



MARECHAL
electric



***Switch rated connectors for
Mining & Tunnelling
Industries***



Marechal's DECONTACTOR™ ideally suited



Connect with confidence & disconnect with safety

Thanks to its integral load-break isolating switch mechanism, the deconnector socket allows users to **connect and disconnect electrical equipment safely** up to 250 A : a release button cuts the power and de-energises the plug before it can be removed. Even in the event of a short-circuit, the deconnector guarantees user safety and eliminates any electrocution hazard.

Provides automatic watertight seal

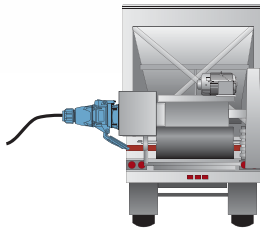
Our deconnectors are **automatically** watertight just by inserting the plug or by closing the socket lid when you remove the plug. There is no need to turn any sealing ring!

Reduce downtime

When deconnectors are used in lieu of hard-wiring, a fitter can replace a motor safely and efficiently. Operating costs are reduced as re-wiring on site is no longer necessary.

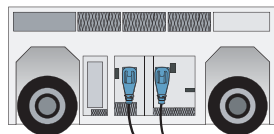
Ensure long working life in harsh environments

The deconnector butt contacts have silver-nickel tips which are an excellent conductor, **corrosion-resistant**. Its heavy duty design is shock resistant (**Iko8/Iko9**) and environmentally sound (**-40 °C to +60 °C**). These are true fit-and-forget connectors allowing you to save money and make product, not regularly replace connectors.



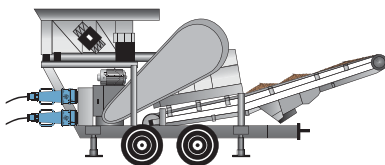
Feeders

DS Series devices with amperage capacity up to 250A provide durable, safe connections for Feeders and other equipment.



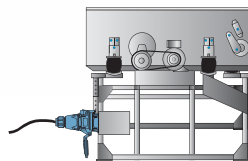
Generators

600A PF Series connectors supply power from generators to motor control centres.



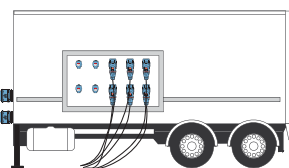
Crushers

Parallel phasing with dual PF's maximizes capacity for high load applications.



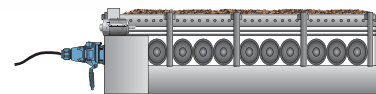
Screeners

DB Series Deconnectors provide rugged, switch rated connections up to 30 Kw.



Motor Control Centres

Deconnectors and multipin devices provide power and control circuits to all plant equipment.



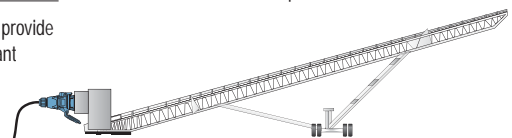
Conveyors

DSN Series Deconnectors simplify reconfigurations of conveyors. IP54 to IP 66 construction provides protection from water and dust.

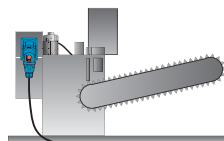


Float Pumps

DS Deconnectors allow float pumps to be easily disconnected and relocated to another pond.

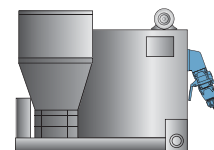


Stackers



Cutting Machines, Extruders & Other Forming Equipment

Deconnectors connecting process equipment are safe to make & break under full load. They also provide a 'line of sight' disconnect and facilitate quick motor change-outs.



to the mining and tunnelling industries

At the heart of Marechal's technology

Load-break plug release button:
no need for a pilot conductor to switch power first

Watertight seal: IP66/67 protection

Central earth contact: no danger of forcing an earth contact into a phase or neutral

Anti-corrosion treated

Integral cable seal: range-take seal anchors cable sheath

Spring-loaded elastic terminals:
resist vibrations and temperature changes

Socket safety shutter: prevents unwanted access to live parts (IPX4)

Silver-nickel tipped contacts:
excellent current carrying performance

Glassfibre-reinforced polyester bodies:
excellent mechanical resistance to abuse

Safety & code compliance: Marechal vs. the competition

Motor hard-wired to a switch disconnect	Motor connected with a Marechal motor plug	Motor connected with a Competitive plug & socket-outlet
<p>Disconnect may be difficult to install in 'line of sight' from the motor</p> <p>Qualified electrician</p> <p>18"</p>	<ul style="list-style-type: none"> • Cord connection allows easy 'line of sight' area • Dead front eliminates access to live parts • Ability to safely make & break under load eliminates the need for interlocks • ≥ 65 kA short circuit make & withstand rating ensures safety during re-energization <p>Or</p>	<ul style="list-style-type: none"> • Expensive mechanical interlocks are required since these plugs & receptacles cannot safely make & break under load • The interlock must be mounted on a fixed surface- this may make 'line of sight' location more difficult
Motor change-out process	Motor change-out process	Motor change-out process
<ol style="list-style-type: none"> 1. Electrician opens disconnect switch 2. Remove disconnect cover 3. Voltmeter test to verify deenergization 4. Apply lockout/tagout 5. Disconnect motor from hard-wiring 6. Mechanic removes old/installs new motor 7. Electrician connects motor to hard-wiring 	<ol style="list-style-type: none"> 1. Mechanic removes plug from socket-outlet 2. Apply lockout/tagout as required 3. Mechanic removes old/installs new motor 4. Mechanic inserts plug into socket-outlet <p>Marechal makes it safe & easy</p>	<ol style="list-style-type: none"> 1. Open interlock switch 2. Remove interlock cover 3. Voltmeter test to verify deenergization 4. Remove plug 5. Apply lockout/tagout as required 6. Remove old/install new motor 7. Insert plug into socket-outlet



Focus on Mining and Tunnelling plants

Decontactors are ideal for...



Power distribution

The mine and quarry environments combine mechanical shock, climatic conditions and dust with the distribution of electric power and frequent disconnections.

Decontactor advantage

Marechal decontactors' metal or glassfibre reinforced polyester housings **resist shocks**. Their silver-nickel contacts are **corrosion resistant** and **withstand temperature changes**. When disconnected, the dead front prevents exposure to live parts.



Conveyor connections

Conveyors and other mobile equipment need high power connections for motors. Disconnection under load can be a problem.

Decontactor advantage

Decontactors' butt-contact technology provides a convenient line of sight disconnection and allows non-electrical workers to safely make and break under load up to 250A without arc flash hazard.



High amperage equipment

Often plugs and sockets with high amperage are difficult to disconnect because of size and contact heating.

Advantage of butt-contact technology

Marechal's PF series plugs and sockets can handle up to 600A/1000V. Frictionless butt-contact technology allows **easy connection and disconnection** and silver-nickel contact tips guarantee **superior conductivity and reliability** regardless of climatic conditions.



Pump power supply

Often pumps are hardwired for reasons of safety. Procedures to open junction boxes are lengthy; downtime can be very long if the pump is far away from the main production site and there's no electrician around.

Decontactor advantage

In case of breakdown, the pump or motor can be easily and safely disconnected and replaced by a multi-skilled worker.



Motor or process control

Traditional pin and sleeve multipin connectors are not designed for frequent connection and disconnection that are required for mobile equipments in mines and quarries.

Marechal technology for control connectors

Our butt contact technology allows **frequent connection and disconnection** and provide **longterm, troublefree conductivity** over time. Marechal technology also offers a **keying system** to avoid connection errors with connectors that look alike.



Process equipment connections

Some process equipment such as this concrete floor panel forming machine moves along the production line. It can be difficult to comply to safety rules and ensure reliability over time.

Deconnector advantage

The deconnector's integral load-break capability **simplifies disconnection procedures** and installation, saving time and money. Our keying system **any incorrect plugging in of equipment**.



Electrical mining machines

To power these heavy duty machines, connectors must be robust and resist humidity and corrosion as well as coping with frequent disconnection.

Advantage of butt-contact technology

Our connectors' rugged casing materials, stainless steel hardware and silver-nickel contact surfaces ensure durability, corrosion resistance and long operating lives. For example, the silver-nickel contacts withstand wear and maintain excellent conductivity even when oxidized.



Ex environments

Due to possible presence of gases, some mines are classed as potentially explosive atmospheres.

Advantage deconnector – ATEX

Whether fixed supplies or mobile connections the DXN / DX deconnectors are ATEX approved for use in such environments. Butt-contact technology makes them safe, reliable and compact. They are automatically waterproof when connected.

Product selection guide

(See our main catalogue for product details and part-numbers)

DECONTACTOR™: A WIDE RANGE OF PLUGS AND SOCKETS

Integral load-break isolating switch • Easy and safe to handle • Reliability and long service time thanks to silver-nickel butt-contact technology • Spring-assisted non-loosening terminals resist vibration and extreme temperatures from -40 °C to +60 °C • UV and corrosion resistant • for all cable diameters up to 1000 V a.c. and 250 V d.c.



DS DECONTACTOR™ range

The DS decontactors are our widest range offering rated currents from 30 to 400 A. Polyester from 30 to 90 A and metal-bodied from 50 to 400A it provides the user with many options – padlocking, auxiliary contacts, etc. Each decontactator size accepts a wide range of cable diameter, which makes the DS range very appropriate for the long cables frequently used in mining and tunnelling industries.

- 5 sizes from 30 to 250 A with AC22/AC23 load-break capability
- robust design IK08 (glassfibre reinforced polyester body), IK09 (metal body)
- safety shutter on the socket to shield the contacts
- IP54/55 watertight automatically upon connection (IP66/67 optional)
- keying system with 24 positions to avoid incorrect connections
- wide range of metal and polyester boxes
- wide range metal, polyester and elastomer handles
- product up to 400 A also available without load-break capacity

DN DECONTACTOR™ range

The DN decontactator was designed in 1953 but still is fully compliant with the most recent safety regulations. Its metal bodied rugged design remains a favourite with industries requiring robust connections. Each decontactator size accepts a wide range of cable diameter, which makes the DN range very appropriate for the long cables frequently used in mining and tunnelling industries.

- 5 sizes from 20 to 150 A with AC22 load-break capability
- metal casing IK09 for harsh environments
- IP54/55 watertight automatically upon connection (IP66/67 optional)
- simple design for use in very dusty environments
- keying system with 16 positions to avoid incorrect connections
- wide range of metal boxes
- wide range metal, polyester and elastomer handles



Multipin connectors *for control and power applications*

6 sizes available for control applications with up to 37 contacts (From 5 to 30 A / 500 V a.c.)

3 sizes available for power applications with 7 contacts (Up to 150 A / 500 V a.c.)

- auxiliary contacts optional
- integral load-break isolating switch
- easy and safe to handle
- reliability and long service time thanks to silver-nickel butt-contact technology
- spring-assisted non-loosening terminals resist vibration and temperature change
- UV and corrosion resistant
- service temperature range -40 °C to +60 °C.
- keying system to avoid incorrect connections
- robust design IKo8 (glassfibre reinforced polyester body), IKo9 (metal body)
- automatic watertight (different IP ratings according to version)
- wide range of metal and polyester boxes
- wide range metal, polyester and elastomer handles



PF High current plugs and sockets *(315 to 600A)*

- 5 sizes from 315 A to 600 A
- up to 1000 V a.c. or d.c.
- up to 8 pilot or auxiliary contacts
- easy and safe to handle with locking system
- reliability and long service time thanks to silver butt-contact technology
- corrosion resistant
- metal casing IKo9, durable in harsh environments
- IP66/67 watertight
- service temperature range -40 °C to +60 °C
- keying system with 7 to 10 positions to avoid incorrect connections.



This is more than a plug and socket

The DECONTACTOR™ is a plug and socket with an integral load-break isolating switch. Combining these functions into the same unit makes the deconnector a safe, reliable and compact disconnection device for motors and power supplies, saving you time and cost. **It is the ideal electrical connector for the mining and tunnelling industries.**



Innovation for safety and flexibility

For over fifty years, the Marechal deconnector has been known for safety and flexibility. With 7% revenue spent on R&D, we continue to innovate and offer the products to meet the varying needs of our customers.

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BECMA is an international association of manufacturers of butt-contact connectors. It is the only organisation that is able to guarantee that when a plug made by one member manufacturer is mated with a socket made by another complies with the European Low Voltage Directive. BECMA oversees the compliance of mixed plugs and sockets between its members.
www.becma.ch