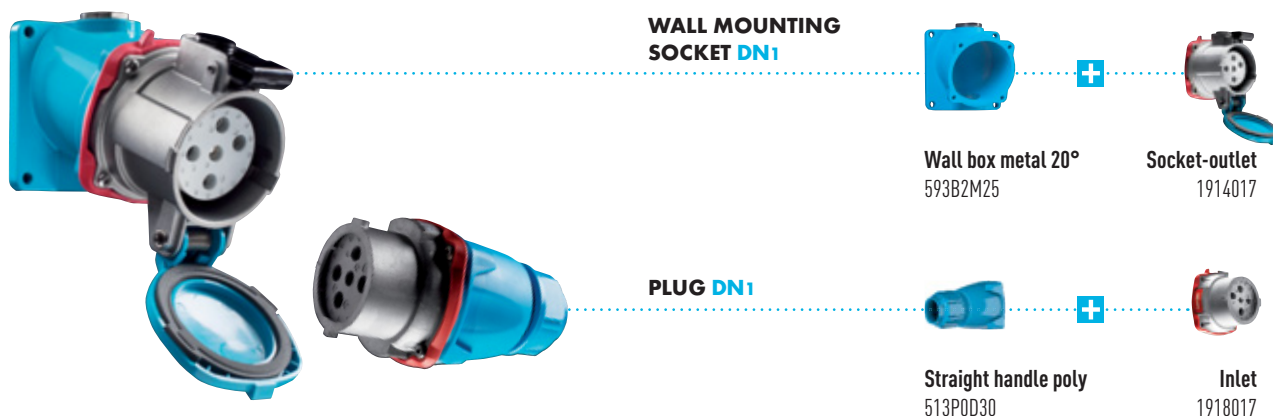
► Other voltages, frequencies and contact configurations are available (see page 10).

## INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 76.





## MAIN FEATURES

|                                                   |       |                           |                  |
|---------------------------------------------------|-------|---------------------------|------------------|
| Rated current (with wiring according to standard) | 30 A  | Ambient temperature       | -40 °C to +60 °C |
| Maximum voltage                                   | 500 V | Flexible wiring (min-max) | 2,5-6 mm²        |
| IP protection lid closed                          | IP55  | Stranded wiring (min-max) | 2,5-10 mm²       |
| IP protection plug connected                      | IP54  | Other wiring              | on request       |
| Shock resistance (metal casing)                   | IK09  | Keying positions          | 16               |

## Load-break capability of the DECONTACTOR™

|                                                           |                              |
|-----------------------------------------------------------|------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | 30 A/500 V                   |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | (30 A/400 V) or (16 A/500 V) |

**SOCKET-  
OUTLET** female  
**DN1 (30 A)**



**INLET** male  
**DN1 (30 A)**



Dual-voltage socket-  
outlet (see p. 7)

|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 20-24 V AC                | 2P     | 191408A | 191808A |
| 220-250 V AC              | 1P+N+E | 1914015 | 1918015 |
| 380-440 V AC              | 3P+E   | 1914013 | 1918013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 1914017 | 1918017 |
| 480-500 V AC              | 3P+E   | 1914093 | 1918093 |
| 480-500 V AC              | 3P+N+E | 1914097 | 1918097 |

► Other voltages, frequencies and contact configurations are available (see page 10).

INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 76.







## WALL MOUNTING SOCKET DN3



Wall box metal 20°  
594B2M25



Socket-outlet  
1934017

## PLUG DN3



Straight handle poly  
514P0D35



Inlet  
1938017

## MAIN FEATURES

|                                                   |       |                           |                        |
|---------------------------------------------------|-------|---------------------------|------------------------|
| Rated current (with wiring according to standard) | 50 A  | Ambient temperature       | -40 °C to +60 °C       |
| Maximum voltage                                   | 500 V | Flexible wiring (min-max) | 2,5-16 mm <sup>2</sup> |
| IP protection lid closed                          | IP55  | Stranded wiring (min-max) | 2,5-25 mm <sup>2</sup> |
| IP protection plug connected                      | IP54  | Other wiring              | on request             |
| Shock resistance (metal casing)                   | IK09  | Keying positions          | 16                     |

## Load-break capability of the DECONTACTOR™

|                                                           |                              |
|-----------------------------------------------------------|------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | 50 A/500 V                   |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | (50 A/400 V) or (32 A/500 V) |

## SOCKET- OUTLET female DN3 (50 A)



## INLET male DN3 (50 A)



Dual-voltage socket-  
outlet (see p. 7)

|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 20-24 V AC                | 2P     | 193408A | 193808A |
| 220-250 V AC              | 1P+N+E | 1934015 | 1938015 |
| 380-440 V AC              | 3P+E   | 1934013 | 1938013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 1934017 | 1938017 |
| 480-500 V AC              | 3P+E   | 1934093 | 1938093 |
| 480-500 V AC              | 3P+N+E | 1934097 | 1938097 |

► Other voltages, frequencies and contact configurations are available (see page 10).

## INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 76.





## WALL MOUNTING SOCKET DN6



Wall box metal 30°  
595C3M50



Socket-outlet  
1964017



## PLUG DN6



Straight elastomer  
555POD35



Inlet  
1968017

## MAIN FEATURES

|                                                   |       |                           |                  |
|---------------------------------------------------|-------|---------------------------|------------------|
| Rated current (with wiring according to standard) | 90 A  | Ambient temperature       | -40 °C to +60 °C |
| Maximum voltage                                   | 500 V | Flexible wiring (min-max) | 10-25 mm²        |
| IP protection lid closed                          | IP55  | Stranded wiring (min-max) | 10-35 mm²        |
| IP protection plug connected                      | IP54  | Other wiring              | on request       |
| Shock resistance (metal casing)                   | IK09  | Keying positions          | 16               |

## Load-break capability of the DECONTACTOR™

|                                                           |                              |
|-----------------------------------------------------------|------------------------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | 90 A/500 V                   |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | (90 A/400 V) or (63 A/500 V) |

## SOCKET-OUTLET female DN6 (90 A)



## INLET male DN6 (90 A)



Dual-voltage socket-outlet (see p. 7)

|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| 20-24 V AC                | 2P           | 196408A    | 196808A    |
| 220-250 V AC              | 1P+N+E       | 1964015    | 1968015    |
| 380-440 V AC              | 3P+E         | 1964013    | 1968013    |
| 220-250 V AC 380-440 V AC | 3P+N+E       | 1964017    | 1968017    |
| 480-500 V AC              | 3P+E         | 1964093    | 1968093    |
| 480-500 V AC              | 3P+N+E       | 1964097    | 1968097    |
| Auxiliaries 10 A/400 V AC | + 4 contacts | Ref. + 264 | Ref. + 264 |

► Other voltages, frequencies and contact configurations are available (see page 10).

## INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 76.





## OPTIONS (DETAILS ON PAGE 216)

|                                                                                     | DN8<br>Size 2                                                                                                                    | DN1<br>Size 3               | DN3<br>Size 4               | DN6<br>Size 5                                              |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|------------------------------------------------------------|
| INDUSTRIAL-DOMESTIC ADAPTERS                                                        |                                                                                                                                  |                             |                             |                                                            |
|    | Industrial inlet MARECHAL®<br>1P+N+E + domestic socket-outlet<br>10/16 A 230 V.                                                  | 1988015D11*                 | NA                          | NA                                                         |
|    | * All these plug adapters are available to foreign standards : replace D11 by D40 for UK, D30 for Germany/NL/Lux, D06 for Italy. |                             |                             |                                                            |
| LOCKING SHAFT FOR 3 PADLOCKS Ø 8 mm (PADLOCKS NOT SUPPLIED)                         |                                                                                                                                  |                             |                             |                                                            |
|    | Socket-outlet<br>ref. + 844                                                                                                      | Socket-outlet<br>ref. + 844 | Socket-outlet<br>ref. + 844 | Socket-outlet<br>ref. + 844                                |
| SAFETY HASP FOR UP TO 6 PADLOCKS                                                    |                                                                                                                                  |                             |                             |                                                            |
|    | 873A541                                                                                                                          | 873A541                     | 873A541                     | 873A541                                                    |
| INLET CAP                                                                           |                                                                                                                                  |                             |                             |                                                            |
|   | 198A126                                                                                                                          | 191A126                     | 193A126                     | 196A126                                                    |
| LARGER RELEASE BUTTON                                                               |                                                                                                                                  |                             |                             |                                                            |
|  | Ref. + 453                                                                                                                       | Ref. + 453                  | Ref. + 453                  | Ref. + 453                                                 |
| 180° OPENING LID                                                                    |                                                                                                                                  |                             |                             |                                                            |
|                                                                                     | Metal socket<br>ref. + 10                                                                                                        | Metal socket<br>ref. + 10   | Metal socket<br>ref. + 10   | Metal socket<br>ref. + 10                                  |
| SELF-RETURNING LID (WITHOUT FULL CLOSURE IP40)                                      |                                                                                                                                  |                             |                             |                                                            |
|  | Socket-outlet<br>ref. +R                                                                                                         | Socket-outlet<br>ref. +R    | Socket-outlet<br>ref. +R    | Socket-outlet<br>ref. +R                                   |
| 180° OPENING & SELF-RETURNING LID                                                   |                                                                                                                                  |                             |                             |                                                            |
|                                                                                     | Socket-outlet<br>ref. + 18                                                                                                       | Socket-outlet<br>ref. + 18  | Socket-outlet<br>ref. + 18  | Socket-outlet<br>ref. + 18                                 |
| CLOSING MECHANISM                                                                   |                                                                                                                                  |                             |                             |                                                            |
|  |                                                                                                                                  |                             |                             | Draw lever only:<br>196A376<br>Draw plate only:<br>196A396 |
| IP66/IP67 SOCKET-OUTLET AND INLET (RECOMMENDED IN THE CASE OF COUPLER SOCKET)       |                                                                                                                                  |                             |                             |                                                            |
|                                                                                     | Ref. + 600                                                                                                                       | Ref. + 600                  | Ref. + 600                  | Ref. + 600                                                 |



## ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| HANDLES                                                                             |          | DN8<br>Size 2 | DN1<br>Size 3 | DN3<br>Size 4 | DN6<br>Size 5 |
|-------------------------------------------------------------------------------------|----------|---------------|---------------|---------------|---------------|
| <b>POLY HANDLE WITH GLAND</b>                                                       |          |               |               |               |               |
|    | 5-21 mm  | 512P0D21      |               |               |               |
|                                                                                     | 10-30 mm |               | 513P0D30      |               |               |
|                                                                                     | 13-35 mm |               |               | 514P0D35      |               |
|    | 5-21 mm  | 552P0D21      |               |               |               |
|                                                                                     | 10-30 mm |               | 553P0D30      |               |               |
|                                                                                     | 13-35 mm |               |               | 554P0D35      |               |
| <b>ELASTOMER HANDLE WITH GLAND</b>                                                  |          |               |               |               |               |
|    | 18-25 mm |               |               |               | 555P0D25      |
|                                                                                     | 25-35 mm |               |               |               | 555P0D35      |
|                                                                                     | 35-45 mm |               |               |               | 555P0D45      |
|                                                                                     | 45-49 mm |               |               |               | 555P0D49      |
| <b>POLY HANDLE WITH POLY CABLE GLAND</b>                                            |          |               |               |               |               |
|   | 5-12 mm  | 512P020P      |               |               |               |
|                                                                                     | 9-18 mm  | 512P025P      | 513P025P      |               |               |
|                                                                                     | 14-25 mm | 512P032P      | 513P032P      | 514P032P      | 515P032P      |
|                                                                                     | 18-32 mm | 512P040P      | 513P040P      | 514P040P      | 515P040P      |
|                                                                                     | 24-38 mm |               |               | 514P050P      | 515P050P      |
|                                                                                     | 35-48 mm |               |               |               | 515P063P      |
| <b>METAL HANDLE WITH METAL GLAND (+ EARTHING WIRE)</b>                              |          |               |               |               |               |
|  | 7-13 mm  | 592P020M      | 593P020M      |               |               |
|                                                                                     | 8-16 mm  | 592P025M      | 593P025M      | 594P025M      |               |
|                                                                                     | 16-24 mm | 592P032M      | 593P032M      | 594P032M      | 595P032M      |
|                                                                                     | 22-32 mm |               | 593P040M      | 594P040M      | 595P040M      |
|                                                                                     | 34-44 mm |               |               | 594P050M      | 595P050M      |
|                                                                                     | 35-48 mm |               |               |               | 595P063M      |



## ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| HANDLES                                                                           |     | DN8<br>Size 2 | DN1<br>Size 3 | DN3<br>Size 4 | DN6<br>Size 5 |
|-----------------------------------------------------------------------------------|-----|---------------|---------------|---------------|---------------|
| POLY HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY)                             |     |               |               |               |               |
|  | M20 | 512P0M20      | 513P0M20      |               |               |
|                                                                                   | M25 | 512P0M25      | 513P0M25      |               |               |
|                                                                                   | M32 | 512P0M32      | 513P0M32      | 514P0M32      |               |
|                                                                                   | M40 | 512P0M40      | 513P0M40      | 514P0M40      | 515P0M40      |
|                                                                                   | M50 |               |               | 514P0M50      | 515P0M50      |
|                                                                                   | M63 |               |               |               | 515P0M63      |
| METAL HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY)                            |     |               |               |               |               |
|  | M20 | 592P0M20      | 593P0M20      |               |               |
|                                                                                   | M25 | 592P0M25      | 593P0M25      | 594P0M25      |               |
|                                                                                   | M32 | 592P0M32      | 593P0M32      | 594P0M32      | 595P0M32      |
|                                                                                   | M40 |               | 593P0M40      | 594P0M40      | 595P0M40      |
|                                                                                   | M50 |               |               | 594P0M50      | 595P0M50      |
|                                                                                   |     |               |               |               |               |

| SLEEVES                                                                             |     | DN8<br>Size 2 | DN1<br>Size 3 | DN3<br>Size 4 | DN6<br>Size 5 |
|-------------------------------------------------------------------------------------|-----|---------------|---------------|---------------|---------------|
| POLY SLEEVE                                                                         |     |               |               |               |               |
|  | 30° | 512M3         | 513M3         | 514M3         | 515M3         |
|                                                                                     |     |               |               |               |               |
|  | 30° | 552M3         | 553M3         | 554M3         | 555M3         |
|                                                                                     |     |               |               |               |               |
|  | 70° | 512M7         | 513M7         | 514M7         |               |
|                                                                                     |     |               |               |               |               |
|  | 70° | 552M7         | 553M7         |               |               |
|                                                                                     |     |               |               |               |               |
| METAL SLEEVE                                                                        |     |               |               |               |               |
|  | 0°  | 592M0         | 593M0         | 594M0         | 595M0         |
|                                                                                     |     |               |               |               |               |
|  | 30° | 592M3         | 593M3         | 594M3         | 595M3         |
|                                                                                     |     |               |               |               |               |
|  | 70° |               | 593M7         | 594M7         | 595M7         |
|                                                                                     |     |               |               |               |               |

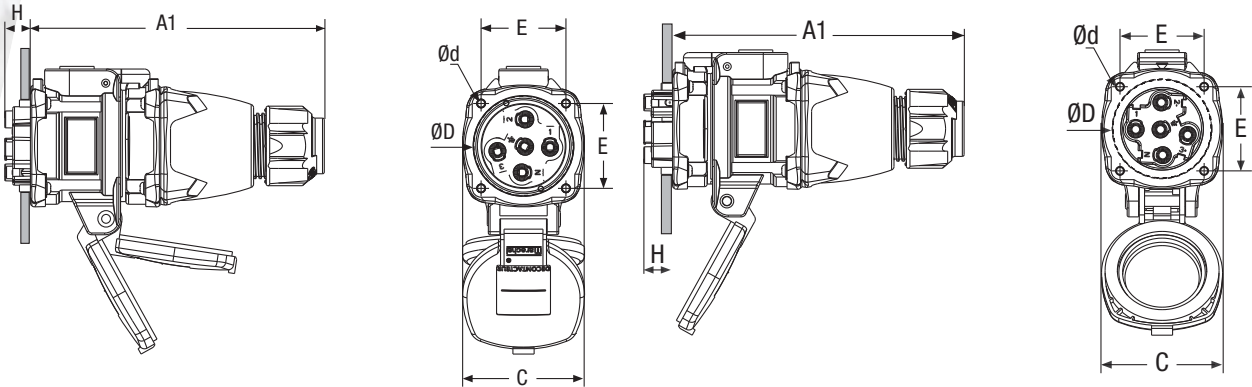


| BOXES                                                                                                                |  |  | DN8<br>Size 2 | DN1<br>Size 3 | DN3<br>Size 4 | DN6<br>Size 5 |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|
| <b>POLY BOX</b>                                                                                                      |                                                                                   |                                                                                   |               |               |               |               |
|                                     | 30°                                                                               | M20                                                                               | 512B3M20      |               |               |               |
|                                                                                                                      | 30°                                                                               | M25                                                                               | 512B3M25      | 513B3M25      |               |               |
|                                                                                                                      | 30°                                                                               | M32                                                                               |               |               | 514B3M32      |               |
|                                                                                                                      | 30°                                                                               | M40                                                                               |               |               | 514B3M40      |               |
| <b>METAL BOX (+ EARTHING WIRE)</b>                                                                                   |                                                                                   |                                                                                   |               |               |               |               |
|                                     | 20°                                                                               | M20                                                                               | 592B2M20      | 593B2M20      |               |               |
|                                                                                                                      | 20°                                                                               | M25                                                                               | 592B2M25      | 593B2M25      | 594B2M25      |               |
|                                                                                                                      | 20°                                                                               | M32                                                                               |               | 593B2M32      | 594B2M32      |               |
|                                                                                                                      | 20°                                                                               | M40                                                                               |               |               | 594B2M40      |               |
| <b>POLY BOX + POLY SLEEVE</b>                                                                                        |                                                                                   |                                                                                   |               |               |               |               |
| <br>Extra earth bar<br>ref: 51AA089 | 70°                                                                               | Without Hole                                                                      | 512C7000      | 513C7000      | 514C7000      |               |
|                                                                                                                      | 70°                                                                               | Ø M20                                                                             | 512C7M20      |               |               |               |
|                                                                                                                      | 70°                                                                               | Ø M25                                                                             | 512C7M25      | 513C7M25      |               |               |
|                                                                                                                      | 70°                                                                               | Ø M32                                                                             | 512C7M32      | 513C7M32      | 514C7M32      |               |
|                                                                                                                      | 70°                                                                               | Ø M40                                                                             | 512C7M40      | 513C7M40      | 514C7M40      |               |
| <b>METAL BOX (+ EARTHING WIRE) + POLY SLEEVE</b>                                                                     |                                                                                   |                                                                                   |               |               |               |               |
|                                   | 30°                                                                               | M20                                                                               | 512C3M20      | 513C3M20      |               |               |
|                                                                                                                      | 30°                                                                               | M25                                                                               | 512C3M25      | 513C3M25      | 514C3M25      |               |
|                                                                                                                      | 30°                                                                               | M32                                                                               | 512C3M32      | 513C3M32      | 514C3M32      | 515C3M32      |
|                                                                                                                      | 30°                                                                               | M40                                                                               | 512C3M40      | 513C3M40      | 514C3M40      | 515C3M40      |
|                                                                                                                      | 30°                                                                               | M50                                                                               |               |               | 514C3M50      | 515C3M50      |
|                                                                                                                      | 30°                                                                               | M63                                                                               |               |               |               | 515C3M63      |
| <b>METAL BOXES WITH METAL SLEEVE (+ EARTHING WIRE)</b>                                                               |                                                                                   |                                                                                   |               |               |               |               |
|                                   | 30°                                                                               | M20                                                                               | 592C3M20      | 593C3M20      |               |               |
|                                                                                                                      | 30°                                                                               | M25                                                                               | 592C3M25      | 593C3M25      | 594C3M25      |               |
|                                                                                                                      | 30°                                                                               | M32                                                                               | 592C3M32      | 593C3M32      | 594C3M32      | 595C3M32      |
|                                                                                                                      | 30°                                                                               | M40                                                                               |               | 593C3M40      | 594C3M40      | 595C3M40      |
|                                                                                                                      | 30°                                                                               | M50                                                                               |               |               | 594C3M50      | 595C3M50      |
|                                                                                                                      | 30°                                                                               | M63                                                                               |               |               |               | 595C3M63      |
|                                   | 0°                                                                                | M20                                                                               | 592C0M20      | 593C0M20      |               |               |
|                                                                                                                      | 0°                                                                                | M25                                                                               | 592C0M25      | 593C0M25      | 594C0M25      |               |
|                                                                                                                      | 0°                                                                                | M32                                                                               | 592C0M32      | 593C0M32      | 594C0M32      | 595C0M32      |
|                                                                                                                      | 0°                                                                                | M40                                                                               |               | 593C0M40      | 594C0M40      | 595C0M40      |
|                                                                                                                      | 0°                                                                                | M50                                                                               |               |               | 594C0M50      | 595C0M50      |
|                                                                                                                      | 0°                                                                                | M63                                                                               |               |               |               | 595C0M63      |
|                                   | 70°                                                                               | M20                                                                               |               | 593C7M20      |               |               |
|                                                                                                                      | 70°                                                                               | M25                                                                               |               | 593C7M25      | 594C7M25      |               |
|                                                                                                                      | 70°                                                                               | M32                                                                               |               | 593C7M32      | 594C7M32      | 595C7M32      |
|                                                                                                                      | 70°                                                                               | M40                                                                               |               | 593C7M40      | 594C7M40      | 595C7M40      |
|                                                                                                                      | 70°                                                                               | M50                                                                               |               |               | 594C7M50      | 595C7M50      |
|                                                                                                                      | 70°                                                                               | M63                                                                               |               |               |               | 595C7M63      |
| <b>METAL BOXES WITH METAL SLEEVE (+ EARTHING WIRE)</b>                                                               |                                                                                   |                                                                                   |               |               |               |               |
|                                   | 0°                                                                                | M50                                                                               |               |               |               | 595E0M50      |
|                                                                                                                      | 30°                                                                               | M50                                                                               |               |               |               | 595E3M50      |
|                                                                                                                      | 30°                                                                               | M63                                                                               |               |               |               | 595E3M63      |
|                                   | 70°                                                                               | M50                                                                               |               |               |               | 595E7M50      |
|                                                                                                                      | 70°                                                                               | M63                                                                               |               |               |               | 595E7M63      |

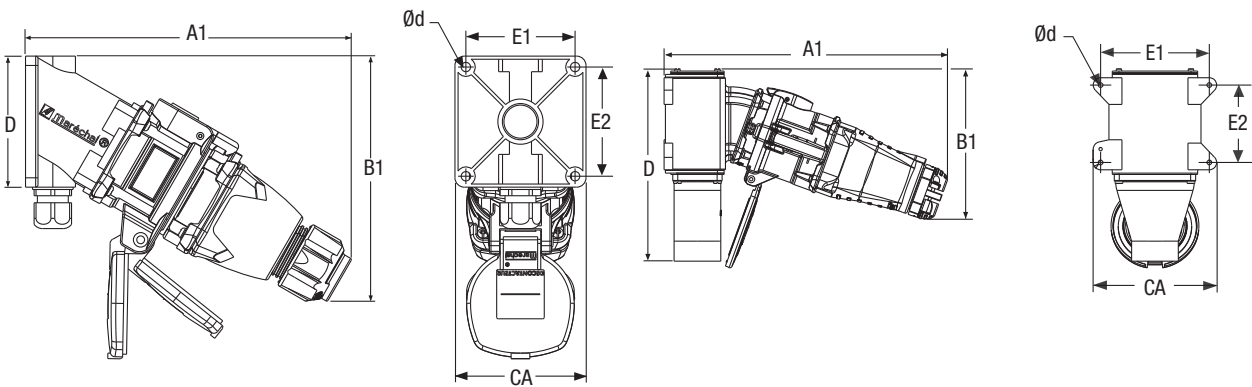


## DIMENSIONS

### DN8/DN1/DN3/DN6

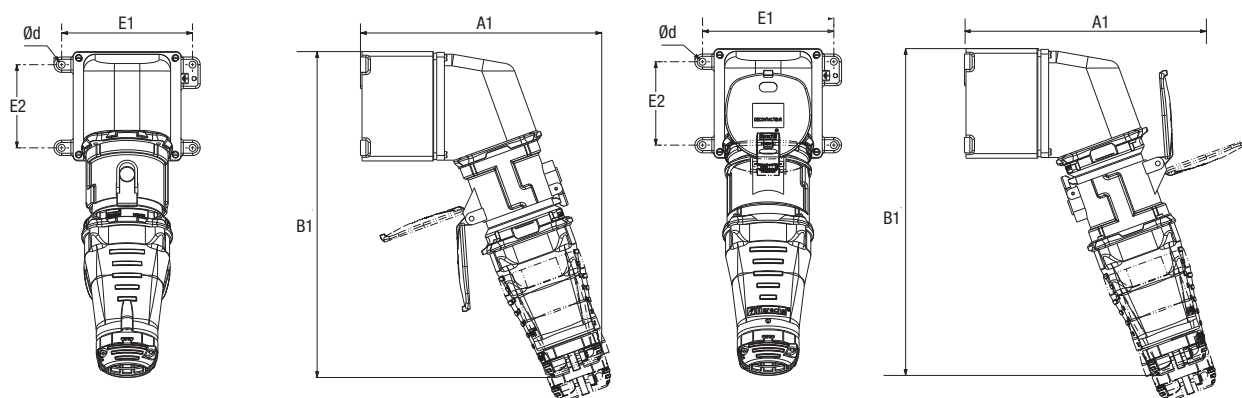


|     | A1  | C   | E  | H  | Ød* |
|-----|-----|-----|----|----|-----|
| DN8 | 174 | 69  | 48 | 12 | 5   |
| DN1 | 174 | 81  | 55 | 15 | 5   |
| DN3 | 212 | 95  | 66 | 22 | 5,5 |
| DN6 | 311 | 118 | 81 | 25 | 6   |

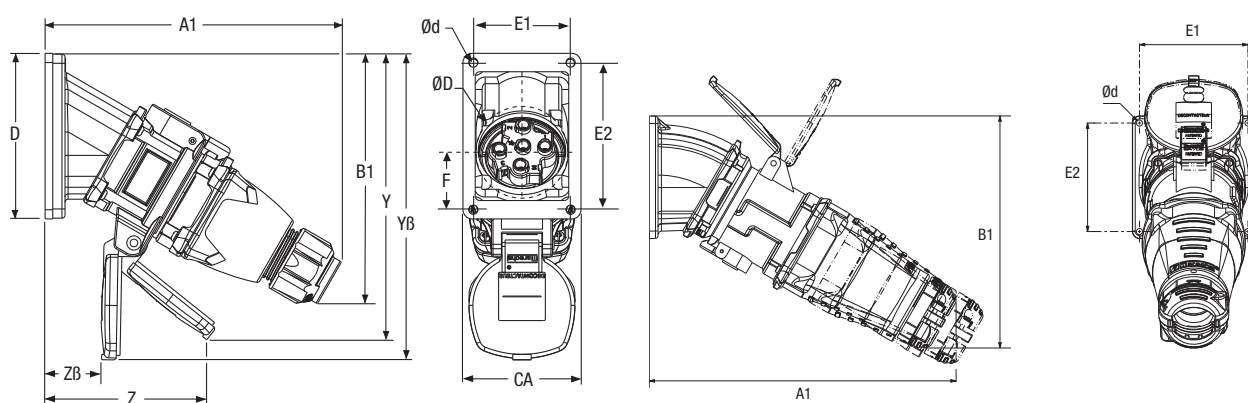


|     | A1  | B1  | CA  | D   | E1  | E2  | Ød* |
|-----|-----|-----|-----|-----|-----|-----|-----|
| DN8 | 198 | 143 | 76  | 76  | 64  | 64  | 5,5 |
| DN1 | 221 | 160 | 85  | 85  | 72  | 72  | 6   |
| DN3 | 266 | 190 | 105 | 130 | 89  | 112 | 7   |
| DN6 | 385 | 216 | 125 | 150 | 105 | 105 | 8   |

\*Ød : maximum drilling diameter.

**DN1/DN3/DN6**


|            | A2  | B2  | E1  | E2  | Ød* |
|------------|-----|-----|-----|-----|-----|
| <b>DN1</b> | 203 | 267 | 110 | 70  | 6,5 |
| <b>DN3</b> | 239 | 320 | 145 | 97  | 8,5 |
| <b>DN6</b> | 313 | 423 | 190 | 108 | 9   |

**DN8/DN1/DN3/DN6**


|            | A1  | b1  | D   | E1  | E2  | Ød* |
|------------|-----|-----|-----|-----|-----|-----|
| <b>DN8</b> | 189 | 168 | 108 | 63  | 95  | 5,5 |
| <b>DN1</b> | 104 | 178 | 107 | 63  | 95  | 5,5 |
| <b>DN3</b> | 242 | 220 | 136 | 87  | 122 | 6,5 |
| <b>DN6</b> | 350 | 265 | 140 | 124 | 124 | 7   |

\*Ød : maximum drilling diameter.

# MULTICONTACT



- Number of connections up to 5000 matings.
- Very good resistance to vibrations.
- Resistance to current fluctuation.
- Resistance to corrosion.
- Solid silver-nickel contacts assure superior conductivity.



FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates



**PN7C** P. 86

#### MULTI-CONTACT CONNECTORS GRP OR METAL

- Up to 7 contacts
- 25 A/500 V max.
- IP66/IP67
- Screw-in contacts



**DN9C** P. 87

#### CONNECTEUR $\Delta$ MULTICONTACTS METAL

- Up to 9 contacts
- 30 A/415 V max.
- IP54/IP55 (IP66 in option)
- Screw-in contacts



**PN12C** P. 88

#### MULTI-CONTACT CONNECTORS GRP OR METAL

- Up to 12 contacts
- 16 A/480 V max.
- IP66/IP67
- Crimping or welding contacts



**DN20C** P. 90

#### METAL MULTI-CONTACT CONNECTORS

- Up to 20 contacts
- 25 A/415 V max.
- IP54/IP55 (IP66 in option)
- Screw-in contacts



**DSN12C** P. 89

#### GRP MULTI-CONTACT CONNECTORS

- Up to 12 contacts
- 16 A/480 V max.
- IP66/IP67/IP69
- Crimping or welding contacts



**DSN24C** P. 91

#### GRP MULTI-CONTACT CONNECTORS

- Up to 24 contacts
- 16 A/415 V max.
- IP66/IP67
- Crimping or welding contacts



**DSN37C** P. 92

#### GRP MULTI-CONTACT CONNECTORS

- Up to 37 contacts
- 16 A/415 V max.
- IP66/IP67
- Crimping or welding contacts



**DS7C3** P. 93

#### DECONTACTOR™ $\Delta$ METAL

- Up to 7 contacts
- Star delta starting
- 50 A/500 V max.
- IP55



# CRIMPING CONTACTS



**FOR**  
**PN12C/DSN12C/**  
**DSN24C/DSN37C**

## ECONOMIC AND TECHNICAL ADVANTAGES

Crimping ensures an economical and sustainable solution through installation time saving and quality of connection.

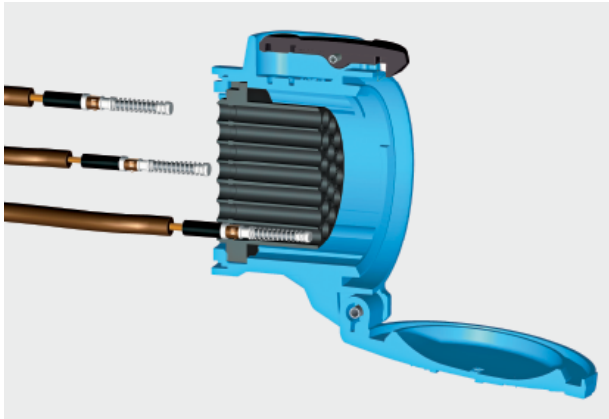
- No need for soldering performance qualifications.
- High resistance to vibrations.
- Handling more than 5000 operations: a high durability and quality of connection guaranteed.

| ACCESSORIES AND OPTIONS                                                             | DESIGNATION                              | REFERENCE                                      |
|-------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------|
|  | Bag of 13 females contacts               | 01AA213                                        |
|  | Bag of 13 males contacts                 | 01AA113 (PN12C/DSN12C)<br>61CA113 (DSN24C/37C) |
|  | Multi-Contact removal tool               | 61CA593                                        |
|  | European crimping tool                   | 61CA500                                        |
|  | Helavia sleeve expansion tool            | 61CA400                                        |
|                                                                                     | Bag of 13 heat shrink insulation sleeves | 61CA083                                        |

## FAST WIRING

- Cable conductors: 1 mm<sup>2</sup> to 2,5 mm<sup>2</sup>
- Before wiring, equip each conductor with a heat-shrink sleeve or an insulating sleeve.
- After wiring, cover the visible portion of the contact with the sleeve.
- Crimp the contact with a KNIPEX crimping tool P/N° 61CA500 or a GREENLEE crimping tool P/N° 45505.
- Use the 4 mm<sup>2</sup> footprint whatever the conductor cross-section.
- Perform a double crimping in compliance with CEI 60352-2 standard.
- Conductors can equally be soldered.

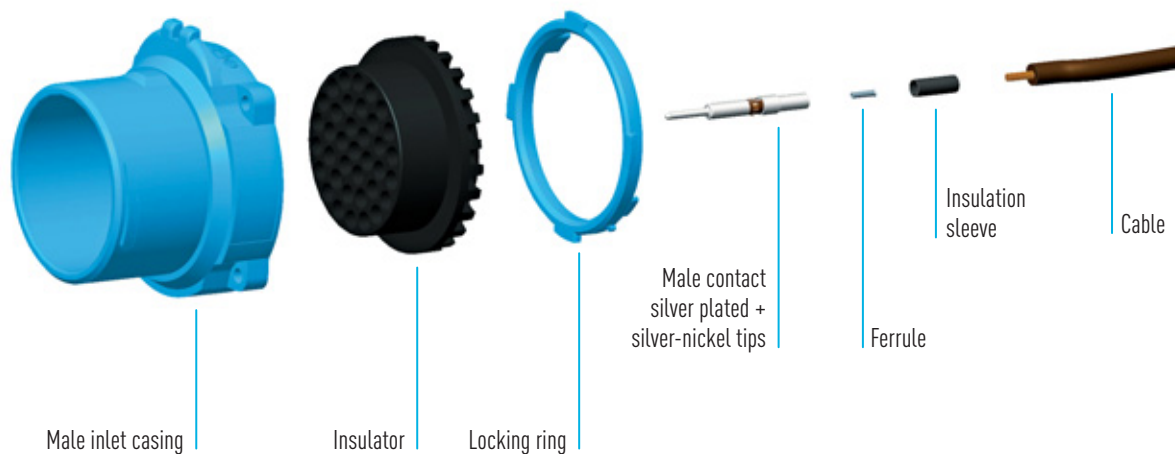
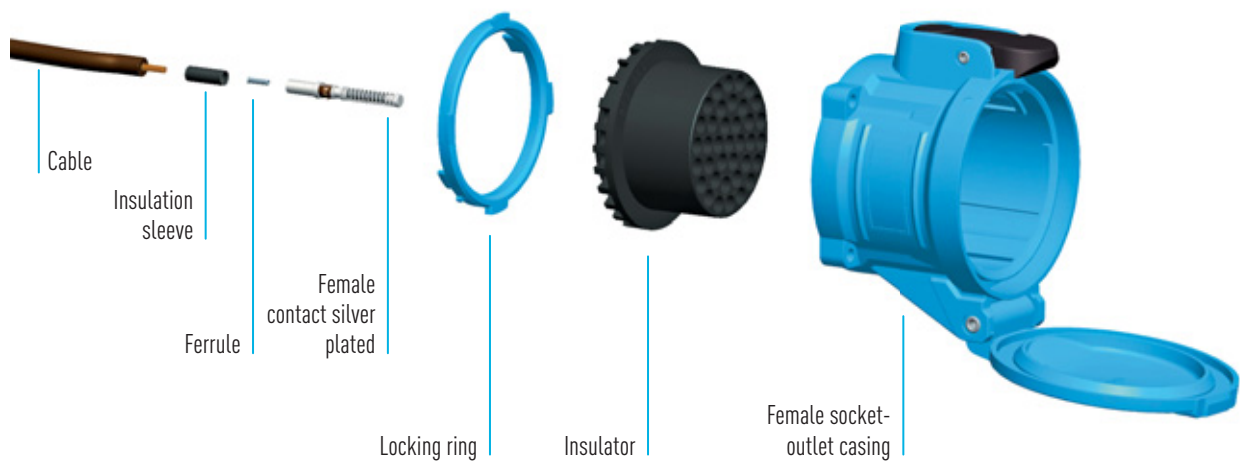
## SIMPLE ASSEMBLY AND DISASSEMBLY

**Assembly**

To insert contacts when they have been wired is simple.  
Push wired contact into rear of insulator until it stops to complete the installation.

**Disassembly**

To remove, use the tool provided.  
Push tool from front onto contact until tool stops.  
Contact is then released at rear of insulator.





### WALL MOUNTING SOCKET PN7c



Wall box poly 30°  
511B3M20



Socket-outlet  
01P4061

### PLUG PN7c



Straight handle poly  
511P0D18



Inlet  
01P8061

## MAIN FEATURES

|                                                      |           |                                 |                     |
|------------------------------------------------------|-----------|---------------------------------|---------------------|
| Rated current/contact (wiring according to standard) | 25 A      | Shock resistance (metal casing) | IK09                |
| Σ of currents (contacts)                             | ≤ 130 A   | Ambient temperature             | -40 °C to +60 °C    |
| Maximum voltage                                      | 500 V     | Flexible wiring (min-max)       | 1-4 mm <sup>2</sup> |
| IP protection lid closed                             | IP66/IP67 | Stranded wiring (min-max)       | 1-6 mm <sup>2</sup> |
| IP protection plug connected                         | IP66/IP67 | Wiring (terminals)              | screw-type          |
| Shock resistance (poly casing)                       | IK08      | Keying positions                | 5                   |



GRP devices are not compatible with metal devices.



In case of Different voltage, think of MARECHAL® keying position coding



### SOCKET- OUTLET female PN7c (16/25 A)



### INLET male PN7c (16/25 A)



|          |             |         |         |
|----------|-------------|---------|---------|
| 50 V AC  | 6P (16 A)   | 01P4060 | 01P8060 |
| 50 V AC  | 7P (16 A)   | 01P4070 | 01P8070 |
| 500 V AC | 5P+E (25 A) | 01P4051 | 01P8051 |
| 500 V AC | 6P+E (16 A) | 01P4061 | 01P8061 |



### SOCKET- OUTLET female PN7c (16/25 A)



### INLET male PN7c (16/25 A)



|          |             |         |         |
|----------|-------------|---------|---------|
| 50 V AC  | 6P (16 A)   | 09P4060 | 09P8060 |
| 50 V AC  | 7P (16 A)   | 09P4070 | 09P8070 |
| 480 V AC | 5P+E (25 A) | 09P4051 | 09P8051 |
| 480 V AC | 6P+E (16 A) | 09P4061 | 09P8061 |



For a black colour GRP housing replace the second reference character 1 with 5.

## INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 95.





**WALL MOUNTING  
SOCKET DN9c**



Wall box metal 20°  
593B2M25



Socket-outlet  
1914081



**PLUG DN9c**



Straight handle poly  
513POD30



Inlet  
1918081

## MAIN FEATURES

|                                                      |         |                           |                  |
|------------------------------------------------------|---------|---------------------------|------------------|
| Rated current/contact (wiring according to standard) | 30 A    | Ambient temperature       | -40 °C to +60 °C |
| Σ of currents (contacts)                             | ≤ 210 A | Flexible wiring (min-max) | 1-6 mm²          |
| Maximum voltage                                      | 415 V   | Stranded wiring (min-max) | 1,5-10 mm²       |
| IP protection lid closed                             | IP55    | Wiring (terminals)        | screw-type       |
| IP protection plug connected                         | IP54    | Keying positions          | 2                |
| Shock resistance                                     | IK09    |                           |                  |



In case of Different  
voltage, think of MARECHAL®  
keying position coding

**SOCKET-  
OUTLET female  
DN9c (30 A)**



**INLET male  
DN9c (30 A)**



|          |      |         |         |
|----------|------|---------|---------|
| 50 V AC  | 6P   | 1914060 | 1918060 |
| 50 V AC  | 7P   | 1914070 | 1918070 |
| 50 V AC  | 8P   | 1914080 | 1918080 |
| 50 V AC  | 9P   | 1914090 | 1918090 |
| 415 V AC | 5P+E | 1914051 | 1918051 |
| 415 V AC | 6P+E | 1914061 | 1918061 |
| 415 V AC | 7P+E | 1914071 | 1918071 |
| 415 V AC | 8P+E | 1914081 | 1918081 |

► The contacts can be assigned either power or signal.





### WALL MOUNTING SOCKET PN12C



Wall box poly 30°  
511B3M20



Socket-outlet  
01A4001

### PLUG PN12C



Straight handle plug  
511P0D18



Inlet  
01A8001

## MAIN FEATURES

|                                |                         |                           |                       |
|--------------------------------|-------------------------|---------------------------|-----------------------|
| Maximum voltage                | 480 V                   | Σ of currents (contacts)  | ≤ 110 A               |
| Impulse withstand voltage      | 5 kV/Pollution degree 3 | Flexible wiring (min-max) | 1-2,5 mm <sup>2</sup> |
| Contact resistance             | < 2 mΩ                  | Wiring (terminals)        | To weld/crimp         |
| Permitted current range        | 4-20 mA/16 A            | Keying positions          | 2                     |
| Rated current percontact (max) | 16 A                    |                           |                       |

## CLIMATIC FEATURES

|                              |                  |                       |                                         |
|------------------------------|------------------|-----------------------|-----------------------------------------|
| Ambient temperature          | -40 °C to +60 °C | Salt, Fog performance | 1000 hours connected                    |
| IP protection plug connected | IP66/IP67        | Resistance to fluids  | Motor oils, petrol, oils, detergents... |
| IP protection lid closed     | IP66/IP67        |                       |                                         |

## MECHANICAL FEATURES

|                    |                         |                                 |                                                                                           |
|--------------------|-------------------------|---------------------------------|-------------------------------------------------------------------------------------------|
| Butt contacts      | Pastilles argent-nickel | Shock resistance (poly casing)  | IK08                                                                                      |
| Contact protection | Silvering               | Shock resistance (metal casing) | IK09                                                                                      |
| Load cycles        | > 5 000 cycles          | Vibration                       | Frequency 5-1000 Hz, 1g/(90 minutes on each critical frequency) according to IEC 6068-2-6 |



AISI 304 stainless steel version available on request



### SOCKET- OUTLET female PN12C (16 A)



### INLET male PN12C (16 A)



|       |          |                    |         |         |
|-------|----------|--------------------|---------|---------|
| GRP   | 480 V AC | 12 contacts        | 01A4001 | 01A8001 |
| METAL | 480 V AC | 12 contacts        | 09A4001 | 09A8001 |
|       |          | Bag of 13 contacts | 01AA213 | 01AA113 |

► Each product is supplied with 1 bag of 13 contacts, supplied with insulation sleeves and ferrules



For a black colour GRP housing replace the second reference character 1 with 5.



GRP devices are not compatible with metal devices.

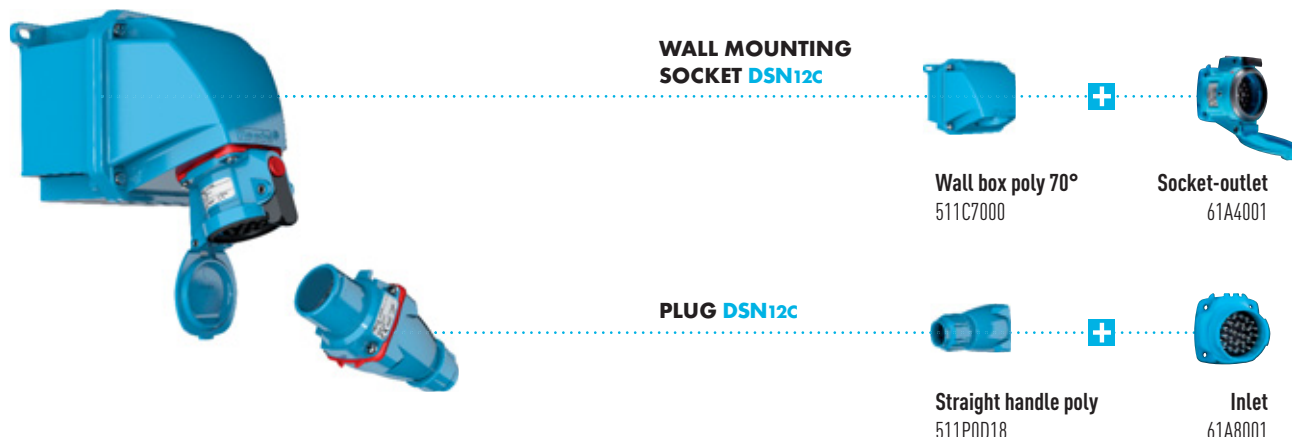
## INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 95.







## MAIN FEATURES

|                                |                         |                           |               |
|--------------------------------|-------------------------|---------------------------|---------------|
| Maximum voltage                | 480 V                   | Σ of currents (contacts)  | ≤ 110 A       |
| Impulse withstand voltage      | 5 kV/Pollution degree 3 | Flexible wiring (min-max) | 1-2,5 mm²     |
| Contact resistance             | < 2 mΩ                  | Wiring (terminals)        | To weld/crimp |
| Permitted current range        | 4-20 mA/16 A            | Keying positions          | 1             |
| Rated current percontact (max) | 16 A                    |                           |               |

## CLIMATIC FEATURES

|                              |                  |                       |                                         |
|------------------------------|------------------|-----------------------|-----------------------------------------|
| Ambient temperature          | -40 °C to +60 °C | Salt, Fog performance | 1000 hours connected                    |
| IP protection plug connected | IP66/IP67/IP69   | Resistance to fluids  | Motor oils, petrol, oils, detergents... |
| IP protection lid closed     | IP66/IP67/IP69   |                       |                                         |

## MECHANICAL FEATURES

|                    |                         |                  |                                                                                           |
|--------------------|-------------------------|------------------|-------------------------------------------------------------------------------------------|
| Butt contacts      | Pastilles argent-nickel | Shock resistance | IK08                                                                                      |
| Contact protection | Silvering               | Vibration        | Frequency 5-1000 Hz, 1g/(90 minutes on each critical frequency) according to IEC 6068-2-6 |
| Load cycles        | > 5000 cycles           |                  |                                                                                           |

**SOCKET-OUTLET** female  
**DSN12C (16 A)**



**INLET** male  
**DSN12C (16 A)**



|          |                    |         |         |
|----------|--------------------|---------|---------|
| 480 V AC | 12 contacts        | 61A4001 | 61A8001 |
|          | Bag of 13 contacts | 01AA213 | 61CA113 |

► Each product is supplied with 1 bag of 13 contacts, supplied with insulation sleeves and ferrules

**INFO+**

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 95.





**WALL MOUNTING  
SOCKET DN20c**



Wall box metal 30°  
595C3M50



Socket-outlet  
1964191



**PLUG DN20c**



Straight elastomer  
555POD35



Inlet  
1968191

## MAIN FEATURES

|                                                      |         |                           |                        |
|------------------------------------------------------|---------|---------------------------|------------------------|
| Rated current/contact (wiring according to standard) | 25 A    | Ambient temperature       | -40 °C to +60 °C       |
| Σ of currents (contacts)                             | ≤ 350 A | Flexible wiring (min-max) | 1-6 mm <sup>2</sup>    |
| Maximum voltage                                      | 415 V   | Stranded wiring (min-max) | 1,5-10 mm <sup>2</sup> |
| IP protection lid closed                             | IP55    | Wiring (terminals)        | screw-type             |
| IP protection plug connected                         | IP54    | Keying positions          | 4                      |
| Shock resistance                                     | IK09    |                           |                        |



In case of Different  
voltage, think of  
MARECHAL® keying  
position coding

**SOCKET-  
OUTLET female  
DN20c (25 A)**



**INLET male  
DN20c (25 A)**



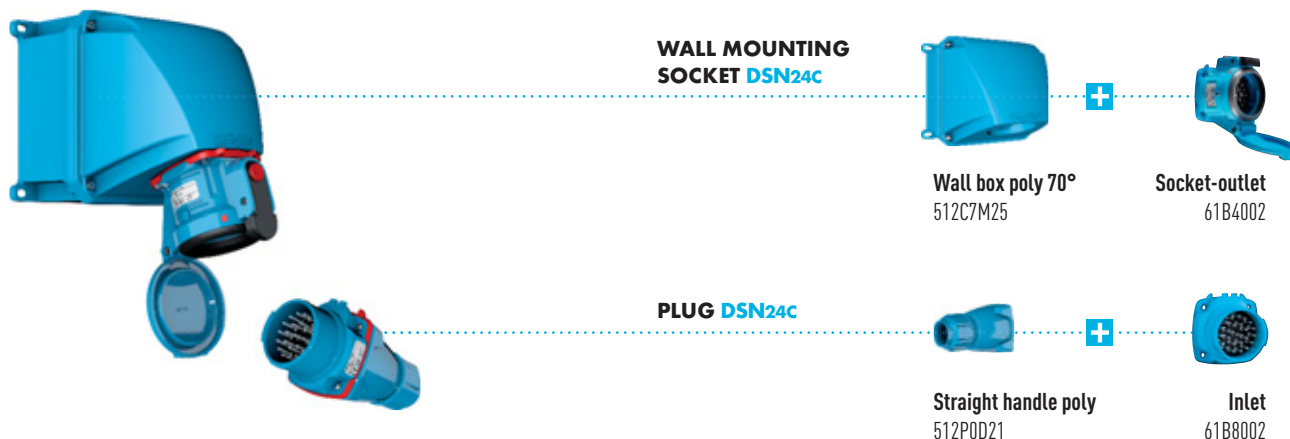
|          |       |         |         |
|----------|-------|---------|---------|
| 50 V AC  | 10P   | 1964100 | 1968100 |
| 50 V AC  | 11P   | 1964110 | 1968110 |
| 50 V AC  | 12P   | 1964120 | 1968120 |
| 50 V AC  | 13P   | 1964130 | 1968130 |
| 50 V AC  | 14P   | 1964140 | 1968140 |
| 50 V AC  | 15P   | 1964150 | 1968150 |
| 50 V AC  | 16P   | 1964160 | 1968160 |
| 50 V AC  | 17P   | 1964170 | 1968170 |
| 50 V AC  | 18P   | 1964180 | 1968180 |
| 50 V AC  | 19P   | 1964190 | 1968190 |
| 50 V AC  | 20P   | 1964200 | 1968200 |
| 415 V AC | 9P+E  | 1964091 | 1968091 |
| 415 V AC | 10P+E | 1964101 | 1968101 |
| 415 V AC | 11P+E | 1964111 | 1968111 |
| 415 V AC | 12P+E | 1964121 | 1968121 |
| 415 V AC | 13P+E | 1964131 | 1968131 |
| 415 V AC | 14P+E | 1964141 | 1968141 |
| 415 V AC | 15P+E | 1964151 | 1968151 |
| 415 V AC | 16P+E | 1964161 | 1968161 |
| 415 V AC | 17P+E | 1964171 | 1968171 |
| 415 V AC | 18P+E | 1964181 | 1968181 |
| 415 V AC | 19P+E | 1964191 | 1968191 |

## INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 95.





### MAIN FEATURES

|                                |                         |                           |               |
|--------------------------------|-------------------------|---------------------------|---------------|
| Maximum voltage                | 480 V                   | Σ of currents (contacts)  | ≤ 230 A       |
| Impulse withstand voltage      | 5 kV/Pollution degree 3 | Flexible wiring (min-max) | 1-2,5 mm²     |
| Contact resistance             | < 2 mΩ                  | Wiring (terminals)        | To weld/crimp |
| Permitted current range        | 4-20 mA/16 A            | Keying positions          | 1             |
| Rated current percontact (max) | 16 A                    |                           |               |

### CLIMATIC FEATURES

|                              |                  |                       |                                         |
|------------------------------|------------------|-----------------------|-----------------------------------------|
| Ambient temperature          | -40 °C to +60 °C | Salt, Fog performance | 200 hours connected                     |
| IP protection plug connected | IP66/IP67        | Resistance to fluids  | Motor oils, petrol, oils, detergents... |
| IP protection lid closed     | IP66/IP67        |                       |                                         |

### MECHANICAL FEATURES

|                    |                         |                  |                                                                                           |
|--------------------|-------------------------|------------------|-------------------------------------------------------------------------------------------|
| Butt contacts      | Pastilles argent-nickel | Shock resistance | IK08                                                                                      |
| Contact protection | Silvering               | Vibration        | Frequency 5-1000 Hz, 1g/(90 minutes on each critical frequency) according to IEC 6068-2-6 |
| Load cycles        | > 5000 cycles           |                  |                                                                                           |

**SOCKET-OUTLET** female  
**DSN24c (16 A)**



**INLET** male  
**DSN24c (16 A)**



|          |                    |         |         |
|----------|--------------------|---------|---------|
| 480 V AC | 24 contacts        | 61B4002 | 61B8002 |
|          | Bag of 13 contacts | 01AA213 | 61CA113 |

► Each product is supplied with 2 bags of 13 contacts, supplied with insulation sleeves and ferrules



For a black colour GRP housing replace the second reference character 1 with 5.

INFO+

### OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 95.





### WALL MOUNTING SOCKET DSN37C



Wall box poly 70°  
513C7M25



Socket-outlet  
61C4003

### PLUG DSN37C



Straight handle poly  
513P0D30



Inlet  
61C8003

## MAIN FEATURES

|                                |                         |                           |                       |
|--------------------------------|-------------------------|---------------------------|-----------------------|
| Maximum voltage                | 480 V                   | Σ of currents (contacts)  | ≤ 360 A               |
| Impulse withstand voltage      | 5 kV/Pollution degree 3 | Flexible wiring (min-max) | 1-2,5 mm <sup>2</sup> |
| Contact resistance             | < 2 mΩ                  | Wiring (terminals)        | To weld/crimp         |
| Permitted current range        | 4-20 mA/16 A            | Keying positions          | 3                     |
| Rated current percontact (max) | 16 A                    |                           |                       |

## CLIMATIC FEATURES

|                              |                  |                       |                                         |
|------------------------------|------------------|-----------------------|-----------------------------------------|
| Ambient temperature          | -40 °C to +60 °C | Salt, Fog performance | 200 hours connected                     |
| IP protection plug connected | IP66/IP67        | Resistance to fluids  | Motor oils, petrol, oils, detergents... |
| IP protection lid closed     | IP66/IP67        |                       |                                         |

## MECHANICAL FEATURES

|                    |                         |                  |                                                                                           |
|--------------------|-------------------------|------------------|-------------------------------------------------------------------------------------------|
| Butt contacts      | Pastilles argent-nickel | Shock resistance | IK08                                                                                      |
| Contact protection | Silvering               | Vibration        | Frequency 5-1000 Hz, 1g/(90 minutes on each critical frequency) according to IEC 6068-2-6 |
| Load cycles        | > 5000 cycles           |                  |                                                                                           |

### SOCKET- OUTLET female DSN37C (16 A)



### INLET male DSN37C (16 A)



|          |                    |         |         |
|----------|--------------------|---------|---------|
| 480 V AC | 37 contacts        | 61C4003 | 61C8003 |
|          | Bag of 13 contacts | 01AA213 | 61CA113 |

► Each product is supplied with 3 bags of 13 contacts, supplied with insulation sleeves and ferrules



For a black colour GRP housing replace the second reference character 1 with 5.

## INFO+

## OPTIONS AND ACCESSORIES

Find the boxes, sleeves and handles at the end of the section page 95.





## MAIN FEATURES

|                                                   |       |                           |                  |
|---------------------------------------------------|-------|---------------------------|------------------|
| Rated current (with wiring according to standard) | 50 A  | Ambient temperature       | -40 °C to +60 °C |
| Maximum voltage                                   | 500 V | Flexible wiring (min-max) | 2,5-10 mm²       |
| IP protection lid closed                          | IP55  | Stranded wiring (min-max) | 2,5-10 mm²       |
| IP protection plug connected                      | IP54  | Wiring (terminals)        | screw-type       |
| Shock resistance (metal casing)                   | IK09  | Keying positions          | 5                |
| Auxiliary contacts 5 A/400 V option               | 3     |                           |                  |

## Load-break capability of the DECONTACTOR™

|                                                           |            |
|-----------------------------------------------------------|------------|
| Comply with IEC/EN 60309-1 and IEC/EN 60309-4 standards   | 50 A/500 V |
| Load-break capability according to IEC/EN 60947-3/AC-22 A | 50 A/500 V |

**SOCKET-  
OUTLET** female  
**DS7c3 (50 A)**



**INLET** male  
**DS7c3 (50 A)**



|                   |             |            |            |
|-------------------|-------------|------------|------------|
| 50 A/max 500 V AC | 6P+E        | 3934561    | 3938561    |
| 50 A/max 500 V AC | 6P+E+3 aux. | 3934561972 | 3938561972 |







## OPTIONS (DETAILS ON PAGE 216)

|                                                                                     | PN7c<br>PN12c                      | DN9c                        | DN20c                       | DSN12c                      | DSN24c                      | DSN37c                      |
|-------------------------------------------------------------------------------------|------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <b>LOCKING PIN FOR 2 PADLOCKS Ø 8 mm (PADLOCKS NOT SUPPLIED)</b>                    |                                    |                             |                             |                             |                             |                             |
|    | Ref. + 843<br>1 padlocks<br>Ø 4 mm | NA                          | NA                          | Ref. + 843                  | Ref. + 843                  | Ref. + 843                  |
| <b>LOCKING PIN FOR 3 PADLOCKS Ø 8 mm (PADLOCKS NOT SUPPLIED)</b>                    |                                    |                             |                             |                             |                             |                             |
|    | NA                                 | Ref. + 844                  | Ref. + 844                  | NA                          | NA                          | NA                          |
| <b>SCREW LOCKING IMPRINT BTR 2,5</b>                                                |                                    |                             |                             |                             |                             |                             |
|    | Ref. + 22                          | NA                          | NA                          | NA                          | NA                          | NA                          |
| <b>LARGER RELEASE BUTTON</b>                                                        |                                    |                             |                             |                             |                             |                             |
|    | NA                                 | Socket-outlet<br>ref. + 453 | Socket-outlet<br>ref. + 453 | Socket-outlet<br>ref. + 453 | Socket-outlet<br>ref. + 453 | Socket-outlet<br>ref. + 453 |
| <b>IN-LINE CONNECTIONS (A PAIR OF FINGER DRAW PLATES TO AID CLOSING)</b>            |                                    |                             |                             |                             |                             |                             |
|   |                                    |                             |                             | 611A346                     | 613A346                     | 616A346                     |
| <b>INLET CAP</b>                                                                    |                                    |                             |                             |                             |                             |                             |
|  |                                    | 191A126                     | 196A126                     | NA                          | NA                          | NA                          |
|  | IP66/IP67                          | 01NA426                     | NA                          | 611A426                     | 613A426                     | 616A426                     |
| <b>180° OPENING LID</b>                                                             |                                    |                             |                             |                             |                             |                             |
|                                                                                     | Metal socket<br>ref. + 10          | Metal socket<br>ref. + 10   | Metal socket<br>ref. + 10   | Metal socket<br>ref. + 10   | Metal socket<br>ref. + 10   | Metal socket<br>ref. + 10   |
| <b>SELF-RETURNING LID (WITHOUT FULL CLOSURE IP40)</b>                               |                                    |                             |                             |                             |                             |                             |
|  | Socket-outlet<br>ref. +R           | Socket-outlet<br>ref. +R    | Socket-outlet<br>ref. +R    | Socket-outlet<br>ref. +R    | Socket-outlet<br>ref. +R    | Socket-outlet<br>ref. +R    |
| <b>180° OPENING &amp; SELF-RETURNING LID</b>                                        |                                    |                             |                             |                             |                             |                             |
|                                                                                     | Socket-outlet<br>ref. + 18         | Socket-outlet<br>ref. + 18  | Socket-outlet<br>ref. + 18  | Socket-outlet<br>ref. + 18  | Socket-outlet<br>ref. + 18  | Socket-outlet<br>ref. + 18  |
| <b>CLOSING MECHANISM</b>                                                            |                                    |                             |                             |                             |                             |                             |
|  | NA                                 | NA                          | Draw lever only<br>196A376  | NA                          | NA                          | NA                          |
|                                                                                     | NA                                 | NA                          | Draw plate only<br>196A396  | NA                          | NA                          | NA                          |
| <b>IP66/IP67 SOCKET-OUTLET AND INLET</b>                                            |                                    |                             |                             |                             |                             |                             |
|                                                                                     | Standard                           | Ref. + 600                  | Ref. + 600                  | Standard                    | Standard                    | Standard                    |
| <b>ELECTROMAGNETIC COMPATIBILITY (EMC) (SEE DETAIL PAGE 223)</b>                    |                                    |                             |                             |                             |                             |                             |
|                                                                                     | Metal socket ref.<br>+EMC          | Metal socket ref.<br>+EMC   |                             |                             |                             |                             |



# ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| BOXES                                                                               |     |              | PN7c<br>DSN12c<br>PN12c<br>Size 1 | DSN24c<br>Size 2 | DN9c<br>DSN37c<br>Size 3 | DS7c3<br>Size 4 | DN20c<br>Size 5 |           |
|-------------------------------------------------------------------------------------|-----|--------------|-----------------------------------|------------------|--------------------------|-----------------|-----------------|-----------|
| <b>POLY BOX</b>                                                                     |     |              |                                   |                  |                          |                 |                 |           |
|    | 30° | M20          | 511B3M20                          | 512B3M20         |                          |                 |                 |           |
|                                                                                     | 30° | M25          | 511B3M25                          | 512B3M25         | 513B3M25                 |                 |                 |           |
|                                                                                     | 30° | M32          |                                   |                  |                          | 514B3M32        |                 |           |
|                                                                                     | 30° | M40          |                                   |                  |                          | 514B3M40        |                 |           |
| <b>METAL BOX (+ EARTHING WIRE)</b>                                                  |     |              |                                   |                  |                          |                 |                 |           |
|    | 20° | M20          |                                   | 592B2M20         | 593B2M20                 |                 |                 | Ref. +EMC |
|                                                                                     | 20° | M25          |                                   | 592B2M25         | 593B2M25                 | 594B2M25        |                 | Ref. +EMC |
|                                                                                     | 20° | M32          |                                   |                  | 593B2M32                 | 594B2M32        |                 | Ref. +EMC |
|                                                                                     | 20° | M40          |                                   |                  |                          | 594B2M40        |                 |           |
| <b>POLY BOX + POLY SLEEVE</b>                                                       |     |              |                                   |                  |                          |                 |                 |           |
|    | 70° | Without Hole | 511C7000                          | 512C7000         | 513C7000                 | 514C7000        |                 |           |
|                                                                                     | 70° | ø 20         | 511C7M20                          | 512C7M20         |                          |                 |                 |           |
|                                                                                     | 70° | ø 25         | 511C7M25                          | 512C7M25         | 513C7M25                 |                 |                 |           |
|                                                                                     | 70° | ø 32         | 511C7M32                          | 512C7M32         | 513C7M32                 | 514C7M32        |                 |           |
|                                                                                     | 70° | ø 40         |                                   | 512C7M40         | 513C7M40                 | 514C7M40        |                 |           |
| <b>METAL BOX (+ EARTHING WIRE) + POLY SLEEVE</b>                                    |     |              |                                   |                  |                          |                 |                 |           |
|  | 30° | M20          | 511C3M20                          | 512C3M20         | 513C3M20                 |                 |                 |           |
|                                                                                     | 30° | M25          |                                   | 512C3M25         | 513C3M25                 | 514C3M25        |                 |           |
|                                                                                     | 30° | M32          |                                   | 512C3M32         | 513C3M32                 | 514C3M32        | 515C3M32        |           |
|                                                                                     | 30° | M40          |                                   | 512C3M40         | 513C3M40                 | 514C3M40        | 515C3M40        |           |
|                                                                                     | 30° | M50          |                                   |                  |                          | 514C3M50        | 515C3M50        |           |
|                                                                                     | 30° | M63          |                                   |                  |                          |                 | 515C3M63        |           |
|                                                                                     | 30° | M63          |                                   |                  |                          |                 | 515C3M63        |           |
| <b>METAL BOXES WITH METAL SLEEVE (+ EARTHING WIRE)</b>                              |     |              |                                   |                  |                          |                 |                 |           |
|  | 30° | M20          |                                   | 592C3M20         | 593C3M20                 |                 |                 | Ref. +EMC |
|                                                                                     | 30° | M25          |                                   | 592C3M25         | 593C3M25                 | 594C3M25        |                 | Ref. +EMC |
|                                                                                     | 30° | M32          |                                   | 592C3M32         | 593C3M32                 | 594C3M32        | 595C3M32        | Ref. +EMC |
|                                                                                     | 30° | M40          |                                   |                  | 593C3M40                 | 594C3M40        | 595C3M40        | Ref. +EMC |
|                                                                                     | 30° | M50          |                                   |                  |                          | 594C3M50        | 595C3M50        |           |
|                                                                                     | 30° | M63          |                                   |                  |                          |                 | 595C3M63        |           |
|  | 0°  | M20          |                                   | 592C0M20         | 593C0M20                 |                 |                 | Ref. +EMC |
|                                                                                     | 0°  | M25          |                                   | 592C0M25         | 593C0M25                 | 594C0M25        |                 | Ref. +EMC |
|                                                                                     | 0°  | M32          |                                   | 592C0M32         | 593C0M32                 | 594C0M32        | 595C0M32        | Ref. +EMC |
|                                                                                     | 0°  | M40          |                                   |                  | 593C0M40                 | 594C0M40        | 595C0M40        | Ref. +EMC |
|                                                                                     | 0°  | M50          |                                   |                  |                          | 594C0M50        | 595C0M50        |           |
|                                                                                     | 0°  | M63          |                                   |                  |                          |                 | 595C0M63        |           |
|  | 45° | M20          | 591C4M20                          |                  |                          |                 |                 |           |
|                                                                                     | 45° | M25          | 591C4M25                          |                  |                          |                 |                 |           |
|                                                                                     | 45° | M32          | 591C4M32                          |                  |                          |                 |                 |           |
|  | 70° | M20          |                                   |                  | 593C7M20                 |                 |                 | Ref. +EMC |
|                                                                                     | 70° | M25          |                                   |                  | 593C7M25                 | 594C7M25        |                 | Ref. +EMC |
|                                                                                     | 70° | M32          |                                   |                  | 593C7M32                 | 594C7M32        | 595C7M32        | Ref. +EMC |
|                                                                                     | 70° | M40          |                                   |                  | 593C7M40                 | 594C7M40        | 595C7M40        | Ref. +EMC |
|                                                                                     | 70° | M50          |                                   |                  |                          | 594C7M50        | 595C7M50        |           |
|                                                                                     | 70° | M63          |                                   |                  |                          |                 | 595C7M63        |           |



## ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

### BOXES



PN7c  
DSN12c  
PN12c  
Size 1

DSN24c  
Size 2

DN9c  
DSN37c  
Size 3

DS7c3  
Size 4

DN20c  
Size 5

#### METAL BOXES WITH METAL SLEEVE (+ EARTHING WIRE)



0° M50 595E0M50

30° M50 595E3M50

30° M63 595E3M63



70° M50 595E7M50

70° M63 595E7M63

### SLEEVE



PN7c  
DSN12c  
PN12c  
Size 1

DSN24c  
Size 2

DN9c  
DSN37c  
Size 3

DS7c3  
Size 4

DN20c  
Size 5



#### POLY SLEEVE



Size 1

30° 511M3 512M3 513M3 514M3 515M3



30° 551M3 552M3 553M3 554M3 555M3



70° 511M7 512M7 513M7 514M7



70° 551M7 552M7 553M7

#### METAL SLEEVE



0° 591M0 592M0 593M0 594M0 595M0 Ref. +EMC



Size 1

30° 591M3 592M3 593M3 594M3 595M3 Ref. +EMC



45° 591M4



70° 593M7 594M7 595M7 Ref. +EMC

| HANDLE                                                                                         |  | PN7c<br>DSN12c<br>PN12c<br>Size 1 | DSN24c<br>Size 2 | DN9c<br>DSN37c<br>Size 3 | DS7c3<br>Size 4 | DN20c<br>Size 5 |  |  |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------|------------------|--------------------------|-----------------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| POLY HANDLE WITH GLAND                                                                         |                                                                                   |                                   |                  |                          |                 |                 |                                                                                     |                                                                                     |
| <br>* Short   | 9-18 mm                                                                           | 511P0D18*                         |                  |                          |                 |                 |                                                                                     |                                                                                     |
|                                                                                                | 5-21 mm                                                                           | 511P0D21                          | 512P0D21         |                          |                 |                 |                                                                                     |                                                                                     |
|                                                                                                | 10-30 mm                                                                          |                                   |                  | 513P0D30                 |                 |                 |                                                                                     |                                                                                     |
|                                                                                                | 13-35 mm                                                                          |                                   |                  |                          | 514P0D35        |                 |                                                                                     |                                                                                     |
| <br>* Short   | 9-18 mm                                                                           | 551P0D18*                         |                  |                          |                 |                 |                                                                                     |                                                                                     |
|                                                                                                | 5-21 mm                                                                           |                                   | 552P0D21         |                          |                 |                 |                                                                                     |                                                                                     |
|                                                                                                | 10-30 mm                                                                          |                                   |                  | 553P0D30                 |                 |                 |                                                                                     |                                                                                     |
|                                                                                                | 13-35 mm                                                                          |                                   |                  |                          | 554P0D35        |                 |                                                                                     |                                                                                     |
| <br>60° angle | 9-18 mm                                                                           | 511P6D18                          |                  |                          |                 |                 |                                                                                     |                                                                                     |
| <br>60° angle | 9-18 mm                                                                           | 551P6D18                          |                  |                          |                 |                 |                                                                                     |                                                                                     |
| ELASTOMER HANDLE WITH GLAND                                                                    |                                                                                   |                                   |                  |                          |                 |                 |                                                                                     |                                                                                     |
|              | 18-25 mm                                                                          |                                   |                  |                          |                 | 555P0D25        |                                                                                     |                                                                                     |
|                                                                                                | 25-35 mm                                                                          |                                   |                  |                          |                 | 555P0D35        |                                                                                     |                                                                                     |
|                                                                                                | 35-45 mm                                                                          |                                   |                  |                          |                 | 555P0D45        |                                                                                     |                                                                                     |
|                                                                                                | 45-49 mm                                                                          |                                   |                  |                          |                 | 555P0D49        |                                                                                     |                                                                                     |
| POLY HANDLE WITH POLY CABLE GLAND                                                              |                                                                                   |                                   |                  |                          |                 |                 |                                                                                     |                                                                                     |
|             | 5-12 mm                                                                           | 511P020P                          | 512P020P         |                          |                 |                 | Ref. +443                                                                           |                                                                                     |
|                                                                                                | 9-18 mm                                                                           | 511P025P                          | 512P025P         | 513P025P                 |                 |                 | Ref. +443                                                                           |                                                                                     |
|                                                                                                | 14-25 mm                                                                          | 511P032P                          | 512P032P         | 513P032P                 | 514P032P        | 515P032P        | Ref. +443                                                                           |                                                                                     |
|                                                                                                | 18-32 mm                                                                          |                                   | 512P040P         | 513P040P                 | 514P040P        | 515P040P        | Ref. +443                                                                           |                                                                                     |
|                                                                                                | 24-38 mm                                                                          |                                   |                  |                          | 514P050P        | 515P050P        |                                                                                     |                                                                                     |
|                                                                                                | 35-48 mm                                                                          |                                   |                  |                          |                 | 515P063P        |                                                                                     |                                                                                     |
| METAL HANDLE WITH METAL GLAND (+ EARTHING WIRE)                                                |                                                                                   |                                   |                  |                          |                 |                 |                                                                                     |                                                                                     |
|             | 7-13 mm                                                                           | 591P020M                          | 592P020M         | 593P020M                 |                 |                 | Ref. +EMC (7-12 mm)                                                                 |                                                                                     |
|                                                                                                | 8-16 mm                                                                           | 591P025M                          | 592P025M         | 593P025M                 | 594P025M        |                 | Ref. +EMC (9-16 mm)                                                                 |                                                                                     |
|                                                                                                | 16-24 mm                                                                          | 591P032M                          | 592P032M         | 593P032M                 | 594P032M        | 595P032M        | Ref. +EMC (11-21 mm)                                                                |                                                                                     |
|                                                                                                | 22-32 mm                                                                          |                                   |                  | 593P040M                 | 594P040M        | 595P040M        | Ref. +EMC (19-28 mm)                                                                |                                                                                     |
|                                                                                                | 34-44 mm                                                                          |                                   |                  |                          | 594P050M        | 595P050M        |                                                                                     |                                                                                     |
|                                                                                                | 35-48 mm                                                                          |                                   |                  |                          |                 | 595P063M        |                                                                                     |                                                                                     |
| POLY HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY)                                          |                                                                                   |                                   |                  |                          |                 |                 |                                                                                     |                                                                                     |
|             | M20                                                                               | 511P0M20                          | 512P0M20         | 513P0M20                 |                 |                 | Ref. +443                                                                           |                                                                                     |
|                                                                                                | M25                                                                               | 511P0M25                          | 512P0M25         | 513P0M25                 |                 |                 | Ref. +443                                                                           |                                                                                     |
|                                                                                                | M32                                                                               | 511P0M32                          | 512P0M32         | 513P0M32                 | 514P0M32        |                 | Ref. +443                                                                           |                                                                                     |
|                                                                                                | M40                                                                               |                                   | 512P0M40         | 513P0M40                 | 514P0M40        |                 | Ref. +443                                                                           |                                                                                     |
|                                                                                                | M50                                                                               |                                   |                  |                          | 514P0M50        | 515P0M50        | Ref. +443                                                                           |                                                                                     |
|                                                                                                | M63                                                                               |                                   |                  |                          |                 | 515P0M63        | Ref. +443                                                                           |                                                                                     |
| METAL HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY)                                         |                                                                                   |                                   |                  |                          |                 |                 |                                                                                     |                                                                                     |
|             | M20                                                                               | 591P0M20                          | 592P0M20         | 593P0M20                 |                 |                 | Ref. +EMC                                                                           |                                                                                     |
|                                                                                                | M25                                                                               | 591P0M25                          | 592P0M25         | 593P0M25                 | 594P0M25        |                 | Ref. +EMC                                                                           |                                                                                     |
|                                                                                                | M32                                                                               | 591P0M32                          | 592P0M32         | 593P0M32                 | 594P0M32        | 595P0M32        | Ref. +EMC                                                                           |                                                                                     |
|                                                                                                | M40                                                                               |                                   |                  | 593P0M40                 | 594P0M40        | 595P0M40        | Ref. +EMC                                                                           |                                                                                     |
|                                                                                                | M50                                                                               |                                   |                  |                          | 594P0M50        | 595P0M50        |                                                                                     |                                                                                     |
|                                                                                                | M63                                                                               |                                   |                  |                          |                 | 595P0M63        |                                                                                     |                                                                                     |

# INDUSTRIAL PLUGS



- A range from 16 A to 600 A 1000 V.
- Automatic watertightness from IP44 to 66/67.
- From -40 ° to +240 °C.
- GRP or metal casing.
- Reliable & compact.

FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates



**PNC P.100****COMPACT CONNECTOR**

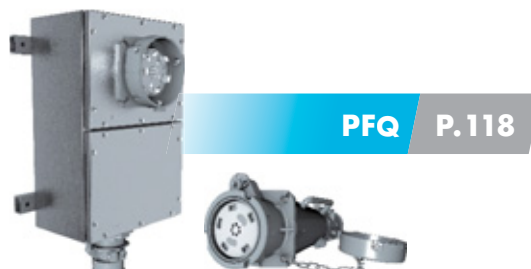
- Glassfiber reinforced thermoplastic UL94 V-0
- Standard IP66/IP67 (IP68 on specification)
- Long life, 2 000 operations

**PN P.102****COMPACT PLUGS & SOCKETS**

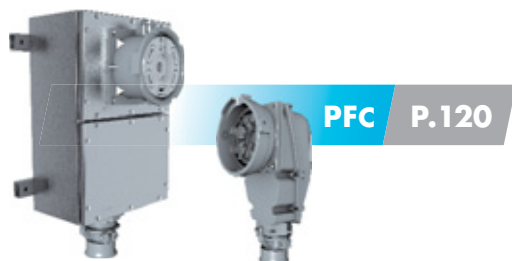
- Standard IP66/IP67
- All industries
- GRP or metal casing

**PNHT P.105****HIGH TEMPERATURE PLUGS & SOCKETS**

- Permanent 240 °C
- 30 A/500 V
- IP44 water-and dust-tight sealing

**PFQ P.118****HEAVY-DUTY PLUGS & SOCKETS**

- Up to 400 A/690 V
- Automatic IP66/IP67 water-and dust-tight
- Mechanical and electrical interlocking
- Up to 6 auxiliary and 2 pilot contacts
- Metal casing and stainless steel case AISI 316 L

**PFC P.120****HEAVY-DUTY PLUGS & SOCKETS**

- Up to 600 A/1 000 V
- Automatic IP66/IP67 water-and dust-tight
- Mechanical and electrical interlocking
- Up to 2 auxiliary and 2 pilot contacts
- Metal casing and stainless steel case AISI 316 L

# PNC



COMPACT  
CONNECTOR



16 A

- ▶ Glassfiber reinforced thermoplastic UL94 V-0
- ▶ Standard IP66/IP67/IP69 (IP68 on specification)
- ▶ Long life, 2 000 operations tested
- ▶ Very good vibration resistance

## ELECTRICAL FEATURES

|                           |                                                                       |
|---------------------------|-----------------------------------------------------------------------|
| Permitted current range   | 4-20 mA/16 A                                                          |
| Maximum voltage           | 480 V                                                                 |
| Impulse withstand voltage | 5 kV/Pollution degree 3                                               |
| Contact resistance        | < 2 mΩ                                                                |
| Polarity                  | 3P+N+E                                                                |
| Conductors accepted       | From 0,75 mm <sup>2</sup> to 2,5 mm <sup>2</sup><br>Screwed terminals |
| Cable diameter            | From 11 to 15 mm<br>(smaller Ø available according to specification)  |

## MECHANICAL FEATURES

|                    |                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------|
| Casing & insulator | Glassfiber reinforced thermoplastic UL94 V-0                                              |
| Butt contacts      | Copper alloy with silver-nickel tips                                                      |
| Contact protection | Tinning                                                                                   |
| Load cycles        | > 2000 cycles                                                                             |
| Shock resistance   | IK08                                                                                      |
| Vibration          | Frequency 5-1000 Hz, 1g (90 minutes on each critical frequency) according to IEC 6068-2-6 |

## CLIMATIC FEATURES

|                               |                                                                                                                              |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature           | -40 °C to +100 °C                                                                                                            |
| IP protection Socket with cap | IP66/IP67<br>IP69 100bar (1450 PSI) 80 °C                                                                                    |
| IP protection plug connected  | IP66/IP67<br>IP68 tested at 10 meters deep for 15 days<br>(please contact us for references)<br>IP69 100bar (1450 PSI) 80 °C |
| Salt, Fog performance         | 200 h not connected<br>> 1000 h connected                                                                                    |
| Resistance to fluids          | Motor oils, petrol, oils, detergents...                                                                                      |

### SOCKET-

**OUTLET** female  
(with M25 lock nut)  
**PNC (16 A)**



**INLET** male  
(with M25 lock nut)  
**PNC (16 A)**



480 V AC

5P

01E4007

01E8007

### COUPLER

socket female  
**PNC (16 A)**



**PLUG**  
male  
**PNC (16 A)**

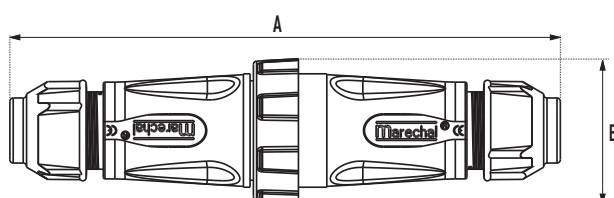


480 V AC

5P

01E3007

01E1007



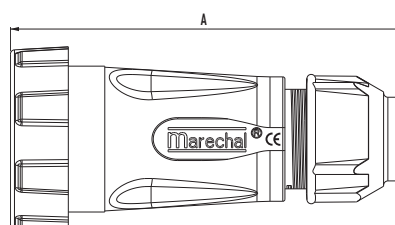
PNC

A

165

B

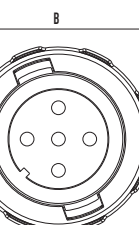
45



PNC

A

92



B

45

### PNC connectors comply with:

- The requirements of IEC 61984, IEC 60529, IEC 62262, IEC 68-2-6 International standards,
- The European Low Voltage Directive 2014/35/EU,
- The French NF C 15-100 standard,
- The decrees relating to workers' protection in Belgium, Spain and Italy.

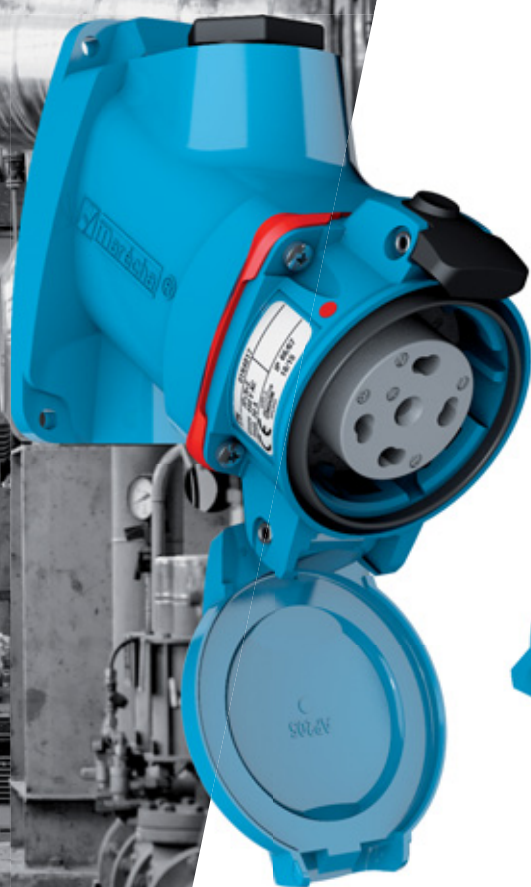
Also certified by TR CU (GOST) (Russian inspection laboratory).

EAC

# PN



## COMPACT PLUGS & SOCKETS



**30 A**

- Standard IP66/IP67
- All industries
- Chemical resistant GRP UL94 Or metal casing

## TECHNICAL FEATURES

|                     | PN               | PNHT   |
|---------------------|------------------|--------|
| Rated current (In)  | 30 A             | 30 A   |
| U <sub>max</sub>    | 500 V            | 500 V  |
| Keying positions    | 16               | 4      |
| Ambient temperature | -40 °C to +60 °C | 240 °C |
| IP protection       | IP66/IP67        | IP44   |

## OPERATION



To connect the plug: align the red dots on the plug and the socket-outlet, then turn the plug anticlockwise to connect.



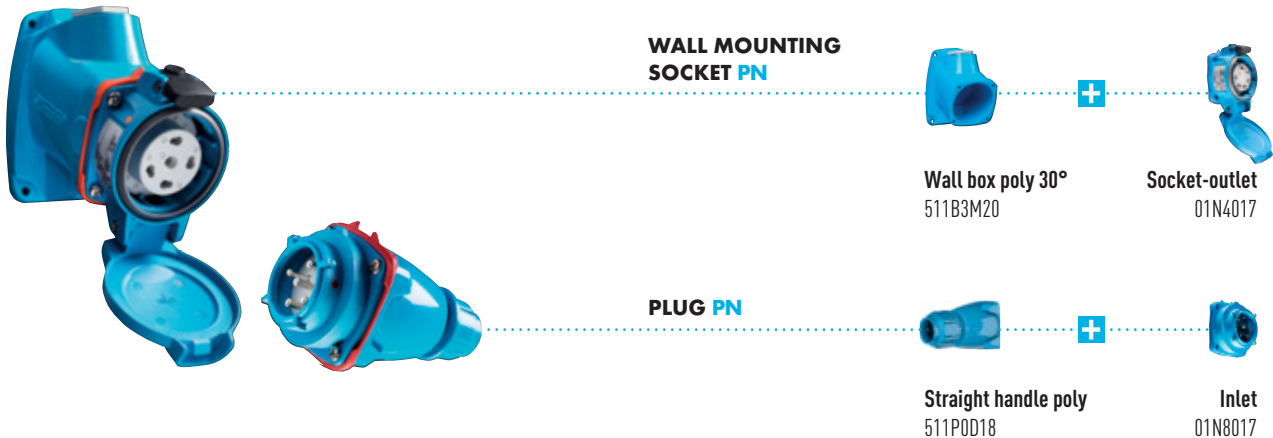
To remove the plug: turn the plug clockwise and withdraw.

**PN plugs and socket-outlets comply with:**

- IEC/EN 60309-1 & IEC/EN 60309-4 European and International standards (plugs and socket-outlets for industrial purposes),
- The European Low Voltage Directive 2014/35/EU, conformity with the CE marking,
- The European 'Machine Directive' 2006/42/CE regarding equipment isolation,
- The French NF C 15-100 standard,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses,
- The decrees relating to workers' protection in Belgium, Spain and Italy,
- The UL 1682 (USA) and CSA C22.2 N° 182.1-07 (Canada) standards for plugs and socket-outlets.

**Also certified by VERITAS LCIE, UL, TR CU (GOST) and cCSAus (French, American, Russian and Canadian inspection laboratories).**





### MAIN FEATURES

|                                                   |           |                           |                        |
|---------------------------------------------------|-----------|---------------------------|------------------------|
| Rated current (with wiring according to standard) | 30 A      | Ambient temperature       | -40 °C to +60 °C       |
| Maximum voltage                                   | 500 V     | Flexible wiring (min-max) | 1-6 mm <sup>2</sup>    |
| IP protection lid closed                          | IP66/IP67 | Stranded wiring (min-max) | 1,5-10 mm <sup>2</sup> |
| IP protection plug connected                      | IP66/IP67 | Other wiring              | on request             |
| Shock resistance (poly casing)                    | IK08      | Keying positions          | 16                     |
| Shock resistance (metal casing)                   | IK09      |                           |                        |



GRP devices are not compatible with metal devices.

Dual-voltage socket-outlet (see p. 7)



**SOCKET-OUTLET** female  
**PN (30 A)**



**INLET** male  
**PN (30 A)**



|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 20-24 V AC                | 2P     | 01N408A | 01N808A |
| 220-250 V AC              | 1P+N+E | 01N4015 | 01N8015 |
| 380-440 V AC              | 3P+E   | 01N4013 | 01N8013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 01N4017 | 01N8017 |
| 480-500 V AC              | 3P+E   | 01N4093 | 01N8093 |
| 480-500 V AC              | 3P+N+E | 01N4097 | 01N8097 |

► Other voltages, frequencies and contact configurations are available (see page 10).



For a black colour GRP housing replace the second reference character 1 with 5.



**SOCKET-OUTLET** female  
**PN (30 A)**

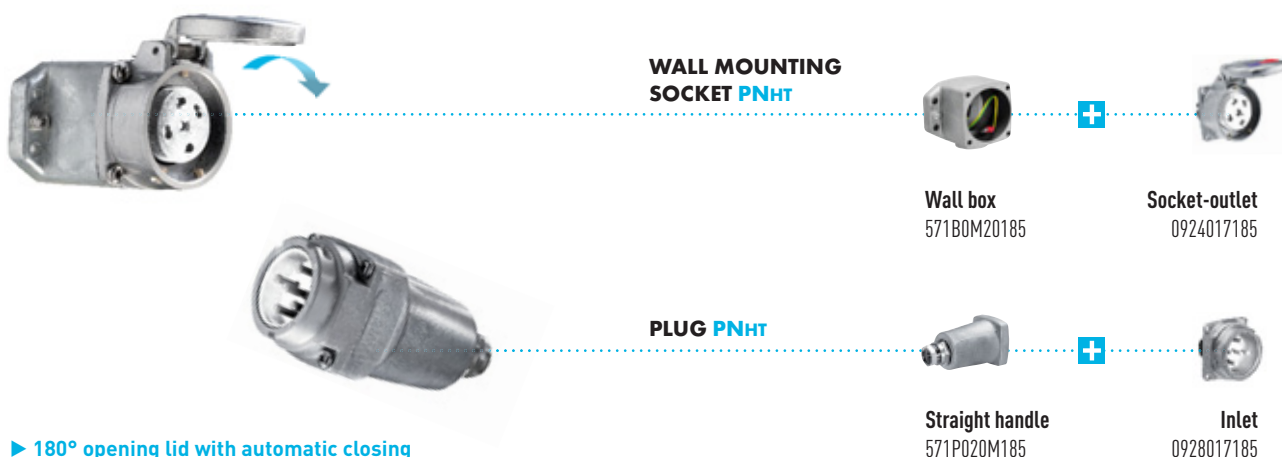


**INLET** male  
**PN (30 A)**



|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 20-24 V AC                | 2P     | 09N408A | 09N808A |
| 220-250 V AC              | 1P+N+E | 09N4015 | 09N8015 |
| 380-440 V AC              | 3P+E   | 09N4013 | 09N8013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 09N4017 | 09N8017 |
| 480-500 V AC              | 3P+E   | 09N4093 | 09N8093 |
| 480-500 V AC              | 3P+N+E | 09N4097 | 09N8097 |

► Other voltages, frequencies and contact configurations are available (see page 10).



## MAIN FEATURES

|                                   |        |                           |                        |
|-----------------------------------|--------|---------------------------|------------------------|
| Max. operating temperature steady | 240 °C | Protection                | IP44                   |
| Rated current In                  | 30 A   | Robustness                | IK09                   |
| Umax                              | 500 V  | Flexible wiring (min-max) | 1-6 mm <sup>2</sup>    |
| Maximum no. of contacts           | 3P+N+E | Stranded wiring (min-max) | 1,5-10 mm <sup>2</sup> |



**SOCKET-OUTLET** female  
**PNHT (30 A)**



**INLET** male  
**PNHT (30 A)**



|                           |        |            |            |
|---------------------------|--------|------------|------------|
| 20-24 V AC                | 2P     | 092408A185 | 092808A185 |
| 220-250 V AC              | 1P+N+E | 0924015185 | 0928015185 |
| 380-440 V AC              | 3P+E   | 0924013185 | 0928013185 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 0924017185 | 0928017185 |



## OPTIONS (DETAILS ON PAGE 216)

PN

PNC

### INDUSTRIAL-DOMESTIC ADAPTERS



Industrial inlet MARECHAL® 1P+N+E domestic socket-outlet 10/16 A 230 V 10 A and 16 A.

01N8015D11\*

NA



\* All these plug adapters are available to foreign standards : replace D11 by D40 for UK, D30 for Germany/NL/Lux, D06 for Italy.

### LOCKING WITH PADLOCK (Ø 4 mm) WITHOUT SHAFT (PADLOCKS NOT SUPPLIED)



Ref. + 843

NA

### SCREW LOCKING IMPRINT BTR 2,5



Socket-outlet ref. + 22

NA

### REVERSED INTERIOR AND CONTACTS



The connector is supplied with a Rubber inlet cap.

Ref. conn. + 001  
Socket-outlet ref. + 001

### IP55 SELF-CLOSING LID (SOCKET-OUTLET)



Replace N by S  
Eg: 400 V 3P+N+E poly = 01S4017

### INLET CAP



Socket-outlet cap  
Plug cap

01EA125  
01EA126



Inlet cap

012A126

### ADAPTER PLATE FOR PN ACCESSORIES



251A457-E

### 180° OPENING LID

Metal socket ref. + 10

NA

### SELF CLOSING/SELF RETURNING LID (ACCORDING TO MODEL)



Socket-outlet ref. +R

NA

### 180° OPENING & SELF-RETURNING LID

Socket-outlet ref. + 18

NA

### ELECTROMAGNETIC COMPATIBILITY (EMC) (SEE DETAIL PAGE 223)

Metal socket ref. +EMC



## ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

| BOXES                                                                                                              |  |  | PN<br>Size 1 | PNHT<br>Size 1 |  |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------|----------------|-------------------------------------------------------------------------------------|
| <b>POLY BOX</b>                                                                                                    |                                                                                   |                                                                                   |              |                |                                                                                     |
|                                   | 0°                                                                                | M20                                                                               | 511B0M20     |                |                                                                                     |
|                                                                                                                    | 0°                                                                                | M25                                                                               | 511B0M25     |                |                                                                                     |
|                                   | 30°                                                                               | M20                                                                               | 511B3M20     |                |                                                                                     |
|                                                                                                                    | 30°                                                                               | M25                                                                               | 511B3M25     |                |                                                                                     |
| <b>METAL BOX (+ EARTHING WIRE)</b>                                                                                 |                                                                                   |                                                                                   |              |                |                                                                                     |
|                                   | 0°                                                                                | M20                                                                               | 591B0M20     |                | Ref. +EMC                                                                           |
|                                                                                                                    | 0°                                                                                | M25                                                                               | 591B0M25     |                | Ref. +EMC                                                                           |
|                                   | 0°                                                                                | M20                                                                               |              | 571B0M20185    |                                                                                     |
|                                                                                                                    | 0°                                                                                | M25                                                                               |              | 571B0M25185    |                                                                                     |
| <b>POLY BOX + POLY SLEEVE</b>                                                                                      |                                                                                   |                                                                                   |              |                |                                                                                     |
| <br>Extra earth bar ref: 51AA089 | 70°                                                                               | Without Hole                                                                      | 511C7000     |                |                                                                                     |
|                                                                                                                    | 70°                                                                               | ø 20                                                                              | 511C7M20     |                |                                                                                     |
|                                                                                                                    | 70°                                                                               | ø 25                                                                              | 511C7M25     |                |                                                                                     |
|                                                                                                                    | 70°                                                                               | ø 32                                                                              | 511C7M32     |                |                                                                                     |
| <b>METAL BOX (+ EARTHING WIRE) + POLY SLEEVE</b>                                                                   |                                                                                   |                                                                                   |              |                |                                                                                     |
|                                 | 30°                                                                               | M20                                                                               | 511C3M20     |                |                                                                                     |
| <b>METAL BOXES WITH METAL SLEEVE (+ EARTHING WIRE)</b>                                                             |                                                                                   |                                                                                   |              |                |                                                                                     |
|                                 | 45°                                                                               | M20                                                                               | 591C4M20     |                | Ref. +EMC                                                                           |
|                                                                                                                    | 45°                                                                               | M25                                                                               | 591C4M25     |                | Ref. +EMC                                                                           |
|                                                                                                                    | 45°                                                                               | M32                                                                               | 591C4M32     |                | Ref. +EMC                                                                           |
|                                 | 45°                                                                               | M20                                                                               |              | 571C4M20185    |                                                                                     |
|                                                                                                                    | 45°                                                                               | M25                                                                               |              | 571C4M25185    |                                                                                     |
|                                                                                                                    | 45°                                                                               | M32                                                                               |              | 571C4M32185    |                                                                                     |

### TPM ELECTRICAL INLET WITH FLAP

PN  
size 1

#### BLACK POLY HOUSING (IP55) WITH LID FOR SOCKET



Dimensions (LxHxD)

121 x 136 x 60

551B0065 Size 1 case without indicator light  
551B0165 Size 1 case with 1+1 indicator lights  
551B0265 Size 1 case with 1+2 indicator lights



# ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

## SLEEVE



PN  
Size 1

PNHT  
Size 1



### POLY SLEEVE



30°

511M3



30°

551M3



70°

511M7



70°

551M7

### METAL SLEEVE



0°

591M0

Ref. +EMC



30°

591M3



45°

591M4

Ref. +EMC



45°

571M4185



## HANDLE

PN  
Size 1PNHT  
Size 1

## POLY HANDLE WITH GLAND



\* Short

9-18 mm

511P0D18\*

5-21 mm

511P0D21



\* Short

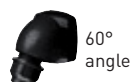
9-18 mm

551P0D18

60°  
angle

9-18 mm

511P6D18\*

60°  
angle

9-18 mm

551P6D18

## POLY HANDLE WITH POLY CABLE GLAND (FOR A BLACK COLOUR HANDLE REPLACE THE SECOND REFERENCE CHARACTER 1 WITH 5)



5-12 mm

511P020P

9-18 mm

511P025P

14-25 mm

511P032P

## METAL HANDLE WITH METAL GLAND (+ EARTHING WIRE)



7-13 mm

591P020M

8-16 mm

591P025M

Ref. +EMC (9-16 mm)

16-24 mm

591P032M

Ref. +EMC (11-21 mm)



8-13 mm

571P020M185

12-20 mm

571P025M185

18-28 mm

571P032M185

## POLY HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY, FOR A BLACK COLOUR HANDLE REPLACE THE SECOND REFERENCE CHARACTER 1 WITH 5)



M20

511P0M20

M25

511P0M25

M32

511P0M32

## METAL HANDLE WITHOUT CABLE GLAND (METRIC THREAD ENTRY)



M20

591P0M20

M25

591P0M25

Ref. +EMC

M32

591P0M32

Ref. +EMC



M25

571P0M25185

M32

571P0M32185



## SPARE PARTS



| PLUG |                            | PN poly | PN METAL |
|------|----------------------------|---------|----------|
| 1    | Plug interior              | 01NA010 | 09NA110  |
| 2    | Locking ring               | 611A583 | 09NA583  |
| 3    | Plug contact (P or N)      | 01NA011 | 01NA011  |
| 4    | Color-coded voltage gasket | 611AV26 | 611AV26  |
|      |                            | 611AB26 | 611AB26  |
|      |                            | 611AR26 | 611AR26  |
|      |                            | 611AN26 | 611AN26  |
| 5    | Plug casing                | 01NA501 | 09NA501  |



Remember to order  
the special removal key



Yellow disassembly key  
For poly casing  
31-A500-1

Contact us for spare parts.



| SOCKET |                            | PN        | PN METAL  |
|--------|----------------------------|-----------|-----------|
| 1      | Socket Interior 3P+E       | 01NA020C3 | 09NA220C3 |
| 1      | Socket Interior 1P+N+E     | 01NA020C5 | 09NA220C5 |
| 1      | Socket Interior 3P+N+E     | 01NA020C7 | 09NA220C7 |
| 2      | Locking ring               | 611A583   | 09NA583   |
| 3      | Socket contact             | 01NA021   | 01NA021   |
| 4      | Color-coded voltage gasket | 611AV26   | 611AV26   |
|        |                            | 611AB26   | 611AB26   |
|        |                            | 611AR26   | 611AR26   |
|        |                            | 611AN26   | 611AN26   |
| 5      | Socket Lid Gasket          | 01NA524*  | 09NA524*  |
| 6      | Casing gasket              | 01NA074   | 01NA074   |

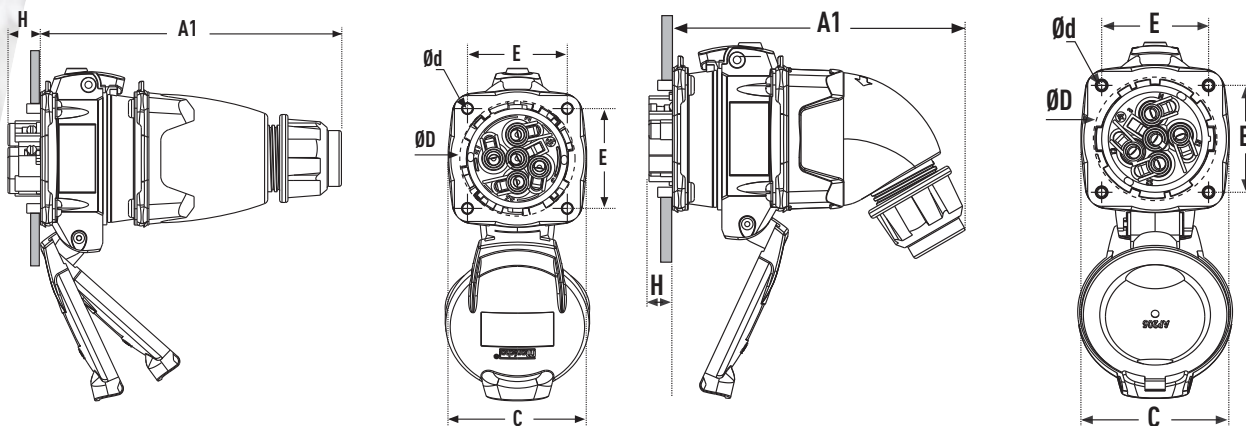
\*Add suffix cover option (opening 180 °, self-returning, etc.).

Contact us for spare parts.

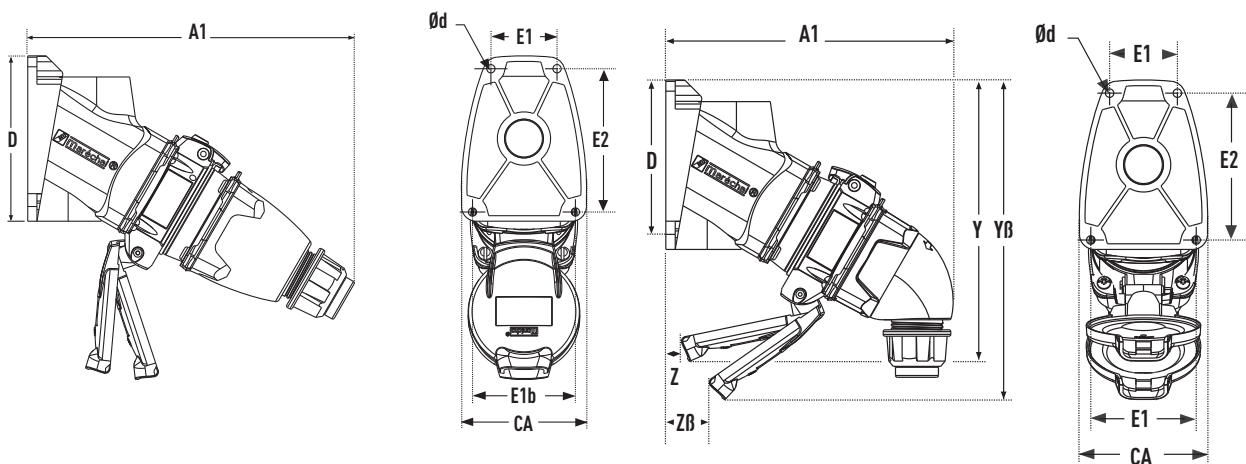


## DIMENSIONS

PN



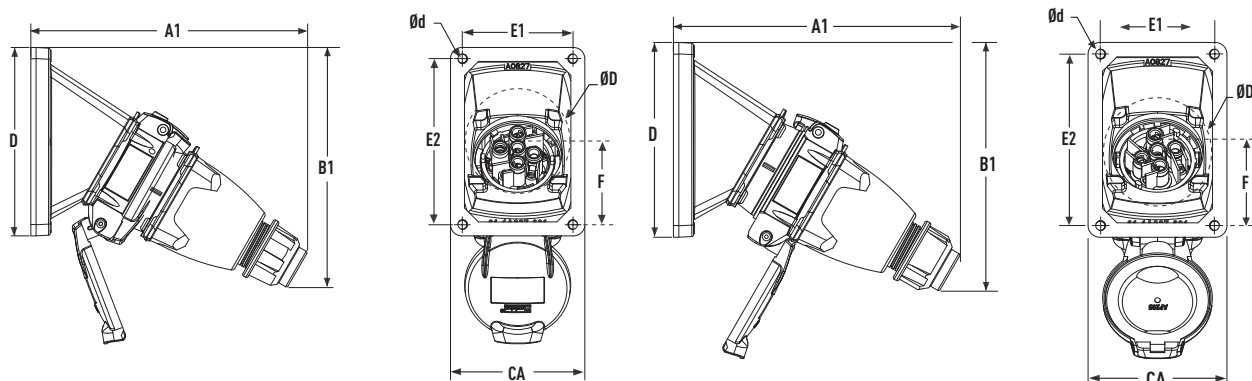
|                        | A1  | C  | E  | H  | Ød* |
|------------------------|-----|----|----|----|-----|
| <b>Straight handle</b> | 127 | 58 | 42 | 14 | 4,5 |
| <b>Angled handle</b>   | 117 | 58 | 42 | 14 | 4,5 |



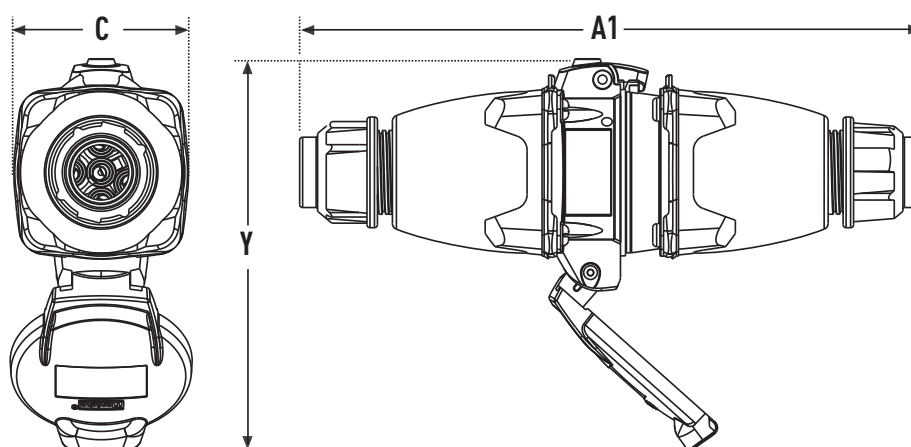
|                        | A1  | B1  | CA | D  | E1 | E1b | E2 | Ød* |
|------------------------|-----|-----|----|----|----|-----|----|-----|
| <b>Straight handle</b> | 178 | 143 | 68 | 90 | 36 | 56  | 78 | 4,5 |
| <b>Angled handle</b>   | 153 | 159 | 68 | 90 | 36 | 56  | 78 | 4,5 |

\*Ød : maximum drilling diameter.

PN



|                        | A1  | B1  | CA | D   | E1 | E2 | Ød* |
|------------------------|-----|-----|----|-----|----|----|-----|
| <b>Straight handle</b> | 159 | 138 | 77 | 108 | 63 | 95 | 5   |
| <b>Angled handle</b>   | 134 | 153 | 77 | 108 | 63 | 95 | 5   |



|                        | A1  | C  | Y   |
|------------------------|-----|----|-----|
| <b>Straight handle</b> | 208 | 58 | 132 |

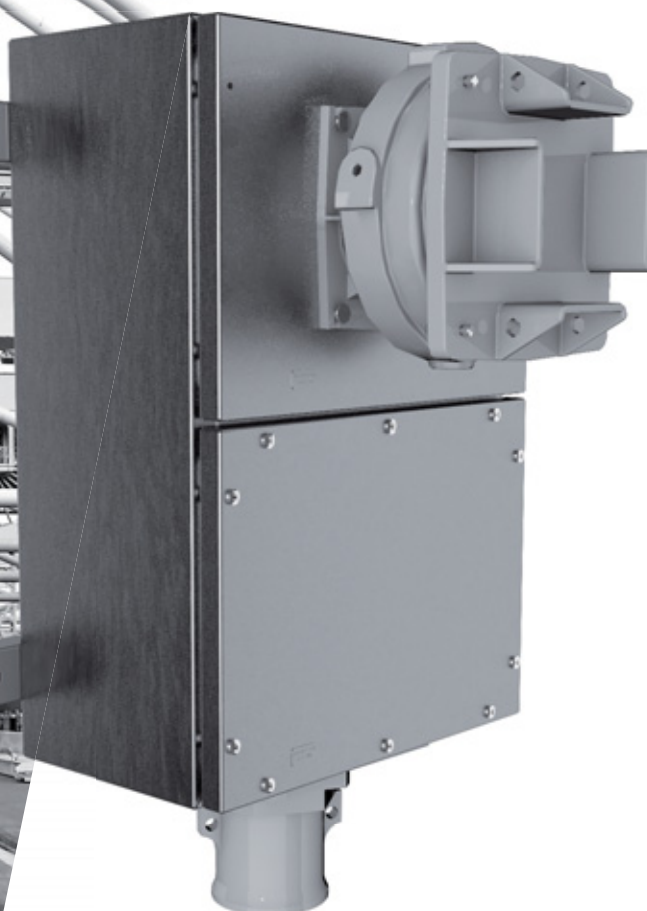
\*Ød : maximum drilling diameter.



# PF



## HEAVY-DUTY PLUGS & SOCKETS



**315 A/400 A/500 A/600 A**

- ▶ Up to 600 A/1 000 V
- ▶ Automatic IP66/IP67 water-and dust-tight
- ▶ Mechanical and electrical interlocking
- ▶ Up to 6 auxiliary and 2 pilot contacts
- ▶ Marine aluminum casing and stainless steel AISI 316 L box

## TECHNICAL FEATURES

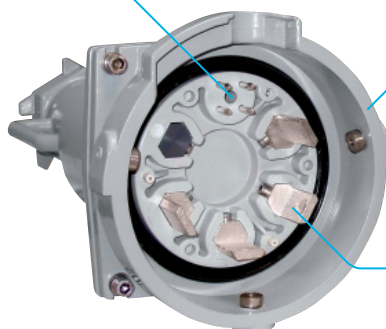
Socket-outlets that must be linked to switch/contactors via the pilot contacts.

|                              | PFQ3                     | PFQ4  | PFC5    | PFC6    |
|------------------------------|--------------------------|-------|---------|---------|
| Rated current (In)           | 315 A                    | 400 A | 500 A   | 600 A   |
| U <sub>max</sub>             | 690 V                    | 690 V | 1 000 V | 1 000 V |
| Auxiliary contacts available | 6                        | 6     | 2       | 2       |
| Pilot contacts               | <<< 2 >>>                |       |         |         |
| Keying positions             | 10                       | 10    | 7       | 7       |
| Ambient temperature          | <<< -40 °C to +60 °C >>> |       |         |         |

## MECHANICAL FEATURES

**Pilot contacts:** designed to connect after and disconnect before the phase contacts

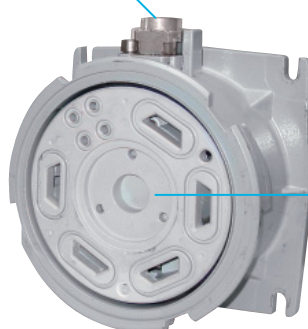
**IK10 metal casing**  
High resistance to shocks



**Lateral spring-loaded silver butt-contacts.** Silver is an excellent conductor and the plug engagement cleans contacts automatically.

### Electromechanical interlocking mechanism

The locking mechanism guarantees safe and watertight connection and engages the pilot contacts



**Safety shutter IP4X/IPXXD (PFQ) IP2X (PFC)**



### PF series comply with :

- The European Low Voltage Directive 2014/35/EU,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses, and to NF C15-100 French standard
- The decrees relating to workers' protection in Belgium, Spain and Italy.

**Also certified by UL, TR CU (GOST) and CSA (American, Russian and Canadian inspection laboratories).**

# HEAVY-DUTY PLUGS & SOCKETS



## MECHANICAL AND ELECTRICAL LOCKING

### OPERATING INSTRUCTIONS



Off load engagement



The male-female couple is automatically watertight.



Locking the plug in the socket closes the pilots and connects the main circuit.

FIND PF OPERATION IN VIDEO



PF operation

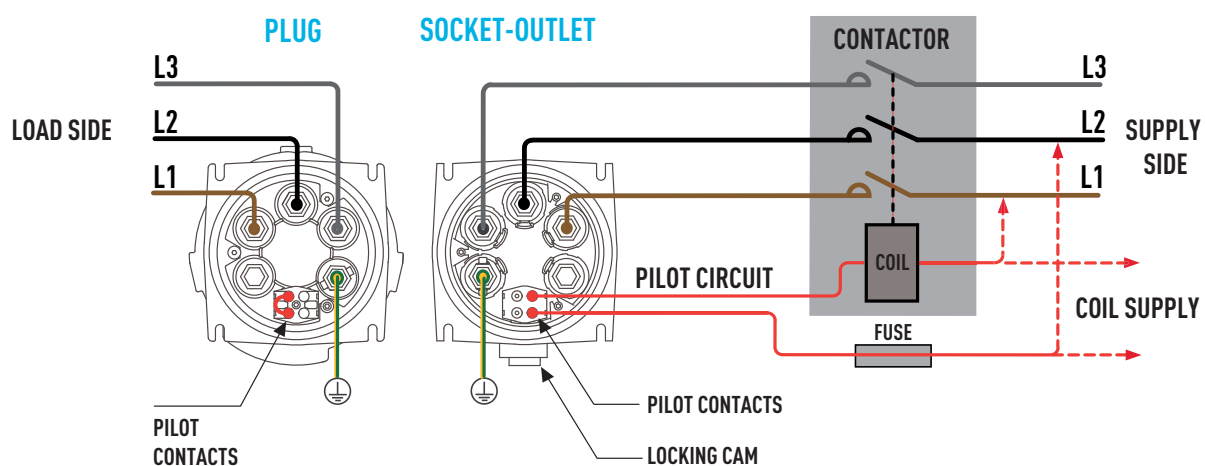
## ELECTRICAL INTERLOCKING

At this level of power, it is not possible to cut directly under load. Electrical interlocking with a switch or a pilot controlled contactor is required. Boxes with the following equipment are available upon request:

- circuit breaker or differential switch,
- contactor,
- fuses,
- loop-out enclosures,
- terminals for single pole cables...

INFOS +

### LINE DIAGRAM OF TYPICAL PF PILOT CONTROL CIRCUIT



### PILOT CONTACTS

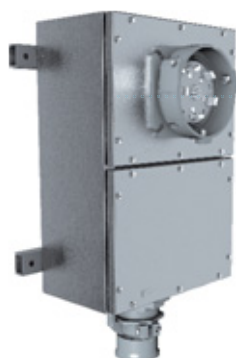
|                   | PFC           | PFQ           |
|-------------------|---------------|---------------|
| Pilot contacts    | 2             | 2             |
| Pilot Amperage    | 20 A/400 V AC | 10 A/400 V AC |
| Interlocking Type | Mechanical    | Mechanical    |
| Terminal Type     | Screw         | Solder/crimp  |

Notes : The mechanical locking of the plug to the socket-outlet, via the rotation of a cam, closes the pilot contacts.  
Failure to use a pilot/relay system can create an electrical shock hazard.



# PFQ3 & Q4

HEAVY-DUTY PLUGS & SOCKETS



**WALL MOUNTING INLET PFQ3**



**Box**  
474A023070



**Inlet**  
4738017



**COUPLER SOCKET PFQ3**



**Straight handle**  
474A013-70



**Socket-outlet**  
4734017

## MAIN FEATURES

|                              |                           |                                  |                        |
|------------------------------|---------------------------|----------------------------------|------------------------|
| Rated current                | 315 A (PFQ3)/400 A (PFQ4) | Flexible wiring (min-max)        | 95-240 mm <sup>2</sup> |
| Maximum voltage              | 690 V                     | Stranded wiring (min-max)        | 95-240 mm <sup>2</sup> |
| IP protection lid closed     | IP66/IP67                 | Wiring for single or multi entry |                        |
| IP protection plug connected | IP66/IP67                 | Keying positions                 | 10                     |
| Shock resistance             | IK10                      | Auxiliary contacts (10 A/400 V)  | 6                      |
| Ambient temperature          | -40 °C to +60 °C          | Pilot contacts (10 A/400 V)      | 2                      |

**SOCKET-  
OUTLET** female  
**PFQ3 (315 A)**



**INLET** male  
**PFQ3 (315 A)**



|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 380-440 V AC              | 3P+E   | 4734013 | 4738013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 4734017 | 4738017 |
| 660-690 V AC              | 3P+E   | 4734193 | 4738193 |
| 380-400 V AC 660-690 V AC | 3P+N+E | 4734197 | 4738197 |

**SOCKET-  
OUTLET** female  
**PFQ4 (400 A)**



**INLET** male  
**PFQ4 (400 A)**



|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 380-440 V AC              | 3P+E   | 4744013 | 4748013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 4744017 | 4748017 |
| 660-690 V AC              | 3P+E   | 4744193 | 4748193 |
| 380-400 V AC 660-690 V AC | 3P+N+E | 4744197 | 4748197 |

## 315 A &amp; 400 A IP66/IP67

**BOXES** STAINLESS STEEL 316 L  
**CABLE GLAND INCLUDED**


|          | Wiring from 95 to 150 mm <sup>2</sup> | Wiring from 150 to 240 mm <sup>2</sup> |
|----------|---------------------------------------|----------------------------------------|
| 46-50 mm | 474A023050                            | 474A023550                             |
| 51-55 mm | 474A023055                            | 474A023555                             |
| 56-60 mm | 474A023060                            | 474A023560                             |
| 61-65 mm | 474A023065                            | 474A023565                             |
| 66-70 mm | 474A023070                            | 474A023570                             |
| 71-75 mm | 474A023075                            | 474A023575                             |
| 76-80 mm | 474A023080                            | 474A023580                             |
| 81-85 mm | 474A023085                            | 474A023585                             |
| 86-90 mm | 474A023090                            | 474A023590                             |

On request: boxes for installation in ducts, boxes equipped with circuit breaker, earth-leakage switch, contactor,...


**HANDLES**

|          | Straight*  | Angled 90° |
|----------|------------|------------|
| 46-50 mm | 474A013-50 | 474A913-50 |
| 51-55 mm | 474A013-55 | 474A913-55 |
| 56-60 mm | 474A013-60 | 474A913-60 |
| 61-65 mm | 474A013-65 | 474A913-65 |
| 66-70 mm | 474A013-70 | 474A913-70 |
| 71-75 mm | 474A013-75 | 474A913-75 |
| 76-80 mm | 474A013-80 | 474A913-80 |
| 81-85 mm | 474A013-85 | 474A913-85 |
| 86-90 mm | 474A013-90 | 474A913-90 |

Straight connection:  
use M12 straight cable lugs and sleeves

Right angle connection using straight M12 cable  
lugs and insulation sleeves



PF socket  
instructions


**ACCESSORIES AND OPTIONS**

Key for locking and  
operating pilot contacts 473A393

Inlet lid 474A126

M12 connection piece 474A277



It is recommended to put an insulating sleeve  
once the lugs are crimped.

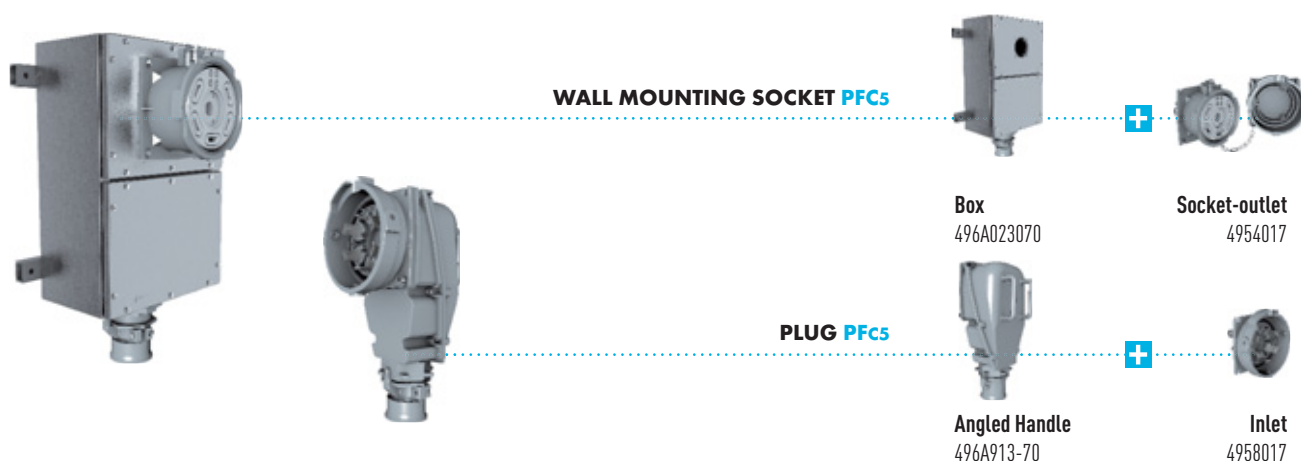
i

\* Trumpet gland available on request



# PFC5 & C6

HEAVY-DUTY PLUGS & SOCKETS



## MAIN FEATURES

|                              |                           |                                  |                        |
|------------------------------|---------------------------|----------------------------------|------------------------|
| Rated current                | 500 A (PFC5)/600 A (PFC6) | Flexible wiring (min-max)        | 95-240 mm <sup>2</sup> |
| Maximum voltage              | 1 000 V                   | Stranded wiring (min-max)        | 95-240 mm <sup>2</sup> |
| IP protection lid closed     | IP66/IP67                 | Wiring for single or multi entry |                        |
| IP protection plug connected | IP66/IP67                 | Keying positions                 | 7                      |
| Shock resistance             | IK10                      | Auxiliary contacts (20 A/400 V)  | 2                      |
| Ambient temperature          | -40 °C to +60 °C          | Pilot contacts (20 A/400 V)      | 2                      |

### SOCKET-OUTLET female PFC5 (500 A) INLET male PFC5 (500 A)

|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 380-440 V AC              | 3P+E   | 4954013 | 4958013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 4954017 | 4958017 |
| 660-690 V AC              | 3P+E   | 4954193 | 4958193 |
| 380-400 V AC 660-690 V AC | 3P+N+E | 4954197 | 4958197 |
| 1000 V AC                 | 3P+E   | 4954223 | 4958223 |

### SOCKET-OUTLET female PFC6 (600 A) INLET male PFC6 (600 A)

|                           |        |         |         |
|---------------------------|--------|---------|---------|
| 380-440 V AC              | 3P+E   | 4964013 | 4968013 |
| 220-250 V AC 380-440 V AC | 3P+N+E | 4964017 | 4968017 |
| 660-690 V AC              | 3P+E   | 4964193 | 4968193 |
| 380-400 V AC 660-690 V AC | 3P+N+E | 4964197 | 4968197 |
| 1000 V AC                 | 3P+E   | 4964223 | 4968223 |

## 500 A to 600 A IP66/IP67

**BOXES STAINLESS STEEL 316 L**  
**CABLE GLAND INCLUDED**


|          | Wiring from 95 to 150 mm <sup>2</sup> | Wiring from 150 to 240 mm <sup>2</sup> |
|----------|---------------------------------------|----------------------------------------|
| 46-50 mm | 496A023050                            | 496A023550                             |
| 51-55 mm | 496A023055                            | 496A023555                             |
| 56-60 mm | 496A023060                            | 496A023560                             |
| 61-65 mm | 496A023065                            | 496A023565                             |
| 66-70 mm | 496A023070                            | 496A023570                             |
| 71-75 mm | 496A023075                            | 496A023575                             |
| 76-80 mm | 496A023080                            | 496A023580                             |
| 81-85 mm | 496A023085                            | 496A023585                             |
| 86-90 mm | 496A023090                            | 496A023590                             |

On request: boxes for installation in ducts, boxes equipped with circuit breaker, earth-leakage switch, contactor,...


**HANDLES**

|          | Straight * | Angled 90° |
|----------|------------|------------|
| 46-50 mm | 496A013-50 | 496A913-50 |
| 51-55 mm | 496A013-55 | 496A913-55 |
| 56-60 mm | 496A013-60 | 496A913-60 |
| 61-65 mm | 496A013-65 | 496A913-65 |
| 66-70 mm | 496A013-70 | 496A913-70 |
| 71-75 mm | 496A013-75 | 496A913-75 |
| 76-80 mm | 496A013-80 | 496A913-80 |
| 81-85 mm | 496A013-85 | 496A913-85 |
| 86-90 mm | 496A013-90 | 496A913-90 |

A right angled cable  
lug M14  
with insulated sleeve

Straight cable  
lug M14  
with insulated sleeve


**ACCESSORIES AND OPTIONS**

|             |         |
|-------------|---------|
| Locking key | 496A393 |
| Inlet cap   | 496A126 |



It is recommended to put an insulating sleeve once the lugs are crimped.

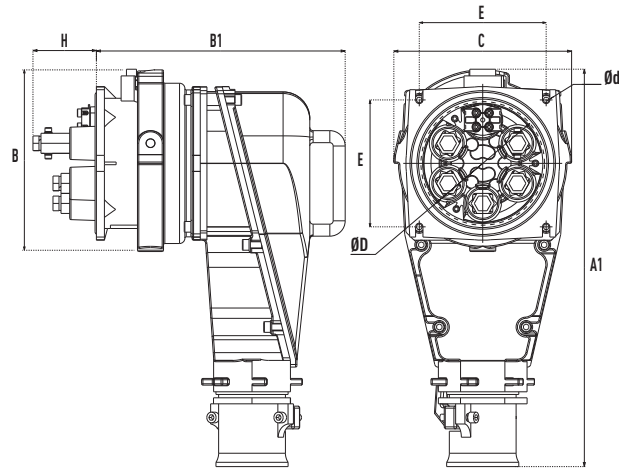
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\* Trumpet gland available on request

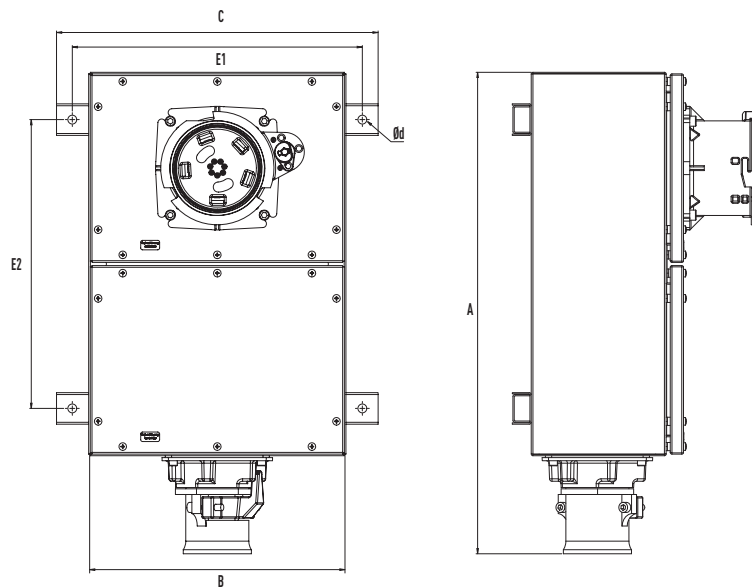


## DIMENSIONS

### PFQ/PFC



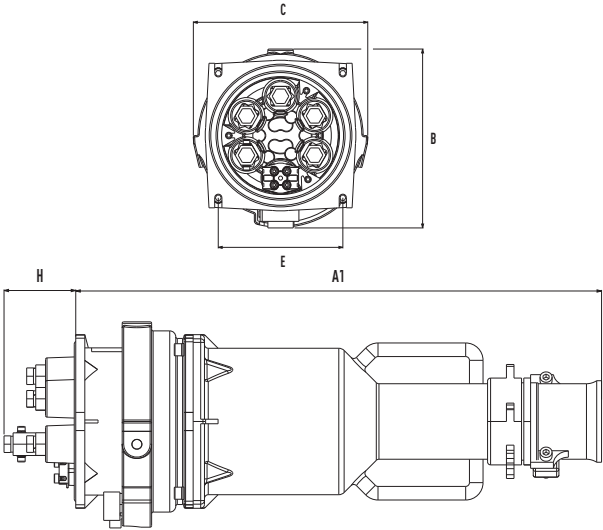
|                   | A1  | B   | B1  | C   | E   | H  | Ød* | ØD max. |
|-------------------|-----|-----|-----|-----|-----|----|-----|---------|
| <b>PFQ ANGLED</b> | 471 | 244 | 354 | 202 | 145 | 69 | 11  | 135     |
| <b>PFC ANGLED</b> | 595 | 273 | 373 | 266 | 190 | 95 | 11  | 185     |



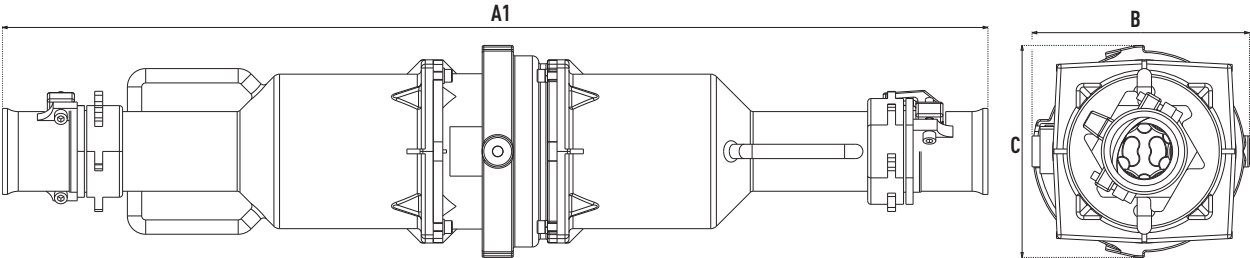
|                               | A    | B   | C   | E1  | E2      | Ød* |
|-------------------------------|------|-----|-----|-----|---------|-----|
| <b>95-150 mm<sup>2</sup></b>  | 764  | 408 | 510 | 460 | 458     | 14  |
| <b>150-240 mm<sup>2</sup></b> | 1064 | 408 | 510 | 460 | 400/800 | 14  |

\*Ød : maximum drilling diameter.

PFQ/PFC



|              | A1  | B   | B1 | C   | E   | H  | Ød* | ØD max. |
|--------------|-----|-----|----|-----|-----|----|-----|---------|
| PFQ STRAIGHT | 645 | 244 | –  | 202 | 145 | 69 | 11  | 135     |
| PFC STRAIGHT | 697 | 273 | –  | 266 | 190 | 95 | 11  | 185     |



|     | A1   | B   | C   |
|-----|------|-----|-----|
| PFQ | 1181 | 244 | 202 |
| PFC | 1238 | 273 | 266 |

\*Ød : maximum drilling diameter.

# SINGLE POLE POWER CONNECTOR



- Single-Pole power connectors from 75 A to 700 A-1000 V.
- High reliability, resistant to strong starting currents.
- Option : padlocking, auxiliary contact.



FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates





**CS** P. 126

### SINGLE POLE POWER CONNECTOR

- From 75 to 250 A - very low voltage (maximum 50 V)
- Bayonet contact system
- Self-cleaning contacts
- 16 to 95 mm<sup>2</sup> conductors



**CS1000** P. 130

### SINGLE POLE POWER CONNECTOR

- Up to 400 A/1 000 V
- Automatic IP66/IP67 water- and dust-tight
- Visual and mechanical coding
- Padlocking ring



**SP** P. 136

### SINGLE POLE POWER CONNECTOR

- Up to 700 A/1 000 V
- Automatic IP66/IP67 water- and dust-tight
- Electromechanical interlocking system
- Visual and mechanical coding

# CS



## SINGLE POLE POWER CONNECTOR



**250 A**

- ▶ From 75 to 250 A - very low voltage (maximum 50 V)
- ▶ Bayonet contact system
- ▶ Self-cleaning contacts
- ▶ 16 to 95 mm<sup>2</sup> conductors

## TECHNICAL FEATURES

| Type CS | Wire cross-section (mm²) | In rated current (A) | i max welding cycle (A) |      |
|---------|--------------------------|----------------------|-------------------------|------|
|         |                          |                      | 5 minutes cycles        |      |
|         |                          |                      | 60 %                    | 30 % |
| CS2     | 16                       | 75                   | 100                     | 150  |
|         | 25                       | 100                  | 125                     | 200  |
|         | 35                       | 125                  | 150                     | 250  |
|         | 50                       | 150                  | 200                     | 300  |
| CS3     | 50                       | 150                  | 200                     | 300  |
|         | 70                       | 200                  | 250                     | 350  |
|         | 95                       | 250                  | 300                     | 400  |

\* Definition of 30% welding cycle: on a 5 min cycle, 30% of the time working (i.e. 1 min 30 s) and 70% off (i.e. 3 min 30 s).

**INLET** male  
with lug



**PLUG**  
male with lug



| Wire cross-section (mm²) | Rated current welding cycle |       | CS2        | CS3        | CS2        | CS3        |
|--------------------------|-----------------------------|-------|------------|------------|------------|------------|
|                          | 60 %                        | 30 %  |            |            |            |            |
| 16                       | 100 A                       | 150 A | 4 2901 016 |            | 4 0201 016 |            |
| 25                       | 125 A                       | 200 A | 4 2901 030 |            | 4 0201 030 |            |
| 35                       | 150 A                       | 250 A | 4 2901 040 |            | 4 0201 040 |            |
| 50                       | 200 A                       | 300 A | 4 2901 050 | 4 3901 050 | 4 0201 050 | 4 0301 050 |
| 70                       | 250 A                       | 350 A |            | 4 3901 075 |            | 4 0301 075 |
| 95                       | 300 A                       | 400 A |            | 4 3901 100 |            | 4 0301 100 |
| with screw               | 200 A                       | 300 A | 4 2901 121 |            |            |            |
| with screw               | 300 A                       | 400 A |            | 4 3901 121 |            |            |

**SOCKET-OUTLET**  
female with lug



**COUPLER**  
socket female  
with lug



| Wire cross-section (mm²) | Rated current welding cycle |       | CS2        | CS3        | CS2        | CS3        |
|--------------------------|-----------------------------|-------|------------|------------|------------|------------|
|                          | 60 %                        | 30 %  |            |            |            |            |
| 16                       | 100 A                       | 150 A | 4 2401 016 |            | 4 2301 016 |            |
| 25                       | 125 A                       | 200 A | 4 2401 030 |            | 4 2301 030 |            |
| 35                       | 150 A                       | 250 A | 4 2401 040 |            | 4 2301 040 |            |
| 50                       | 200 A                       | 300 A | 4 2401 050 | 4 3401 050 | 4 2301 050 | 4 3301 050 |
| 70                       | 250 A                       | 350 A |            | 4 3401 075 |            | 4 3301 075 |
| 95                       | 300 A                       | 400 A |            | 4 3401 100 |            | 4 3301 100 |
| with screw               | 200 A                       | 300 A | 4 2401 121 |            |            |            |
| with screw               | 300 A                       | 400 A |            | 4 3401 121 |            |            |

## ADDITIONAL COPPER LUGS

**Lug choice depends on the cable:** the cross-section of the flexible cable mentioned in the table below is for information only. Please check dimensions as these may vary according to cable types and manufacturers.



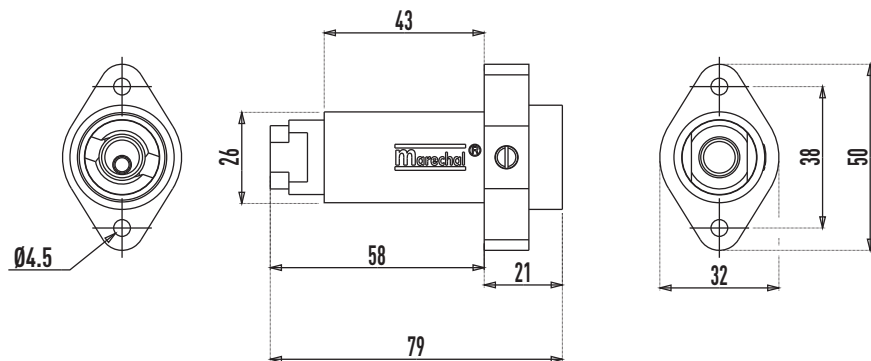
| Wiring (mm²) |          | Straight threaded M10* |            | Internal diameter (mm) |
|--------------|----------|------------------------|------------|------------------------|
| Flexible     | Stranded | CS2                    | CS3        |                        |
| 16           | 25       | 4 2 301 416            |            | 6,6                    |
| 25           | 35       | 42 301 430             |            | 7,9                    |
| 35           | 50       | 42 301 440             |            | 9,2                    |
| 50           | 70       | 42 301 450             | 4 3301 450 | 11                     |
| 70           | 95       |                        | 4 3301 475 | 13,1                   |
| 95           | 120      |                        | 4 3301 400 | 14,5                   |

\* Wiring with crimping lugs, according to NF C20-130 standard (for VDE 0220 standard, please contact us). Crimping: double hexagonal crimping is recommended.

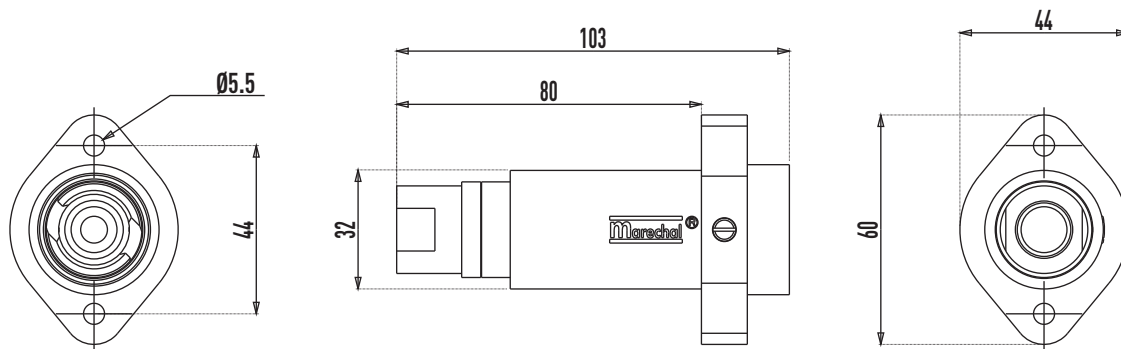


## DIMENSIONS

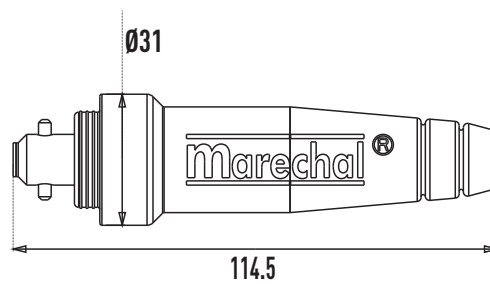
### CS2/SOCKET-OUTLET



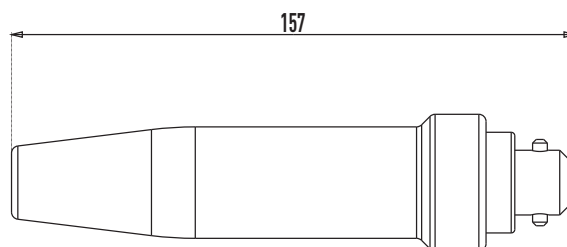
### CS3/SOCKET-OUTLET



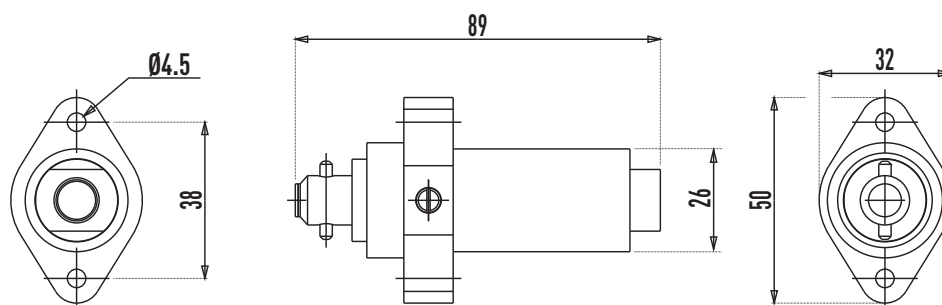
### CS2/PLUG



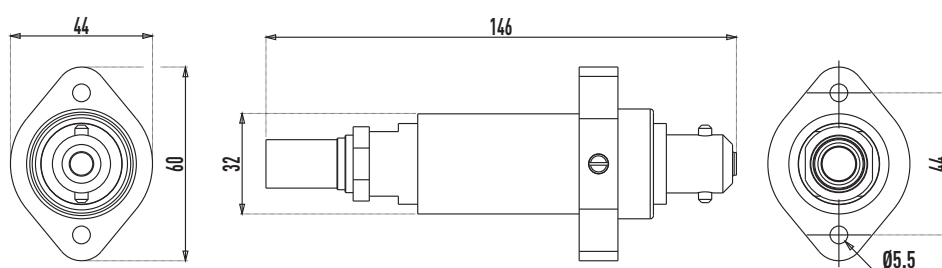
### CS3/PLUG



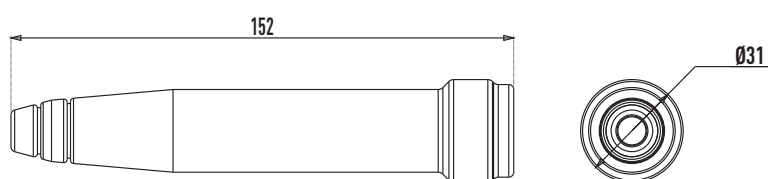
## CS2/INLET



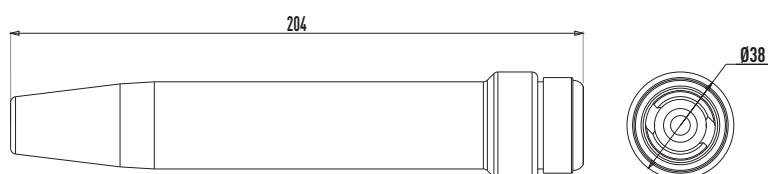
## CS3/INLET



## CS2/COUPLER SOCKET



## CS3/COUPLER SOCKET





# CS1000



## SINGLE POLE POWER CONNECTOR



**400 A**

- ▶ Up to 400 A/1 000 V
- ▶ Automatic IP66/IP67 water- and dust-tight
- ▶ Visual and mechanical coding
- ▶ Padlocking ring



## MAIN FEATURES

|                                                   |                      |                           |                          |
|---------------------------------------------------|----------------------|---------------------------|--------------------------|
| Rated current (with wiring according to standard) | 400 A                | Shock resistance          | IK08                     |
| Maximum voltage AC                                | 1 000 V              | Ambient temperature       | -40 °C to +60 °C         |
| Maximum voltage DC                                | 1 500 V              | Flexible wiring (min-max) | 50-150 mm <sup>2</sup>   |
| Short-circuit current I <sub>cc</sub>             | 20 kA pendant 250 ms | Stranded wiring (min-max) | 70 - 185 mm <sup>2</sup> |
| Protection                                        | IP66/IP67            | Keying positions          | 5, mechanical and visual |
| Number of operations                              | 2 000                |                           |                          |

### Perfect safety

- Socket-outlet: IP2X finger protection, without cap,
- IP66/IP67 watertightness with cap ; or upon connection,
- Locking mechanism preventing disconnection by accident.

### Easy connection

- Mechanical fool-proofing system between phases, neutral and earth,
- Standardised colour coding (according to local regulation),
- Replacable crimping lug in case of cable damage.

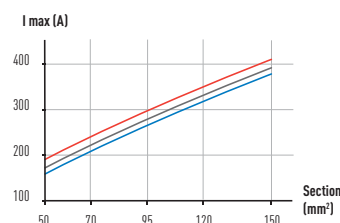
### High Performance

Thanks to its silver butt-contact technology the CS1000 connector withstands permanent current of 400 A/1 000 V AC or 1 500 V DC (wiring from 50 to 150 mm<sup>2</sup>).

### CS1000 electrical rating

Permanent permissible current for a H07RNF cable, at 30 °C ambient temperature

- Maximum permanent permissible current in the CS1000 after 2 000 operations depending on cable cross-section.
- Maximum intensity of permanent current specified by the cable manufacturers to maintain a conductor core temperature < 85 °C.
- NFC 15-100 or the IEC 60 364-5-52 standards to maintain a conductor core temperature < 70 °C.



### IP66/IP67 seal ring

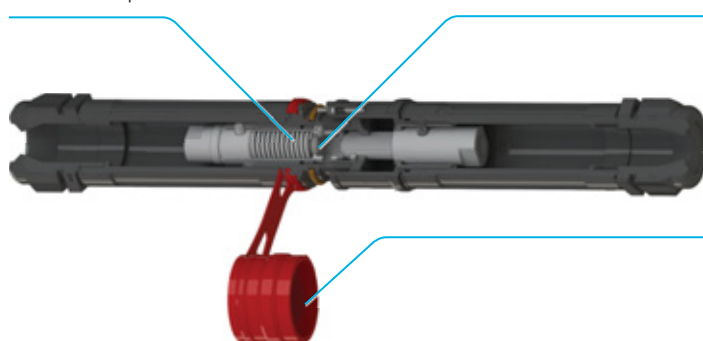


### Safety shutter (IP2X protection)

### Bayonet operation

### Spring Loaded Butt-Style Contacts

Ensures optimal contact force and superior electrical performance over thousands of operations.



### Silver-Nickel Contact Material

Solid silver-nickel contact surfaces provide:

- superior conductivity,
- corrosion resistance,
- durability.

### Protective Cap

Ensures IP66/IP67 watertightness when disconnected.

# CS1000

## SINGLE POLE CONNECTOR



| COLOR coding |         | SOCKET-OUTLET female<br>CS1000 (400 A)<br>WITHOUT LUG | INLET male<br>CS1000 (400 A)<br>WITHOUT LUG |
|--------------|---------|-------------------------------------------------------|---------------------------------------------|
| Type         | Europe* | Reference                                             | Reference                                   |
| L1           | Brown   | 4534001                                               | 4538001                                     |
| L2           | Black   | 4534002                                               | 4538002                                     |
| L3           | Grey    | 4534003                                               | 4538003                                     |
| Neutral      | Blue    | 453400N                                               | 453800N                                     |
| Earth        | Green   | 453400T                                               | 453800T                                     |
| Positive     | Red     | 453400P                                               | 453800P                                     |
| Negative     | Black   | 453400M                                               | 453800M                                     |

\* The indicated references are valid for Europe and Japan. For other countries: add the suffix P80 for the USA/P67 for Australia and New Zealand/P40 for UK and South-Africa.

| Type     | Australia<br>and New Zealand | Reference   | Reference   |
|----------|------------------------------|-------------|-------------|
| L1       | Red                          | 4534001-P67 | 4538001-P67 |
| L2       | White                        | 4534002-P67 | 4538002-P67 |
| L3       | Blue                         | 4534003-P67 | 4538003-P67 |
| Neutral  | Black                        | 453400N-P67 | 453800N-P67 |
| Earth    | Green                        | 453400T-P67 | 453800T-P67 |
| Positive | Red                          | 453400P-P67 | 453800P-P67 |
| Negative | Black                        | 453400M-P67 | 453800M-P67 |

| Type     | USA   | Reference   | Reference   |
|----------|-------|-------------|-------------|
| L1       | Black | 4534001-P80 | 4538001-P80 |
| L2       | Red   | 4534002-P80 | 4538002-P80 |
| L3       | Blue  | 4534003-P80 | 4538003-P80 |
| Neutral  | White | 453400N-P80 | 453800N-P80 |
| Earth    | Green | 453400T-P80 | 453800T-P80 |
| Positive | Red   | 453400P-P80 | 453800P-P80 |
| Negative | Black | 453400M-P80 | 453800M-P80 |

## 5 MECHANICAL KEYING POSITIONS (EUROPEAN COLOR CODING)



## COPPER LUGS

**Lug choice depends on the cable:** the cross-section of the flexible cable mentioned in the table below is for information only. Please check dimensions as these may vary according to cable types and manufacturers.

| Wiring (mm <sup>2</sup> ) |          | Straight with hole <sup>(1)</sup> | Straight threaded M12 <sup>(2)</sup> | Internal diameter (mm) |
|---------------------------|----------|-----------------------------------|--------------------------------------|------------------------|
| Flexible                  | Stranded | Reference                         | Reference                            |                        |
| 50                        | 70       | 454A50C                           | 454A50D                              | 11                     |
| 70                        | 95       | 454A70C                           | 454A70D                              | 13,1                   |
| 95                        | 120      | 454A95C                           | 454A95D                              | 14,5                   |
| 120                       | 150      | 454A12C                           | 454A12D                              | 16,2                   |
| 150                       | 185      | 454A15C                           | 454A15D                              | 18                     |

(1) For female socket-outlet.

(2) For male contact, wiring with crimping lugs, according to NF C20-130 standard (for VDE 0220 standard, please contact us). Crimping: Double hexagonal crimping is recommended.

| PADLOCKING<br>ring | SLEEVE**<br>inclined 30°<br>with adapter plate | ADAPTER<br>plate | HANDLE<br>straight | INLET<br>cap     |
|--------------------|------------------------------------------------|------------------|--------------------|------------------|
| 453A843            | 453A027                                        | 453A540          | M32                | 453A753 14-25 mm |
|                    |                                                |                  | M40                | 453A783 18-32 mm |

\*\* The inclined sleeve is recommended to reduce cable weight effect.

## ACCESSORIES AND OPTIONS

Additional unlocking key

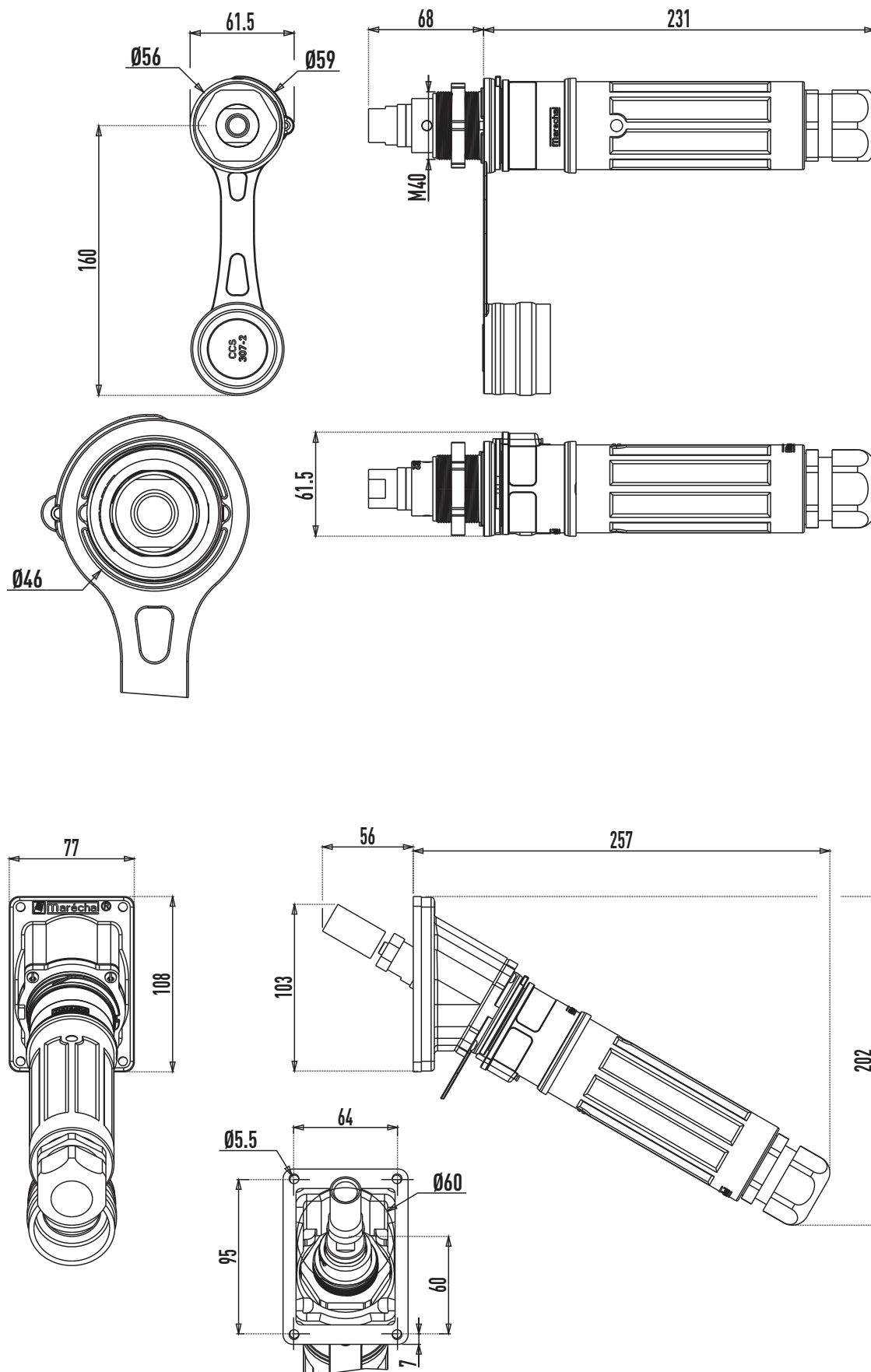
453A396





## DIMENSIONS

CS1000









# SP



## SINGLE POLE POWER CONNECTOR



**700 A**

- ▶ Up to 700 A/1 000 V
- ▶ Automatic IP66/IP67 water-and dust-tight
- ▶ Electromechanical interlocking system
- ▶ Visual and mechanical coding

## MAIN FEATURES

|                                       |                                       |                           |                          |
|---------------------------------------|---------------------------------------|---------------------------|--------------------------|
| Rated current                         | 700 A                                 | Ambient temperature       | -40 °C to +60 °C         |
|                                       | For higher current, please contact us | Flexible wiring (min-max) | 50-400 mm <sup>2</sup>   |
| Maximum voltage AC                    | 1 000 V                               | Stranded wiring (min-max) | 70-500 mm <sup>2</sup>   |
| Maximum voltage DC                    | 1 500 V                               | Keying positions          | 5, mechanical and visual |
| Short-circuit current I <sub>cc</sub> | 20 kA pendant 250 ms                  | Number of operations      | 2 000                    |
| IP protection lid closed              | IP66/IP67                             | Pre-wired pilot circuit   | 10 A/250 V               |
| Shock resistance                      | IK08                                  |                           |                          |

### The highest possible safety

- Reliable mechanical and electrical interlocking with pilotcontact circuit.
- IP2X socket-outlet when cap removed,
- Automatic IP66 watertightness when plug is connected.

### An easily operable connector

- Straight insertion of the plug into the socket-outlet without any rotation,
- Different mechanical keying of L1, L2, L3, N and E,
- Visual identification by standard colours,
- Screwed crimping lugs facilitate cable replacement.

### Performances

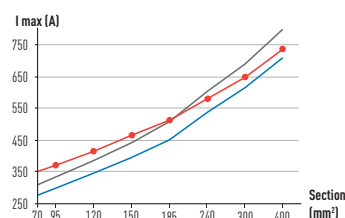
Thanks to the butt-contact principle, the SP withstands continuously up to 700 A/1000 V AC or 1500 V DC (70 mm<sup>2</sup> to 400 mm<sup>2</sup> conductors), withstands at least 2 000 operations.



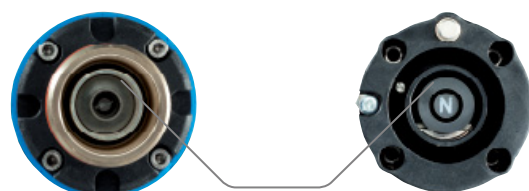
### SP Characterisation

Permissible current according to conductor cross-section at 30 °C ambient temperature

- Maximum permanent permissible current in the SP after 2 000 operations depending on cable cross-section.
- Maximum intensity of permanent current specified by the cable manufacturers to maintain a conductor core temperature < 85 °C.
- Maximum intensity of permanent current specified by the NFC 15-100 or the IEC 60 364-5-52 standards to maintain a conductor core temperature < 70 °C.

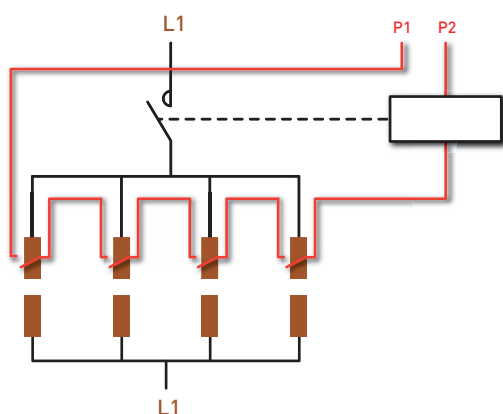


### Mechanical coding between phases

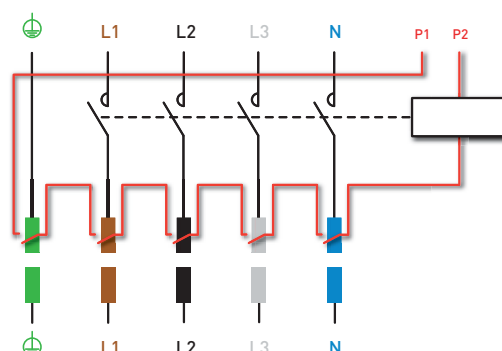


Coding ring (each phase, neutral and earth has a different diameter)

### Interlocking electrical wiring diagram: increased power with parallel connection



### Interlocking electrical wiring diagram: last connection close all the circuit





| Type     | Europe* | Reference | Reference |
|----------|---------|-----------|-----------|
| L1       | Brown   | 4544001   | 4548001   |
| L2       | Black   | 4544002   | 4548002   |
| L3       | Grey    | 4544003   | 4548003   |
| Neutral  | Blue    | 454400N   | 454800N   |
| Earth    | Green   | 454400T   | 454800T   |
| Positive | Red     | 454400P   | 454800P   |
| Negative | Black   | 454400M   | 454800M   |

\* The indicated references are valid for Europe and Japan. For other countries: add the suffix P80 for the USA/P67 for Australia and New Zealand/P40 for UK and South-Africa.

| Type     | Australia and New Zealand | Reference   | Reference   |
|----------|---------------------------|-------------|-------------|
| L1       | Red                       | 4544001-P67 | 4548001-P67 |
| L2       | White                     | 4544002-P67 | 4548002-P67 |
| L3       | Blue                      | 4544003-P67 | 4548003-P67 |
| Neutral  | Black                     | 454400N-P67 | 454800N-P67 |
| Earth    | Green                     | 454400T-P67 | 454800T-P67 |
| Positive | Red                       | 454400P-P67 | 454800P-P67 |
| Negative | Black                     | 454400M-P67 | 454800M-P67 |

| Type     | USA   | Reference   | Reference   |
|----------|-------|-------------|-------------|
| L1       | Black | 4544001-P80 | 4548001-P80 |
| L2       | Red   | 4544002-P80 | 4548002-P80 |
| L3       | Blue  | 4544003-P80 | 4548003-P80 |
| Neutral  | White | 454400N-P80 | 454800N-P80 |
| Earth    | Green | 454400T-P80 | 454800T-P80 |
| Positive | Red   | 454400P-P80 | 454800P-P80 |
| Negative | Black | 454400M-P80 | 454800M-P80 |



## LUGS

**Lug choice depends on the cable:** the cross-section of the flexible cable mentioned in the table below is for information only. Please check dimensions as these may vary according to cable types and manufacturers.

| Wiring (mm <sup>2</sup> ) |          | Straight with hole <sup>(1)</sup> | Straight threaded M12 <sup>(2)</sup> | Internal diameter (mm) |
|---------------------------|----------|-----------------------------------|--------------------------------------|------------------------|
| Flexible                  | Stranded | Reference                         | Reference                            |                        |
| 50                        | 70       | 454A50C                           | 454A50D                              | 11                     |
| 70                        | 95       | 454A70C                           | 454A70D                              | 13,1                   |
| 95                        | 120      | 454A95C                           | 454A95D                              | 14,5                   |
| 120                       | 150      | 454A12C                           | 454A12D                              | 16,2                   |
| 150                       | 185      | 454A15C                           | 454A15D                              | 18                     |
| 185                       | 240      | 454A18C                           | 454A18D                              | 20,6                   |
| 240                       | 300      | 454A24C                           | 454A24D                              | 23,1                   |
| 300                       | 400      | 454A30C                           | 454A30D                              | 26,1                   |
| 400                       | 500      | 454A40C                           | 454A40D                              | 29,2                   |

(1) For female socket-outlet.

(2) For male contact, wiring with crimping lugs, according to NF C20-130 standard (for VDE 0220 standard, please contact us). Crimping: Double hexagonal crimping is recommended.

## ACCESSORIES AND OPTIONS

**Lever mechanism**  
Compatible with socket  
or inlet since 2018

454A376



**M12 connection piece for  
connection of straight cable  
lugs to the terminals**

474A277



### SLEEVE\*

Inclined metal 45°



### HANDLE

Straight



454A027

M50

454A753

17-38 mm

M63

454A783

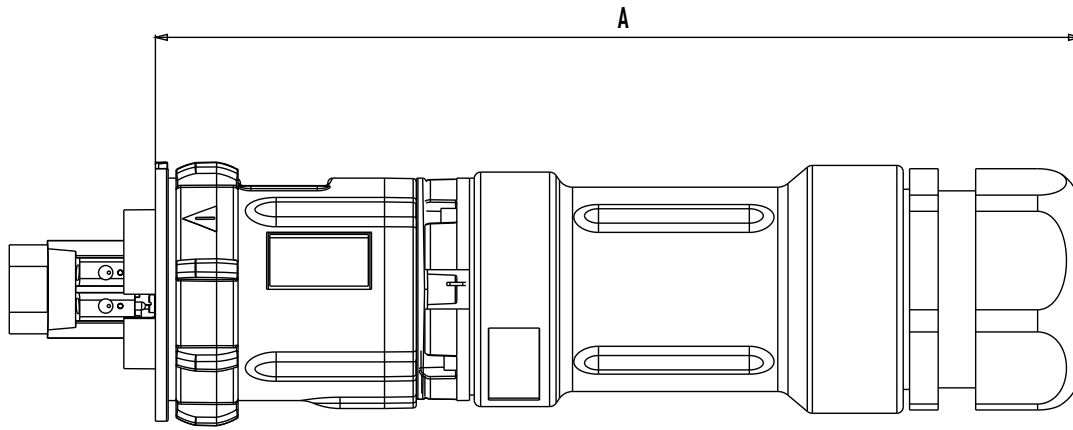
35-48 mm

\* The inclined sleeve is recommended to reduce cable weight effect.

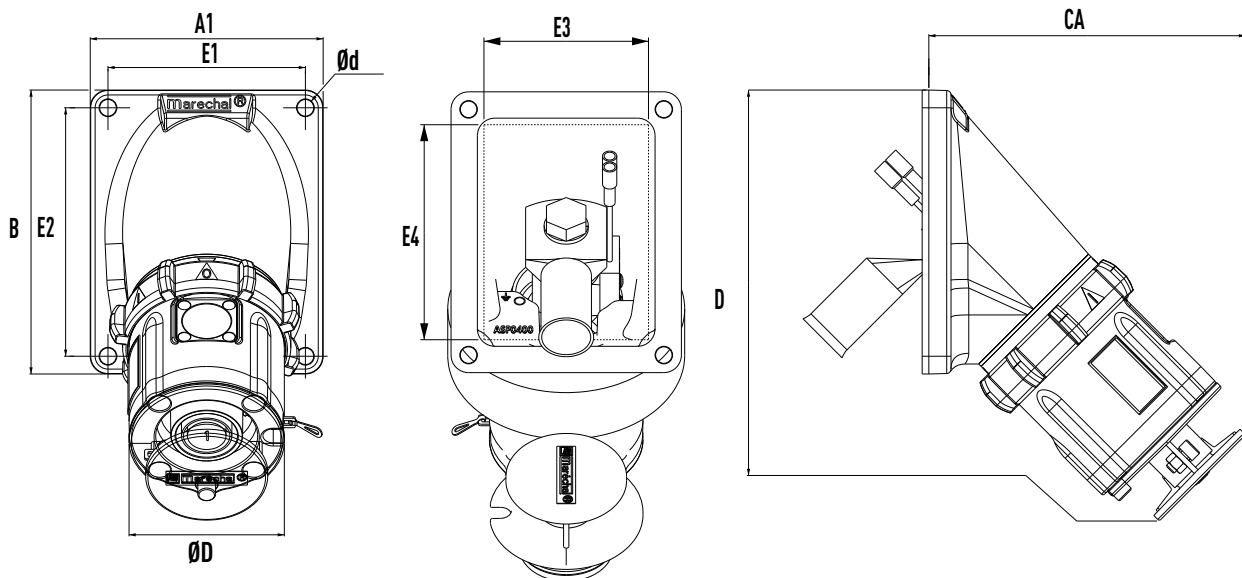


## DIMENSIONS

### SP M50/SP M63



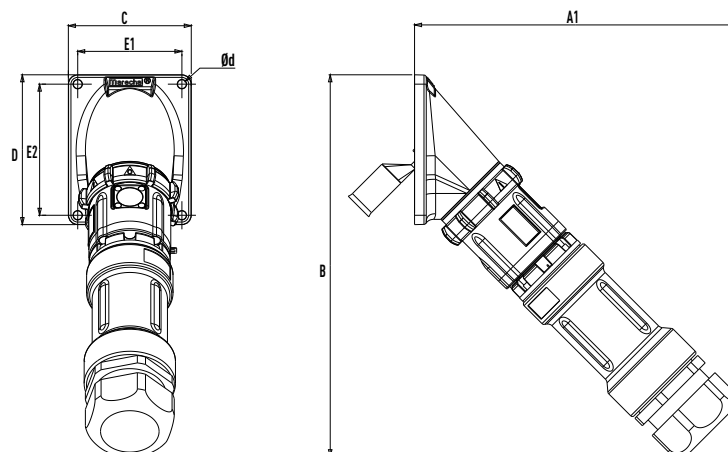
|        | A1  |
|--------|-----|
| SP M50 | 265 |
| SP M63 | 291 |



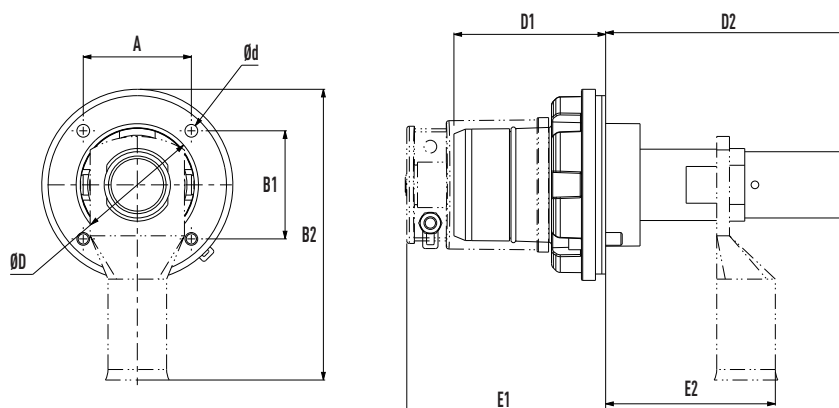
|               | A1  | E1 | B   | E2  | E3 | E4 | D   | CA  | Ød* | ØD max. |
|---------------|-----|----|-----|-----|----|----|-----|-----|-----|---------|
| SP M50/SP M63 | 105 | 89 | 128 | 112 | 75 | 98 | 194 | 143 | 7,5 | 70      |



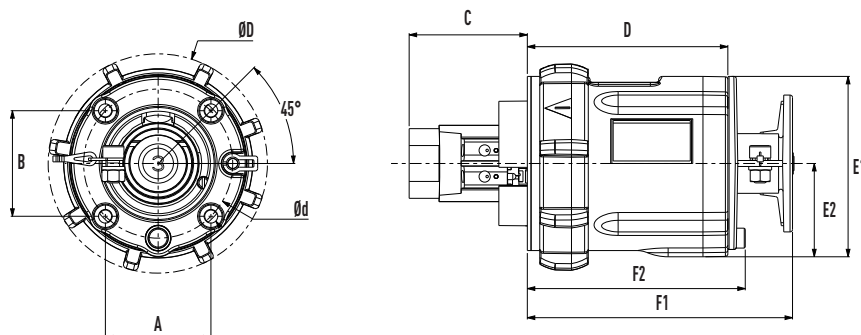
## SP M50/SP M63



|        | A1  | B   | E1 | E2  | D   | C   | Ød* |
|--------|-----|-----|----|-----|-----|-----|-----|
| SP M50 | 250 | 302 | 89 | 112 | 128 | 105 | 7,5 |
| SP M63 | 275 | 326 | 89 | 112 | 128 | 105 | 7,5 |



|    | A  | B1 | B2  | D1 | D2 | E1 | E2 | ØD | Ød |
|----|----|----|-----|----|----|----|----|----|----|
| SP | 42 | 42 | 114 | 60 | 95 | 78 | 67 | 48 | 5  |



|    | A  | B  | C    | D  | E1 | E2 | F1  | F2 | ØD | Ød |
|----|----|----|------|----|----|----|-----|----|----|----|
| SP | 42 | 42 | 47,5 | 81 | 73 | 38 | 107 | 88 | 88 | 60 |

# CUSTOMIZED SOLUTIONS



MARECHAL® offers a wide range of distribution boxes for all industrial applications and a large choice of products designed specifically for power-supply in tunnels.

FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates



**BG**

**144**

### LIQUEFIED GAS TRANSFER BOXES

- Carrier safety
- 30 mA protection
- Guaranteed lorry grounding



**CD**

**146**

### DISTRIBUTION BOX

- From 16 A up to 63 A
- RCD protection
- Inspection trap
- For MARECHAL® DECONTACTOR™ socket outlets
- Range of protection levels available



**TUNNELS**

**P. 152**

### BOXES AND CONNECTORS

- No cable cutting
- Fire-resistant boxes
- Wall mounting socket-outlet for smoke accelerators
- Fire brigade boxes



**CUSTOM**

**P. 158**

### BOXES, EXTENSIONS AND CABLE REEL

- Distribution boxes
- Portable power distribution
- Cable assembly
- Construction case

# BG

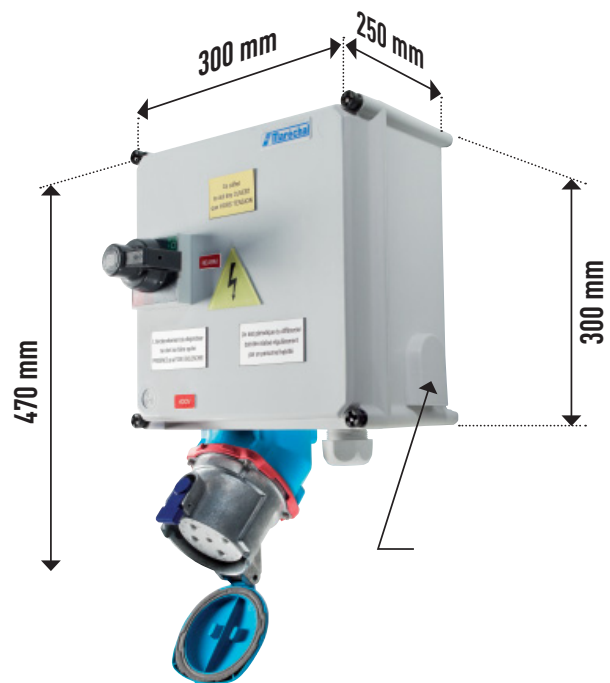


## LIQUEFIED GAS TRANSFER BOXES



- Carrier safety
- 30 mA protection
- Guaranteed lorry grounding

Safe connection box for loading and unloading liquefied gas from vehicles



|            |      |       |                 |       |
|------------|------|-------|-----------------|-------|
| <b>DN6</b> | 80 A | 400 V | 3P + E + switch | Azote |
| <b>DN6</b> | 63 A | 400 V | 3P + E + switch | Azote |
| <b>DN1</b> | 16 A | 400 V | 3P + E          |       |

1

2

3

|            |              |       |
|------------|--------------|-------|
| <b>DN6</b> | 1---9 0670 A | 25 kA |
| <b>DN6</b> | 1964033C2416 | 25 kA |
| <b>DN1</b> | 1914013*     | /     |

|              |   |          |
|--------------|---|----------|
| 1968033Z0078 | + | 555P0D45 |
| 1968033Z0078 | + | 555P0D45 |
| 1918013270** | + | 513P0D30 |

|              |   |          |
|--------------|---|----------|
| 1964033Z0172 | + | 595C3M32 |
| 1964033Z0172 | + | 595C3M32 |
| 1914013      | + | 593B2M25 |



# CD



## DISTRIBUTION BOX



**16 A/32 A/63 A**

- ▶ IP66/IP69 water-and dust-tight
- ▶ RCD protection
- ▶ For MARECHAL® DECONTACTOR™ socket outlets
- ▶ Complies with IEC/EN 61439-1 and IEC/EN 61439-3,
- ▶ Composed of two parts fixed on hinges
- ▶ Pre-wired ready for installation
- ▶ UV protected

## MAIN FEATURES

|                                  | CD                                                |
|----------------------------------|---------------------------------------------------|
| Material                         | Impact-resistant thermoplastic (IK09)             |
| Fastenings                       | Captive stainless steel screws                    |
| Protection mode                  | IP66/IP69 - IP44 with domestic sockets            |
| Rated current                    | From 16 to 63 A                                   |
| Wiring capacity                  | 2 x 1,5 mm <sup>2</sup> to 5 x 35 mm <sup>2</sup> |
| Cable entries                    | M50 max.                                          |
| Housing dimensions (WxHxD) in mm | 345 x 225 x 156                                   |
| Assembly                         | 10 modules max.                                   |



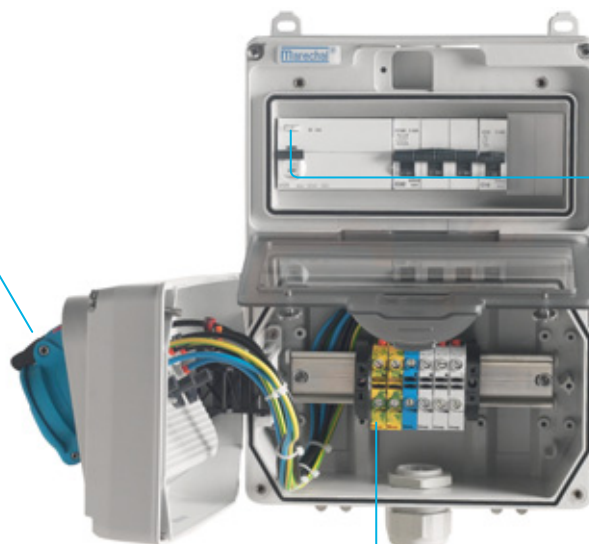
Ready wired for installation.



## DECONTACTOR™ DSN1

16 A - 1P+N+E  
220-250 V

## DECONTACTOR™ DSN3

32 A - 3P+N+E  
220-250 V/380-440 VTerminal  
3P+N+E 16 mm<sup>2</sup>Cable gland  
M32 Poly (14-25 mm)

## Protection

- Main switch with RCD 30 mA  
1x40A 3P+N
- Circuit breaker PC1 :  
1x16 A 1P+N
- Circuit breaker PC2 :  
1x32 A 3P+N

## COMPOSITION

## INSIDE box

| Box   | Main switch<br>with RCD 30mA | Circuit breaker<br>Socket 1 | Circuit breaker<br>Socket 2 | Terminal                  | Cable gland<br>mm |
|-------|------------------------------|-----------------------------|-----------------------------|---------------------------|-------------------|
| CD1   |                              | 1x16 A 1P+N 30mA            |                             | 1P+N+E 16 mm <sup>2</sup> | M25 POLY (9-18)   |
| CD2   | 1x25 A 1P+N                  | 1x16 A 1P+N                 | 1x16 A 1P+N                 | 1P+N+E 16 mm <sup>2</sup> | M25 POLY (9-18)   |
| CD3   |                              | 1x16 A 3P+N 30mA            |                             | 3P+N+E 16 mm <sup>2</sup> | M25 POLY (9-18)   |
| CD4   |                              | 1x16 A 3P 30mA              |                             | 3P+E 16 mm <sup>2</sup>   | M25 POLY (9-18)   |
| CD5   | 1x25 A 3P+N                  | 1x16 A 3P+N                 | 1x16 A 3P+N                 | 3P+N+E 16 mm <sup>2</sup> | M25 POLY (9-18)   |
| CD6*  |                              | + 2 fuses 6 A Gg            |                             | 1P+N+E 16 mm <sup>2</sup> | M25 POLY (9-18)   |
| CD7   | 1x25 A 1P+N                  | 1x16 A 1P+N                 | 1x16 A 1P+N                 | 1P+N+E 16 mm <sup>2</sup> | M25 POLY (9-18)   |
| CD8   |                              | 1x32 A 1P+N 30mA            |                             | 1P+N+E 16 mm <sup>2</sup> | M32 POLY (14-25)  |
| CD9   | 1x40 A 1P+N                  | 1x32 A 1P+N                 | 1x32 A 1P+N                 | 3P+N+E 16 mm <sup>2</sup> | M32 POLY (14-25)  |
| CD10  |                              | 1x32 A 3P+N 30mA            |                             | 3P+N+E 16 mm <sup>2</sup> | M32 POLY (14-25)  |
| CD11  | 1x40 A 3P+N                  | 1x32 A 3P+N                 | 1x32 A 3P+N                 | 3P+N+E 16 mm <sup>2</sup> | M32 POLY (14-25)  |
| CD12  | 1x40 A 3P+N                  | 1x16 A 1P+N                 | 1x32 A 3P+N                 | 3P+N+E 16 mm <sup>2</sup> | M32 POLY (14-25)  |
| CD13  | 1x40 A 3P+N                  | 1x16 A 1P+N                 | 1x32 A 3P+N                 | 3P+N+E 35 mm <sup>2</sup> | M40 POLY (18-32)  |
| CD14  | 1x40 A 3P+N                  | 1x16 A 1P+N                 | 1x32 A 3P+N                 | 3P+N+E 16 mm <sup>2</sup> | M32 POLY (14-25)  |
| CD15  |                              | 1x63 A 3P+N 30mA            |                             | 3P+N+E 16 mm <sup>2</sup> | M40 POLY (18-32)  |
| CD16* | 1x25 A 3P+N                  | + 2 fuses 6 A Gg            | 1x16 A 3P+N                 | 3P+N+E 16 mm <sup>2</sup> | M32 POLY (14-25)  |

\* CD6 and CD16 boxes are equipped with a 160 VA 230 V/24 V transformer. Maximum operating temperature: 40 °C

| Type | French standard socket<br>16 A - 230 V | 16 A socket<br>24 V | 16 A socket |           |                        | 32 A socket |                        | 63 A socket            | MARECHAL® Decontactor™ associated* |             |
|------|----------------------------------------|---------------------|-------------|-----------|------------------------|-------------|------------------------|------------------------|------------------------------------|-------------|
|      |                                        |                     | 220-250 V   | 380-440 V | 220-250 V<br>380-440 V | 220-250 V   | 220-250 V<br>380-440 V | 220-250 V<br>380-440 V |                                    |             |
| Box  | 2P+E                                   | 2P                  | 1P+N+E      | 3P+E      | 3P+N+E                 | 1P+N+E      | 3P+N+E                 | 3P+N+E                 | DSN range                          | DS range    |
| CD1  |                                        |                     | 1           |           |                        |             |                        |                        | 6114015CD1                         | 3114015CD1  |
| CD2  |                                        |                     | 2           |           |                        |             |                        |                        | 6114015CD2                         | 3114015CD2  |
| CD3  |                                        |                     |             |           | 1                      |             |                        |                        | 6114017CD3                         | 3114017CD3  |
| CD4  |                                        |                     |             | 1         |                        |             |                        |                        | 6114013CD4                         | 3114013CD4  |
| CD5  |                                        |                     |             |           | 2                      |             |                        |                        | 6114017CD5                         | 3114017CD5  |
| CD6  |                                        | 1                   |             |           |                        |             |                        |                        | 611408ACD6                         | 311408ACD6  |
| CD7  | 1                                      |                     | 1           |           |                        |             |                        |                        | 6114015CD7                         | 3114015CD7  |
| CD8  |                                        |                     |             |           |                        | 1           |                        |                        | 6134015CD8                         | 3134015CD8  |
| CD9  |                                        |                     |             |           |                        | 2           |                        |                        | 6134015CD9                         | 3134015CD9  |
| CD10 |                                        |                     |             |           |                        |             | 1                      |                        | 6134017CD10                        | 3134017CD10 |
| CD11 |                                        |                     |             |           |                        |             | 2                      |                        | 6134017CD11                        | 3134017CD11 |
| CD12 |                                        |                     | 1           |           |                        |             | 1                      |                        | 6134017CD12                        | 3134017CD12 |
| CD13 |                                        |                     | 1           |           |                        |             | 1                      |                        | 6134017CD13                        | 3134017CD13 |
| CD14 | 1                                      |                     |             |           |                        |             | 1                      |                        | 6134017CD14                        | 3134017CD14 |
| CD15 |                                        |                     |             |           |                        |             |                        | 1                      | 6164017CD15                        |             |
| CD16 |                                        | 1<br>[PN range]     |             |           | 1                      |             |                        |                        | 6114017CD16                        | 3114017CD16 |

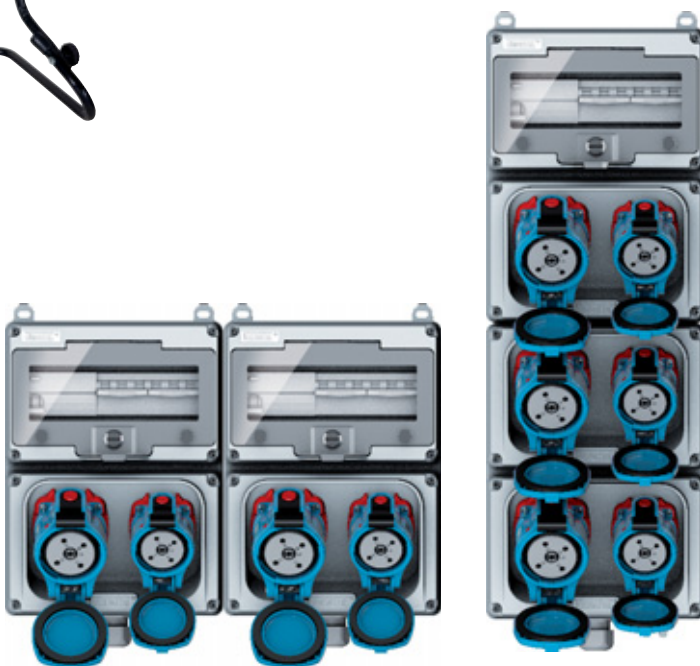
\* CD6 and CD16 boxes are equipped with a 160 VA 230V/24V transformer. Maximum operating temperature: 40 °C.

### INFOS +

The CD box can be mounted on a support.  
Frame ref. : 9CHAS-CD



Other configurations on request.  
Assembly possible (factory) for your needs greater than  
2 outlets. Please contact us for references.









# CRIC



## CONNECTION TERMINALS



- ▶ From 2 x 1.5 to 2 x 120 mm<sup>2</sup>
- ▶ Vibration-resistant
- ▶ Thermal cycling-resistant and anti-shearing terminals



## CRIC - TERMINALS FROM 2 X 1.5 TO 2 X 120 mm<sup>2</sup>

The CRIC terminals are characterised by:

- perfectly tight: no tool required,
- a spring placed inside the terminal head compensates for strand settlement and copper yield.
- Spring-assisted tightening (even after copper yield)
- Vibration-resistant, thermal cycling-resistant and anti-shearing terminals
- Comply with the NFC 20-110 standard



| Terminal    | Wiring                                            |  insulated with fixing part |  insulated + screw with rear part |  Earth with threaded hole |  Earth + screw with rear part |  Earth + screw with threaded hole |  insulated without fixing part | Protecting cap |
|-------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------|
| <b>T6</b>   | 2 x 1,5 mm <sup>2</sup> to 2 x 6 mm <sup>2</sup>  | 6 TA 6                                                                                                         | 6 TB 6                                                                                                               | 6 TD 6                                                                                                       | 6 TE 6                                                                                                           | 6 TF 6                                                                                                                 | 6 TV 6                                                                                                              | -              |
| <b>T16</b>  | 2 x 4 mm <sup>2</sup> to 2 x 16 mm <sup>2</sup>   | 6 TA 16                                                                                                        | 6 TB 16                                                                                                              | 6 TD 16                                                                                                      | 6 TE 16                                                                                                          | 6 TF 16                                                                                                                | 6 TV 16                                                                                                             | -              |
| <b>T35</b>  | 2 x 6 mm <sup>2</sup> to 2 x 35 mm <sup>2</sup>   | 6 TA 35                                                                                                        | 6 TB 35                                                                                                              | 6 TD 35                                                                                                      | 6 TE 35                                                                                                          | 6 TF 35                                                                                                                | 6 TV 35                                                                                                             | -              |
| <b>B70</b>  | 2 x 25 mm <sup>2</sup> to 2 x 70 mm <sup>2</sup>  | 6 BA 70                                                                                                        | 6 BB 70*                                                                                                             | 6 BD 70                                                                                                      | 6 BE 70                                                                                                          | 6 BF 70                                                                                                                | -                                                                                                                   | 6 C 70         |
| <b>B120</b> | 2 x 50 mm <sup>2</sup> to 2 x 120 mm <sup>2</sup> | 6 BA 120                                                                                                       | 6 BB 120*                                                                                                            | 6 BD 120                                                                                                     | 6 BE 120                                                                                                         | 6 BF 120                                                                                                               | -                                                                                                                   | 6 C 120        |

\* Rod non insulated.

# TUNNELS



## BOXES AND CONNECTORS



MARECHAL ELECTRIC is now a leading company in the electric connection for tunnels. Based on technology specially intended for such difficult environments and quick light disconnection, MARECHAL ELECTRIC has already equipped more than 700 km of underground roads, railroads and inland waterways...

Always with the same objective: provide user safety, optimise maintenance and make the work of emergency services easier.

## PRODUCTS SUITED FOR SPECIAL TUNNEL ENVIRONMENTS

Very often in a tunnel, there is dust, stone projections, smoke, gas, moisture, water streaming and, of course, pollution. Electric connections in tunnels are subjected to extremely corrosive conditions. Designed to withstand such conditions, MARECHAL® boxes equipped with connectors or deconnectors provide safe solutions for tunnel maintenance.

## WATERTIGHTNESS

All boxes are watertight and withstand the use of high-pressure washing during the tunnels' maintenance.

## CORROSION AND IMPACT RESISTANCE HALOGENE AND SMOKE FREE

For optimum safety, the materials used for making Marechal® boxes and connectors are resistant to corrosion and impact (resistance IK09). In case of fire, these materials emit no smoke or dangerous product.

## QUALITY CONNECTION AND EASY DISCONNECTION: USE OF BUTT-CONTACT

Easy disconnection = easy maintenance: thanks to the MARECHAL® silver-nickel butt-contact technology, the contacts are never welded. Therefore, the connection quality remains absolutely stable, and the disconnection can be done any time, even after several years.

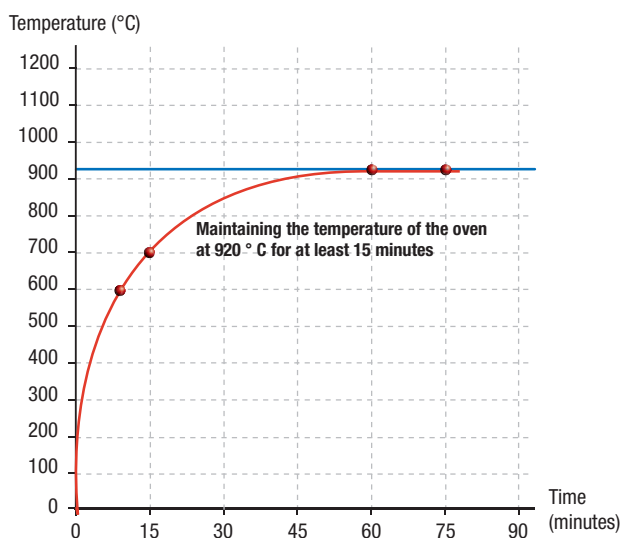
## STANDARDS AND CERTIFICATIONS

Supply circuits for emergency lighting installed in tunnels must meet the following requirements:

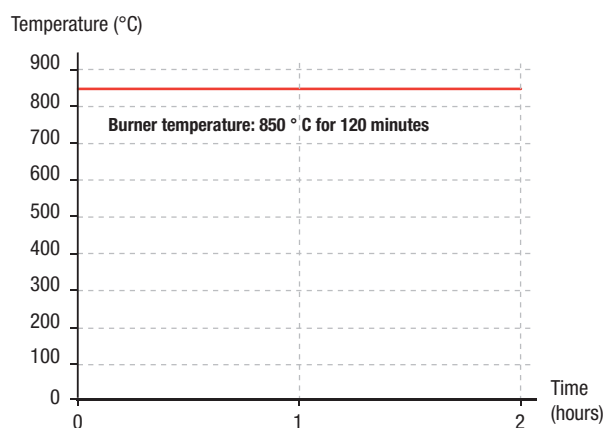
- EN 50362 European standard.
- French government Directive No. 2000-63 of 25 August 2000 on safety in tunnels and national road network.
- NF C 32-070 French standards.
- Guides CETU defining the fire behavior of road tunnels.

To meet these requirements, MARECHAL® equipments are among the only on the market to have been tested and certified by:

- C.S.T.B France - Centre Scientifique et Technique du Bâtiment.
- IMQ laboratory in Ital.



Oven temperature curve - standardized time  
NF C 32-070 standard



Flame temperature curve - Time  
NF EN 50362 standard



Consult us

### MAIN FEATURES

|                                              | POLY BOXES                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service terminals                            | 2 to 5 insulation-piercing.                                                                                                                                                                                                                                                                                                                                            |
| Service protection                           | By circuit breaker fitted to DIN rail                                                                                                                                                                                                                                                                                                                                  |
| Cables accepted                              | Armoured and unarmoured cables, stranded or flexible, from 2,5 mm <sup>2</sup> to 35 mm <sup>2</sup> (for conductors above 25 mm <sup>2</sup> , the main cable must be cut).                                                                                                                                                                                           |
| Internal and external Earth point            | Inside and outside the enclosure                                                                                                                                                                                                                                                                                                                                       |
| Ingress Protection                           | IP66 according to NF EN 60529                                                                                                                                                                                                                                                                                                                                          |
| Shock resistance                             | IK09 according to NF EN 50102                                                                                                                                                                                                                                                                                                                                          |
| Fire smoke class                             | M1F0                                                                                                                                                                                                                                                                                                                                                                   |
| Self extinguishing material                  | UL94-V0                                                                                                                                                                                                                                                                                                                                                                |
| Modularity box<br>Options<br>Other equipment | <ul style="list-style-type: none"> <li>• Supply of service leads fitted with MARECHAL® coupler sockets</li> <li>• Accessories for fixing box to cable tray or ladder.</li> <li>• "Power On" signal light</li> <li>• Alternative non-piercing terminals</li> <li>• Alternative Protection: single phase circuit breaker</li> <li>• Plate for external fixing</li> </ul> |

### DERIVATION BOXES WITHOUT CUTTING MAIN CABLE - STANDARD LIGHTING.

Made from halogen free fiberglass reinforced polyester compound or thermoplastic, these boxes allow a service tap-off from the main through cable without the need to strip or cut the main cable. "Snail" type gasket allow the immediate positioning of cables with a maximum diameter of 28 mm whilst creating an IP67 seal. The box lid, fitted with a retaining cord, is fixed to the box by means of captive stainless steel screws.



**EXPRESS®** box made from halogen free fiberglass reinforced polyester compound

| Type  | H x L x P en mm | Distribution                                                          |
|-------|-----------------|-----------------------------------------------------------------------|
| 91150 | 268 x 272 x 111 | Maximum 2 tap-offs using 2 sockets<br>Maximum 4 tap-offs using glands |



**EXPRESS®** Box made from halogen free thermoplastic

| Type  | H x L x P en mm | Distribution                                                          |
|-------|-----------------|-----------------------------------------------------------------------|
| 93036 | 190 x 522 x 121 | Maximum 2 tap-offs using 2 sockets<br>Maximum 4 tap-offs using glands |


[Consult us](#)

### MAIN FEATURES

|                                               | POLY BOXES                                                                                                                                                                                                                                                                                                                                                 | STAINLESS STEEL 316 L BOXES                                                                                                                                                   |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire resistance</b>                        | Electrical continuity of the main cable guaranteed: <ul style="list-style-type: none"> <li>NF C 32-070 : oven temp. 920°C - temperature increases.</li> <li>NF EN 50362 : oven temp. 850°C - temperature increases.*</li> </ul>                                                                                                                            | Electrical continuity of the main cable guaranteed to oven temp. 920°C - temperature increases according to NFC 32-070 standard.                                              |
| <b>Service terminals</b>                      | <ul style="list-style-type: none"> <li>2 to 5 insulation-piercing, stainless steel connectors, fitted into a ceramic base. The whole arrangement is fitted to the wall by means of a stainless steel plate.</li> <li>2 to 5 insulation-piercing only under EN 50362</li> </ul>                                                                             | 2 to 5 insulation-piercing, stainless steel connectors, fitted into a ceramic base.                                                                                           |
| <b>Service protection</b>                     | By fuse or circuit breaker fitted to DIN rail                                                                                                                                                                                                                                                                                                              | By fuse or circuit breaker mounted on ceramic base.                                                                                                                           |
| <b>Cables accepted</b>                        | Armoured and unarmoured cables, stranded or flexible, from 4 mm <sup>2</sup> to 25 mm <sup>2</sup> . (For conductors above 25 mm <sup>2</sup> , the main cable must be cut.)                                                                                                                                                                               | Cables up to 185 mm <sup>2</sup> .                                                                                                                                            |
| <b>Internal and external Earth point</b>      | Inside and outside the enclosure                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                               |
| <b>Ingress Protection</b>                     | IP66 according to NF EN 60529                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                               |
| <b>Shock resistance</b>                       | IK09 according to NF EN 50102                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                               |
| <b>Fire smoke class</b>                       | M1F0                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                               |
| <b>Self extinguishing material</b>            | UL94-V0                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                               |
| <b>Modularity box Options Other equipment</b> | <ul style="list-style-type: none"> <li>Supply of service leads fitted with MARECHAL® coupler sockets</li> <li>Accessories for fixing box to cable tray or ladder.</li> <li>"Power On" signal light</li> <li>Alternative non-piercing terminals</li> <li>Alternative Protection: single phase circuit breaker</li> <li>Plate for external fixing</li> </ul> | <ul style="list-style-type: none"> <li>Supply of service leads fitted with MARECHAL® coupler sockets</li> <li>Alternative Protection: single phase circuit breaker</li> </ul> |

\* Only for EXPRESS® BOX Part no. 91151

## DISTRIBUTION BOXES FIRE RESISTANT - EMERGENCY LIGHTING, SIGNALLING, SIGNPOSTING

### Poly boxes

Made from halogen free fiberglass reinforced polyester compound, these boxes allow a service tap-off from the main through cable without the need to strip or cut the main cable, known as type CR1-C1, conforms to NF C 32-070 or type FTG10(O) M1 0.6 KV conforms to EN 50362. "Snail" type gasket allow the immediate positioning of cables with a maximum diameter of 28mm whilst creating an IP67 seal. The box lid, fitted with a retaining cord, is fixed to the box by means of captive stainless steel screws.

### Stainless steel boxes

Made from AISI 316 L, these boxes allow a service tap-off from the main through cable. Known as type CR1-C1, it conforms to NF C 32-070. The main cable through the box through the cable glands and is connected to stainless steel terminals mounted on ceramic base. The box lid is fixed to the box by means of captive stainless steel screws.



**EXPRESS®** box made from halogen free fiberglass reinforced polyester compound

| Type  | CSTB Certificate | IMQ Certificate | H x L x P in mm | Distribution                                                         |
|-------|------------------|-----------------|-----------------|----------------------------------------------------------------------|
| 91151 | RS10-083         | AC.00646        | 268 x 272 x 111 | Maximum 2 tap-offs using 2 sockets. Maximum 4 tap-offs using glands. |



**STAINLESS** steel 316 L box

| Type  | CSTB Certificate     | H x L x P en mm            | Distribution                                                 |
|-------|----------------------|----------------------------|--------------------------------------------------------------|
| 91141 | RS15-077<br>RS15-124 | 140x200x130<br>500x500x160 | Cable gland<br>cable diameter greater than 25mm <sup>2</sup> |



# FIRE BOXES

FIRE DEPARTMENT BOX - SECURITY RECESS



Consult us

## MAIN FEATURES

|                                   |                                                                  |
|-----------------------------------|------------------------------------------------------------------|
| Service protection                | Differential circuit breaker 30 mA.                              |
| Internal and external Earth point | Inside and outside the enclosure                                 |
| Ingress Protection                | IP55 (metal) IP66/69K (thermoplastique) according to NF EN 60529 |
| Shock resistance                  | IK09 according to NF EN 50102                                    |

## ALUMINIUM BOX

Especially developed in collaboration with emergency services who specialise in tunnel rescue, this box is installed in a security recess. Completely made of aluminium, this box is composed of a back box, an inclined cover with an inspection window. The power of this kit is carried by cables 5G16 mm<sup>2</sup> max. The box lid is fixed to the box by means of captive stainless steel screws.



### ALUMINIUM box

| Type  | H x L x P in mm | Distribution                                                                  |
|-------|-----------------|-------------------------------------------------------------------------------|
| 91277 | 345 x 280 x 125 | One or two MARECHAL® decontactor (DS or DN) can be fit on the inclined cover. |

## THERMOPLASTIC BOX

Natural evolution of the aluminum version, this cabinet fulfills the same functions by adding an IP66 waterproof or even IP69 (high cleaning pressure). And resistance to corrosion due to salting.

This box is composed of two parts fixed on hinges:

- a protection part, with a transparent window (locking key in option),
- a terminal part for a quick access to the connection.

The assembly is in captive stainless steel screws.



### THERMOPLASTIC box

| Type        | H x L x P in mm | Distribution                                                  |
|-------------|-----------------|---------------------------------------------------------------|
| 3134017CDxx | 342 x 225 x 156 | One to two MARECHAL® sockets of type DS or DSN can be mounted |





# CUSTOM



**BOXES,  
EXTENSIONS  
AND CABLE REEL**



In direct connection with its production of industrial electrical socket-outlets, MARECHAL ELECTRIC has the internal skills to offer you complete customized solutions. From cable assembly to the power distribution box.

Contact us.

## EXAMPLE OF SOLUTIONS'



Portable rubber box



Automatic cable reel



Equipped cable reel



Boxes of all sizes and materials, GRP, sheet metal or stainless steel.



Cable assembly



Portable service boxe



# DECONTACTOR™



Switch with socket-outlet.

The plugs and sockets as well as socket-outlet boxes and junction boxes in this range are meant for use in hazardous areas in compliance with the ATEX 2014/35/EU Directive and as per the IECEx in zones 1 and 2 (Gas) and zones 21 and 22 (Dust).

FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates





**DXN P. 162**

#### DECONNECTOR™ COMPACT & WATERTIGHT

-  II2 G D Ex de IIC, Ex tb IIIC
- IP66/IP67 water-and dust-tight
- Integrated load-break switch
- Robust and compact design
- High performance poly casing
- From 20 A to 63 A
- From -40 °C to +60 °C



**DXA1 P. 174**

#### DECONNECTOR™ METAL

-  II2 G D Ex de IIC, Ex tb IIIC
- IP66/IP67 water-and dust-tight
- Integrated load-break switch
- Locking in connected or disconnected by padlockable shaft
- Intended for low temperature -55°C
- 20 A



**DX P. 178**

#### DECONNECTOR™ METAL

-  II2 G D Ex de IIC, tD A21
- IP65 water- and dust-tight
- Integrated load-break switch
- Locking in connected or disconnected position by keying axis
- From 20 A to 200 A

# DXN



## DECONTACTOR™ FOR HAZARDOUS AREAS



**20 A/32 A/63 A**

- ▶ II2 G D Ex de IIC, Ex tb IIIC
- ▶ Automatic IP66/IP67 water-and dust-tight
- ▶ Integrated load-break switch
- ▶ Robust and compact design
- ▶ High performance GRP casing

## TECHNICAL FEATURES

|                                 | DXN1                                                | DXN3  | DXN6  |
|---------------------------------|-----------------------------------------------------|-------|-------|
| Rated current (In)              | 20 A                                                | 32 A  | 63 A  |
| Umax                            | 550 V                                               | 750 V | 750 V |
| Auxiliary contacts (optional)   | –                                                   | 2     | 2     |
| Keying positions <sup>(1)</sup> | <<< 24 >>>                                          |       |       |
| Ambient temperature             | <<< -40 °C to +60 °C >>>                            |       |       |
| Protection mode                 | <<< « de » and « tb » >>>                           |       |       |
| ATEX zones                      | <<< Zones 1 and 2 (gas) Zones 21 and 22 (dusts) >>> |       |       |

(1) To distinguish between different power supplies and applications

## MOUNTING: LOAD BREAK RELEASE BUTTON SHOULD BE AT THE TOP



## DECONTACTOR™ DXN are conform to:

- The ATEX 2014/35/EU Directive,
- IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31 international standards
- The essential safety requirements of IEC 60309-1 & IEC 60309-4 international and European standards (plugs and socket-outlets for industrial purposes),
- The switch utilization categories AC-22 and AC-23 described in IEC/EN 60947-3,
- The French NF C 15-100 standard,
- The European 'Machine Directive' 2006/42/CE regarding equipment isolation,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses,
- The decrees relating to workers' protection in Belgium, Spain and Italy,

Also certified by LCIE (ATEX and IECEx), NANIO (TR CU EAC), NCC (INMETRO) and cCSAus (French, Russian, Brazilian and American-Canadian\* European and international notified bodies) and by BUREAU VERITAS MARINE.

(\*) for North-American markets



## WALL MOUNTING SOCKET DXN1



Wall box poly 30°  
251AB53



Socket-outlet  
2514017



## PLUG DXN1



Straight handle poly  
251A753



Inlet  
2518017

## MAIN FEATURES

|                                                   |                  |                           |                       |
|---------------------------------------------------|------------------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 20 A             | Flexible wiring (min-max) | 1-4 mm <sup>2</sup>   |
| Maximum voltage                                   | 550 V            | Stranded wiring (min-max) | 1,5-6 mm <sup>2</sup> |
| IP protection lid closed                          | IP66/IP67        | Other wiring              | on request            |
| IP protection plug connected                      | IP66/IP67        | Keying positions          | 24                    |
| Shock resistance                                  | IK08             | Protection mode           | de, tb                |
| Ambient temperature                               | -40 °C to +60 °C | ATEX zones                | 1 & 2, 21 & 22        |

## TEMPERATURE RATING

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| Gas temperature classes          | T6 for an ambient T° between -40 °C and +40 °C                 |
|                                  | T5 for an ambient T° between -40 °C and +60 °C                 |
| Dust surface temperature classes | Surface T° ≤ 70 °C for an ambient T° between -40 °C and +40 °C |
|                                  | Surface T° ≤ 90 °C for an ambient T° between -40 °C and +60 °C |
| Comply with EN 60309-1           | 20 A/550 V                                                     |

## SOCKET-OUTLET female DXN1 (20 A)



## INLET male DXN1 (20 A)



Each socket outlet or inlet must be associated with a box, a sleeve or a handle.

|              |        |         |         |
|--------------|--------|---------|---------|
| 20-24 V AC   | 2P     | 251408A | 251808A |
| 220-250 V AC | 1P+N+E | 2514015 | 2518015 |
| 380-440 V AC | 3P+E   | 2514013 | 2518013 |
| 380-440 V AC | 3P+N+E | 2514017 | 2518017 |
| 480-500 V AC | 3P+E   | 2514093 | 2518093 |
| 480-500 V AC | 3P+N+E | 2514097 | 2518097 |

► Other voltages, frequencies and contact configurations are available (see page 10).

## MARECHAL ELECTRIC FRANCE

II 2 G D

Ex de IIC

T\* Gb

Ex tb IIIC

T\* Db

\*-40 °C ≤ Ta ≤ +60 °C

T5

T90 °C

-40 °C ≤ Ta ≤ +40 °C

T6

T70 °C

IECEX LCI 09.0005X/LCIE 99 ATEX 6027 X

**WALL MOUNTING  
SOCKET DXN<sup>3</sup>**Wall box poly 30 °  
253AB53Socket-outlet  
2534017**PLUG DXN<sup>3</sup>**Straight handle poly  
253A753Inlet  
2538017**MAIN FEATURES**

|                                                   |                  |                           |                        |
|---------------------------------------------------|------------------|---------------------------|------------------------|
| Rated current (with wiring according to standard) | 32 A             | Flexible wiring (min-max) | 2,5-10 mm <sup>2</sup> |
| Maximum voltage                                   | 750 V            | Stranded wiring (min-max) | 2,5-16 mm <sup>2</sup> |
| IP protection lid closed                          | IP66/IP67        | Other wiring              | on request             |
| IP protection plug connected                      | IP66/IP67        | Keying positions          | 24                     |
| Shock resistance                                  | IK08             | Protection mode           | de, tb                 |
| Ambient temperature                               | -40 °C to +60 °C | ATEX zones                | 1 & 2, 21 & 22         |

**TEMPERATURE RATING**

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| Gas temperature classes          | T6 for an ambient T° between -40 °C and +40 °C                 |
|                                  | T5 for an ambient T° between -40 °C and +60 °C                 |
| Dust surface temperature classes | Surface T° ≤ 57 °C for an ambient T° between -40 °C and +40 °C |
|                                  | Surface T° ≤ 77 °C for an ambient T° between -40 °C and +60 °C |
| Comply with EN 60309-1           | 32 A/750 V                                                     |

**SOCKET-OUTLET  
female  
DXN<sup>3</sup> (32 A)****INLET male  
DXN<sup>3</sup> (32 A)**

Each socket outlet or inlet must be associated with a box, a sleeve or a handle.

|                            |              |            |            |
|----------------------------|--------------|------------|------------|
| 20-24 V AC                 | 2P           | 253408A    | 253808A    |
| 220-250 V AC               | 1P+N+E       | 2534015    | 2538015    |
| 380-440 V AC               | 3P+E         | 2534013    | 2538013    |
| 380-440 V AC               | 3P+N+E       | 2534017    | 2538017    |
| 480-500 V AC               | 3P+E         | 2534093    | 2538093    |
| 480-500 V AC               | 3P+N+E       | 2534097    | 2538097    |
| 550 V AC - Auxiliaries 5 A | + 2 contacts | Ref. + 972 | Ref. + 972 |

► Other voltages, frequencies and contact configurations are available (see page 10).

**MARECHAL ELECTRIC FRANCE**

II2 G D

Ex de IIC T\* Gb

Ex tb IIIC T\* Db

\*-40 °C ≤ Ta ≤ +60 °C T5 T77 °C

-40 °C ≤ Ta ≤ +40 °C T6 T57 °C

IECEX LCI 09.0006/LCIE 05 ATEX 6149





## WALL MOUNTING SOCKET DXN6



Wall box poly 30°  
256AB53



Socket-outlet  
2564017



## PLUG DXN6



Straight handle poly  
256A753



Inlet  
2568017

## MAIN FEATURES

|                                                   |                  |                           |                      |
|---------------------------------------------------|------------------|---------------------------|----------------------|
| Rated current (with wiring according to standard) | 63 A             | Flexible wiring (min-max) | 6-16 mm <sup>2</sup> |
| Maximum voltage                                   | 750 V            | Stranded wiring (min-max) | 6-25 mm <sup>2</sup> |
| IP protection lid closed                          | IP66/IP67        | Other wiring              | on request           |
| IP protection plug connected                      | IP66/IP67        | Keying positions          | 24                   |
| Shock resistance                                  | IK09             | Protection mode           | de, tb               |
| Ambient temperature                               | -40 °C to +60 °C | ATEX zones                | 1 & 2, 21 & 22       |

## TEMPERATURE RATING

|                                                  |                                                                 |            |
|--------------------------------------------------|-----------------------------------------------------------------|------------|
| Gas temperature classes                          | T5 for an ambient T° between -40 °C and +40 °C                  |            |
|                                                  | T4 for an ambient T° between -40 °C and +60 °C                  |            |
| Dust surface temperature classes                 | Surface T° ≤ 87 °C for an ambient T° between -40 °C and +40 °C  |            |
|                                                  | Surface T° ≤ 107 °C for an ambient T° between -40 °C and +60 °C |            |
| The essential safety requirements of IEC 60309-1 |                                                                 | 63 A/750 V |

## SOCKET-OUTLET female DXN6 (63 A)



## INLET male DXN6 (63 A)



Each socket outlet or inlet must be associated with a box, a sleeve or a handle.

|                            |              |            |            |
|----------------------------|--------------|------------|------------|
| 20-24 V AC                 | 2P           | 256408A    | 256808A    |
| 220-250 V AC               | 1P+N+E       | 2564015    | 2568015    |
| 380-440 V AC               | 3P+E         | 2564013    | 2568013    |
| 380-440 V AC               | 3P+N+E       | 2564017    | 2568017    |
| 480-500 V AC               | 3P+E         | 2564093    | 2568093    |
| 480-500 V AC               | 3P+N+E       | 2564097    | 2568097    |
| 550 V AC - Auxiliaries 5 A | + 2 contacts | Ref. + 972 | Ref. + 972 |

► Other voltages, frequencies and contact configurations are available (see page 10).

## MARECHAL ELECTRIC FRANCE

II 2 G D

Ex de IIC

T\* Gb

Ex tb IIIC

T\* Db

\*-40 °C ≤ Ta ≤ +60 °C

T4

T107 °C

-40 °C ≤ Ta ≤ +40 °C

T5

T87 °C

IECEx LCI 09.0007/LCIE 05 ATEX 6150



## OPTIONS (DETAILS ON PAGE 216)

|                                                                                     | DXN1<br>size 1           | DXN3<br>size 2           | DXN6<br>size 3           |
|-------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|
| <b>LOCKING PIN FOR 2 PADLOCKS Ø 8 mm (PADLOCKS NOT SUPPLIED)</b>                    |                          |                          |                          |
|    | Socket-outlet ref. + 843 | Socket-outlet ref. + 843 | Socket-outlet ref. + 843 |
| <b>SAFETY HASP FOR UP TO 6 PADLOCKS</b>                                             |                          |                          |                          |
|    | 873A541                  | 873A541                  | 873A541                  |
| <b>INLET CAP IP66/IP67</b>                                                          |                          |                          |                          |
|    | 251A426                  | 253A426                  | 256A426                  |
| <b>IN-LINE CONNECTIONS (A PAIR OF FINGER DRAW PLATES TO AID CLOSING)</b>            |                          |                          |                          |
|   | 611A346                  | 613A346                  | 616A346                  |
| <b>180° OPENING LID</b>                                                             |                          |                          |                          |
|                                                                                     | Metal socket ref. + 10   | Metal socket ref. + 10   | Metal socket ref. + 10   |
| <b>SELF-RETURNING LID (WITHOUT FULL CLOSURE IP40)</b>                               |                          |                          |                          |
|  | Socket-outlet ref. +R    | Socket-outlet ref. +R    | Socket-outlet ref. +R    |
| <b>180° OPENING &amp; SELF-RETURNING LID</b>                                        |                          |                          |                          |
|                                                                                     | Socket-outlet ref. + 18  | Socket-outlet ref. + 18  | Socket-outlet ref. + 18  |
| <b>COMPATIBLE WITH DSN SOCKET</b>                                                   |                          |                          |                          |
|  | Please contact           | Please contact           | NA                       |
| <b>SELF-EJECTING (SEE REFERENCES AND OPTIONS DETAILS PAGE 228)</b>                  |                          |                          |                          |
|  |                          |                          |                          |



# ACCESSORIES

(SEE PAGE 238 TO CROSS REFERENCE WITH OLDER PART NUMBERS)

## BOXES



DXN1  
size 1

DXN3  
size 2

DXN6  
size 3

### WALL BOX POLY WITH EX POLY CABLE GLAND



|     |          |            |            |         |
|-----|----------|------------|------------|---------|
| 30° | 5-10 mm  | 251AB5316P |            |         |
| 30° | 10-14 mm | 251AB53    | 253AB53    |         |
| 30° | 12-18 mm | 251AB5325P | 253AB5325P | 256AB53 |

### WALL BOX POLY WITHOUT CABLE GLAND



|     |     |            |            |            |
|-----|-----|------------|------------|------------|
| 30° | M20 | 251AB53417 | 253AB53417 |            |
| 30° | M25 | 251AB53418 | 253AB53418 | 256AB53418 |

### WALL BOX POLY WITHOUT TERMINAL BLOCKS



|     |          |            |            |            |
|-----|----------|------------|------------|------------|
| 70° | 10-14 mm | 251AB8820P | 253AB8820P | 256AB8820P |
| 70° | 12-18 mm | 251AB8825P | 253AB8825P | 256AB8825P |
| 70° | 16-25 mm | 251AB8832P | 253AB8832P | 256AB8832P |
| 70° | 22-32 mm |            |            | 256AB8840P |

120 X 120 mm  
FOR DXN1/3

160 X 160 mm  
FOR DXN6

### WALL BOX POLY WITH TERMINAL BLOCKS (IECEX LCIE 16.0042X/LCIE 16 ATEX 3054X)



|     |          |                           |                           |                           |
|-----|----------|---------------------------|---------------------------|---------------------------|
| 70° | 10-14 mm | 251A08820P <sup>(1)</sup> | 253A08820P <sup>(2)</sup> | 256A08820P <sup>(3)</sup> |
| 70° | 12-18 mm | 251A08825P <sup>(1)</sup> | 253A08825P <sup>(2)</sup> | 256A08825P <sup>(3)</sup> |
| 70° | 16-25 mm |                           |                           | 256A08832P <sup>(3)</sup> |
| 70° | 22-32 mm |                           |                           | 256A08840P <sup>(3)</sup> |

120 X 120 mm  
FOR DXN1/3

160 X 160 mm  
FOR DXN6

1. With 2 holes (1 with a cable gland + 1 with a stopping plug), with 8+2E 4 mm<sup>2</sup> terminals blocks + 2,5 mm<sup>2</sup> wires, wiring 1 - 4mm<sup>2</sup>.  
For alternatives, please contact us.
2. With 2 holes (1 with a cable gland + 1 with a stopping plug), with 8+2E 10 mm<sup>2</sup> terminals blocks + 6 mm<sup>2</sup> wires, wiring 2.5 - 10mm<sup>2</sup>.  
For alternatives, please contact us.
3. With 2 holes (1 with a cable gland + 1 with a stopping plug), with 8+2E 16 mm<sup>2</sup> terminals blocks + 16 mm<sup>2</sup> wires, wiring 6 - 16mm<sup>2</sup>.  
For alternatives, please contact us.

### IN THIS CONFIGURATION

-40 °C ≤ Ta ≤ +55 °C T4 T105° C  
-40 °C ≤ Ta ≤ +50 °C T5 T95 °C

## LEGEND FOR OPTIONAL ACCESSORIES



Angle



Threading or gland size



EMC option



HT 240° C



Self-ejection

INFO +

| SLEEVE                                                                            |  | DXN1<br>size 1 | DXN3<br>size 2 | DXN6<br>size 3 |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|----------------|----------------|
| <b>INCLINED POLY SLEEVE</b>                                                       |                                                                                   |                |                |                |
|  | 30°                                                                               | 251A057        | 253A027        | 256A027        |
|                                                                                   | 70°                                                                               | 251A757        | 253A757        | 256A757        |

| HANDLE                                                                             |  | DXN1<br>size 1 | DXN3<br>size 2 | DXN6<br>size 3 |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------|----------------|----------------|
| <b>POLY HANDLE WITH POLY CABLE GLAND</b>                                           |                                                                                   |                |                |                |
|  | 10-14 mm                                                                          | 251A753        | 253A753        | 256A25320P     |
|                                                                                    | 12-18 mm                                                                          | 251A25325P     | 253A783        | 256A753        |
|                                                                                    | 16-25 mm                                                                          | 251A25332P     | 253A25332P     | 256A25332P     |
|                                                                                    | 22-32 mm                                                                          |                | 253A25340P     | 256A25340P     |

|                                                                                                                                               |          |            |            |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|------------|------------|
| <b>POLY HANDLE WITH EX GLAND FOR SELF-EJECTION OPTION </b> |          |            |            |            |
|                                                            | 10-14 mm | 251A463    | 253A463    |            |
|                                                                                                                                               | 12-18 mm | 251A44325P | 253A44325P | 256A463    |
|                                                                                                                                               | 16-25 mm |            | 253A44332P | 256A44332P |
|                                                                                                                                               | 22-32 mm |            |            | 256A44340P |

|                                                                                     |          |            |            |            |
|-------------------------------------------------------------------------------------|----------|------------|------------|------------|
| <b>STRAIGHT POLY HANDLE WITH METAL CABLE GLAND WITH EARTH CONTINUITY</b>            |          |            |            |            |
|  | 8-10 mm  | 251A25320M | 253A25320M | 256A25320M |
|                                                                                     | 12-14 mm | 251A25325M | 253A25325M | 256A25325M |
|                                                                                     | 18-24 mm | 251A25332M | 253A25332M | 256A25332M |

**LEGEND FOR OPTIONAL ACCESSORIES**

Angle



Threading or gland size



EMC option



HT 240° C



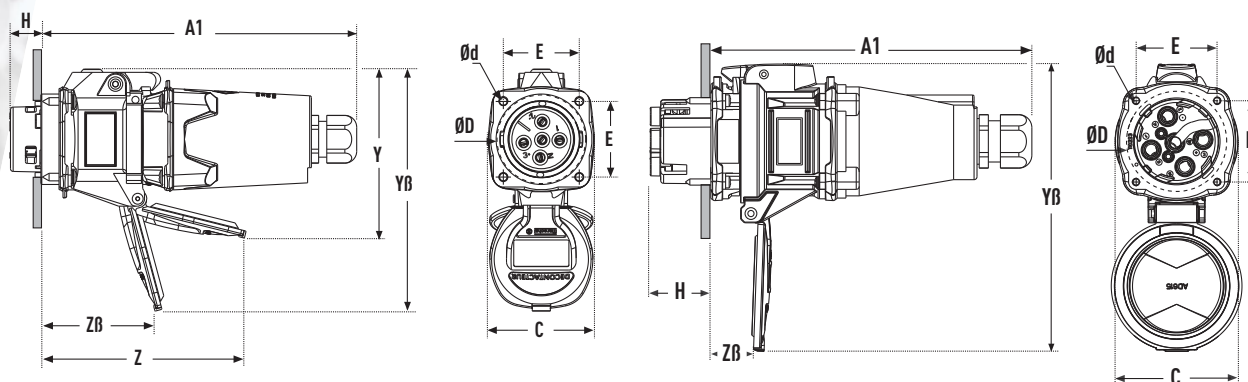
Self-ejection

**INFO +**

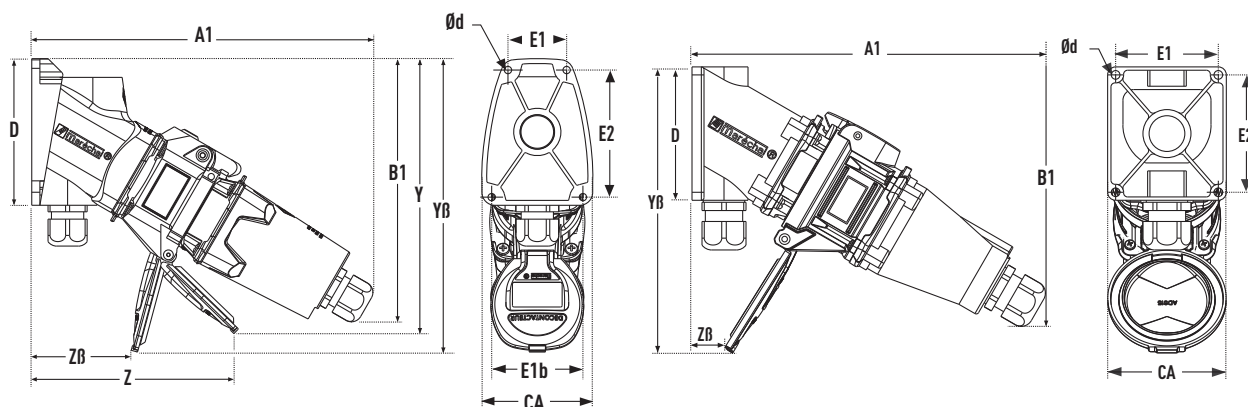


# DIMENSIONS

## DXN1/DXN3/DXN6



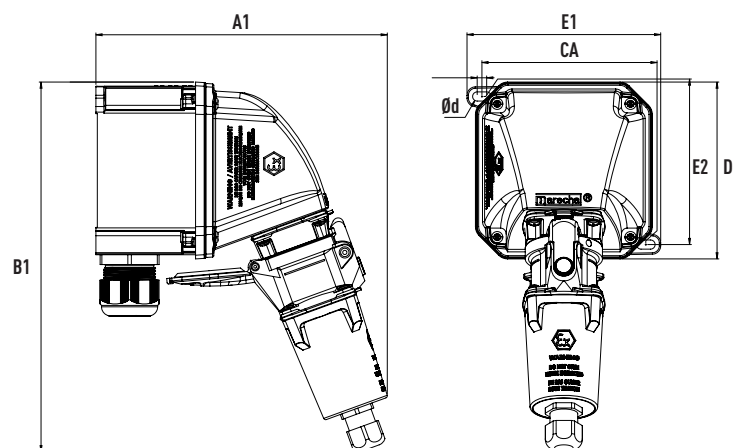
|             | A1  | C  | E  | H  | Y  | YB  | Z   | ZB | Ød* | ØD max |
|-------------|-----|----|----|----|----|-----|-----|----|-----|--------|
| <b>DXN1</b> | 165 | 58 | 42 | 27 | 89 | 134 | 104 | 53 | 4,5 | 51     |
| <b>DXN3</b> | 190 | 77 | 48 | 29 | -  | 171 | -   | 39 | 5   | 57     |
| <b>DXN6</b> | 218 | 84 | 55 | 30 | -  | 195 | -   | 50 | 5   | 68     |



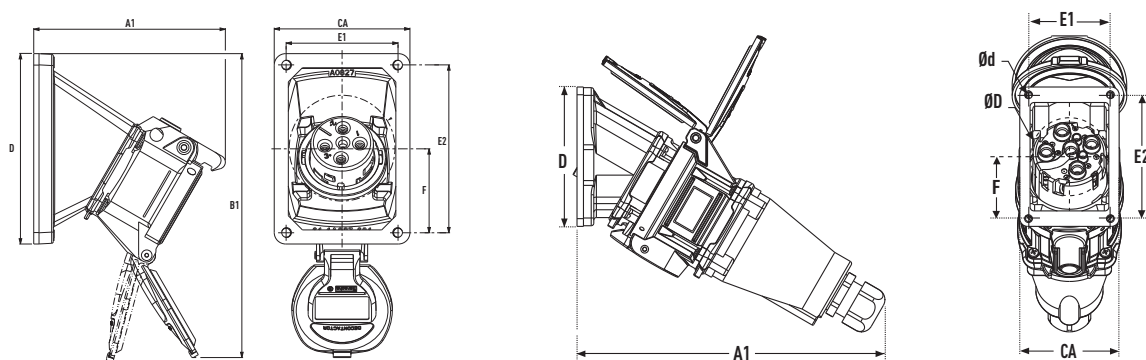
|             | A1  | B1  | CA | D   | E1 | E1b | E2 | Y   | YB  | Z   | ZB | Ød* |
|-------------|-----|-----|----|-----|----|-----|----|-----|-----|-----|----|-----|
| <b>DXN1</b> | 209 | 162 | 68 | 90  | 36 | 56  | 78 | 166 | 180 | 127 | 61 | 4,5 |
| <b>DXN3</b> | 226 | 166 | 84 | 84  | 70 | /   | 70 | /   | 191 | /   | 30 | 6   |
| <b>DXN6</b> | 265 | 195 | 89 | 100 | 77 | /   | 88 | /   | 225 | /   | 41 | 6,5 |

\*Ød : maximum drilling diameter.



**DXN1/DXN3/DXN6**


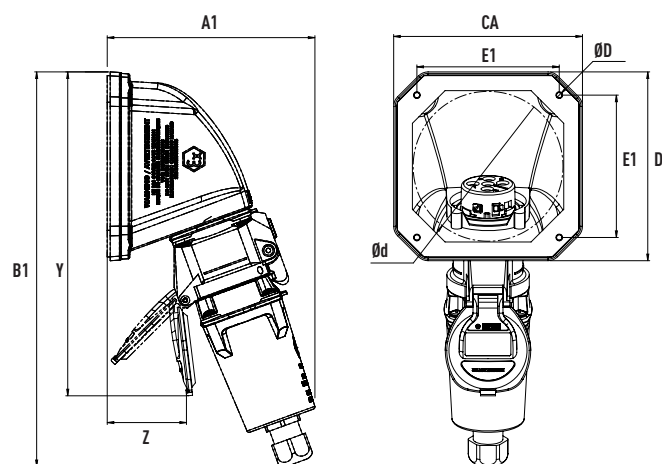
|             | A1  | B1  | CA  | D   | E1  | E2    | Ød* |
|-------------|-----|-----|-----|-----|-----|-------|-----|
| <b>DXN1</b> | 208 | 264 | 117 | 126 | 138 | 105.5 | 6,5 |
| <b>DXN3</b> | 217 | 275 | 117 | 126 | 138 | 105.5 | 6,5 |
| <b>DXN6</b> | 244 | 341 | 157 | 166 | 175 | 145.5 | 6,5 |



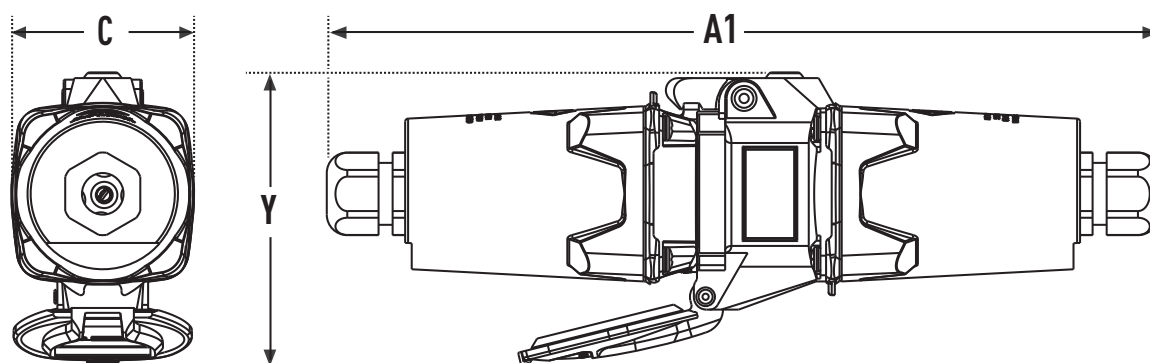
|             | A1  | B1  | CA | D   | E1   | E2 | F  | Ød* | ØD max |
|-------------|-----|-----|----|-----|------|----|----|-----|--------|
| <b>DXN1</b> | 109 | 172 | 77 | 108 | 63,5 | 95 | 48 | 5   | 60     |
| <b>DXN3</b> | 205 | 167 | 77 | 108 | 63   | 95 | 37 | 5,5 | 60     |
| <b>DXN6</b> | 239 | 190 | 77 | 108 | 64   | 95 | 40 | 5,5 | 60     |

\*Ød : maximum drilling diameter.

# DXN1/DXN3/DXN6



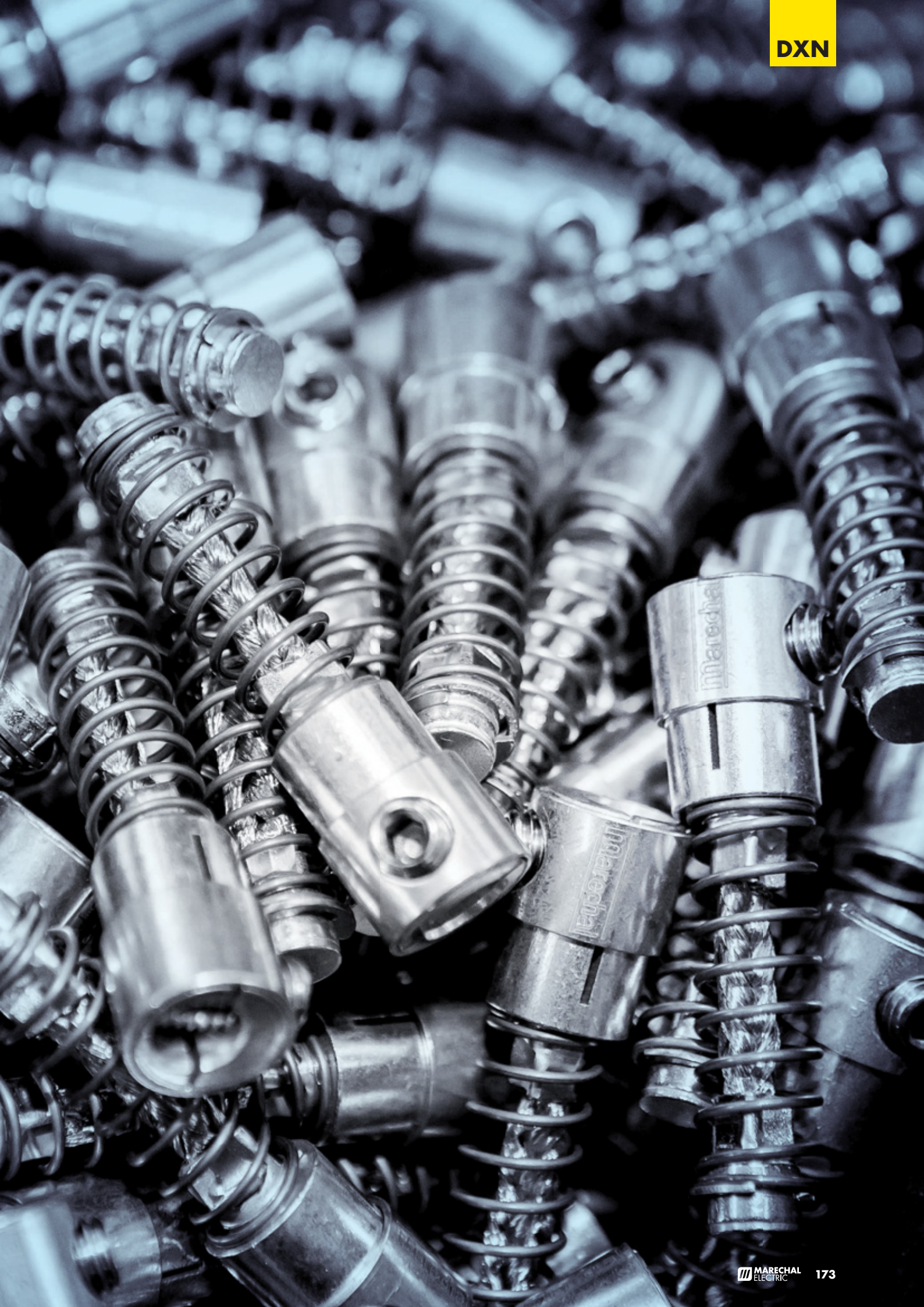
|             | A1  | B1  | CA  | D   | E1  | Y   | Z  | Ød* | ØD max |
|-------------|-----|-----|-----|-----|-----|-----|----|-----|--------|
| <b>DXN1</b> | 139 | 264 | 126 | 126 | 95  | 217 | 53 | 3.6 | 100    |
| <b>DXN3</b> | 148 | 275 | 126 | 126 | 95  | 246 | 45 | 3.6 | 100    |
| <b>DXN6</b> | 175 | 341 | 166 | 166 | 135 | 300 | 71 | 3.6 | 140    |



|             | A1  | C  | Y   |
|-------------|-----|----|-----|
| <b>DXN1</b> | 266 | 58 | 89  |
| <b>DXN3</b> | 304 | 71 | 118 |
| <b>DXN6</b> | 350 | 84 | 122 |

\*Ød : maximum drilling diameter.







# DXA1



## DECONTACTOR™ METAL



**20 A**

- ▶ II 2 G D Ex de IIC, Ex tb IIIC
- ▶ Automatic IP66/IP67 water-and dust-tight
- ▶ Integrated load-break switch
- ▶ Lockable in connected or disconnected position with optional lockout shaft
- ▶ Low temperature rating of -55°C

## MAIN FEATURES

|                                                   |           |                           |                       |
|---------------------------------------------------|-----------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 20 A      | Ambient temperature       | -55 °C to +60 °C      |
| Maximum voltage                                   | 550 V     | Flexible wiring (min-max) | 1-4 mm <sup>2</sup>   |
| IP protection lid closed                          | IP66/IP67 | Stranded wiring (min-max) | 1,5-6 mm <sup>2</sup> |
| IP protection plug connected                      | IP66/IP67 | ATEX zones                | 1 & 2, 21 & 22        |
| Shock resistance                                  | IK10      | Keying positions          | 24                    |



### DXA DECONTACTOR™ complies with:

- The ATEX 2014/35/EU Directive,
- IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31 international standards
- The essential safety requirements of IEC 60309-1 & IEC 60309-4 international and European standards (plugs and socket-outlets for industrial purposes),
- The switch utilization categories AC-22 and AC-23 described in IEC/EN 60947-3,
- The French NF C 15-100 standard,
- The European 'Machine Directive' 2006/42/CE regarding equipment isolation,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses,
- The decrees relating to workers' protection in Belgium, Spain and Italy,

**Also certified by LCIE (ATEX et IECEx) and cCSAus (French and American-Canadian\* European and international notified bodies).**

(\*) for North-American markets





**WALL MOUNTING  
SOCKET DXA1**



**PLUG DXA1**

### GLAND SUFFIX

| PE Ex            | Suffix     |
|------------------|------------|
| M25<br>(9-16 mm) | Ref. + 25M |
| M32<br>(12-21mm) | 291A653    |
| Other            | Consult us |

**SOCKET-OUTLET  
female  
DXA1 (20 A)**



**PLUG male  
DXA1 (20 A)**



|              |        |         |         |
|--------------|--------|---------|---------|
| 220-250 V AC | 1P+N+E | 2914015 | 2918015 |
| 380-440 V AC | 3P+E   | 2914013 | 2918013 |
| 380-440 V AC | 3P+N+E | 2914017 | 2918017 |

**WALL mounting  
socket female  
DXA1 (20 A)**



**PLUG male  
DXA1 (20 A)**



|              |        |     |         |                   |                   |
|--------------|--------|-----|---------|-------------------|-------------------|
| 220-250 V AC | 1P+N+E | M20 | 8-13 mm | 2914015 + 291A053 | 2918015 + 291A963 |
| 380-440 V AC | 3P+E   | M20 | 8-13 mm | 2914013 + 291A053 | 2918013 + 291A963 |
| 380-440 V AC | 3P+N+E | M20 | 8-13 mm | 2914017 + 291A053 | 2918017 + 291A963 |

**INCLINED socket  
female  
DXA1 (20 A)**



**INCLINED appliance  
inlet male  
DXA1 (20 A)**



|              |        |                   |                   |
|--------------|--------|-------------------|-------------------|
| 220-250 V AC | 1P+N+E | 2914015 + 291A027 | 2918015 + 291A027 |
| 380-440 V AC | 3P+E   | 2914013 + 291A027 | 2918013 + 291A027 |
| 380-440 V AC | 3P+N+E | 2914017 + 291A027 | 2918017 + 291A027 |

**COUPLER socket  
female  
DXA1 (20 A)**



**WALL mounting  
appliance inlet male  
DXA1 (20 A)**



|              |        |     |         |                   |                   |
|--------------|--------|-----|---------|-------------------|-------------------|
| 220-250 V AC | 1P+N+E | M20 | 8-13 mm | 2914015 + 291A963 | 2918015 + 291A053 |
| 380-440 V AC | 3P+E   | M20 | 8-13 mm | 2914013 + 291A963 | 2918013 + 291A053 |
| 380-440 V AC | 3P+N+E | M20 | 8-13 mm | 2914017 + 291A963 | 2918017 + 291A053 |

### MARECHAL ELECTRIC FRANCE

|                                                                                              |                                  |        |
|----------------------------------------------------------------------------------------------|----------------------------------|--------|
|  II 2 G D | Ex de IIC T* Gb Ex tb IIIC T* Db |        |
| -55 °C ≤ Ta ≤ +40 °C                                                                         | T6                               | T68 °C |
| -55 °C ≤ Ta ≤ +60 °C                                                                         | T5                               | T88 °C |
| LCIE 15 ATEX3033X/IECEx LCIE 15.0030X                                                        |                                  |        |

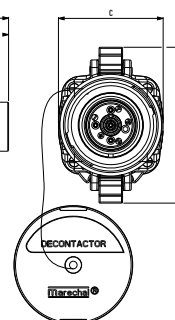
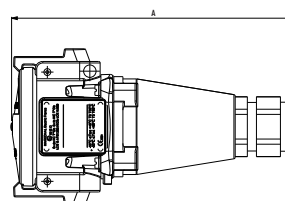
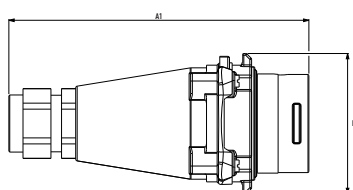
### ACCESSORIES AND OPTIONS

|           |         |
|-----------|---------|
| Inlet cap | 291A426 |
|-----------|---------|

Locking with shaft for 2 padlocks ø 8 mm  
(padlocks not supplied) Ref. socle + 843

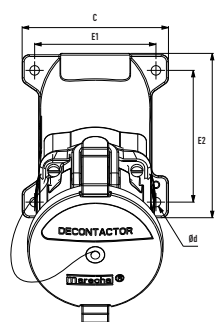
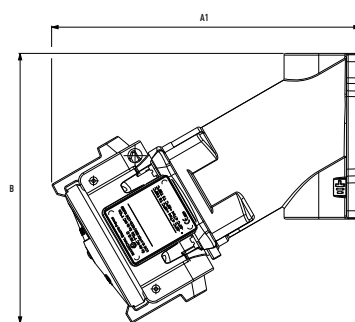


# DIMENSIONS

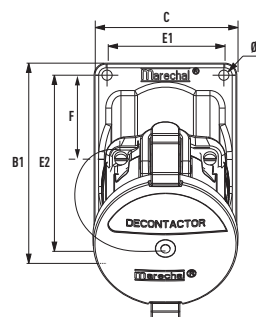
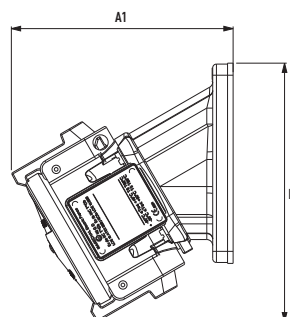


|             | A1  | B  |
|-------------|-----|----|
| <b>DXA1</b> | 170 | 79 |

|             | A   | B   | C  | C1 |
|-------------|-----|-----|----|----|
| <b>DXA1</b> | 185 | 103 | 69 | 78 |



|             | A1  | B   | B1 | C  | E1 | E2 | Ød* |
|-------------|-----|-----|----|----|----|----|-----|
| <b>DXA1</b> | 178 | 156 | 95 | 84 | 70 | 76 | 5,5 |



|             | A1  | B   | B1  | C  | E1 | E2 | F  | Ød* | ØD max |
|-------------|-----|-----|-----|----|----|----|----|-----|--------|
| <b>DXA1</b> | 120 | 140 | 108 | 77 | 63 | 95 | 37 | 5,5 | 60     |

\*Ød : maximum drilling diameter.

# DX



## DECONTACTOR™ METAL



**20 A/32 A/63 A/125 A/200 A**

- ▶  II2 G D Ex de IIC, tD A21
- ▶ IP65 water-and dust-tight
- ▶ Integrated load-break switch
- ▶ Locking in connected or disconnected position by keying axis

## TECHNICAL FEATURES

|                     | DX1                                             | DX3   | DX6                          | DX9   | DX2   |
|---------------------|-------------------------------------------------|-------|------------------------------|-------|-------|
| Rated current (In)  | 20 A                                            | 32 A  | 63 A                         | 125 A | 200 A |
| Umax                | 750 V                                           | 750 V | 750 V                        | 750 V | 750 V |
| Keying positions    | 24                                              | 24    | 23                           | 23    | 23    |
| Ambient temperature | <<< -25 °C ≤ Ta ≤ +60 °C >>>                    |       | <<< -40 °C ≤ Ta ≤ +60 °C >>> |       |       |
| Protection mode     | <<< «de» and «tD A21» >>>                       |       |                              |       |       |
| ATEX zones          | <<< Zones 1 & 2 [gas] Zones 21 & 22 [dusts] >>> |       |                              |       |       |

## MECHANICAL FEATURES

- Enclosure "d": during connection and disconnection, electric arc is contained and cannot reach the outside of the enclosure.



Interior moulding in the stand-by position: Cut view of the explosion-proof chamber.

### Connection:

Socket-outlet with a plug contact engaged: Closing of the dead butt-contact(s); unlocking of the interior moulding.



Plug rotation: Pressure on the springs. Switch contacts close immediately.

- Aluminium corrosion-free casing
- IK10 shock resistance
- External male contacts: these pins engage with the spring-loaded silver-nickel butt contacts inside the socket
- IP65 lid
- ON/OFF indicator
- Design ensures compliance with interlock standard EN 60309-4 : no live contacts.



### Disconnection:

Reversed rotation of the plug: The switch contacts open immediately. Return of the plug to its "off" stand-by position.



### DX DECONTACTOR™ complies with:

- The ATEX 2014/35/EU Directive,
- IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31 international standards
- The essential safety requirements of IEC 60309-1 & IEC 60309-4 international and European standards (plugs and socket-outlets for industrial purposes),
- The French NF C 15-100 standard,
- The European 'Machine Directive' 2006/42/CE regarding equipment isolation,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses,
- The decrees relating to workers' protection in Belgium, Spain and Italy,

Also certified by NANIO (TR CU EAC) and LCIE (ATEX and IECEx, Russian and French European and international notified bodies).



### WALL MOUNTING SOCKET DX1



Wall box 90°  
262AB53



Socket-outlet  
2624017

### PLUG DX1



Plug  
2621017

## MAIN FEATURES

|                                                   |                  |                           |                        |
|---------------------------------------------------|------------------|---------------------------|------------------------|
| Rated current (with wiring according to standard) | 20 A             | Flexible wiring (min-max) | 2,5-10 mm <sup>2</sup> |
| Maximum voltage                                   | 750 V            | Stranded wiring (min-max) | 2,5-10 mm <sup>2</sup> |
| IP protection lid closed                          | IP65             | Other wiring              | on request             |
| IP protection plug connected                      | IP65             | Keying positions          | 24                     |
| Shock resistance                                  | IK10             | Protection mode           | de, tD A21             |
| Ambient temperature                               | -25 °C to +60 °C | ATEX zones                | 1 & 2, 21 & 22         |

### SOCKET-OUTLET female DX1 (20 A)



### INCLINED appliance inlet DX1 (20 A)



### PLUG male DX1 (20 A)



Each socket outlet or inlet must be associated with a box, a sleeve or a handle.

|              |        |         |         |         |         |
|--------------|--------|---------|---------|---------|---------|
| 220-250 V AC | 1P+N+E | 2624015 | 2626015 | 8-13 mm | 2621015 |
| 380-440 V AC | 3P+E   | 2624013 | 2626013 | 8-13 mm | 2621013 |
| 380-440 V AC | 3P+N+E | 2624017 | 2626017 | 8-13 mm | 2621017 |

► Other voltages, frequencies and contact configurations are available (see page 10).

### BOXES Ex metal CABLE GLAND INCLUDED \*



| Cable gland entry | Wall box metal 90°  |
|-------------------|---------------------|
| M20               | 262AB53 8-13 mm     |
| M25               | 262AB5325M 9-16 mm  |
| M32               | 262AB5332M 12-21 mm |

\* For alternatives with Earth continuity, please contact us

### HANDLES Ex metal CABLE GLAND INCLUDED



| Cable gland entry | Straight handle metal |
|-------------------|-----------------------|
| M20               | 262A963 8-13 mm       |
| M25               | 262A95325M 9-16 mm    |
| M32               | 262A95332M 12-21 mm   |

### MARECHAL ELECTRIC FRANCE

|                                     |           |        |
|-------------------------------------|-----------|--------|
| II 2 G D                            | Ex de IIC | tD A21 |
| -25 °C ≤ Ta ≤ +60 °C                | T5        | T84 °C |
| -25 °C ≤ Ta ≤ +50 °C                | T6        | T74 °C |
| IECEx LC1 09.0014/LCIE 05 ATEX 6127 |           |        |





## WALL MOUNTING SOCKET DX3



Wall box 90°  
263AB53



Socket-outlet  
2634017

## PLUG DX3



Plug  
2631017

## MAIN FEATURES

|                                                   |                  |                           |                |
|---------------------------------------------------|------------------|---------------------------|----------------|
| Rated current (with wiring according to standard) | 32 A             | Flexible wiring (min-max) | 2,5-10 mm²     |
| Maximum voltage                                   | 750 V            | Stranded wiring (min-max) | 2,5-10 mm²     |
| IP protection lid closed                          | IP65             | Other wiring              | on request     |
| IP protection plug connected                      | IP65             | Keying positions          | 24             |
| Shock resistance                                  | IK10             | Protection mode           | de, tD A21     |
| Ambient temperature                               | -25 °C to +60 °C | ATEX zones                | 1 & 2, 21 & 22 |

## SOCKET-OUTLET female DX3 (32 A)



## INCLINED appliance inlet DX3 (32 A)



## PLUG male DX3 (32 A)



Each socket outlet or inlet must be associated with a box, a sleeve or a handle.

|              |        |         |         |         |         |
|--------------|--------|---------|---------|---------|---------|
| 220-250 V AC | 1P+N+E | 2634015 | 2636015 | 9-16 mm | 2631015 |
| 380-440 V AC | 3P+E   | 2634013 | 2636013 | 9-16 mm | 2631013 |
| 380-440 V AC | 3P+N+E | 2634017 | 2636017 | 9-16 mm | 2631017 |

► Other voltages, frequencies and contact configurations are available (see page 10).

## BOXES

Ex metal cable gland included\*



| Cable gland entry | Wall box metal 90° |          |
|-------------------|--------------------|----------|
| M20               | 263AB5320M         | 8-13 mm  |
| M25               | 263AB53            | 9-16 mm  |
| M32               | 263AB5332M         | 12-21 mm |

\* For alternatives with Earth continuity, please contact us

## HANDLES

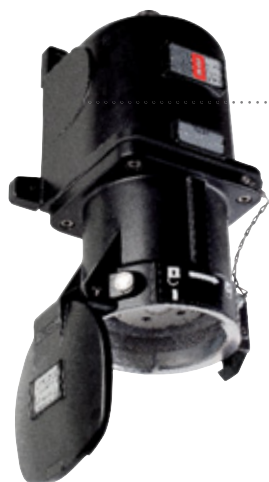
Ex metal cable gland included



| Cable gland entry | Straight handle metal |          |
|-------------------|-----------------------|----------|
| M20               | 263A95320M            | 8-13 mm  |
| M25               | 263A963               | 9-16 mm  |
| M32               | 263A95332M            | 12-21 mm |

## MARECHAL ELECTRIC FRANCE

|                                     |           |        |
|-------------------------------------|-----------|--------|
| II 2 G D                            | Ex de IIC | tD A21 |
| -25 °C ≤ Ta ≤ +60 °C                | T5        | T84 °C |
| -25 °C ≤ Ta ≤ +50 °C                | T6        | T74 °C |
| IECEx LCI 09.0014/LCIE 05 ATEX 6127 |           |        |



### WALL MOUNTING SOCKET DX6



Wall box 90°  
266AB53



Socket-outlet  
2664017

### PLUG DX6



Plug  
2661017

### MAIN FEATURES

|                                                   |                  |                           |                       |
|---------------------------------------------------|------------------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 63 A             | Flexible wiring (min-max) | 16-35 mm <sup>2</sup> |
| Maximum voltage                                   | 750 V            | Stranded wiring (min-max) | 16-50 mm <sup>2</sup> |
| IP protection lid closed                          | IP65             | Other wiring              | on request            |
| IP protection plug connected                      | IP65/IP66        | Keying positions          | 23                    |
| Shock resistance                                  | IK10             | Protection mode           | de, tD A21            |
| Ambient temperature                               | -40 °C to +60 °C | ATEX zones                | 1 & 2, 21 & 22        |

### SOCKET-OUTLET female DX6 (63 A)



### INCLINED appliance inlet DX6 (63 A)



### PLUG male DX6 (63 A)



Each socket outlet or inlet must be associated with a box, a sleeve or a handle.

|              |        |         |         |          |         |
|--------------|--------|---------|---------|----------|---------|
| 220-250 V AC | 1P+N+E | 2664015 | 2666015 | 12-21 mm | 2661015 |
| 380-440 V AC | 3P+E   | 2664013 | 2666013 | 12-21 mm | 2661013 |
| 380-440 V AC | 3P+N+E | 2664017 | 2666017 | 12-21 mm | 2661017 |

► Other voltages, frequencies and contact configurations are available (see page 10).

### BOXES

Ex metal cable gland included\*



| Cable gland entry | Wall box metal 90° |          |
|-------------------|--------------------|----------|
| M25               | 266AB5325M         | 9-16 mm  |
| M32               | 266AB53            | 12-21 mm |
| M40               | 266AB5340M         | 16-27 mm |

\* For alternatives with Earth continuity, please contact us

### HANDLES

Ex metal cable gland included



| Cable gland entry | Straight handle metal |          |
|-------------------|-----------------------|----------|
| M25               | 266A95325M            | 9-16 mm  |
| M32               | 266A963               | 12-21 mm |
| M40               | 266A95340M            | 16-27 mm |

### MARECHAL ELECTRIC FRANCE

|                                                                                              |           |        |
|----------------------------------------------------------------------------------------------|-----------|--------|
|  II 2 G D | Ex de IIC | tD A21 |
| -40 °C ≤ Ta ≤ +60 °C                                                                         | T5        | T90 °C |
| -40 °C ≤ Ta ≤ +50 °C                                                                         | T6        | T80 °C |
| IECEx LC1 09.0015/LCIE 04 ATEX 6038                                                          |           |        |



### WALL MOUNTING SOCKET DX9



Wall box 90°  
269AB53



Socket-outlet  
2694017

### PLUG DX9



Plug  
2691017

### MAIN FEATURES

|                                                   |                  |                           |                |
|---------------------------------------------------|------------------|---------------------------|----------------|
| Rated current (with wiring according to standard) | 125 A            | Flexible wiring (min-max) | 35-50 mm²      |
| Maximum voltage                                   | 750 V            | Stranded wiring (min-max) | 50-70 mm²      |
| IP protection lid closed                          | IP65             | Other wiring              | on request     |
| IP protection plug connected                      | IP65/IP66        | Keying positions          | 23             |
| Shock resistance                                  | IK10             | Protection mode           | de, tD A21     |
| Ambient temperature                               | -40 °C to +60 °C | ATEX zones                | 1 & 2, 21 & 22 |

### SOCKET-OUTLET female DX9 (125 A)



### INCLINED appliance inlet DX9 (125 A)



### PLUG male DX9 (125 A)



Each socket outlet or inlet must be associated with a box, a sleeve or a handle.

|              |        |         |         |          |            |
|--------------|--------|---------|---------|----------|------------|
| 380-440 V AC | 3P+E   | 2694013 | 2696013 | 16-27 mm | 2691013    |
|              |        |         |         | 23-35 mm | 269101350M |
|              |        |         |         | 36-48 mm | 269101363M |
| 380-440 V AC | 3P+N+E | 2694017 | 2696017 | 16-27 mm | 2691017    |
|              |        |         |         | 23-35 mm | 269101750M |
|              |        |         |         | 36-48 mm | 269101763M |

► Other voltages, frequencies and contact configurations are available (see page 10).

### BOXES

Ex metal cable gland included\*



| Cable gland entry | Wall box metal 90° |          |
|-------------------|--------------------|----------|
| M32               | 269AB5332M         | 12-21 mm |
| M40               | 269AB53            | 16-27 mm |
| M50               | 269AB5350M         | 23-35 mm |
| M63               | 269AB5363M         | 36-48 mm |

\* For alternatives with Earth continuity, please contact us

### HANDLES

Ex metal cable gland included

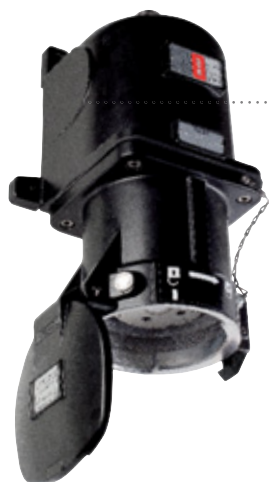


| Cable gland entry | Straight handle metal |          |
|-------------------|-----------------------|----------|
| M32               | 269A95332M            | 12-21 mm |
| M40               | 269A963               | 16-27 mm |
| M50               | 269A95350M            | 23-35 mm |
| M63               | 269A95363M            | 36-48 mm |

### MARECHAL ELECTRIC FRANCE

|                                                                                              |           |        |
|----------------------------------------------------------------------------------------------|-----------|--------|
|  II 2 G D | Ex de IIC | tD A21 |
| -40 °C ≤ Ta ≤ +60 °C                                                                         | T5        | T90 °C |
| -40 °C ≤ Ta ≤ +50 °C                                                                         | T6        | T80 °C |

IECEX LCI 09.0015/LCIE 04 ATEX 6038



### WALL MOUNTING SOCKET DX2



Wall box 90°  
267AB53



Socket-outlet  
2674017



### PLUG DX2



Plug  
2671017

### MAIN FEATURES

|                                                   |                  |                  |                    |
|---------------------------------------------------|------------------|------------------|--------------------|
| Rated current (with wiring according to standard) | 200 A            | Flexible wiring  | 50 mm <sup>2</sup> |
| Maximum voltage                                   | 750 V            | Stranded wiring  | 70 mm <sup>2</sup> |
| IP protection lid closed                          | IP65             | Other wiring     | on request         |
| IP protection plug connected                      | IP65/IP66        | Keying positions | 23                 |
| Shock resistance                                  | IK10             | Protection mode  | de, tD A21         |
| Ambient temperature                               | -40 °C to +60 °C | ATEX zones       | 1 & 2, 21 & 22     |

### SOCKET-OUTLET female DX2 (200 A)



### INCLINED appliance inlet DX2 (200 A)



### PLUG male DX2 (200 A)



Each socket outlet or inlet must be associated with a box, a sleeve or a handle.

|              |        |         |         |          |         |
|--------------|--------|---------|---------|----------|---------|
| 380-440 V AC | 3P+E   | 2674013 | 2676013 | 36-48 mm | 2671013 |
| 380-440 V AC | 3P+N+E | 2674017 | 2676017 | 36-48 mm | 2671017 |

► Other voltages, frequencies and contact configurations are available (see page 10).

### BOXES

Ex metal cable gland included\*



| Cable gland entry | Wall box metal 90° |
|-------------------|--------------------|
| M63               | 267AB53 36-48 mm   |

\* For alternatives with Earth continuity, please contact us

### HANDLES

Ex metal cable gland included



| Cable gland entry | Straight handle metal |
|-------------------|-----------------------|
| M63               | 267A963 36-48 mm      |

### MARECHAL ELECTRIC FRANCE

 II 2 G D Ex de IIC tD A21  
-40 °C ≤ Ta ≤ +60 °C T3 T91 °C  
IECEx LC1 09.0015/LCIE 04 ATEX 6038



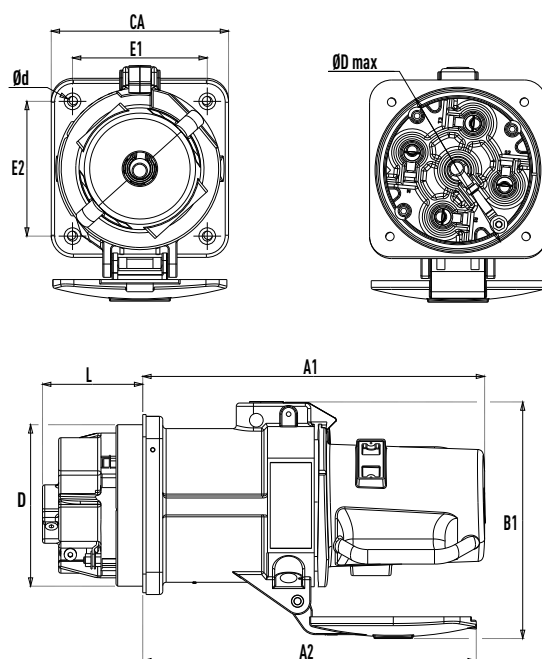




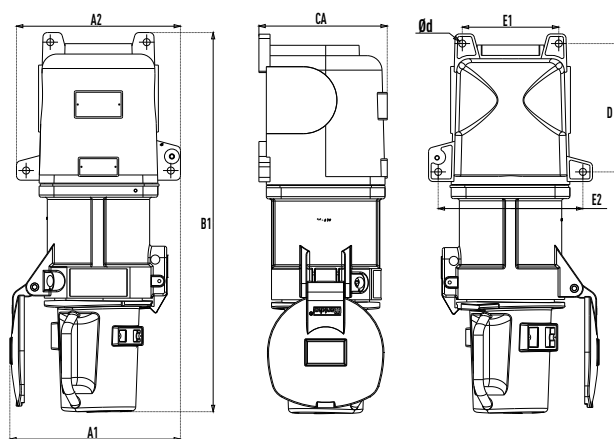


# DIMENSIONS

DX1/DX3/DX6/DX9/DX2



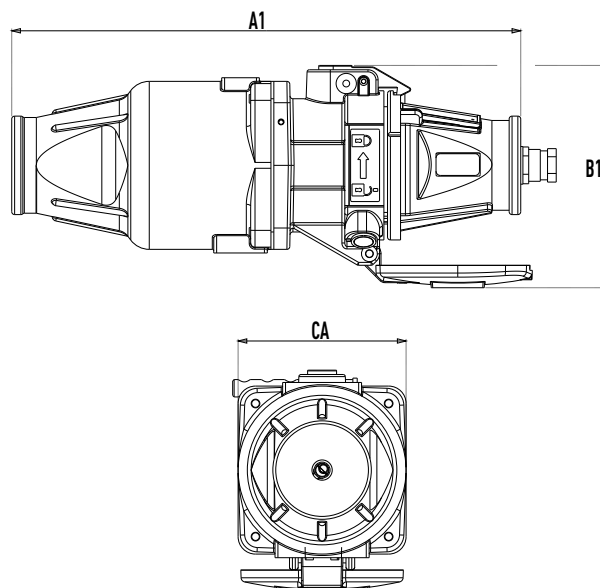
|             | A1  | A2  | B1  | CA  | D   | E1  | E2  | L  | Ød* | ØD max |
|-------------|-----|-----|-----|-----|-----|-----|-----|----|-----|--------|
| DX1/DX3     | 173 | 181 | 154 | 116 | 116 | 92  | 92  | 59 | 5,7 | 108    |
| DX6/DX9/DX2 | 307 | 300 | 212 | 160 | 145 | 122 | 122 | 90 | 9   | 150    |



|             | A1  | A2  | B1  | CA  | D   | E1  | E2  | Ød* |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|
| DX1/DX3     | 168 | 167 | 324 | 129 | 118 | 90  | 145 | 9,5 |
| DX6/DX9/DX2 | 230 | 221 | 511 | 173 | 173 | 130 | 195 | 9,5 |

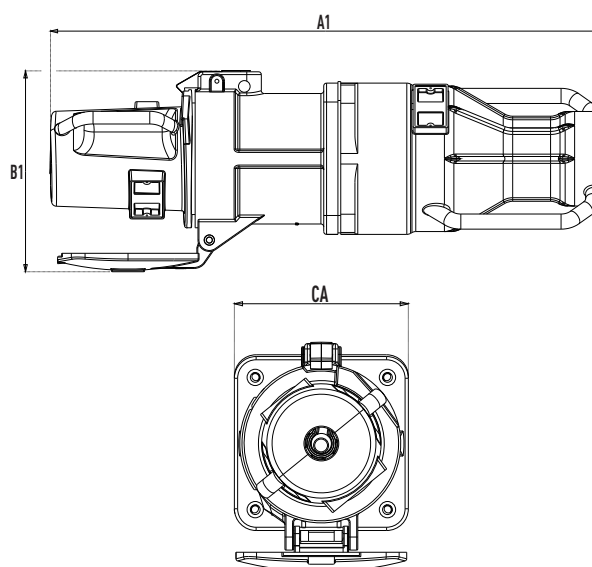
\*Ød : maximum drilling diameter.

## DX1/DX3



|                | A1    | B1    | CA  |
|----------------|-------|-------|-----|
| <b>DX1/DX3</b> | 351,5 | 153,5 | 116 |

## DX6/DX9/DX2



|                    | A1  | B1  | CA  |
|--------------------|-----|-----|-----|
| <b>DX6/DX9/DX2</b> | 582 | 212 | 160 |

\*Ød : maximum drilling diameter.

# MULTICONTACT CONNECTORS



FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](https://marechal.com)



Dimensions  
and certificates



**PXN12C P. 190**

#### MULTICONTACT CONNECTORS

- II2 G D Ex e IIC, Ex tb IIIC
- Up to 12 contacts
- Locking in connected or disconnected position
- Corrosion-free metal casing



**DXN25C P. 191**

#### MULTICONTACT CONNECTORS

- II2 G D Ex e IIC, Ex tb IIIC
- Up to 25 contacts
- Locking in connected or disconnected position
- Corrosion-free metal casing



**DXN37C P. 192**

#### MULTICONTACT CONNECTORS

- II2 G D Ex e IIC, Ex tb IIIC
- Up to 37 contacts
- Locking in connected or disconnected position
- Corrosion-free metal casing



**PXN12C, DXN25C and DXN37C multicontact connectors comply with:**

- The ATEX 2014/35/EU Directive,
- IEC/EN 60079-0, IEC/EN 60079-7 and IEC/EN 60079-31 International standards
- The French NF C 15-100 standard,
- The decrees relating to workers' protection in Belgium, Spain and Italy,

**Also certified by LCIE (ATEX and IECEx) and NANIO (TR CU EAC) (French and Russian European and international notified bodies).**



# PXN12c



MULTI-CONTACT CONNECTORS

METAL

10 A IP65/IP66



**WALL MOUNTING  
SOCKET PXN12c**



Wall box 30°  
06A0001



**PLUG PXN12c**



Plug  
06A1001

## MAIN FEATURES

|                                                   |              |                           |                       |
|---------------------------------------------------|--------------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 4-20 mA/10 A | Ambient temperature       | -40 °C to +55 °C      |
| Maximum voltage                                   | 220 V        | Flexible wiring (min-max) | 1-2,5 mm <sup>2</sup> |
| Number of contacts                                | 11C+E        | Wiring (terminals)        | crimping              |
| IP protection lid closed                          | IP65/IP66    | Protection mode           | e or i, tb            |
| IP protection plug connected                      | IP65/IP66    | ATEX zones                | 1 & 2, 21 & 22        |
| Shock resistance                                  | IK09         | Keying positions          | 2                     |

Connection or disconnection  
screw locking imprint BTR 2.5.

**WALL** mounting socket  
female  
**PXN12c (10 A)**



**PLUG** male  
**PXN12c (10 A)**



|     |            |          |     |            |          |
|-----|------------|----------|-----|------------|----------|
| M25 | 06A000125M | 9-16 mm  | M25 | 06A100125M | 9-16 mm  |
| M32 | 06A0001    | 12-21 mm | M32 | 06A1001    | 12-21 mm |

**INCLINED** socket  
female  
**PXN12c (10 A)**



**INCLINED**  
appliance inlet male  
**PXN12c (10 A)**



06A7001

06A9001

**COUPLER** socket  
female  
**PXN12c (10 A)**



**WALL** mounting  
appliance inlet male  
**PXN12c (10 A)**



|     |            |          |     |            |          |
|-----|------------|----------|-----|------------|----------|
| M25 | 06A300125M | 9-16 mm  | M25 | 06A600125M | 9-16 mm  |
| M32 | 06A3001    | 12-21 mm | M32 | 06A6001    | 12-21 mm |

MARECHAL ELECTRIC FRANCE

Ex II 2 G D Ex e IIC Gb Ex tb IIIC Db  
-40 °C ≤ Ta ≤ +55 °C T5 T69 °C

Ex ia or ib IIC T6 Gb

IECEx LCIE 14.0041X/LCIE 07 ATEX 6070X

## INFOS +

Each product is supplied with 1 bag of 13 contacts depending on the maximum configuration.  
This allows you to set up the product to suit your needs.



# DXN25C



MULTI-CONTACT CONNECTORS

METAL

10 A IP66/IP67



**WALL MOUNTING  
SOCKET DXN25c**



**Wall mounting  
socket**  
36D0002



**PLUG DXN25c**



**Plug**  
36D1002

## MAIN FEATURES

|                                                   |              |                           |                       |
|---------------------------------------------------|--------------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 4-20 mA/10 A | Ambient temperature       | -40 °C to +60 °C      |
| Maximum voltage                                   | 440 V        | Flexible wiring (min-max) | 1-2,5 mm <sup>2</sup> |
| Number of contacts                                | 24C+E        | Wiring (terminals)        | crimping              |
| IP protection lid closed                          | IP66/IP67    | Protection mode           | e or i, tb            |
| IP protection plug connected                      | IP66/IP67    | ATEX zones                | 1 & 2, 21 & 22        |
| Shock resistance                                  | IK09         | Keying positions          | 3                     |

Locking position connected or  
disconnected by lockable shaft.

Other accessories on request.

**WALL** mounting socket  
female  
**DXN25c (10 A)**



**PLUG** male  
**DXN25c (10 A)**



|     |            |          |     |            |          |
|-----|------------|----------|-----|------------|----------|
| M32 | 36D000232M | 12-21 mm | M32 | 36D100232M | 12-21 mm |
| M40 | 36D0002    | 16-27 mm | M40 | 36D1002    | 16-27 mm |

**INCLINED** socket  
female  
**DXN25c (10 A)**



**INCLINED**  
appliance inlet male  
**DXN25c (10 A)**



36D7002

36D9002

**COUPLER** socket  
female  
**DXN25c (10 A)**



**WALL** mounting  
appliance inlet male  
**DXN25c (10 A)**



|     |            |          |     |            |          |
|-----|------------|----------|-----|------------|----------|
| M32 | 36D300232M | 12-21 mm | M32 | 36D600232M | 12-21 mm |
| M40 | 36D3002    | 16-27 mm | M40 | 36D6002    | 16-27 mm |

### MARECHAL ELECTRIC FRANCE

II 2 G D    Ex e IIC Gb Ex tb IIIC Db  
 -40 °C ≤ Ta ≤ +40 °C    T6    T51 °C  
 -40 °C ≤ Ta ≤ +60 °C    T5    T71 °C  
 Ex ia or ib IIC T6 Gb  
 IECEx LCIE 14.0040X/LCIE 09 ATEX 3050X

### INFOS +

Each product is supplied with 2 bags of 13 contacts depending on the maximum configuration.  
This allows you to set up the product to suit your needs.  
Delivered with padlocking shaft.

# DXN37C



MULTI-CONTACT CONNECTORS

METAL

10 A IP66/IP67



**WALL MOUNTING  
SOCKET DXN37C**



**PLUG DXN37C**



**Wall mounting  
socket  
36C0003**



**Plug  
36C1003**

## MAIN FEATURES

|                                                   |           |                           |                       |
|---------------------------------------------------|-----------|---------------------------|-----------------------|
| Rated current (with wiring according to standard) | 10 A      | Ambient temperature       | -40 °C to +55 °C      |
| Maximum voltage                                   | 230 V     | Flexible wiring (min-max) | 1-2,5 mm <sup>2</sup> |
| Number of contacts                                | 36C+E     | Wiring (terminals)        | crimping              |
| IP protection lid closed                          | IP66/IP67 | Protection mode           | e or i, tb            |
| IP protection plug connected                      | IP66/IP67 | ATEX zones                | 1 & 2, 21 & 22        |
| Shock resistance                                  | IK09      | Keying positions          | 3                     |

Locking position connected or disconnected by lockable shaft.

Other accessories on request.

**WALL** mounting socket  
female  
**DXN37c (10 A)**



**PLUG** male  
**DXN37c (10 A)**



|     |            |          |     |            |          |
|-----|------------|----------|-----|------------|----------|
| M32 | 36C000332M | 12-21 mm | M32 | 36C100332M | 12-21 mm |
| M40 | 36C0003    | 16-27 mm | M40 | 36C1003    | 16-27 mm |

**INCLINED** socket  
female  
**DXN37c (10 A)**



**INCLINED**  
appliance inlet male  
**DXN37c (10 A)**



|         |         |
|---------|---------|
| 36C7003 | 36C9003 |
|---------|---------|

**COUPLER** socket  
female  
**DXN37c (10 A)**



**WALL** mounting  
appliance inlet male  
**DXN37c (10 A)**



|     |            |          |     |            |          |
|-----|------------|----------|-----|------------|----------|
| M32 | 36C300332M | 12-21 mm | M32 | 36C600332M | 12-21 mm |
| M40 | 36C3003    | 16-27 mm | M40 | 36C6003    | 16-27 mm |

MARECHAL ELECTRIC FRANCE



II 2 G D

Ex e IIC Gb Ex tb IIIC Db

-40 °C ≤ Ta ≤ +40 °C

T6

T56 °C

-40 °C ≤ Ta ≤ +55 °C

T5

T76 °C

Ex ia or ib IIC T6 Gb

IECEx LCIE 14.0038X/LCIE 07 ATEX 6071X

## INFOS +

Each product is supplied with 3 bags of 13 contacts depending on the maximum configuration. This allows you to set up the product to suit your needs. Delivered with padlocking shaft.









## OPTIONS

### SIMPLE ASSEMBLY AND DISASSEMBLY



#### Assembly

To insert contacts when they have been wired is simple.  
Push wired contact into rear of insulator until it stops to complete the installation.

#### Disassembly

To remove, use the tool provided.  
Push tool from front onto contact until tool stops.  
Contact is then released at rear of insulator.

#### Fast wiring

- Cable conductors: 1 mm<sup>2</sup> to 2,5 mm<sup>2</sup>.
- Before wiring, equip each conductor with a heat-shrink sleeve or an insulating sleeve.
- After wiring, cover the visible portion of the contact with the sleeve.
- Crimp the contact with a KNIPEX crimping tool P/N° 61CA500 or a GREENLEE crimping tool P/N° 45505.
- Use the 4 mm<sup>2</sup> footprint whatever the conductor cross-section.
- Perform a double crimping in compliance with CEI 60352-2 standard.
- Conductors can equally be soldered.

#### PXN12C

#### DXN25C

#### DXN37C

#### BAG OF 13 FEMALE CONTACTS



Ref. 01AA213

Ref. 01AA213

Ref. 01AA213

#### BAG OF 13 MALE CONTACTS



Ref. 01AA113

Ref. 61CA113

Ref. 61CA113

#### REMOVAL KEY



Ref. 61CA593

Ref. 61CA593

Ref. 61CA593

#### CRIMPING TOOL



Ref. 61CA500

Ref. 61CA500

Ref. 61CA500

#### HELAVIA SLEEVE EXPANSION TOOL



Ref. 61CA400

Ref. 61CA400

Ref. 61CA400

#### BAG OF 13 HEAT SHRINK INSULATION SLEEVES

Ref. 61CA083

Ref. 61CA083

Ref. 61CA083

#### INLET CAP



Ref. 012A126

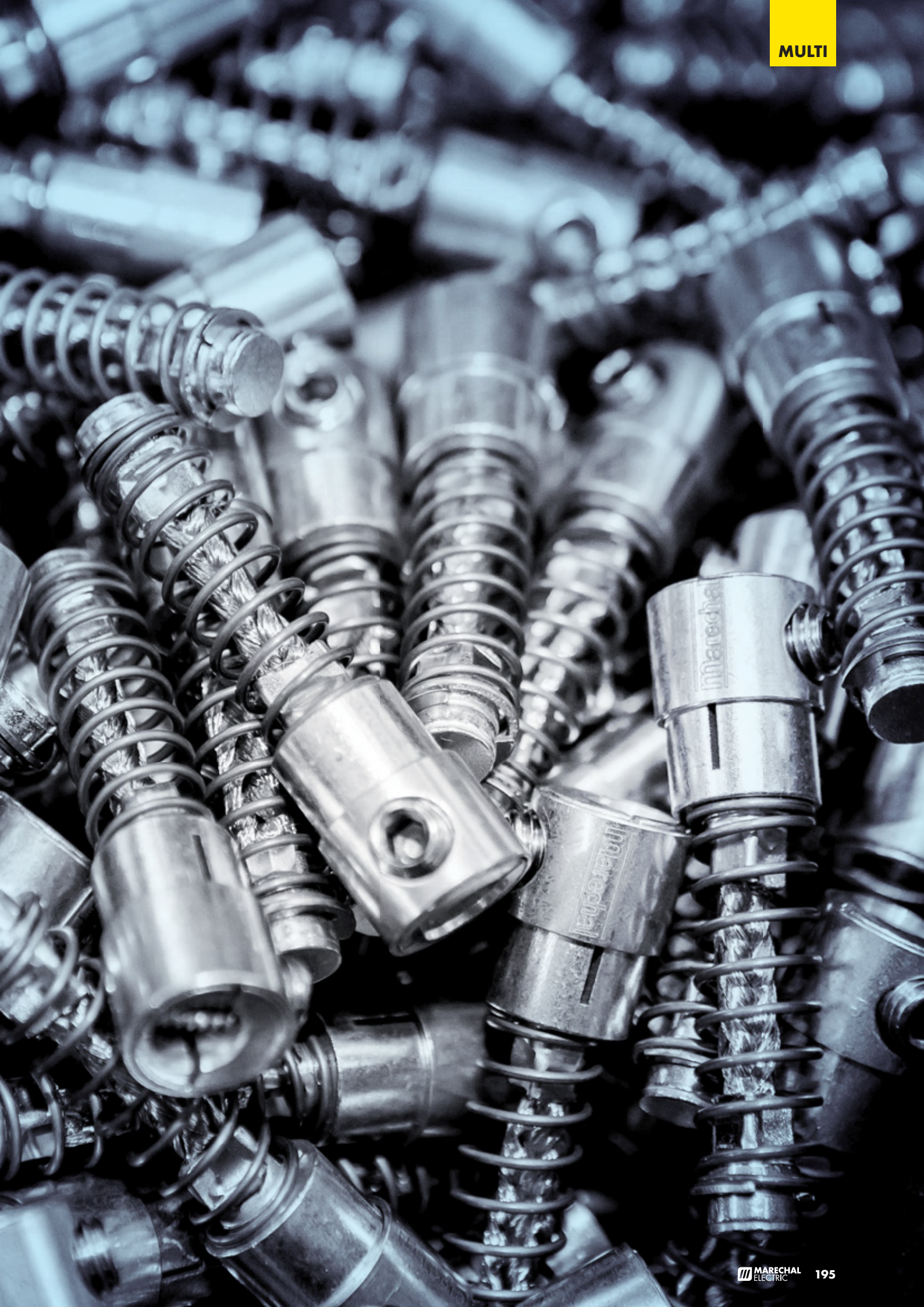


IP66/IP67

Ref. 313A426

Ref. 313A426





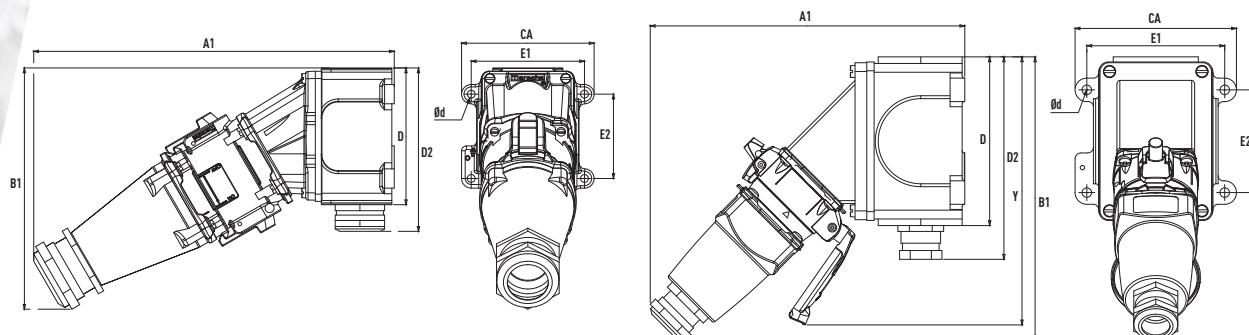




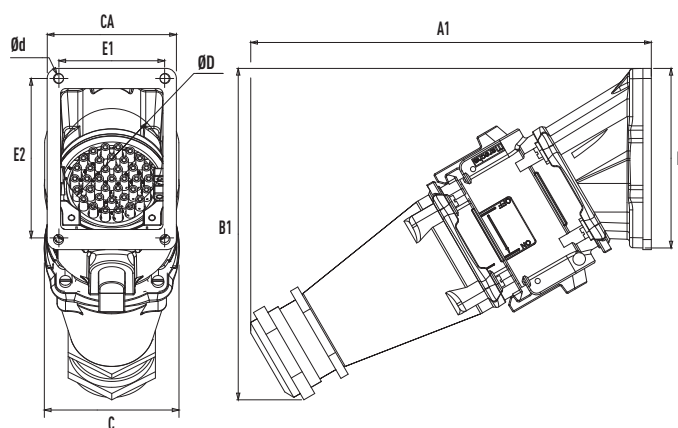
# DIMENSIONS

**DXN25c/DXN37c**

**PXN12c**

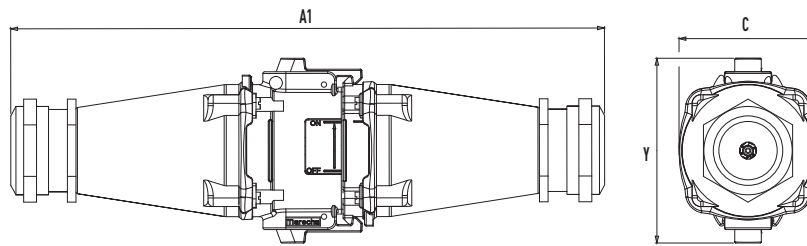


|                      | A1  | B1  | D   | D2  | CA  | E1 | E2 | Ød* |
|----------------------|-----|-----|-----|-----|-----|----|----|-----|
| <b>DXN25c/DXN37c</b> | 299 | 200 | 114 | 136 | 110 | 94 | 70 | 6,5 |
| <b>PXN12c</b>        | 213 | 193 | 114 | 142 | 110 | 94 | 70 | 6,5 |

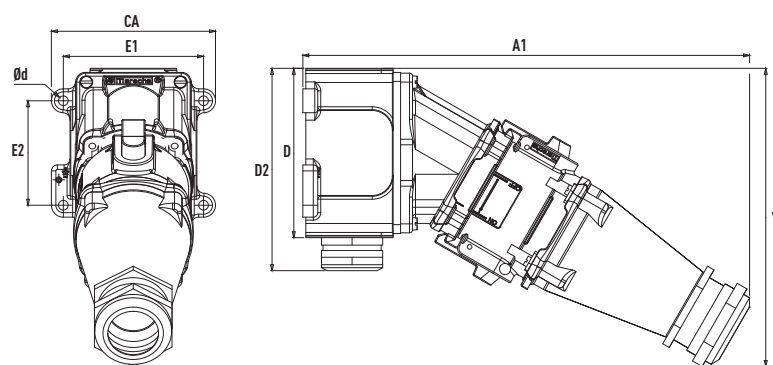


|                      | A1  | B1  | CA | D   | E1 | E2 | Ød* | ØD max |
|----------------------|-----|-----|----|-----|----|----|-----|--------|
| <b>DXN25c/DXN37c</b> | 239 | 197 | 77 | 107 | 63 | 95 | 5,5 | 60     |
| <b>PXN12c</b>        | 153 | 189 | 77 | 107 | 63 | 95 | 6   | 60     |

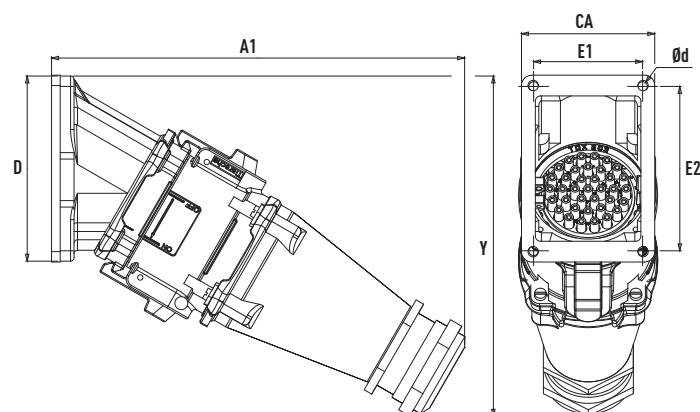
\*Ød : maximum drilling diameter.



|                      | A1  | C  | Y   |
|----------------------|-----|----|-----|
| <b>DXN25c/DXN37c</b> | 346 | 80 | 108 |
| <b>PXN12c</b>        | 246 | 58 | 87  |



|                      | A1  | CA  | D   | D2  | E1 | E2 | Y   | Ød* |
|----------------------|-----|-----|-----|-----|----|----|-----|-----|
| <b>DXN25c/DXN37c</b> | 299 | 110 | 114 | 136 | 94 | 70 | 200 | 6,5 |
| <b>PXN12c</b>        | 213 | 110 | 114 | 142 | 94 | 70 | 193 | 6,5 |



|                      | A1  | CA | D   | E1 | E2 | Y   | Ød* | ØD max |
|----------------------|-----|----|-----|----|----|-----|-----|--------|
| <b>DXN25c/DXN37c</b> | 239 | 77 | 107 | 63 | 95 | 197 | 5,5 | 60     |
| <b>PXN12c</b>        | 153 | 77 | 107 | 63 | 95 | 189 | 6   | 60     |

\*Ød : maximum drilling diameter.

# PNCX



## COMPACT CONNECTOR



**5 A**

- ▶ II 2 G D Ex e IIC, Ex tb IIIC
- ▶ Can be used in zones 1 and 2 (gas), 21 and 22 (dust)
- ▶ Compact and easy to use
- ▶ Standard IP66/IP67/IP69
- ▶ Long life, 2 000 operations

## ELECTRICAL FEATURES

|                           |                                                                       |
|---------------------------|-----------------------------------------------------------------------|
| Maximum voltage           | 250 V                                                                 |
| Impulse withstand voltage | 5 kV/Pollution degree 3                                               |
| Contact resistance        | < 2 mΩ                                                                |
| Permitted current range   | 4-20 mA/5 A                                                           |
| Polarity                  | 3P+N+E                                                                |
| Conductors accepted       | From 0,75 mm <sup>2</sup> to 2,5 mm <sup>2</sup><br>Screwed terminals |
| Cable diameter            | From 10 to 14 mm<br>(smaller Ø available according to specification)  |

## MECHANICAL FEATURES

|                    |                                                                                                    |
|--------------------|----------------------------------------------------------------------------------------------------|
| Casing & insulator | Glassfiber reinforced thermoplastic UL94 V-0                                                       |
| Butt contacts      | Copper alloy with silver-nickel tips                                                               |
| Contact protection | Tinning                                                                                            |
| Load cycles        | > 2000 cycles                                                                                      |
| Shock resistance   | IK08                                                                                               |
| Vibration          | Frequency 5-1 000 Hz, 1 g<br>(90 minutes on each critical frequency)<br>according to IEC 60068-2-6 |

## CLIMATIC FEATURES

|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| Ambient temperature           | -20 °C to +70 °C                                   |
| IP protection Socket with cap | IP66/IP67<br>IP69 100bar (1450 PSI) 80 °C          |
| IP protection plug connected  | IP66/IP67<br>IP69 100bar (1450 PSI) 80 °C          |
| Salt, Fog performance         | 200 h minimum not connected<br>> 1 000 h connected |
| Resistance to fluids          | Motor oils, petrol, oils, detergents...            |

## MARQUAGE ATEX

|               |                                                      |
|---------------|------------------------------------------------------|
| ATEX zones    | Gas zones 1 and 2,<br>Dust zones 21 and 22           |
| ATEX markings | Ⓔ II 2 G D<br>Ex e IIC T6 Gb<br>Ex tb IIIC T72 °C Db |
| Certificates  | LCIE 16 ATEX 3001 X<br>IECEx LCIE 16.0001 X          |

**SOCKET-OUTLET**  
female (with lock nut)  
**PNCX (5 A)**

**INLET**  
male (with lock nut)  
**PNCX (5 A)**

250 V

5P

06E4007

06E8007

**COUPLER  
SOCKET**  
female  
**PNCX (5 A)**

**PLUG**  
male  
**PNCX (5 A)**

250 V

5P

06E3007

06E1007



**ADAPTER PLATE FOR  
DXN1 ACCESSORIES  
(SEE PAGES 168-169)**

251A457-E

PLUG



### PNCX connectors complies with:

- The ATEX 2014/34/UE Directive,
- The requirements of IEC 61984, IEC 60529, IEC 62262, EN/IEC 60079-0, EN/IEC 60079-7 and EN/IEC 60079-31 International standards,
- The European Low Voltage Directive 2014/35/UE.
- The French NF C 15-100 standard,
- The French decree dated 20 December 2011 pertaining to the wiring and operating conditions of movable electrical apparatuses,

# SPeX



## SINGLE POLE POWER CONNECTOR



**680 A**

- ▶  II2 G D Ex e IIC, Ex tb IIIC
- ▶ Ambient temperature -20 °C to +60 °C
- ▶ IP65/IP66 Water-and dust-tight
- ▶ Electromechanical interlocking system
- ▶ Mechanic and visual keying



## THE HIGHEST POSSIBLE SAFETY

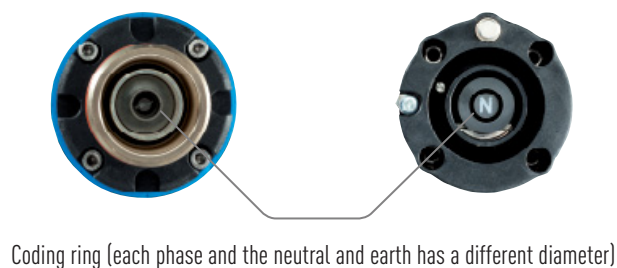
- Reliable mechanical and electrical interlocking,
- IP2X socket-outlet when cap removed,
- Automatic IP65/IP66 when plug is connected.



## AN SIMPLE-TO-USE CONNECTOR

- Straight insertion of the plug into the socket-outlet,
- Different mechanical keying for L1, L2, L3, N and E, positive and negative (DC)
- Visual identification by standard colours.

### Mechanical coding between phases



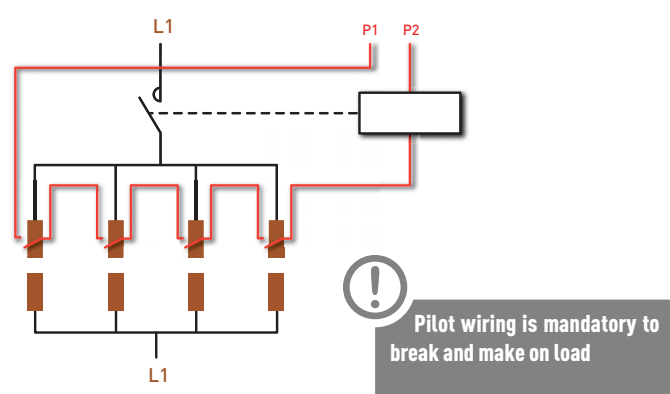
## SPeX ATEX CLASSIFICATION ACCORDING TO CABLE CROSS-SECTION AND TA (AMBIENT TEMPERATURE)

|                     | -20 °C ≤ Ta ≤ +40 °C<br>G D<br>T5/T56 °C | -20 °C ≤ Ta ≤ +40 °C<br>G D<br>T6/T56 °C | -20 °C ≤ Ta ≤ +60 °C<br>G D<br>T5/T76 °C |
|---------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| 70 mm <sup>2</sup>  | 290 A                                    | 235 A                                    | 235 A                                    |
| 95 mm <sup>2</sup>  | 415 A                                    | 335 A                                    | 335 A                                    |
| 120 mm <sup>2</sup> | 456 A                                    | 376 A                                    | 376 A                                    |
| 150 mm <sup>2</sup> | 493 A                                    | 415 A                                    | 415 A                                    |
| 185 mm <sup>2</sup> | 530 A                                    | 450 A                                    | 450 A                                    |
| 240 mm <sup>2</sup> | 570 A                                    | 497 A                                    | 497 A                                    |
| 300 mm <sup>2</sup> | 620 A                                    | 540 A                                    | 540 A                                    |
| 400 mm <sup>2</sup> | 680 A                                    | 600 A                                    | 600 A                                    |

## PERFORMANCES

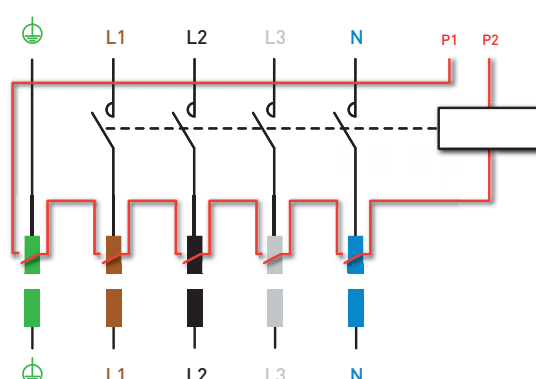
- With 240 mm<sup>2</sup> wiring, the SPeX accepts a permanent current up to 570 A/1000 V AC with T5 ATEX classification at 40 °C ambient temperature.

### Interlocking electrical wiring diagram: increased power with parallel connection.



### Energy distribution system with separate connection of contacts

The pilot contact breaks the circuit in conformity with ATEX Directive (increased safety "e"). **The breaking system is not supplied.**



# SPeX SINGLE POLE POWER CONNECTOR



## MAIN FEATURES

|                                             |                                                     |                                |                          |
|---------------------------------------------|-----------------------------------------------------|--------------------------------|--------------------------|
| <b>Rated current</b>                        | according to temperature class and section of cable | <b>Ambient temperature</b>     | see table                |
| <b>Maximum voltage AC</b>                   | 1 000 V                                             | <b>Wiring (min - max)</b>      | see table                |
| <b>Maximum voltage DC</b>                   | 1 500 V                                             | <b>Keying position</b>         | 5, mechanical and visual |
| <b>Short-circuit current I<sub>cc</sub></b> | 20 kA during 250 ms                                 | <b>Protection mode</b>         | e, tb                    |
| <b>IP protection - lid closed</b>           | IP65/IP66                                           | <b>ATEX zones</b>              | 1 & 2, 21 & 22           |
| <b>IP protection - connected plug</b>       | IP65/IP66                                           | <b>Number of operations</b>    | 2000                     |
| <b>Shock resistance</b>                     | IK08                                                | <b>Pre-wired pilot circuit</b> | 6 A/250 V                |

### SOCKET-OUTLET female SPeX (680 A) WITHOUT LUG



### INLET male SPeX (680 A) WITHOUT LUG



| Type     | Europe* | Reference | Reference<br>16-25 mm | Reference<br>22-32 mm | Reference<br>28-38 mm | Reference<br>40-48 mm |
|----------|---------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|
| L1       | Brown   | 4647001   | 464100132P            | 464100140P            | 464100150P            | 464100163P            |
| L2       | Black   | 4647002   | 464100232P            | 464100240P            | 464100250P            | 464100263P            |
| L3       | Grey    | 4647003   | 464100332P            | 464100340P            | 464100350P            | 464100363P            |
| Neutral  | Blue    | 464700N   | 464100N32P            | 464100N40P            | 464100N50P            | 464100N63P            |
| Earth    | Green   | 464700T   | 464100T32P            | 464100T40P            | 464100T50P            | 464100T63P            |
| Positive | Red     | 464700P   | 464100P32P            | 464100P40P            | 464100P50P            | 464100P63P            |
| Negative | Black   | 464700M   | 464100M32P            | 464100M40P            | 464100M50P            | 464100M63P            |

\* The indicated references are valid for Europe and Japan. For other countries: replace the prefix 46 by: 42 for the USA/43 for Australia and New Zealand/44 for UK and South Africa

| Type     | Australia and New Zealand | Reference | Reference<br>16-25 mm | Reference<br>22-32 mm | Reference<br>28-38 mm | Reference<br>40-48 mm |
|----------|---------------------------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|
| L1       | Red                       | 4347001   | 434100132P            | 434100140P            | 434100150P            | 434100163P            |
| L2       | White                     | 4347002   | 434100232P            | 434100240P            | 434100250P            | 434100263P            |
| L3       | Blue                      | 4347003   | 434100332P            | 434100340P            | 434100350P            | 434100363P            |
| Neutral  | Black                     | 434700N   | 434100N32P            | 434100N40P            | 434100N50P            | 434100N63P            |
| Earth    | Green                     | 434700T   | 434100T32P            | 434100T40P            | 434100T50P            | 434100T63P            |
| Positive | Red                       | 434700P   | 434100P32P            | 434100P40P            | 434100P50P            | 434100P63P            |
| Negative | Black                     | 434700M   | 434100M32P            | 434100M40P            | 434100M50P            | 434100M63P            |

## ACCESSORIES AND OPTIONS



Lever mechanism

454A376

Compatible with socket or inlet since 2018.

**MARECHAL ELECTRIC  
FRANCE**

 II2 G D

Ex e IIC Gb  
Ex tb IIIC Db

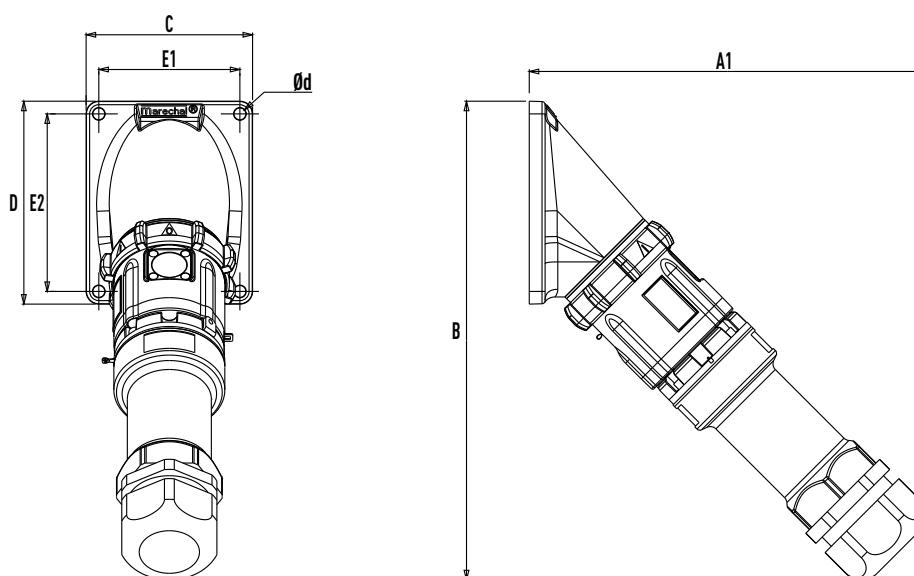
IECEx LCI 12.0005X  
LCIE 07 ATEX 6073 X

## COPPER LUGS

**Lug choice depends on the cable:** the cross-section of the flexible cable mentioned in the table below is for information only. Please check dimensions as these may vary according to cable types and manufacturers.

| Wiring (mm²) |          |  |  | Internal diameter (mm) |
|--------------|----------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|
| Flexible     | Stranded | Reference                                                                         | Reference                                                                         |                        |
| 50           | 70       | 454A50C                                                                           | 454A50D                                                                           | 11                     |
| 70           | 95       | 454A70C                                                                           | 454A70D                                                                           | 13,1                   |
| 95           | 120      | 454A95C                                                                           | 454A95D                                                                           | 14,5                   |
| 120          | 150      | 454A12C                                                                           | 454A12D                                                                           | 16,2                   |
| 150          | 185      | 454A15C                                                                           | 454A15D                                                                           | 18                     |
| 185          | 240      | 454A18C                                                                           | 454A18D                                                                           | 20,6                   |
| 240          | 300      | 454A24C                                                                           | 454A24D                                                                           | 23,1                   |
| 300          | 400      | 454A30C                                                                           | 454A30D                                                                           | 26,1                   |
| 400          | 500      | 454A40C                                                                           | 454A40D                                                                           | 29,2                   |

\* Wiring with crimping lugs, according to NF C20-130 standard (for VDE 0220 standard, please contact us).  
Crimping: Double hexagonal crimping is recommended.



|             | A1  | B   | E1 | E2  | D   | C   | Ød* |
|-------------|-----|-----|----|-----|-----|-----|-----|
| <b>SPeX</b> | 250 | 302 | 89 | 112 | 128 | 105 | 7.5 |

\*Ød : maximum drilling diameter.

# CUSTOMIZED SOLUTIONS



FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates



[technor.com](http://technor.com)



**MXBS P. 206**

### SOCKET-OUTLET COMBINATION BOXES

- II 2 G D Ex eb IIC, Ex tb IIIC
- Intrinsic safety capability
- IP66 Water-and dust-tight
- GRP casing, aluminium, stainless steel AISI 316 L
- Assembly of multi-contact connectors and socket-outlets on the same enclosure
- Custom configuration



**MXBJ P. 208**

### JUNCTION BOXES

- II 2 G D Ex eb IIC, Ex tb IIIC
- Intrinsic safety capability
- IP66 Water-and dust-tight
- GRP casing, aluminium, stainless steel AISI 316 L
- Custom configuration



**B2X P. 210**

### SOCKET OR JUNCTION BOXES

- II 2 G D Ex e IIC, Ex tb IIIC
- Intrinsic safety capability
- IP66/IP67 Water-and dust-tight
- GRP casing
- For Ex socket and/or EX terminals
- 120x120 mm or 160x160 mm
- On hinges



**Technor P. 212**

### A WIDE RANGE OF TECHNOLOGICALLY ADVANCED PRODUCTS

- Lighting
- Flameproof enclosure
- Junction boxes
- Control station
- Visual signal
- Cable glands & fittings



# MXBS



## SOCKET-OUTLET COMBINATION BOXES



**680 A**

- ▶  Ex eb IIC, Ex tb IIIC
- ▶ Intrinsic safety capability
- ▶ IP66 Water-and dust-tight
- ▶ GRP casing, aluminium, stainless steel AISI 316 L
- ▶ Assembly of multi-contact connectors and socket-outlets on the same enclosure
- ▶ From -55 °C to +60 °C



## ASSOCIATED MARECHAL® PRODUCTS

|                                |                           |
|--------------------------------|---------------------------|
| <b>DECONTACTOR™</b>            | DXA1, DXN1, DXN3 and DXN6 |
| <b>Connectors</b>              | PNCX and SPeX             |
| <b>Multicontact connectors</b> | PXN12C, DXN25C and DXN37C |

## CLIMATIC FEATURES

|                                      |                       |
|--------------------------------------|-----------------------|
| <b>Temperature range and ratings</b> | From -55 °C to +60 °C |
|--------------------------------------|-----------------------|

## ATEX MARKINGS

|                   |                                     |
|-------------------|-------------------------------------|
| <b>ATEX zones</b> | Gas and Dust : zones 1 & 2, 21 & 22 |
|-------------------|-------------------------------------|

|                      |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| <b>ATEX markings</b> | Ⓔ II 2 G Ex eb IIC T* Gb increased safety                                  |
|                      | Ⓔ II 2 G Ex ia IIC T* Gb or Ⓔ II 2 G Ex ib IIC T* Gb increased safety      |
|                      | Ⓔ II 2 G Ex eb ia or eb ib IIC T* Gb increased safety and intrinsic safety |
|                      | Ⓔ II 2 D Ex tb IIIC T* Db in dust                                          |

|                             |                                                |
|-----------------------------|------------------------------------------------|
| <b>Standards compliance</b> | IEC/EN 60079-0, 60079-7, 60079-11 and 60079-31 |
|-----------------------------|------------------------------------------------|

|                     |                                                                         |
|---------------------|-------------------------------------------------------------------------|
| <b>Certificates</b> | Certificates IECEX N° IECEX LCI 11.0042X and ATEX n° LCIE 11 ATEX 3047X |
|---------------------|-------------------------------------------------------------------------|

\* Depending on the ambient temperature, the internal components and socket mix.

## MECHANICAL FEATURES

|                             |      |
|-----------------------------|------|
| <b>Degree of protection</b> | IP66 |
|-----------------------------|------|

|                         |                                     |
|-------------------------|-------------------------------------|
| <b>Shock resistance</b> | IK09 according to IEC and EN 62 262 |
|-------------------------|-------------------------------------|

GRP casing, aluminium, stainless steel AISI 316 L. Casing made of High performance Poly for DXN1, DXN3 and DXN6 decontactors and PNCX, SPeX connectors.

**Material**  
Casing made of Metal for DXA1 DECONTACTOR™ and PXN12C, DXN25C and DXN37C multicontact connectors.  
Stainless steel screw.

## ELECTRICAL FEATURES

|                         |              |
|-------------------------|--------------|
| <b>Maximum voltage*</b> | 1000 V AC/DC |
|-------------------------|--------------|

|                                 |       |
|---------------------------------|-------|
| <b>Maximum nominal current*</b> | 680 A |
|---------------------------------|-------|

|                                                    |              |
|----------------------------------------------------|--------------|
| <b>Flexible and stranded wiring (mini - maxi)*</b> | 0.22-400 mm² |
|----------------------------------------------------|--------------|

|                 |                                                                |
|-----------------|----------------------------------------------------------------|
| <b>Junction</b> | Terminal blocks. Feed through and loop-in loop-out connection. |
|-----------------|----------------------------------------------------------------|

|                                 |                                                                                                                        |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Cable entries and glands</b> | M12 to M80 depending on the size of the box/Polyamide cable gland for unarmoured cable.                                |
|                                 | Nickel plated brass cable gland for unarmoured cable and armoured cable (with plate or washer bonding inside the box). |

\* Depending on the socket-outlet.



## ACCESSORIES ON REQUEST

- Inclined sleeve
- Earth stud
- Earth bar
- Hinges
- Mounting brackets
- Purge or breather
- Earthing plate
- Metal gland with or without earth ring

# MXBJ



## JUNCTION BOXES



**400 A**

- ▶  II 2 G D Ex eb IIC and Ex tb IIIC
- ▶ Intrinsic safety capability
- ▶ IP66 Water-and dust-tight
- ▶ GRP casing, aluminium, stainless steel AISI 316 L
- ▶ From -55 °C to +60 °C
- ▶ Shock resistance IK09



## ELECTRICAL FEATURES

|                                             |                         |
|---------------------------------------------|-------------------------|
| Maximum voltage*                            | 750 V                   |
| Maximum nominal current*                    | 400 A                   |
| Flexible and stranded wiring (mini - maxi)* | 0,2-300 mm <sup>2</sup> |
| Cable entries                               | M12 to M80              |

\* Depending on the type of terminal connection.

## CLIMATIC FEATURES

|                               |                       |
|-------------------------------|-----------------------|
| Temperature range and ratings | From -55 °C to +60 °C |
|-------------------------------|-----------------------|

## MECHANICAL FEATURES

|                      |                                                                               |
|----------------------|-------------------------------------------------------------------------------|
| Degree of protection | IP66                                                                          |
| Shock resistance     | IK09 according to IEC and EN 62 262                                           |
| Material             | GRP casing, aluminium, stainless steel AISI 316 L.<br>Stainless steel screws. |

## ATEX MARKINGS

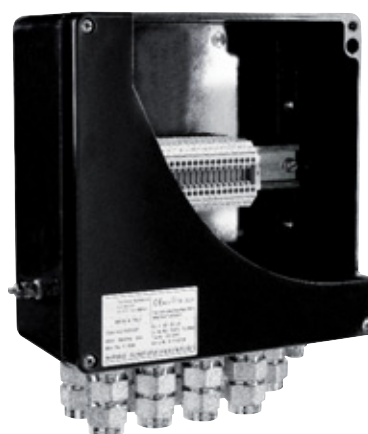
|            |                                     |
|------------|-------------------------------------|
| ATEX zones | Gas and Dust : zones 1 & 2, 21 & 22 |
|------------|-------------------------------------|

|               |                                                                       |
|---------------|-----------------------------------------------------------------------|
| ATEX markings | II 2 G Ex eb IIC T* Gb increased safety                               |
|               | II 2 G Ex ia IIC T* Gb or                                             |
|               | II 2 G Ex ib IIC T* Gb intrinsic safety                               |
|               | II 2 G Ex eb ib or ia IIC T* Gb increased safety and intrinsic safety |
|               | II 2 D Ex tb IIIC T* Db in dust                                       |

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Standards compliance | IEC/EN 60079-0, 60079-7,<br>60079-11 et 60079-31 |
|----------------------|--------------------------------------------------|

|              |                                                                            |
|--------------|----------------------------------------------------------------------------|
| Certificates | Certificates IECEx N° IECEx LCI 11.0026X<br>and ATEX N° LCIE 11 ATEX 3028X |
|--------------|----------------------------------------------------------------------------|

\* Depending on the ambient temperature, the internal components and socket mix.



## ACCESSORIES ON REQUEST

- Earth stud
- Earth bar
- Shield bar
- Junction bar
- Hinges
- Mounting
- Purge or breather
- Earthing plate
- Metal gland with or without earth ring



# B2x



## SOCKET OR JUNCTION BOXES



**63 A**

- ▶ II 2 G D Ex e IIC, Ex tb IIIC
- ▶ Intrinsic safety capability
- ▶ IP66/IP67 Water-and dust-tight
- ▶ GRP casing
- ▶ With Ex e certified Terminal
- ▶ Dimension 120x120x90 mm or 160x160x90 mm





## ELECTRICAL FEATURES

|                                            |                           |
|--------------------------------------------|---------------------------|
| Maximum voltage                            | 750 V DC/AC               |
| Maximum nominal current                    | 63 A                      |
| Flexible and stranded wiring (mini - maxi) | 0.22 – 35 mm <sup>2</sup> |
| Cable entries                              | M12 to M40                |

## CLIMATIC FEATURES

|                   |                       |
|-------------------|-----------------------|
| Temperature range | From -50 °C to +60 °C |
|-------------------|-----------------------|

## MECHANICAL FEATURES

|                      |                                     |
|----------------------|-------------------------------------|
| Dimensions           | 120x120x90 and 160x160x90           |
| Degree of protection | IP66/IP67                           |
| Shock resistance     | IK09 according to IEC and EN 62 262 |
| Material             | High performance GRP                |

## ASSOCIATED MARECHAL® PRODUCTS

|                         |                           |
|-------------------------|---------------------------|
| DECONTACTOR™            | DXA1, DXN1, DXN3 and DXN6 |
| Connectors              | PNCX                      |
| Multicontact connectors | PXN12C, DXN25C and DXN37C |

## ATEX MARKINGS

|            |                                                                |
|------------|----------------------------------------------------------------|
| ATEX zones | IECEx and ATEX for zones 1 and 2 (gas)<br>and 21 et 22 (dusts) |
|------------|----------------------------------------------------------------|

|               |                                                                                                             |
|---------------|-------------------------------------------------------------------------------------------------------------|
| ATEX markings | Ⓔ II 2 G Ex e IIC T* Gb or Ex ia or ib IIC T* Gb<br>or Ex e ia or ib IIC T* Gb<br>Ⓔ II 2 D Ex tb IIIC T* Db |
|---------------|-------------------------------------------------------------------------------------------------------------|

|                      |                                                   |
|----------------------|---------------------------------------------------|
| Standards compliance | IEC/EN 60079-0, 60079-7,<br>60079-11 and 60079-31 |
|----------------------|---------------------------------------------------|

|              |                                                                             |
|--------------|-----------------------------------------------------------------------------|
| Certificates | Certificates IECEx N° IECEx LCIE 16.0042X<br>and ATEX N° LCIE 16 ATEX 3054X |
|--------------|-----------------------------------------------------------------------------|

\* Depends on equipment mounted in/on the enclosure and the ambient temperature. Ambient temperature: -50°C to +60°C T6/T5/T4 for gas.

For standard configurations of socket boxes with terminals, see the DXN1, DXN3 and DXN6 pages.  
For special configurations, contact us.



## ACCESSORIES ON REQUEST

- Earth Stud
- Earth bar
- Junction bar
- Draining and breathing device
- Earth continuity plate
- Metal cable gland with or without earth continuity

# Technor®



## A WIDE RANGE OF ATEX PRODUCTS



- Safety of people
- Equipment and infrastructure in potentially explosive atmosphere



## LIGHTING

### Ex d, Ex de, Ex nA, Ex emb

A complete range of lighting with dedicated design for hazardous areas. Manufactured either in stainless steel, marine grade aluminium and cast steel with an extra Polyurethane painting. Every single light brings excellent photometric properties.



## CONTROL STATIONS

### Ex d, Ex e, Ex de, Ex dem

Range of GRP, Copper free aluminium or Stainless Steel control stations designed to offer a flexible, light weight and cost effective solution tailor made upon customer request.



## JUNCTION BOXES

### Ex d, Ex e et Ex ia

The AQ/AR range of stainless steel AISI-316L enclosure used as instrument and electrical terminal boxes, where an explosive atmosphere may be present and are especially recommended for chemical agent environments, sea-water corrosion resistance and extremes of low and high temperature, offshore and onshore oriented.

The CP./CPS.. range of copper free aluminium enclosures, used for terminals wiring, grants Ex d or Ex e mode of protection. Internal and external screws are made of AISI316 stainless steel. This series is tailor made on the base of customer specification, including quantity and type of terminals. These boxes are suitable for hazardous areas of industrial plants for indoor and outdoor applications.



## FLAMEPROOF ENCLOSURES

### Ex d IIB, IIB+H2 et IIC

Large range of enclosures manufactured in Copper free aluminium, Cast Iron or Stainless steel. Ideal for instrument housing, control, check, connection, automation, interruption and/or protection use. They can be equipped with pushbuttons, pilot lamps and selector switches.



## EARTHING SYSTEMS

### Ex d IIC T5 Gb

Control and discharge system for electrostatic charges suitable for road tankers, rail tankers and any movable tanker for dangerous items, ready for one/two double circuit clamps PTA ISEO-2. System is complete with arrest/consensus optical warning and changeover contact free from output voltage.



## VISUAL SIGNAL

### Ex d, Ex de IIC

The top of technology among Aircraft Warning Lights, LIOL, MIOL with LED technology, reliable long life and maintenance saving products, in compliance with ICAO and FAA, along with signalization unit like beacons, flashing unit, rotating light.



## CABLE GLANDS & ACCESSORIES

### Ex d/e

Single seal, double seals cable glands, suitable for unarmored and armored cables. Nickel-chrome plated brass, stainless steel and aluminum made, hexagon shape, anti-ageing EPDM oil resistant gaskets. These cable glands are used in classified Area Zone 1 & 2 and Zone 21 & 22.







# MAIN OPTIONS

DESCRIPTION OF THE KEY OPTIONS  
OF OUR PRODUCTS.



FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates



|                                          |        |
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| STOP-LATCH.....                          | P. 219 |
| TYPOLOGY OF LIDS.....                    | P. 220 |
| DRAW MECHANISM .....                     | P. 222 |
| ELECTROMAGNETIC COMPATIBILITY (EMC)..... | P. 223 |
| ADDITIONAL OPTIONS .....                 | P. 224 |
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| MECHANICAL SELF-EJECTING SYSTEMS .....   | P. 228 |
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| EX REGULATIONS.....                      | P. 233 |
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## MECHANICAL LOCKING



Locking devices prevent the unintentional supply or use of an equipment during maintenance, and fit perfectly within consignment procedures known as LOTO (Lockout/Tag-out). Socket-outlets adjacent to electric machines or motors may be disconnected and locked-out thus providing a visible disconnection and protecting workers from a local security failure, without the use of an authorized electrician.

After disconnecting the DECONTACTOR™ in complete safety:

- The plug can be locked-out thus preventing its connection to any socket-outlet;
- The socket-outlet can also be locked-out cover closed;
- The plug and the socket-outlet can also be padlocked together to prevent any unwanted disconnection (supply of emergency equipment).
- Plug/appliance inlet: a padlock (or a safety lock) can be placed directly. Padlock not supplied.
- Socket-outlet alone (cover closed) or connected assembly: a padlock (or a safety lock) can be placed directly on the socket latch or onto a locking shaft under the latch (padlock not supplied).

Socket-outlet alone



Connected assembly



Plug alone



Suffix to be added to the socket-outlet or plug/inlet part number (P/N°) depending on the locking option:

| OPTIONS                                             | DSN SERIES               | DS SERIES                                        | DXN SERIES               | DN SERIES        | PN SERIES                                      |
|-----------------------------------------------------|--------------------------|--------------------------------------------------|--------------------------|------------------|------------------------------------------------|
| Locking shaft for up to 2 padlocks Ø 4 to 8 mm max. | Socket-outlet P/N° + 843 | Socket-outlet P/N° + 843                         | Socket-outlet P/N° + 843 | NA               | NA                                             |
| Locking shaft for up to 3 padlocks Ø 8 mm max.      | NA                       | NA                                               | NA                       | Réf. socle + 844 | NA                                             |
| Padlocking latch (no shaft) one padlock Ø 4 mm max. | NA                       | NA                                               | NA                       | NA               | Socket-outlet P/N° + 843                       |
| Allen-screw locking latch*                          | NA                       | DS2 Socket-outlet P/N° + 22 (6 mm hexagonal key) | NA                       | NA               | Socket-outlet P/N° + 22 (2.5 mm hexagonal key) |
| Locking plug/inlet (padlocking hole)                | <<< Inlet P/N° + 843 >>> |                                                  |                          | NA               | NA                                             |
| Safety lock (up to 6 padlocks)                      | <<< P/N° 873A541 >>>     |                                                  |                          |                  | NA                                             |

\* no possibility to use a padlock.

Some of our ranges are equipped with a mechanical locking device as standard.

With a BTR screw:  
PXN12C/DS4



With lockable shaft:  
DX/DXN25C et DXN37C



Consignment:  
DB





# STOP-LATCH

This option is ideal for quick disconnection of machinery and equipment by employees wearing gloves.  
The latch is fitted with a red label with warning "stop" for ease of identification.

**i** The use of this latch is not recommended in case of extension cables.



**Suffix to be added to the socket-outlet part number (P/N°):**

| OPTION     | DSN SERIES | DS SERIES*                       | DN SERIES |
|------------|------------|----------------------------------|-----------|
| Stop-latch |            | <<< Socket-outlet P/N° + 453 >>> |           |

\* The stop-latch is standard for the DS2.



**!** The stop latch is not an emergency-stop button



## TPOLOGY OF LIDS

### LIDS

#### Lid opening at 180°

Hinged lids of our products open as standard at 120°.

They may, however, depending on the configuration open at 180°.

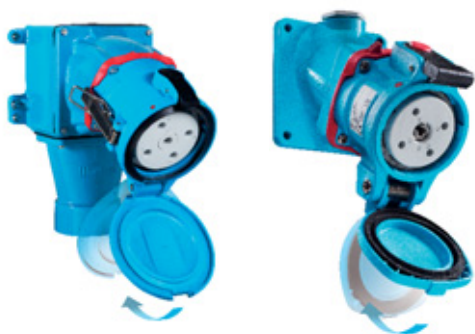
MARECHAL® products lids are designed with an automatic opening, in order

to oblige the user to close it voluntarily and thus ensure the waterproofness of the socket-outlet, up to IP66/IP67/IP69.

**Suffix to be added to the socket-outlet part number (P/N°):**

| OPTION              | DSN SERIES | DS9/2 METAL SERIES | DN SERIES | PN SERIES | DXN SERIES                      |
|---------------------|------------|--------------------|-----------|-----------|---------------------------------|
| Lid opening at 180° |            |                    |           |           | <<< Socket-outlet P/N° + 10 >>> |

**LID OPENING AT 180° IS A STANDARD FOR THE DS1-, DS3-, DS6-POLY AND DS9-POLY.**



**Check that this option is compatible with the final assembly of the product.**

### STANDARD LID CONFIGURATIONS



180° opening lid



120° opening lid



90° opening lid



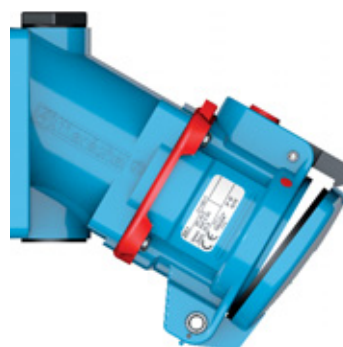


## AUTOMATIC SELF-RETURNING LID AND LID-SPRUNG-CLOSED

A normally closed lid configuration is available for applications where it is desirable to protect the socket-outlet front – the Shutter – from ingress of dust and debris or potential damage.

This option provides a lid that automatically returns to a pre-closed position after withdrawal of the plug.

The user must then always manually close the lid in order to achieve the complete seal (IP-rating), except for the DS1-, DS3- and DS6-poly, for which there is an automatic sprung-closed lid.



### Suffix to be added to the socket-outlet part number (P/N°):

| OPTION                                       | DSN SERIES | DS SERIES <sup>(1)</sup>       | DN SERIES | PN SERIES <sup>(2)</sup> | DXN SERIES |
|----------------------------------------------|------------|--------------------------------|-----------|--------------------------|------------|
| Socket-outlet with self-returning lid closed |            | <<< Socket-outlet P/N° + R >>> |           |                          |            |

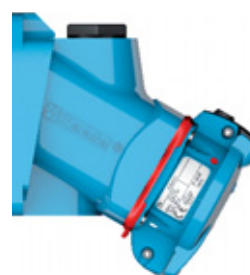
1 For DS1-, DS3- and DS6-poly, this is an automatic sprung-closed lid.

2 The IP55 PN series version is available with a standard automatic sprung-closed lid (no need to add R).

DS1/DS3/DS6 example



PN example



This option is recommended for self-ejecting applications.  
See page 228.

## SELF-RETURNING LID + LID OPENING AT 180°

It is possible to combine these two options if required.

### Suffix to be added to the socket-outlet part number (P/N°):

| OPTION                             | DSN SERIES | DS SERIES*                      | DN SERIES | PN SERIES | DXN SERIES |
|------------------------------------|------------|---------------------------------|-----------|-----------|------------|
| Self-returning lid opening at 180° |            | <<< Socket-outlet P/N° + 18 >>> |           |           |            |

\* Since lid opening at 180° is a standard for the DS1-, DS3-, DS6-poly and DS9-poly, the « R » for self-returning lid is sufficient.



## DRAW MECHANISM

### DRAW LEVERS

A draw-lever mechanism is available as an accessory for certain sizes in the DN series to ease inserting the plug into the socket-outlet.

Part numbers (P/N°) for these products:

| OPTION                       | DN6     |
|------------------------------|---------|
| Draw Lever with handle alone | 196A376 |
| Draw base-plate alone        | 196A396 |



### FINGER DRAW PLATES

Other engagement support systems are available, especially for couple socket (plug + connector).

Part numbers (P/N°) for these products:

| OPTION | DSN1    | DSN3/DS1 | DSN6/DS3 | DS6     |
|--------|---------|----------|----------|---------|
| Plates | 611A346 | 613A346  | 616A346  | 316A346 |



Finger draw-plates are available in pairs with 2 seals and mounting screws a bit longer than standard.

DS9 - 150 A



DS2 - 250 A



DS4 - 400 A



Some of our products are supplied with a draw mechanism as standard.



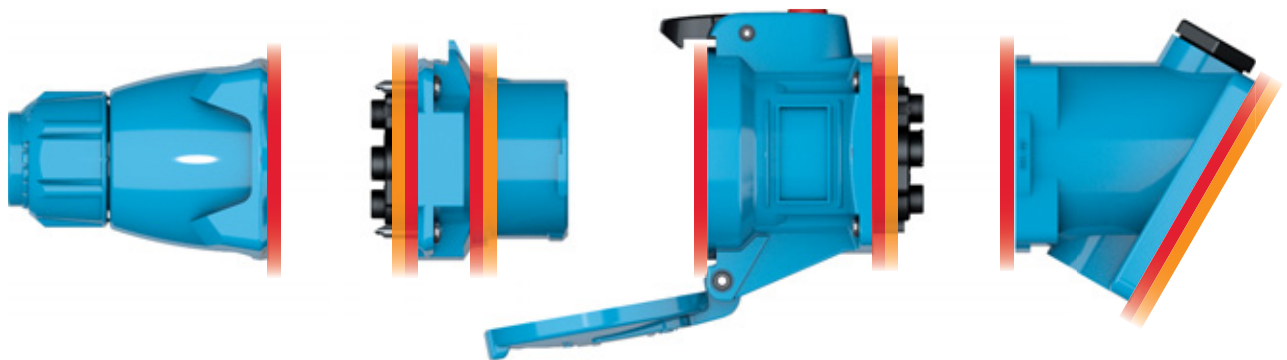
## ELECTROMAGNETIC COMPATIBILITY (EMC)

Most electrical and electronic equipments generate electromagnetic fields can sometimes interfere with the operation of other equipments. This option allows our metal cased devices to function properly in an electromagnetic environment without producing disturbances for everything that is in this environment, thus limiting the level of unwanted emissions from the device to not disrupt radio reception or other equipment. Electromagnetic compatibility (EMC) tests are carried out on our products according to IEC 62153-4-5: 2016. Within a frequency range between **30 MHz** and **1000 MHz**, the **EMC** option offers an attenuation between **30 dB** and **70 dB** of the electromagnetic emissions.



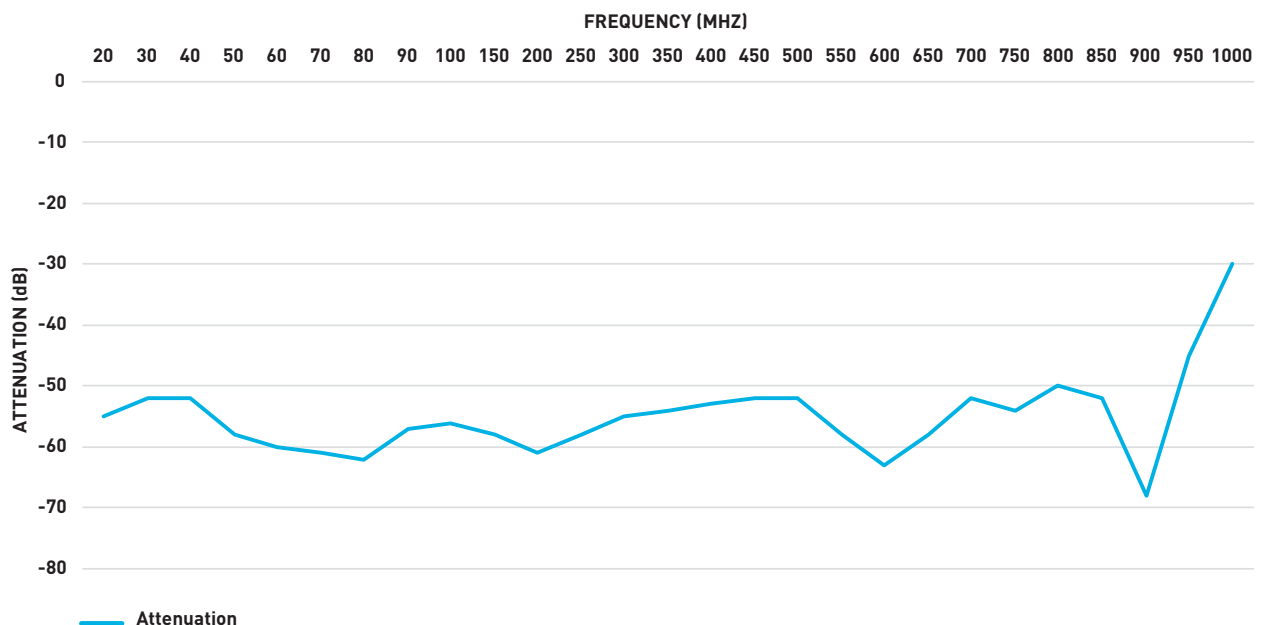
**Suffix to be added to socket-outlets, inlets and accessories part numbers (P/N°):**

| OPTION                        | DS6 - DS9 - DS2                             | DN9C | PN SERIES |
|-------------------------------|---------------------------------------------|------|-----------|
| Electromagnetic compatibility | Socket-outlet, inlet & accessory P/N° + EMC |      |           |



- All contact surfaces are un-protected to provide optimal electrical conductivity;
- Gaskets are fitted with metallic braided fabric, silicone with Monel threads or graphite-loaded, ensuring an excellent EMC performance.

**Example: DS2 EMC shielding attenuation curve:**





## ADDITIONAL OPTIONS

### INCREASED WATERTIGHTNESS (IP66/IP67)

In order to increase the IP rating of a product that is not IP66/IP67 as standard, a seal is added to the plug (appliance Inlet), and the socket-outlet lid is fitted with a heavier, higher-IP sealing gasket.

**Suffix to be added to socket-outlet & inlet part number (P/N°):**

| OPTION             | DS6* | DS9 METAL                                | DS2 | DN SERIES |
|--------------------|------|------------------------------------------|-----|-----------|
| Seals to IP66/IP67 |      | <<< Socket-outlet & inlet P/N° + 600 >>> |     |           |

\* Automatic sprung-closed lid is not possible with this option. The only option in this instance is self-returning lid (R).



i

With this option, it is recommended to use our draw mechanisms systems, especially in couple socket configuration.

### REVERSED INTERIORS

In the PN series, the interior mouldings and contacts can be swapped:

- The plug interior moulding and contacts can be assembled in a socket-outlet casing.
- The socket-outlet moulding and contacts can be assembled in plug casing.

**Suffix to be added to socket-outlet & inlet part number (P/N°):**

| OPTION                                   | PN SERIES                        |
|------------------------------------------|----------------------------------|
| Reversed interior mouldings and contacts | Socket-outlet & inlet P/N° + 001 |

As the plug top becomes the emitting part, it is supplied with a cap as standard (012A126).



### PHASE-SEQUENCE INDICATOR

The phase-sequence indicator is an accessory that provides a simple way to test if the phase sequence is correct, and the rotation direction of AC motors, from 250 to 690 V AC.

The accessory comprises a plug top to be mated directly with the socket-outlet which phase-sequence is to be tested. The plug top is either fitted with a handle with LEDs that illuminate to indicate the presence of phase and the phase-rotational direction, or connected with a cable to a phase sequence indicator.



Please contact us for part numbers



## VISUAL STATUS-INDICATORS

Our devices can be fitted with LEDs indicating the presence of voltage.

The LEDs are fitted on handles as follows:

- Tension 24 V AC                      Ø 8 mm yellow LED
- Tension 240 V AC                  Ø 8 mm red LED
- Tension 400 V AC                  Ø 8 mm red LED

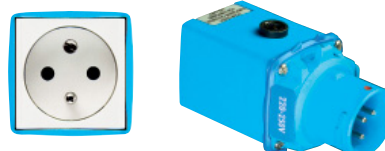
### Suffix to be added to handles part numbers (P/N°):

| HANDLE    | DSN1 - DSN3 - DSN6 - DS1 - DS3 - DS6 - DN8 - DN1 - DN3 - PN - DB3 - DB6 |
|-----------|-------------------------------------------------------------------------|
| For 24 V  | Standard P/N° + LY                                                      |
| For 240 V | Standard P/N° + LR                                                      |
| For 400 V | Standard P/N° + LR4                                                     |



## INDUSTRIAL/DOMESTIC ADAPTER

In order to allow the connection of an appliance fitted with a domestic plug to an industrial type socket-outlet, MARECHAL ELECTRIC has developed an adapter which features a MARECHAL® single phase industrial plug top at one end and a 10/16 A - 230 V domestic socket at the other end. The adapter includes a 6 x 32 mm 10/16 A fuse-link.



### Part numbers (P/N°) for these products:

| TYPE           |       | DSN1       | DSN3       | DS1        | DN8        | PN         |
|----------------|-------|------------|------------|------------|------------|------------|
| France         | Poly  | 6118015D11 | 6138015D11 | 3118015D11 | –          | 01N8015D11 |
|                | Metal | –          | –          | –          | 1988015D11 | 09N8015D11 |
| United Kingdom | Poly  | 6118015D40 | 6138015D40 | 3118015D40 | –          | 01N8015D40 |
|                | Metal | –          | –          | –          | 1988015D40 | 09N8015D40 |
| Germany        | Poly  | 6118015D30 | 6138015D30 | 3118015D30 | –          | 01N8015D30 |
|                | Metal | –          | –          | –          | 1988015D30 | 09N8015D30 |
| Italy          | Poly  | 6118015D06 | 6138015D06 | 3118015D06 | –          | 01N8015D06 |
|                | Metal | –          | –          | –          | 1988015D06 | 09N8015D06 |
| Australia      | Poly  | 6118015D67 | 6138015D67 | 3118015D67 | –          | 01N8015D67 |
|                | Metal | –          | –          | –          | 1988015D67 | 09N8015D67 |





## PILOTS & AUXILIARIES

The use of socket-outlets and plugs with at least one pilot contact and cables with pilot conductors allows the remote control of a contactor (or similar electrically controlled switchgear). This concept is named "electrical interlocking".

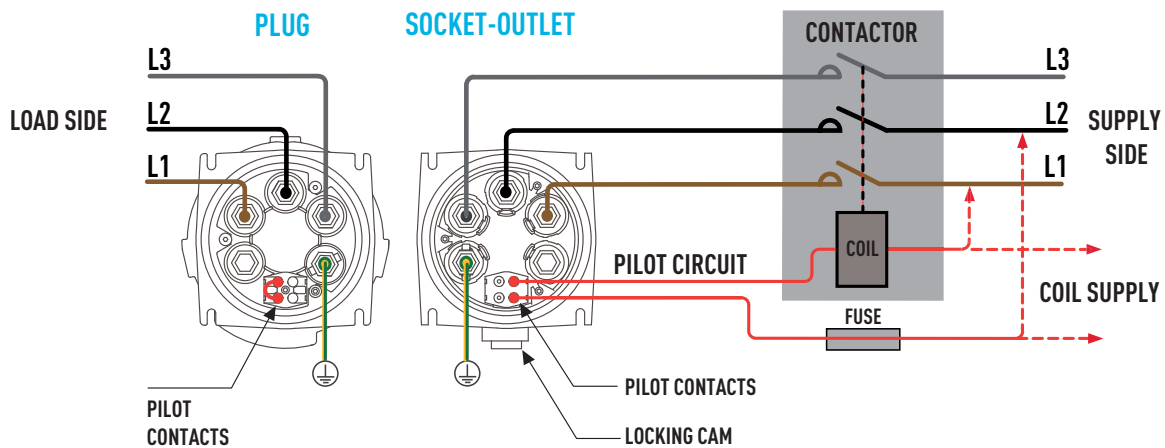
- The power supply of the socket-outlet must be controlled by a contactor or similar.
- One terminal of the contactor control-coil must be connected to a phase and the other terminal to the pilot contact of the socket-outlet.
- The cable (or coupler socket) between the source and the load, must include pilot conductor(s).

- The plug (or inlet) is provided with a shunt, which, when the socket-outlet and the plug are mated, closes the supply circuit for the up-stream feeding contactor coil.

- The contactor closes and power is fed downstream to the load.

The circuit must be so designed that the contactor coil can not be fed (and the contactor closed) until all connections downstream between socket-outlet (connector) and plug (appliance inlet) are completely made – i.e. closed.

Example of diagram for PFC series pilot circuit:



**Plug side:** 2 pilot contacts are shorted to close the pilot circuit.

**Socket-outlet side:** rotate the locking cam to lock/unlock the plug and close/open the pilot circuit.

**Coil supply:** DC etc.

SP series



PF series

Up to 6 auxiliaries (and 2 contacts pilots)



DS4 series



Some of our products feature pilot contacts as standard.



## AUXILIARY CONTACTS

Auxiliary contacts are often required for all kinds of remote control or signal transmission and in particular:

- To de-energized a motor-starter when a motor is disconnected.
- To connect a winding embedded thermistor for thermal protection of a pump motor.
- In particular for automated systems, it may be necessary to indicate if an equipment is connected or not.

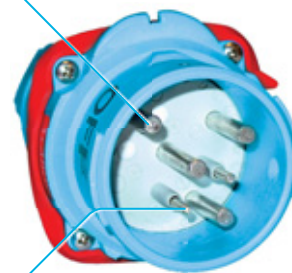
MARECHAL® offers a wide range of products with up to 8 auxiliary contacts.



Please refer to the catalogue for information about the suffix for the socket-outlet and inlet part numbers, in relation to requirement for the number of auxiliary contacts.

Power Contact

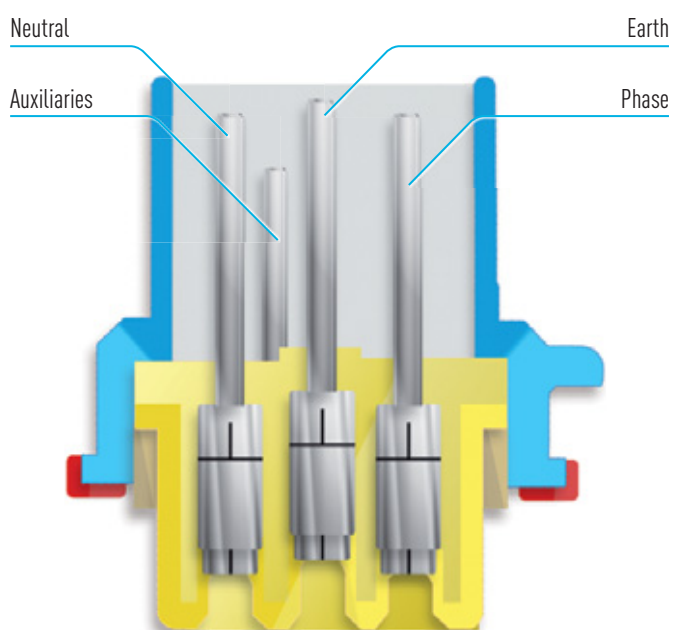
Auxiliary Contact



## SEQUENCING BETWEEN AUXILIARY CONTACTS AND POWER CONTACTS (EARTH, NEUTRAL AND PHASES)

To ensure optimum operation, DECONTACTOR™ contacts are sequenced:

- ① the earth contact closes first,
- ② then the neutral contact,
- ③ then the phase contacts L1, L2 and L3,
- ④ and last the auxiliary contacts.



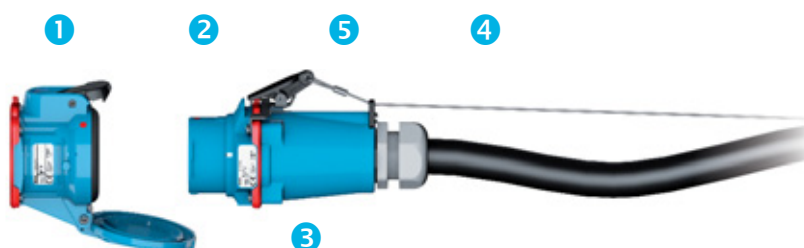
This design ensures no arc at connection and disconnection.



# MECHANICAL SELF-EJECTING SYSTEMS

## FIXED ELECTRIC POWER SUPPLY

Ejecting plug (inlet + handle)



|                       | INDUSTRIAL RANGE                                   |                                                                                    |           |                                                                                      | ATEX RANGE                                                                           |
|-----------------------|----------------------------------------------------|------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Legends               |                                                    | Ejection pawl                                                                      |           | Cam Mechanism                                                                        | Ejection pawl                                                                        |
|                       |                                                    |  |           |  |  |
|                       | DSN                                                | DS POLY<br>DS1/DS3/DS6                                                             | DS6 METAL | DS9 METAL                                                                            | DXN                                                                                  |
| Socket-outlet         | Ref. +352                                          | Ref. +352                                                                          | Ref. +352 | Ref. +353                                                                            | Ref. +352                                                                            |
| Inlet                 | Standard                                           | Standard                                                                           | Standard  | Ref. +204                                                                            | Standard                                                                             |
| Poly handles + eyelet | Ref. +443                                          | Ref. +443                                                                          | Ref. +443 | Ref. +443                                                                            | See DXN handle<br>page 169                                                           |
| Tension cord          | 311A336                                            | 311A336                                                                            | 311A336   | 311A336                                                                              | 251A336                                                                              |
| Mechanism             | 611A338 (DSN1)<br>613A338 (DSN3)<br>616A338 (DSN6) | 311A338 (DS1)<br>313A338 (DS3)<br>316A338 (DS6)                                    | 316A338   | 399A338 (DS9)                                                                        | 251A338 (DXN1)<br>253A338 (DXN3)<br>256A338 (DXN6)                                   |

FOR ELECTROMECHANICAL EJECTION SEE RETTBOX® IN PAGE 30

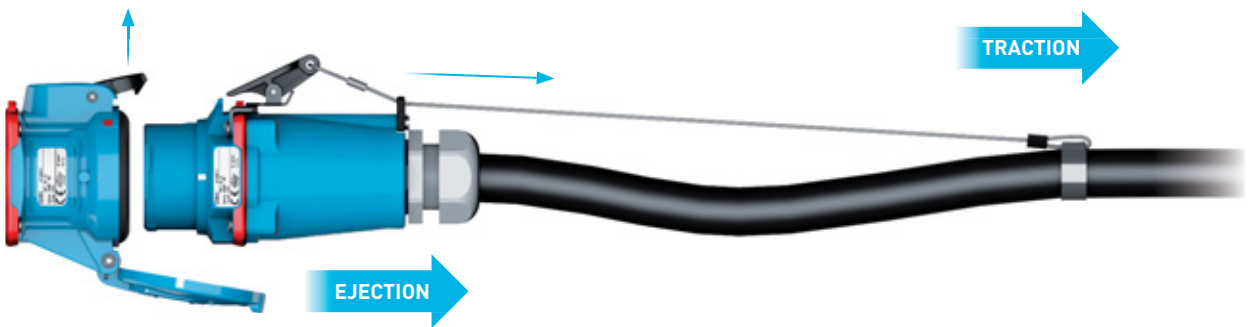




Step 1: self-ejection system at rest.



Step 2: the traction acts on the electrical cable and the rope. The ejection finger gradually raises the latch.



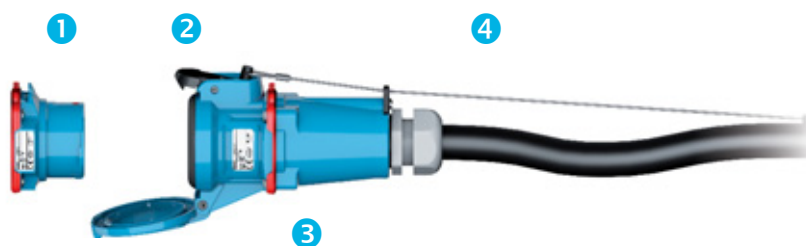
Step 3: the latch is fully raised by the ejection finger, causing the automatic ejection of the plug.



# MECHANICAL SELF-EJECTING SYSTEMS

## MOBILE POWER SUPPLY SOURCE

Ejecting coupler socket (handle + socket- outlet)



|                         | INDUSTRIAL RANGE |                                                                                     |           |                                                                                      | ATEX RANGE                                                                            |
|-------------------------|------------------|-------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Legends                 |                  | Ejection pawl                                                                       |           | Cam Mechanism                                                                        | Ejection pawl                                                                         |
|                         |                  |  |           |  |  |
|                         | DSN              | DS POLY<br>DS1/DS3/DS6                                                              | DS6 METAL | DS9 METAL                                                                            | DXN                                                                                   |
| 1 Inlet                 | Standard         | Standard                                                                            | Standard  | Ref. +204                                                                            | Standard                                                                              |
| 2 Socket-outlet         | Ref. +354        | Ref. +354                                                                           | Ref.+354  | Ref. +365                                                                            | Ref. +354                                                                             |
| 3 Poly handles + eyelet | Ref. +443        | Ref. +443                                                                           | Ref. +443 | Ref. +443                                                                            | See DXN handle<br>page 169                                                            |
| 4 Tension cord          | 311A336          | 311A336                                                                             | 311A336   | 311A336                                                                              | 251A336                                                                               |

For metal casing, we recommend to ensure the mooring of the product.  
If you want to fix the connector directly without a sleeve, provide a socket-outlet with a 180° opening option.

INFOS +

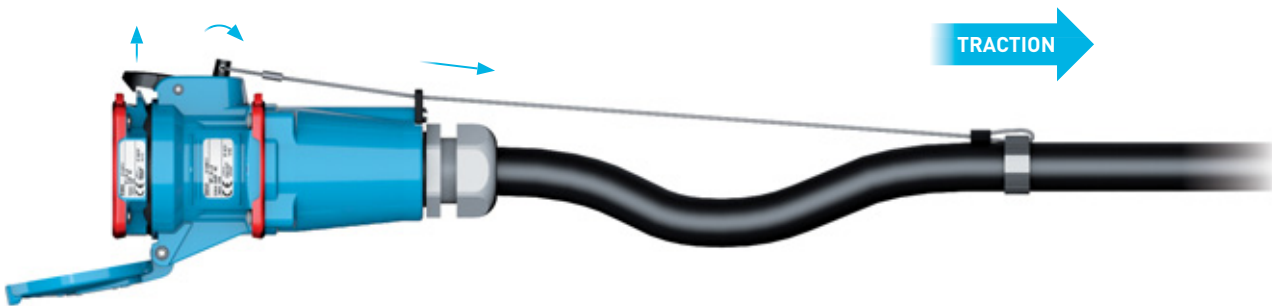
FOR ELECTROMECHANICAL EJECTION SEE RETTBOX® IN PAGE 42



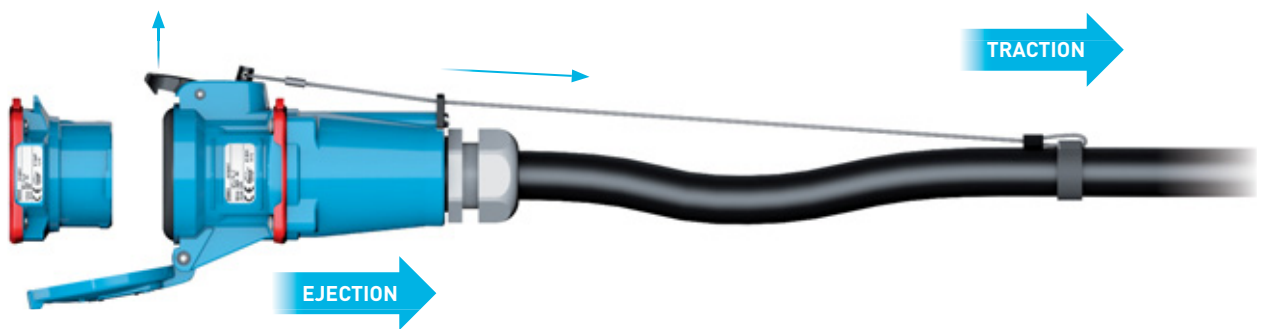




Step 1: Self-ejection system at rest.



Step 2: The traction acts on the electrical cable and the rope. The latch rises gradually.



Step 3: The latch is fully raised, causing the ejection of the socket automatically.



# MAIN OPTION COMBINATION SUFFIXES

3 digits suffixes (8, 9 and 10) for specials products, to be added to 7 digits for basic products.

## SOCKET SUFFIX

| OPTION CHOICE |                  |                    |        |           |               |                | APPLICABLE RANGE |                      |                   |     |            |             |              |             |              |     |
|---------------|------------------|--------------------|--------|-----------|---------------|----------------|------------------|----------------------|-------------------|-----|------------|-------------|--------------|-------------|--------------|-----|
| Locking       | 180° Opening lid | Self returning lid | 2 aux. | IP66/IP67 | Self ejection | Ejection latch | PN               | DSN1<br>DSN3<br>DSN6 | DN8<br>DN1<br>DN3 | DN6 | DS1<br>DS3 | DS6<br>POLY | DS6<br>METAL | DS9<br>POLY | DS9<br>METAL | DS2 |
| •             |                  |                    |        |           |               |                | 843              | 843                  | 843               | 843 | 843        | 843         | 843          | 843         | 843          | 843 |
|               | •                |                    |        |           |               |                | 10               | 10                   | 10                | 10  |            |             | 10           |             | 10           | 10  |
|               |                  | •                  |        |           |               |                | R                | R                    | R                 | R   | R          | R           | R            | R           | R            | R   |
|               |                  |                    | •      |           |               |                |                  | 972                  |                   | 972 | 972        | 972         | 972          | 262         | 262          | 972 |
|               |                  |                    |        | •         |               |                |                  |                      | 600               | 600 |            | 600         | 600          |             | 600          | 600 |
|               |                  |                    |        |           | •             |                |                  | 341                  |                   |     | 341        | 341         | 341          | 341         |              |     |
|               |                  |                    |        |           |               | •              |                  | 348                  | 348               | 348 | 348        | 348         | 348          |             | 348          |     |
| •             | •                |                    |        |           |               |                | 841              | 841                  | 841               | 841 |            |             | 841          |             | 841          | 841 |
| •             | •                |                    |        | •         |               |                |                  |                      | 672               | 672 |            |             | 672          |             | 672          | 672 |
| •             |                  | •                  |        |           |               |                | 858              | 858                  | 858               | 858 | 858        | 858         | 858          | 858         | 858          | 858 |
| •             |                  | •                  | •      |           |               |                |                  | 977                  |                   | 977 | 977        | 977         | 977          | 662         | 662          | 977 |
| •             |                  | •                  |        | •         |               |                |                  |                      | 588               | 588 |            | 588         | 588          |             | 588          | 588 |
| •             |                  |                    | •      |           |               |                |                  | 372                  |                   | 372 | 372        | 372         | 372          | 213         | 213          | 372 |
| •             |                  |                    | •      | •         |               |                |                  |                      |                   | 807 |            | 807         | 807          |             | 808          | 807 |
| •             |                  |                    |        | •         |               |                |                  |                      | 659               | 659 |            | 659         | 659          |             | 659          | 659 |
| •             | •                | •                  |        |           |               |                | 514              | 514                  | 514               | 514 |            |             | 514          |             | 514          | 514 |
| •             | •                | •                  |        | •         |               |                |                  |                      | 809               | 809 |            |             | 809          |             | 809          | 809 |
|               | •                | •                  |        |           |               |                | 18               | 18                   | 18                | 18  |            |             | 18           |             | 18           | 18  |
|               | •                |                    | •      |           |               |                |                  | 961                  |                   | 961 |            |             | 961          |             | 210          | 961 |
|               | •                |                    |        | •         |               |                |                  |                      | 608               | 608 |            |             | 608          |             | 608          | 608 |
|               | •                |                    |        |           | •             |                |                  | 184                  |                   |     |            |             | 184          |             |              |     |
|               | •                |                    |        |           | •             | •              |                  | 384                  |                   |     |            |             | 384          |             |              |     |
|               | •                |                    |        | •         |               |                |                  |                      | 612               | 612 |            |             | 612          |             | 612          | 612 |
|               | •                | •                  |        |           | •             |                |                  | 134                  |                   |     |            |             | 134          |             |              |     |
|               | •                | •                  |        |           | •             | •              |                  | 346                  |                   |     |            |             | 346          |             |              |     |
|               | •                | •                  | •      |           | •             | •              |                  | 232                  |                   |     |            |             | 232          |             |              |     |
|               |                  | •                  | •      |           |               |                |                  | 960                  |                   | 960 | 960        | 960         | 960          | 267         | 267          | 960 |
|               |                  | •                  | •      |           | •             |                |                  | 853                  |                   |     | 853        | 853         | 853          | 093         |              |     |
|               |                  | •                  | •      |           | •             | •              |                  | 973                  |                   |     | 973        | 973         | 973          |             |              |     |
|               |                  | •                  |        | •         |               |                |                  |                      | 605               | 605 |            | 605         | 605          |             | 605          | 605 |
|               |                  | •                  |        |           | •             |                |                  | 352                  |                   |     | 352        | 352         | 352          | 352         |              |     |
|               |                  | •                  |        |           | •             | •              |                  | 354                  |                   |     | 354        | 354         | 354          |             |              |     |
|               |                  | •                  |        |           |               | •              |                  | 365                  | 365               | 365 | 365        | 365         | 365          |             | 365          |     |
|               |                  | •                  |        | •         |               | •              |                  |                      | 307               | 307 |            | 307         | 307          |             | 307          |     |
|               |                  | •                  |        | •         | •             | •              |                  |                      |                   |     |            | 339         | 339          |             |              |     |
|               |                  | •                  | •      | •         |               |                |                  |                      |                   | 604 |            | 604         | 604          |             | 632          | 604 |
|               |                  |                    | •      | •         |               |                |                  |                      |                   | 602 |            | 602         | 602          |             | 655          | 602 |
|               |                  |                    | •      |           | •             | •              |                  | 366                  |                   |     | 366        | 366         | 366          |             |              |     |

## PLUG SUFFIX

| OPTION CHOICE |        |           |                  | APPLICABLE RANGE |      |              |                   |     |            |             |              |             |              |     |
|---------------|--------|-----------|------------------|------------------|------|--------------|-------------------|-----|------------|-------------|--------------|-------------|--------------|-----|
| Locking       | 2 aux. | IP66/IP67 | Self<br>ejection | PN               | DSN1 | DSN3<br>DSN6 | DN8<br>DN1<br>DN3 | DN6 | DS1<br>DS3 | DS6<br>POLY | DS6<br>METAL | DS9<br>POLY | DS9<br>METAL | DS2 |
| •             |        |           |                  |                  | 843  | 843          |                   |     | 843        | 843         | 843          | 843         | 843          | 843 |
|               | •      |           |                  |                  |      | 972          |                   | 972 | 972        | 972         | 972          | 262         | 262          | 972 |
|               |        | •         |                  |                  |      |              | 600               | 600 |            | 600         | 600          |             | 600          | 600 |
|               |        |           | •                |                  |      |              | 204               | 204 |            |             |              |             | 204          | 204 |
| •             | •      |           |                  |                  |      |              |                   | 372 | 372        | 372         | 372          | 213         | 213          | 372 |
| •             | •      | •         |                  |                  |      |              |                   | 807 |            |             | 807          |             | 808          | 807 |
| •             |        | •         |                  |                  |      |              |                   | 659 |            |             | 659          |             | 659          | 659 |
|               | •      | •         |                  |                  |      |              |                   | 602 |            | 602         | 602          |             | 655          | 602 |
|               | •      |           | •                |                  |      |              |                   | 206 |            |             |              |             | 530          | 206 |
|               | •      | •         | •                |                  |      |              |                   | 374 |            |             |              |             | 189          | 374 |
|               |        | •         | •                |                  |      |              | 620               | 620 |            |             |              |             | 620          | 620 |



# REGULATIONS

## EUROPEAN ATEX DIRECTIVE

### > European Directive 2014/34/EU

ATEX Directive 2014/34/EU is a "new approach" directive that applies to protective systems against explosions as well as all equipment used in or related to explosive atmospheres, such as electrical and non-electrical equipment, components and safety, control and adjusting devices that are necessary for the safe operation of those equipment and protective systems. As a "new approach" directive, the 2014/34/EU Directive defines the essential requirements for the safety and health which shall be respected by all manufacturers. Devices falling within the scope of the European Directive and answering to the essential requirements for the safety and health are identified by a marking plate on which the  logo appears.

### > European Directive 1999/92/EC

The 1999/92/EC Directive aims to improve the safety and health protection of workers who may be exposed to potentially explosive atmospheres.

The site manager has the obligation:

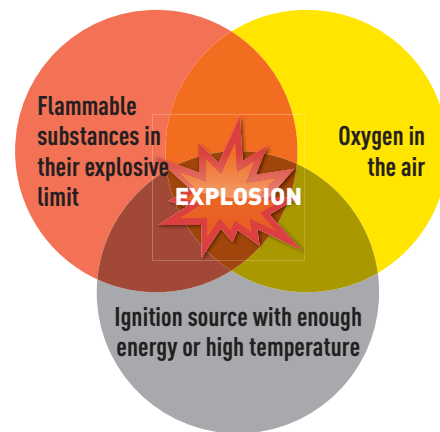
- to prevent the formation of explosive atmospheres or if this is not possible, prevent ignition of explosive atmospheres,
- to assess the specific risks arising from explosive atmospheres ; to draw up and keep up to date an explosion protection document,
- to classify places where explosive atmospheres may occur into zones,
- to mitigate the detrimental effects of an explosion to protect the health and safety of workers (install appropriate equipment, take organizational measures such as staff training, ...).

## INTERNATIONAL SCHEME: IECEx

IECEx Scheme: A voluntary certification scheme complying with international standards for electrical and non-electrical equipment for use in explosive atmospheres.

Its aim is to facilitate the international flow of equipment intended to be used in potentially explosive atmospheres (in compliance with one or more international standards defining the type of protection against the risk of explosion) and thus avoiding multiple national certifications and at the same time ensuring an appropriate level of safety. The IECEx certification scheme allows the manufacturers of "Ex proof" equipment to obtain a Certificate of Conformity that would be accepted in Member States in which this certification scheme is recognized.

### > Conditions for explosion



## AREAS CLASSIFICATION DEFINED BY DIRECTIVE 1999/92/EC

| Probability of ATEX presence          | Very High                                                                                          | High and Normal                                                                        | Low                                                                                                                                                         |
|---------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Definition                            | Location where an explosive atmosphere is present continuously or for a long period or frequently. | Location in which an explosive atmosphere occurs occasionally during normal operation. | Location where an explosive atmosphere is not liable to occur during normal operation or, if it does, is only short-lived (foreseeable abnormal operation). |
| Zoning for gas & vapours (1999/92/EC) | Zone 0                                                                                             | Zone 1                                                                                 | Zone 2                                                                                                                                                      |
| Zoning for dust & fiber (1999/92/EC)  | Zone 20                                                                                            | Zone 21                                                                                | Zone 22                                                                                                                                                     |



# REGULATIONS

## ATEX/IECEx CLASSIFICATION

| ATEX Category | IEC protection Level (EPL) | Zone of installation | Atmosphere           |
|---------------|----------------------------|----------------------|----------------------|
| 1G            | Ga                         | 0                    | GAS                  |
| 2G            | Gb                         | 1                    |                      |
| 3G            | Gc                         | 2                    |                      |
| 1D            | Da                         | 20                   | DUST                 |
| 2D            | Db                         | 21                   |                      |
| 3D            | Dc                         | 22                   |                      |
| M1            | Ma                         | MINING               | COAL DUST<br>METHANE |
| M2            | Mb                         |                      |                      |

## GAS AND VAPOURS CLASSIFICATION AND TEMPERATURE CLASSIFICATION

Gases are divided into three groups by IEC/EN standards, four groups by the CEC (Canadian Electrical Code) and the NEC (National Electrical Code - US) standards. The groups defined in European, International and North American standards are fundamentally the same, as illustrated by the following table.

| Gas group |               | Typical gas                                              |
|-----------|---------------|----------------------------------------------------------|
| EN/IEC    | North America |                                                          |
| IIC       | A             | Acetylene                                                |
| IIC       | B             | Hydrogen                                                 |
| IIB       | C             | Ethylene, Ethyl ether, Cyclopropane, Butadene 1-3        |
| IIA       | D             | Propane, Ethane, Butane, Heptane, Acetone, Ethyl Alcohol |

## DUST CLASSIFICATION

IEC/EN standards defines dust classification:

| Dust group | Definition          |          |                       |
|------------|---------------------|----------|-----------------------|
|            | Dust type           | Size     | Resistivity           |
| IIIA       | combustible flyings | > 500 µm | -                     |
| IIIB       | non-conductive dust | ≤ 500 µm | > 10 <sup>3</sup> Ω.m |
| IIIC       | conductive dust     | ≤ 500 µm | ≤ 10 <sup>3</sup> Ω.m |



## TEMPERATURE CLASSES

| Self ignition temperature of the gases/vapours | T6 | T5 | T4 | T3 | T2 | T1 |
|------------------------------------------------|----|----|----|----|----|----|
| 85 °C ≤ Temp. ≤ 100 °C                         |    |    |    |    |    |    |
| 100 °C < Temp. ≤ 135 °C                        |    |    |    |    |    |    |
| 135 °C < Temp. ≤ 200 °C                        |    |    |    |    |    |    |
| 200 °C < Temp. ≤ 300 °C                        |    |    |    |    |    |    |
| 300 °C < Temp. ≤ 450 °C                        |    |    |    |    |    |    |
| 450 °C < Temp.                                 |    |    |    |    |    |    |

EXPLOSION

Equipment must never be used in an atmosphere capable of ignition at the temperature indicated on the marking (temperature class).

## MARKING EXPLANATION

- ① Manufacturer – Address      Type :... ③  
 ② S/N :....  
 ⑥ II 2 G D      Ex eb IIC T\* Gb  
                                          Ex tb IIIC T\* Db  
 Class I Zone 1      AEx d IIC T\*, AEx tb IP6X T\*  
 Class I Div 1      Groups A, B, C, D T\*  
 Class II Div 1      Groups E, F, G T\*  
 ④ \* : -40 °C ≤ Ta ≤ +40 °C : T6 and T70 °C  
                                          -40 °C ≤ Ta ≤ +60 °C : T5 and T90 °C  
 ⑤ LCIE 16 ATEX ABCD X/IECEx I 16.ABCD X

- ① Manufacturer identification:  
 – Name and/or trademark  
 – Address  
 ② Conformity to all relevant European directives and/or North American standards  
 ③ Product type  
 ④ Temperature class  
 ⑤ The certificate number endings:  
 – none: OK to use without specific recommendations  
 – X: equipment with special condition(s) for safe use  
 – U: component (complementary certification needed for use)  
 ⑥ Mark for product in the scope of directive 2014/34/EU and in compliance with ERSR  
 Directive 2014/34/EU marking:  
**II**: Equipment group = surface industry  
**2**: Equipment category  
**G D**: Gas or Dust atmosphere

| Gas details                                                                                                                                                                                                                                                           | Dust details                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ex</b> : apparatus intended to be installed in hazardous location<br><b>eb</b> : type of protection (eb = increased safety)<br><b>IIC</b> : gas group / Subdivision C<br><b>T6</b> : temperature class<br><b>Gb</b> : equipment protection for use in zone 1 and 2 | <b>Ex</b> : apparatus intended to be installed in hazardous location<br><b>tb</b> : type of protection (tb = protection by enclosure)<br><b>IIIC</b> : dust group / Subdivision C<br><b>T85°C</b> : maximum surface temperature<br><b>Db</b> : equipment protection use in zone 21 and 22<br><b>IP66</b> : degree of watertightness |

EHSR: Essential Health and Safety Requirements





# REGULATIONS

## PRESENTATION OF MOST COMMON TYPES OF PROTECTION

### > Flameproof « Ex d » equipment

A flameproof equipment offers an enclosure in which the parts which can ignite an explosive gas atmosphere can be placed. It withstands the pressure developed during an internal explosion of an explosive mixture, and prevents the transmission of the explosion to the explosive gas atmosphere surrounding the enclosure.

A flameproof enclosure must meet three criteria:

- Contain an internal explosion without permanent distortions.
- Guarantee that the explosion cannot be transmitted to the surrounding atmosphere.
- Have a temperature at any points on the surface that is lower than the self ignition temperature of the surrounding gases or vapours.

There are two construction values which are essential for a flameproof equipment to answer to the 3 criteria:

- the length of flameproof gasket (L)
- the gap (i)

These values depend on gas group and the maximum allowed gap depends on the length of flameproof gasket.

It is necessary to lubricate the thread and to ensure that at least 5 threads are engaged for metric thread and that 5 threads are present on each parts for NPT threads.

Holes which are not used for cable entries must be blanked using the appropriate blanking plugs.

The equipment is supplied with the lubricated gasket. When the equipment is installed, the flamespaths must be lubricated to keep it in good condition. Use a non-hardening, anti-corrosive grease (see technical note).

In order to successfully retain the flameproof character of the equipment:

- Care must be taken before starting up to ensure that all the screws for closing the covers and cable entries are firmly tightened and that the blocking device is well screwed, if necessary.
- Modification of the original predrilled holes is prohibited.

### > Increased Safety « Ex e » equipment

Method of protection applicable to electrical equipment such as light fittings, sockets, switches, etc, which consists of preventing the occurrence of any accidental ignition.

The construction principles for increased safety « e » equipment are as follows:

- Use of high-quality insulation materials
- Specially dimensioned clearance and creepage distance
- Electrical connection which can't become loose
- Minimum protection level against penetration into enclosures IP54
- Respect of the temperature classes
- Conformity of cable entries
- Labelling.

These principles are respected by screwing the cable gland directly onto the enclosure or, for untapped holes, by fixing with a locknut. Holes which are not used for cable entries must be blanked using the appropriate blanking plugs. The equipment has a protection level of at least IP54; it is therefore important to ensure that the sealing gasket is in good condition when the product is installed. Defective seals must be systematically replaced.

It is important to be sure that the gasket is properly positioned for the plugs and sockets and for all the luminaries before connecting the male and female parts (for plugs and sockets) and before closing the light transmitting part of the lighting fixture.

For the connection, all technical note or instruction sheet shall be followed.

### > Products marked « Ex de »

Except « Ex d » enclosure, equipment having a combined protection type « d » and « e » are the most commonly used.

Some apparatuses such as power sockets, lampholders, etc, which create arcs and sparks in normal operation, can't be designed only with protection mode « e ».

- The part where the electric arc is produced is enclosed in a small flameproof chamber.
- The connection terminals are « e » increased safety.
- The assembly is mounted in an « e » increased safety enclosure.

### Cables entries

The connection of cables to the electrical equipment shall maintain the explosion protection integrity of the relevant type of protection. When the cable gland certificate has an 'X' marking, this cable gland shall only be used for fixed installations. When the equipment is only portable, cable glands without 'X' marking shall be used.

## INSTALLATION RECOMMENDATION

### > General requirements

Electrical installations for explosive atmosphere must comply with the requirements regarding installations in both non hazardous and hazardous locations:

- national rules (for example NFC 15-100 + BE3 condition for France),
- EN/IEC 60079-14,
- EN/IEC 60079-17.

### > Equipment selection (except cable entries)

| Zones                                | Type of protection   |                                                                                     | Marking | EN/IEC standard |
|--------------------------------------|----------------------|-------------------------------------------------------------------------------------|---------|-----------------|
| –                                    | General requirements |                                                                                     | –       | 60079-0         |
| For use in Zones 1, 2                | Flameproof enclosure |    | Ex d    | 60079-1         |
| For use in Zones 1, 2                | Increased safety     |  | Ex e    | 60079-7         |
| For use in Zones 0, 1, 2, 20, 21, 22 | Intrinsic safety     |  | Ex i    | 60079-11        |
| For use in Zones 1, 2                | Pressurization       |  | Ex p    | 60079-2         |
| For use in Zones 0, 1, 2, 20, 21, 22 | Encapsulation        |  | Ex m    | 60079-18        |
| For use in Zones 1, 2                | Oil immersion        |  | Ex o    | 60079-6         |
| For use in Zones 1, 2                | Powder filling       |  | Ex q    | 60079-5         |
| For use in Zone 2                    | "Non sparking"       |                                                                                     | Ex n    | 60079-15        |
| For use in Zones 20, 21, 22          | Dust atmospheres     |                                                                                     | Ex t    | 60079-31        |



# OLD/NEW ACCESSORIES REFERENCES

## CROSS REFERENCES

Entry by the former reference towards the new one.

| OLD REFERENCE | NEW REFERENCE | OLD REFERENCE | NEW REFERENCE | OLD REFERENCE | NEW REFERENCE | OLD REFERENCE | NEW REFERENCE |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 01NA013       | 511P0D18      | 09NA055483    | 591B0N07      | 191A095418    | 593C0M25      | 193A653419    | 594C3M32      |
| 01NA013130    | 511P0D18      | 09NA05561     | 591B0M20      | 191A095419    | 593C0M32      | 193A653420    | 594C3M40      |
| 01NA013T      | 511P0D18      | 09NA055Z0076  | 571B0Z0076    | 191A127       | 593M0         | 193A753       | 514P025P      |
| 01NA053       | 511B3M20      | 09NA055Z1142  | 591B0Z1142    | 191A25325P    | 513P025P      | 193A95332M    | 594P032M      |
| 01NA053130    | 511B3M20      | 09NA205476    | 591F0N10      | 191A25332P    | 513P032P      | 193A95340M    | 594P040M      |
| 01NA053418    | 511B3M25      | 09NA653       | 591C4M20      | 191A25340P    | 513P040P      | 193A953417    | 594P0M20      |
| 01NA053568    | 511B320P568   | 09NA653418    | 591C4M25      | 191A253417    | 513P0M20      | 193A953418    | 594P0M25      |
| 01NA055       | 511B0M20      | 09NA653418EMC | 591C4M25EMC   | 191A253418    | 513P0M25      | 193A953419    | 594P0M32      |
| 01NA055130    | 511B0M20      | 09NA653419    | 591C4M32      | 191A253419    | 513P0M32      | 193A953420    | 594P0M40      |
| 01NA055418    | 511B0M25      | 09NA653483    | 591C4N07      | 191A253420    | 513P0M40      | 193A95440M    | 5K4P040M      |
| 01NA055Z1156  | 511B0Z1156    | 09NA653EMC    | 591C4M20EMC   | 191A253Z1963  | 513P0Z1963    | 193A954420    | 5K4P0M40      |
| 01NA055Z1233  | 511B0Z1233    | 09NA653Z1676  | 591C4Z1676    | 191A44325P    | 513P025P443   | 193A963       | 594P025M      |
| 01NA25325P    | 511P025P      | 09NA95325M    | 591P025M      | 191A44332P    | 513P032P443   | 196A027       | 595M3         |
| 01NA25332P    | 511P032P      | 09NA95325M130 | 591P025M      | 191A443418    | 513P0M25443   | 196A027130    | 595M3         |
| 01NA253417    | 511P0M20      | 09NA95325MEMC | 591P025MEMC   | 191A463       | 513P020P443   | 196A02761     | 595M3         |
| 01NA253418    | 511P0M25      | 09NA95332M    | 591P032M      | 191A473       | 513P0D30473   | 196A053       | 595C3M40      |
| 01NA253419    | 511P0M32      | 09NA95332MEMC | 591P032MEMC   | 191A653       | 593C3M20      | 196A095       | 595C0M50      |
| 01NA253Z1154  | 511P0Z1154    | 09NA953417    | 591P0M20      | 191A653418    | 593C3M25      | 196A095419    | 595C0M32      |
| 01NA313       | 511P6D18      | 09NA953418    | 591P0M25      | 191A653419    | 593C3M32      | 196A095420    | 595C0M40      |
| 01NA313130    | 511P6D18      | 09NA953419    | 591P0M32      | 191A653420    | 593C3M40      | 196A095463    | 595C0M63      |
| 01NA313Z0037  | 511P6Z0037    | 09NA953478    | 571P0M25      | 191A753       | 513P020P      | 196A127       | 595M0         |
| 01NA753       | 511P020P      | 09NA953479    | 571P0M32      | 191A95325M    | 593P025M      | 196A25332P    | 515P032P      |
| 01NA753Z0361  | 511P0Z0361    | 09NA953481    | 591P0N10      | 191A95332M    | 593P032M      | 196A253419    | 515P0M32      |
| 02NA013       | 521P0D18      | 09NA95425M    | 5K1P025M      | 191A95332MEMC | 593P032MEMC   | 196A253429    | 515P0M50      |
| 02NA313       | 521P6D18      | 09NA954418    | 5K1P0M25      | 191A95335932M | 5T3P032M      | 196A25350P    | 515P050P      |
| 03NA313       | 531P6D18      | 09NA963       | 591P020M      | 191A95340M    | 593P040M      | 196A653       | 595C3M50      |
| 03NA313130    | 531P6D18      | 09NA963356    | 5K1P020M      | 191A953417    | 593P0M20      | 196A653419    | 595C3M32      |
| 04NA013       | 541P0D18      | 09NA963491    | 571P020M      | 191A953418    | 593P0M25      | 196A653420    | 595C3M40      |
| 04NA313       | 541P6D18      | 09NA963EMC    | 591P020MEMC   | 191A953419    | 593P0M32      | 196A653463    | 595C3M63      |
| 04NA313130    | 541P6D18      | 09NA963Z0076  | 571P0Z0076    | 191A953420    | 593P0M40      | 196A65361     | 595C3M50      |
| 05NA013       | 551P0D18      | 118A013       | 512P0D21      | 191A963       | 593P020M      | 196A653Z1566  | 595C3Z1566    |
| 05NA013130    | 551P0D18      | 118A013130    | 512P0D21      | 193A013       | 514P0D35      | 196A753       | 515P040P      |
| 05NA313       | 551P6D18      | 118A01361     | 512P0D21      | 193A013130    | 514P0D35      | 196A95332M    | 595P032M      |
| 0---92504-2   | 591B0M20      | 118A027       | 512M3         | 193A013T      | 514P0D35      | 196A953419    | 595P0M32      |
| 0---92504-3   | 571P020M185   | 118A053       | 512B3M20      | 193A027       | 594M3         | 196A953420    | 595P0M40      |
| 092A027       | 591M4         | 118A053130    | 512B3M20      | 193A027356    | 5K4M3         | 196A953429    | 595P0M50      |
| 092A027185    | 571M4185      | 118A653       | 512C3M20      | 193A02761     | 594M3         | 196A953463    | 595P0M63      |
| 092A055185    | 571B0M20185   | 191A013       | 513P0D30      | 193A053       | 594B2M25      | 196A95350M    | 595P050M      |
| 092A055186    | 571B0000185   | 191A013130    | 513P0D30      | 193A053419    | 594B2M32      | 196A963       | 595P040M      |
| 092A127-2035  | 571M0-2035    | 191A013230    | 513P0D30      | 193A05361     | 594B2M25      | 198A013       | 512P0D21      |
| 092A653185    | 571C4M20185   | 191A013P      | 513P0D30      | 193A095       | 594C0M25      | 198A027       | 592M3         |
| 092A672185    | 571C4M25185   | 191A013T      | 513P0D30      | 193A095419    | 594C0M32      | 198A027130    | 592M3         |
| 092A673185    | 571C4M32185   | 191A027       | 593M3         | 193A095420    | 594C0M40      | 198A027356    | 5K2M3         |
| 092A674185    | 571P025M185   | 191A027356    | 5K3M3         | 193A095429    | 594C0M50      | 198A027491    | 572M3         |
| 092A675185    | 571P032M185   | 191A027359    | 5T3M3         | 193A127       | 594M0         | 198A02761     | 592M3         |
| 092A963185    | 571P020M185   | 191A02761     | 593M3         | 193A127356    | 5K4M0         | 198A027826    | 592M3EMC      |
| 09NA027       | 591M3         | 191A053       | 593B2M20      | 193A25320P    | 514P020P      | 198A053       | 592B2M20      |
| 09NA027130    | 591M3         | 191A053077    | 593B2M25077   | 193A25332P    | 514P032P      | 198A053356    | 5K2B2M20      |
| 09NA027356    | 5K1M3         | 191A053098    | 593B2M20098   | 193A25340P    | 514P040P      | 198A053418    | 592B2M25      |
| 09NA027EMC    | 591M3EMC      | 191A053418    | 593B2M25      | 193A253417    | 514P0M20      | 198A053491    | 572B2M20      |
| 09NA055       | 591B0M20      | 191A053419    | 593B2M32      | 193A253420    | 514P0M40      | 198A05361     | 592B2M20      |
| 09NA055130    | 591B0M20      | 191A053419EMC | 593B2M32EMC   | 193A463       | 514P025P443   | 198A053Z1069  | 5T2B2Z1069    |
| 09NA055418    | 591B0M25      | 191A05361     | 593B2M20      | 193A473       | 514P0D35473   | 198A095       | 592C0M20      |
| 09NA055418EMC | 591B0M25EMC   | 191A095       | 593C0M20      | 193A653       | 594C3M25      | 198A095418    | 592C0M25      |



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| 198A127          | 592M0            | 311A083000M      | 512B3M25         | 313A463          | 513P025P443      | 316A95350M       | 594P050M         |
| 198A25325P       | 512P025P         | 311A083130       | 512B3M25         | 313A473          | 513P0D30473      | 316A95350MEMC    | 594P050MEMC      |
| 198A25332P       | 512P032P         | 311A25320M       | 512P020M         | 313A653          | 513C3M25         | 316A953Z1904     | 594P0Z1904       |
| 198A25340P       | 512P040P         | 311A25325P       | 512P025P         | 313A653417       | 513C3M20         | 316A963          | 594P040M         |
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| 198A463          | 512P020P443      | 311A253418       | 512P0M25         | 313A95320M       | 593P020M         | 319A027          | 515M3            |
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| 198A653420       | 592C3M40         | 311A25350P       | 512P050P         | 313A953418       | 593P0M25         | 319A207          | 515M3            |
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| 198A953417       | 592P0M20         | 311A443417       | 512P0M20443      | 316A013          | 514P0D35         | 319A253420       | 515P0M40         |
| 198A953418       | 592P0M25         | 311A443418       | 512P0M25443      | 316A013130       | 514P0D35         | 319A253429       | 515P0M50         |
| 198A953419       | 592P0M32         | 311A443420       | 512P0M40443      | 316A013230       | 514P0D35         | 319A253463       | 515P0M63         |
| 198A95349125M    | 572P025M         | 311A463          | 512P020P443      | 316A013488       | 514P0D35         | 319A253487       | 515P0N12         |
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| 198A963          | 592P020M         | 311A653130       | 512C3M20         | 316A013Z1133     | 514P0Z1133       | 319A653          | 515C3M50         |
| 198A963356       | 5K2P020M         | 311A653418       | 512C3M25         | 316A013Z1412     | 514P0Z1412       | 319A653419       | 515C3M32         |
| 198A963491       | 572P020M         | 311A653418130    | 512C3M25         | 316A027          | 514M3            | 319A653420       | 515C3M40         |
| 198A963Z1069     | 592P0Z1069       | 311A653419       | 512C3M32         | 316A027130       | 514M3            | 319A653463       | 515C3M63         |
| 199A027          | 595M3            | 311A653420       | 512C3M40         | 316A027230       | 514M3            | 319A653487       | 515C3N12         |
| 199A053          | 595E3M50         | 311A753          | 512P020P         | 316A053          | 514B3M40         | 319A753          | 515P050P         |
| 199A053463       | 595E3M63         | 311A95325M       | 592P025M         | 316A053130       | 514B3M40         | 319A873          | 515P040P873      |
| 199A095420       | 595C0M40         | 311A953417       | 592P0M20         | 316A073          | 514B3N12         | 319A95332M       | 595P032M         |
| 199A095463       | 595C0M63         | 311A953418       | 592P0M25         | 316A20380        | 514B3000         | 319A95340M       | 595P040M         |
| 199A127          | 595M0            | 311A953419       | 592P0M32         | 316A207          | 514M3            | 319A953419       | 595P0M32         |
| 199A25332P       | 515P032P         | 311A963          | 592P020M         | 316A25325P       | 514P025P         | 319A953420       | 595P0M40         |
| 199A25340P       | 515P040P         | 313A013          | 513P0D30         | 316A25332P       | 514P032P         | 319A953429       | 595P0M50         |
| 199A25363P       | 515P063P         | 313A013130       | 513P0D30         | 316A253417       | 514P0M20         | 319A953463       | 595P0M63         |
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| 199A753          | 515P050P         | 313A027          | 513M3            | 316A253420       | 514P0M40         | 319A953Z1060     | 595P0Z1060       |
| 199A95332M       | 595P032M         | 313A027130       | 513M3            | 316A253429       | 514P0M50         | 319A953Z1180     | 595P0Z1180       |
| 199A95340M       | 595P040M         | 313A027230       | 513M3            | 316A253487       | 514P0N12         | 319A963          | 595P050M         |
| 199A95363M       | 595P063M         | 313A02761        | 513M3            | 316A25350P       | 514P050P         | 319A963826       | 575P050MEMC      |
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| 311A013          | 512P0D21         | 313A053130       | 513B3M25         | 316A44332P       | 514P032P443      | 341A027          | 542M3            |
| 311A013000M      | 512P0D21         | 313A053230       | 513B3M25         | 316A443417       | 514P0M20443      | 341A463          | 542P020P443      |
| 311A013130       | 512P0D21         | 313A073          | 513B3N10         | 316A443419       | 514P0M32443      | 351A013          | 552P0D21         |
| 311A013230       | 512P0D21         | 313A25320P       | 513P020P         | 316A463          | 514P040P443      | 351A013130       | 552P0D21         |
| 311A01361        | 512P0D21         | 313A25332P       | 513P032P         | 316A473          | 514P0D35473      | 351A027          | 552M3            |
| 311A013Z0361     | 512P0Z0361       | 313A25340P       | 513P040P         | 316A473130       | 514P0D35473      | 351A053          | 552B3M20         |
| 311A027          | 512M3            | 313A253417       | 513P0M20         | 316A473488       | 514P0D35473      | 351A253417       | 552P0M20         |
| 311A027130       | 512M3            | 313A253418       | 513P0M25         | 316A653          | 514C3M40         | 351A95325M       | 5K2P025M         |
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| 311A053000M      | 512B3M20         | 313A253Z1280     | 513P0Z1280       | 316A753          | 514P040P         | 352A013D45       | 556P0D45         |
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| 311A053390       | 512B3M20390      | 313A44340P       | 513P040P443      | 316A953418       | 594P0M25         | 352A027          | 5K6M6            |
| 311A053418       | 512B3M25         | 313A443417       | 513P0M20443      | 316A953419       | 594P0M32         | 352A053475       | 5K6E6M75         |
| 311A073          | 512B3N07         | 313A443418       | 513P0M25443      | 316A953420       | 594P0M40         | 352A773          | 556P0000         |
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| 352A913-63       | 5K6P0D63         | 392A507463       | 596N0M63         | 396A95325M       | 594P025M         | 51BA058Z0039     | 512C7Z0039       |
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| 353A027          | 553M3            | 392A507575       | 576N0M75         | 396A953418       | 594P0M25         | 51BA058Z0451     | 512C7Z0451       |
| 353A053          | 553B3M25         | 392A723          | 596B3723         | 396A953420       | 594P0M40         | 51BA058Z0694     | 512C7Z0694       |
| 353A127          | 5K3M0            | 392A753          | 516P063P         | 396A95350M       | 594P050M         | 51BA058Z0778     | 512C7Z0778       |
| 353A253419       | 553P0M32         | 392A753Z0124     | 516P0Z0124       | 396A963          | 594P040M         | 51BA058Z0787     | 512C7Z0787       |
| 353A463          | 553P025P443      | 392A753Z1412     | 516P0Z1412       | 399A027          | 595M3            | 51BA058Z0788     | 512C7Z0788       |
| 353A473          | 553P0D30473      | 392A913          | 596P0D54         | 399A027130       | 595M3            | 51BA058Z1452     | 512C7Z1452       |
| 356A013          | 554P0D35         | 392A913-63       | 596P0D63         | 399A027355       | 5R5M3            | 51BA058Z1518     | 512C7Z1518       |
| 356A027          | 554M3            | 392A953429       | 596P0M50         | 399A027356       | 5K5M3            | 51BA058Z1631     | 512C7Z1631       |
| 356A053          | 554B3M40         | 392A953463       | 596P0M63         | 399A027357       | 5H5M3            | 51BA058Z1756     | 512C7Z1756       |
| 356A25350P       | 554P050P         | 392A953475       | 596P0M75         | 399A02761        | 595M3            | 51BA757          | 512M7            |
| 356A463          | 554P040P443      | 393A027          | 593M3            | 399A027826       | 595M3EMC         | 51CA055          | 513F0000         |
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| 359A027          | 555M3            | 393A127          | 593M0            | 399A053463       | 595E3M63         | 51CA058Z0788     | 513C7Z0788       |
| 359A25325P       | 555P025P         | 393A653          | 593C3M25         | 399A053475       | 595E3M75         | 51CA058Z1756     | 513C7Z1756       |
| 359A25363P       | 555P063P         | 393A653417       | 593C3M20         | 399A05361        | 595E3M50         | 51CA757          | 513M7            |
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| 359A953463       | 5K5P0M63         | 393A653420       | 593C3M40         | 399A053Z1905     | 595E3Z1905       | 51DA757          | 514M7            |
| 359A95363M       | 5K5P063M         | 393A653483       | 593C3N07         | 399A095          | 595C0M50         | 55AA058          | 551C7000         |
| 359A953Z1204     | 5K5P0Z1204       | 393A953Z0027     | 573P0Z0027       | 399A095420       | 595C0M40         | 55BA058          | 552C7000         |
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| 391A027          | 592M3            | 393A953Z1431     | 573P0Z1431       | 399A095Z1164     | 595C0Z1164       | 55CA058          | 553C7000         |
| 391A053          | 592B2M20         | 393A953Z1552     | 573P0Z1552       | 399A107          | 595A107          | 55CA757          | 553M7            |
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| 391A095418       | 592C0M25         | 394A02563M       | 577C763M         | 399A127EMC       | 595M0EMC         | 611A013130       | 511P0D18         |
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| 391A127          | 592M0            | 394A02768        | 597M6            | 399A653          | 595C3M50         | 611A013Z1412     | 511P0Z1412       |
| 391A653          | 592C3M20         | 394A915-57       | 577P0D57         | 399A653073       | 595C3N20         | 611A053          | 511B3M20         |
| 391A653418       | 592C3M25         | 394A915-62       | 577P0D62         | 399A653419       | 595C3M32         | 611A053130       | 511B3M20         |
| 391A653419       | 592C3M32         | 394A915-68       | 577P0D68         | 399A653420       | 595C3M40         | 611A05325P       | 511B325P         |
| 392A027          | 596M6            | 394A91573        | 577P0D73         | 399A653463       | 595C3M63         | 611A053418       | 511B3M25         |
| 392A027130       | 596M6            | 396A013          | 514P0D35         | 399A65361        | 595C3M50         | 611A053484       | 511B3N05         |
| 392A027355       | 5R6M6            | 396A025490       | 594F0N20         | 399A653EMC       | 595C3M50EMC      | 611A057          | 511M3            |
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| 392A053          | 596E6M63         | 396A027356       | 5K4M3            | 399A953429       | 595P0M50         | 611A073          | 511B3N05         |
| 392A053429       | 596E6M50         | 396A027EMC       | 594M3EMC         | 399A95363M       | 595P063M         | 611A165          | 551B0165         |
| 392A053475       | 596E6M75         | 396A027 V        | 594M3            | 399A963          | 595P050M         | 611A165Z1901     | 551B0Z1901       |
| 392A05361        | 596E6M63         | 396A053          | 594B2M40         | 399A963826       | 595P050MEMC      | 611A25320M       | 511P020M         |
| 392A053C0937     | 596E6C0937       | 396A053420EMC    | 594B2M40EMC      | 51AA058          | 511C7000         | 611A25325M       | 511P025M         |
| 392A053Z0094     | 596C6Z0094       | 396A053Z1069     | 5T4B2Z1069       | 51AA058130       | 511C7000         | 611A25325P       | 511P025P         |
| 392A053Z1089     | 596E6Z1089       | 396A073          | 594B2N12         | 51AA05820M       | 511C720M         | 611A25332M       | 511P032M         |
| 392A053Z1279     | 596C6Z1279       | 396A095          | 594C0M40         | 51AA058417       | 511C7M20         | 611A25332P       | 511P032P         |
| 392A053Z1396     | 596E6Z1396       | 396A095418       | 594C0M25         | 51AA058418       | 511C7M25         | 611A253417       | 511P0M20         |
| 392A053Z1466     | 596E6Z1466       | 396A095419       | 594C0M32         | 51AA058419       | 511C7M32         | 611A253418       | 511P0M25         |
| 392A053Z1467     | 596E6Z1467       | 396A095429       | 594C0M50         | 51AA058Z0596     | 511C7Z0596       | 611A253419       | 511P0M32         |
| 392A053Z1664     | 596E6Z1664       | 396A095800       | 594C0000         | 51AA058Z0694     | 511C7Z0694       | 611A253484       | 511P0N05         |
| 392A053Z1824     | 596E6Z1824       | 396A127          | 594M0            | 51AA058Z0778     | 511C7Z0778       | 611A253Z1413     | 511P0Z1413       |
| 392A073          | 596E6N20         | 396A653          | 594C3M40         | 51AA058Z0786     | 511C7Z0786       | 611A265          | 551B0265         |
| 392A127          | 596M0            | 396A653130       | 594C3M40         | 51AA058Z1249     | 511C7Z1249       | 611A413          | 511P0D21         |
| 392A253463       | 516P0M63         | 396A653418       | 594C3M25         | 51AA058Z1756     | 511C7Z1756       | 611A413Z0065     | 511P0Z0065       |
| 392A253475       | 516P0M75         | 396A653419       | 594C3M32         | 51AA058Z1866     | 511C7Z1866       | 611A44325P       | 511P025P443      |
| 392A25375M       | 516P075M         | 396A653420EMC    | 594C3M40EMC      | 51AA757          | 511M7            | 611A44332P       | 511P032P443      |
| 392A25375M404    | 516P075M         | 396A653429       | 594C3M50         | 51BA058          | 512C7000         | 611A463          | 511P020P443      |
| 392A253D63       | 516P0D63         | 396A653429130    | 594C3M50         | 51BA05820M       | 512C720M         | 611A653          | 511C3M20         |
| 392A503          | 596F0000         | 396A653490       | 594C3N20         | 51BA058417       | 512C7M20         | 611A653483       | 511C3N07         |
| 392A503463       | 596F00M63        | 396A653Z0757     | 594C3Z0757       | 51BA058418       | 512C7M25         | 611A653484       | 511C3N05         |
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| 613A013          | 512P0D21         | 616A463          | 513P025P443      | 693A095419       | 592C0M32         | 876A053420       | 594C7M40         |
| 613A013130       | 512P0D21         | 616A473          | 513P0D30473      | 693A095420       | 592C0M40         | 876A053420EMC    | 594C7M40EMC      |
| 613A01361        | 512P0D21         | 616A473130       | 513P0D30473      | 693A127          | 592M0            | 876A053429       | 594C7M50         |
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| 616A073          | 513B3N07         | 659A013VD35      | 555P0D35         | 873A963          | 593P025M         | 879A95340M       | 595P040M         |
| 616A25320P       | 513P020P         | 659A013Z1415     | 555P0Z1415       | 876A013          | 514P0D35         | 879A953420       | 595P0M40         |
| 616A25332M       | 513P032M         | 659A013Z1416     | 555P0Z1416       | 876A013130       | 514P0D35         | 879A953429       | 595P0M50         |
| 616A25332P       | 513P032P         | 659A463D35       | 555P0D35443      | 876A025418       | 594F0M25         | 879A953463       | 595P0M63         |
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| 616A253417       | 513P0M20         | 659A773          | 555P0000         | 876A025420       | 594F0M40         | 879A963          | 595P050M         |
| 616A253418       | 513P0M25         | 681A013          | 581P0D18         | 876A025429       | 594F0M50         |                  |                  |
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| 616A253420       | 513P0M40         | 693A027          | 592M3            | 876A053          | 594C7M40         |                  |                  |



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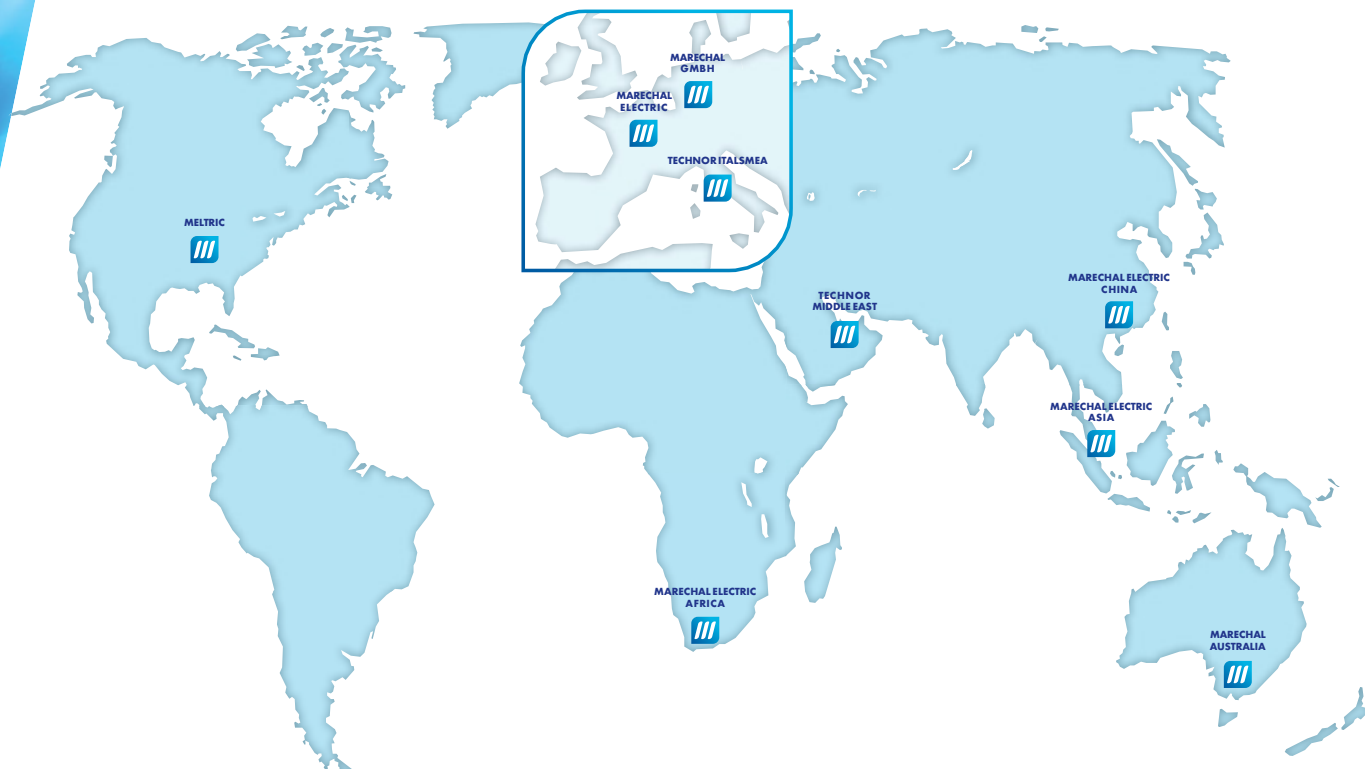


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