

SAFE, RELIABLE, WATERTIGHT ELECTRICAL CONNECTIONS

FOR THE FOOD AND BEVERAGE INDUSTRIES



SAFE, VERSATILE ELECTRICAL CONNECTIONS

The future of safe, efficient food and beverage processing is NOW. Discover the simple effectiveness of **MELTRIC® Switch-Rated plugs and receptacles**. MELTRIC electrical solutions help trim operational costs, keep employees safe, and maximize production.



Reduced Downtime

Replace old pin and sleeve or disconnect switch technology with MELTRIC Switch-Rated plugs and receptacles and minimize the time and expense required to connect and disconnect your electrical equipment.

- Safely make and break electrical connections with plug-and-play speed
- Apply lockout/tagout quickly and easily with MELTRIC integral provisions
- Eliminate the time required to suit up in cumbersome PPE
- Avoid rewiring errors

Qualified electricians are needed to wire and install MELTRIC plugs and receptacles. However, once installed, power can be connected or disconnected by any technician with plug-and-play simplicity and in complete safety without the need for additional PPE. Equipment changeouts and maintenance work can be performed faster, improving uptime and efficiency.





Watertight Operation

WASHDOWN
BROCHURE>>>

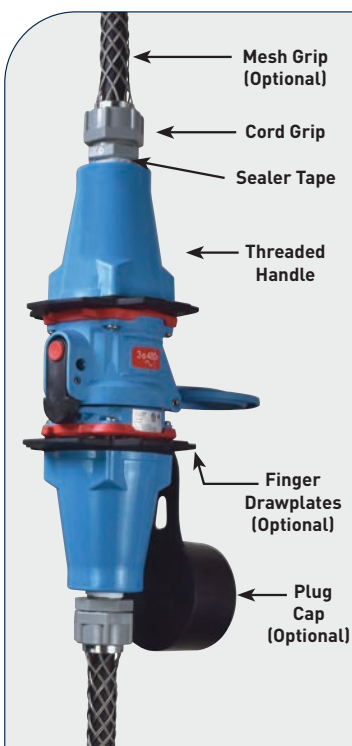


Make clean-up and maintenance safer and more efficient; MELTRIC Switch-Rated devices are built to withstand the rigors of food and beverage processing.

DSN Series devices are designed to automatically ensure up to Type 4X and IP69/IP69K rated watertightness as soon as the plug and receptacle are mated, or when the receptacle lid is closed. There is no need to thread on or engage sealing rings as on many pin and sleeve devices.

Good sanitation is critical in the food and beverage industry, but frequent washdowns with caustic cleaners can be brutal on equipment. MELTRIC devices are designed to be durable with:

- Stainless steel hardware that withstands corrosion
- Silver-nickel contacts that provide reliable conductivity in harsh environments
- Chemical-resistant casings



Use mesh cord grips to maximize resistance to cord pullout.

Installing a DSN/DS for Maximum Watertightness

Multiple mounting options are available, but washdown environments may require specific mounting installations to prevent water ingress. Here are some installation guidelines for use in washdown environments:

- **Mounting Orientation:** Install the receptacle (inlet) pointing downward to ensure water washes over the device during washdowns.
- **Threaded Handle Accessory:** Use a threaded poly handle for a better watertight seal when installing with a cord grip.
- **Sealer Tape on Cord Grip:** Use sealer tape on poly/threaded handles when installing third-party cord grips and on NPT handle fittings for additional watertight protection.
- **Plug Cap:** Use the optional plug cap to prevent water ingress into the plug when it is disconnected.

MELTRIC chemical-resistant poly casings can withstand commercial-strength cleaning products, including the top five most common solutions:

- Chlorinated cleaners (Chlorine dioxide)
- Sanitizers and disinfectants (Hypochlorites)
- Foaming cleaners (Lodophors)
- Ammonium
- Heavy-duty acid cleaners (CIP acid)



IP69K Type

Safety Features



Optimized Safety

Every MELTRIC device is engineered for reliability and safety. Our signature Switch-Rated series elevates user safety with the addition of unique product features designed to isolate and eliminate electrical hazards:

- Dead-front safety shutters – prevent access to live parts
- Enclosed arc chambers – eliminate arc hazard during disconnection
- Quick-break technology – immediately de-energizes the circuit, reducing the risk of arc formation
- Contact technology - withstands overload and short-circuit conditions – keeps users safe from electrical hazards
- Built-in lockout/tagout provision - makes lock or hasp insertion easy

MELTRIC DSN and DS Switch-Rated devices are UL/CSA listed for branch circuit and motor circuit disconnect switching. Our Switch-Rated plugs and receptacles can safely make and break electrical connections under full load, even in wet, washdown conditions. Switch-Rated devices power equipment and machinery up to 200 A, 600 volts, and 100 horsepower.

For added safety, available lockout/tagout provisions allow lockout of either the plug or the receptacle and allow connected devices to be locked together.

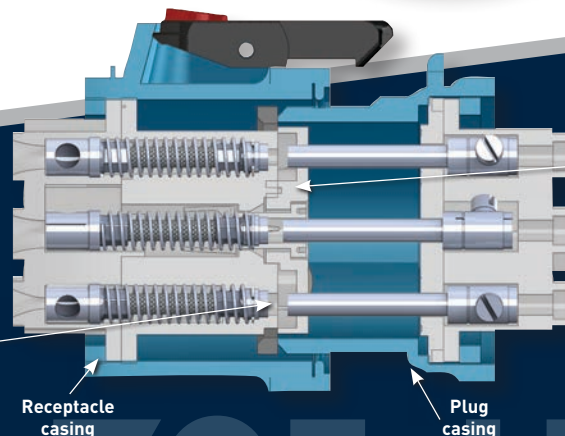


SAFETY SHUTTER



Dead-front safety shutter prevents access to live contacts

Arc chamber prevents external exposure to arc flash



Safety shutter

Receptacle casing

Plug casing

ENCLOSED ARC CHAMBERS



Simplify Code Compliance

MELTRIC Switch-Rated plugs and receptacles simplify NFPA 70E and NEC compliance.



Here's How:

- **NFPA 70E Normal Operation – Article 110.2 (B) Exception No. 1** - PPE may not be required, as the design of Switch-Rated plugs and receptacles incorporates a contained arc chamber. UL2682 verifies that the operator is not subjected to an arc flash when the plug and receptacle are installed and operated as instructed.
- **NFPA 70E Establishing and Verifying an Electrically Safe Work Condition - Article 120.5** - Switch ratings ensure a safe and proper interruption of the load current (2); removal of the plug from the receptacle provides clear visual and physical verification of de-energization (3) and (7); and integral lockout provisions make applying lockout/tagout simple (6).
- **NEC Line-of-Sight Motor Disconnect - Article 430.102(B) (1) and 430.109 (A)(1), 430.110** - MELTRIC Switch-Rated plugs and receptacles are hp-rated and UL/CSA listed for motor circuit disconnect switching so they meet all NEC requirements as an approved 'line-of-sight' motor disconnect. These switch ratings eliminate the need for the auxiliary disconnect required with most other plugs and receptacles.



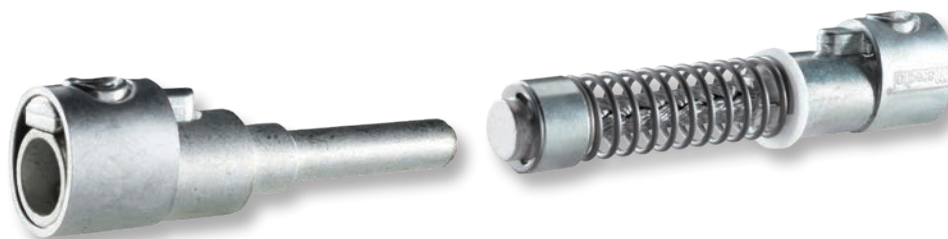
CSA CSA Z4

Safety Features



Butt-Style Pressure Contacts – Built for Performance

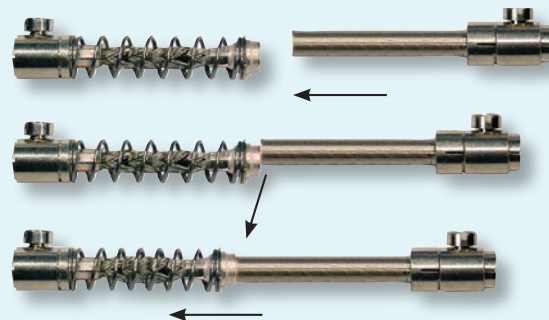
Unlike traditional pin and sleeve, twist-lock, or straight-bladed devices, MELTRIC plugs and receptacles use spring-loaded, butt-style pressure contacts to ensure a superior electrical connection.



Spring loading ensures optimal contact force over thousands of operations. Incorporating a resilient silver-nickel alloy to minimize and withstand arcing, prevent welding, and resist corrosion, these butt-style contacts are impervious to deterioration, wear, and oxidation. This helps ensure safe load making and breaking and excellent conductivity over the life of the device.

Self-Cleaning Action

MELTRIC contacts provide a self-cleaning wiping action as they close. This helps remove dirt and deposits from the contact surface and helps provide a reliable electrical connection.



Quick Break Technology

Pushing down on the pawl instantaneously breaks the electrical circuit and ejects the plug to the “off” position. Load breaking is accomplished in just 15 milliseconds. This minimizes associated internal arcing, enhances user safety, and prevents equipment damage.





Easy Connections



MELTRIC Switch-Rated devices are easy to connect and disconnect.

To Disconnect

- 1) Press the pawl to eject the plug.
- 2) Rotate the plug counterclockwise 30°.
- 3) Remove the plug straight out.

To Connect

- 1) Line up red dots.
- 2) Insert plug into receptacle.
- 3) Rotate plug clockwise 30°.
- 4) Push plug until the pawl latches.



Replace Pin and Sleeve Devices...**No More PPE!**

- Improve worker safety
- Reduce changeout and maintenance downtime
- Simplify NEC and NFPA 70E Compliance

Need More Control?

MELTRIC devices can be configured with auxiliary pilot contacts that can communicate with secondary control circuits.

- Send alarm signals
- Remotely turn equipment on or off
- Receive notifications for planned maintenance

The Possibilities are Endless!



Self-Cleaning



SOLUTIONS FOR EVERY STAGE

of the Food and Beverage Industry

Process



Growing and Producing

Rugged construction

- Stackers, slingers, pumps, fans, HVAC equipment



Processing

Portable, watertight connections

- Washers, conveyors, pumps, ovens, mixers, extruders, depositors, HVAC equipment



Packaging

Mobile, versatile

- Cartoners, wrappers, baggers, sealers, fillers, conveyors



Storage

Reliable, sturdy connections

- Pumps, fans, refrigeration units, freezers, forklift chargers



Distribution

Power on the go

- Reefer electrification, loading dock power, conveyors, generators



Retail

Portable. Accessible. Safe.

- Generators, refrigerators, slicers, ovens, display units, portable food carts



FOOD & BEV
WEB PAGE >>



Applications



Conveyor Systems

- Quick and safe equipment reconfigurations
- Incorporates secondary controls



Portable/Handheld Equipment

- Corrosion resistant - perfect for caustic washdowns
- Easy to use, even with gloves



Pumps & Mixers

- Type 4X/IP69/IP69K watertight options
- Corrosion and shock resistant
- More economical than stainless steel



Production Line Equipment

- Eliminate the need for mechanical interlocks and auxiliary disconnects
- Quick, easy, and portable



Generators

- Safe
- Portable
- Watertight
- Simple operation
- Can lock in mated position



Vehicles

- Convenient, durable
- Sustainable – eliminates vehicle idling
- Optional self-ejecting models

What is a Switch-Rated Device?

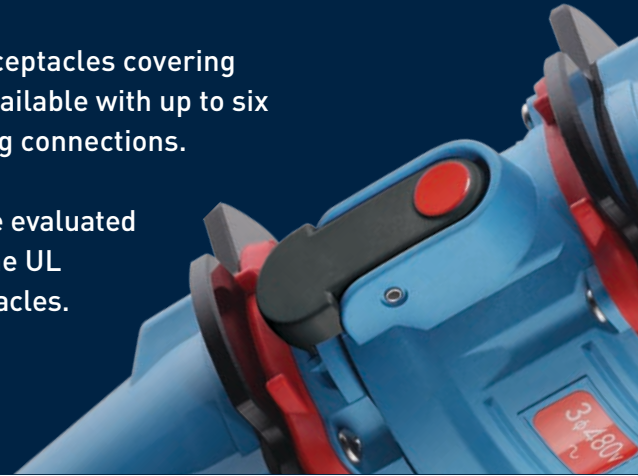
**WATCH
ME>>**



Switch-Rated plugs and receptacles have different capabilities than standard plugs and receptacles. They combine the function of a disconnect switch with the convenience of a plug and receptacle. Switch-Rated plugs and receptacles are UL/CSA listed for “Branch Circuit Disconnect Switching” and/or “Motor Circuit Disconnect Switching.” Standard pin and sleeve, twist lock, and straight bladed plugs and receptacles are not.

Today, MELTRIC offers a full line of Switch-Rated plugs and receptacles covering applications from 20 A to 200 A and up to 100 hp. Models are available with up to six auxiliary contacts for integral control, monitoring, and signaling connections.

To achieve their ratings, Switch-Rated plugs and receptacles are evaluated and performance tested in accordance with UL Subject 2682, the UL Standard created specifically for Switch-Rated plugs and receptacles. The requirements are naturally much more rigorous than for standard plugs and receptacles. Key performance tests are summarized in the table below.



UL Subject 2682 – Performance Test Requirements

Voltage Withstand	3000 VAC for 1 minute
General Overload	50 Operations @ 150% Rated Current (p.f. \leq 0.80)
Horsepower Overload	50 Operations @ 600% of Full Load Motor Current (p.f. \leq 0.50)
Temperature Rise	$< 30^{\circ}\text{C}$ - Performed on devices already subjected to the overload test
Electrical Endurance	6000 Operations @ Rated Current and Voltage (p.f. \leq 0.80) - Performed on devices already subjected to the overload test
Short Circuit - Make	≥ 10 kA with appropriate fusing
Short Circuit - Withstand	≥ 10 kA with appropriate fusing

Industrial or Commercial Installation

MELTRIC was the first company to develop and offer UL/CSA Switch-Rated plugs and receptacles and remains the primary innovator in this field. No one beats MELTRIC for Switch-Rated innovation, safety, reliability, and breadth of product line.

MELTRIC Switch-Rated devices safely and easily make and break electrical connections under full load, even in wet, and highly corrosive conditions. Perfect for food and beverage applications.

Safe. Fast. Easy. Eliminate dangerous pin and sleeve devices. Eliminate cumbersome PPE.

RECOMMENDED

UL and CSA Switch-Rated Products

Ideal for the Food and Beverage Industry



DSN

- 20 – 150 A, 600 VAC
- .75 – 75 hp
- Compact and lightweight
- Type 4X/IP69/IP69K
- Configurable with up to 6 auxiliary contacts
- Fiberglass-reinforced thermoplastic poly casings resist shock, chemicals, and UV rays



DS

- 20 – 200 A, 600 VAC
- .75 – 100 hp
- Type 3R or 4X/IP69/IP69K
- Larger wiring capacity, rugged durability
- Configurable with up to 6 auxiliary contacts
- Available in fiberglass-reinforced thermoplastic polyamide or zinc alloy casings – both materials resist shock, chemicals, and UV rays

Model	Casing Material	Voltage (Max)	Branch Circuit Disconnect Switching Rating up to 600 V	Max Number of Contacts		Environmental Rating	Motor Circuit Disconnect Switching Rating @ 480 V/600 V*
				Main	Aux		
DSN20	Poly	600 V	20 A	3P+N+G	2*	Type 4X/IP69/IP69K**	7.5 hp
DSN30	Poly	600 V	30 A	3P+N+G	2	Type 4X/IP69/IP69K**	15 hp
DSN60	Poly	600 V	60 A	3P+N+G	4	Type 4X/IP69/IP69K**	20 hp
DSN100	Poly or Metal	600 V	100 A	3P+N+G	4	Type 4X/IP69/IP69K**	50 hp
DSN150	Poly or Metal	600 V	150 A	3P+N+G	6	Type 4X/IP69/IP69K**	75 hp
DS20	Poly	600 V	20 A	3P+N+G	2	Type 3R	7.5 hp/10 hp
DS30	Poly	600 V	30 A	3P+N+G	4	Type 3R	15 hp
DS60	Poly or Metal	600 V	60 A	3P+N+G	4	Type 4X/IP69/IP69K**	25 hp
DS100	Poly or Metal	600 V	100 A	3P+N+G	6	Type 4X/IP69/IP69K**	30 hp/na
DS200	Metal	600 V	200 A	3P+N+G	6	Type 4X/IP69/IP69K**	100 hp

* DSN20 pilot contacts are different than other models and just create a continuity loop through the receptacle.

** Also meets IP66/IP67 requirements

*** Consult MELTRIC catalog for horsepower ratings at other voltages

Switch-Rated

Electrical Connection Solutions for Your Industrial Applications

In addition to the innovative Switch-Rated devices featured in this brochure, MELTRIC offers a full line of industrial plugs and receptacles providing solutions for a broad range of electrical connection applications.



Explore the Complete Line of MELTRIC Plugs, Receptacles, and Accessories

- Multipin devices available with 4-37 contacts
- Hazardous Location devices for Class 1 & 2 Div 2 and Zone 1/21 & 2/22 environments
- High Temperature devices, up to 30 A, 465°F
- High Amperage devices, up to 600 A
- Power Distribution—Rubber Boxes, Panel Assemblies, Custom Configurations, Receptacle/Wall Box Combinations, and more



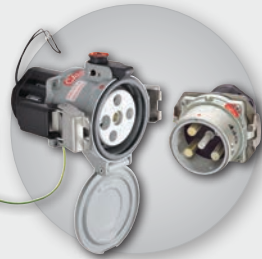
Multipin



Hazardous Location



High Temp



High Amperage



Power Distribution

Our friendly engineering and customer service teams are available Monday - Friday, 7 a.m. - 5 p.m. (Central Time)

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