



**SAFE &  
RELIABLE**

**Switch Rated  
Electrical Connectors**

*for the*

**POWER GENERATION**

*Industry*





# Benefit from Meltric's DECONTACTOR™ Series Switch Rated Plugs, Receptacles, and Electrical Connectors...

## Safety and Code Compliance

Meltric's DECONTACTOR™ Series products combine the safety and function of a switch with the convenience of a plug & receptacle. They are UL & CSA rated for 'motor circuit' and 'branch circuit' switching and are approved NEC 'line of sight' disconnects. Key features, including silver-nickel butt style contacts, enclosed arc chambers, dead front construction and high short circuit ratings, ensure user safety and eliminate the potential for exposure to arc flash or live parts, greatly simplifying compliance with NFPA 70E.



Portable Equipment Connection



Wastewater Mixer Connection



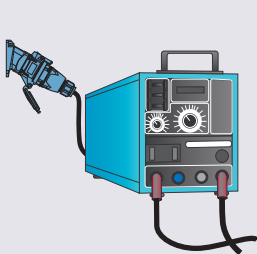
Portable Oil Filter Pump and Cordset

- ✓ Switch ratings comply with NEC 'line of sight' disconnect requirements
- ✓ Short circuit ratings up to 100kA help ensure user safety in overload conditions
- ✓ Dead front construction prevents unintended access to live parts
- ✓ Enclosed arc chambers prevent arc flash exposure

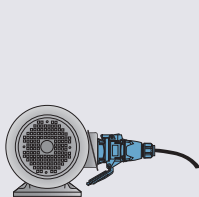


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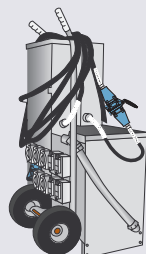
## Common Meltric Applications at Power Generation Facilities



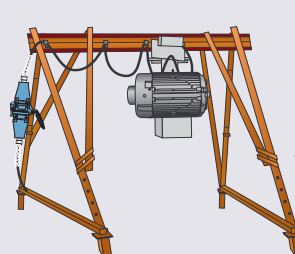
Welding Machines



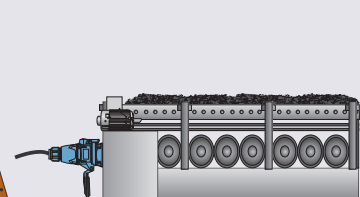
Downtime Critical Motors



Portable Power Distribution



Hoist Connections



Modular Conveyors



## Performance with Cost Savings

Meltric's DECONTACTOR™ Series plugs and receptacles help power plants enhance safety and performance while also reducing equipment and labor costs. Their switch ratings eliminate the expense of interlocks and auxiliary disconnect switches, and their flexible mounting configurations simplify installation. Decontactors unique combination of safety features and plug & play simplicity allows technicians to quickly and easily make and break electrical connections during equipment change-outs. The electrical work can be performed efficiently back at the shop.



Welding Machine



Process Pump Connections

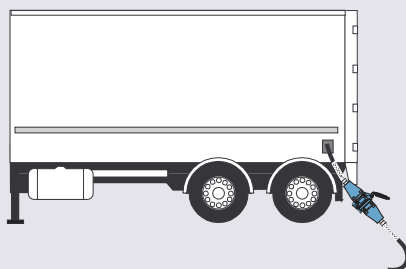


Power Receptacles (lower left)

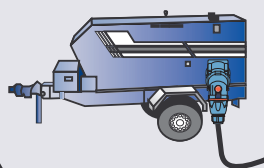
- ✓ Switch ratings eliminate the need for expensive interlocks and auxiliary disconnects
- ✓ Solid silver-nickel contacts are backed by a 5 year warranty
- ✓ Plug & play simplicity helps reduce equipment change-out time by up to 50%
- ✓ Optional pilot contacts allow control and power circuits in one connection



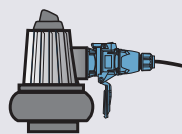
Meltric Installed base includes Nuclear, Hydro, Fossil Fuel and 'Waste to Energy' Plants



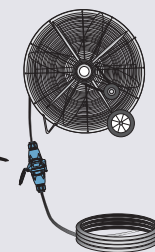
Mobile Facilities



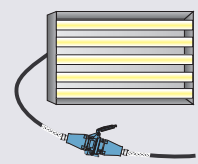
Portable Generators



Pumps



Fans & Cordsets



Heat Lamps & Portable Lighting

# Application Spotlights

## DECONTACTOR™ Series Switch Rated Plugs & Receptacles

### Welding Machine Connections



*Decontactors allow welders to safely connect and disconnect welding machines even under overload conditions.*



*Decontactors provide an 'inline switch' when used on extension cords*

### Ensure User Safety

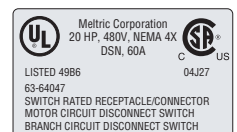
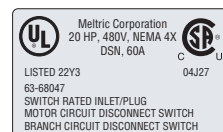
Significant safety and cost advantages make Decontactors the ideal choice for connecting power to welding machines and other equipment. With their switch ratings, 65kA or greater short circuit ratings, enclosed arc chambers and dead front construction, they not only allow users to safely make and break resistive and inductive loads under full load, but also eliminate the potential for arc flash exposure and provide protection in dangerous overload situations. The need for the expensive interlocks required with other plug & receptacles and the common problem of defeating the interlock with extension cords are eliminated.

4

### Mobile Facilities Power Supply



*Decontactors provide convenient power supply connections and local disconnects for mobile facilities.*



*Typical Plug and Receptacle Label showing the Decontactors UL & CSA switch ratings*

### Easily Meet NEC Code Requirements

The NEC requires motors to have readily accessible 'line of sight' disconnects. Meltric Decontactors are UL and CSA listed for 'Motor Circuit' and Branch Circuit' Disconnect Switching, and are approved NEC 'line of sight' disconnect switches. With models rated up to 60 hp and 200A, and with configurations available for wall mounted, equipment mounted, and in-line connections, Decontactors provide the most convenient and cost effective means of meeting code requirements for local disconnects.



## Downtime Critical Equipment



*Correct motor rotation can be ensured by pre-testing motors at a test bench with receptacles that match the polarization in the field.*



*Meltric's switch rated plugs and receptacles utilize motor starter contact technology, allowing users to safely make and break motor loads up to 60 hp*

## Simplify Motor Change-outs

Motors that are prewired with a Deconnector plug or inlet can be electrically connected simply by plugging them in. Safety features allow technicians to perform motor change-outs in the field, eliminating the need to wait for an electrician. Using Meltric Deconnectors to connect motors instead of hardwiring can help reduce motor change-out and downtime costs by 50%.

## Hoist Connections



*Deconnectors used as in-line disconnects facilitate quick and safe servicing of hoist equipment.*



*Deconnector receptacle – dead front prevents unintended exposure to live parts*

## Ensure Arc Flash Protection

Deconnectors provide arc flash protection by eliminating the potential for exposure to live parts and arcing. The contacts are completely enclosed during load-making and breaking, ensuring that any associated arcing is safely isolated in internal arc chambers. The plug can only be removed if the device has been switched 'off' and the plug contacts are dead. The safety shutter on the receptacle automatically closes while the plug is being removed, maintaining a dead front and preventing access to live parts after the plug is removed. Thus, at no time during the operation of the device will the user have unintended access to live contacts or arcing.

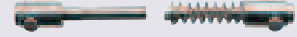
# Application Spotlights

## DECONTACTOR™ Series Switch Rated Plugs & Receptacles

### Portable Lighting Connections



Meltric plugs and receptacles ensure worker safety when connecting heat lamps or other lighting loads, even in damp conditions.



MATERIAL	CONTACT RESISTANCE	
	New	Oxidized
SILVER-NICKEL	23 $\mu\Omega$	60 $\mu\Omega$
BRASS	370 $\mu\Omega$	1400 $\mu\Omega$

Meltric's silver nickel contacts are 20X more conductive than brass

### Withstand Harsh Environments

In addition to their superior electrical properties, Decontactors spring-loaded, silver-nickel butt style contacts are more durable and withstand harsh environments better than the brass contacts used on pin & sleeve devices. Decontactor contacts close with a self-cleaning wiping action, their heavy duty coil springs maintain optimal contact pressure and the silver-nickel material offers excellent wear resistance, providing more reliable performance in dirty environments. Unlike brass, silver-nickel maintains its electrical properties after oxidation and withstands many common corrosive environments.

6

### Pump Connections



Float pumps or dewatering pumps can be safely and quickly disconnected and reconnected with Decontactors.



Decontactor inlets/plugs include lockout/tagout provisions. Receptacles are available with an optional lockout pawl.

### Simplify NFPA 70E Compliance

The NFPA 70E 'Standard for Electrical Safety in the Workplace' requires the establishment of an electrical safe work condition before work tasks can be performed. Meltric Decontactors make this simple. Dead front construction eliminates potential exposure to arcing and unintended access to live parts, and the removal of the plug from the receptacle provides verification of de-energization. Thus, electrical connections can be made and broken without the need to establish flash hazard boundaries, perform voltage testing, or 'suit-up' to meet NFPA 70E's PPE requirements for energized electrical work.



## Portable Power Distribution



*A mobile diesel generator supplies power via Meltric plugs & receptacles during outage conditions.*



*NEMA 4X rated DSN Deconnector*

## Protect Against the Elements

Meltric's Deconnector Series plugs and receptacles are available with ingress protection ratings up to NEMA 4X and IP66/67. DS and DSN series Deconnectors achieve their ratings simply by mating the plug with the receptacle. There is no need to turn or tighten additional fittings as is required to enable protection on many other plug & receptacles. The ratings can also be maintained when the plug & receptacle are disconnected: by closing and latching the lid on the receptacle, or by installing an optional cap on the plug.

## Retrofit Applications



*Adapter plates made it simple for this power plant to convert their existing pin and sleeve receptacles to Deconnectors.*



*Adapter plates are available in a variety of sizes and configurations.*

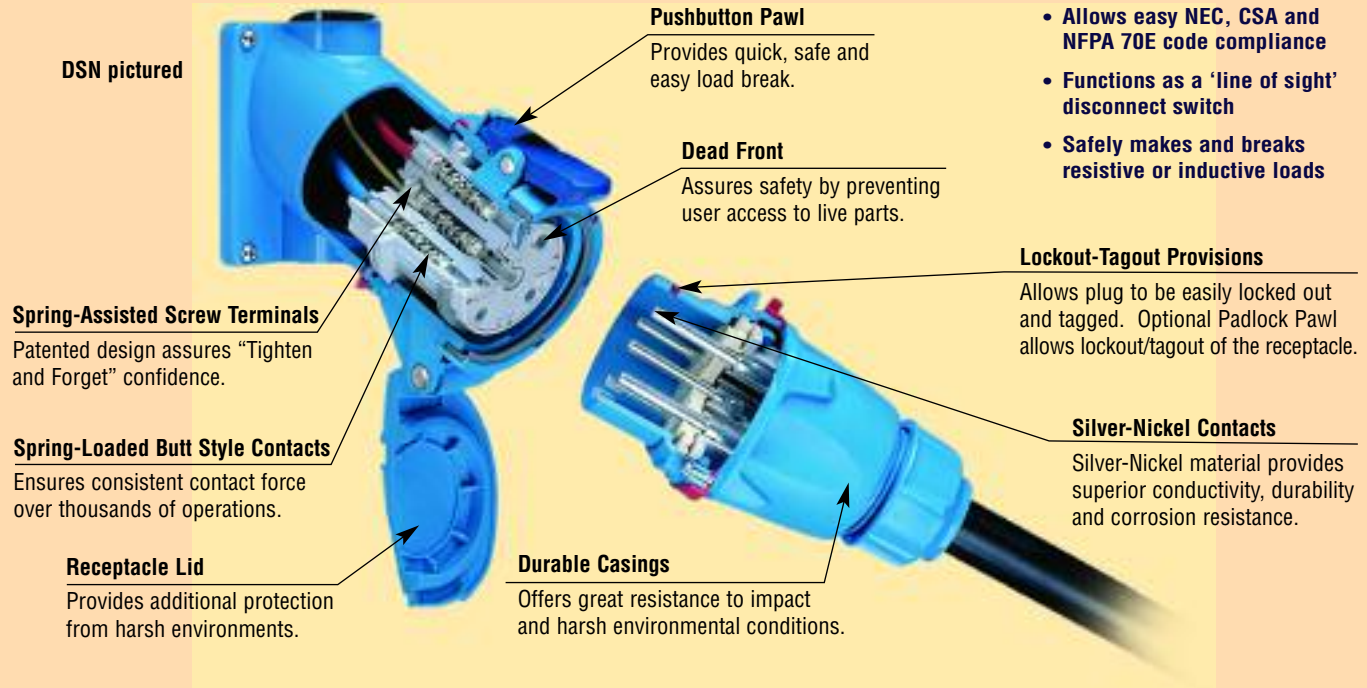
## Minimize Upgrade Costs

With Meltric Deconnectors, power generation facilities can upgrade existing pin & sleeve connections to improve safety and comply with NEC and NFPA 70E requirements easily and with minimal expense. Their switch ratings eliminate the need for expensive interlocks and auxiliary disconnect switches, and available adapter plates allow Deconnector receptacles or inlets to be easily installed on existing junction boxes, eliminating the need for costly rewiring. Meltric offers standard adapter plates to fit hundreds of other manufacturers boxes and can quickly custom make others as required.



# Product Specifications

## Meltric DECONTACTOR™ Series Plugs & Receptacles – 20 to 200A...



### DSN 20-60A



- Compact, lightweight design
- NEMA 4X, IP 66/67
- Up to 4 auxiliary contacts
- Polyester casings
- 100kA short circuit rated

### DS 20-200A



- Rugged construction
- NEMA 3R
- Up to 5 auxiliary contacts
- Polyester or Metal casings
- ≥65kA short circuit rated

### DB 30-100A



- High horsepower capacity
- IP 67
- Up to 4 auxiliary contacts
- Zinc aluminum alloy casings
- 100kA short circuit rated

## Tested to a Higher Standard

Meltric Deconnectors are the world's only UL and CSA switch rated plugs and receptacles. Not only do they meet performance test requirements for UL 1682/CSA C22.2 No. 182.1 (to which competitive pin and sleeve devices are listed), but Deconnectors also meet the performance test requirements in UL Subject 2682 "Switch-Rated Plugs and Receptacles." Based on their evaluation against this standard, Deconnectors are UL and CSA listed for use in motor circuit disconnect/switching applications and in branch circuit disconnect/switching applications.

### Tests passed by Meltric Deconnectors and by traditional pin and sleeve type plugs and receptacles (per UL 1682 and CSA 22.2 No. 182.1)

- ✓ Temperature Rise (not to exceed 30°C over ambient)
- ✓ 50 operations @ 150% device rating and .7 - .8 power factor
- ✓ Endurance - number of operations @ .75 - .8 power factor

• 20A	5,000 under load	0 off load
• 30 to 60A	1,000 under load	1,000 off load
• 100 to 200A	250 under load	250 off load

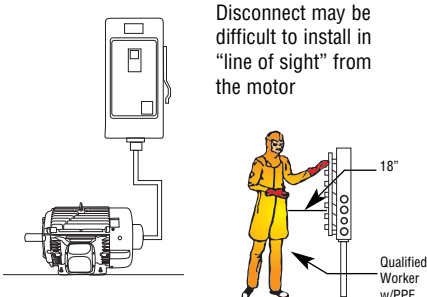
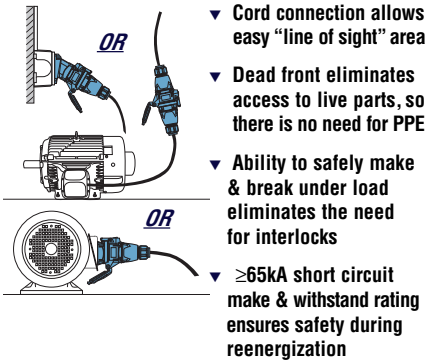
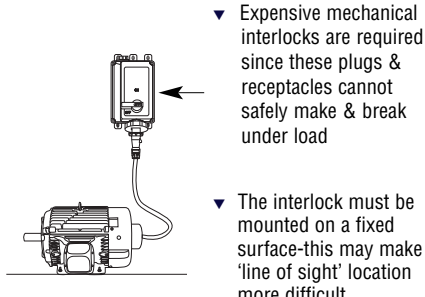
### Additional Tests passed exclusively by Deconnector™ Series plugs and receptacles per UL Subject 2682.

- ✦ 50 operations @ 6x motor FLA .4 - .5 power factor
- ✦ 6,000 operations @ FLA .75 - .8 power factor
- ✦ Short circuit make and withstand @ ≥65kA, 600V and < .15 PF

**Additional Listings include: IEC/EN 60309-1, 60947-3, AS 3123**

# ...Offering Durability, Safety & Code Compliance

## SAFETY & CODE COMPLIANCE: *Meltric vs the Competition*

MOTOR HARD-WIRED TO A BLADED DISCONNECT SWITCH	MOTOR CONNECTED WITH A MELTRIC MOTOR PLUG	MOTOR CONNECTED WITH A COMPETITIVE PLUG & RECEPTACLE
 <p>Disconnect may be difficult to install in "line of sight" from the motor</p> <p>18"</p> <p>Qualified Worker w/PPE</p>	 <p>OR</p> <p>OR</p> <ul style="list-style-type: none"> <li>▼ Cord connection allows easy "line of sight" area</li> <li>▼ Dead front eliminates access to live parts, so there is no need for PPE</li> <li>▼ Ability to safely make &amp; break under load eliminates the need for interlocks</li> <li>▼ <math>\geq 65\text{kA}</math> short circuit make &amp; withstand rating ensures safety during reenergization</li> </ul>	 <ul style="list-style-type: none"> <li>▼ Expensive mechanical interlocks are required since these plugs &amp; receptacles cannot safely make &amp; break under load</li> <li>▼ The interlock must be mounted on a fixed surface-this may make "line of sight" location more difficult</li> </ul>
MOTOR CHANGE-OUT PROCESS	MOTOR CHANGE-OUT PROCESS	MOTOR CHANGE-OUT PROCESS
<ol style="list-style-type: none"> <li>1. Electrician opens disconnect switch</li> <li>2. Determine PPE requirements and obtain</li> <li>3. Remove disconnect cover</li> <li>4. Voltmeter test to verify deenergization</li> <li>5. Apply lockout/tagout</li> <li>6. Disconnect motor from hard-wiring</li> <li>7. Mechanic removes old/installs new motor</li> <li>8. Electrician connects motor to hard-wiring</li> </ol>	<ol style="list-style-type: none"> <li>1. Mechanic removes plug from receptacle</li> <li>2. Apply lockout/tagout as required</li> <li>3. Mechanic removes old/installs new motor</li> <li>4. Mechanic inserts plug into receptacle</li> </ol> <p><b>Meltric Makes it Safe &amp; Easy</b></p>	<ol style="list-style-type: none"> <li>1. Open interlock switch</li> <li>2. Determine PPE requirements &amp; obtain</li> <li>3. Remove interlock cover</li> <li>4. Voltmeter test to verify deenergization</li> <li>5. Remove plug</li> <li>6. Apply lockout/tagout as required</li> <li>7. Remove old/install new motor</li> <li>8. Insert plug into receptacle</li> </ol>

## Product Selection Guide

Model	Casing Material	Maximum Voltage (VAC)	Amperage Rating	Maximum Number of Contacts		Environmental Rating	Maximum Horsepower Rating	
				Main	Auxiliary		480VAC	600VAC
<i>DSN20</i>	Poly	480VAC	20A	3P+N+E	-	NEMA 4X IP66/67	5 hp	na
<i>DSN30</i>	Poly	600VAC	30A	3P+N+E	2	NEMA 4X IP66/67	10 hp	15 hp
<i>DSN60</i>	Poly	600VAC	60A	3P+N+E	4	NEMA 4X IP66/67	20 hp	20 hp
<i>DS20</i>	Poly	600VAC	20A	3P+N+E	2	NEMA 3R	5 hp	7.5 hp
<i>DS30</i>	Poly	600VAC	30A	3P+N+E	4	NEMA 3R	10 hp	10 hp
<i>DS60</i>	Poly or Metal	600VAC	60A	3P+N+E	3	NEMA 3R	20 hp	25 hp
<i>DS100C</i>	Poly or Metal	600VAC	100A	3P+N+E	3	NEMA 3R	20 hp	25 hp
<i>DS100</i>	Poly or Metal	600VAC	100A	3P+N+E	5	NEMA 3R	-	-
<i>DS200</i>	Metal	480VAC	200A	3P+N+E	5	NEMA 3R	-	-
<i>DB30</i>	Zinc Aluminum	600VAC	30A	3P+N+E	2	IP67	10 hp	10 hp
<i>DB60</i>	Zinc Aluminum	600VAC	60A	3P+N+E	2	IP67	30 hp	30 hp
<i>DB100</i>	Zinc Aluminum	600VAC	100A	3P+N+E	4	IP67	60 hp	60 hp

\* Consult the Meltric catalog for horsepower ratings at other voltages.



# Common Product Accessories

## Handle Options

Optional Cord Grip with Wire Mesh



Poly Handle PH Handle PM Handle Finger Draw Plates

Meltric offers handles for all applications. Poly handles feature a layered bushing and compression nut to secure the cable, PH handles are threaded to receive cord grips or conduit fittings, and PM handles have cable clamps and interior bushings. PH or PM style handles are recommended for cord-drop applications and optional finger drawplates are recommended for easier closure of cord-to-cord connectors.



## Angles and Boxes



Conduit Entry Metal Junction Box 30° Metal Angle 70° Metal Angle

Meltric offers a variety of poly and metal angles and adapters to help users locate and position their devices in the most effective orientation for the application. Meltric also offers a range of metal junction boxes to support all sizes of Deconnectors and a line of nylon conduit entry boxes for applications where non-metallic accessories are preferred.



## Pawl Options



Locking device not included

Emergency Stop Pawl Padlockable Pawl

An emergency stop pawl with a larger and easier to actuate stop button is available for applications where emergency disconnections may be required. Padlock pawls include a .32" diameter hole through the pawl to allow the insertion of a padlock, allowing users to lock the receptacle lid closed or lock the plug and receptacle in the connected state.



## Adapter Plates



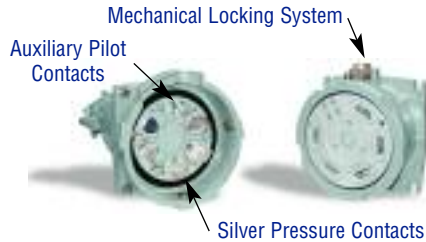
Meltric adapter plates allow Deconnectors to be installed on existing junction boxes, providing an easy and cost effective means of upgrading from competitive devices. Standard adapter plates are available for many Appleton, Crouse-Hinds, Hubbell, Killark and Pyle National devices, and can be quickly custom made for others.



# Other Meltric Product Lines for the Power Generation Industry



## PF/PFQ Series – For High Amperage Connections



PF/PFQ Series plugs & receptacles are engineered for applications up to 600A where routine plug insertion and high reliability are required. Solid silver contacts maximize conductivity and resistance to corrosion, a mechanical locking feature prevents accidental disconnection, and auxiliary pilot contacts ensure disconnection of the load before the plug can be removed.



## Multipin Series – For Control Wire Connections



Meltric's multipin connectors are available with up to 37 contacts and NEMA 4X environmental protection. They help eliminate rewiring errors and simplify equipment change-outs by providing a convenient single connection point for applications where the monitoring of critical parameters and/or the control of secondary circuits or equipment is required.



## DXN Series – For Hazardous Duty Connections



DXN Series plugs and receptacles are CSA rated for use in Class I Zone 1, Class I Division 2 and Class II Division 2 environments. With their lightweight, yet rugged, construction and their ability to be used as in-line connectors, DXN's bring the convenience of plug & play simplicity to hazardous duty environments.



## Power Distribution Products – For Custom Power Needs



Meltric's power distribution products make it easy for plants to provide the safety of Decontactor Series switch rated plugs & receptacles wherever power is required. Meltric offers a number of standard panels and boxes that can be equipped to suit users needs, or will custom design a package specifically for the intended application.





### **Outstanding Customer Service**

Meltric's Customer Service group is trained to answer most technical questions on the spot and is located at our manufacturing facility to streamline the order fulfillment and communication process. The Engineering group is located at the same facility and thus can quickly provide application and custom product design support. Friendly and personal assistance is only a toll-free call away at (800) 433-7642.

### **Short Lead-Times Plus a Same Day Shipment Option**



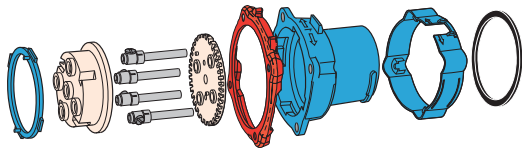
Meltric ships 90% of its orders for standard products within two days of order receipt and offers same day shipment on many items for a nominal priority fee, helping to ensure that your items are delivered when you need them. Larger orders and custom orders naturally take a bit longer.

### **Five Year Warranty on Electrical Components**



Meltric stands behind its products with a five-year warranty on the electrical contacts and a one-year warranty on the complete product. A complete warranty statement and information on other terms and conditions is available from Customer Service.

### **Reasonably Priced Replacement Parts**



With the Decontactors robust construction, the need to replace worn parts is rare. However, if they are required, parts are readily available and reasonably priced. Purchasing all the individual parts costs no more than buying an assembled product.

*Presented by Meltric and:*