

DB Switch-Rated plug and receptacle

NOTE: The DB product line is being phased out in Q3 2019. Please consider alternative DSN and DS models.

Main Advantages

- ▶ Switch & Hp rated
- ▶ 100 kA short circuit rated*
- ▶ IP67 environmental ratings
- ▶ Up to 4 auxiliary contacts
- ▶ Durable metal construction

* See note under General Ratings on the next page.

Highlighted Advantage



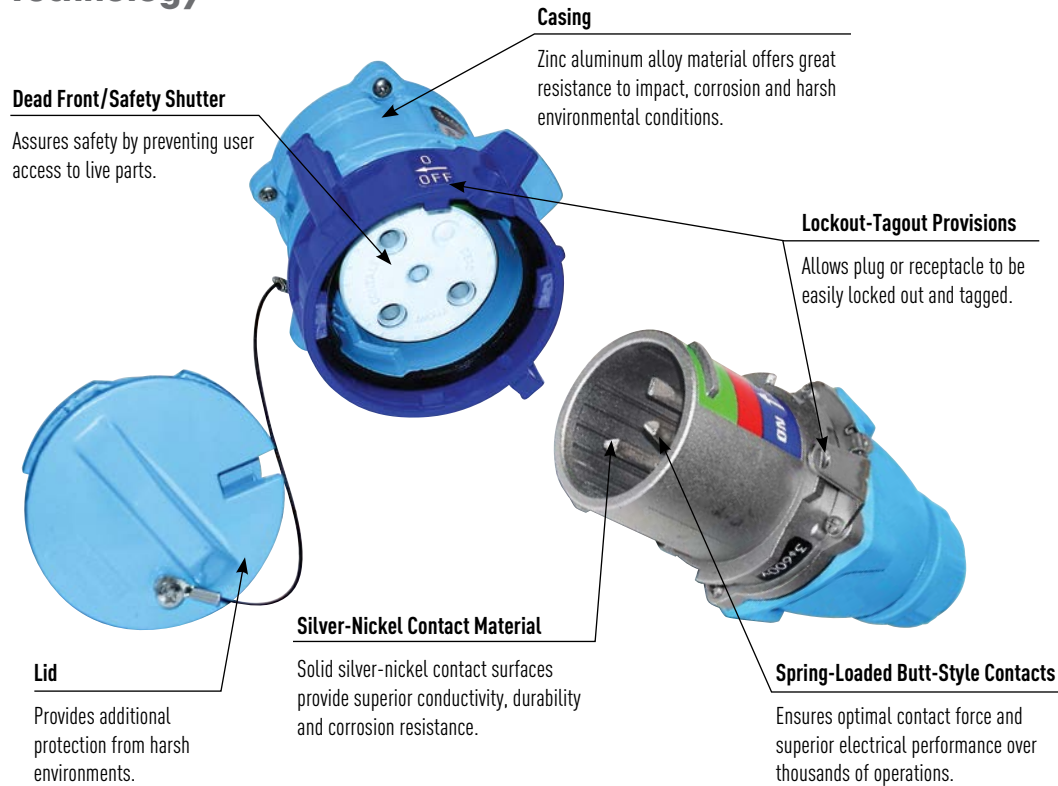
Simplify Compliance to NFPA 70E & CSA Z462
see pgs 18-19 for more information



- | | | | |
|------------------------|-------|---------------|-------|
| ▶ Features and Ratings | p. 57 | ▶ Spare parts | p. 66 |
| ▶ DB30 | p. 60 | ▶ Dimensions | p. 68 |
| ▶ DB60 | p. 62 | | |
| ▶ DB100 | p. 64 | | |

PRODUCT FEATURES

DECONTACTOR™ Technology



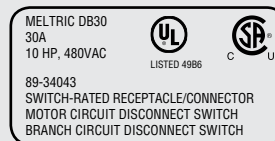
General Ratings

Amperage	30 to 100A
Voltage	600 VAC
Frequency	50-400 Hz
Horsepower	2 to 60 hp
Short-Circuit (Make & Withstand)	100kA*
Environmental	IP67
Temperature	min -40°F/max 140°F

* Testing was performed with RK1 current limiting fuses sized at 400% of the highest full load motor ampacity associated with the devices horsepower ratings, except for the DB100, which was tested with 250A fuses.

Highlighted Feature

Typical Device Labels



Meltric DB Series Switch-Rated devices are UL & CSA rated for "motor circuit" and "branch circuit" disconnect switching – up to 60 hp and up to 100A.

Operating Instructions



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



Turning the receptacle ring counterclockwise releases the plug and rapidly opens the circuit. The plug is ejected to its rest position.



From the rest position the 'dead' plug can be withdrawn by rotating it counterclockwise. The receptacle can be made watertight up to IP67 by replacing the lid and turning the locking ring fully clockwise.



To reconnect, insert plug and twist. Pushing the plug fully home safely makes the circuit. The plug is held in the 'on' position by a locking ring. IP67 protection is enabled by fully rotating the locking ring in the clockwise direction.

Listings

Category	UL	CSA	IEC
Plugs and Receptacles	UL 1682	C22.2 No. 182.1	60309-1
Branch Circuit Disconnect Switching (AC only)	UL Subject 2682 (Performance tests from UL 98)	UL Subject 2682	60947-3, AC22, AC23
Motor Circuit Disconnect Switching (AC only)	UL Subject 2682 (Performance tests from UL 98)	UL Subject 2682	60947-3, AC22, AC23

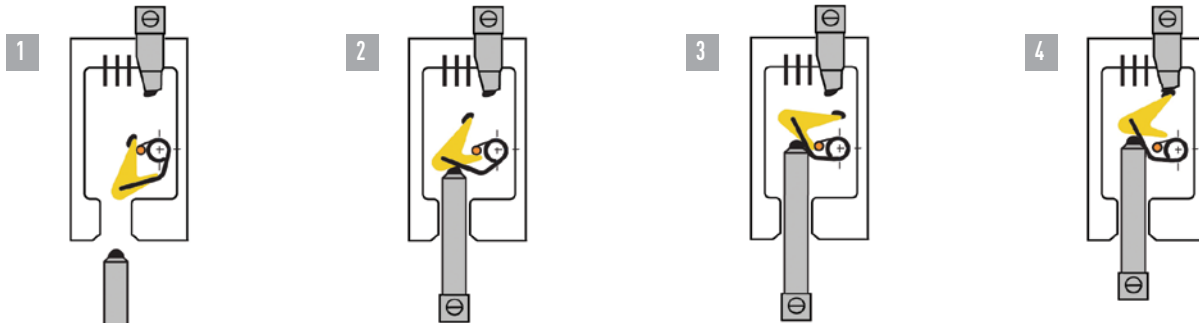
CE ratings available upon request.

PRODUCT FEATURES

Spring-Loaded Operating Mechanism

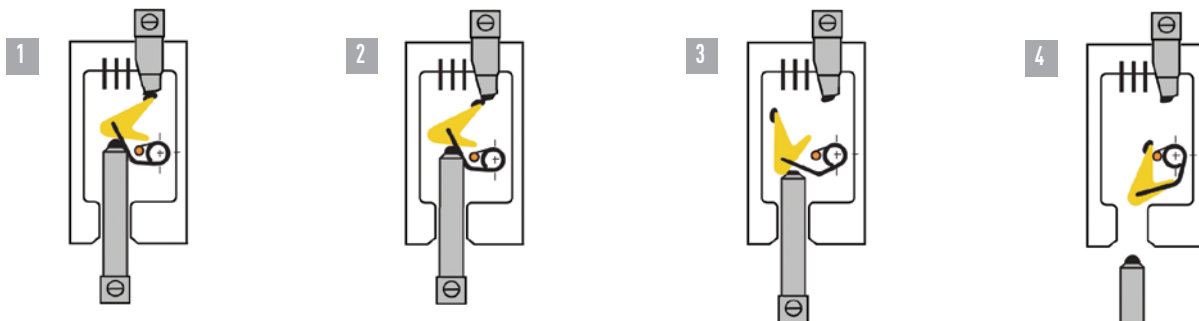
DB Series Switch-Rated plugs and receptacles use an internal spring-loaded operating mechanism to open and close the contacts at high speed, independent of the manual motion of the user.

Load-Making



1. As the plug is first inserted into the receptacle, the contact travels toward the operating mechanism. Only the receptacle contact (shown at the top of the drawing) is live.
2. As the plug contact is inserted further, it engages a mobile intermediate contact on the operating mechanism, which it begins to move around a stop. This motion also begins to wind the operating spring.
3. As the plug is inserted further, to the almost completely engaged position, the operating spring becomes fully loaded and the mobile contact rotates into a position where any further insertion motion will release it from the stop.
4. As the last small insertion motion is made, the mobile contact clears the stop and releases the energy in the spring. This instantly drives the mobile contact into engagement with the receptacle contact and completes the electrical connection.

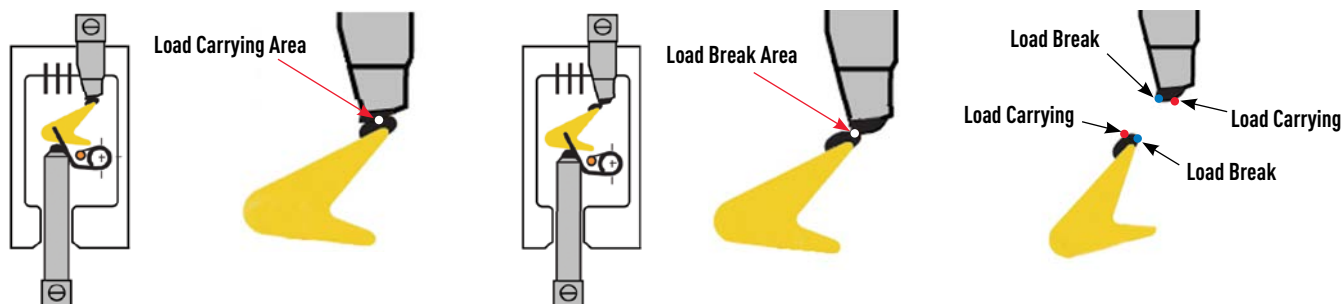
Load-Breaking



1. When the contacts are engaged, the operating spring is still almost fully charged. This maintains contact pressure and provides energy for the breaking operation.
2. In order to break the circuit, the plug retaining ring is turned to the 'off' position. This releases the plug, which in turn releases the mobile contact and the spring energy in the operating mechanism.
3. The spring energy instantly drives the mobile contact away from the live receptacle contact. It follows a different path than on making and is moved along an arc chute.
4. The mobile contact returns to its initial position, preparing the device to be used again.

Two Stage Contact System

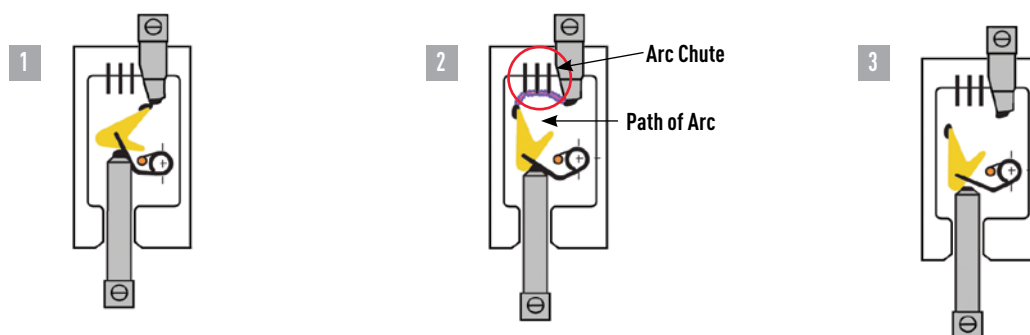
The operation of the DB's contacts was specifically designed to ensure that load-breaking and load-carrying are performed in separate locations on the contacts.



This is accomplished with the motion of the mobile contact relative to the receptacle contact. The opening of the contacts begins with a wiping action that moves the contact area toward the edges of the contacts, where load-breaking occurs. This allows numerous overload-breaking operations without deteriorating the main contact surfaces or the continuity of the connection.

Arc-Extinguishing System

For higher currents, or when significant overloads are involved, additional provision is desirable to handle the arcing that occurs during load-breaking. MELTRIC accomplishes this on its DB Series with a series of magnetic V-shaped blades, which create an arc chute.



As the contacts open, the mobile intermediate contact moves along the arc chute. The arc is transferred to the magnetic "V" shaped blades, which splits and destabilizes it. This helps to cool and quickly extinguish the arc, minimizing any potential damage to the contacts. Together with the spring operator, two stage contact system and silver-nickel butt-style contacts, this feature allows the DB series to easily and safely break high horsepower inductive loads and significant overloads.

DB30 Switch-Rated Plugs & Receptacles – 30A

UL/CSA Ratings

- **Max Amperage & Voltage**
30A, 600 VAC
- **Switch-Rating (AC Only)**
Branch Circuit & Motor Circuit
Disconnect Switching
- **Horsepower Ratings**

120V	1Ø	2 hp
240V	1Ø	3 hp
208V	3Ø	7 1/2 hp
240V	3Ø	7 1/2 hp
480V	3Ø	20 hp
600V	3Ø	25 hp
- **Short Circuit Rating**
100kA Close & Withstand
Testing was performed with RK1
current limiting fuses sized at 400% of
the highest full load motor ampacity
associated with the devices hp rating.
- **Environmental Ratings**
IP67
- **Temperature Range**
Min -40°F/Max 140°F
See pg 271 for temps below -15°F.
- **Wiring Capacity**
Min 14 AWG Max 8 AWG
Aux Contacts - Max 14 AWG
- **Certifications**
UL 2682, CSA 182.1

NOTE: The DB product line is
being phased out in Q3 2019.
Please consider alternative
DSN and DS models.

Receptacle (female)



Inlet (male)



! Don't forget to add installation
accessories to your order

North American UL/CSA Configurations

Voltage	Polarity	Part # Metal	Part # Metal
120V	1P+N+G	89-34165	89-38165
120 208V	3P+N+G	89-34167	89-38167
125V	1P+N+G	89-34075	89-38075
125 250V	2P+N+G	89-34076	89-38076
208V	2P+G	89-34162	89-38162
208V	3P+G	89-34163	89-38163
250V	2P+G	89-34072	89-38072
250V	3P+G	89-34073	89-38073
277V	1P+N+G	89-34045	89-38045
277 480V	3P+N+G	89-34047	89-38047
347 600V	3P+N+G	89-34147	89-38147
480V	2P+G	89-34042	89-38042
480V	3P+G	89-34043	89-38043
600V	2P+G	89-34142	89-38142
600V	3P+G	89-34143	89-38143

For international configurations and ratings (IEC, CE) visit meltric.com/international-catalog or contact customer service at 800.433.7642.

Main Options



**Auxiliary/Pilot
Contacts**

Receptacle Options

Suffix

Inlet Options

Suffix

With 2 Auxiliary/Pilot Contacts

Recept # - 172*

With 2 Auxiliary/Pilot Contacts

Inlet # - 172*

Notes: * Auxiliary/Pilot Contacts are not available on DB devices with
1P+N+G, 2P+N+G or 3P+N+G polarity.





! See pages 248-257 for detailed
information on these options




Order Example: 480V DB30 + 2 auxiliary contacts
DB30 Metal inlet 3P+G = 89-38043-172


INSTALLATION ACCESSORIES – SIZE 3


Unless indicated otherwise, accessories can be used with either poly or metal plugs and receptacles.

HANDLES

HANDLE w/NPT	Part # Poly	Part # Metal
	513P0N05	593P0N05
	513P0N07	593P0N07
	513P0N10	593P0N10
	513P0N12	593P0N12
For metal devices only 1 1/2"	–	593P0N15

HANDLE w/CORD GRIP	Cable Range	Poly	Metal
	.625 - .750"	713P0CP4	793P0CS4
	.770 - .875"	713P0DP2	793P0DS1
	.875 - 1.000"	713P0DP3	793P0DS3

NYLON HANDLE w/Cable Range	
	.390 - 1.18" 513P0D30

POLY HANDLE w/CLAMP & BUSHING w/Cable Range	
	.750 - .875" 713P0S14
	.875 - 1.000" 713P0S16
	1.000 - 1.125" 713P0S18
	1.125 - 1.250" 713P0S20
	1.250 - 1.375" 713P0S22





For available cord grips, see pg 178.



Cable Range	NPT	Cable Range	NPT
.312 - .625	1/2"	.875 - 1.375"	1 1/4"
.438 - .812	3/4"	.890 - 1.812"	1 1/2"
.660 - 1.000	1"		

NPT sizes are determined by the cable diameter and third party cord grip.


ANGLES

METAL ANGLE	
	0° 593M0
	30° 593M3
	FS/FD Box 30° 793M3FS
	70° 593M7

* Base measures approximately 4.2" x 2.7". Due to the variation in sizes of FS boxes, please verify that your FS box matches our dimensions, if not call Customer Service for other solutions.

BOXES




METAL BOX w/NPT	
	0° 1/2" 7T1F0N05
	0° 3/4" 7T1F0N07
	0° 1" 7T1F0N10
	0° 1 1/4" 7T1F0N12

METAL BOX WITH NYLON ANGLE w/NPT	
	70° 1/2" 793C7N05
	70° 3/4" 793C7N07
	70° 1" 793C7N10
* 27.7 in ³	70° 1 1/4" 793C7N12

* Interior volume with receptacle installed.

NPT on top or bottom (if rotated). For other NPT configurations, contact customer service.

MISCELLANEOUS ACCESSORIES

PROTECTIVE CAP	
	89-3A126 For Male Devices Only.
CORD GRIP with or w/o MESH	
	see pgs 178
EASY RETROFIT ADAPTER PLATES	
	see pg 175 Mount to existing boxes.

DB60 Switch-Rated Plugs & Receptacles – 60A

UL/CSA Ratings

- **Max Amperage & Voltage**
60A, 600 VAC
- **Switch-Rating (AC Only)**
Branch Circuit & Motor Circuit
Disconnect Switching
- **Horsepower Ratings**

120V	1Ø	3 hp
240V	1Ø	7.5 hp
208V	3Ø	15 hp
240V	3Ø	15 hp
480V	3Ø	30 hp
600V	3Ø	30 hp
- **Short Circuit Rating**
100kA Close & Withstand
Testing was performed with RK1
current limiting fuses sized at 400% of
the highest full load motor ampacity
associated with the devices hp rating.
- **Environmental Ratings**
IP67
- **Temperature Range**
Min -40°F/Max 140°F
See pg 271 for temps below -15°F.
- **Wiring Capacity**
Min 8 AWG Max 3 AWG
Aux Contacts - Max 14 AWG
- **Certifications**
UL 2682, CSA 182.1

NOTE: The DB product line is
being phased out in Q3 2019.
Please consider alternative
DSN and DS models.

Receptacle (female)



Inlet (male)



! Don't forget to add installation
accessories to your order

North American UL/CSA Configurations

Voltage	Polarity	Part # Metal	Part # Metal
120V	1P+N+G	89-64165	89-68165
120 208V	3P+N+G	89-64167	89-68167
125V	1P+N+G	89-64075	89-68075
125 250V	2P+N+G	89-64076	89-68076
208V	2P+G	89-64162	89-68162
208V	3P+G	89-64163	89-68163
250V	2P+G	89-64072	89-68072
250V	3P+G	89-64073	89-68073
277V	1P+N+G	89-64045	89-68045
277 480V	3P+N+G	89-64047	89-68047
347 600V	3P+N+G	89-64147	89-68147
480V	2P+G	89-64042	89-68042
480V	3P+G	89-64043	89-68043
600V	2P+G	89-64142	89-68142
600V	3P+G	89-64143	89-68143

For international configurations and ratings (IEC, CE) visit meltric.com/international-catalog or contact customer service at 800.433.7642.

Main Options



**Auxiliary/Pilot
Contacts**

Receptacle Options

Suffix

Inlet Options

Suffix

With 2 Auxiliary/Pilot Contacts

Recept # - 172*

With 2 Auxiliary/Pilot Contacts

Inlet # - 172*

Notes: * Auxiliary/Pilot Contacts are not available on DB devices with
1P+N+G, 2P+N+G or 3P+N+G polarity.





! See pages 248-257 for detailed
information on these options

Order Example: 480V DB60 + 2 auxiliary contacts
DB60 Metal inlet 3P+G = 89-68043-172

INSTALLATION ACCESSORIES – SIZE 4

Unless indicated otherwise, accessories can be used with either poly or metal plugs and receptacles.

HANDLES

HANDLE w/NPT		Part # Poly	Part # Metal
	1/2"	514P0N05	594P0N05
	3/4"	514P0N07	594P0N07
	1"	514P0N10	594P0N10
	1 1/4"	514P0N12	594P0N12
For metal devices only	1 1/2"	514P0N15	594P0N15
HANDLE w/CORD GRIP Cable Range		Poly	Metal
	.750-.875"	714P0DP2	794P0DS1
	.875-1.000"	714P0DP3	794P0DS3
	1.000-1.125"	714P0EP2	794P0ES2

For metal devices only

NYLON HANDLE w/Cable Range

	.51 - 1.38"	514P0D35
---	-------------	----------

POLY HANDLE w/CLAMP & BUSHING w/Cable Range

	1.250 - 1.375"	714P0S22
	1.438 - 1.562"	714P0S25
	1.562 - 1.688"	714P0S27
	1.688 - 1.812"	714P0S29






For available cord grips, see pg 178.



Cable Range	NPT	Cable Range	NPT
.312 - .625	1/2"	.875 - 1.375"	1 1/4"
.438 - .812	3/4"	.890 - 1.812"	1 1/2"
.660 - 1.000	1"		


NPT sizes are determined by the cable diameter and third party cord grip.


ANGLES

METAL ANGLE		
	0°	594M0
	30°	594M3
	30°	794M3L
	Oversized 30°	794M3
	70°	594M7

Mounts on oversize box only. Order with 7T4F0Nxx box. See page 64.

BOXES

METAL BOX w/NPT			
	0°	1"	7T4F0N10
	0°	1 1/4"	7T4F0N12
	0°	1 1/2"	7T4F0N15
	0°	2"	7T4F0N20




METAL BOX WITH METAL ANGLE w/NPT			
	70°	1"	794C7N10
	70°	1 1/4"	794C7N12
	70°	1 1/2"	794C7N15
	70°	2"	794C7N20

* 91.0 in³

* Interior volume with receptacle installed.

NPT on top or bottom (if rotated). For other NPT configurations, contact customer service.

MISCELLANEOUS ACCESSORIES

PROTECTIVE CAP	
	89-6A126 For Male Devices Only.
CORD GRIP with or w/o MESH	
	see pgs 178
EASY RETROFIT ADAPTER PLATES	
	see pg 175 Mount to existing boxes.

DB100 Switch-Rated Plugs & Receptacles – 100A

UL/CSA Ratings

- **Max Amperage & Voltage**
100A, 600 VAC
- **Switch-Rating (AC Only)**
Branch Circuit & Motor Circuit
Disconnect Switching
- **Horsepower Ratings**

120V	1Ø	7 1/2 hp
240V	1Ø	15 hp
208V	3Ø	30 hp
240V	3Ø	30 hp
480V	3Ø	60 hp
600V	3Ø	60 hp
- **Short Circuit Rating**
100kA Close & Withstand
Testing was performed with 250A RK1 fuses, so the 100kA rating applies up to 60 hp @ 600, 40 hp @ 480V and 20 hp @ 240V and 208V.
- **Environmental Ratings**
IP67
- **Temperature Range**
Min -40°F/Max 140°F
See pg 271 for temps below -15°F.
- **Wiring Capacity**
Min 1/0- AWG Max 2/0 AWG
Aux Contacts - Max 14 AWG
+ Smaller conductors can be retained in the terminal, but may result in a temperature rise greater than the 30° max allowed in UL & CSA standards.
- **Certifications**
UL 2682, CSA 182.1

NOTE: The DB product line is being phased out in Q3 2019. Please consider alternative DSN and DS models.

Receptacle (female)



Inlet (male)



! Don't forget to add installation accessories to your order

North American UL/CSA Configurations

Voltage	Polarity	Part # Metal	Part # Metal
120V	1P+N+G	89-94165	89-98165
120 208V	3P+N+G	89-94167	89-98167
125V	1P+N+G	89-94075	89-98075
125 250V	2P+N+G	89-94076	89-98076
208V	2P+G	89-94162	89-98162
208V	3P+G	89-94163	89-98163
250V	2P+G	89-94072	89-98072
250V	3P+G	89-94073	89-98073
277V	1P+N+G	89-94045	89-98045
277 480V	3P+N+G	89-94047	89-98047
347 600V	3P+N+G	89-94147	89-98147
480V	2P+G	89-94042	89-98042
480V	3P+G	89-94043	89-98043
600V	2P+G	89-94142	89-98142
600V	3P+G	89-94143	89-98143

For international configurations and ratings (IEC, CE) visit meltric.com/international-catalog or contact customer service at 800.433.7642.

Main Options



Auxiliary/Pilot Contacts

Receptacle Options

Suffix

Inlet Options

Suffix

With 4 Auxiliary/Pilot Contacts

Recept # - 174**

With 4 Auxiliary/Pilot Contacts

Inlet # - 174**

Notes: * DB100 devices with auxiliary/pilot contacts are not UL/CSA listed.

** Auxiliary/Pilot Contacts are not available on DB devices with 1P+N+G, 2P+N+G or 3P+N+G polarity.

! See pages 248-257 for detailed information on these options

Order Example: 480V DB100 + 4 auxiliary contacts

DB100 Metal inlet 3P+G = 89-98043-174

INSTALLATION ACCESSORIES – SIZE 5



Unless indicated otherwise, accessories can be used with either poly or metal plugs and receptacles.

HANDLES

HANDLE w/NPT		Part # Poly	Part # Metal	
	3/4"	515P0N07	595P0N07	
	1"	515P0N10	595P0N10	
	1 1/4"	515P0N12	595P0N12	
	1 1/2"	515P0N15	595P0N15	
For metal devices only	2"	515P0N20	595P0N20	
HANDLE w/CORD GRIP		Cable Range	Poly	Metal
	1.270 - 1.470"	715P0EP3	-	
	1.250 - 1.375"	-	795P0ES4	
	1.438 - 1.562"	-	795P0FS2	
	1.562 - 1.688"	-	795P0FS3	
For metal devices only	1.520 - 1.860"	715P0GP2	-	
SANTOPRENE HANDLE w/Cable Range				
	.70 - 1.000"	555P0D25		
	1.00 - 1.375"	555P0D35		
IP 66/67	1.375 - 1.750"	555P0D45		
POLY HANDLE w/CLAMP & BUSHING w/Cable Range				
	1.250 - 1.375"	715P0S22		
	1.438 - 1.562"	715P0S25		
	1.562 - 1.688"	715P0S27		
	1.688 - 1.812"	715P0S29		

For available cord grips, see pg 178.

BOXES

METAL BOX w/NPT			
	0°	1 1/4"	7T5F0N12
	0°	1 1/2"	7T5F0N15
	0°	2"	7T5F0N20
METAL BOX WITH NYLON ANGLE w/NPT			
	70°	1 1/4"	795C7N12
	70°	1 1/2"	795C7N15
	70°	2"	795C7N20

* 175.0 in³

* Interior volume with receptacle installed.





NPT on top or bottom (if rotated). For other NPT configurations, contact customer service.



Cable Range	NPT	Cable Range	NPT
.438 - .812	3/4"	.890 - 1.812"	1 1/2"
.660 - 1.000	1"	1.190 - 2.438"	2"
.875 - 1.375"	1 1/4"		




NPT sizes are determined by the cable diameter and third party cord grip.

ANGLES

METAL ANGLE		
	0°	595M0
	30°	595M3
	30°	795M3
	70°	595M7

Mounts on oversize box only. Order with 7T5F0Nxx box. See page 64.

MISCELLANEOUS ACCESSORIES

PROTECTIVE CAP		
	89-9A126	For Male Devices Only.
CORD GRIP with or w/o MESH		
	see pgs 175	
EASY RETROFIT ADAPTER PLATES		
	see pg 175	Mount to existing boxes.