



N° 7A - Rev. : 8



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A manufacturer of products bearing the Quality Label

## GENERAL

The DXN Decontactor is a plug and socket-outlet for use in explosive atmospheres. It combines in a single unit, the performances of a plug and socket-outlet for industrial purposes as defined in IEC/EN 60309-1 standard, with that of an air-break switch. It can make and break under full load, mixed resistive and inductive loads, in complete safety.

When one or two auxiliary contacts are used as pilot contacts, the DXN can be electrically interlocked with a contactor.

Live socket contacts are protected against small tools and wires IP4X according to IEC/EN 60529 standard.

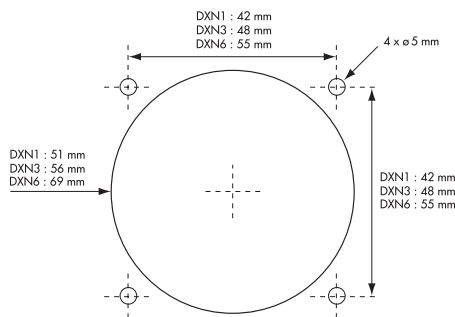
## INSTALLATION

The DXN must be installed by an authorised electrician.

### Assembly

Optimum operating conditions are achieved by installing the Decontactors with the latch at the top

To achieve IP66+67, DXN socket-outlets and inlets must be assembled on an 'e' increased safety box or enclosure as follows :



- Either drill 4 blind threaded holes with a minimum depth of 16 mm for cylindrical screws of 4 x 16 mm,
- Or drill 4 unthreaded holes  $\varnothing$  5 mm and use 4 cylindrical screws with watertightness seal below the screw head, spring washer and a nut, dimension : 4 x (wall thickness + 12 mm). The spring washer must be assembled under the nut.

### Fixing screws

An appropriate tool must be used for each type of screws. Apply the necessary torque to tighten self-tapping screws for the first time. Do not over tighten screws supplied with polymeric accessories.

### Wiring screws

The table hereunder indicates the recommended torques and tools.

	Torque	Flat screwdriver
DXN1	0.8 N.m	3 mm
DXN3 Main contacts	1.2 N.m	5 mm
DXN3 Auxiliary contacts	1.2 N.m	3 mm
DXN6 Main contacts	2.5 N.m	5 mm
DXN6 Auxiliary contacts	1.2 N.m	3 mm

### Colour-coded ring

To achieve IP66+67, do not forget the colour-coded standard ring between the inlet or socket-outlet and its rear accessory.

The two protrusions of the ring must be positioned on the latch side for the socket-outlet and on the catch side for the appliance inlet.

### Wiring

Be sure power is off before starting.

Conductor cross-section (mm <sup>2</sup> )	Main contacts		Aux. (optional)
	Flexible	Rigid	Flexible
DXN1	1 to 4	2.5 to 6	-
DXN3	2.5 to 10	2.5 to 16	1 to 2.5
DXN6	6 to 16	6 to 25	1 to 2.5

Other sizes can be used with the help of wiring ferrules.

Wiring will be made according to applicable national installation standards.

- Respect conductor coding and terminal markings,
- Select conductors with appropriate cross-section according to national installation standard,
- Back out terminal screws far enough (but not completely) to allow a complete insertion of conductors



The DXN wiring terminals are spring-assisted to prevent loosening due to strand settlement, vibration or thermal cycling.  
**Respect recommended torques.**

### d) Plug and connector :

Insert cable through handle, strip cable sheath to adequate length (see table) and twist strands of each conductor together. Alternatively, place a wiring ferrule onto the conductor. Insert conductors fully into

their respective terminals and tighten the wiring screws manually with an appropriate tool (see recommended torques and tools). Assemble handle with screws and gasket, and tighten cable gland. After assembly, the cable sheath must extend into the handle. Whilst clamping or anchoring, the conductors inside the handle must not be tight.

For a proper clamping the use of PVC cables is not recommended.

### e) Socket-outlet and appliance inlet on box :

Insert cable through surface box glanding arrangement and strip cable sheath to adequate length (see table). Insert conductors fully into their respective terminals and tighten the wiring screws manually with an appropriate tool (see recommended torques and tools). Assemble socket-outlet or inlet on adapter or box, using gaskets and screws supplied, and tighten cable gland. Ensure that blanking cap supplied with the surface box for unused entry, if any, is properly tightened.



Stripping length A	Socket-outlet	Plug / inlet
	mm	mm
DXN1	12	12
DXN3 (main contacts)	20	21
DXN3 (auxiliary contacts)	17	17
DXN6 (main contacts)	20	21
DXN6 (auxiliary contacts)	17	21

## OPERATION

To ensure a safe and reliable operation, the DXN must be used according to its designed destination, and in particular its assigned ratings, in terms of current, voltage and IP according to IEC/EN 60309-1 or explosive classification. Respect its explosion proof classification.

The plug and the socket-outlet must have compatible ratings (pin configuration, voltage, rated current...) to be connected together.

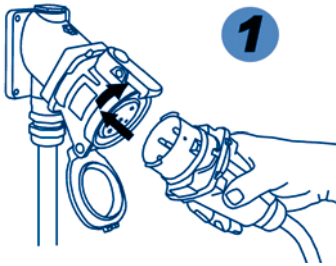


For uses in non-explosive atmosphere :

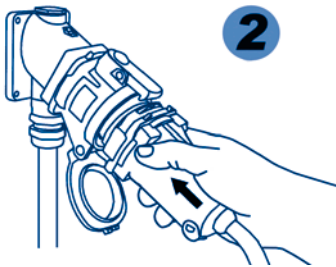
Up to 415 V, **DXN1** plugs are compatible with the **DSN1** range socket-outlets  
Up to 690 V, **DXN3** plugs, without auxiliary contacts, are compatible with the **DSN3** range socket-outlets  
**DXN6** and **DSN6** are NOT compatible

When not in use, the socket-outlet is shielded by a protective lid preventing the entry of dust and moisture. This is held in the closed position by a latch. To release the spring-loaded lid, depress the latch.

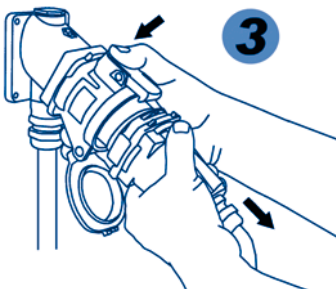
To connect the plug, align the plug bayonet and the hollow part of the socket-outlet, push the plug partially, latching catch facing upward, turn clockwise. Two red dots give a visual indication that facilitates the insertion of the plug. The plug is then in the rest position, circuit open.



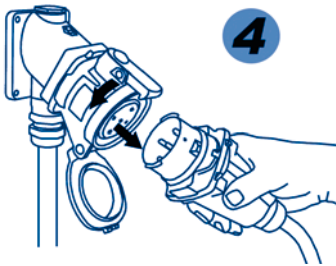
To close the circuit, push the plug fully home until it is held in place by the latch.



To release, simply depress the latch and pull the plug simultaneously, which breaks the circuit,



then twist and withdraw the plug. The socket-outlet lid MUST then be shut.



For the optimum operation of the DXN, make sure the flexible cable does not hinder the ejection of the plug or connector to its parked position.

### Options : Socket-outlet padlocking and plug lock-out :

The single 6-mm-padlocking option requires a padlock, which fits tightly in the locking hole of the latch. The 3-mm-padlocking option is achieved by inserting a shaft into the hole provided in the locking latch. The shaft can accommodate a padlock of up to 3 mm. To deny access of a plug to any socket-outlet, place a padlock or a lockout through the (optional) hole provided in the plug skirt.

### MAINTENANCE

From time to time, the fastening screws should be checked for tightness. Care should be taken that the weight of the cable is taken by the glanding arrangement and not the terminals themselves.

Contact surfaces may be checked for cleanliness. Any deposit of dust can be rubbed off with a clean cloth. Sprays should not be used, as they tend to collect dirt. Depending on prevailing conditions, the pitting of plug and socket contacts should be regularly monitored. In the event of serious damage, contact your supplier to have the contacts replaced.

IP gaskets between plug and socket-outlet bodies should be inspected periodically.

Rules applying to the DXN impose that any replacement of component must be performed under the control of the manufacturer : MARECHAL ELECTRIC S.A.

Any repair or service must be achieved with genuine **MARECHAL** parts only.

### RESPONSIBILITY

A **MARECHAL** plug or socket must only be used with a **MARECHAL** socket or plug.

MARECHAL ELECTRIC S.A.'s responsibility cannot be engaged in case **MARECHAL** products would be associated with socket-outlets, inlets or spare parts other than from **MARECHAL**.

MARECHAL ELECTRIC S.A.'s responsibility is strictly limited to the obligations expressly agreed in its general sales conditions.

Any penalty or indemnity provided herein will be considered as lump damages, redeeming from any other sanctions.

### DECLARATION OF CONFORMITY

The DXN is a product bearing the **MARECHAL** Quality Label. It has been designed, manufactured and controlled in a strict respect of the relevant international and European standards, laws and directives, and particularly of the European ATEX directive. It bears the CE marking whenever applicable. It also bears the markings of its explosion proof classification.

**MARECHAL ELECTRIC is a member of the international association, BECMA : the Butt-contact Electrical Connectors Manufacturers' Association.**



[www.becma.ch](http://www.becma.ch)

**MARECHAL electric**

**CE – Déclaration de conformité**  
**EC – Declaration of conformity**

Nous / we

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Déclarons que nos produits / Declare that our products:

**Prises de courant industrielles / Industrial plugs and socket-outlets**

Type	Intensité	Marquage	Et sont conformes aux normes suivantes:
Type	Intensity	Marking	And comply with the following standards:
DXN1	20 A	II 2 G / D -40°C ≤ Ta ≤ +60°C -40°C ≤ Ta ≤ +40°C LCIE 99 ATEX 6027 X	EEx ed IIC T5 T90°C T6 T70°C  EN 60309-1 (Norme produit / Product standard) EN 50014 EN 50018 EN 50019 EN 50281-1-1
DXN3	32 A	II 2 G / D -40°C ≤ Ta ≤ +60°C -40°C ≤ Ta ≤ +40°C LCIE 05 ATEX 6149	EEx ed IIC T4 T100°C T6 T80°C  EN 50281-1-1
DXN6	63 A	II 2 G / D -40°C ≤ Ta ≤ +60°C -40°C ≤ Ta ≤ +40°C LCIE 05 ATEX 6150	EEx ed IIC T4 T110°C T5 T90°C

Satisfait aux dispositions de la Directive du Conseil : ATEX n° 94/9/CE du 23 mars 1994  
Satisfy the measures set in the Council Directive : ATEX n° 94/9/EC of March 23<sup>rd</sup> 1994

Année d'apposition de marquage « CE » :  
Affixing date of « CE » marking:


DXN1 : 2000  
DXN3 : 2000  
DXN6 : 2002

avec les caractéristiques d'étanchéité suivantes / with the following watertightness characteristics : **IP 66/67**

N° de notification de l'évaluation relatif à la qualité : LCIE 00 ATEX Q 0081 selon l'annexe IV réalisé par l'organisme notifié n° 0081 : LCIE - 33, avenue du Général Leclerc - 92260 Fontenay-Aux-Roses - France

Quality assessment notification number : LCIE 00 ATEX Q 0081 according to annex IV carried out by notified body n° 0081 : LCIE - 33, avenue du Général Leclerc - 92260 Fontenay-Aux-Roses - France

Saint-Maurice, le 27 / 07 / 2006

  
 Manoel DA COSTA  
 Responsable ATEX / ATEX Manager