



DS & DSN MULTIPIN

INSDS/DSNMULTI 011012 D



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GENERAL

DS and DSN Multipin products are used for power and control. They can carry loads as well as low level signals and information. DS and DSN Multipin devices comply with applicable IEC standards. CE listings are available if ordered.

INSTALLATION

DS and DSN Multipins should be installed by qualified electricians in accordance with all applicable local and national electrical codes. Before starting, verify that the power is off, that the product ratings are appropriate for the application, and that the conductors meet code requirements and are within the capacities of the terminals noted in Table 1.

Table 1 - Wiring Terminal Capacity ¹ (in AWG)		
Device	Main Contacts	
	Minimum	Maximum
DSN24c	20	14
DSN37c	20	14
DS24c	20	14
DS37c	20	14

¹ Capacity is based on THHN wire sizes

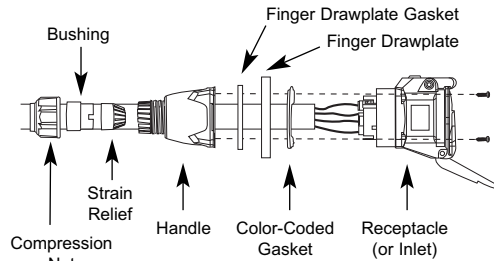
General Notes & Precautions

- Self-tapping screws are provided for use with some polymeric accessories. High torque may be required to drive them in. Once they are seated, care should be taken in order to avoid over-tightening them against the plastic material.
- Various handles and cord grip options may be used. These instructions are based on handles provided with integral multi-layer bushing cord grips.
- Strip each conductor to 3/8".
- For soldered terminals, use tin solder and a 50W soldering iron. Insert the conductor into its terminal and heat the terminal for approximately 30 seconds. While heating, apply the soldering wire into the hole at the bottom of the terminal and let it penetrate by capillarity. Let it cool down without any mechanical stress.

- Meltric threaded handles come with tapered style threads. The use of fitting seal tape is recommended to maintain watertightness of all NPT fittings and joints.

Assembly for In-Line Connections

When DS and DSN Multipins are used as in-line connectors, finger drawplates should be installed on both the receptacle and plug in order for the user to more easily provide the leverage required to connect the device.

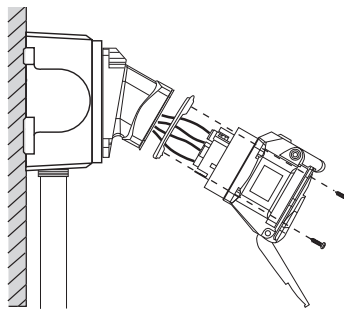


Adjust the bushing diameter to fit the cable by removing inner sections of it as required. Insert the bushing into the strain relief, then insert the assembly into the handle and loosely install the compression nut. Insert the cable through the handle, the thin black drawplate gasket and finger drawplate (if applicable) and the color coded gasket. Strip the cable sheath to provide a workable wire length, being mindful that the sheath must extend into the handle to achieve a secure cord grip. Then strip the individual wires to 3/8" and twist the strands of each conductor together.

Verify that the cable sheath extends beyond the strain relief and into the handle. Assemble the receptacle (or inlet), the color coded gasket, the finger drawplate, and the thin black drawplate gasket to the handle with the four self-tapping screws provided. Adjust the cable location so that it will not be under tension inside the handle and tighten the compression nut to secure the cable.

Assembly for Mounted Receptacles (or Inlets)

In applications where DS and DSN receptacles (or inlets) are mounted to wall boxes, panels or other equipment, optimal operation is achieved when the device is installed with the latch at the top.



receptacles, mount device so one latch is at the top. Insert the cable or wires through the wall box and cut to allow adequate length, strip the cable sheath as desired, strip the individual wires to 3/8", and twist the strands of each conductor together.

Assemble the receptacle (or inlet) and the color-coded gasket to the box with the appropriate hardware. Assemble the mating plug (or receptacle) to the cord end as indicated in the assembly instructions above for in-line connections, except there will be no finger drawplate or associated black gasket.

Hole Pattern for Custom Mounting

In applications where custom mounting to a panel or box is being performed, the clearance and mounting holes should be drilled as indicated in the following diagram and Table 2.

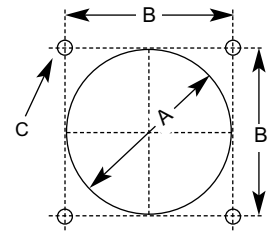


Table 2 - Custom Mounting Dimensions						
Model	'A'		'B'		C	
	Inches	mm	Inches	mm	Inches	mm
DSN24c	2.25	57	1.89	48	.19	5
DSN37c	2.50	64	2.17	55	.19	5
DS24c	2.25	57	1.89	48	.19	5
DS37c	2.50	64	2.17	55	.19	5

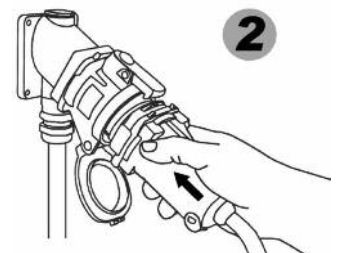
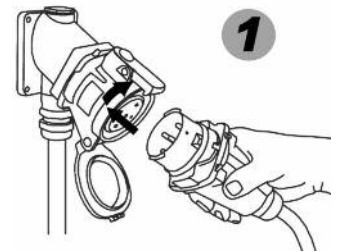
In order to maintain the NEMA 4X or IP 66 & 67 protection provided by DSN models in custom installations, watertight seals should be used under the heads of the four mounting bolts and they must be retained by a lock washer and nut on the inside of the box or panel. Alternatively, four blind holes may be drilled and threaded to accommodate the mounting screws, provided that the hole depth is sufficient to achieve adequate gasket compression.

OPERATION

To ensure safe and reliable operation Meltric plugs and receptacles must be used in accordance with their assigned ratings. They can only be used in conjunction with mating receptacles or plugs manufactured by Meltric or another licensed producer of products bearing the Marechal™ technology trademark.

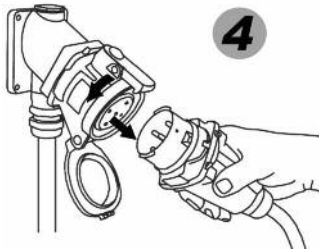
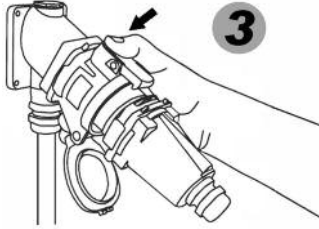
Connection

To connect a plug and receptacle, first depress the pawl to open the lid on the receptacle, then orient the plug as shown in figure 1 so that the red dot on the outside of the casing lines up with the red dot just to the left of the latch on the receptacle casing. Push the plug partially into the receptacle until it hits a stop, then rotate the plug in the clockwise direction until it hits another stop after about 30° of rotation. At this point, the circuit is still open. Push the plug straight into the receptacle as shown in figure 2 until it becomes securely latched in place. The electrical connection is now made. On in-line connectors, squeeze the drawplates on both sides of the device together until the plug latches in place.



Disconnection

To break the connection, simply depress the pawl as shown in figure 3. This will break the circuit and eject the plug straight out to the rest, or off, position. The plug contacts are de-energized at this point. To remove the plug, rotate it counter-clockwise (about 30°) until it releases from the receptacle as shown in figure 4. Close and latch the lid on the receptacle.



Connection and Disconnection of Stainless Steel DS

Operation of the stainless steel DS is similar to the standard DS/DSN operation with the following two exceptions:

1. The stainless steel DS utilizes two pawls to latch the plug to the receptacle. Thus to disconnect the plug from the receptacle both pawls must be depressed.
2. The stainless steel DS plug casing does not have a red dot that can be used for proper alignment before insertion. Instead, the thicker groove in the plug casing should be aligned with the thicker protruding screw in the receptacle and the thinner groove should be aligned with the thin protruding screw.

Achieving Rated Watertightness

Rated ingress protection applies to the device when the plug and receptacle are mated and latched together. It also applies to the receptacle when the lid is latched closed.

Meltric threaded handles come with tapered style threads. The use of fitting seal tape is recommended to maintain watertightness of all NPT fittings and joints.

Lockout Provisions

Poly DS and DSN receptacles may be purchased with optional lockout provisions. To lockout the receptacle, close and latch the lid and then attach the locking device through the optional hole provided in the pawl. This will prevent the lid from being opened for the insertion of a plug.

NOTE: Attaching the receptacle locking device with the receptacle lid open will not prevent the insertion of a plug. Lockout of the receptacle is only accomplished when the lid is locked closed.

MAINTENANCE

Meltric products require little on-going maintenance. However, it is a good practice to periodically perform the following general inspections:

- Check the mounting screws for tightness.
- Verify that the weight of the cable is supported by the strain relief mechanism and not by the terminal connections.
- Check the IP gaskets for wear and resiliency. Replace as required.
- Verify the electrical continuity of the ground circuit.
- Check the contact surfaces for cleanliness and pitting.

Receptacle contacts may be inspected by a qualified electrician. This should only be done with the power off. If any significant pitting of the contacts or other serious damage is observed, the device should be replaced.

Deposits of dust or similar foreign materials can be rubbed off the contacts with a clean cloth. Meltric recommends regular cleaning of contacts in low voltage applications. If a cleaning spray is used, it should be a fast evaporating, non-conductive type that doesn't leave a residue and is compatible with plastics.

MANUFACTURER'S RESPONSIBILITY

Meltric's responsibility is strictly limited to the repair or replacement of any product that does not conform to the warranty specified in the purchase contract. Meltric shall not be liable for any penalties or consequential damages associated with the loss of production, work, profit or any financial loss incurred by the customer.

Meltric Corporation shall not be held liable when its products are used in conjunction with products not bearing the **Marechal**™ technology trademark. The use of Meltric products in conjunction with mating devices that are not marked with the **Marechal**™ technology trademark shall void all warranties on the product.

Meltric Corporation is an ISO 9001 certified company. Its products are designed, manufactured and rated in accordance with applicable UL, CSA and IEC standards. Meltric is also a member of BECMA, the international Butt-contact Electrical Connectors Manufacturers' Association. Like all members, Meltric additionally designs and manufactures its products in accordance with BECMA standards established to ensure intermatability with similarly rated products manufactured by other members.



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