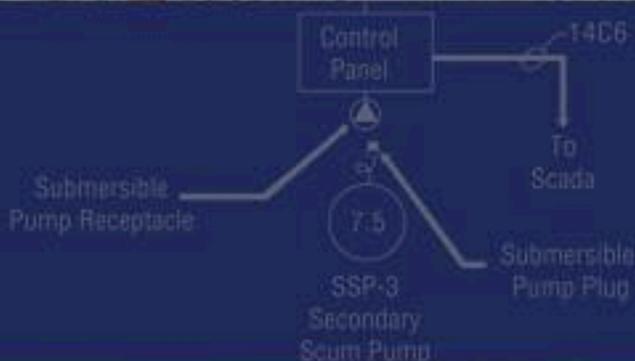


Wastewater Solutions



Featuring Meltric's
DECONTACTOR™ Series
Switch Rated Plugs,
Receptacles and
Electrical Connectors



Meltric DECONTACTOR™ Series Plugs & Receptacles

Decontactors are a combination plug and receptacle and disconnect switch in the same device. In addition to providing a safe and convenient electrical connection, **they also provide the NEC required 'line of sight' disconnect**. They allow users to safely and easily make and break electrical connections even under full load. Using Meltric Decontactors to connect motors instead of hard-wiring can help *reduce motor change-out downtime by as much as 50%*.



Connection to an Anaerobic Basin Mixer



Remote Lift Station



Primary Air Compressor

Simplify Maintenance

Decontactors allow mixers and other equipment to be safely connected with plug and play simplicity. Mechanics can easily replace or service equipment without needing an electrician on site and without the need for electrical PPE, as required by NFPA 70E. Equipment change-out times are significantly reduced, worker exposure to harsh environments is minimized, and re-wiring errors are eliminated (no more motors running backwards).



Simplify NEC Code Compliance

Using Decontactors to connect pumps, grinders (shown) or other equipment, automatically provides the NEC required 'line of sight' disconnect. The installation of Decontactors is a simple and cost effective means of achieving code compliance on new or existing installations. Decontactors function as a local disconnect and provide positive visual verification that power is off. The need and expense of a separate disconnect switch is eliminated.



Ideally Suited for the Wastewater Industry

Decontactors are built with materials that withstand the harsh environment of wastewater treatment plants. For example, Meltric's silver-nickel contacts, stainless steel hardware, and chemical resistant housings help withstand corrosion caused by the hydrogen sulfide gases often found in wastewater environments. Other features, such as optional auxiliary pilot contacts, help make the operation of a wastewater plant safer and more efficient by allowing electrical interlocking with a motor starter and by simplifying the monitoring of key parameters that may indicate thermal alarms or seal failures.



Connection to a Sludge Mixer in a Holding Tank



Connections to Submersible Pumps for Effluent Water

Provide Durable Connections



Decontactors are ideal for connecting submersible pumps in both indoor and outdoor applications. Their spring-loaded, silver-nickel butt-style contacts provide consistently superior electrical performance over thousands of operations and are resistant to wear, corrosion, oxidation, and other factors that contribute to the premature failure of pin & sleeve devices. They also feature a patented, spring assisted, screw terminal design that helps prevent connections from loosening over time due to conductor yield and vibration.

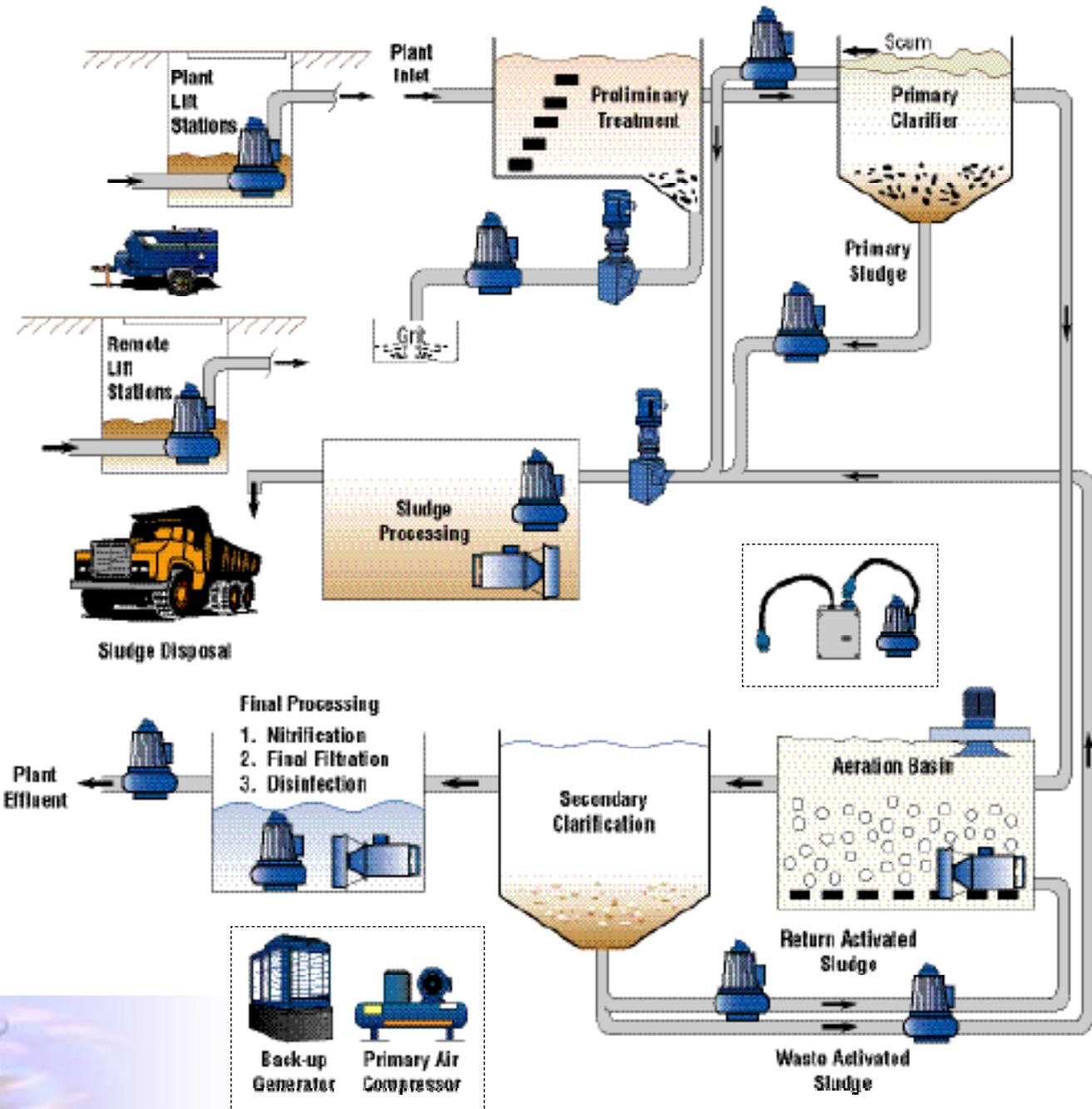
Ensure Safety for Maintenance Personnel



In addition to the safety benefit inherent in the contact design, all Decontactors have dead front construction, enclosed arc chambers and short circuit make and withstand ratings of at least 65kA. The dead front prevents user access to live parts and the short circuit rating ensures safety during insertion, even under overload or locked rotor conditions. Decontactors eliminate the safety hazards associated with pin & sleeve devices.

Benefit from Meltric Connectors...

Meltric Switch Rated Plugs, Receptacles and Connectors are ideal for connecting power to...



Application Spotlight: Submersible Mixers

Submersible mixers and pumps are used throughout a typical wastewater treatment plant, as well as, at remote lift stations. When used to connect power to submersible mixers or pumps, Meltric Decontactors offer.....

- **Safety**

Workers can safely make and break electrical connections under full load. The dead front prevents access to live parts.

- **Easy Equipment Change-outs**

A technician can break the power, service or replace the mixer, and reconnect power. There is no need for an electrician on site.

- **Low Costs**

Decontactors are UL, CSA, and IEC switch rated. You effectively get a disconnect switch for free.

- **Design and Installation Simplicity**

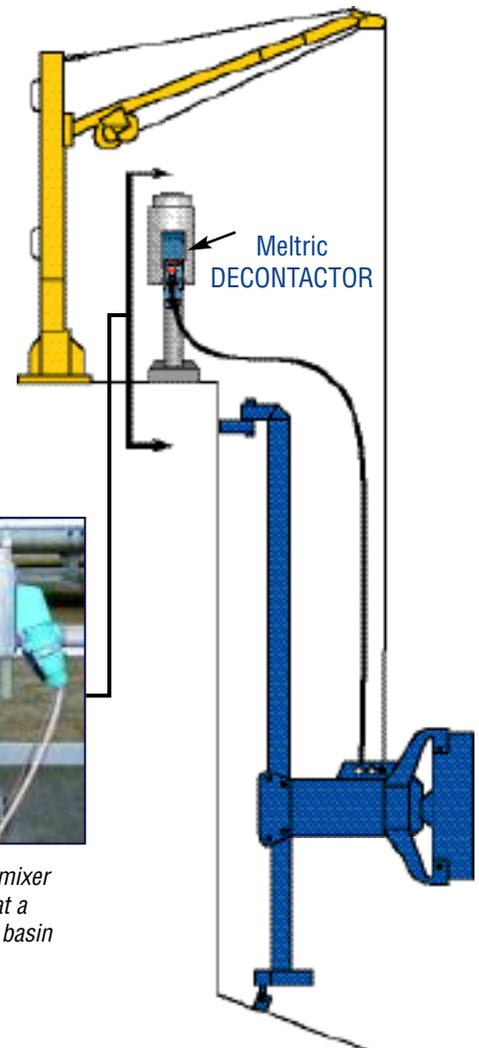
There is no need to locate and install auxiliary disconnect switches or mechanical interlocks.

- **Long Life**

Robust materials and construction resist harsh environments. Butt-style contacts perform for thousands of operations.

- **Extended Functionality**

Optional auxiliary pilot contacts allow facilities to easily interlock with motor starters and monitor key parameters, such as, thermal alarm or seal failure.



Submersible mixer connections at a BNR process basin

Typical submersible mixer application

Simple and Safe Operation



When the plug and receptacle are latched together, the circuit is connected.



Pressing the pawl causes the DECONTACTOR to break the circuit. The plug is ejected to its rest position; its contacts are now dead.



Rotating the 'dead' plug 30° counterclockwise closes the safety shutter and frees the plug to be withdrawn from the receptacle.



The plug and the receptacle are separated. The safety shutter prevents access to live parts.

Meltric DECONTACTOR™ Series Plugs and Receptacles

DSN pictured

Pushbutton Pawl
Provides quick, safe and easy load break.

Dead Front
Assures safety by preventing user access to live parts.

Spring-Assisted Screw Terminals
Patented design assures "Tighten and Forget" confidence.

Spring-Loaded Butt Style Contacts
Ensures consistent contact force over thousands of operations.

Receptacle Lid
Provides additional protection from harsh environments.

Durable Casings
Offers great resistance to impact and harsh environmental conditions.

Lockout-Tagout Provisions
Allows plug to be easily locked out and tagged. Optional padlock pawl allows lockout/tagout of the receptacle.

Silver-Nickel Contacts
Silver-Nickel material provides superior conductivity, durability and corrosion resistance.

- Allows easy NEC, CSA and NFPA 70E code compliance
- Functions as a 'line of sight' disconnect switch
- Safely makes and breaks resistive or inductive loads

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

* Testing was performed with RK1 current limiting fuses sized at 400% of the highest full load motor ampacity associated with the devices hp ratings, except for DB100 which was tested with 250A fuses. Non-horsepower rated DS100 and DS200 devices were tested with RK5 time delay fuses sized at 100% of the devices rated ampacity.

Tested to a Higher Standard

Meltric Decontactors 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 Decontactors also meet the performance test requirements in UL Subject 2682 "Switch-Rated Plugs and Receptacles." Based on their evaluation against this standard, Decontactors are UL and CSA listed for use in motor circuit disconnect/switching applications and in branch circuit disconnect/switching applications.

Tests passed by Meltric Decontactors 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

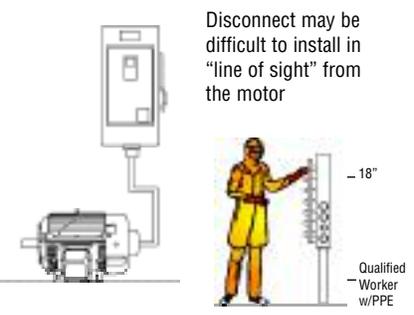
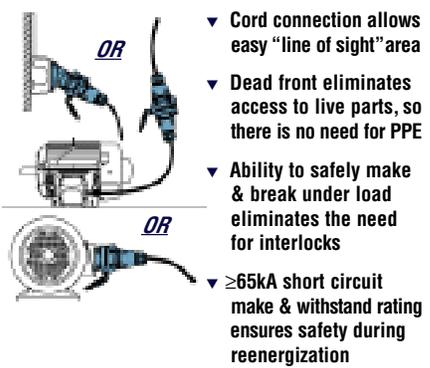
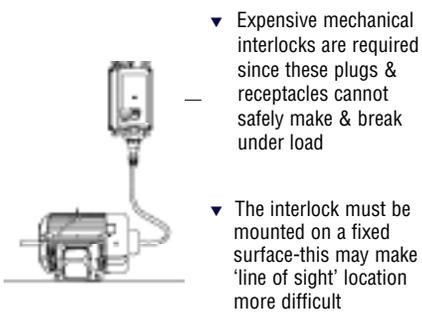
Additional Tests passed exclusively by DECONTACTOR™ Series plugs and receptacles per UL Subject 2682.

- + 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

Product Technology & Specifications

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>	 <ul style="list-style-type: none"> ▼ Cord connection allows easy "line of sight" area ▼ Dead front eliminates access to live parts, so there is no need for PPE ▼ Ability to safely make & break under load eliminates the need for interlocks ▼ ≥65kA short circuit make & withstand rating ensures safety during reenergization 	 <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. Determine PPE requirements and obtain 3. Remove disconnect cover 4. Voltmeter test to verify deenergization 5. Apply lockout/tagout 6. Disconnect motor from hard-wiring 7. Mechanic removes old/installs new motor 8. Electrician connects motor to hard-wiring 	<ol style="list-style-type: none"> 1. Mechanic removes plug from receptacle 2. Apply lockout/tagout as required 3. Mechanic removes old/installs new motor 4. Mechanic inserts plug into receptacle <p style="text-align: center;">Meltric Makes it Safe & Easy</p>	<ol style="list-style-type: none"> 1. Open interlock switch 2. Determine PPE requirements & obtain 3. Remove interlock cover 4. Voltmeter test to verify deenergization 5. Remove plug 6. Apply lockout/tagout as required 7. Remove old/install new motor 8. Insert plug into receptacle

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

Other Meltric Products Commonly Used in Wastewater Facilities



Multipin products are commonly used in power and control applications. They are available with up to 37 contacts and have a total amp capacity ranging from 5 to 100A. DS7 models facilitate star-delta motor starting.



DXN's are CSA listed for Class 1 Division 2 and Class 2 Division 2 environments. Suitable for loads up to 60A, DXN's provide a compact, waterproof solution for potentially hazardous locations.

Common Options Used in Wastewater Facilities

Auxiliary Pilot Contacts



Pilot Contacts

Pilot contacts are available for operating secondary control circuits or for electrical interlocking with motor starters. These contacts make last and break first when the plug is engaged or disengaged. Two to five auxiliary contacts are available on Decontactors.

Lockable Plugs or Receptacles



Padlockable Pawl

Padlockable Plug Cap

Locking device not included

DSN Plug

Padlockable pawls and plug caps are available for preventing unwanted connection or disconnection of plugs. Padlockable pawls also allow the lid to be locked closed. Padlockable plug caps provide up to NEMA 4X watertightness.

Meltric Service

Replacement Parts

The need to replace parts is rare. However, should they be required, parts are readily available and reasonably priced. Purchasing the individual parts costs no more than buying an assembled product.

Same Day Shipping

Due to the modular design of our product and efficient customer service and factory operations, 90% of our orders are shipped by the next day. For a small fee, orders can be shipped the same day.

Five Year Warranty

The electrical contacts on Meltric products are warranted for five years from date of shipment. The complete product is warranted for one year from the date of shipment. Contact Meltric for a full warranty statement.

