

## EN2 SERIES SEALED CONNECTORS

NEW PRODUCT BULLETIN 601

### FEATURES & BENEFITS

- Sealed to IP68, NEMA 250 (6P) (when mated)
- Available in standard or winged coupling ring
- Patented grommet and o-ring free design
- Solder/crimp and PC contact options

### APPLICATIONS

- Any sealed data transmission
- Military or industrial GPS location devices
- Instrumentation
- Medical data carts
- Marine Applications
- Transportation
- General industrial electronic applications



# SWITCHCRAFT®

A H E I C O C O M P A N Y



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### SPECIFICATIONS

#### **MECHANICAL SPECIFICATIONS**

Life:	600 insertion/withdrawal cycles minimum
Vibration:	Mil-Std 202G Method 201A
Hex Nut Torque:	5-6 in/lb
Operating Forces:	8 lb maximum insertion. 0.25 lb minimum withdrawal
Back Shell Type:	Threaded Handle

#### **ELECTRICAL SPECIFICATIONS**

Voltage Rating:	250 V AC/DC for 2 contact arrangement. 125 V AC/DC for 3-7 contact arrangements
Current Rating:	Refer to current rating table on page 3
Insulation Resistance:	1000 M $\Omega$ minimum
Contact Resistance:	10 m $\Omega$ maximum

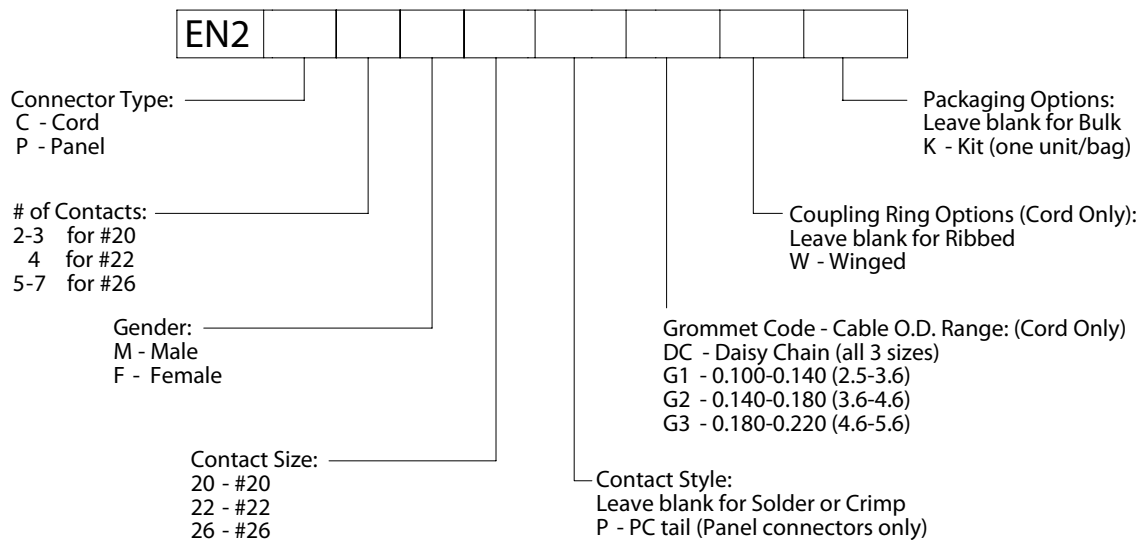
#### **ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature Limits:	-40°C to +85°C (-40°F to +185°F)
Moisture Resistance:	Mil-Std 202G Method 106G
Insulation Resistance:	Mil-Std 202G Method 302 Condition B
Thermal Shock:	Mil-Std 202G Method 107G
Salt Atmosphere (Corrosion):	Mil-Std 202G Method 101E Condition B
Weathertight Ratings:	IP16, IP18, IP66, IP67, IP68 per IEC60529. NEMA 250 (6P), CFR 46 Part 110.20

#### **MATERIAL SPECIFICATIONS**

Connector Housing:	Thermoplastic, Black
Hex Nut:	Thermoplastic, Black
Coupling Ring:	Thermoplastic, Black
Cable Clamp:	Thermoplastic, Black
Handle (Back-Shell)	Thermoplastic, Black
Insulator:	Elastomer, Black
Seal Grommet:	Elastomer, Black
Contacts:	Copper Alloy, Plated

### ORDERING CODE



Consult factory for Cable to Cable (Inline) type connectors.



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### EN2 SERIES CURRENT RATING TABLE

Contacts	Wire (awg)	Current Rating (A) at Operating Temperature (°C)				
		45°C max	55°C max	65°C max	75°C max	85°C max
2 #20	20	7	6	5	4	3.5
	22	5.5	5	4	3	2.5
	24	5.5	5	4	3	2.5
	26	4	3.5	2.5	2	1
3 #20	20	6.5	5.5	4.5	3.5	2
	22	5	4.5	3.5	3	1.5
	24	5	4.5	3.5	3	1.5
	26	3	2.5	2	1.5	0.5
4 #22	20	5	4.5	3.5	3	1.5
	22	4.5	4	3	2	1
	24	4.5	4	3	2	1
	26	3	2.5	2	1.5	0.5
5-7 #26	26	3	2.5	2	1.5	1
	28	2.5	2	1.5	1	0.5
	30	2	1.5	1	0.5	0.5

### EN2 CONTACT CRIMPING TOOLS

Handle	Description	Positioner	Contact Sizes	Wire Sizes
EN3CR	Crimp Hand Tool	EN2POS20	#20, #22	20, 22 AWG
		EN3POS26	#26	26, 28, 30 AWG
EN3CRAUTO	Pneumatic Crimp Tool	EN2POS20	#20, #22	20, 22 AWG
		EN3POS26	#26	26, 28, 30 AWG

### EN2 INSERTION / EXTRACTION TOOLS

Part Number	Contact Sizes	Description
EN3INS20	#20, #22	Insertion / Extraction Tool for 20, 22 AWG
EN3INS26	#26	Insertion / Extraction Tool for 26, 28 & 30 AWG

### EN2 ALTERNATE LARGER FRAME TOOL

Handle	Description	Positioner	Contact Sizes	Wire Sizes
EN2CRL	Hand Tool	EN2POS20L	#20, #22	20-22-24-26 AWG
EN2CRAUTOL	Pneumatic Tool			

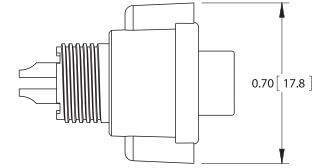
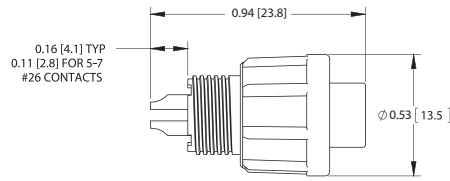
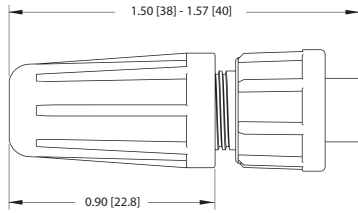


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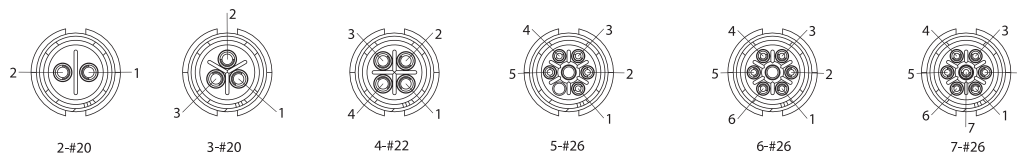
### CORD



TYPICAL CORD CONNECTOR WITH RIBBED COUPLING RING

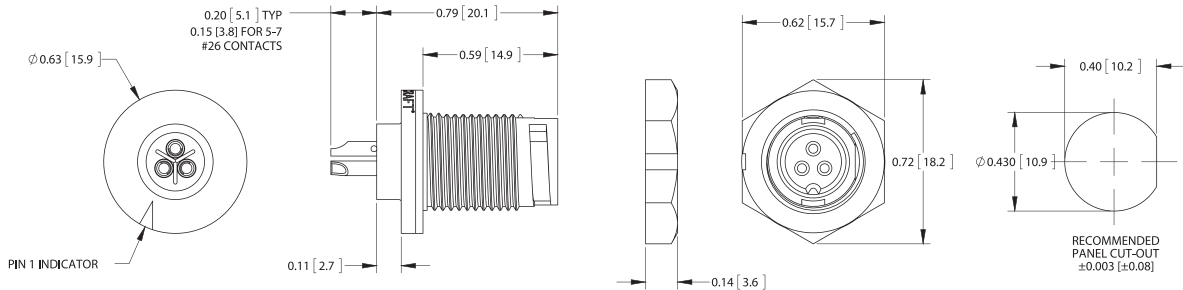
TYPICAL CORD CONNECTOR WITH WINGED COUPLING RING

ALL DIMENSIONS FOR REFERENCE ONLY

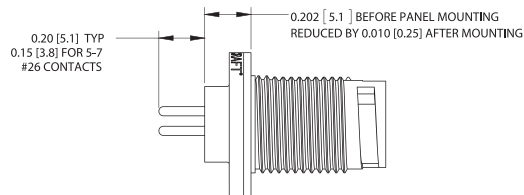


CONTACT ARRANGEMENTS  
CORD CONNECTOR REAR (WIRING SIDE) VIEW

### PANEL MOUNT

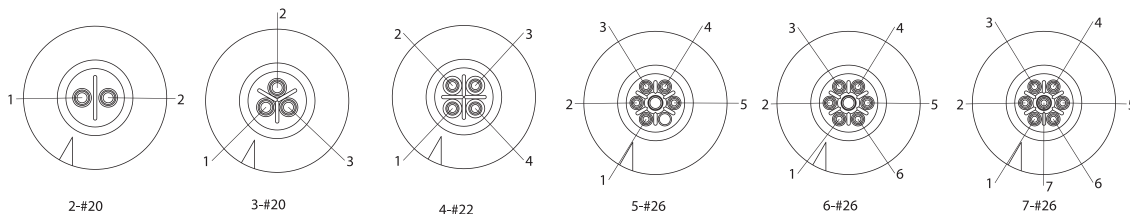


RECOMMENDED  
PANEL CUT-OUT  
±0.003 [±0.08]



PC TAIL TYPE CONTACTS

ALL DIMENSIONS FOR REFERENCE ONLY



CONTACT ARRANGEMENTS  
PANEL CONNECTOR REAR (WIRING SIDE) VIEW

### DUST CAP PART # 16295



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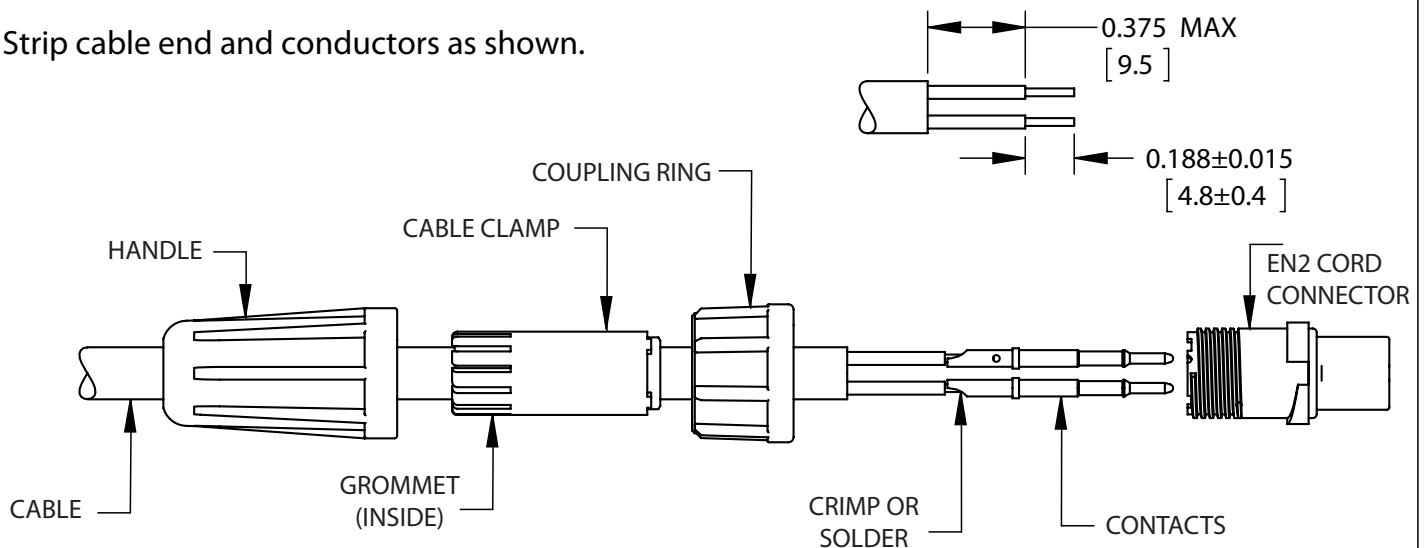
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## EN2 CORD CONNECTOR FIELD ASSEMBLY INSTRUCTIONS

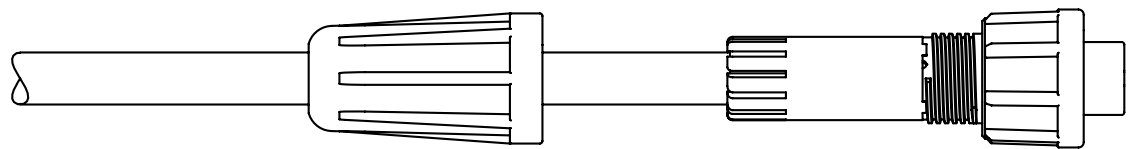
Feed the free end of cable through the handle, cable-clamp/grommet, and coupling ring in the order shown.

Strip cable end and conductors as shown.



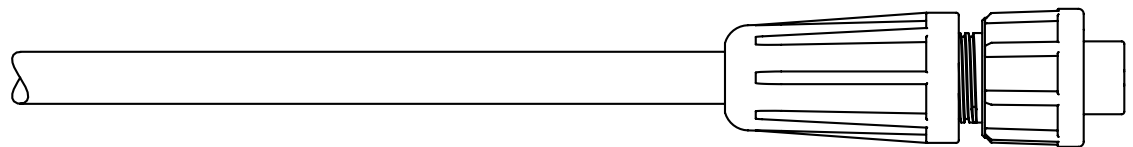
Soldering or crimping conductors to contacts is recommended before insertion into connector. If crimping, use hand or pneumatic crimp tool with crimp positioner per contact size. If soldering after contacts are inserted in the connector, limit exposure of contacts to soldering iron temperature to 4 sec. maximum. Soldering iron temperature should not exceed 650°F (343°C).

Insert wired contacts into connector housing using an insertion tool and per contacts arrangements.



Align coupling ring over housing and bring forward.

Align cable-clamp/grommet on the rear of housing. Make certain grommet is completely inside the cable-clamp in the final position.



Bring forward and thread handle onto housing until tight. Do not exceed 2 in-lb torque.



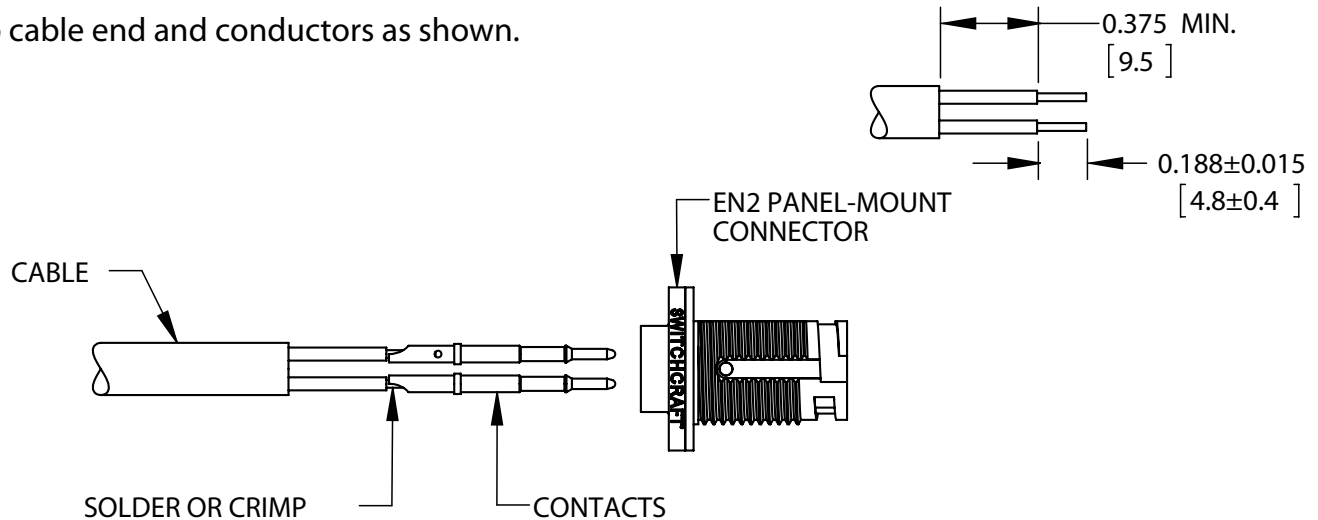
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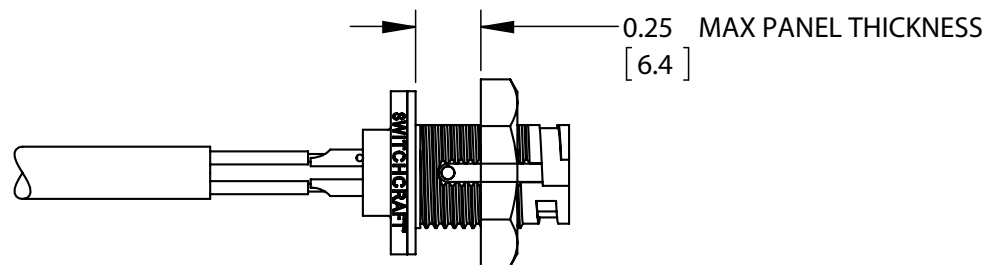
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## EN2 PANEL CONNECTOR FIELD ASSEMBLY INSTRUCTIONS

Strip cable end and conductors as shown.



Soldering or crimping conductors to contacts is recommended before insertion into connector. If crimping, use hand or pneumatic crimp tool with crimp positioner per contact size. If soldering after contacts are inserted in the connector, limit exposure of contacts to soldering iron temperature to 4 sec. maximum. Soldering iron temperature should not exceed 650°F (343°C).



Insert wired contacts into connector housing using an insertion tool and per contacts arrangements.

Align and install connector into panel cut-out. Tighten hex nut 5 -6 in-lb.



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