

TYPE 4X/IP69/IP69K RATED PLUGS & RECEPTACLES FOR AUTOMATIC WATERTIGHTNESS

WASHDOWN RATED Plugs & Receptacles

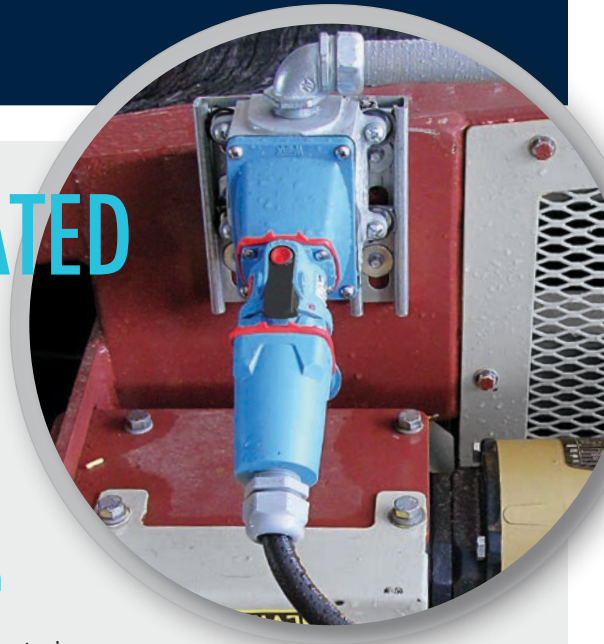


Problem: Traditional electrical connections for washdown operations require the tightening down of a plastic ring to achieve rated watertightness. If a user fails to tighten the ring, the device is not watertight.



Solution: **Automatic Watertight Connection**

MELTRIC DSN and DS Switch-Rated plugs and receptacles achieve their rated watertightness simply by connecting the plug and receptacle or latching the receptacle lid. There is no need to thread on or turn watertightness rings as is required on many pin and sleeve devices. Type 4X/IP69/IP69K watertightness are standard on all DSN devices and all DS devices except for the DS20 and the DS30; Type 3R is standard and Type 4X is optional on these two DS devices.



Other Exclusive Benefits:

- **Safety of a Switch**
DSN/DS Series plugs and receptacles are UL/CSA switch-rated. They feature an integral switching mechanism that enables the safe make and break of inductive or resistive loads up to 200 A or 100 hp.
- **Arc Flash Protection**
Switch-ratings along with a dead-front safety shutter and enclosed arc chambers ensure that workers are never exposed to arcing or live parts.
- **Quick Equipment Changeouts**
Since safety is ensured, technicians can change out motors, pumps, and other electrical equipment with plug-and-play simplicity. NFPA 70E/CSA Z462 code compliance is simplified.



BEST PRACTICES in Washdown Environments



Ordering Best Practices

Accessories



Poly Handle w/Cord Grip



Protective Inlet/
Plug Cap

or



Padlockable
Inlet/Plug Cap



Set of Two (2)
Finger Drawplates

Choose the Best Accessories for Watertightness

Threaded Handles + Cord Grips

For maximum protection from water ingress MELTRIC recommends handles with threaded NPT connections sized to mate with a standard cord grip (with or without mesh). When installed properly the threaded handle with cord grip offers a durable, watertight seal.

Male Plug Caps

When a plug is left in the disconnected state the male contacts are exposed. To prevent water exposure, two types of caps are available. When fully inserted over the male inlet the Protective Cap provides excellent protection. If a lockable cap is preferred the Padlockable Plug Cap will provide rated watertightness as well as enable plug lockout.

Finger Drawplates

Finger Drawplates are recommended for easier connector closure on cord-to-cord assemblies.

Selecting Lid Options



Standard lid configuration should be used when receptacles are not easily accessible and visible.

DSN60 Order Example:
63-64043



Select the "NC" lid when receptacles are readily accessible and visible.

DSN60 Order Example:
63-64043-NC

⚠ Both lids must be fully closed prior to washdown.

Order the Best Plug/Receptacle Options for Washdown Performance

Choosing the appropriate lid will ensure the receptacle operates with maximum performance in washdown environments. MELTRIC DSN and DS receptacles are supplied with normally open as standard. Normally closed (NC) lid is an option. Here are some guidelines to determine which lid option is best for you:

- **Normally Open:** If an operator is more than 20 feet from the device, as in cord drop applications, the standard lid is recommended because, at a distance, it is easily seen and readily indicates that the receptacle lid needs to be manually closed before washdown operations in order to keep internal components dry.

- **Normally Closed:** The NC lid requires an operator to manually close it to obtain a complete watertight seal. We do not recommend this option unless necessary for your specific application. If desired, we recommend product training to your employees to ensure they understand to close the lid for watertightness.



Cord Grip Configuration

Mesh Grip
(Optional*)

*Use of a cord grip with mesh on the receptacle side will reduce cable strain or cord pullout.

Cord Grip

Sealer Tape

Threaded
Handle

Finger
Drawplates
(Optional)



Cord Grip Installation Best Practices

Installing a DSN/DS for Maximum Watertightness

Since MELTRIC devices are used in a wide variety of applications and environments, they possess different mounting options made capable by their modular design. But for washdown environments, plugs and receptacles should be installed in a manner that will prevent water from entering the device during a washdown event. Here are some guidelines for installing a MELTRIC device for washdown environments:

- **Mounting Orientation:** Always install the receptacle so it is angled or pointing down and the plug pointing up. This will ensure water goes over the device during washdowns.
- **Threaded Handle Accessory:** A threaded poly handle is recommended versus the commonly used poly handle. The threaded handle ensures a watertight seal when a mating cord grip is properly installed.
- **Sealer Tape on Cord Grip:** Handles that allow third-party cord grips must be sealed to keep water out. Always use sealer tape on the fittings of the handle.



Wall-Mounted Configuration

It is best to install the receptacle so it is pointing down with the plug pointing up. For washdown environments, a threaded handle with cord grip is the best accessory choice.



BEST PRACTICES in Washdown Environments



Operation Best Practices

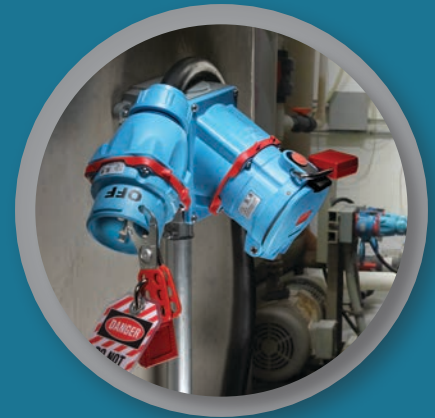
How To Operate a MELTRIC Device in Washdown Environments

MELTRIC devices are cleverly engineered plugs and receptacles that combine the convenience of a plug and receptacle with the functionality of a disconnect switch. Despite this enhanced engineering and flexible/modular design, special precautions should be taken to ensure they are operated properly so their internal parts remain dry. Here are some guidelines for best ways to operate a MELTRIC device in washdown environments:

- **Avoid the Rest Position:** When an operator depresses the pawl on a MELTRIC device, the plug is ejected from the receptacle due to the spring-loaded action of the integral switching mechanism. At this point, the plug is in the “rest” position, which means the plug is electrically separated from the receptacle and the load is disconnected from electrical power. If the plug is left in the rest position and a washdown operation commences, there is no means to prevent water from entering the resting plug and receptacle. So, avoid leaving the MELTRIC device in the rest position during washdowns.
- **Close the Lid and Cap the Plug:** To maintain the watertightness rating, it is recommended that an operator should remove the plug from the receptacle, close the lid fully, and insert protective caps on the plug. MELTRIC has recently improved the protective caps giving them a better watertight seal. Padlockable plug caps are also available to prevent water leakage through the lockout hole. Protective plug caps are the best protection when the MELTRIC plug is not in use.
- **Condensation Prevention:** Washdowns with hot water in production facilities that typically have cold ambient temperatures, such as dairies, may cause the formation of condensation within MELTRIC devices. For these environments, users should take all actions necessary to keep the device dry.



DS and DSN Series plugs achieve rated watertightness up to Type 4X/IP69/IP69K as soon as the plug is latched to the receptacle.



DSN/DS plugs can be locked in the disconnected position and an optional pawl enables locking of the receptacles.



After the removal of the plug from the receptacle, rated watertightness (Type 4X/IP69/IP69K) is maintained by simply closing the lid.



Take all Actions to Keep the Devices Dry



Avoid leaving the MELTRIC device in the REST or OFF position during washdowns.



Protective plug caps are the best way to keep the plug dry when not in use or during washdowns.

meltric.com

4765 W. Oakwood Park Drive • Franklin, WI 53132
414-433-2700 • mail@meltric.com

©2024 MELTRIC Corporation. All rights reserved. WASHDOWN_I

 **MELTRIC**
A COMPANY OF MARECHAL ELECTRIC