INSTRUCTION SHEET

DB

MOTOR DECONTACTOR™

N°4e - Rev.: 2

MARECHAL electric

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A manufacturer of products using the Marechal technology.

GENERAL

The DB MOTOR DECONTACTOR™ combines in a single unit, the performances of a plug and socket-outlet for industrial purposes with that of a air-break motor switch.
It is designed to make and break highly inductive loads and harsh overloads in complete safety. It is a switch with utilisation categories of AC22, AC23 and AC3 according to IEC/EN 60947-3 standard.

Socket-outlet contacts are protected against small tools and wires (IP4X) according to IEC/EN 60529 standard.

INSTALLATION

⚠ The DB MOTOR DECONTACTOR™ must be installed by qualified electricians.

Assembly

Optimum operating conditions are achieved by installing the MOTOR DECONTACTOR™, with the IP67 indication at the top.

Note : Do not forget the gasket between the inlet or socket-outlet and its back accessory. Make sure the blanking cap supplied with surface boxes for the unused entry, if any, is properly tightened.

Fixing screws

Care must be taken to use the appropriate tool for each type of screw. Apply the required torque to the self-tapping screws. Do not overtighten the screws supplied with polymeric accessories.

Wiring screws

This table gives the recommended tightening torques:

	Torque	Tool required
DB3	1.7 N.m	3 x 0.7 mm flat screwdriver
DB6	2.7 N.m	5 x 0.8 mm flat screwdriver
DB9	4.5 N.m	6 x 1.2 mm flat screwdriver

Wiring

⚠ Be sure power is off before starting.

	Maximum conductor Cross-section (in mm²)		Auxiliary contacts (optional)
	flexible	stranded	flexible
DB3	6	10	1.5 pre-wired
DB6	16	25	1.5 pre-wired
DB9	50	70	1.5 pre-wired

Wiring will be made according to applicable national installation standards.

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

Wiring terminals of the MOTOR DECONTACTOR™ are spring-assisted to prevent loosening due to strand settlement, vibration or thermal cycling. **Respect the recommended torque.**

- **Plug and connector:**
  Insert cable through handle, strip conductors 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). After assembly, the cable sheath must extend into the handle. Assemble handle with screws and gasket, and tighten cable gland. Whilst clamping or anchoring, the portion of cable inside the handle must not be tight.

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

- **Socket-outlet and appliance inlet on box:**
  Insert cable through surface box glanding arrangement and strip conductors 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 the blanking cap supplied with the surface box for unused entry, if any, is properly tightened.

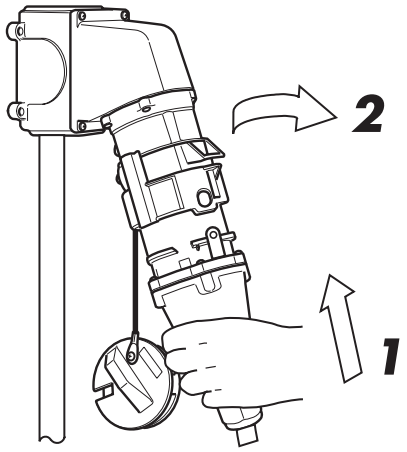
	Stripping length A
	mm
DB3-Ph/N	19
DB3-Earth	12
DB6-Ph/N	20
DB6-Earth	15
DB9-Ph/N	35
DB9-Earth	30

OPERATION

To ensure a safe and reliable operation, the MOTOR DECONTACTOR™ has to be used according to its designed destination, and in particular its assigned ratings, in terms of current, voltage, IP and endurance (according to IEC/EN 60309-1).

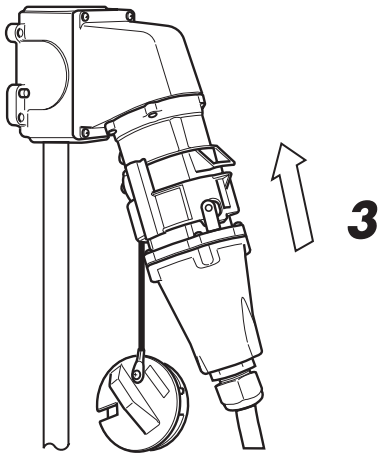
To be connected together, the plug and the socket-outlet of the MOTOR DECONTACTOR™ must have identical rated voltage and current and compatible pin configurations.

When not in use the socket-outlet is shielded by a protective lid. This is held in the closed position by a locking ring, thereby preventing the entry of dust and moisture. To release the lid, turn the ring fully anticlockwise. The lid is then retained by a strong nylon wire.

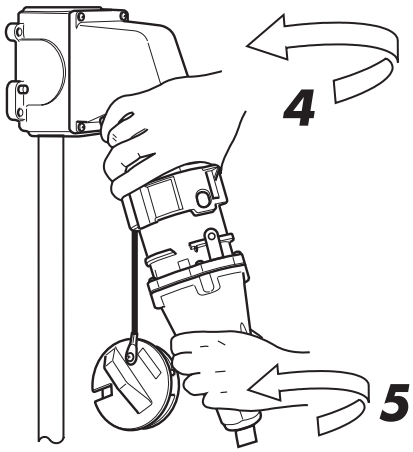


To connect the plug, align its bayonets and the hollow parts of the socket-outlet, push the plug partially, locking finger facing upward, and turn it clockwise as an electric light bulb.

The plug is then in the rest position, circuit open. This is indicated by a «green» window located on the front of the socket-outlet. At this stage, the plug can be consignated into the socket-outlet by means of a conventional lock-out.

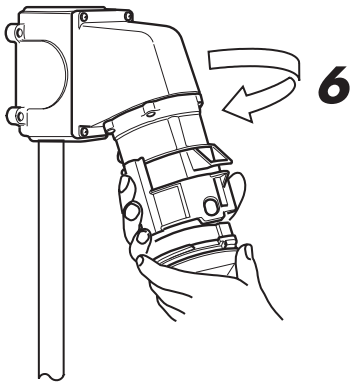


In absence of a lock-out, the circuit is finally closed by pushing the plug fully home until it is held by the locking ring. The window located on the front of the socket-outlet becomes «red». IP67 is achieved by turning the ring clockwise. If the knock-out hole has been opened, the plug can be padlocked into the socket-outlet.



To release the plug, simply turn the ring fully anti-clockwise. The circuit is open (green indicator) and the plug is in its parked position.

⚠ **Plug has to be brought back to its rest position before another engagement is possible.**



To remove, twist and withdraw the plug. The lid must then be shut and the ring turned to restore IP67 of the socket-outlet.

Socket-outlet multiple padlocking and lock-out

A standard lock-out can be used:

- to lock the cover and deny access to the socket-outlet,
- to lock the plug into the socket-outlet with the switch in the «off» position (green indicator),
- and if this corresponds to a safety position, to lock the plug into the socket-outlet with the switch «on» (red indicator).

For this last possibility (which may be unwanted on some pieces of equipment), a knock-out hole, located on the locking ring of the socket-outlet, has to be opened with the help of a 6-mm pin drift.

Note: Locking off the socket-outlet does not guarantee a lock-out of the energised equipment.

Plug lock-out

Place a padlock or a safety lock-out through the hole provided in the plug locking finger, to deny its access to any socket-outlet.

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 by the terminals themselves.

Contact surfaces may be checked for cleanliness. Any deposit of dust can be rubbed off with a clean cloth. Under no circumstances should the contact surfaces be filed as this will remove the silver-nickel tip and reduce the effectiveness of the contact. Sprays should not be used as they tend to collect dirt.

IP gaskets between the plug and socket-outlet bodies should be inspected periodically. Replace gaskets as needed.

⚠ Any repair or service must be achieved with genuine Marechal parts only.

Check regularly the electrical continuity of the ground circuit.

RESPONSIBILITY

A Marechal product must be used with a Marechal complementary accessory only.

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 DB MOTOR DECONTACTOR™ uses the Marechal technology.

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 Low Voltage Directive 2006/95/CE. It bears the CE marking whenever applicable.

The CE marking does not apply to spare parts and components supplied separately.

For the MOTOR DECONTACTOR™
DB3, DB6, DB9,
and whenever it is in the scope of the 2006/95/CE Directive:

We,
MARECHAL ELECTRIC S.A.,
5 avenue de Presles - F-94417 Saint-Maurice Cedex - France

Declare that the DB MOTOR DECONTACTOR™ satisfies the measures set in the Low Voltage Directive 2006/95/CE and in the application decrees of member states.

Saint Maurice
Quality Manager
MARECHAL ELECTRIC S.A.

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

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06/2008