

SWITCHCRAFT CONXALL

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



HARSH

ENVIRONMENT CONNECTIVITY SOLUTIONS

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ABOUT US



Switchcraft, Inc. was established in 1946 to manufacture jacks, plugs and switches, mainly for the communications industry. The original plant was located on West Diversey Street in Chicago. The company moved to a larger facility at 1328 North Halsted Street in 1948 and in 1958, the operation moved to a 185,000 square foot facility located at 5555 North Elston Avenue, which is still the headquarters and the largest of three manufacturing locations for the corporation today.

In 1977, Switchcraft was bought by the Raytheon Corporation and it operated as an independent subsidiary in its Commercial division for twenty years. During this time, Switchcraft expanded its production capability to include vertical integration, for cost effective manufacturing in the United States. They also expanded into harsh environment connector products, which expanded the market growth of the company.

In 1997 Raytheon made a strategic decision to focus solely on the defense industry. As a result, they divested their interests in all of their commercial holdings. At that time Switchcraft was sold to company management and a private equity firm.

In 1999, Switchcraft acquired Conxall, a manufacturer of circular connectors and cable assemblies, in order to expand their offering of harsh environment connectivity products. They are located in a 32,000 square foot facility in Villa Park, IL. This strategic acquisition helped to position Switchcraft for expanded growth in the Industrial Marketplace.

In 2011, Switchcraft was acquired by HEICO Corporation and became part of their Electronic Technologies Group.

Switchcraft is a major supplier of harsh environment connectivity products to the Industrial market and the premier connectivity provider to the Pro-Audio & Broadcast Industries.

CUSTOM PRODUCTS

Can't find exactly what you are looking for in our standard product offering? Contact us to start creating your custom solution! A strong group of engineers and a vertically integrated manufacturing facility make Switchcraft and Conxall your logical choice for custom products. We can transform your product ideas into reality.

ENGINEERING CAPABILITIES

- Full staff of design engineers in Chicago and Villa Park, IL locations
- Full use of modeling and simulation software, for electronic and mechanical design
- Ability to provide rapid prototypes quickly after initial design concepts are completed
- Test lab and model shop on site for product development

ENGINEERING TEST CAPABILITIES

Testing Capabilities for Electrical Properties

- Insulation resistance
- Breakdown voltage
- Contact resistance
- Return losses
- Frequency response measurement

Mechanical Properties

- Force testing
- Life cycle testing
- Low level vibration

Environmental Testing

- Thermal cycling
- Salt spray
- Humidity vs. temperature testing
- NEMA 250 (6P) - IP 66/ 67/ 68



We manufacture many customized products. Some examples are:

- Panel connectors with flex circuits
- Wave soldering to panel mount connectors
- Custom assembly and wiring
- Custom mounted and wired product assemblies
- Wide selection of mold compounds for molded color products
- Assembled ends for non-Switchcraft and Conxall products
- Fully molded units with connectors encapsulated into the assembly

HARSH ENVIRONMENT

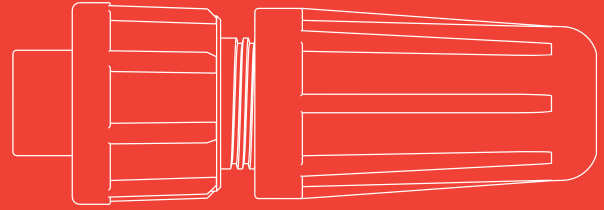
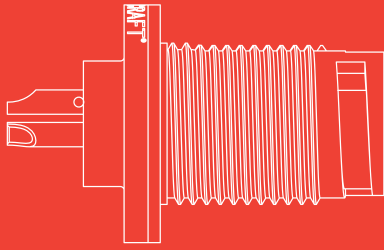


EN2™ | MICRO-CON-X® | EN3® | MINI-CON-X® | SHIELDED MINI-CON-X® | MULTI-CON-X®

CONNECTIVITY SOLUTIONS



SHIELDED MULTI-CON-X® | MAXI-CON-X® | MEGA-CON-X® | MIL-E-QUAL®



EN2™

0.53" [13MM] OD 2-7 CONTACTS



WINGED CABLE END - PIN
MATES WITH PANEL MOUNT



RIBBED CABLE END - PIN
MATES WITH PANEL MOUNT



WINGED CABLE END - SOCKET
MATES WITH PANEL MOUNT



RIBBED CABLE END - SOCKET
MATES WITH PANEL MOUNT



PANEL MOUNT - PIN
MATES WITH CABLE END



PANEL MOUNT - SOCKET
MATES WITH CABLE END

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
Conductor Sizes:	#20 contacts accepts 20 through 26 AWG #22 contacts accepts 20 through 26 AWG #26 contacts accepts 26 through 30 AWG

Electrical Specifications

Voltage Rating:	250 V AC/DC for 2 contact arrangement 125 V AC/DC for 3-7 contact arrangements
Current Rating:	See current rating table on page 109
Insulation Resistance:	1000 MΩ minimum
Contact Resistance:	10 mΩ 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

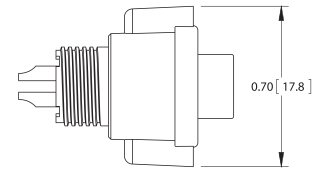
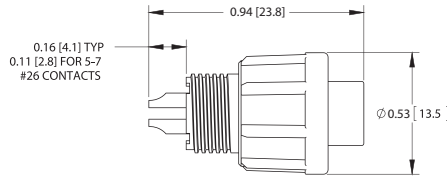
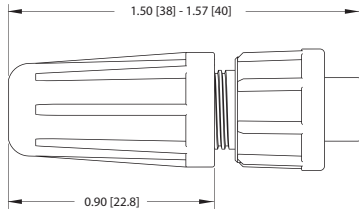
Material Specifications

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

Consult factory for optional colors and materials

NOTE: Seal grommet provides an integrated O-ring seal for the connector assembly instead of a separate O-ring.

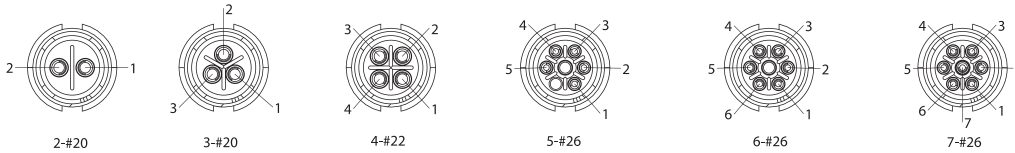
CORD



TYPICAL CORD CONNECTOR WITH RIBBED COUPLING RING

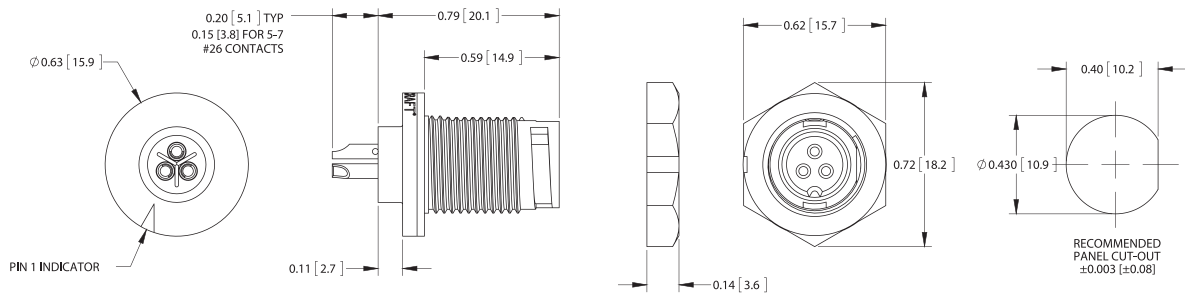
TYPICAL CORD CONNECTOR WITH WINGED COUPLING RING

ALL DIMENSIONS FOR REFERENCE ONLY



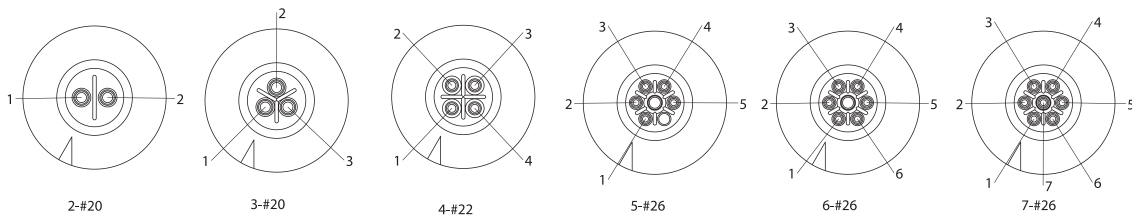
CONTACT ARRANGEMENTS CORD CONNECTOR REAR (WIRING SIDE) VIEW

PANEL MOUNT



PC TAIL TYPE CONTACTS

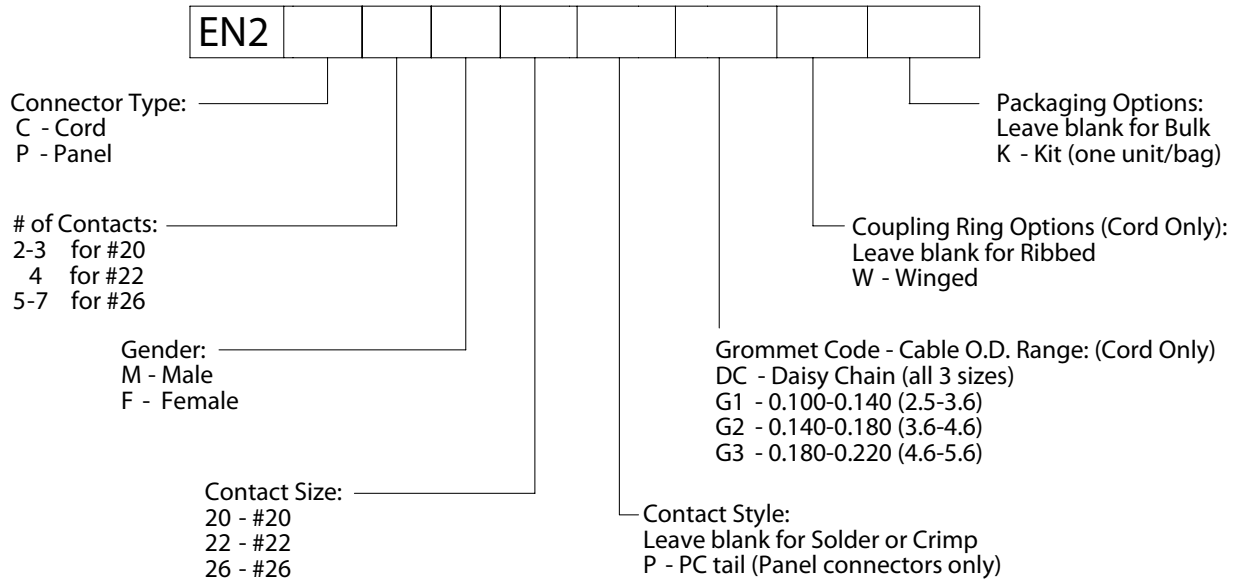
ALL DIMENSIONS FOR REFERENCE ONLY



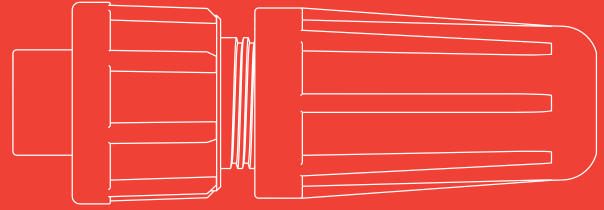
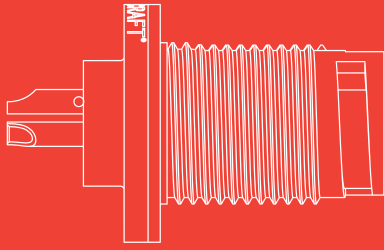
CONTACT ARRANGEMENTS PANEL CONNECTOR REAR (WIRING SIDE) VIEW

All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER



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



MICRO-CON-X[®]

0.53" [13MM] OD 2-7 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE END - PIN
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE TO CABLE / INLINE - SOCKET
MATES WITH CABLE END



PANEL MOUNT - PIN
MATES WITH CABLE END



PANEL MOUNT - SOCKET
MATES WITH CABLE END



DUST CAP
P/N - 16295



IP RATED LOCKING CAP
P/N - 16295P



MOLDED CABLE END ASSEMBLY



MOLDED CABLE TO CABLE ASSEMBLY



MOLDED RIGHT ANGLE CABLE ASSEMBLY

SPECIFICATIONS

Mechanical Specifications

Life:	300 insertion / withdrawal cycles minimum
Vibration:	Coupling rings have overriding locking feature to prevent loosening or separation of connector
Hex Nut Torque:	9 in-lb max tightening torque.
Coupling Locking Style:	Bayonet with ribbed coupling nut (winged coupling nut available) P/N 16482
Backshell Style:	Non-removable snap lock
Conductor Sizes:	#20 accepts 20 through 24 AWG #22 contacts accepts 22 through 24 AWG #26 contacts accepts 24 through 26 AWG

Electrical Specifications

Voltage Rating:	600V AC/DC
Current Rating:	7.5 A – max (See page 107 for Electrical Current Rating Chart)

Environmental Specifications

Operating Temperature Rating:	-40°C to +85°C (-40°F to +185°F)
Salt Atmosphere (Corrosion):	300 Hr salt spray when mated
Weatheright:	IP67 at the face, when mated

Material Specifications

Backshell:	Thermoplastic, UL 94HB, Black
Contacts:	Copper Alloy, Gold over Nickel Plate
Coupling Ring:	Thermoplastic, UL 94HB, Black
Gasket:	Elastomer, Black
Grommet / Strain Relief:	Elastomer, Black
Hex Nut:	Thermoplastic, UL 94HB, Black
O-Ring:	Elastomer, Black
Shell:	Thermoplastic, UL 94HB, Black
Optional Dust Cap:	Elastomer, Black

Molded Cable Assemblies

Weatheright:	NEMA 6P, 13: IEC IP67
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Certifications

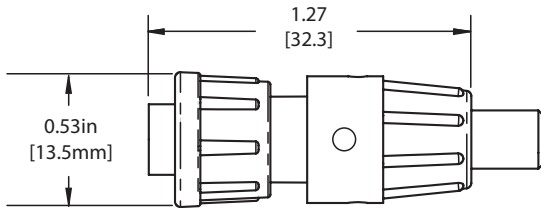
UL File E150822
CSA File 181200
Not for current interruption
RoHS compliant
REACH compliant

Options

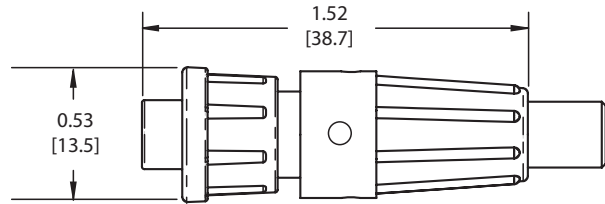
UV Rating:	F1 available
Flame Rating:	UL 94-HB; UL 94V-0 available

Consult factory for optional colors and materials

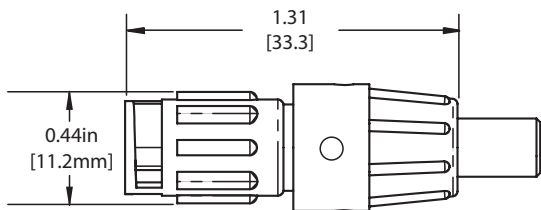
FIELD INSTALLABLE KITS



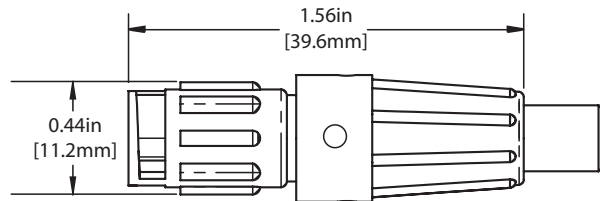
16XXX-XXG-3XX
FIELD INSTALLABLE
CABLE CONNECTOR
BACKSHELL TYPE 3-SHORT
2 & 3 POSITION ONLY



16XXX-XXG-5XX
FIELD INSTALLABLE
CABLE CONNECTOR
BACKSHELL TYPE 5-LONG

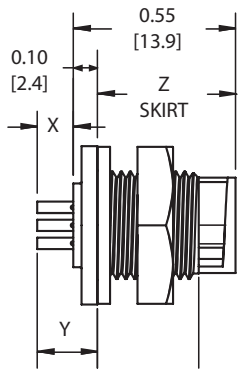


18XXX-XXG-3XX
FIELD INSTALLABLE
CABLE TO CABLE CONNECTOR
BACKSHELL TYPE 3-SHORT
2 & 3 POSITION ONLY

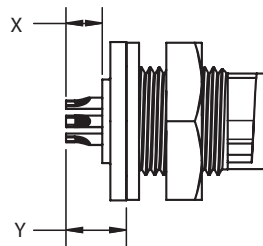


18XXX-XXG-5XX
FIELD INSTALLABLE
CABLE TO CABLE CONNECTOR
BACKSHELL TYPE 5-LONG

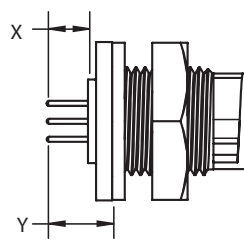
PANEL MOUNT ASSEMBLY KITS



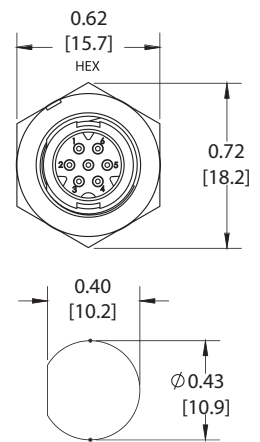
17X80-XXG-3XX
PANEL MOUNT CONNECTOR
CRIMP



17X82-XXG-3XX
PANEL MOUNT CONNECTOR
SOLDER CUP



17X8X-XXG-3XX
PANEL MOUNT CONNECTOR
PC TAIL

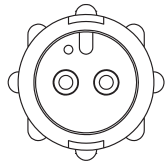


**RECOMMENDED
PANEL CUT-OUT**
TOLERANCE: ±.003

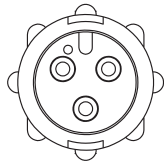
*X, Y, Z - Consult Factory. All dimensions are for reference only. Units shown: in[mm].

PANEL MOUNT / CABLE TO CABLE CONNECTORS

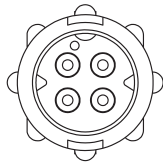
Front View | Wire View



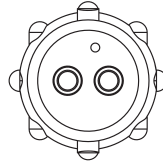
2 POSITION
#20 PIN & SOCKET
CONTACT



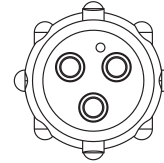
3 POSITION
#20 PIN & SOCKET
CONTACT



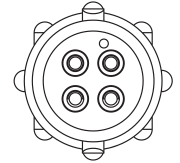
4 POSITION
#22 PIN & SOCKET
CONTACT



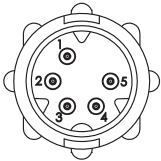
2 POSITION
#20 PIN & SOCKET
CONTACT



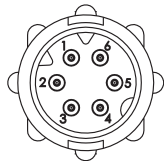
3 POSITION
#20 PIN & SOCKET
CONTACT



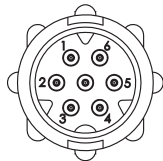
4 POSITION
#22 PIN & SOCKET
CONTACT



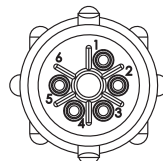
5 POSITION B-KEY
#26 PIN & SOCKET
CONTACT



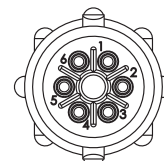
6 POSITION A-KEY
#26 PIN & SOCKET
CONTACT



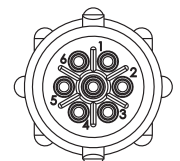
7 POSITION B-KEY
#26 PIN & SOCKET
CONTACT



5 POSITION B-KEY
#26 PIN & SOCKET
CONTACT



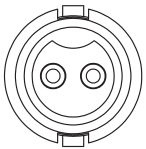
6 POSITION A-KEY
#26 PIN & SOCKET
CONTACT



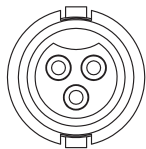
7 POSITION B-KEY
#26 PIN & SOCKET
CONTACT

CABLE CONNECTORS

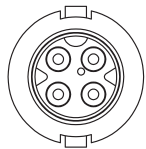
Front View | Wire View



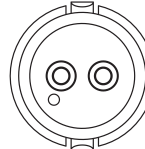
2 POSITION
#20 PIN & SOCKET
CONTACT



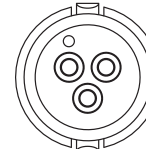
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#20 PIN & SOCKET
CONTACT



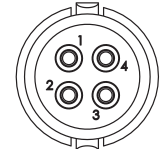
4 POSITION
#22 PIN & SOCKET
CONTACT



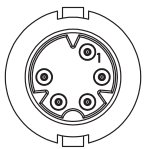
2 POSITION
#20 PIN & SOCKET
CONTACT



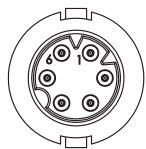
3 POSITION
#20 PIN & SOCKET
CONTACT



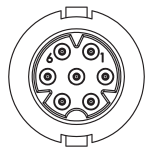
4 POSITION
#22 PIN & SOCKET
CONTACT



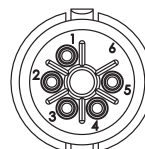
5 POSITION B-KEY
#26 PIN & SOCKET
CONTACT



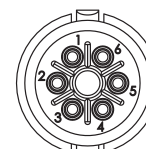
6 POSITION A-KEY
#26 PIN & SOCKET
CONTACT



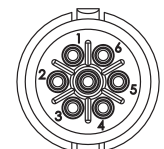
7 POSITION B-KEY
#26 PIN & SOCKET
CONTACT



5 POSITION B-KEY
#26 PIN & SOCKET
CONTACT



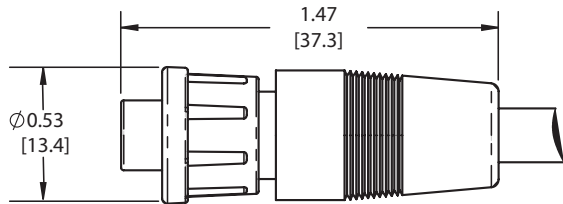
6 POSITION A-KEY
#26 PIN & SOCKET
CONTACT



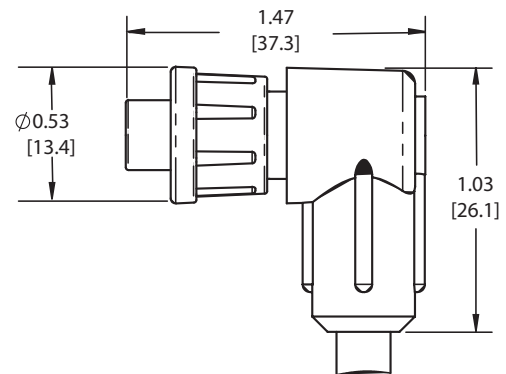
7 POSITION B-KEY
#26 PIN & SOCKET
CONTACT

All dimensions are for reference only. Units shown: in[mm].

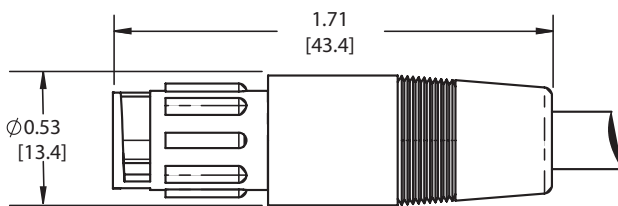
CUSTOM MOLDED CABLE ASSEMBLIES



16XXX-XXG
CABLE CONNECTOR
STRAIGHT OVERMOLDED



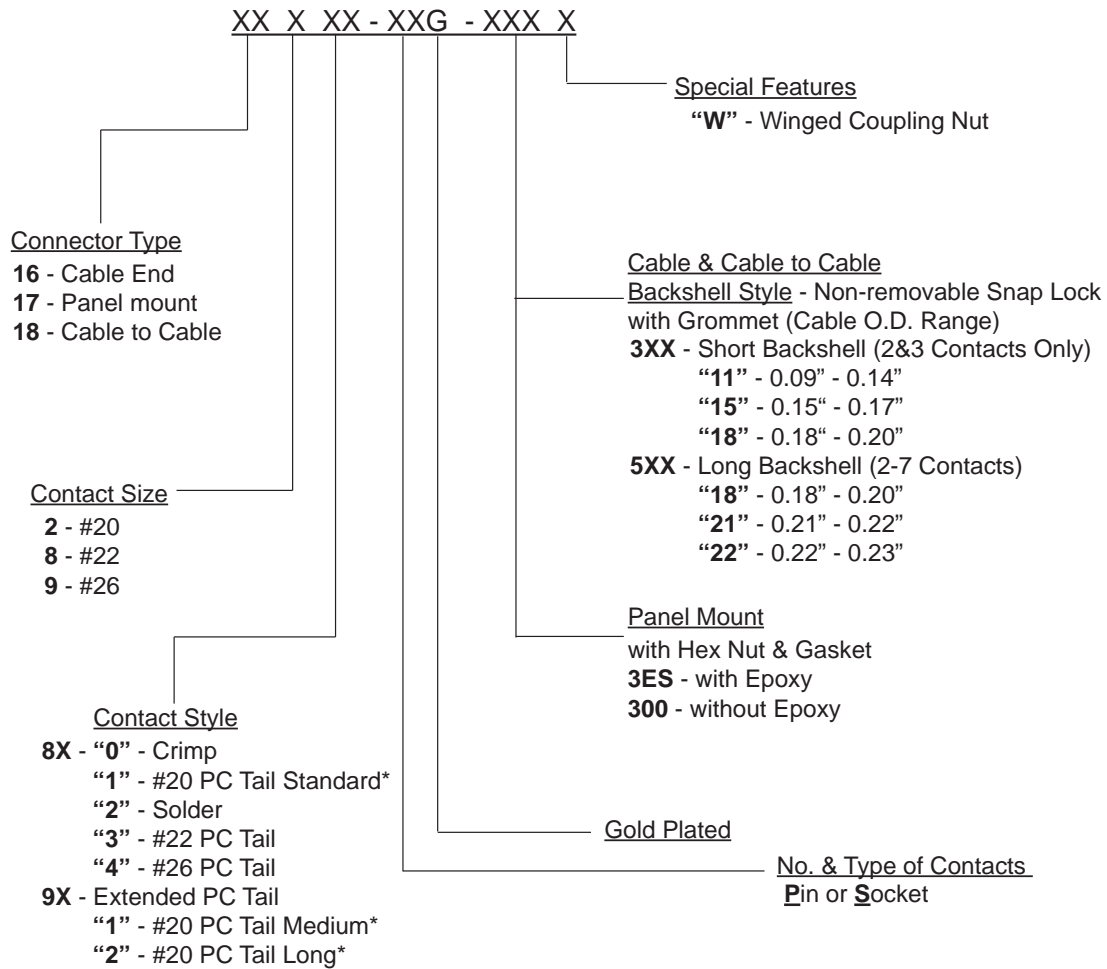
16XXX-XXG
CABLE CONNECTOR
RIGHT ANGLE OVERMOLDED



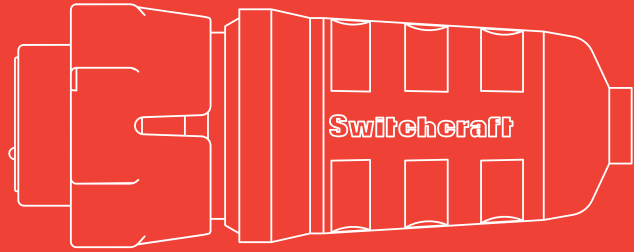
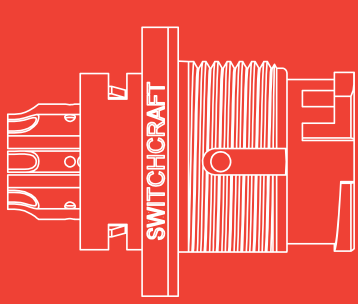
18XXX-XXG
CABLE TO CABLE CONNECTOR
STRAIGHT OVERMOLDED

All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER



*Consult factory for length and diameter of PC Tail. Additionally, alternative colors and materials are available.



EN3[®]

0.71" [18MM] OD 2-18 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE END - PIN
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE TO CABLE / INLINE - PIN
MATES WITH
CABLE END



PANEL MOUNT - PIN
MATES WITH
CABLE END



**PANEL MOUNT-
SOCKET RIGHT ANGLE**
MATES WITH CABLE END



**PANEL MOUNT-
RIGHT ANGLE PCB**
MATES WITH CABLE END



**QUICK DISCONNECT
CABLE END**



**MOLDED
CABLE END ASSEMBLY**



**MOLDED
RIGHT ANGLE ASSEMBLY**



DUST CAP FOR CABLE END
P/N - EN3CAPC



EN3 CAP
P/N - EN3CAP



IP RATED LOCKING CAP
P/N - EN3IPCAPX

SPECIFICATIONS**Mechanical Specifications**

Life:	600 insertion / withdrawal cycles minimum
Vibration:	Mil-Std 202 Method 201
Shock:	Mil-Std 202 Method 213B, condition K
Hex Nut Torque:	All series hex nut to withstand 8-10 in-lb tightening torque.
Coupling Locking Style	Bayonet with ribbed coupling nut (winged coupling nut available)
Back Shell Style:	Boot
Conductor Sizes:	#16 contacts accepts 16 through 18 AWG #20 contacts accepts 20 through 22 AWG #26 contacts accepts 26 through 28 AWG

Electrical Specifications

Voltage Rating:	250 V AC/DC
Current Rating:	See current rating table on page 109
Insulation Resistance:	100 MΩ min
Contact Resistance:	20 mΩ max

Environmental Specifications

Operating Temperature Rating:	-40°C to +65°C (-40°F to +149°F)
Moisture Resistance:	Mil-Std 202 Method 106F
Insulation Resistance:	Mil-Std 202 Method 302 condition B
Thermal Shock:	Mil-Std 202 Method 107G
Salt Atmosphere (Corrosion):	Mil-Std 202 Method 101D condition B
Weathertight:	IEC 60529 IP16/IP18 IEC 60529 IP66/IP68 IEC 60529 IP68 NEMA 250 (6P) CFR 46 Part 110.20

Material Specifications

Panel connector shells & locking disk:	Thermoplastic UL94V-0
Connector shell interior:	Elastomeric, Black UL 94HB
Contacts:	Copper Alloy, Gold over Nickel Plate

Molded Cable Assemblies

Weathertight:	IEC 60529 IP66/IP68 IEC 60529 IP68 NEMA 250 (6P) CFR 46 Part 110.20
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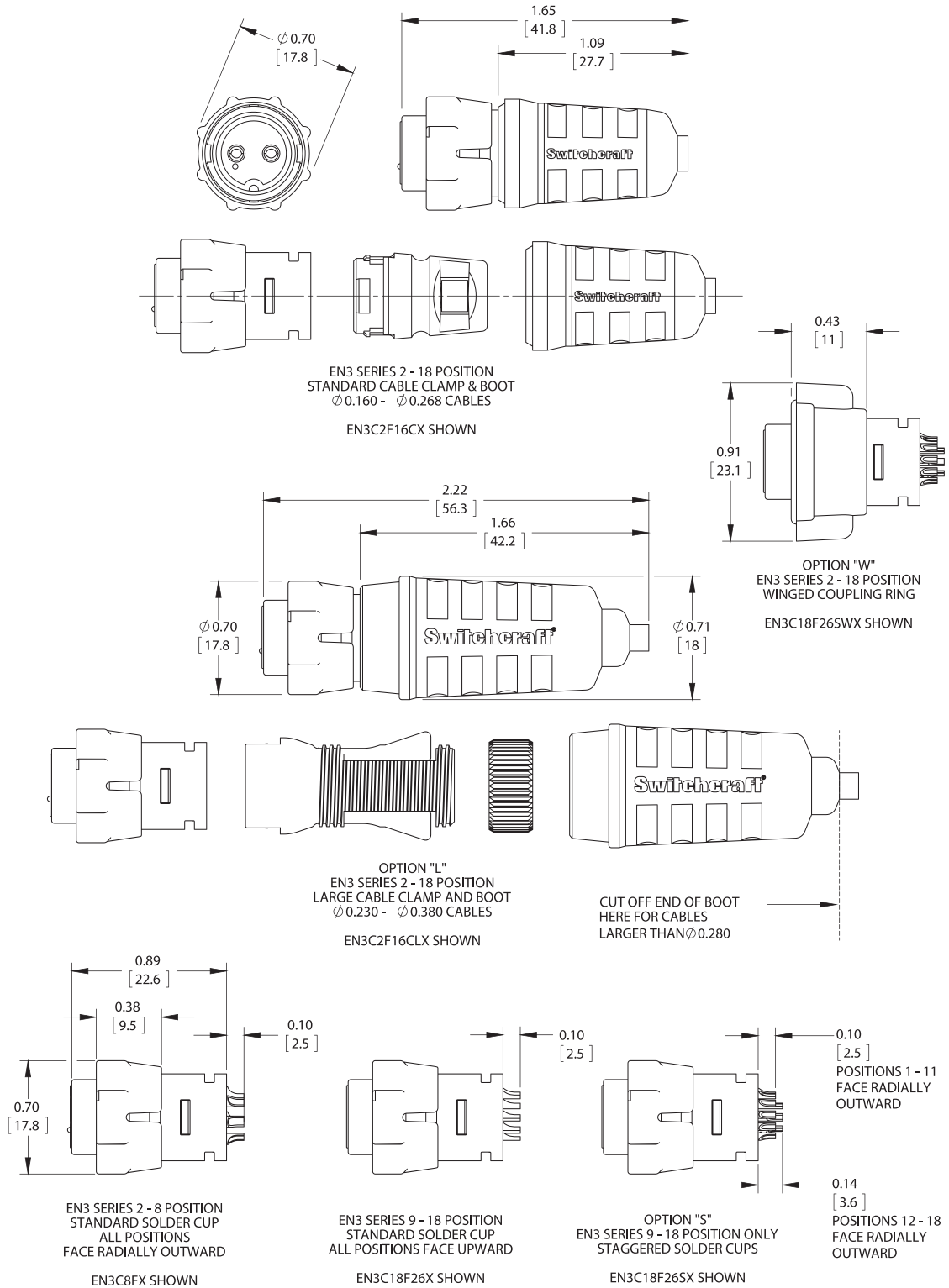
Certifications:

UL File E319753 ; 2-8 pin cord, in-line and panel only

Consult factory for optional colors and materials

NOTE: Seal grommet provides an integrated O-ring seal for the connector assembly instead of a separate O-ring.

CORD CONNECTORS

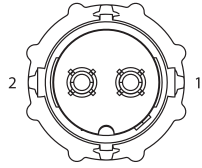


All dimensions are for reference only. Units shown: in[mm].

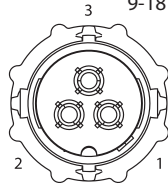
2-18 POSITION CORD CONNECTORS

Rear View (Wiring Side)

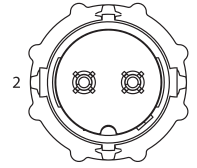
9-18 Position identification numbers denote position used in 18 position layout



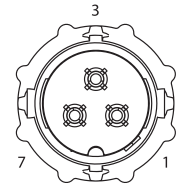
2 POSITION
#16 PIN & SOCKET
CONTACT



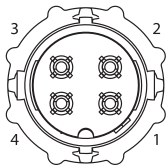
3 POSITION
#16 PIN & SOCKET
CONTACT



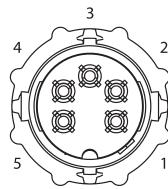
2 POSITION
#20 PIN & SOCKET
CONTACT



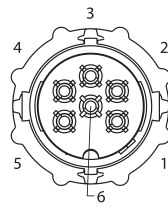
3 POSITION
#20 PIN & SOCKET
CONTACT



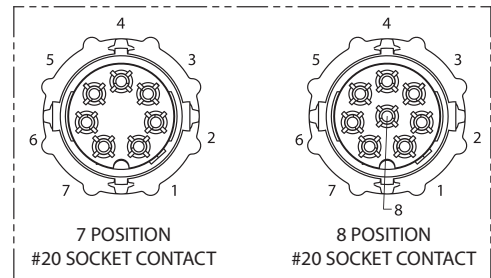
4 POSITION
#20 PIN & SOCKET
CONTACT



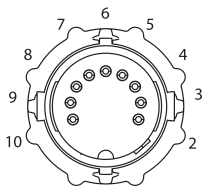
5 POSITION
#20 PIN & SOCKET
CONTACT



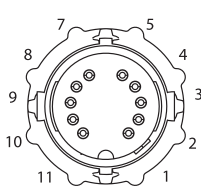
6 POSITION
#20 PIN & SOCKET
CONTACT



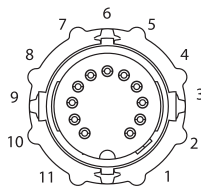
**7 & 8 POSITION NOT AVAILABLE IN
MALE CORD CONNECTORS**



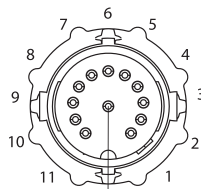
9 POSITION
#26 PIN & SOCKET
CONTACT



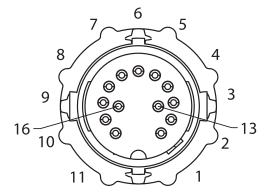
10 POSITION
#26 PIN & SOCKET
CONTACT



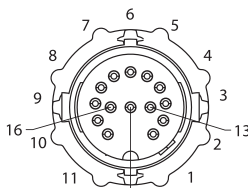
11 POSITION
#26 PIN & SOCKET
CONTACT



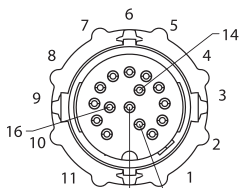
12 POSITION
#26 PIN & SOCKET
CONTACT



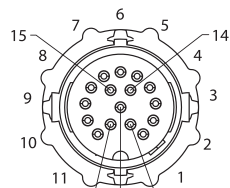
13 POSITION
#26 PIN & SOCKET
CONTACT



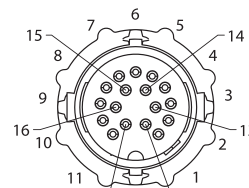
14 POSITION
#26 PIN & SOCKET
CONTACT



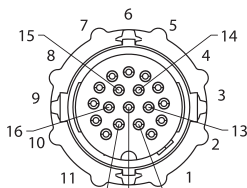
15 POSITION
#26 PIN & SOCKET
CONTACT



16 POSITION
#26 PIN & SOCKET
CONTACT



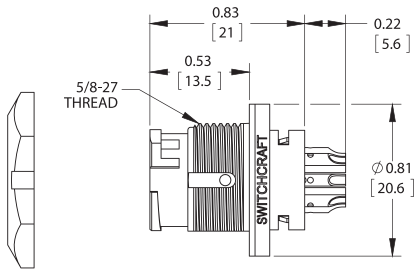
17 POSITION
#26 PIN & SOCKET
CONTACT



18 POSITION
#26 PIN & SOCKET
CONTACT

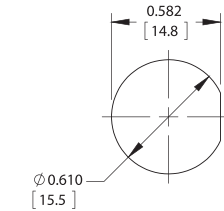
All dimensions are for reference only. Units shown: in[mm].

EN3® PANEL CONNECTORS



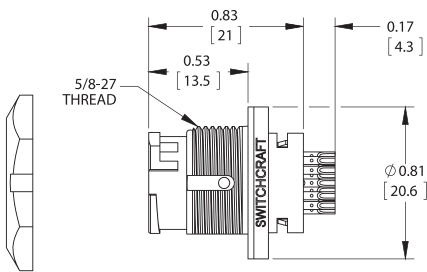
EN3 SERIES 2 - 8 POSITION
STANDARD SOLDER CUP
ALL POSITIONS FACE RADIALLY OUTWARD

EN3P8MX SHOWN



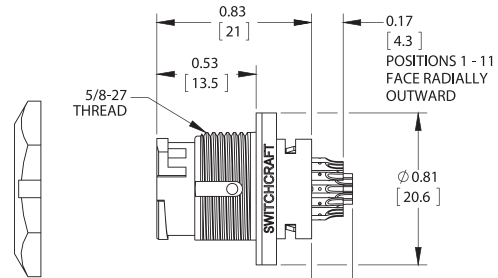
RECOMMENDED
PANEL CUT-OUT
0.188 MAX PANEL THICKNESS ± 0.003\"/>

MOUNTING NUT
8 - 10 INCH-LBS MAX TORQUE



EN3 SERIES 9 - 18 POSITION
STANDARD SOLDER CUP
ALL POSITIONS FACE UPWARD

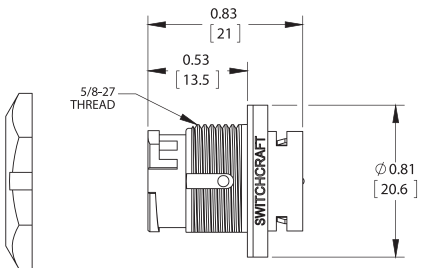
EN3P18M26X SHOWN



OPTIONS "S"
EN3 SERIES 9 - 18 POSITION ONLY
STAGGERED SOLDER CUP

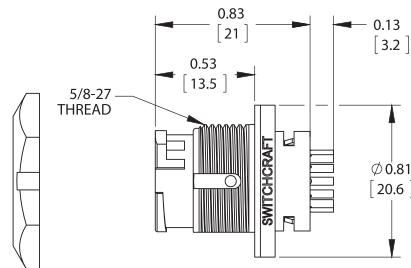
EN3P18M26SX SHOWN

POSITIONS 1 - 11
FACE RADIALLY
OUTWARD
POSITIONS 12 - 18
FACE RADIALLY
OUTWARD



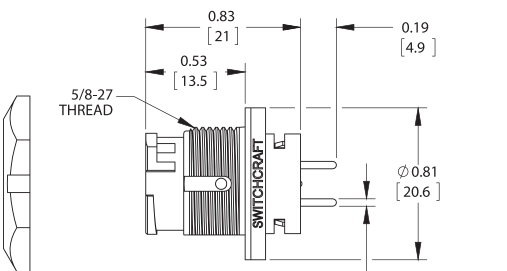
OPTION "C"
EN3 SERIES 2 - 8 POSITION
CRIMP TERMINALS

EN3P2MCX SHOWN



OPTION "C"
EN3 SERIES 9 - 18 POSITION
CRIMP TERMINALS

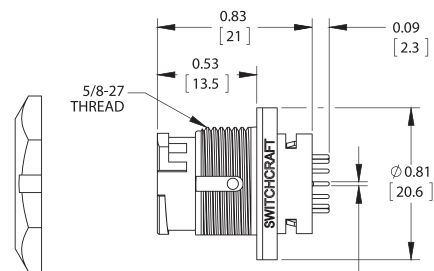
EN3P9M26CX SHOWN



OPTION "P"
EN3 SERIES 2 - 8 POSITION
PC TERMINALS

EN3P2MPX SHOWN

Ø 0.039 [1.0]
FOR #20 CONTACT
Ø 0.047 [1.2]
FOR #16 CONTACT

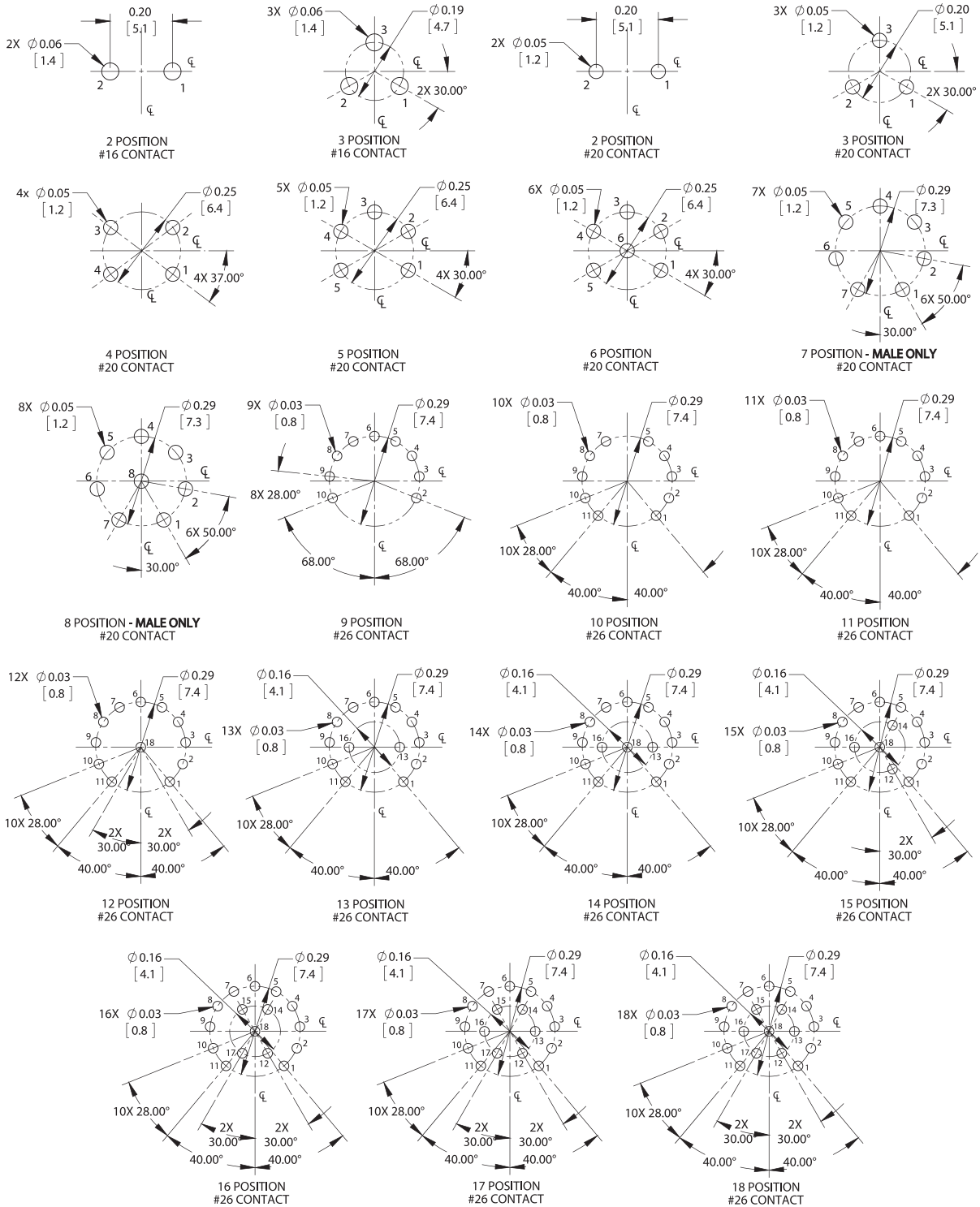


OPTION "P"
EN3 SERIES 9 - 18 POSITION
PC TERMINALS

EN3P9M26PX SHOWN

All dimensions are for reference only. Units shown: in[mm].

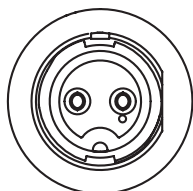
EN3® PANEL CONNECTORS PCB LAYOUT COMPONENT SIDE



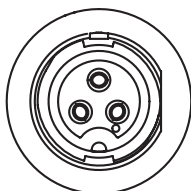
All dimensions are for reference only. Units shown: in[mm].

2-18 PIN PANEL CONNECTORS

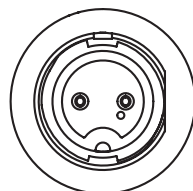
Front View (Mating End)



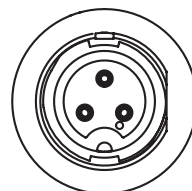
2 POSITION
#16 PIN & SOCKET
CONTACT



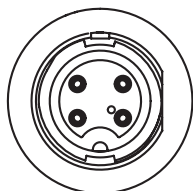
3 POSITION
#16 PIN & SOCKET
CONTACT



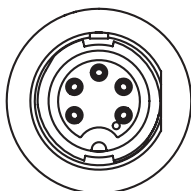
2 POSITION
#16 PIN & SOCKET
CONTACT



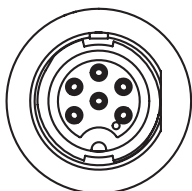
3 POSITION
#20 PIN & SOCKET
CONTACT



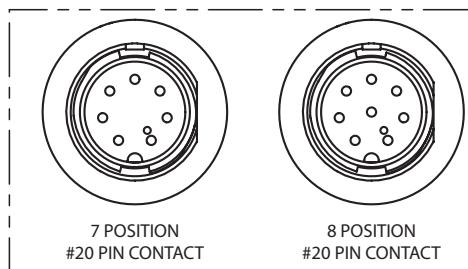
4 POSITION
#20 PIN & SOCKET
CONTACT



5 POSITION
#20 PIN & SOCKET
CONTACT



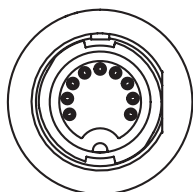
6 POSITION
#20 PIN & SOCKET
CONTACT



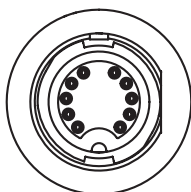
7 POSITION
#20 PIN CONTACT

8 POSITION
#20 PIN CONTACT

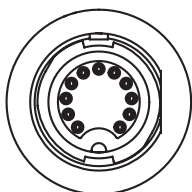
7 & 8 PIN ONLY CONNECTORS



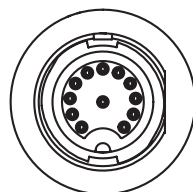
9 POSITION
#26 PIN & SOCKET
CONTACT



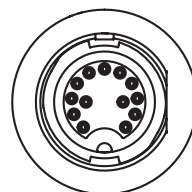
10 POSITION
#26 PIN & SOCKET
CONTACT



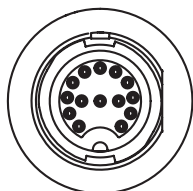
11 POSITION
#26 PIN & SOCKET
CONTACT



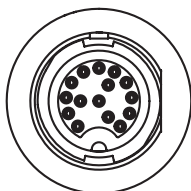
12 POSITION
#26 PIN & SOCKET
CONTACT



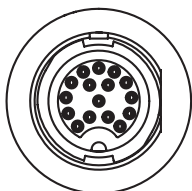
13 POSITION
#26 PIN & SOCKET
CONTACT



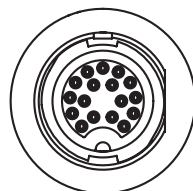
14 POSITION
#26 PIN & SOCKET
CONTACT



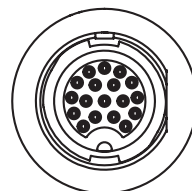
15 POSITION
#26 PIN & SOCKET
CONTACT



16 POSITION
#26 PIN & SOCKET
CONTACT



17 POSITION
#26 PIN & SOCKET
CONTACT



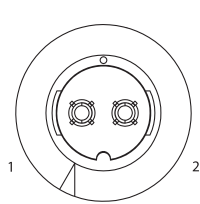
18 POSITION
#26 PIN & SOCKET
CONTACT

All dimensions are for reference only. Units shown: in[mm].

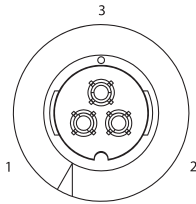
2-18 PANEL CONNECTORS

Rear View (Wiring Side)

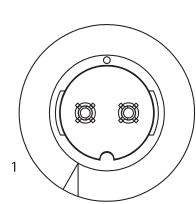
9-18 position identification numbers denote position used in 18 position layout



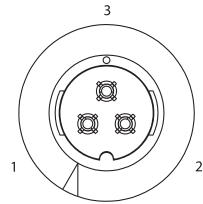
2 POSITION
#16 PIN & SOCKET
CONTACT



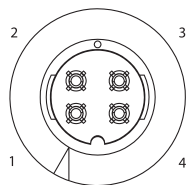
3 POSITION
#16 PIN & SOCKET
CONTACT



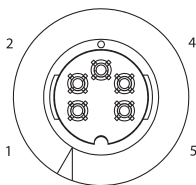
2 POSITION
#20 PIN & SOCKET
CONTACT



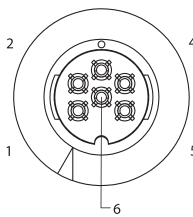
3 POSITION
#20 PIN & SOCKET
CONTACT



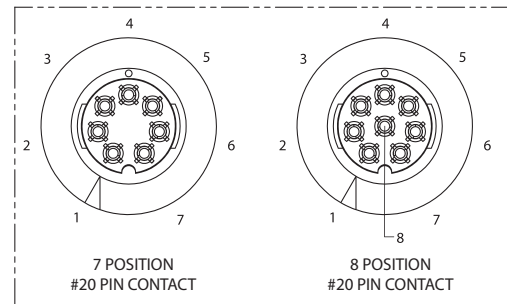
4 POSITION
#20 PIN & SOCKET
CONTACT



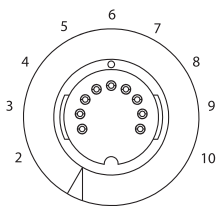
5 POSITION
#20 PIN & SOCKET
CONTACT



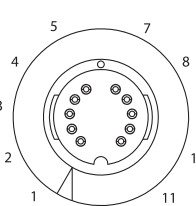
6 POSITION
#20 PIN & SOCKET
CONTACT



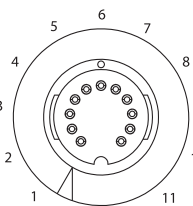
**7 & 8 POSITION NOT AVAILABLE IN
FEMALE PANEL CONNECTORS**



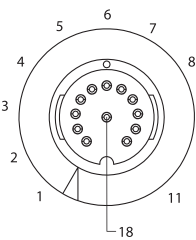
9 POSITION
#26 PIN & SOCKET
CONTACT



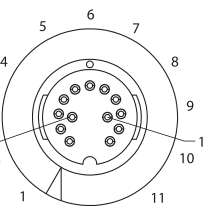
10 POSITION
#26 PIN & SOCKET
CONTACT



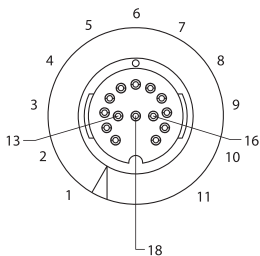
11 POSITION
#26 PIN & SOCKET
CONTACT



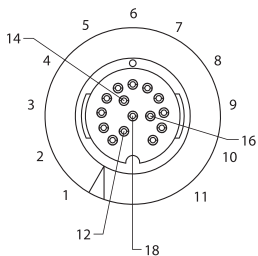
12 POSITION
#26 PIN & SOCKET
CONTACT



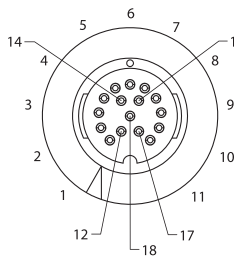
13 POSITION
#26 PIN & SOCKET
CONTACT



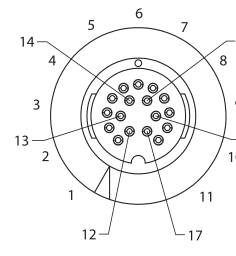
14 POSITION
#26 PIN & SOCKET
CONTACT



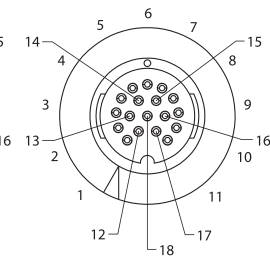
15 POSITION
#26 PIN & SOCKET
CONTACT



16 POSITION
#26 PIN & SOCKET
CONTACT



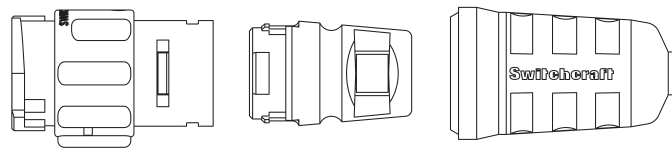
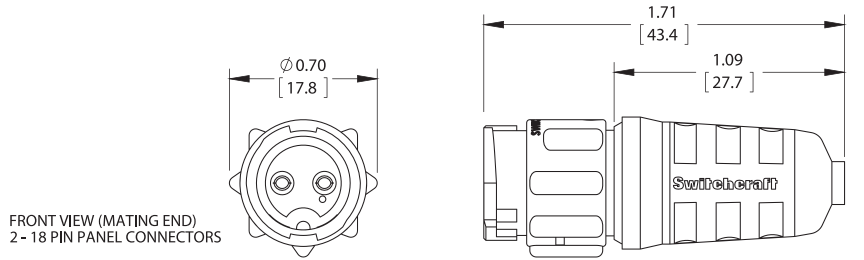
17 POSITION
#26 PIN & SOCKET
CONTACT



18 POSITION
#26 PIN & SOCKET
CONTACT

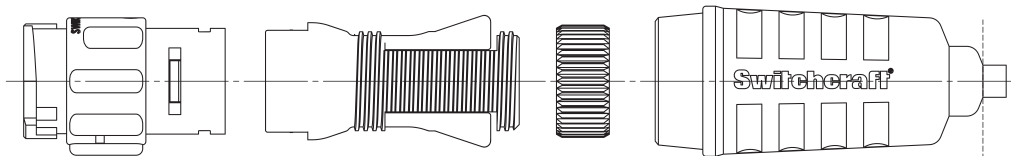
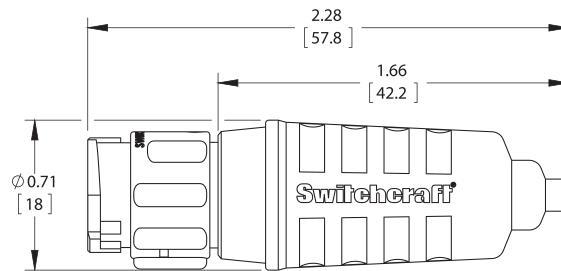
All dimensions are for reference only. Units shown: in[mm].

INLINE CONNECTORS



EN3 SERIES 2 - 18 POSITION
STANDARD CABLE CLAMP & BOOT
Ø 0.160 - Ø 0.268 CABLES

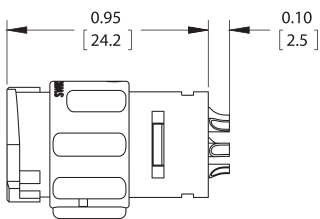
EN3L2F16CX SHOWN



OPTION "L"
EN3 SERIES 2 - 18 POSITION
LARGE CABLE CLAMP & BOOT
Ø 0.230 - Ø 0.380 CABLES

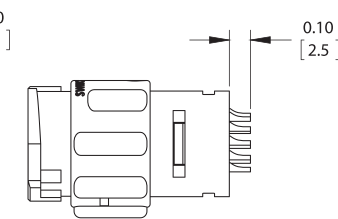
EN3L2F16CLX SHOWN

CUT OFF END OF BOOT
HERE FOR CABLES
LARGER THAN Ø 0.280



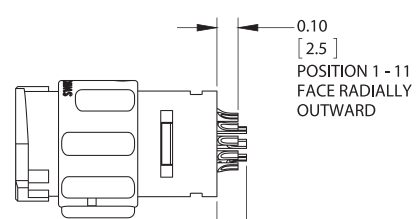
EN3 SERIES 2 - 8 POSITION
STANDARD SOLDER CUP
ALL POSITIONS
FACE RADIALLY OUTWARD

EN3L8MX SHOWN



EN3 SERIES 9 - 18 POSITION
STANDARD SOLDER CUP
ALL POSITIONS FACE UPWARD

EN3L18F26X SHOWN



OPTION "S"
EN3 SERIES 9 - 18 POSITION ONLY
STAGGERED SOLDER CUPS

EN3L18F26SX SHOWN

0.10 [2.5]
POSITION 1 - 11
FACE RADIALLY
OUTWARD

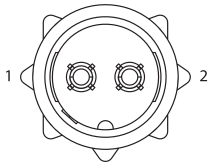
0.14 [3.6]
POSITION 12 - 18
FACE RADIALLY
OUTWARD

All dimensions are for reference only. Units shown: in[mm].

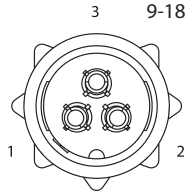
2-18 POSITION INLINE CONNECTORS

Rear View (Wiring Side)

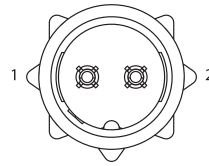
9-18 Position identification numbers denote position used in 18 position layout



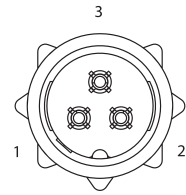
2 POSITION
#16 PIN & SOCKET
CONTACT



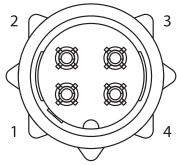
3 POSITION
#16 PIN & SOCKET
CONTACT



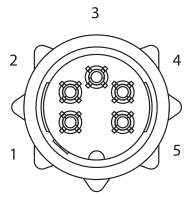
2 POSITION
#20 PIN & SOCKET
CONTACT



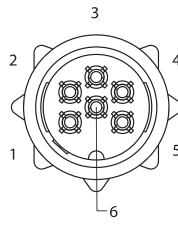
3 POSITION
#20 PIN & SOCKET
CONTACT



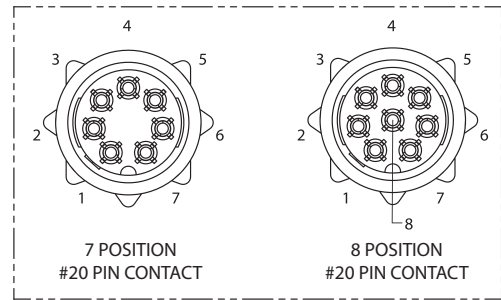
4 POSITION
#20 PIN & SOCKET
CONTACT



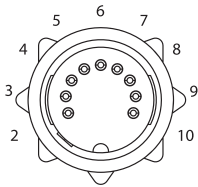
5 POSITION
#20 PIN & SOCKET
CONTACT



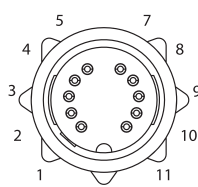
6 POSITION
#20 PIN & SOCKET
CONTACT



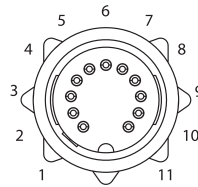
**7 & 8 POSITION NOT AVAILABLE IN
FEMALE INLINE CONNECTORS**



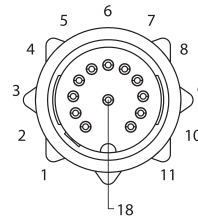
9 POSITION
#26 PIN & SOCKET
CONTACT



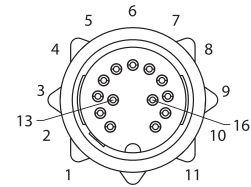
10 POSITION
#26 PIN & SOCKET
CONTACT



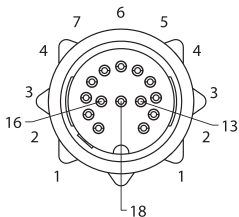
11 POSITION
#26 PIN & SOCKET
CONTACT



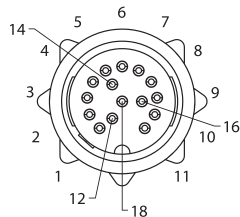
12 POSITION
#26 PIN & SOCKET
CONTACT



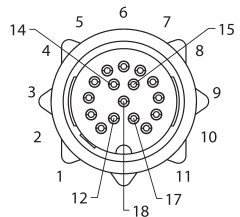
13 POSITION
#26 PIN & SOCKET
CONTACT



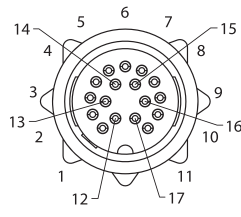
14 POSITION
#26 PIN & SOCKET
CONTACT



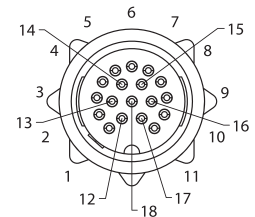
15 POSITION
#26 PIN & SOCKET
CONTACT



16 POSITION
#26 PIN & SOCKET
CONTACT



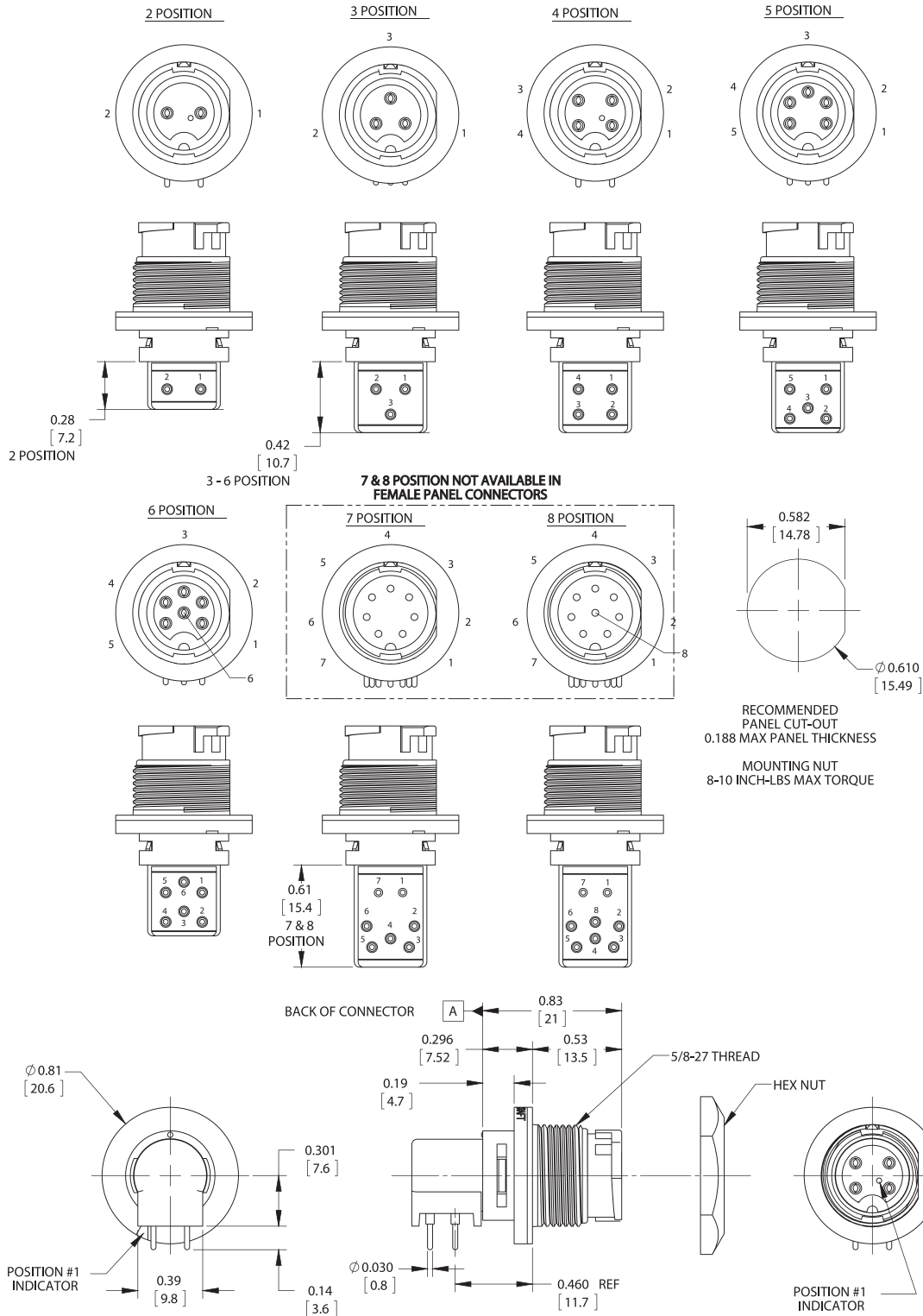
17 POSITION
#26 PIN & SOCKET
CONTACT



18 POSITION
#26 PIN & SOCKET
CONTACT

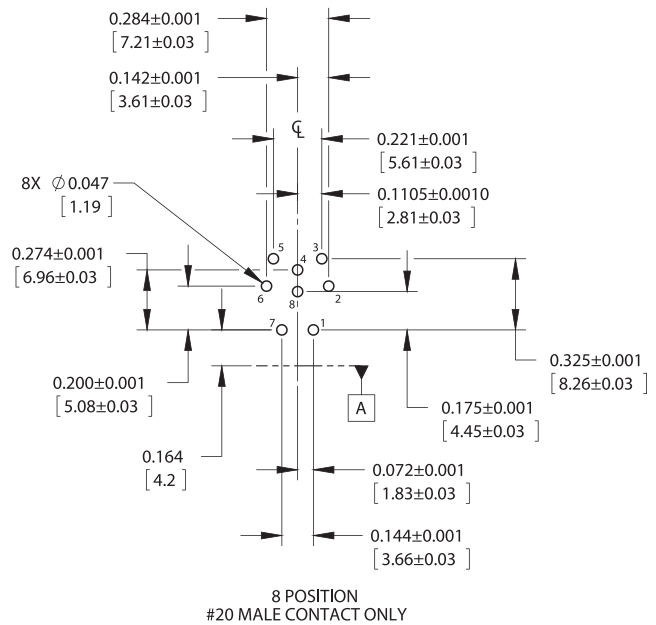
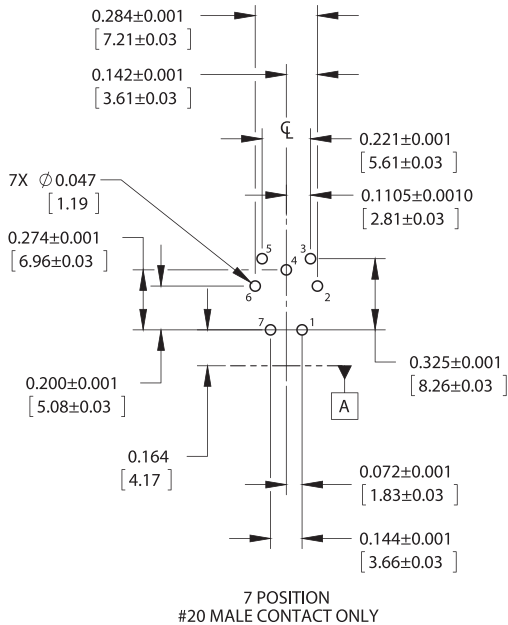
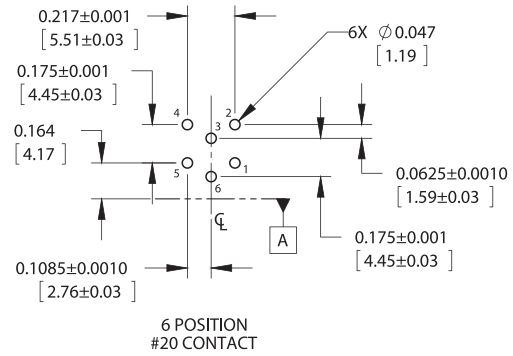
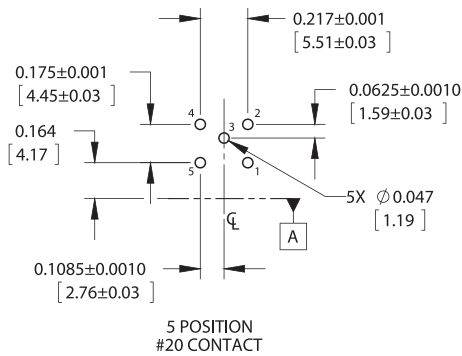
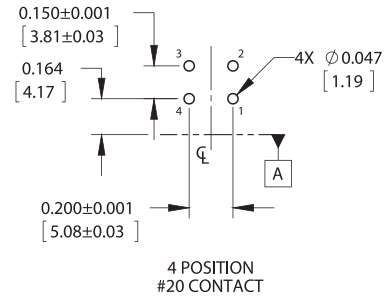
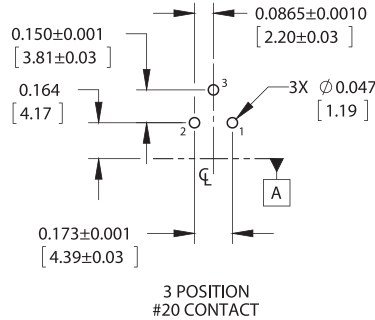
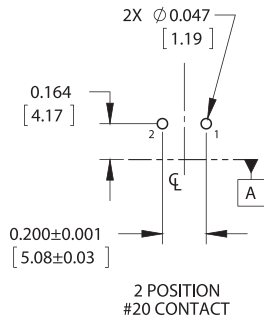
All dimensions are for reference only. Units shown: in[mm].

EN3[®] RIGHT ANGLE 2-8 POSITION MOLDED CONNECTORS



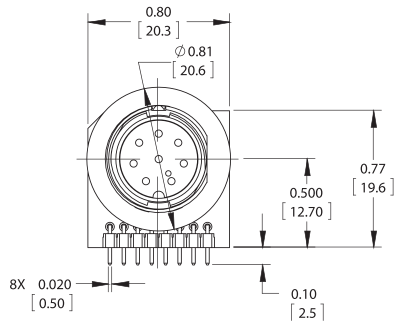
All dimensions are for reference only. Units shown: in[mm].

EN3[®] RIGHT ANGLE 2-8 POSITION CONNECTORS

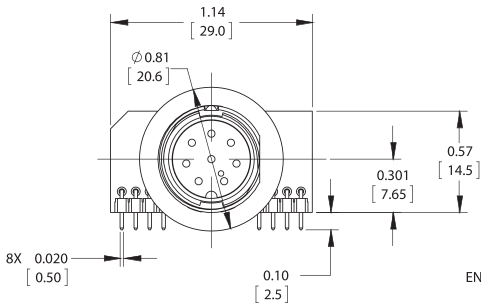
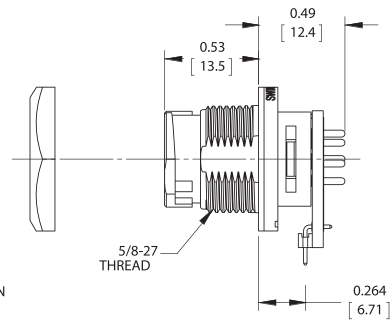


All dimensions are for reference only. Units shown: in[mm].

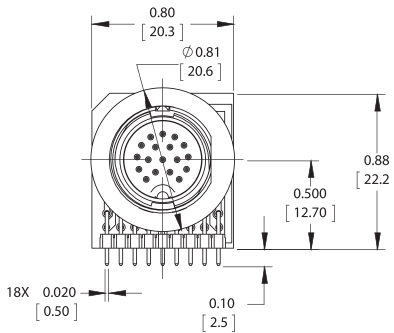
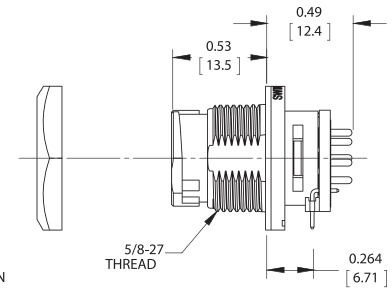
EN3[®] RIGHT ANGLE PC BOARD CONNECTORS



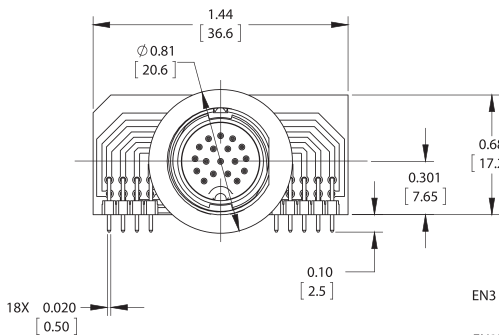
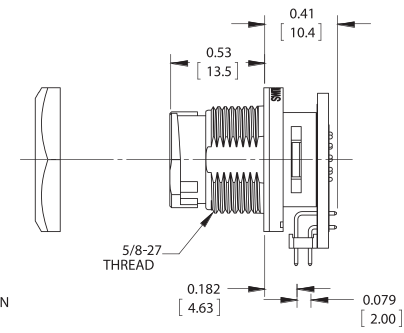
OPTION "N"
EN3 SERIES 2 - 8 POSITION
NARROW PCB
EN3P8MRAPCBN SHOWN
(NOT AVAILABLE IN FEMALE 7 & 8 POSITION)



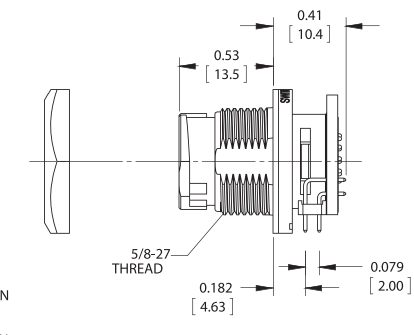
OPTION "W"
EN3 SERIES 2 - 8 POSITION
WIDE PCB
EN3P8MRAPCBW SHOWN
(NOT AVAILABLE IN FEMALE 7 & 8 POSITION)



OPTION "N"
EN3 SERIES 9 - 18 POSITION
NARROW PCB
EN3P18MRAPCBN SHOWN

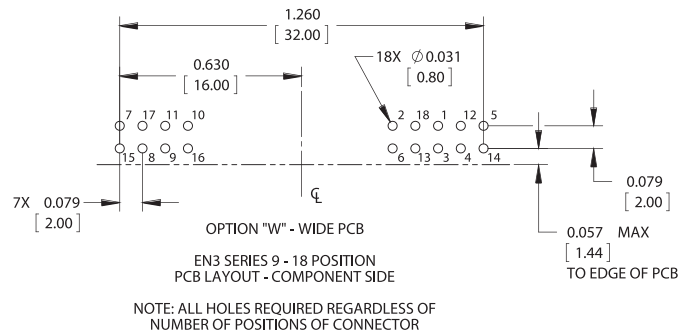
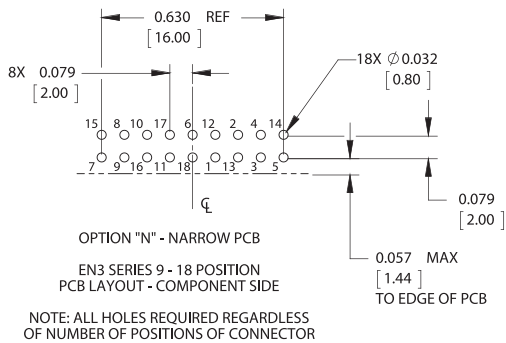
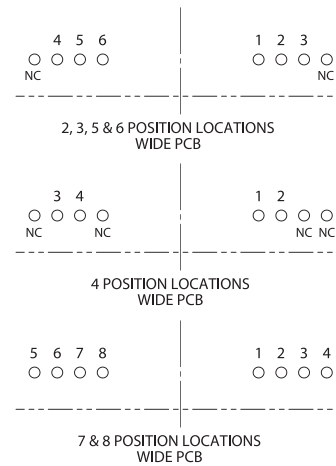
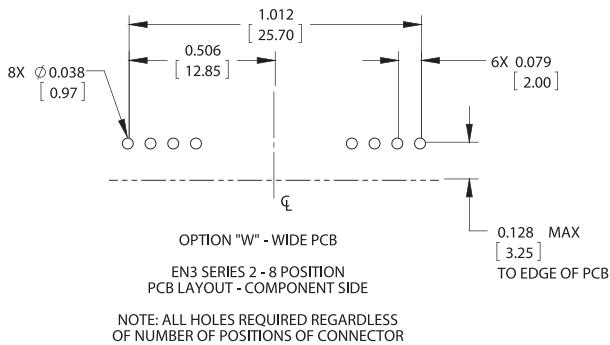
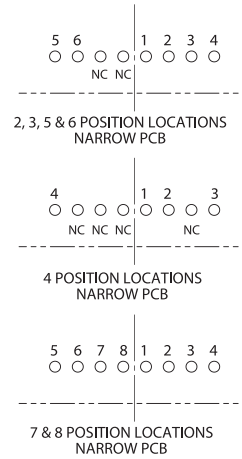
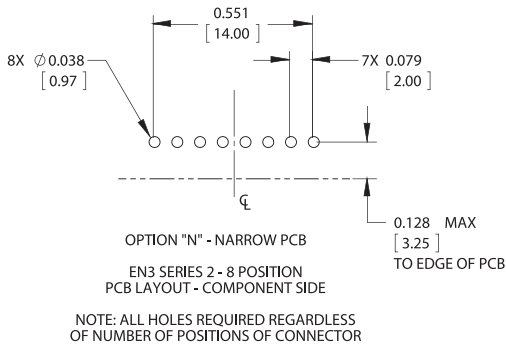


OPTION "W"
EN3 SERIES 9 - 18 POSITION
WIDE PCB
EN3P18MRAPCBW SHOWN



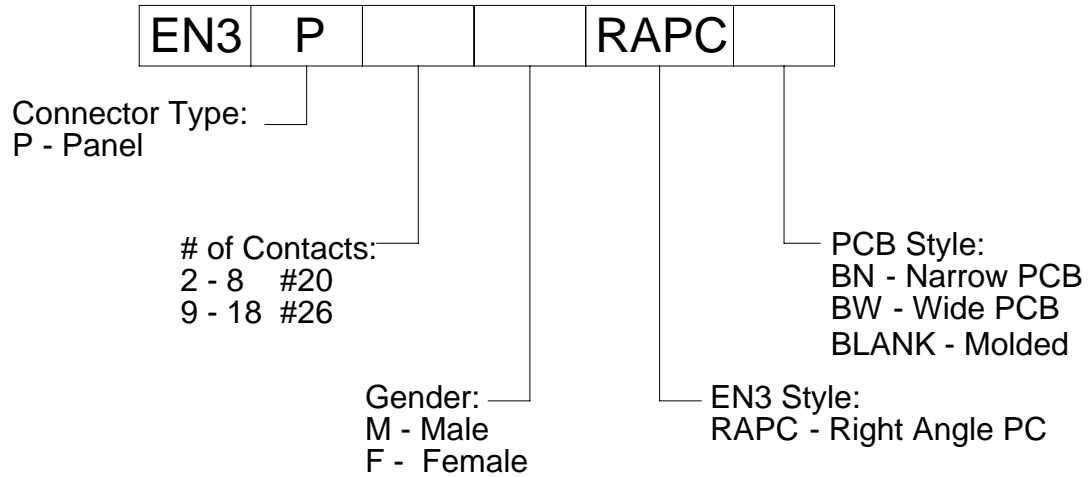
All dimensions are for reference only. Units shown: in[mm].

EN3[®] RIGHT ANGLE PC BOARD CONNECTORS



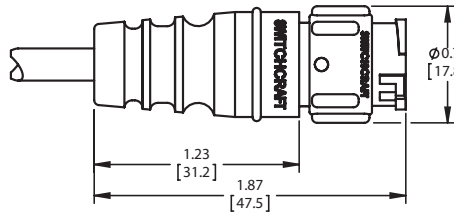
All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER - RIGHT ANGLE EN3® PANEL MOUNTS

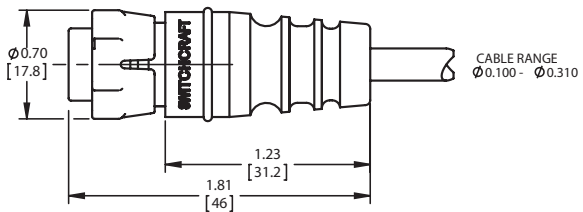


Notes:
7 and 8 pin not available in female Panel connector

CUSTOM MOLDED CABLE ASSEMBLIES

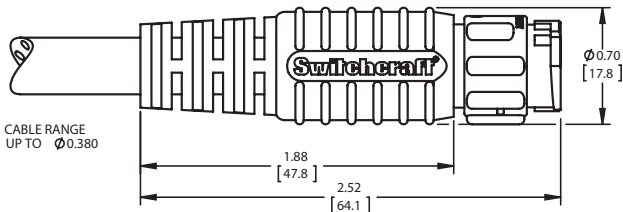


EN3 SERIES COMPACT OVERMOLD
INLINE CONNECTOR

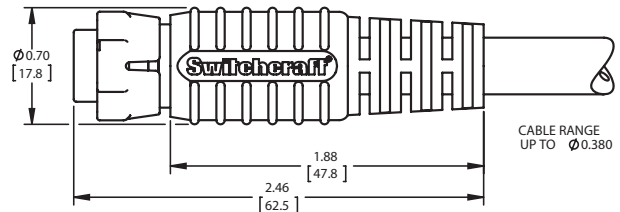


EN3 SERIES COMPACT OVERMOLD
CORD CONNECTOR

CABLE RANGE
Ø0.100 - Ø0.310



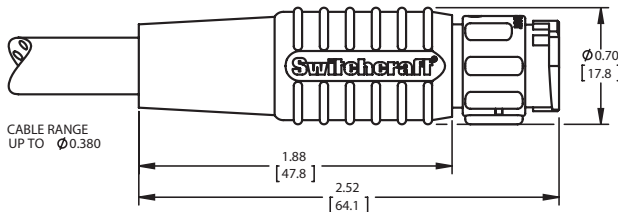
EN3 SERIES STRAIGHT OVERMOLD
INLINE CONNECTOR
WITH FLEX RELIEF



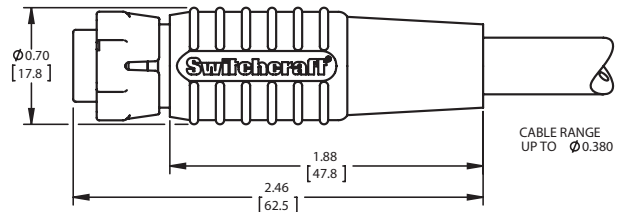
EN3 SERIES STRAIGHT OVERMOLD
CORD CONNECTOR
WITH FLEX RELIEF

CABLE RANGE
UP TO Ø0.380

CABLE RANGE
UP TO Ø0.380



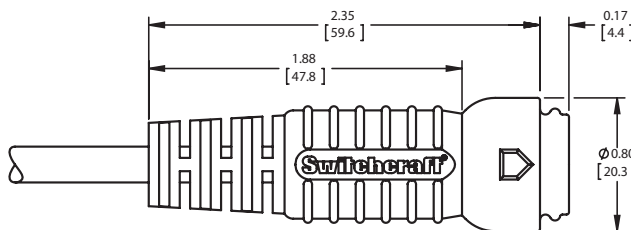
EN3 SERIES STRAIGHT OVERMOLD
INLINE CONNECTOR
WITHOUT FLEX RELIEF



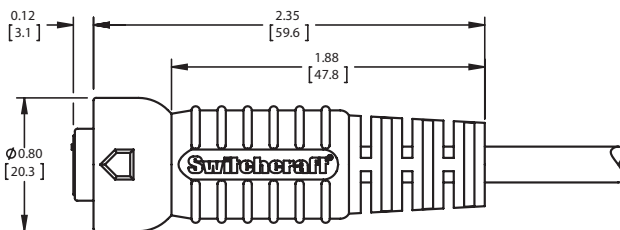
EN3 SERIES STRAIGHT OVERMOLD
CORD CONNECTOR
WITHOUT FLEX RELIEF

CABLE RANGE
UP TO Ø0.380

CABLE RANGE
UP TO Ø0.380



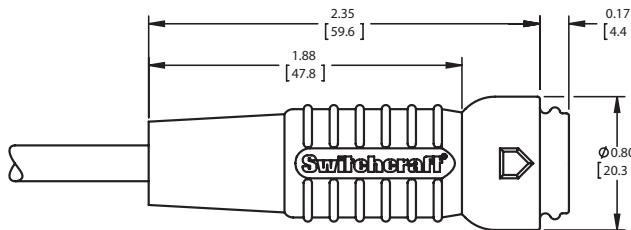
EN3 SERIES QUICK CONNECT OVERMOLD
INLINE CONNECTOR
WITH FLEX RELIEF



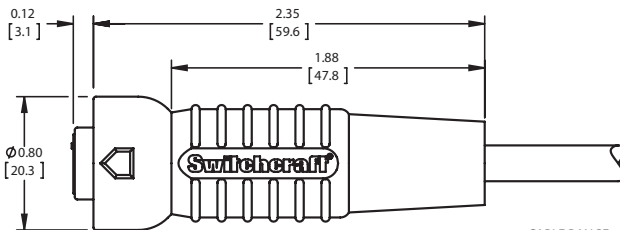
EN3 SERIES QUICK CONNECT OVERMOLD
CORD CONNECTOR
WITH FLEX RELIEF

CABLE RANGE
UP TO Ø0.380

CABLE RANGE
UP TO Ø0.380



EN3 SERIES QUICK CONNECT OVERMOLD
INLINE CONNECTOR
WITHOUT FLEX RELIEF



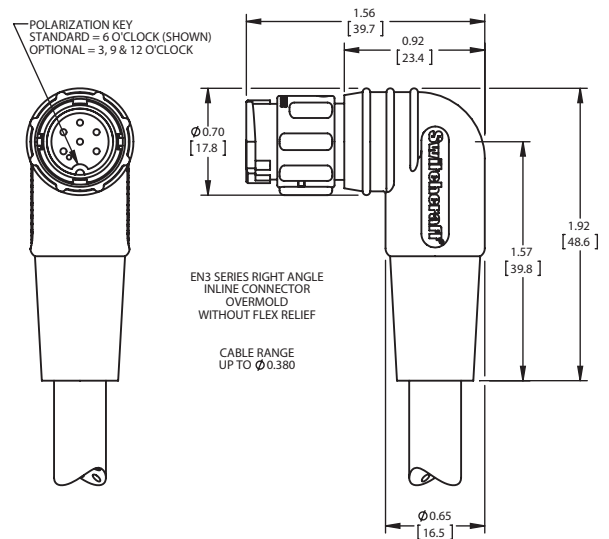
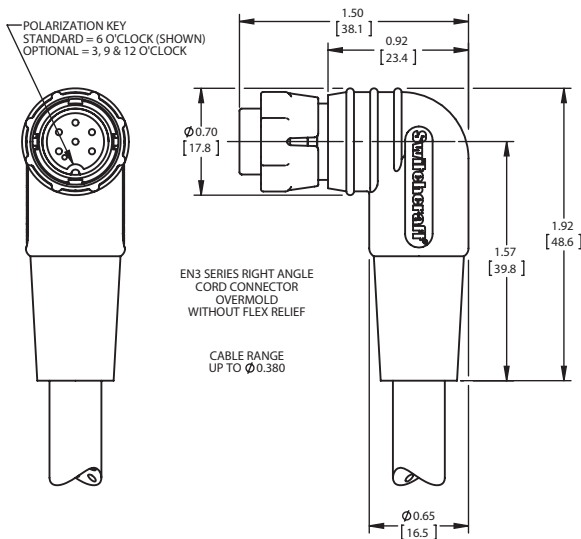
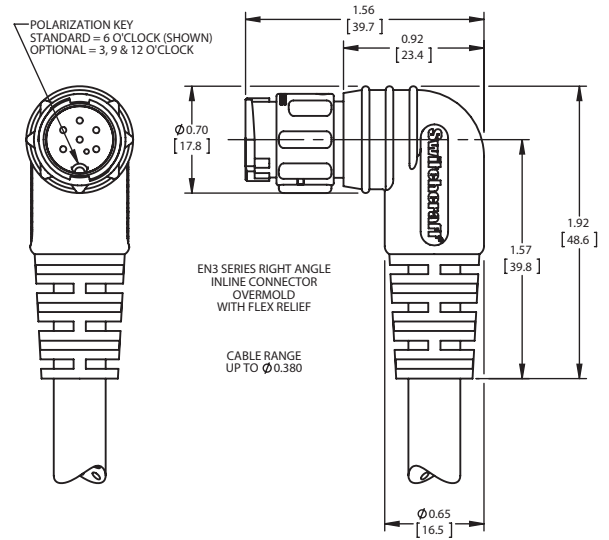
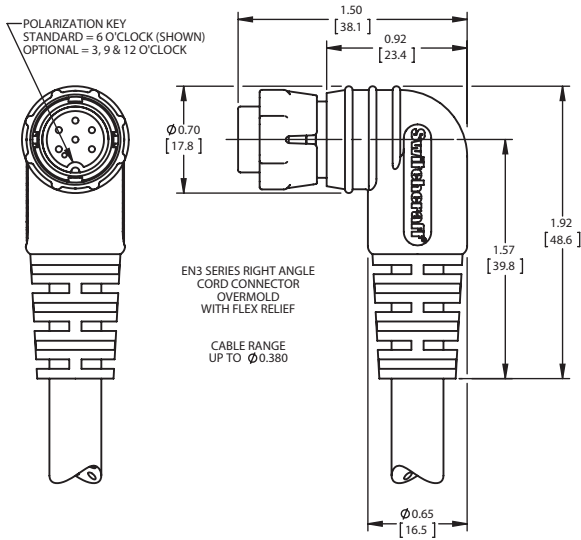
EN3 SERIES QUICK CONNECT OVERMOLD
CORD CONNECTOR
WITHOUT FLEX RELIEF

CABLE RANGE
UP TO Ø0.380

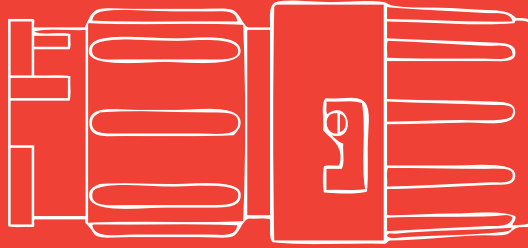
CABLE RANGE
UP TO Ø0.380

All dimensions are for reference only. Units shown: in[mm].

CUSTOM MOLDED CABLE ASSEMBLIES



All dimensions are for reference only. Units shown: in[mm].



MINI-CON-X®

0.71" [18MM] OD 2-8 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE END - PIN
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE TO CABLE / INLINE - PIN
MATES WITH CABLE END



PANEL MOUNT - PIN
MATES WITH CABLE END



PANEL MOUNT - SOCKET
MATES WITH CABLE END



DUST CAP
P/N - 6295



IP RATED LOCKING CAP
P/N - 6295P-W



MOLDED CABLE END ASSEMBLY



MOLDED CABLE TO CABLE ASSEMBLY



MOLDED RIGHT ANGLE CABLE ASSEMBLY

SPECIFICATIONS

Mechanical Specifications

Life:	300 insertion / withdrawal cycles minimum
Vibration:	Coupling rings have overriding locking feature to prevent loosening or separation of connector
Hex Nut Torque:	10 in-lb max tightening torque.
Coupling Locking Style:	Bayonet with ribbed coupling nut (winged coupling nut available) P/N 6482
Backshell Style:	Removable twist lock
Conductor Size:	#16 contacts accepts 16 through 18 AWG #20 contacts accepts 20 through 24 AWG

Electrical Specifications

Voltage Rating:	600 V AC/DC
Current Rating:	13.0 A – max (See page 107 for Electrical Current Rating Chart)

Environmental Specifications

Operating Temperature Rating:	-40°C to +85°C (-40°F to +185°F)
Salt Atmosphere (Corrosion):	300 Hr salt spray when mated
Weathertight:	IP67 when mated

Material Specifications

Backshell:	Thermoplastic, UL 94HB, Black
Contacts:	Copper Alloy, Gold over Nickel Plate
Coupling Ring:	Thermoplastic, UL 94HB, Black
Gasket:	Elastomer, Black
Grommet / Strain Relief:	Elastomer, Black
Hex Nut:	Thermoplastic, UL 94HB, Black
O-Ring:	Elastomer, Black
Shell:	Thermoplastic, UL 94HB, Black
Optional Dust Cap:	Elastomer, Black

Molded Cable Assemblies

Weathertight:	NEMA 6P, 13: IEC IP67
---------------	-----------------------

Certifications

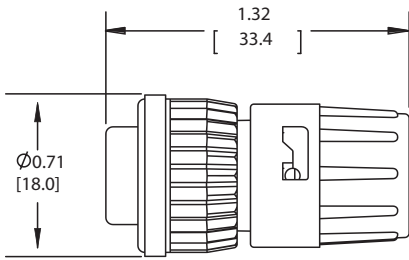
UL File E150822
CSA File 181200
Not for current interruption
RoHS compliant
REACH compliant

Options

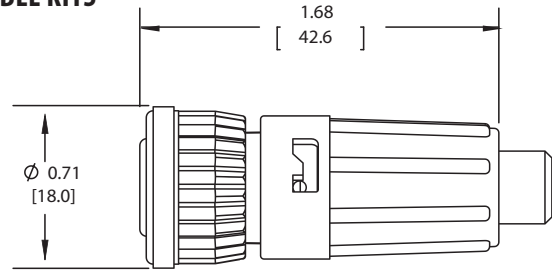
UV Rating:	F1 available
Flame Rating:	UL 94V-0 available

Consult factory for optional colors and materials

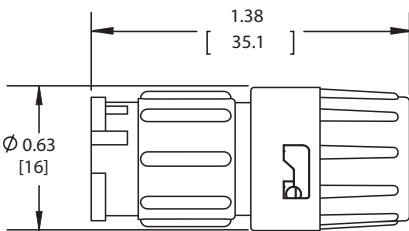
FIELD INSTALLABLE KITS



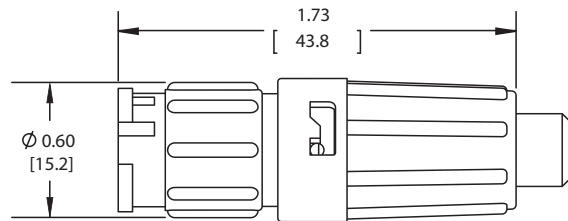
6XXX-XXG-3XX
FIELD INSTALLABLE
CABLE CONNECTOR
TWIST LOCK BACKSHELL
TYPE 3-SHORT



6XXX-XXG-5XX
FIELD INSTALLABLE
CABLE CONNECTOR
TWIST LOCK BACKSHELL
TYPE 5-LONG

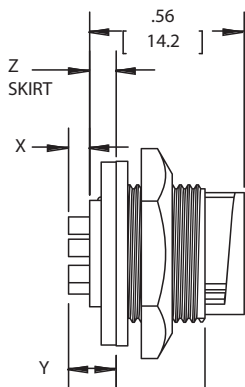


8XXX-XXG-3XX
FIELD INSTALLABLE
CABLE TO CABLE CONNECTOR
TWIST LOCK BACKSHELL
TYPE 3-SHORT

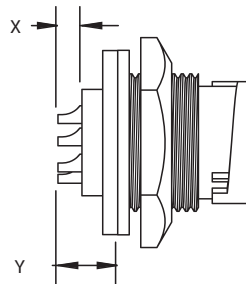


8XXX-XXG-5XX
FIELD INSTALLABLE
CABLE TO CABLE CONNECTOR
TWIST LOCK BACKSHELL
TYPE 5-LONG

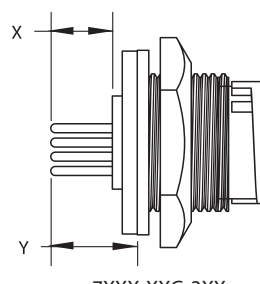
PANEL MOUNT ASSEMBLY KITS



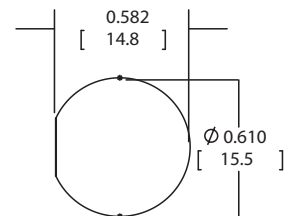
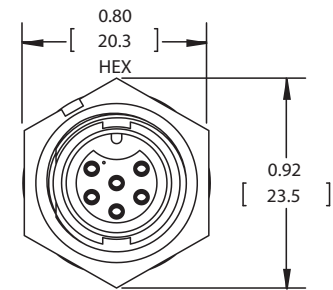
7X80-XXG-3XX
PANEL MOUNT CONNECTOR
CRIMP



7X82-XXG-3XX
PANEL MOUNT CONNECTOR
SOLDER CUP



7XXX-XXG-3XX
PANEL MOUNT CONNECTOR
PC TAIL

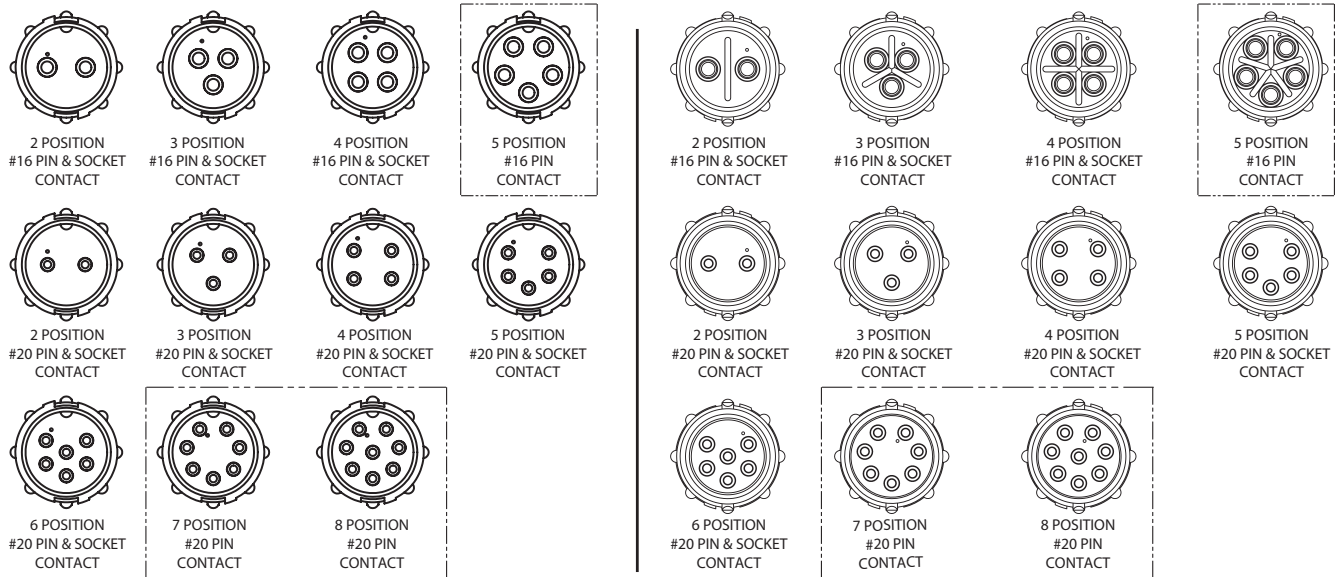


RECOMMENDED
PANEL CUT-OUT
TOLERANCE: ± 0.003 [0.08]

*X, Y, Z - Consult Factory. All dimensions are for reference only. Units shown: in[mm].

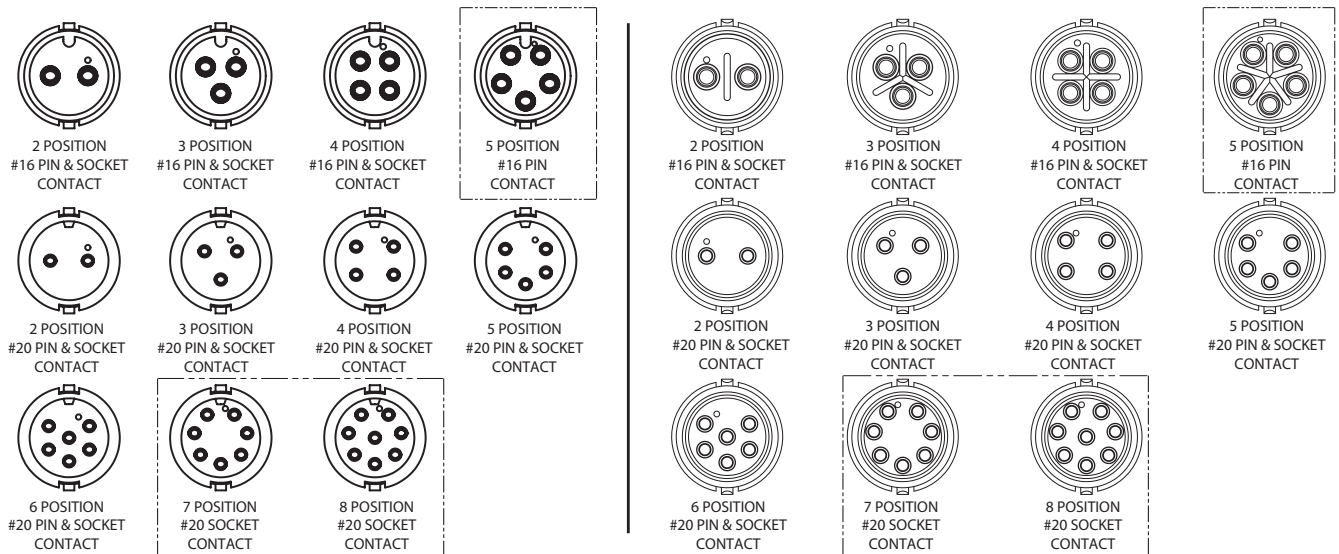
PANEL MOUNT / CABLE TO CABLE CONNECTORS

Front View | Wire View



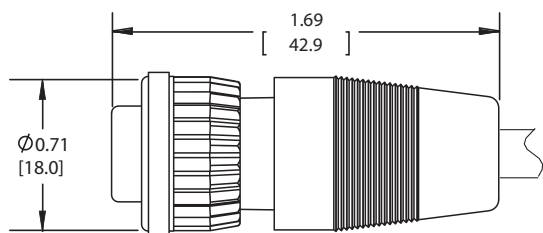
CABLE CONNECTORS

Front View | Wire View

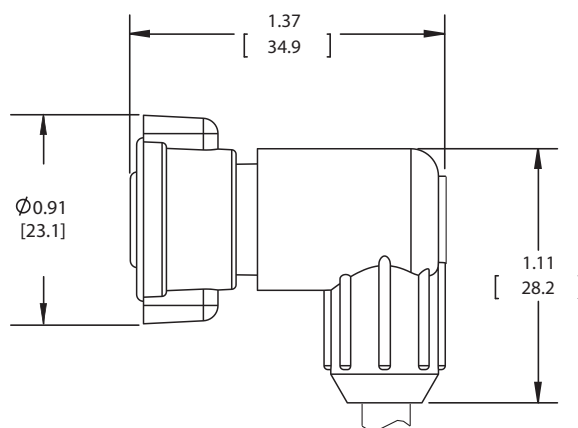


All dimensions are for reference only. Units shown: in[mm].

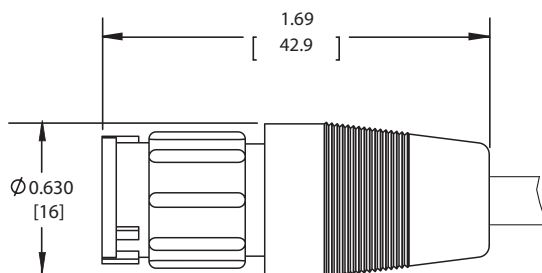
CUSTOM MOLDED CABLE ASSEMBLIES



6XXX-XXG
CUSTOM CABLE CONNECTOR
STRAIGHT OVERMOLDED



6XXX-XXG
CUSTOM CABLE CONNECTOR
RIGHT ANGLE OVERMOLDED



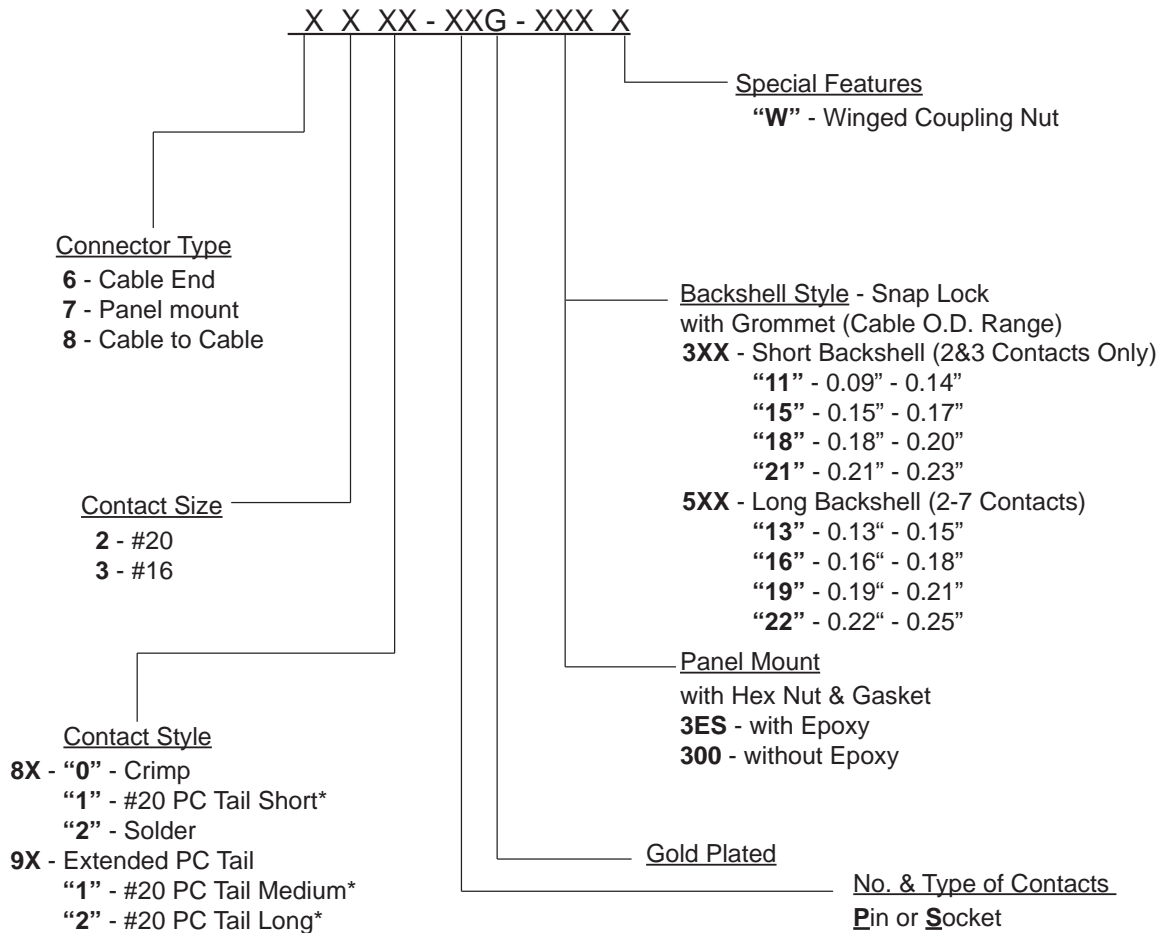
8XXX-XXG
CUSTOM CABLE TO CABLE CONNECTOR
STRAIGHT OVERMOLDED

Note: Mini-Con-X[®] can be overmolded onto an extended well panel mount. Straight version only.

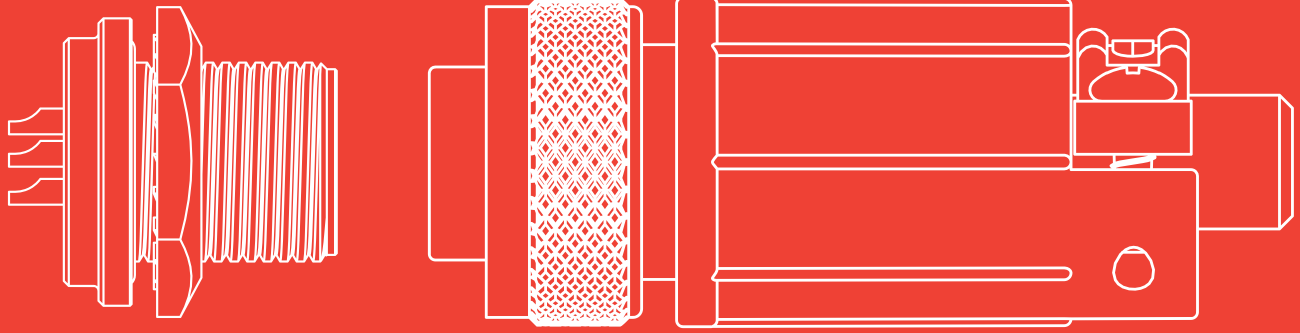
- Available in: 2#20, 4#20 and 6#20 female
- Available in: 4#20, 6#20 and 7#20 male

All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER



*Consult factory for length and diameter of PC Tail. Additionally, alternative colors and materials are available.



SHIELDED MINI-CON-X[®]

0.760" [19MM] OD 2-8 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT



CABLE END - PIN
MATES WITH PANEL MOUNT



PANEL MOUNT - PIN
MATES WITH CABLE END



PANEL MOUNT - SOCKET
MATES WITH CABLE END



MOLDED CABLE END ASSEMBLY



MOLDED RIGHT ANGLE CABLE ASSEMBLY

SPECIFICATIONS

Mechanical Specifications

Life:	400 insertion / withdrawal cycles minimum
Vibration:	MIL-STD 202G Method 201A
Hex Nut Torque:	10-12 in-lb max tightening torque.
Coupling Locking Style:	Threaded Coupling Ring
Backshell Style:	Threaded

Electrical Specifications

Voltage Rating:	600 VAC/DC
Current Rating:	13.0 A – max (See page 107 for Electrical Current Rating Chart)
Conductor Size:	2 through 6 #16 contacts accepts 16 AWG 2 through 8 #20 contacts accepts 20 AWG

Environmental Specifications

Operating Temperature Rating:	-40°C to +85°C (-40°F to +185°F)
Salt Atmosphere (Corrosion):	Method 106F, Mil-Std 202
Weathertight:	IP66 / IP68 NEMA 250 (6P) (when mated)

Material Specifications

Backshell & Strap:	Thermoplastic
Contacts:	Copper Alloy, Gold over Nickel Plate
Coupling Ring:	Nickel Plated Copper Alloy
Inserts:	Thermoplastic
Grommet / Strain Relief:	Elastomer
O-Ring:	Elastomer
Shell:	Nickel Plated Copper Alloy
Cable Housing:	Nickel Plated Copper Alloy
Screws:	Stainless Steel

Molded Cable Assemblies

Weathertight:	IP66 / IP68 NEMA 250 (6P) (when mated)
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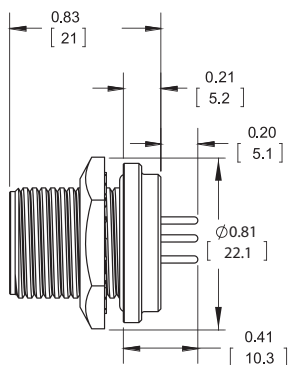
Certifications

UL File E150822
CSA File 181200
Not for current interruption
RoHS compliant

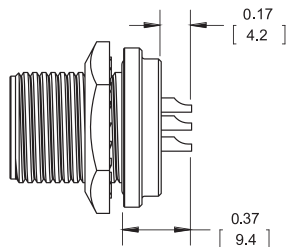
Options

Flame Rating:	UL 94HB
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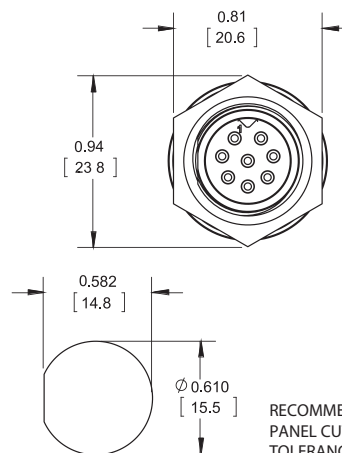
PANEL MOUNT ASSEMBLY KITS



SF7X81-XXG-3XX
PANEL MOUNT CONNECTOR
PC TAIL

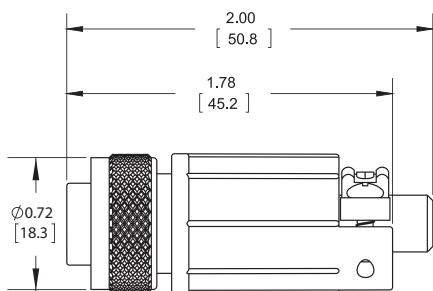


SF7X82-XXG-3XX
PANEL MOUNT CONNECTOR
SOLDER CUP

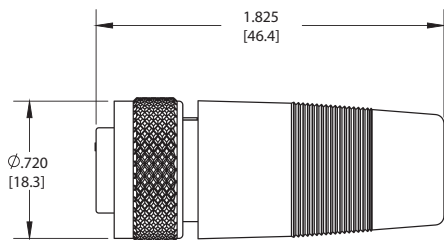


RECOMMENDED
PANEL CUT-OUT
TOLERANCE: ±0.003 [0.08]

FIELD INSTALLABLE KITS

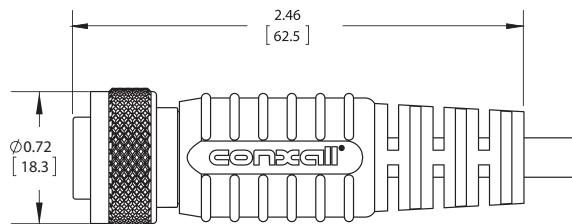


SF6X82-XXG-5XX
CABLE CONNECTOR
SOLDER CUP

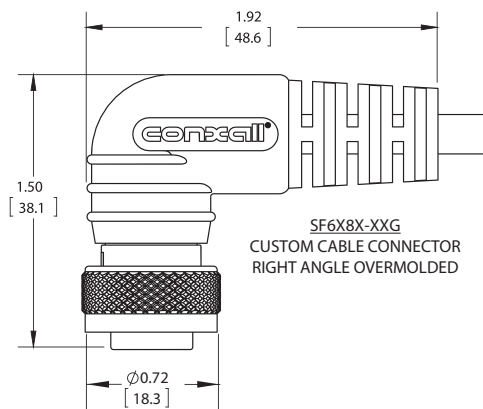


SF6X8X-XXG
CUSTOM CABLE CONNECTOR
STRAIGHT OVERMOLDED (Alternative)

CUSTOM MOLDED CABLE ASSEMBLIES



SF6X8X-XXG
CUSTOM CABLE CONNECTOR
STRAIGHT OVERMOLDED

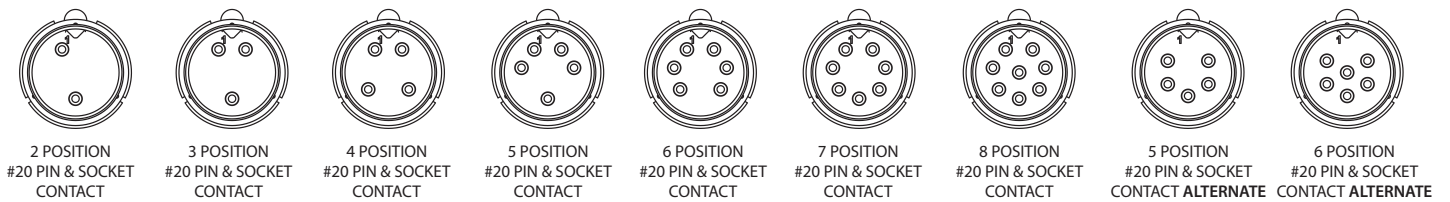
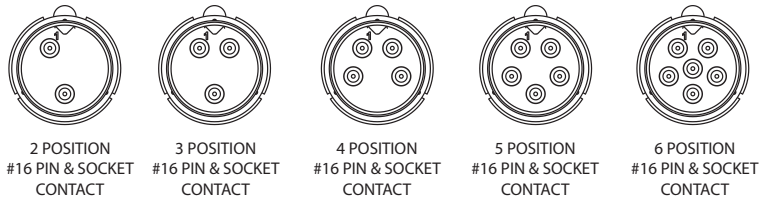


SF6X8X-XXG
CUSTOM CABLE CONNECTOR
RIGHT ANGLE OVERMOLDED

All dimensions are for reference only. Units shown: in[mm].

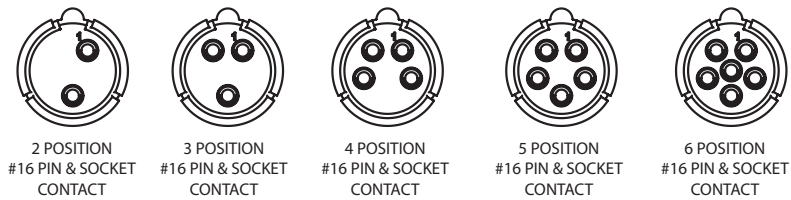
PANEL MOUNT CONNECTOR

Front View



PANEL MOUNT CONNECTOR

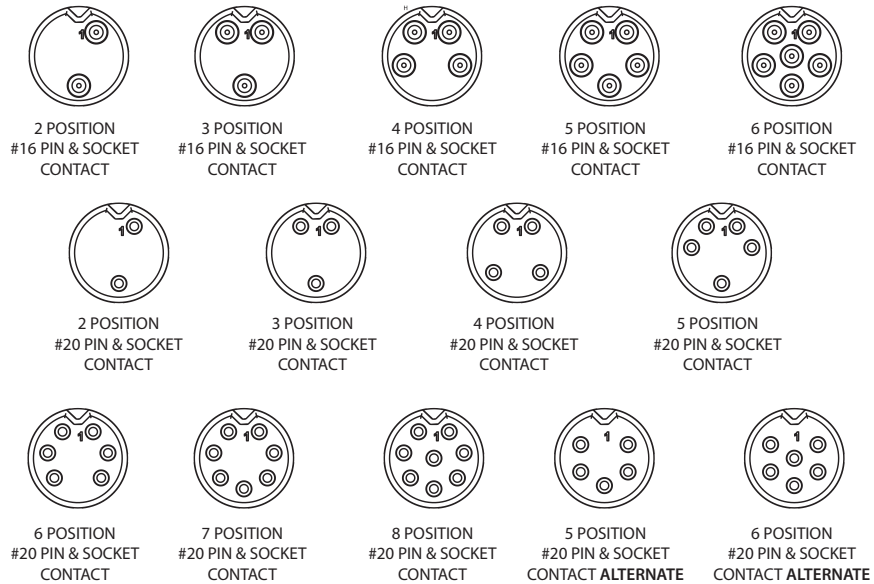
Wire View



All dimensions are for reference only. Units shown: in[mm].

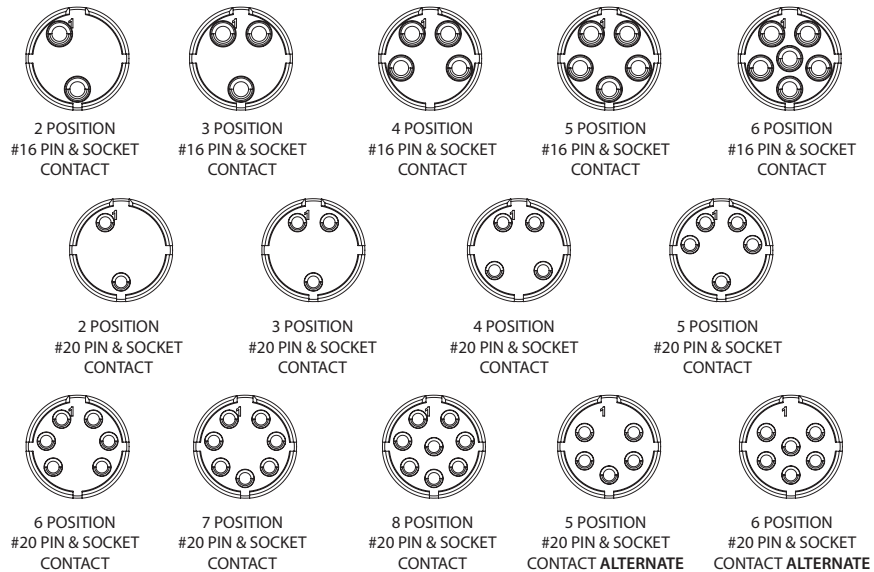
CABLE CONNECTORS

Front View



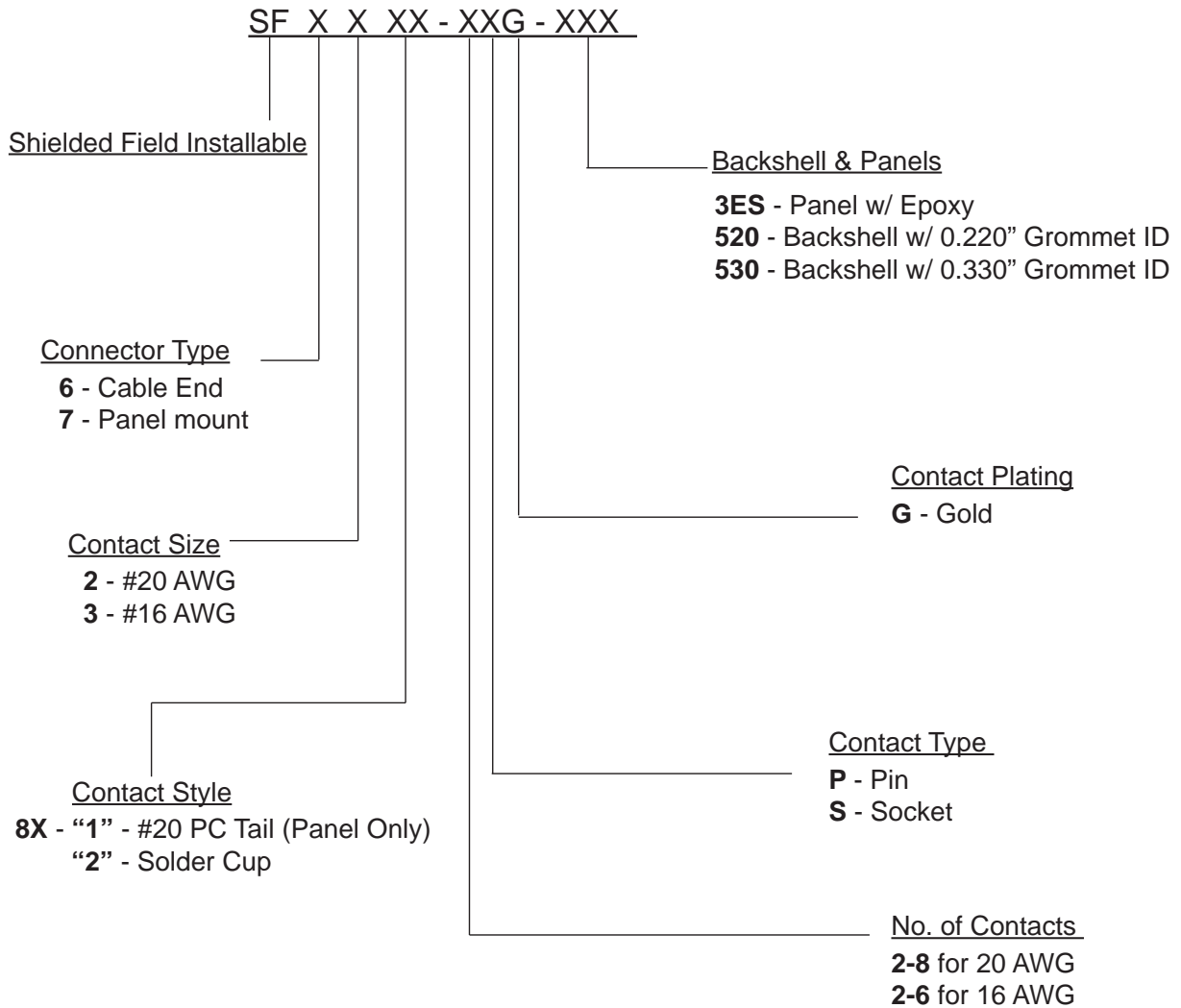
CABLE CONNECTORS

Wire View

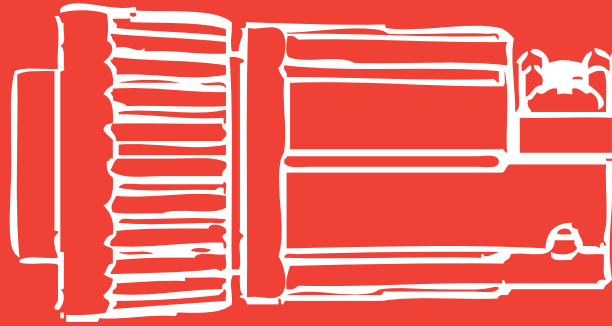


All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER



Consult factory for connectors with alternate 5-20AWG and 6-20AWG contact arrangements.



MULTI-CON-X®

0.875" [22MM] OD 2-9 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE END - PIN
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE TO CABLE / INLINE - SOCKET
MATES WITH CABLE END



PANEL MOUNT - PIN
MATES WITH CABLE END



PANEL MOUNT - SOCKET
MATES WITH CABLE END



DUST CAP
P/N - 4295



MOLDED CABLE END ASSEMBLY



MOLDED CABLE TO CABLE ASSEMBLY



MOLDED RIGHT ANGLE CABLE ASSEMBLY

SPECIFICATIONS

Mechanical Specifications

Life:	300 insertion / withdrawal cycles minimum
Vibration:	Coupling rings have overriding locking feature to prevent loosening or separation of connector
Hex Nut Torque:	10 in-lb tightening torque.
Coupling Locking Style:	Bayonet with ribbed coupling nut (winged coupling nut available) P/N 4482
Backshell Style:	Threaded
Conductor Size:	#12 contacts accepts 12 through 14 AWG #16 contacts accepts 16 through 18 AWG #20 contacts accepts 20 through 24 AWG

Electrical Specifications

Voltage Rating:	600 VAC/DC
Current Rating:	17.0 A – max (See page 107 for Electrical Current Rating Chart)

Environmental Specifications

Operating Temperature Rating:	-40°C to +85°C (-40°F to +185°F)
Salt Atmosphere (Corrosion):	300 Hr salt spray when mated
Weathertight:	IP67 when mated

Material Specifications

Backshell:	Thermoplastic, UL 94HB, Black
Contacts:	Copper Alloy, Gold over Nickel Plate
Coupling Ring:	Thermoplastic, UL 94HB, Black
Gasket:	Elastomer, Black
Grommet / Strain Relief:	Elastomer, Black
Hex Nut:	Thermoplastic, UL 94HB, Black
O-Ring:	Elastomer, Black
Shell:	Thermoplastic, UL 94HB, Black
Optional Dust Cap:	Elastomer, Black

Molded Cable Assemblies

Weathertight:	NEMA 6P, 13: IEC IP67
---------------	-----------------------

Certifications

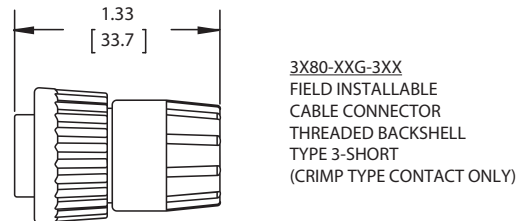
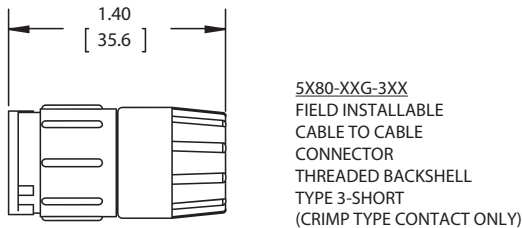
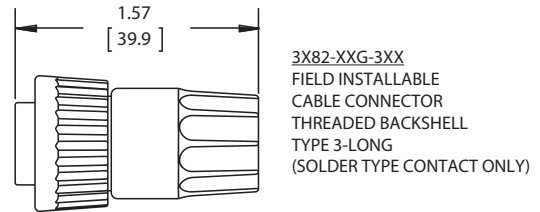
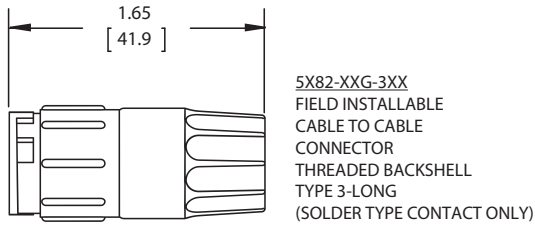
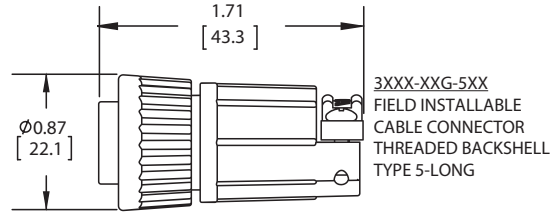
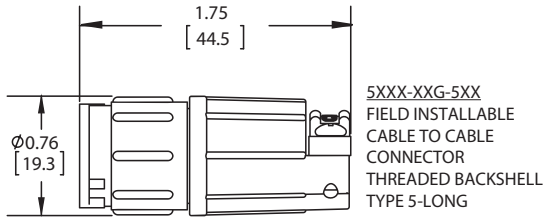
UL File E150822
CSA File 181200
Not for current interruption
RoHS compliant
REACH compliant

Options

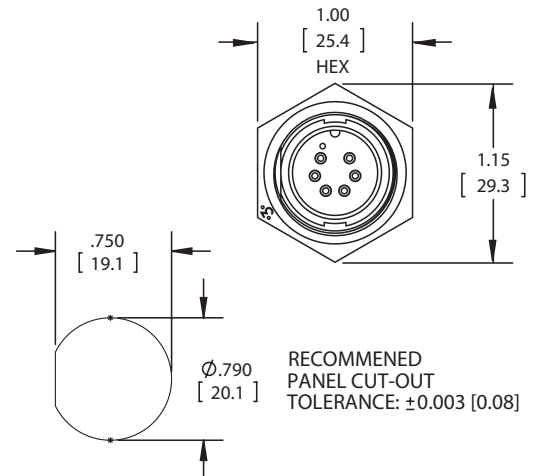
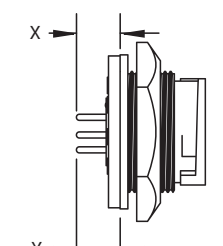
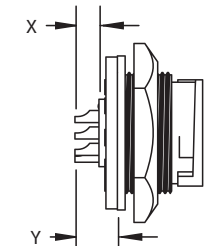
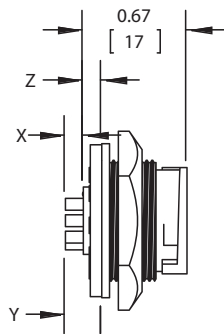
UV Rating:	F1 available
Flame Rating:	UL 94V-0 available

Consult factory for optional colors and materials

FIELD INSTALLABLE KITS



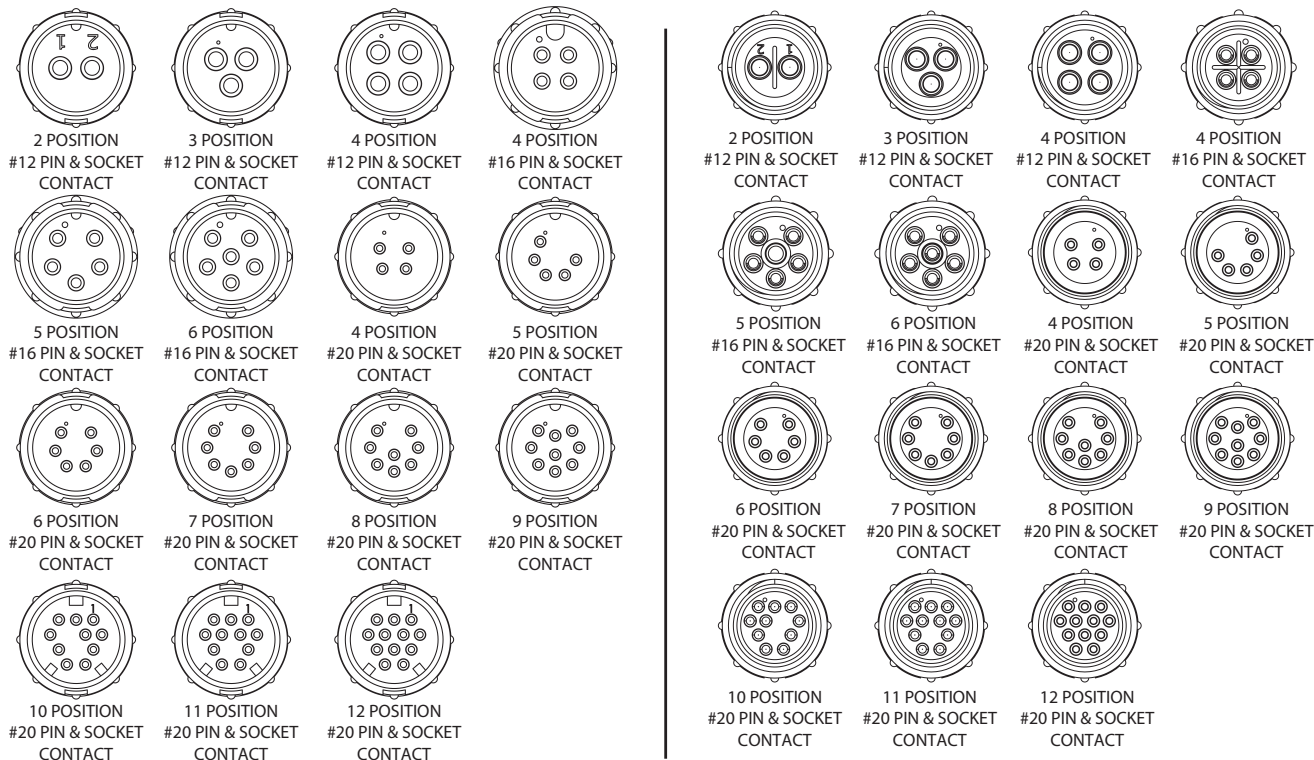
PANEL MOUNT ASSEMBLY KITS



*X, Y, Z - Consult Factory. All dimensions are for reference only. Units shown: in[mm].

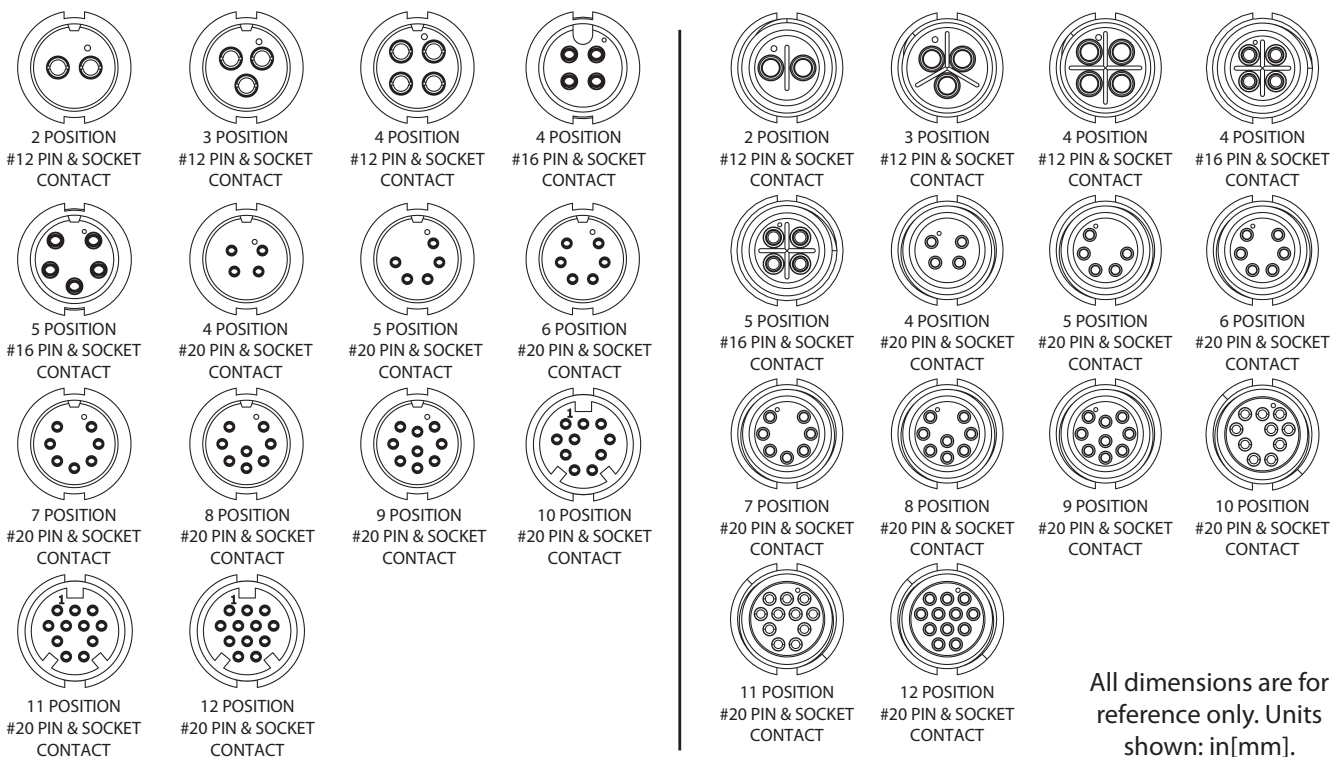
PANEL MOUNT / CABLE TO CABLE CONNECTORS

Front View | Wire View



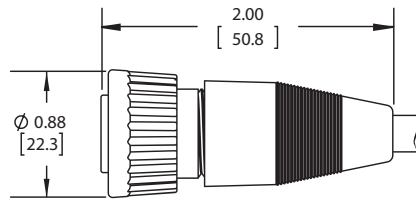
CABLE CONNECTORS

Front View | Wire View

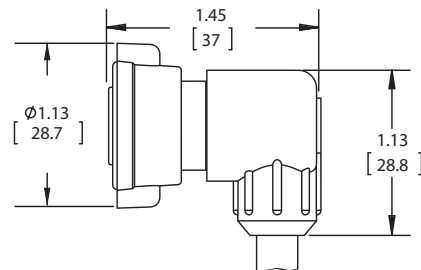


All dimensions are for reference only. Units shown: in[mm].

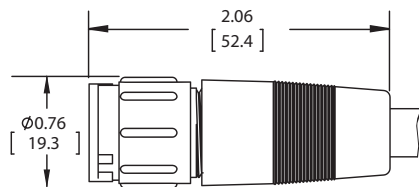
CUSTOM MOLDED CABLE ASSEMBLIES



4XXX-XXG
CUSTOM CABLE CONNECTOR
STRAIGHT OVERMOLDED



4XXX-XXG
CUSTOM CABLE CONNECTOR
RIGHT ANGLE OVERMOLDED



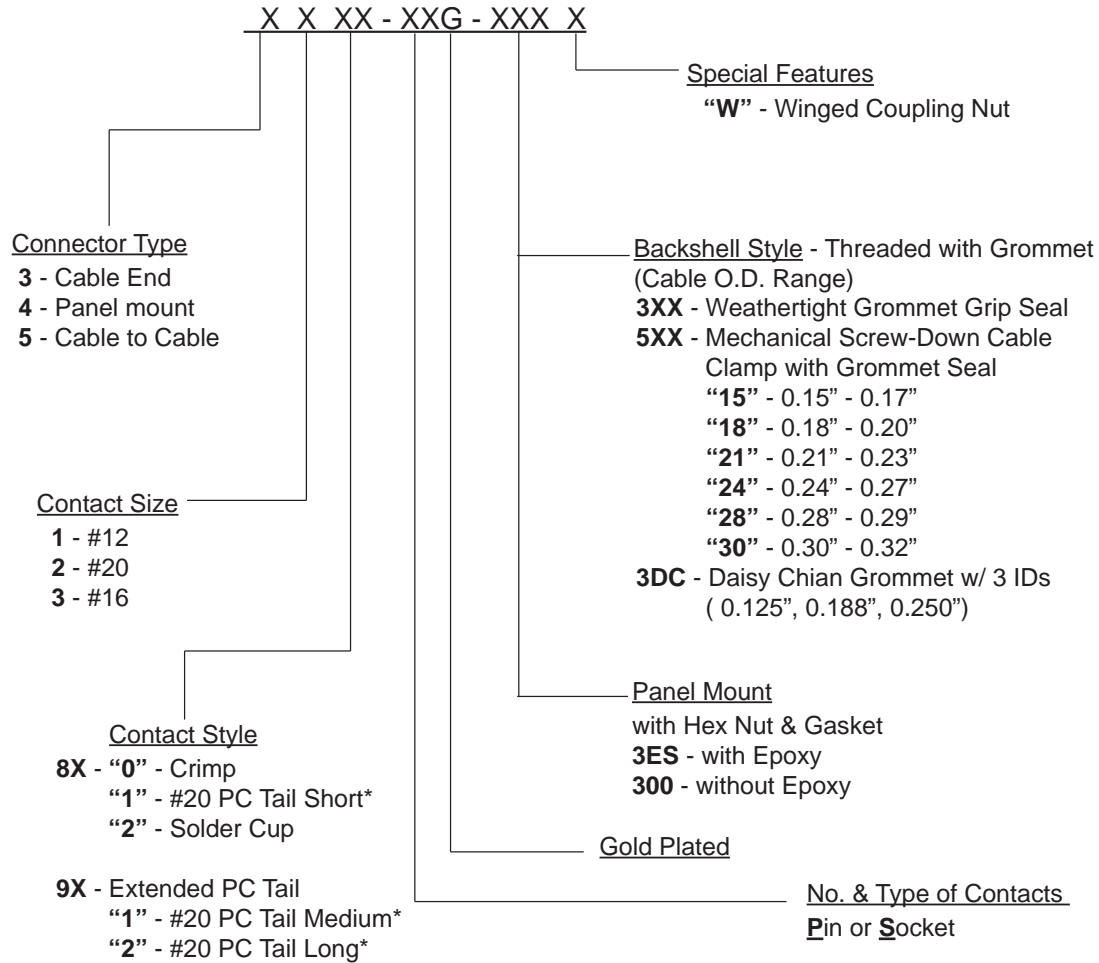
5XXX-XXG
CUSTOM CABLE TO CABLE CONNECTOR
STRAIGHT OVERMOLDED

Note: Multi-Con-X® can be overmolded onto an extended well panel mount. Straight version only.

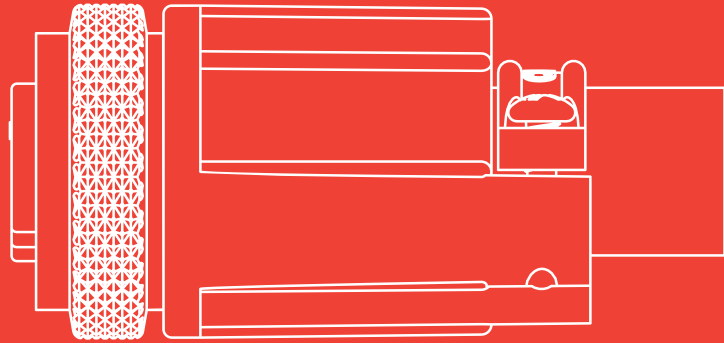
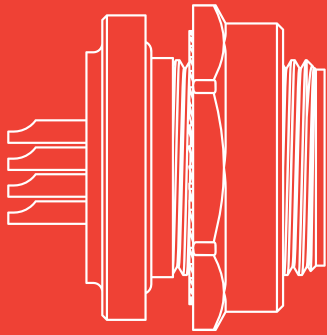
- Available in: 5#20, 6#20 and 9#20 male
- Available in: 4#20 and 9#20 female

All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER



*Consult factory for length and diameter of PC Tail. Additionally, alternative colors and materials are available.



SHIELDED MULTI-CON-X[®] 0.995" [25MM] OD 2-12 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



PANEL MOUNT - PIN
MATES WITH CABLE END



MOLDED CABLE END ASSEMBLY

SHIELDED MULTI-CON-X[®] 0.995" [25MM]OD 2-12 CONTACTS

SPECIFICATIONS

Mechanical Specifications

Life:	400 insertion / withdrawal cycles minimum
Vibration:	Coupling rings have overriding locking feature to prevent loosening or separation of connector
Hex Nut Torque:	10-12 in-lb tightening torque.
Coupling Locking Style:	Threaded Coupling Ring
Backshell Style:	Threaded

Electrical Specifications

Voltage Rating:	600V AC
Current Rating:	13.0 A – max (See page 107 for Electrical Current Rating Chart)
Conductor Size:	2 through 4 #16 contacts accepts 16 AWG 2 through 12 #20 contacts accepts 20 AWG

Environmental Specifications

Operating Temperature Rating:	-40°C to +85°C (-40°F to +185°F)
Salt Atmosphere (Corrosion):	48 Hr salt spray when mated
Weathertight:	IP66 / IP68 NEMA 250 (6P) (when mated)

Material Specifications

Cable Ends

Coupling Nut & Housing:	Nickel Plated Copper Alloy
Contacts:	Copper Alloy, Gold over Nickel Plating
Insert:	Thermoplastic
Backshell & Strap:	Thermoplastic
Screws:	Stainless Steel
O-Rings:	Elastomer

Metal Panel Mounts

Shell:	Nickel Plated Copper Alloy
Nut:	Nickel Plated Copper Alloy
Contacts:	Copper Alloy, Gold over Nickel Plating
Insert:	Thermoplastic

Plastic Panel Mounts

Housing:	Thermoplastic
Shielding Nut:	Nickel Plated Aluminum
Contacts:	Copper Alloy, Gold over Nickel Plating

Molded Cable Assemblies

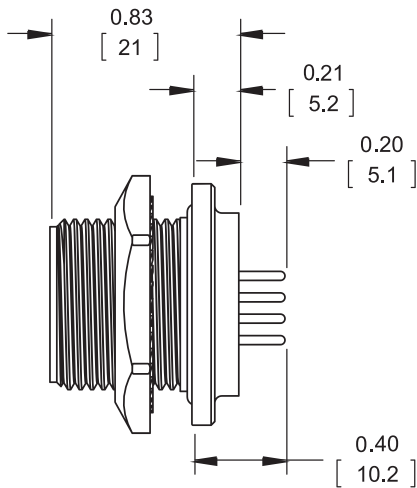
Weathertight:	IP66 / IP68 NEMA 250 (6P) (when mated)
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Certifications

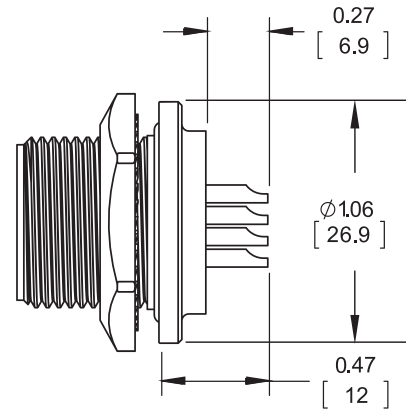
UL File E150822
CSA File 181200
Not for current interruption
RoHS compliant

SHIELDED MULTI-CON-X[®] 0.995" [25MM] OD 2-12 CONTACTS

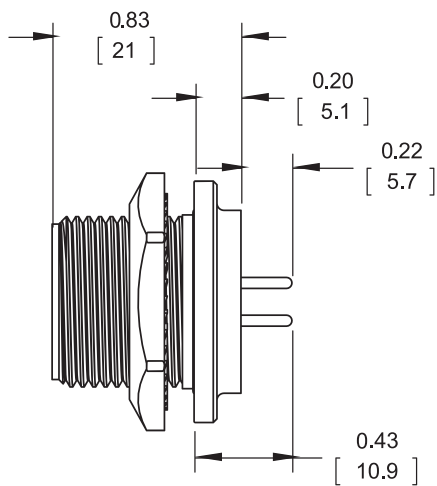
PANEL MOUNT ASSEMBLY KITS - PIN ONLY - METAL



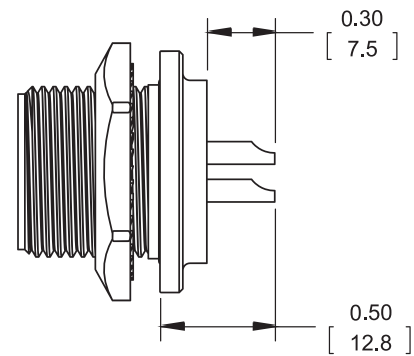
SF4281-XXPG-3XX
PANEL MOUNT CONNECTOR
#20 PC TAIL



SF4282-XXPG-3XX
PANEL MOUNT CONNECTOR
#20 SOLDER CUP



SF4381-XXPG-3XX
PANEL MOUNT CONNECTOR
#16 PC TAIL

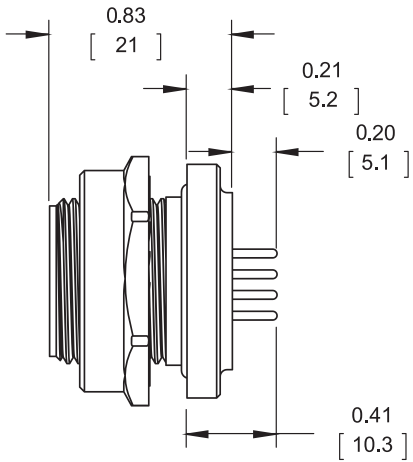


SF4382-XXPG-3XX
PANEL MOUNT CONNECTOR
#16 SOLDER CUP

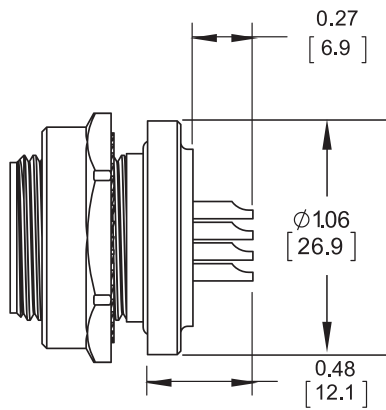
All dimensions are for reference only. Units shown: in[mm].

SHIELDED MULTI-CON-X[®] 0.995" [25MM] OD 2-12 CONTACTS

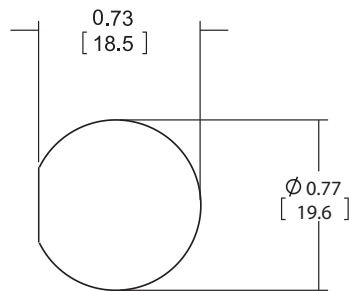
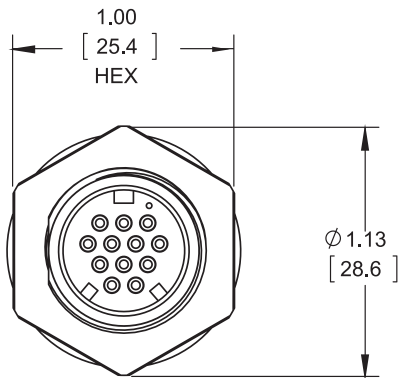
PANEL MOUNT ASSEMBLY KITS - PIN ONLY - PLASTIC



SF4X81V-XXEPG-3XX
PANEL MOUNT CONNECTOR
PC TAIL

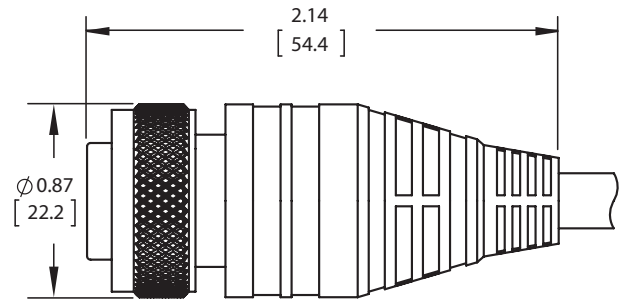


SF4X82V-XXEPG-3XX
PANEL MOUNT CONNECTOR
SOLDER CUP

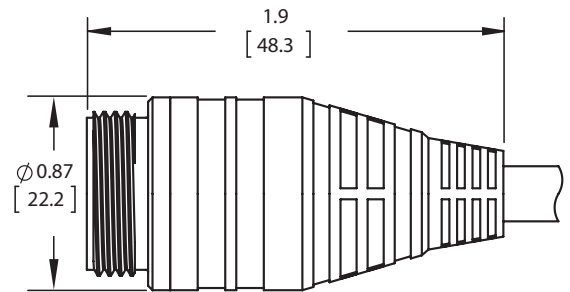


RECOMMENDED
PANEL CUT-OUT
TOLERANCE: ±0.003 [0.08]

CUSTOM MOLDED CABLE ASSEMBLIES

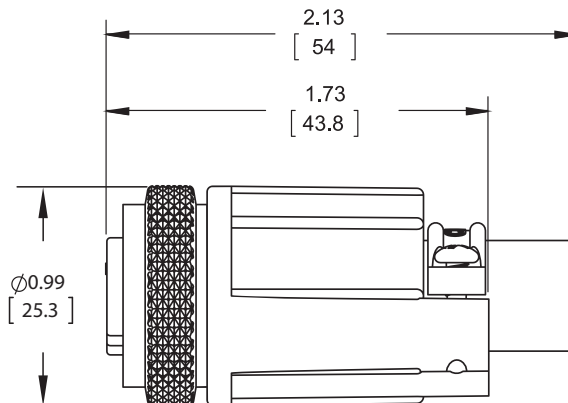


SM3X8X-XXXG
CUSTOM CABLE CONNECTOR, FEMALE
STRAIGHT OVERMOLDED



SM5X8X-XXXG
CUSTOM CABLE TO CABLE CONNECTOR, MALE
STRAIGHT OVERMOLDED

FIELD INSTALLABLE KITS - SOCKET ONLY



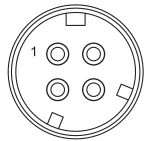
SF3X8X-XXSG-5XX
FIELD INSTALLABLE CABLE CONNECTOR KIT

All dimensions are for reference only.
Units shown: in[mm].

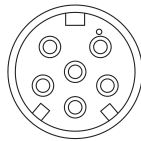
SHIELDED MULTI-CON-X[®] 0.995" [25MM] OD 2-12 CONTACTS

PANEL MOUNT CONNECTORS

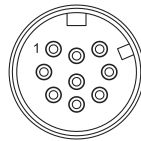
Front View | Wire View



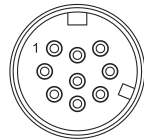
(2-4)-POSITION
#16 PIN CONTACT
"F" KEY



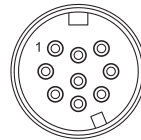
(6)-POSITION
#16 PIN CONTACT
"E" KEY



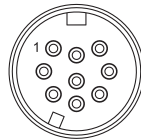
(2-9)-POSITION
#20 PIN CONTACT
"A" KEY



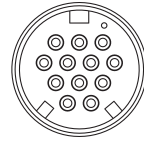
(2-9)-POSITION
#20 PIN CONTACT
"B" KEY



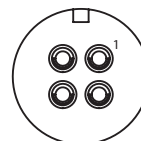
(2-9)-POSITION
#20 PIN CONTACT
"C" KEY



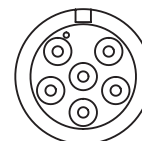
(2-9)-POSITION
#20 PIN CONTACT
"D" KEY



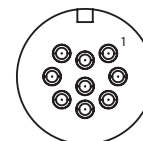
(2-12)-POSITION
#20 PIN CONTACT
"E" KEY



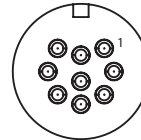
(2-4)-POSITION
#16 PIN CONTACT
"F" KEY



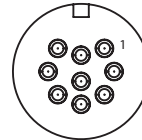
(6)-POSITION
#16 PIN CONTACT
"E" KEY



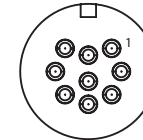
(2-9)-POSITION
#20 PIN CONTACT
"A" KEY



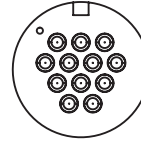
(2-9)-POSITION
#20 PIN CONTACT
"B" KEY



(2-9)-POSITION
#20 PIN CONTACT
"C" KEY



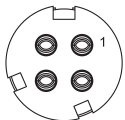
(2-9)-POSITION
#20 PIN CONTACT
"D" KEY



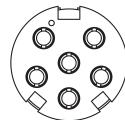
(2-12)-POSITION
#20 PIN CONTACT
"E" KEY

CABLE CONNECTORS

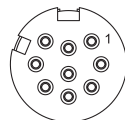
Front View | Wire View



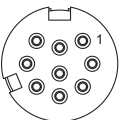
(2-4)-POSITION
#16 PIN CONTACT
"F" KEY



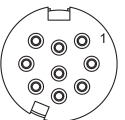
(6)-POSITION
#16 PIN CONTACT
"E" KEY



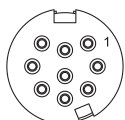
(2-9)-POSITION
#20 PIN CONTACT
"A" KEY



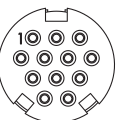
(2-9)-POSITION
#20 PIN CONTACT
"B" KEY



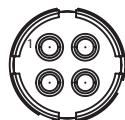
(2-9)-POSITION
#20 PIN CONTACT
"C" KEY



(2-9)-POSITION
#20 PIN CONTACT
"D" KEY



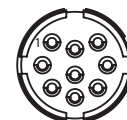
(4-12)-POSITION
#20 PIN CONTACT
"E" KEY



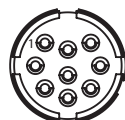
(2-4)-POSITION
#16 PIN CONTACT
"F" KEY



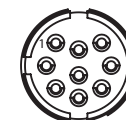
(6)-POSITION
#16 PIN CONTACT
"E" KEY



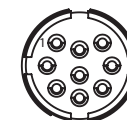
(2-9)-POSITION
#20 PIN CONTACT
"A" KEY



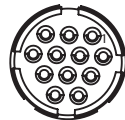
(2-9)-POSITION
#20 PIN CONTACT
"B" KEY



(2-9)-POSITION
#20 PIN CONTACT
"C" KEY



(2-9)-POSITION
#20 PIN CONTACT
"D" KEY



(4-12)-POSITION
#20 PIN CONTACT
"E" KEY

All dimensions are for reference only. Units shown: in[mm].

SHIELDED MULTI-CON-X[®] 0.995" [25MM] OD 2-12 CONTACTS

PART NUMBER TO ORDER

SF X X XX X - XX X XG - XXX

Shielded Field Installable

Connector Type

- 3 - Cable End
- 4 - Panel mount

Contact Size

- 2 - #20 AWG
- 3 - #16 AWG

Contact Style

- 8X - "1" - #20 PC Tail (Panel Only)
- "2" - Solder Cup

Insert & Shell Material Only

- Blank** - Thermoplastic Insert (Cable End Only)
- Blank** - Nickel Plated Copper Alloy Panel Mount Shell with an Engineered Polyester Resin Insert (Panel Only)
- V** - One Piece Thermoplastic Panel Mount Shell

Backshell & Panels

- 3ES** - Panel w/ Epoxy
- 520** - Backshell w/ 0.200" Grommet ID
- 540** - Backshell w/ 0.400" Grommet ID

Contact Plating

- G** - Gold

Contact Type

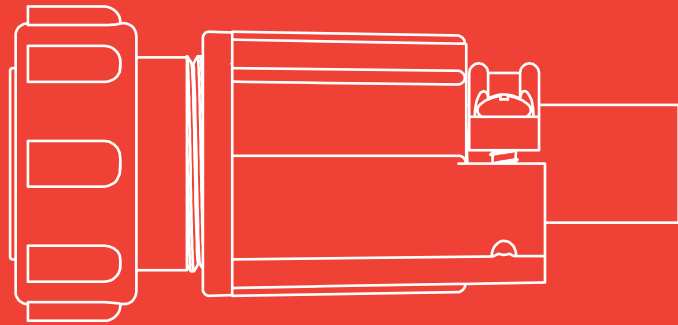
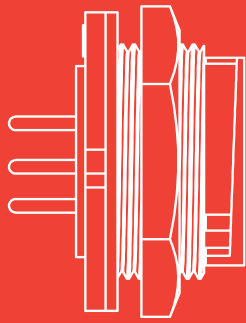
- P** - Pin (Panel Mount)
- S** - Socket (Cable End)

Keying

- A-D** - (2 -9 #20 Contacts)
- E** - (2 -12 #20 Contacts)
- F** - (2 -4 #16 Contacts)

No. of Contacts

2-12



MAXI-CON-X[®]

1.17" [29MM] OD 7, 10, 18 & 20 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE END - PIN
MATES WITH PANEL MOUNT AND
CABLE TO CABLE



CABLE TO CABLE / INLINE - PIN
MATES WITH CABLE END



PANEL MOUNT - PIN
MATES WITH CABLE END



PANEL MOUNT - SOCKET
MATES WITH CABLE END



DUST CAP
P/N - 14295



MOLDED CABLE END ASSEMBLY



MOLDED CABLE TO CABLE ASSEMBLY



MOLDED RIGHT ANGLE CABLE ASSEMBLY

SPECIFICATIONS

Mechanical Specifications

Life:	300 insertion / withdrawal cycles minimum
Vibration:	Coupling rings have overriding locking feature to prevent loosening or separation of connector
Hex Nut Torque:	10 in-lb max tightening torque.
Coupling Locking Style:	Bayonet with ribbed coupling nut (winged coupling nut available) P/N 14482
Backshell Style:	Threaded
Conductor Size:	#12 contacts accepts 12 through 14 AWG #16 contacts accepts 16 through 18 AWG #20 contacts accepts 20 through 24 AWG

Electrical Specifications

Voltage Rating:	600V DC / 480V AC
Current Rating:	23.0 A – max (See page 107 for Electrical Current Rating Chart)

Environmental Specifications

Operating Temperature Rating:	-40°C to +85°C (-40°F to +185°F)
Salt Atmosphere (Corrosion):	300 Hr salt spray when mated
Weathertight:	IP67 when mated

Material Specifications

Backshell:	Thermoplastic, UL 94HB, Black
Contacts:	Copper Alloy, Gold over Nickel Plate
Coupling Ring:	Thermoplastic, UL 94HB, Black
Gasket:	Elastomer, Black
Grommet / Strain Relief:	Elastomer, Black
Hex Nut:	Thermoplastic, UL 94HB, Black
O-Ring:	Elastomer, Black
Shell:	Thermoplastic, UL 94HB, Black
Optional Dust Cap:	Elastomer, Black

Molded Cable Assemblies

Weathertight:	NEMA 6P, 13: IEC IP67
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Certifications

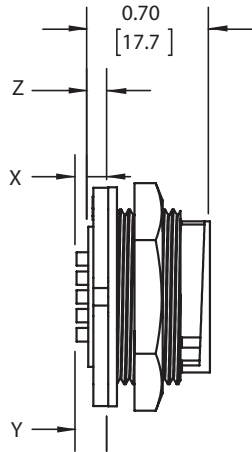
UL File E150822
CSA File 181200
Not for current interruption
RoHs compliant
REACH compliant

Options

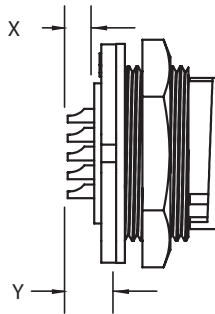
UV Rating:	F1 available
Flame Rating:	UL 94V-0 available

Consult factory for optional colors and materials

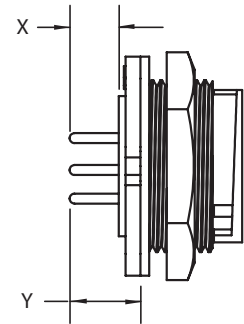
PANEL MOUNT ASSEMBLY KITS



14X80-XXG-3XX
PANEL MOUNT CONNECTOR
CRIMP

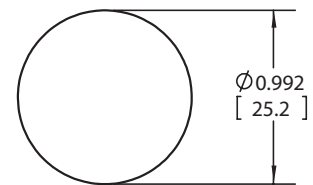
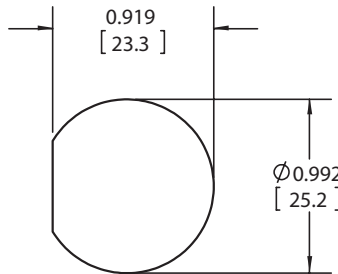
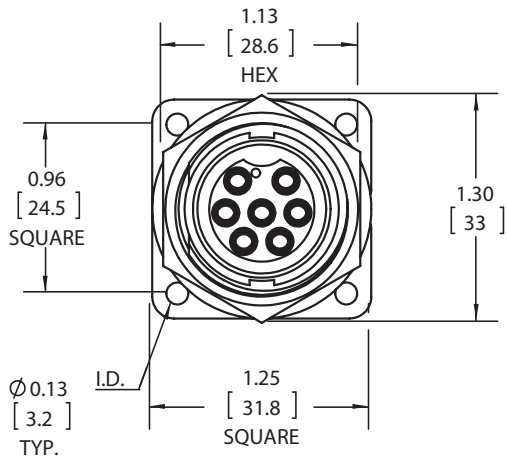


14X82-XXG-3XX
PANEL MOUNT CONNECTOR
SOLDER CUP



14XXX-XXG-3XX
PANEL MOUNT CONNECTOR
PC TAIL

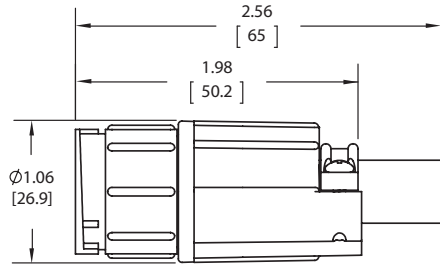
* X, Y, Z - CONSULT FACTORY



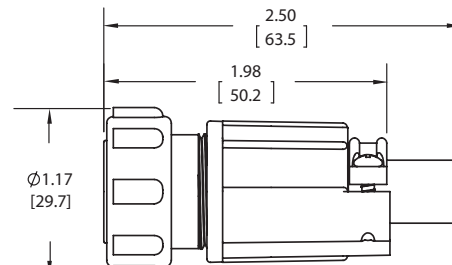
RECOMMENDED
PANEL CUT-OUT
TOLERANCE: ±0.003 [0.08]

All dimensions are for reference only. Units shown: in[mm].

FIELD INSTALLABLE KITS

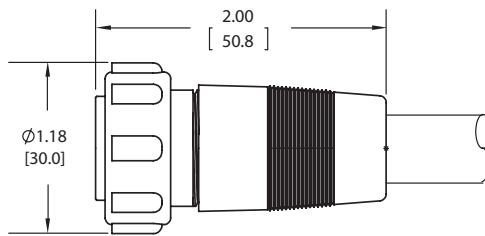


15XXX-XXG-3XX
Field Installable Cable to Cable Connector
Threaded Backshell - Type 3

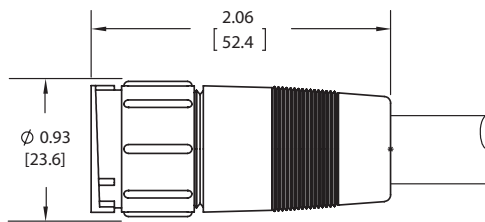


13XXX-XXG-3XX
Field Installable Cable Connector
Threaded Backshell - Type 3

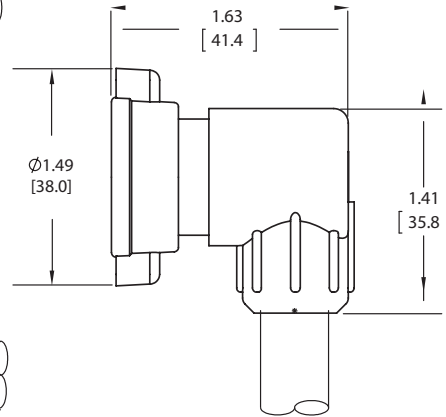
CUSTOM MOLDED CABLE ASSEMBLIES



13XXX-XXG
CUSTOM CABLE CONNECTOR
STRAIGHT OVERMOLDED



15XXX-XXG
CUSTOM CABLE TO CABLE CONNECTOR
STRAIGHT OVERMOLDED

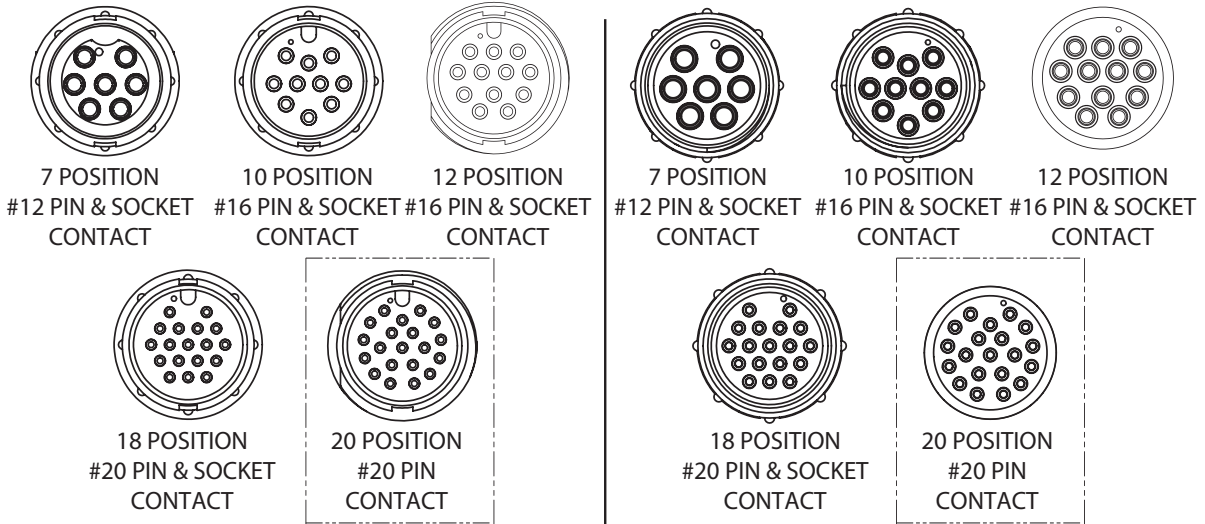


13XXX-XXG
CABLE CONNECTOR
RIGHT ANGLE OVERMOLDED

All dimensions are for reference only. Units shown: in[mm].

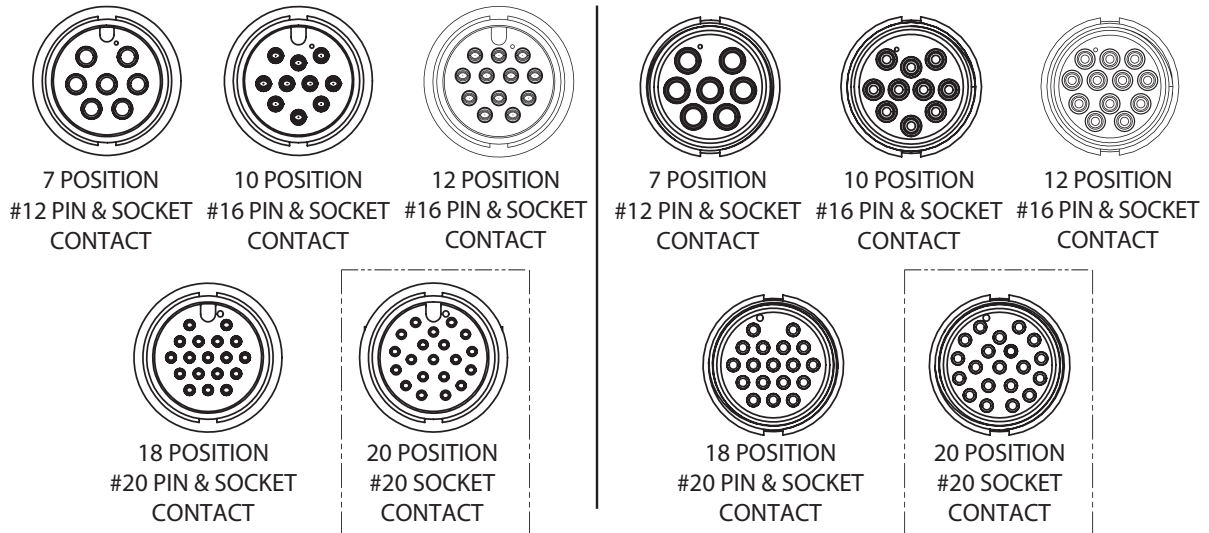
PANEL MOUNT CONNECTORS

Front View | Wire View



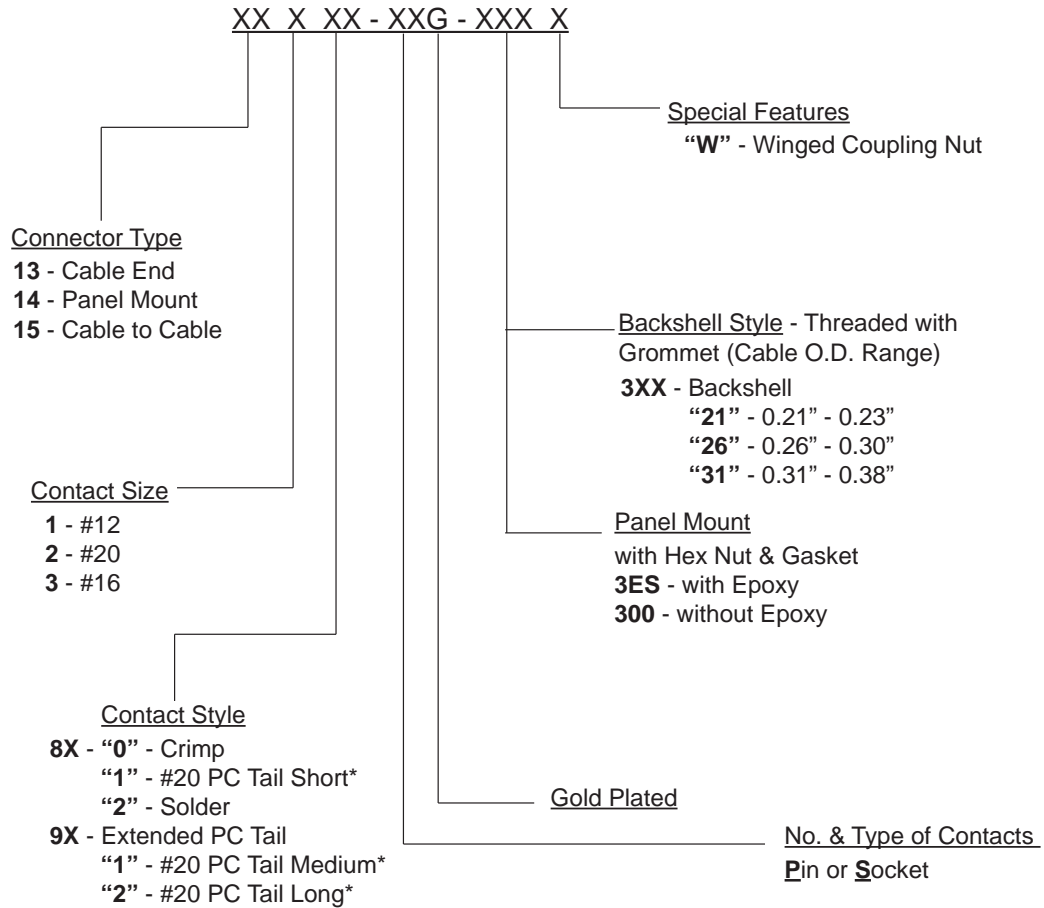
CABLE CONNECTORS

Front View | Wire View

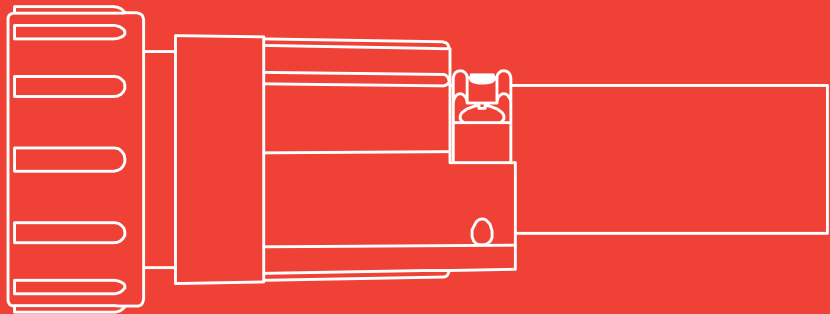


All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER



*Consult factory for length and diameter of PC Tail. Additionally, alternative colors and materials are available.



MEGA-CON-X[®]

1.29" [32MM] O.D. 31 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT



CABLE END - PIN
MATES WITH PANEL MOUNT



PANEL MOUNT - PIN
MATES WITH CABLE END



PANEL MOUNT - SOCKET
MATES WITH CABLE END



DUST CAP
P/N - 24295



MOLDED CABLE END ASSEMBLY



MOLDED RIGHT ANGLE CABLE ASSEMBLY

SPECIFICATIONS

Mechanical Specifications

Life:	300 insertion / withdrawal cycles minimum
Vibration:	Coupling rings have overriding locking feature to prevent loosening or separation of connector
Hex Nut Torque:	10 in-lb max tightening torque.
Coupling Style:	Bayonet with ribbed coupling nut (winged coupling nut available)
Backshell Style:	Threaded
Conductor Size:	#20 contacts accepts 20 through 24 AWG

Electrical Specifications

Voltage Rating:	600V AC
Current Rating:	2.3 A – max (See page 107 for Electrical Current Rating Chart)

Environmental Specifications

Operating Temperature Rating:	-40°C to +85°C (-40°F to +185°F)
Salt Atmosphere (Corrosion):	300 Hr salt spray when mated
Weathertight:	IP67 when mated

Material Specifications

Backshell:	Thermoplastic, UL 94HB, Black
Contacts:	Copper Alloy, Gold over Nickel Plate
Coupling Ring:	Thermoplastic, UL 94HB, Black
Gasket:	Elastomer, Black
Grommet / Strain Relief:	Elastomer, Black
Hex Nut:	Thermoplastic, UL 94HB, Black
O-Ring:	Elastomer, Black
Shell:	Thermoplastic, UL 94HB, Black

Optional Dust Cap:	Elastomer, Black
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Molded Cable Assemblies

Weathertight:	NEMA 6P, 13: IEC IP67
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Certifications

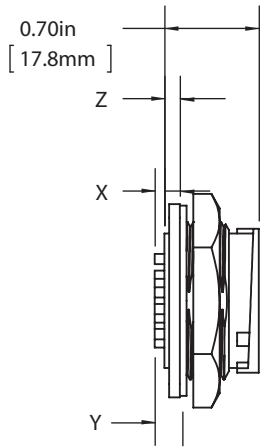
UL File E150822
CSA File 181200
Not for current interruption
RoHS compliant
REACH compliant

Options

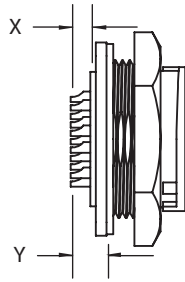
UV Rating:	F1 available
Flame Rating:	UL 94V-0 available

Consult factory for optional colors and materials

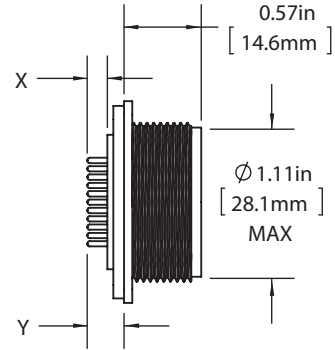
PANEL MOUNT ASSEMBLY KITS



24280-31XG-3XX
PANEL MOUNT CONNECTOR
CRIMP

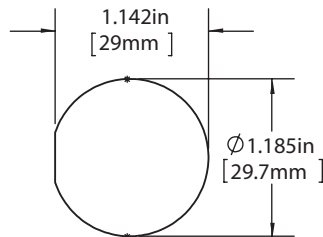
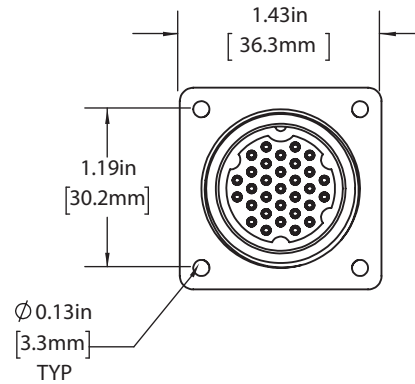
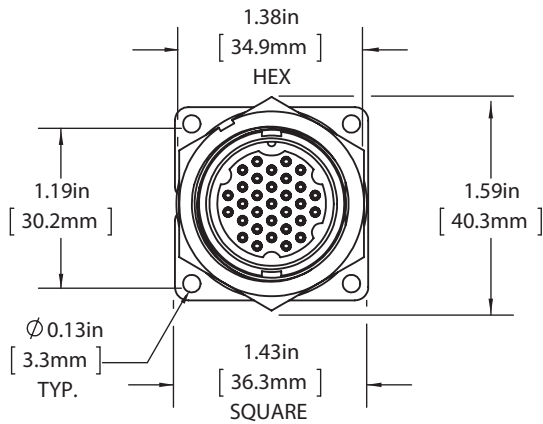


24282-31XG-3XX
PANEL MOUNT CONNECTOR
SOLDER CUP

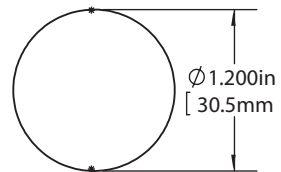


242XX-31XG-3XX
PANEL MOUNT CONNECTOR
PC TAIL

*X, Y, Z - CONSULT FACTORY



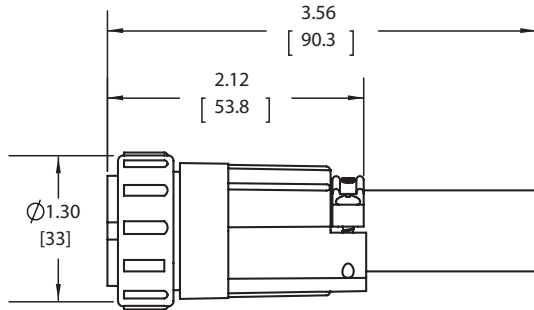
RECOMMENDED
PANEL CUT-OUT
QUICK CONNECT TYPE
TOLERANCE: ± 0.003 [0.08mm]



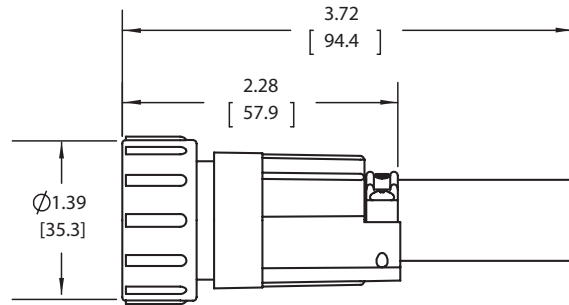
RECOMMENDED
PANEL CUT-OUT
THREADED TYPE
TOLERANCE: ± 0.003 [0.08mm]

All dimensions are for reference only. Units shown: in[mm].

FIELD INSTALLABLE KITS

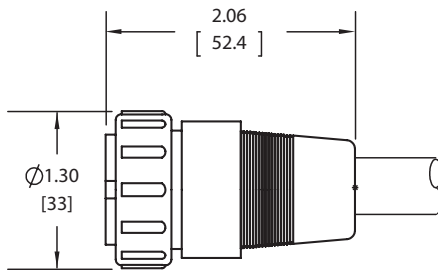


232XX-31XG-3XX
FIELD INSTALLABLE QUICK CONNECT TYPE
CABLE CONNECTOR - BACKSHELL TYPE 3

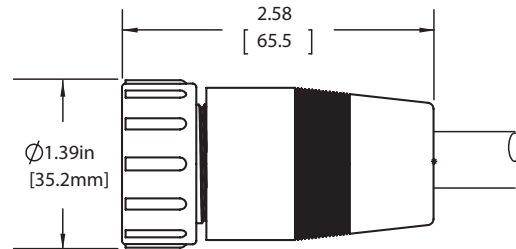


232XX-31XG-T3XX
FIELD INSTALLABLE THREADED TYPE
CABLE CONNECTOR - BACKSHELL TYPE 3

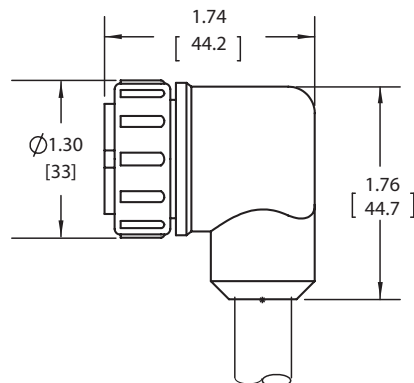
CUSTOM MOLDED CABLE ASSEMBLIES



232XX-31XG
CUSTOM CABLE CONNECTOR STRAIGHT OVERMOLDED
QUICK CONNECT TYPE



232XX-31XG
CUSTOM CABLE CONNECTOR STRAIGHT OVERMOLDED
THREADED CONNECT TYPE

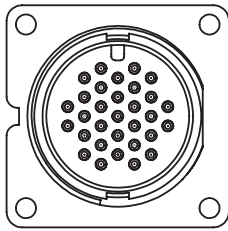


232XX-31XG
CUSTOM CABLE CONNECTOR RIGHT ANGLE OVERMOLDED
QUICK CONNECT TYPE

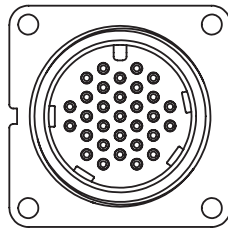
All dimensions are for reference only. Units shown: in[mm].

PANEL MOUNT CONNECTORS

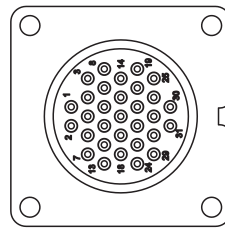
Front View | Wire View



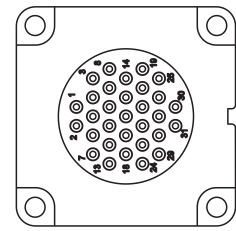
QUICK CONNECT TYPE
SINGLE KEY
31-POSITION
#20 PIN CONTACT



THREADED TYPE
5 KEY
31-POSITION
#20 PIN CONTACT



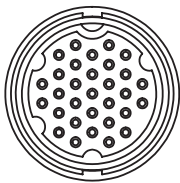
QUICK CONNECT TYPE
SINGLE KEY
31-POSITION
#20 PIN CONTACT



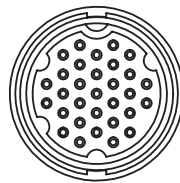
THREADED TYPE
5 KEY
31-POSITION
#20 PIN CONTACT

CABLE CONNECTORS

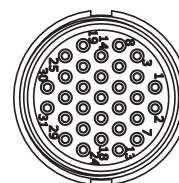
Front View | Wire View



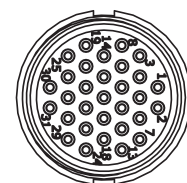
QUICK CONNECT TYPE
5 KEY
31-POSITION
#20 PIN CONTACT



THREADED TYPE
5 KEY
31-POSITION
#20 PIN CONTACT



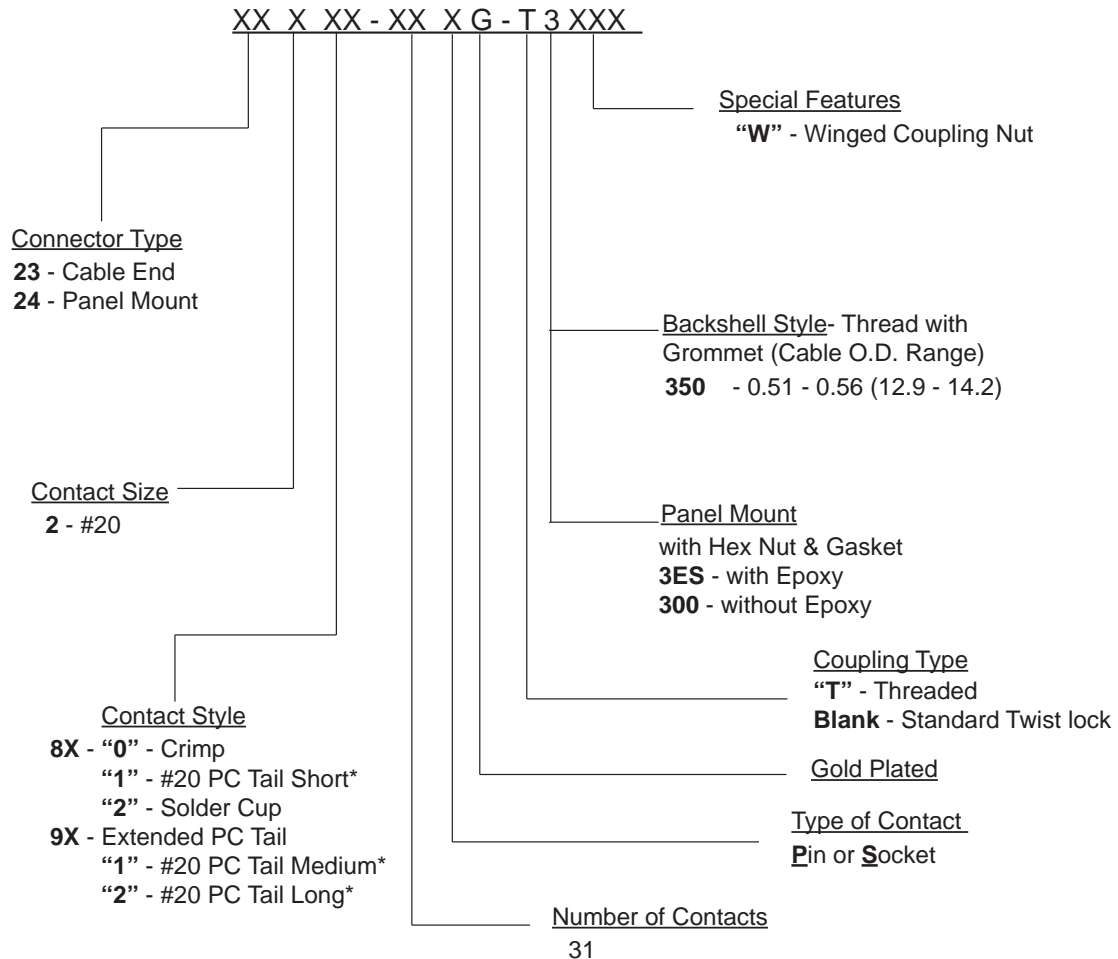
QUICK CONNECT TYPE
5 KEY
31-POSITION
#20 PIN CONTACT



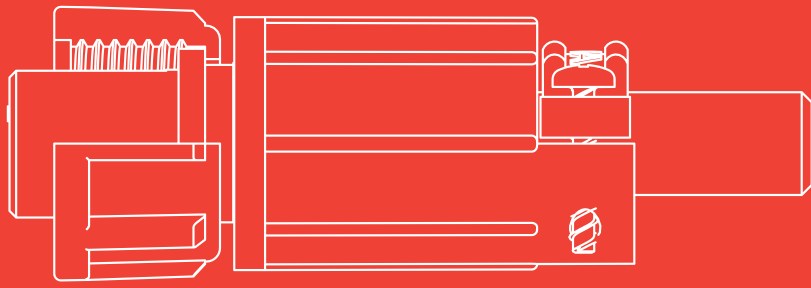
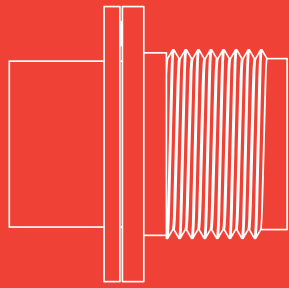
THREADED TYPE
5 KEY
31-POSITION
#20 PIN CONTACT

All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER



*Consult factory for length and diameter of PC Tail. Additionally, alternative colors and materials are available.



MIL-E-QUAL[®] (MIL-C-5015 EQUIVALENT)

2-37 CONTACTS



CABLE END - SOCKET
MATES WITH PANEL MOUNT



CABLE END - PIN
MATES WITH PANEL MOUNT



PANEL MOUNT - SOCKET
MATES WITH CABLE END



PANEL MOUNT - PIN
MATES WITH CABLE END



CABLE CAP



RECEPTACLE CAP
OVERMOLDED ONLY



MOLDED CABLE END ASSEMBLY

SPECIFICATIONS

Mechanical Specifications

Life:	300 insertion / withdrawal cycles minimum
Coupling Locking Style:	Threaded
Backshell Style:	Threaded
Conductor Size:	#12 contacts accepts 12 through 16 AWG #16 contacts accepts 16 through 20 AWG

Electrical Specifications

Voltage Rating:	600 VAC for shell types 3101A and 3102A 500 VAC for shell type 3106A up to 28 positions 277 VAC for shell type 3106A from 29 or greater positions
Current Rating:	23.0 A – max (See page 108 for Electrical Current Rating Chart)

Environmental Specifications

Operating Temperature Rating:	-40°C to +75°C (-40°F to +167°F)
Salt Atmosphere (Corrosion):	48Hr salt spray contacts when mated
Weathertight:	Consult factory with specific application

Material Specifications

Cable Pin / Socket

Mechanical Backshell (Threaded):	Thermoplastic, Black with UV Inhibitor UL94HB
Strap:	Thermoplastic, Black with UV Inhibitor UL94HB
Screws:	Stainless Steel
Grommet:	Elastomer
Coupling Ring:	Thermoplastic, Black with UV Inhibitor UL94HB
Contacts:	Copper Alloy, Silver Plated, Gold Optional
Connector Body:	Thermoplastic
Connector Cap (Optional):	Thermoplastic
O-Ring (Optional):	Elastomer
Alternate Keys/Different Keyways Available	W, X, Y or Z Consult factory

Box Receptacle, In-Line receptacle, Pin/Socket

Contacts:	Copper Alloy, Silver Plated, Gold Optional
Receptacle Body:	Thermoplastic, Black with UV Inhibitor UL94HB
Receptacle Cap (Optional):	Thermoplastic, Black with UV Inhibitor UL94HB
Gasket (Optional):	Elastomer
Alternate Keys/Different Keyways Available	W, X, Y or Z Consult factory

Molded Cable Assemblies

Weathertight:	NEMA 6P, 13: IEC IP67 when mated
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Certifications

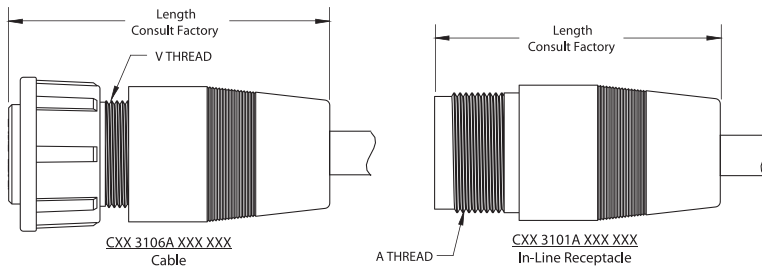
UL File #E150822
CSA File #181200 Patterns: 18-11, 18-1, 18-19, 20-27
U.L. Temperature 75°C (167°F) max.
Not for current interruption

Options

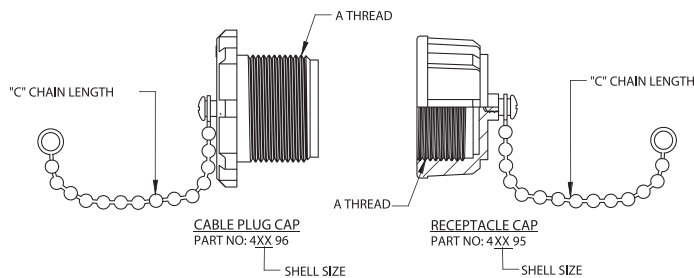
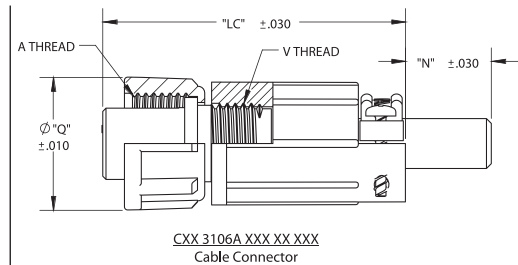
UV Rating:	F1 available
Flame Rating:	UL94V-0 available

Consult factory for optional colors and materials

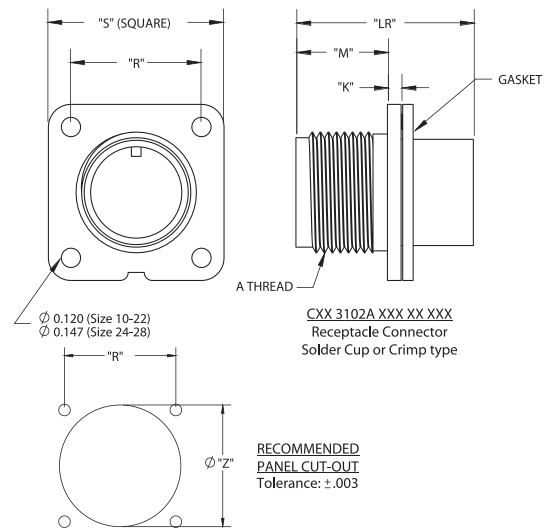
CUSTOM OVERMOLDED ASSEMBLIES



FIELD INSTALLABLE KITS



BOX RECEPTACLE KITS



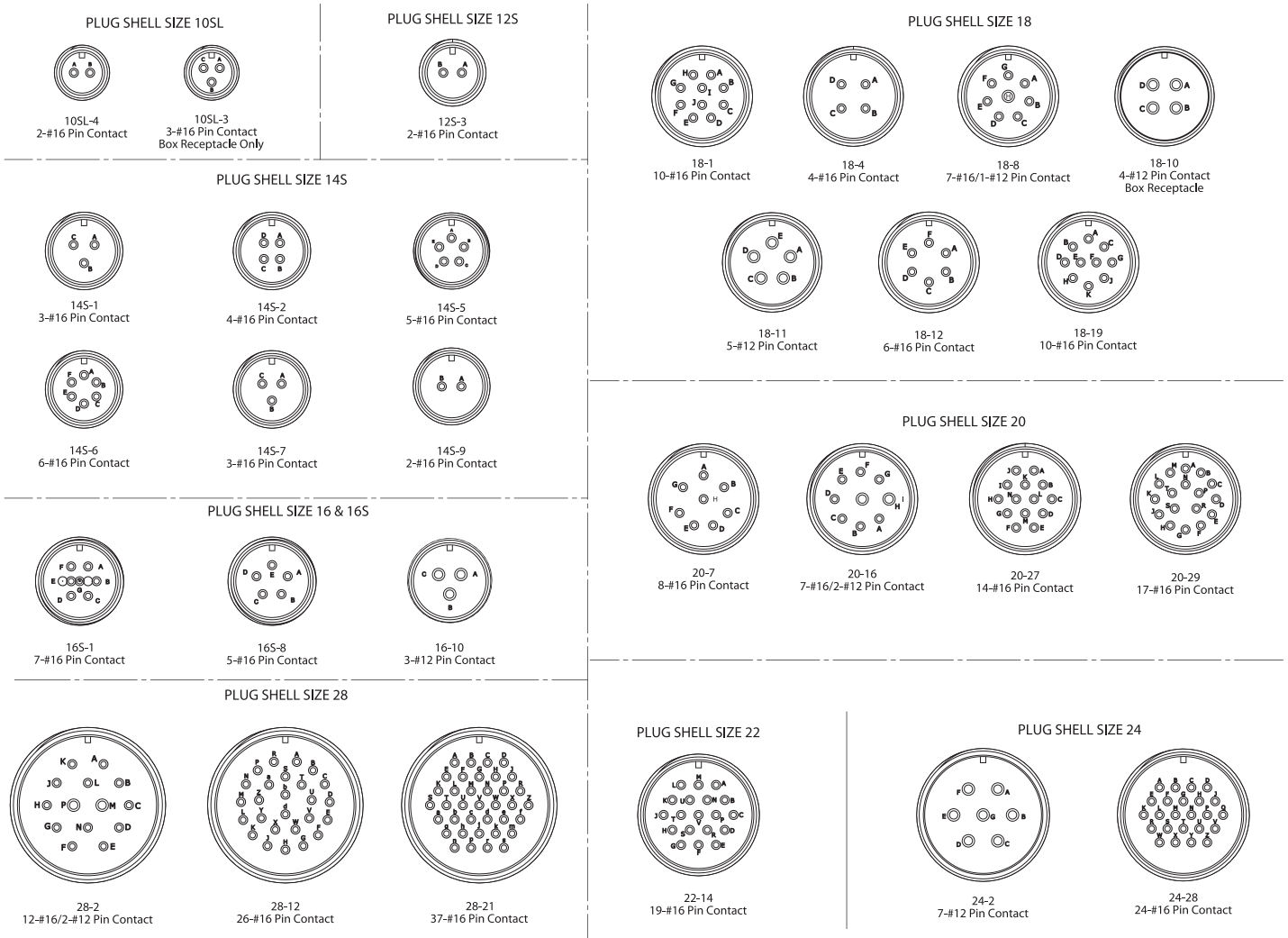
All dimensions are for reference only.
Units shown: in[mm].

Connector Size	LC	N	Q	V Fitting Threads
	Inch mm	Inch mm	Inch mm	
10SL	1.800 47.7	0.535 13.6	0.825 20.9	1/2-20
12S	1.900 48.3	0.535 13.6	0.965 24.1	5/8-24
14S	2.000 50.8	0.553 14.0	1.160 29.5	3/4-20
16S	2.200 56.0	1.425 36.2	1.250 31.8	7/8-20
16	2.400 61.0	1.425 36.2	1.320 33.5	7/8-20
18	2.570 65.3	1.425 36.2	1.435 36.4	1-20
20	2.866 72.8	1.445 36.7	1.440 36.6	1-1/8-18
22	2.892 73.5	1.445 36.7	1.765 44.8	1-1/4-18
24	2.892 73.5	1.445 36.7	1.765 44.8	1-3/8-18
28	2.972 75.5	1.440 36.6	2.099 53.3	1-5/8-18

Connector Size	A Coupling Threads	C	K	LR	M	R	S	Z
		Inch mm	Inch mm	Inch mm	Inch mm	Inch mm	Inch mm	Inch mm
10SL	5/8-24	3.5 88.9	0.080 2.0	0.940 23.9	9/16 14.3	25/32 19.8	1.0 25.4	0.635 16.1
12S	3/4-20	3.5 88.9	0.085 2.2	0.957 24.3	9/16 14.3	13/16 20.6	1-3/32 27.8	0.760 19.3
14S	7/8-20	3.5 88.9	0.090 2.3	1.130 28.7	9/16 14.3	29/32 23.0	1-11/64 29.8	0.885 22.5
16S	1-20	3.5 88.9	0.140 3.6	1.170 29.7	19/32 15.1	31/32 24.6	1-9/32 32.5	1.010 25.7
16	1-20	3.5 88.9	0.140 3.6	1.360 34.5	3/4 19.0	31/32 24.6	1-9/32 32.5	1.010 25.7
18	1-1/8-18	5.0 127.0	0.140 3.6	1.330 33.8	21/32 16.7	1-1/16 27	1-3/8 34.9	1.135 28.8
20	1-1/4-18	5.0 127.0	0.142 3.6	1.330 33.8	3/4 19.0	1-5/32 29.4	1-1/2 38.1	1.260 32.0
22	1-3/8-18	5.0 127.0	0.145 3.7	1.210 30.7	3/4 19.0	1-1/4 31.8	1-5/8 41.3	1.385 35.2
24	1-1/2-18	6.0 152.4	0.145 3.7	1.220 31.0	13/16 20.6	1-3/8 34.9	1-25/32 45.2	1.510 38.4
28	1-3/4-18	6.0 152.4	0.145 3.7	1.220 31.0	13/16 20.6	1-9/16 39.7	2.0 50.8	1.760 44.7

BOX RECEPTACLE / CABLE PLUG / CABLE RECEPTACLE PIN

Face View



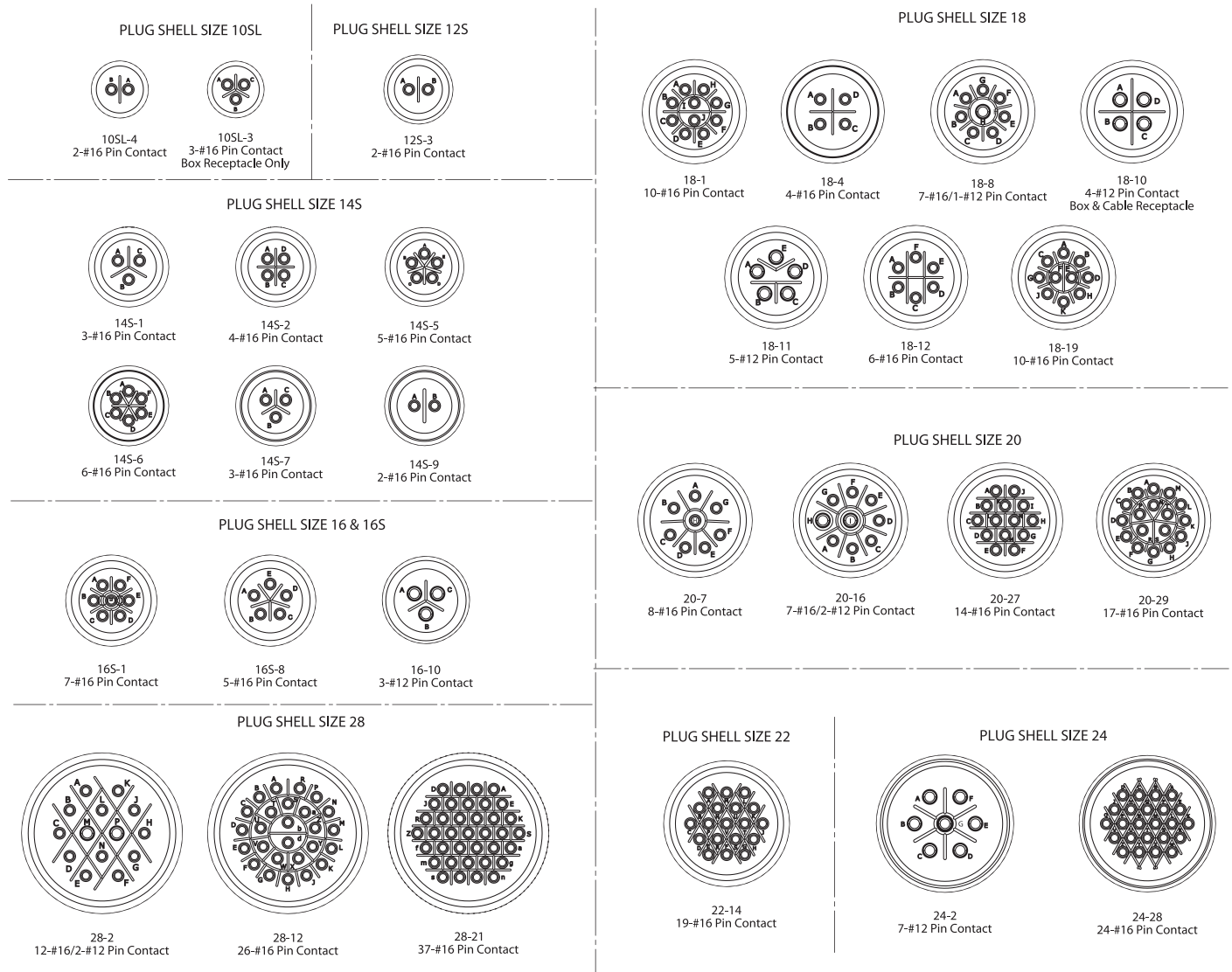
NOTE: Mating face of pin insert shown (socket opposite). Unless otherwise specified, arrangements are per MIL-STD 165L. For alternate key positions, consult factory.

NOTE: *9 contacts: 7-#16/2-#12 cable end, socket only. Panel: pin only.

All dimensions are for reference only. Units shown: in[mm].

BOX RECEPTACLE / CABLE PLUG / CABLE RECEPTACLE PIN

Wire View

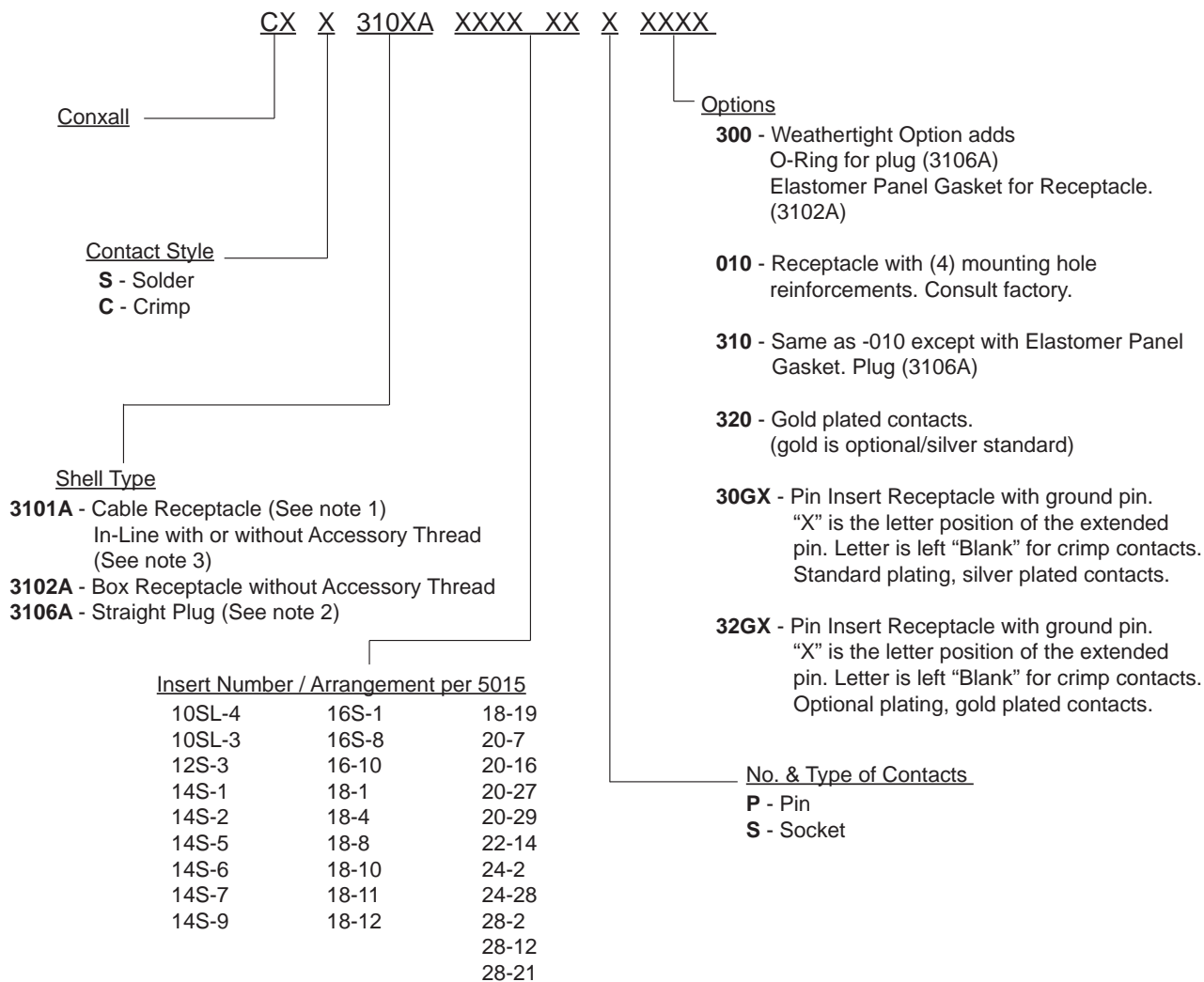


NOTE: Rear face of pin insert shown (socket opposite). Unless otherwise specified, arrangements are per MIL-STD 165L. For alternate key positions, consult factory.

*9 contacts: 7-#16/2-#12 cable end, socket only. Panel: pin only.

All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER

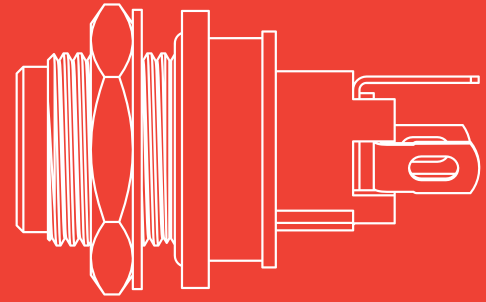
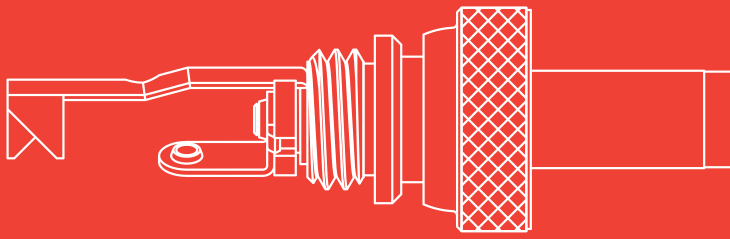


**Complete P/N contains no spaces or dashes.
 Consult factory for optional colors and materials**

Note 1: All Plugs, Box Mount Receptacles and In-Line Receptacles include Crimp or Solder Contacts specified.

Note 2: Straight Plugs include Backshell Assembly with Cable Clamp and Bushing.

Note 3: In-Line Receptacles can be with or without Accessory Thread. Consult factory for availability. In-Line Receptacles without Accessory Thread can be overmolded.



SEALED DC POWER JACKS & PLUGS

0.62" [15MM] OD



SOLDER LUG JACK
MATES WITH SEALED POWER PLUGS



STRAIGHT PC TERMINAL JACK
MATES WITH SEALED POWER PLUGS



RIGHT ANGLE PC TERMINAL JACK
MATES WITH SEALED POWER PLUGS



PLUG
MATES WITH SEALED POWER JACKS



J CAP

SPECIFICATIONS

Mechanical Specifications

Life:	5000 insertion / withdrawal cycles minimum
Vibration:	MIL-STD 202G Method 201A
Hex Nut Torque:	8-12 in-lb
Coupling Locking Style:	Threaded Coupling Ring
Backshell Style:	Threaded Handle

Electrical Specifications

Voltage Rating:	500V AC max
Current Rating:	5A up to 30V DC at 65 °C (149°F) (current carrying only)
Contact Resistance:	0.01 Ω max (Initial) 0.02 Ω (After humidity, durability exposure) 0.10 Ω max(after salt spray)
Insulation Resistance:	10,000 MΩ Min (Initial) 1,000 MΩ (After humidity, durability exposure)

Environmental Specifications

Operating Temperature Rating:	-20 °C to +65 °C (-4°F to +149°F)
Salt Atmosphere (Corrosion):	MIL-STD 202G Method 101E
Thermal Shock:	MIL-STD 202G Method 107G
Weathertight:	IP66, IP67 & IP68 / NEMA 250 (6P) (when mated)

Material Specifications

Jack

Housing:	Thermoplastic
Bushing:	Plated Copper Alloy
Terminals:	Plated Copper Alloy
Insulators:	Thermoplastic
Hardware:	Supplied with one nickel plated copper alloy hex nut (P1489), one nickel plated steel flat washer (P3031) and one o-ring for sealing jack to panel

Plug

Plug Sleeve and Pin:	Plated Copper Alloy
Lock Ring:	Plated Copper Alloy
Finger Insulator:	Thermoplastic
Insulating Washer:	Thermoplastic
Sleeve Terminal:	Tin Plated Copper Alloy
Handle:	Thermoplastic Over molded with Elastomer

Cap

Body:	Elastomer
-------	-----------

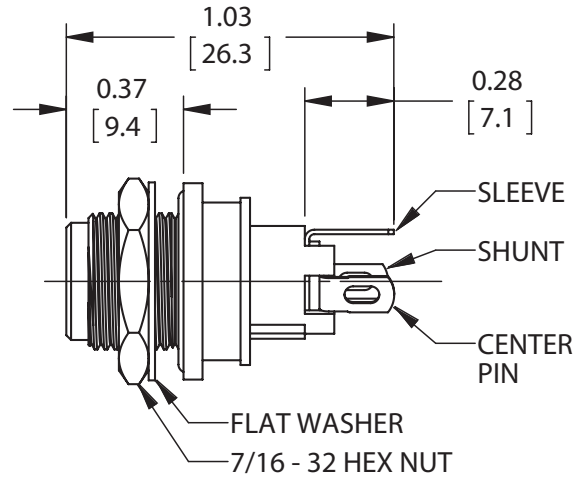
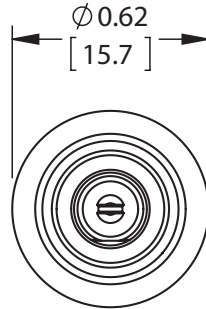
Molded Cable Assemblies

Consult factory for molded options

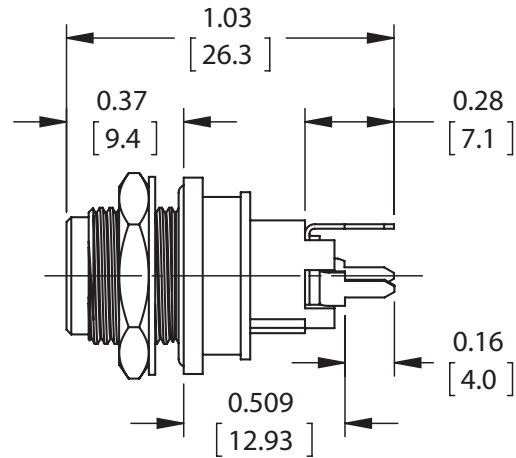
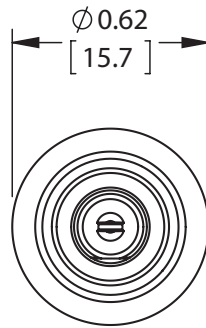
Accessories

Isolated Mount - P3818: Includes insulating shoulder washer/seal and insulating flat washer.

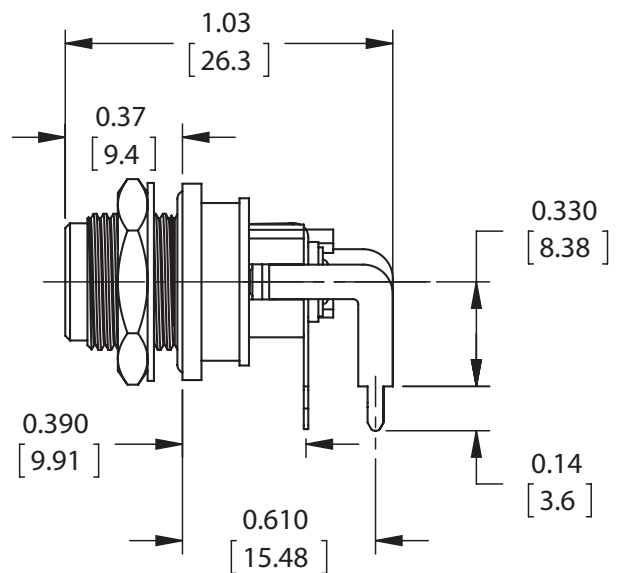
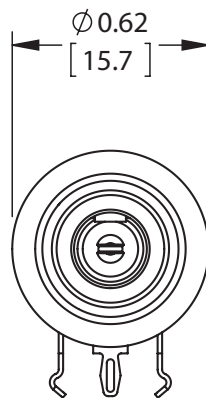
SOLDER LUG



STRAIGHT PC



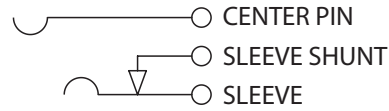
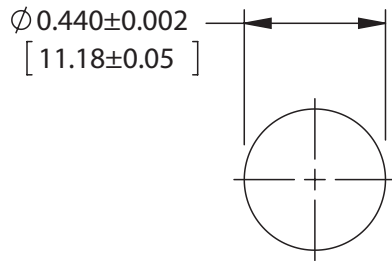
RIGHT ANGLE PC



All dimensions are for reference only. Units shown: in[mm].

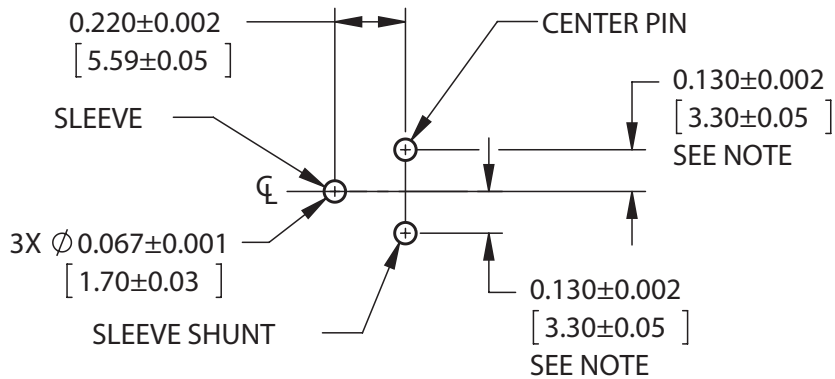
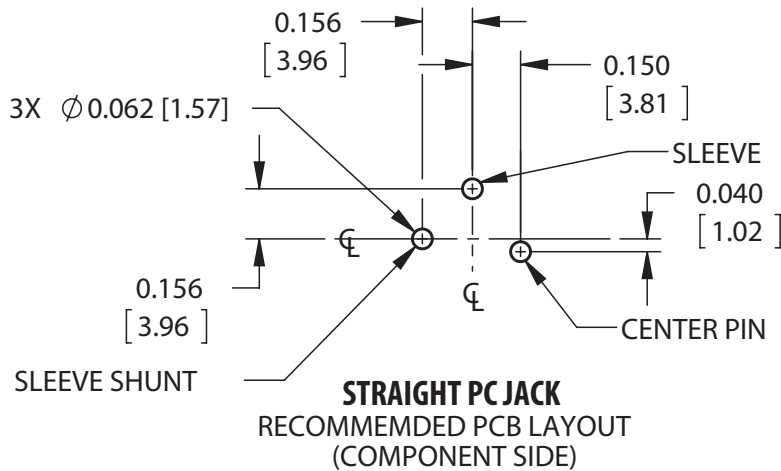
SEALED DC POWER JACKS & PLUGS

0.62" [15MM] OD



JACK SCHEMATIC

RECOMMENDED
PANEL MOUNTING HOLE

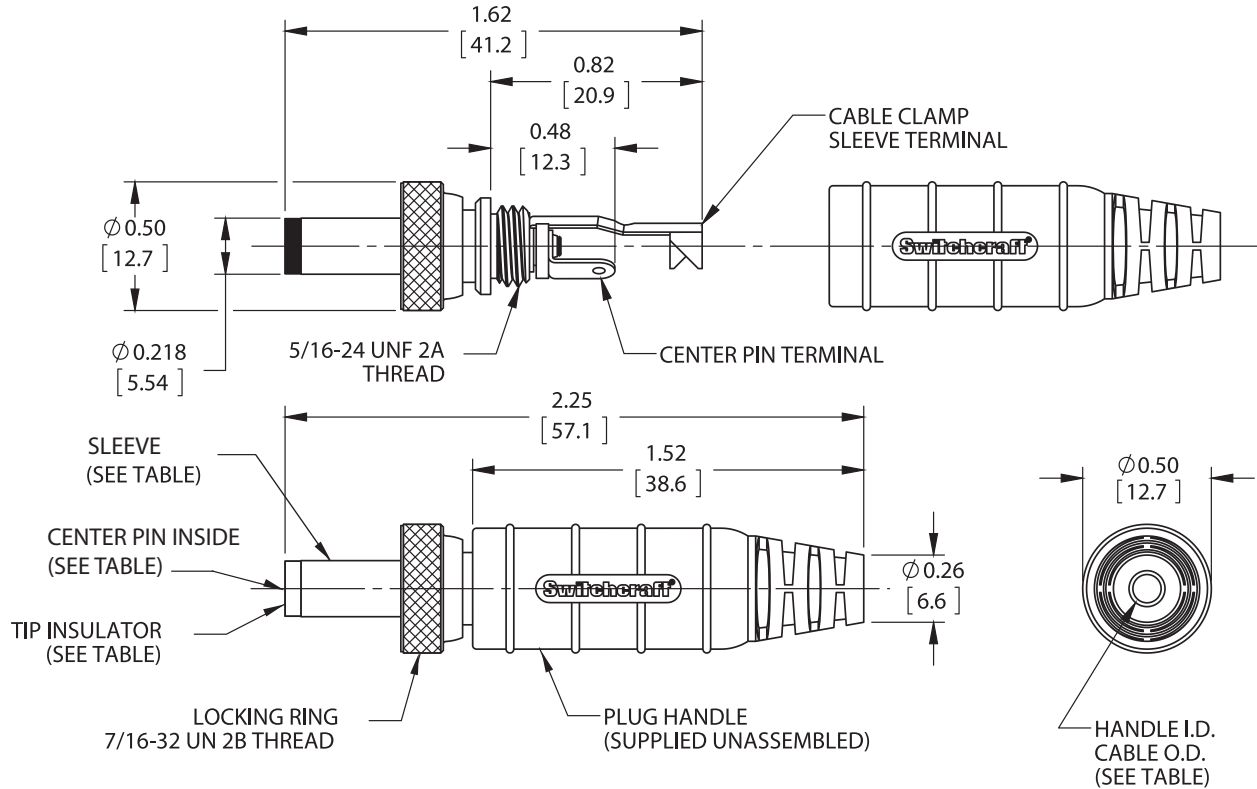


NOTE: 0.130 [3.30] FOR HAND INSERTION
0.135 [3.43] FOR AUTOMATED INSERTION

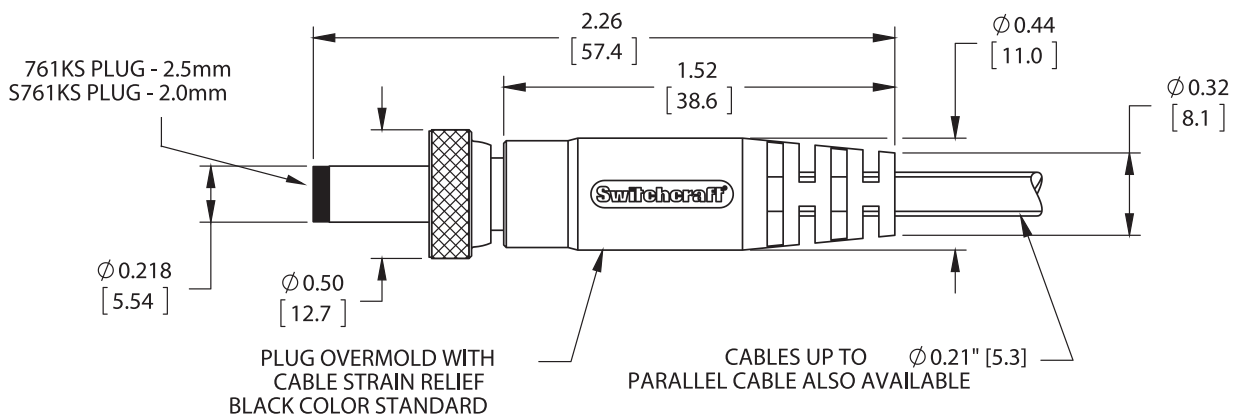
RIGHT ANGLE PC JACK
RECOMMENDED PCB LAYOUT
(COMPONENT SIDE)

All dimensions are for reference only. Units shown: in[mm].

SEALED POWER PLUGS ASSEMBLED HANDLE

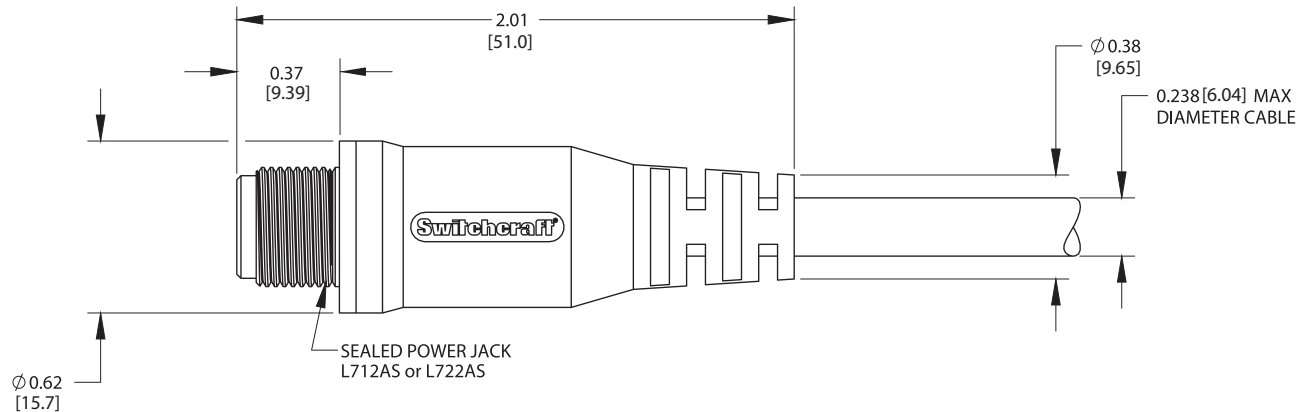


SEALED POWER PLUGS MOLDED CABLE ASSEMBLY



All dimensions are for reference only. Units shown: in[mm].

SEALED POWER JACK MOLDED CABLE ASSEMBLY

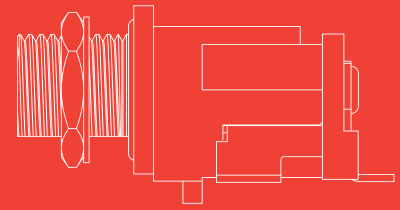
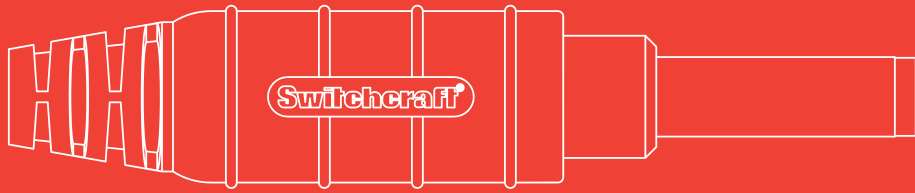


PART NUMBER TO ORDER

Part Number	Center Pin/ Jack Size	Terminal Type	Mating Power Plug
L712AS	0.10 [2.5]	Solder Lugs	761KS12, 761KS15, 761KS17
PCL712AS		Straight PC	
L712RAS		Right Angle PC	
L722AS	0.08 [2.0]	Solder Lugs	S761KS12, S761KS15, S761KS17,
PCL722AS		Straight PC	
L722RAS		Right Angle PC	
JCAP	Power Jack Seal Cap		

Part Number	Center Pin ID/ Jack Size	Tip Insulator Color	Cable Nominal O.D. Range	Mating Power Plug
761KS12	0.10 [2.5]	Black	0.125-0.150 [3.2-3.8mm]	L712AS, L712RAS, PCL712AS
761KS15		Black	0.150-0.175 [3.8-4.4mm]	
761KS17		Black	0.175-0.200 [4.4-5.1mm]	
S761KS12	0.08 [2.0]	White	0.125-0.150 [3.2-3.8mm]	L722AS, L722RAS, PCL722AS
S761KS15		White	0.150-0.175 [3.8-4.4mm]	
S761KS17		White	0.175-0.200 [4.4-5.1mm]	

All dimensions are for reference only. Units shown: in[mm].



HIGH AMPERAGE DC POWER JACKS & PLUGS .43" [11MM] OD



**RIGHT ANGLE HIGH AMPERAGE
POWER JACK - PC MOUNT**



**RIGHT ANGLE HIGH AMPERAGE
POWER JACK - SMT MOUNT**



**RIGHT ANGLE HIGH AMPERAGE
POWER JACK - HYBRID MOUNT**



**HIGH AMPERAGE
POWER PLUG - SEALED
LOCKING**



**HIGH AMPERAGE
POWER PLUG - NON SEALED
LOCKING**



**HIGH AMPERAGE
POWER PLUG - NON SEALED
NON LOCKING**

HIGH AMPERAGE DC POWER JACKS & PLUGS .43" [11MM] OD

SPECIFICATIONS

Mechanical Specifications

Life:	5000 insertion/withdrawal cycles minimum
Vibration:	Mil-Std 202G Method 201A (Locking Only)
Operating Forces:	5 lb maximum insertion. 0.5 lb minimum withdrawal
Panel Mounting Torque:	8-10 in-lb

Electrical Specifications

Voltage Rating:	24 V AC/DC
Current Rating:	See page 88 for Electrical Current Rating Chart
Insulation Resistance:	1000M Ω min
Contact Resistance (initial):	15 m Ω max

Environmental Specifications

Operating Temperature Rating:	-40 °C to +105 °C(-40°F to +221°F)
Moisture Resistance	MIL-STD 202G Method 106G (Sealed Only)
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 (Sealed Only)
Weathertight Ratings:	IP66, IP67, IP68, NEMA 250 (6p) when mated (Sealed Only)

Material Specifications - Jacks

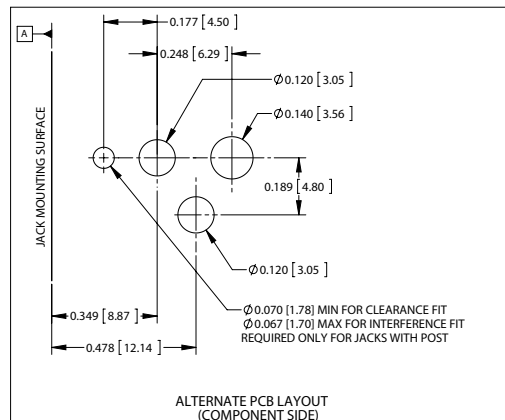
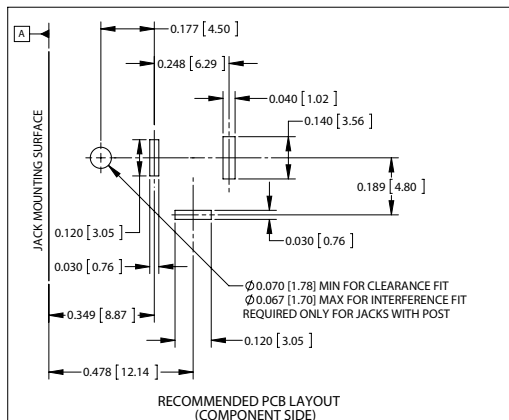
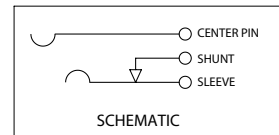
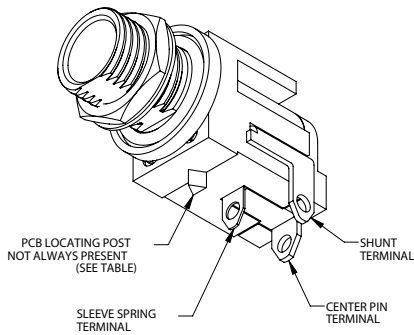
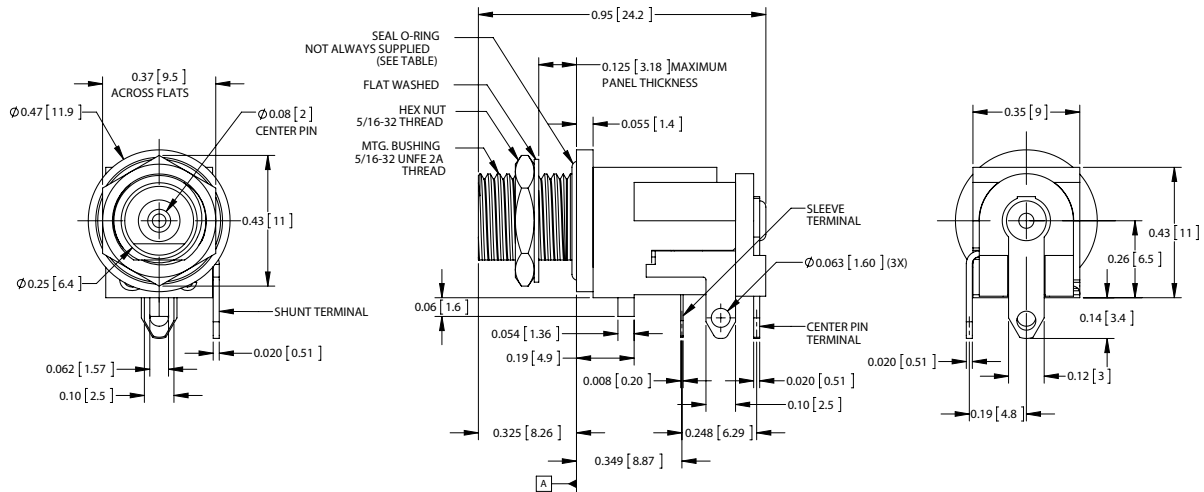
Housing, Cover (insulators):	Thermoplastic, Black
Mounting Bushing, Hex Nut:	Copper Alloy, Nickel Plated
Flat Washer:	Steel, Nickel Plated
O-Ring:	Elastomer, Black
Center Pin:	Copper Alloy, Nickel Plated
Center Pin Terminal & Shunt Terminals:	Copper Alloy, Silver or Matte Tin Plated
Sleeve Spring Terminal:	Spring Copper Alloy, Silver or Matte Tin Plated

Material Specifications - Plugs

Plug Barrel (Sleeve):	Copper Alloy, Nickel Plated
Coupling Ring:	Copper Alloy, Nickel Plated
Metal Handle:	Copper Alloy, Nickel Plated
Rubber Seal Handle:	Black Elastomer over Metal Handle
O-Ring:	Elastomer, Black
Center Contact (Tip):	Copper Alloy, Silver Plated
Tip & Sleeve Terminals:	Copper Alloy, Tin Plated
Tip Insulator:	Thermoplastic, Blue
Terminal Insulator:	Epoxy Glass FR4
Tubular Insulator:	Mylar

HIGH AMPERAGE DC POWER JACKS & PLUGS .43" [11MM] OD

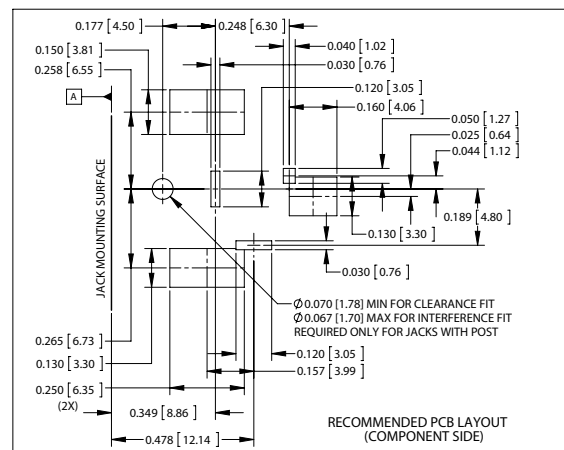
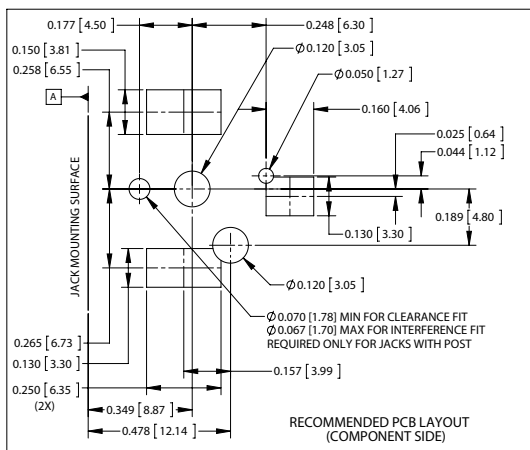
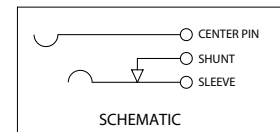
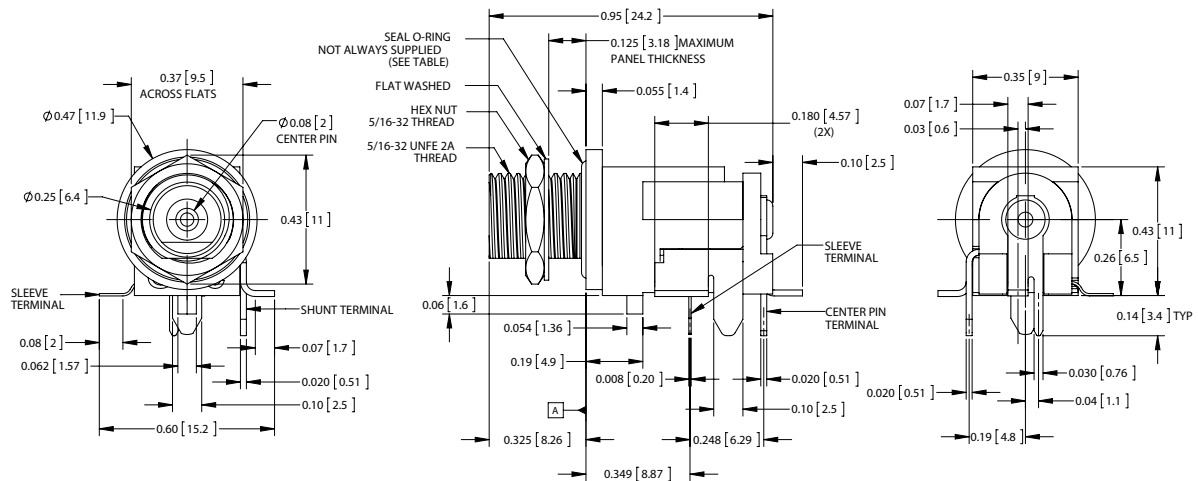
PC-MOUNT HIGH AMPERAGE POWER JACKS



All dimensions are for reference only. Units shown: in[mm].

HIGH AMPERAGE DC POWER JACKS & PLUGS .43" [11MM] OD

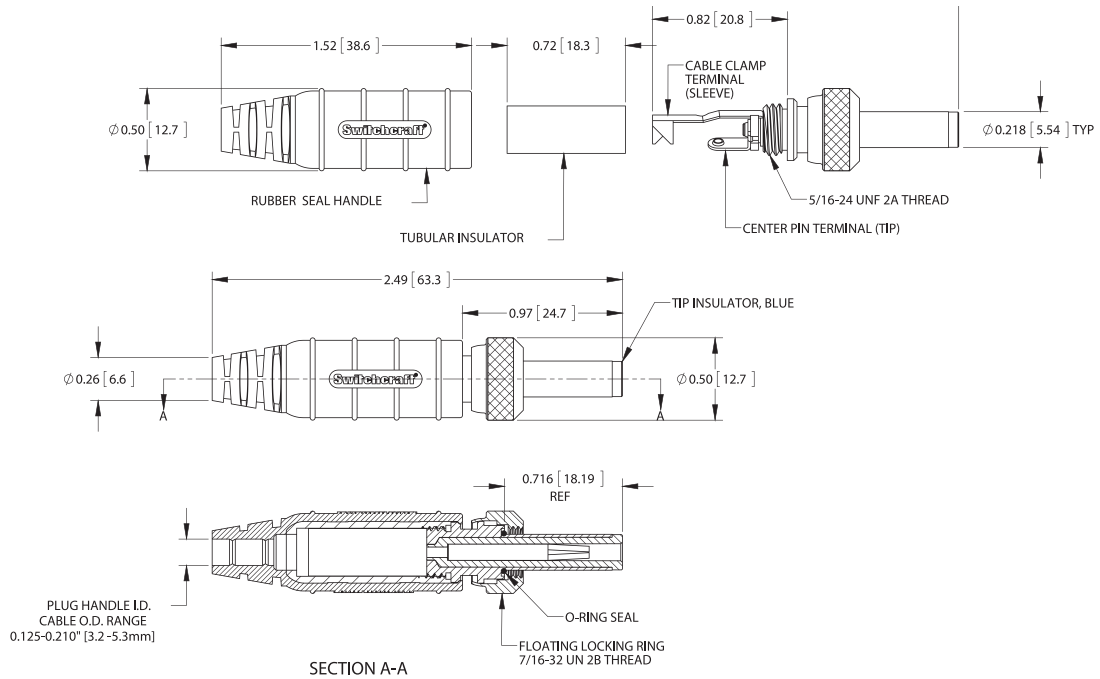
HYBRID-MOUNT HIGH AMPERAGE POWER JACKS



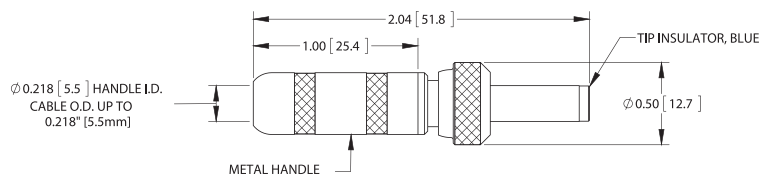
All dimensions are for reference only. Units shown: in[mm].

HIGH AMPERAGE DC POWER JACKS & PLUGS .43" [11MM] OD

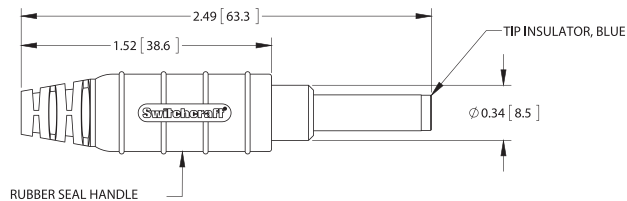
LOCKING AND SEALED PLUGS S10KS12, S10KS15, S10KS17



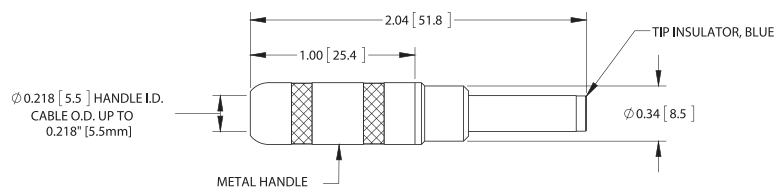
LOCKING, NON-SEALING PLUG S10K



NON-LOCKING, NON-SEALING PLUGS S1012, S1015, S1017



NON-LOCKING, NON-SEALING PLUG S10



All dimensions are for reference only. Units shown: in[mm].

HIGH AMPERAGE DC POWER JACKS & PLUGS .43" [11MM] OD

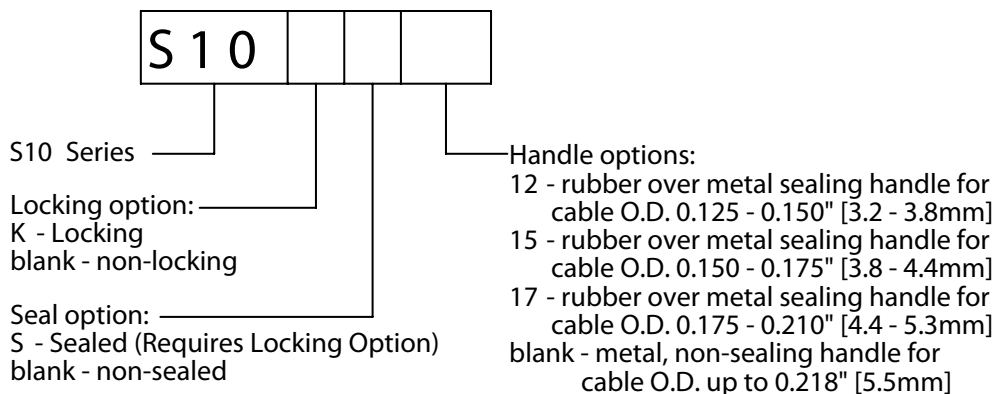
CURRENT RATING TABLE

Jack Terminal Plating	Wire (awg)	Current Rating (A) at Operating Temperature (°C)					
		55°C max	65°C max	75°C max	85°C max	95°C max	105°C max
Silver	16	11	10	9.5	9	7.5	6
	18	9.5	9	8	7	5.5	5
	20	9	8	6.5	6	5	4
Tin	16	11	10	9	8	7	5.5
	18	9.5	9	8	7	5.5	5
	20	8.5	8	6.5	5.5	5	4

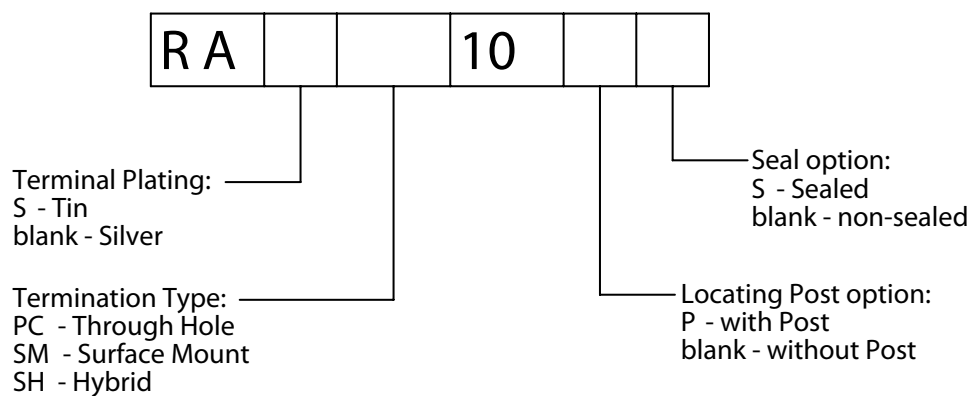
Note: DC Power Plugs & Jacks are for current carry only. Switching Power Jack on-off under resistive load is not recommended. The circuitry on-off switch should be off before connecting or disconnecting the Power Plug to Jack. For electrical life limitations under resistive load, consult factory.

HIGH AMPERAGE DC POWER JACKS & PLUGS .43" [11MM] OD

HIGH AMPERAGE POWER PLUG ORDERING CODE:

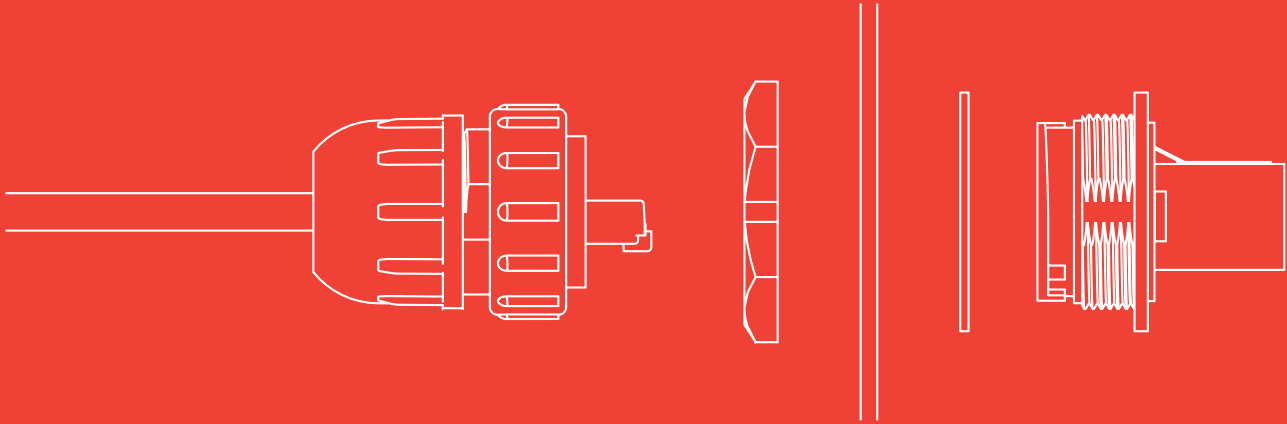


HIGH AMPERAGE POWER JACK ORDERING CODE:



Notes:

1. Standard packaging is bulk. Contact factory for tube or tape & reel packaging options.
2. Tin plating currently not available for the hybrid (SH) termination option.



RJ45 WEATHERTIGHT CONNECTORS

1.44" [37MM] OD



QUICK CONNECT CABLE END
MATES WITH PANEL MOUNT



THREADED CABLE END
MATES WITH PANEL MOUNT



PANEL MOUNT
MATES WITH CABLE END



SHIELDED PANEL MOUNT
MATES WITH CABLE END



REAR VIEW
FEED-THRU TERMINATION



REAR VIEW
STRAIGHT IDC TERMINATION



REAR VIEW-RIGHT ANGLE IDC TERMINATION



MOLDED CABLE ASSEMBLY

SPECIFICATIONS

Manufacturers Identifications

Life:	750 insertion / withdrawal cycles minimum
Vibration:	Mil-Std 202G Method 201A
Hex Nut Torque:	10-12 in-lb
Coupling Locking Style:	Quick Connect (Bayonet)
	Threaded
Backshell Style:	Threaded

Electrical Specifications

Voltage Rating:	1000V DC
Current Rating:	1.5 A
Contact Resistance:	20 mΩ max
Insulation Resistance:	500 MΩ min

Environmental Specifications

Operating Temperature Rating:	-10 °C to +60 °C (+14°F to +140°F)
Insulation Resistance:	Mil-Std 202G Method 302G
Thermal Shock:	Mil-Std 202G Method 107G
Weathertight:	IP67 & IP68, NEMA 250 (6P) (when mated)

Product Ratings:	RJ45 Cable Plug (Category 6):	TIA/EIA 568 C.2
	RJ45 Panel Jack (Category 5e & 6):	TIA/EIA 568 B.2

Material Specifications

Field Installable Plug Assembly:

Sealing Nut, Coupling Ring:	Thermoplastic
Plug Housing, Insert:	Thermoplastic
Sealing Ring:	Elastomer
O-Ring:	Elastomer

RJ45 Plug:

Insulator:	Thermoplastic
Contacts:	Copper Alloy, Gold Plated
Shield (Shielded Option Only):	Copper Alloy, Tin Plated

Panel Housing Jack Assembly:

Panel Housing, Hex Nut:	Thermoplastic
Gasket:	Elastomer

RJ45 Jack:

Housing:	Thermoplastic
Contacts:	Copper Alloy, Gold Plated
Printed Circuit Board (PCB):	FR-4
IDC Contacts:	Copper Alloy, Tin Plated

Molded Cable Assemblies:

Consult factory for molded options

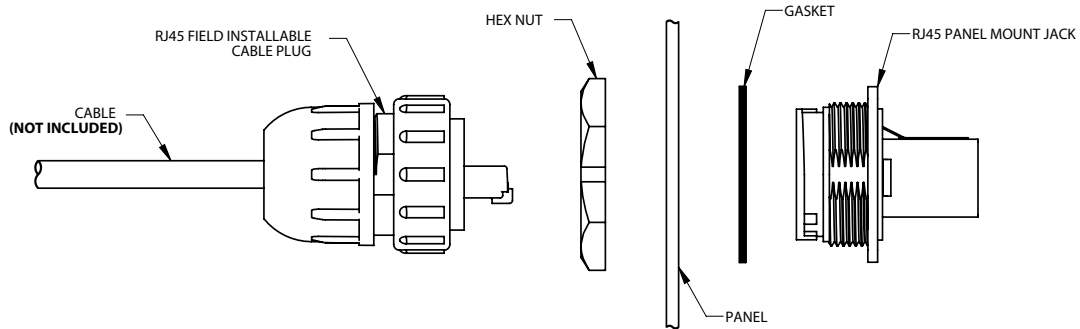
Other

Flame Rating:	UL 94V-0
Recommended Panel Thickness:	1/32" to 3/16" [0.8mm to 4.8mm] - Quick Connect Coupling 1/32" to 5/32" [0.8mm to 3.9mm] - Threaded Coupling

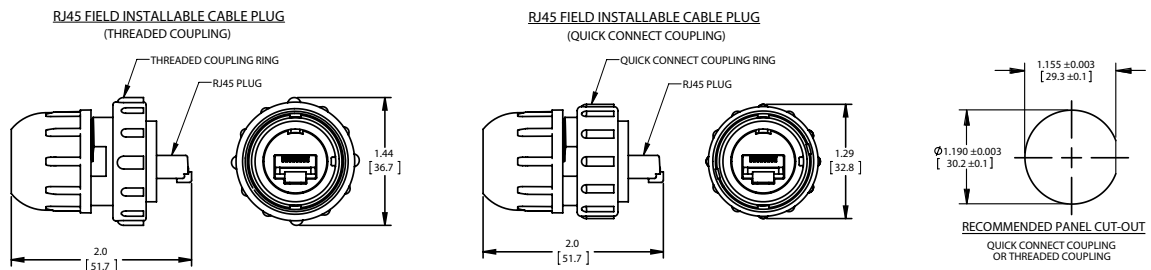
Recommended Cable Type

Conductor Type:	Solid or Stranded Conductors
Outer Cable O.D. Range:	Ø0.190" - Ø0.250" [4.83mm to 6.35mm]
Conductor insulator O.D. Range:	Ø0.037" - Ø0.042" [0.94mm to 1.06mm]

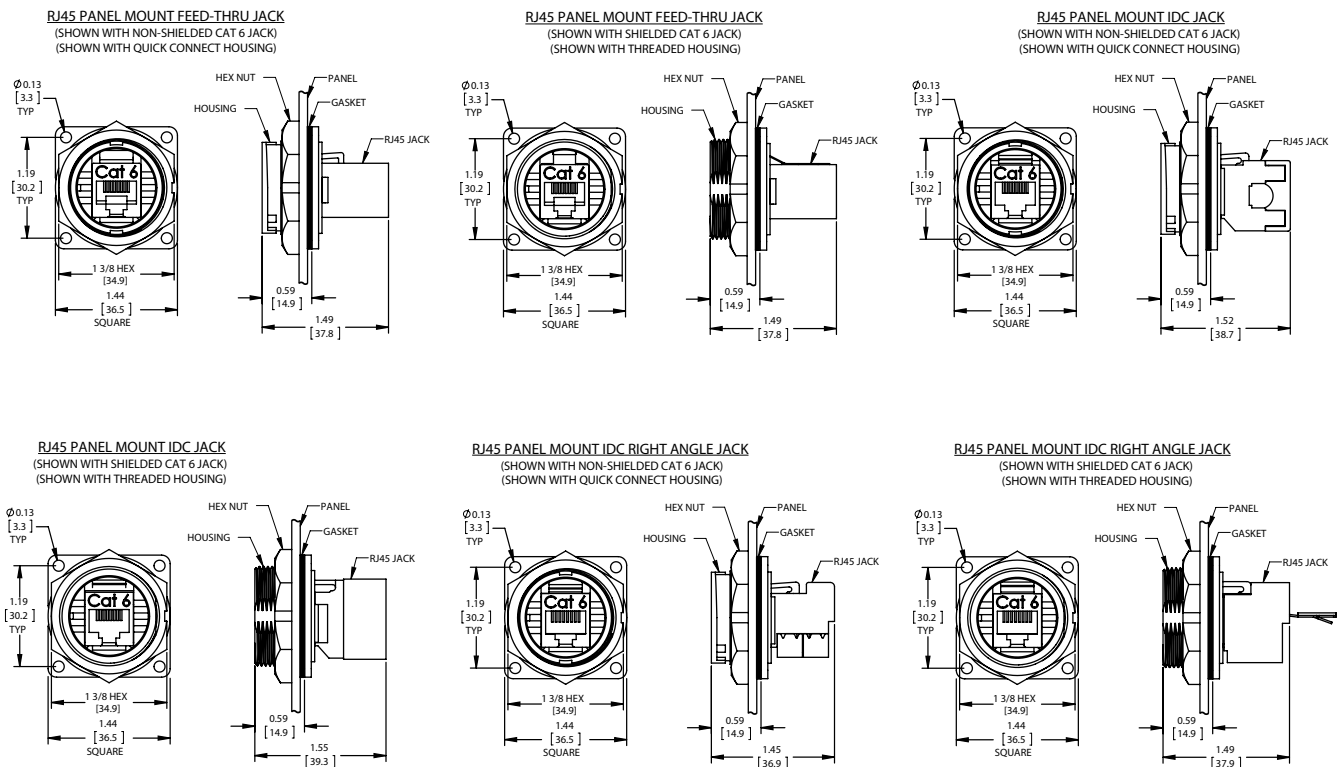
DATA-CON-X®: RJ45 WEATHERTIGHT CONNECTORS



FIELD INSTALLABLE KITS

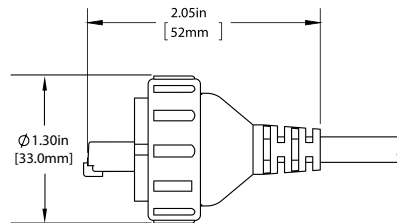


PANEL MOUNT ASSEMBLY KITS

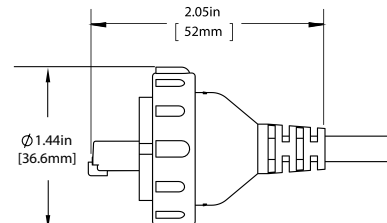


All dimensions are for reference only. Units shown: in[mm].

CUSTOM MOLDED CABLE ASSEMBLIES



DCM-RJXXB-XXXX
CUSTOM CABLE CONNECTOR
STRAIGHT OVERMOLD
QUICK CONNECT



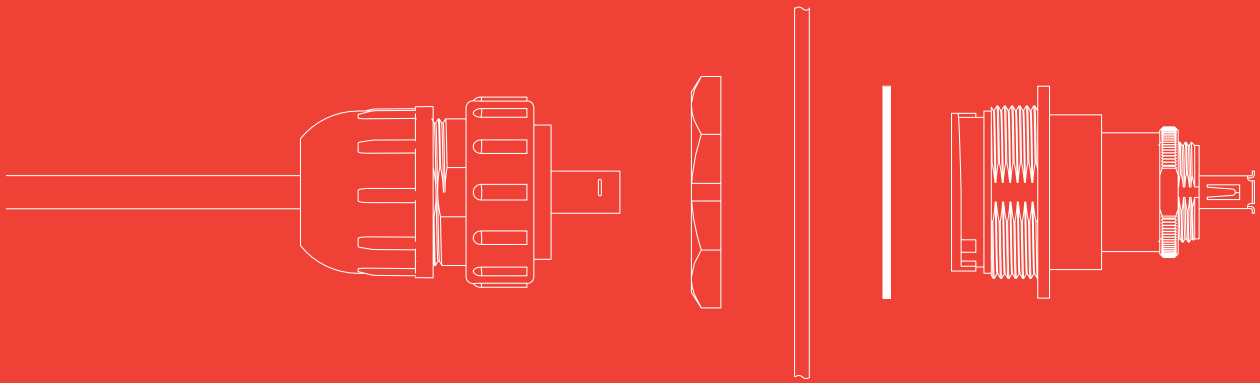
DCM-RJXT-XXXX
CUSTOM CABLE CONNECTOR
STRAIGHT OVERMOLD
THREADED CONNECT

PART NUMBER TO ORDER

DCC	-	RJ6	X	X	-	310
RJ45 FIELD INSTALLABLE CABLE PLUG ASSEMBLY		PLUG TYPE	PLUG SHIELDING	COUPLING TYPE		SERIES
DCC		RJ6 = RJ45 CAT 6	BLANK = UNSHIELDED S = SHIELDED	B = QUICK CONNECT T = THREADED		310

DCP	-	XXX	X	X	-	XX
RJ45 FIELD INSTALLABLE PANEL HOUSING ASSEMBLY		JACK TYPE	JACK SHIELDING	COUPLING TYPE		SERIES
DCP		RJ5 = RJ45 CAT 5e RJ6 = RJ45 CAT 6	BLANK = UNSHIELDED S = SHIELDED	B = QUICK CONNECT T = THREADED		F = FEED-THRU (TO SAME CONNECTOR) SD = IDC, STRAIGHT RD = IDC, RIGHT ANGLE

All dimensions are for reference only. Units shown: in[mm].



USB A & B WEATHERTIGHT CONNECTORS

1.44" [37MM] OD



**CABLE END - USB A
QUICK CONNECT**

MATES WITH PANEL MOUNT



**CABLE END - USB A
THREADED CONNECT**

MATES WITH PANEL MOUNT



**CABLE END - USB B
QUICK CONNECT**

MATES WITH PANEL MOUNT



**CABLE END - USB B
THREADED CONNECT**

MATES WITH PANEL MOUNT



**PANEL MOUNT - USB A
QUICK CONNECT**

MATES WITH CABLE END



**PANEL MOUNT - USB A
THREADED CONNECT**

MATES WITH CABLE END



**PANEL MOUNT - USB B
QUICK CONNECT**

MATES WITH CABLE END



**PANEL MOUNT - USB B
THREADED CONNECT**

MATES WITH CABLE END

SPECIFICATIONS

Mechanical Specifications

Life:	350 insertion/withdrawal cycles minimum
Hex Nut Torque:	10-12 in-lb max
Coupling Locking Style:	Quick Connect (Bayonet) or Threaded
Backshell Style:	Threaded Nut-Squeezed Grommet

Electrical Specifications

Current Rating:	1.5 A
Voltage Rating:	Per USB 2.0 standard
Contact Resistance:	30 mΩ max
Insulation Resistance:	1000 MΩ min
Dielectric Withstanding Voltage:	500 V AC/one minute

Environmental Specifications

Operating Temperature Rating:	0 °C to +50 °C (+32°F to +122°F)
Storage Temperature:	-20 °C to +60 °C (-4°F to +140°F)
Moisture Resistance:	Mil-Std 202G Method 106G
Insulation Resistance:	Mil-Std 202G Method 302
Vibration:	Mil-Std 202G Method 201A
Thermal Shock:	Mil-Std 202G Method 107G
Weathertight:	IP67 & IP68, NEMA 250 (6P) (when mated)
Salt Spray:	Mil-Std 202G Method 101E
Product Ratings:	Tested per USB 2.0

Material Specifications

Plug Nut, Coupling Ring:	Thermoplastic
Plug Housing, Insert:	Thermoplastic
Sealing Ring, O-Ring:	Elastomer
Panel Housing, Hex Nut:	Thermoplastic
Retaining Nut:	Copper Alloy, Nickel Plated
Gasket:	Elastomer

USB A or B Plug:

Shell:	Steel, Nickel Plated
Contacts:	Copper Alloy, Gold Plated
Insulator:	Thermoplastic UL94V-0, White

USB A Receptacle:

Shell:	Steel, Nickel Plated
Contacts:	Copper Alloy, Gold Plated
Insulator:	Thermoplastic UL94V-0, White

USB B Receptacle:

Shell:	Copper Alloy, Nickel Plated
Contacts:	Copper Alloy, Gold Plated
Insulator:	Thermoplastic UL94V-0, White

Molded Cable Assemblies

Consult factory for molded options

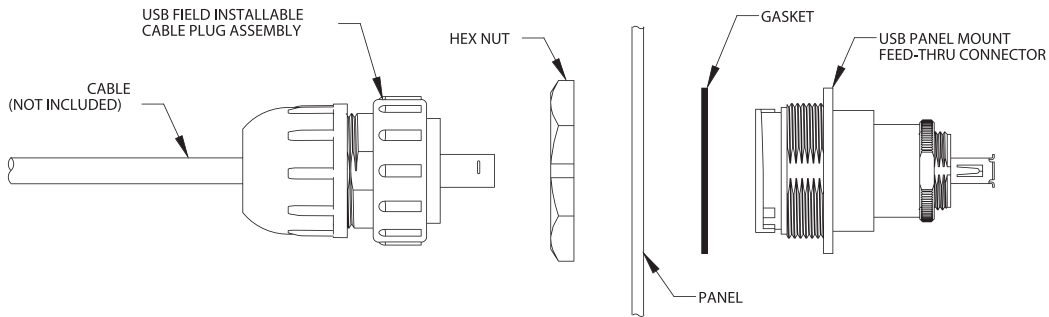
Other

Flame Rating:	UL 94V-0
Recommended Panel Thickness:	1/32" - 3/16" [0.8mm to 4.8mm] - Quick Connect Coupling 1/32" - 5/32" [0.8mm to 3.9mm] - Threaded Coupling

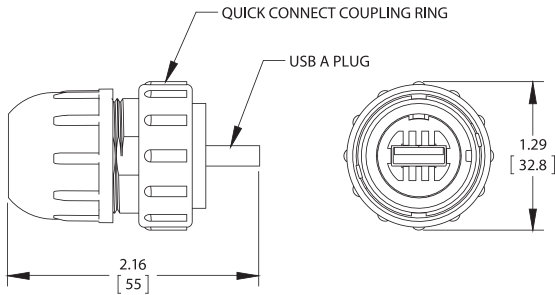
Recommended Cable Type

Conductor Type:	Solid or Stranded Conductors
Outer Cable O.D. Range:	Product 150 Series: 0.134"-0.170" [3.40mm-4.33mm] Product 180 Series: 0.171"-0.208" [4.34mm-5.28mm]

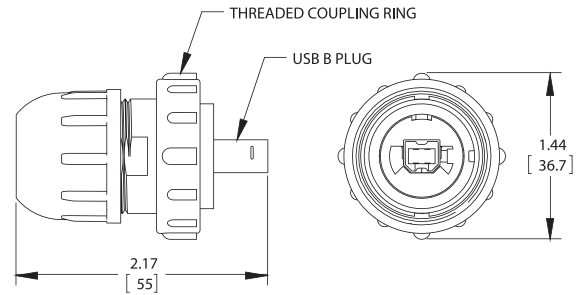
DATA-CON-X®:USB A & B WEATHERTIGHT CONNECTORS



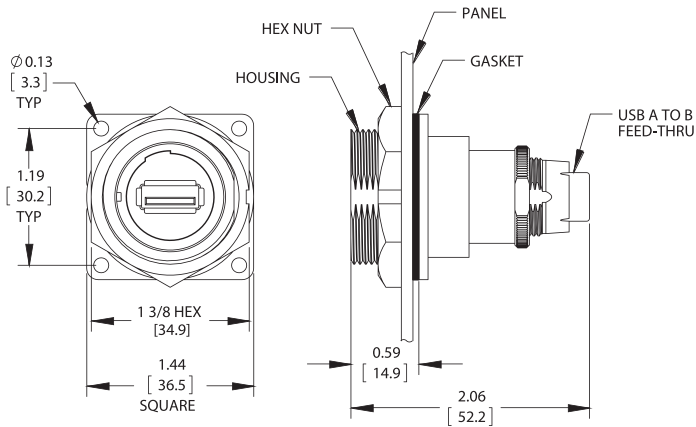
USB A FIELD INSTALLABLE CABLE PLUG
(SHOWN WITH QUICK CONNECT COUPLING)



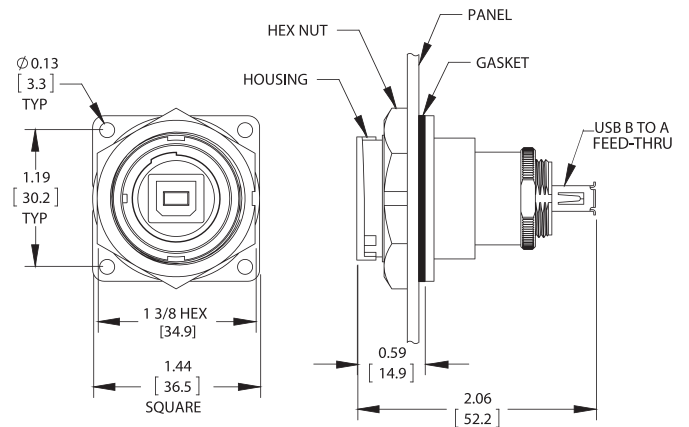
USB B FIELD INSTALLABLE CABLE PLUG
(SHOWN WITH THREADED COUPLING)



USB PANEL MOUNT FEED-THRU CONNECTOR
(SHOWN WITH USB A TO B FEED-THRU CONNECTOR)
(SHOWN WITH THREADED HOUSING)



USB PANEL MOUNT FEED-THRU CONNECTOR
(SHOWN WITH USB B TO A FEED-THRU CONNECTOR)
(SHOWN WITH QUICK CONNECT HOUSING)



All dimensions are for reference only. Units shown: in[mm].

PART NUMBER TO ORDER

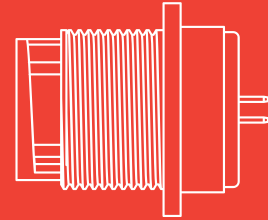
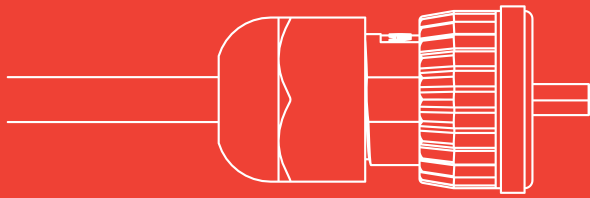


USB FIELD INSTALLABLE CABLE PLUG PART NUMBER CHART			
USB FIELD INSTALLABLE CABLE PLUG ASSEMBLY	PLUG TYPE	COUPLING TYPE	SERIES
DCC	USBA = USB "A" 2.0 USBB = USB "B" 2.0	B = QUICK CONNECT T = THREADED	150 = \varnothing 0.134"-0.170" [3.40-4.33mm] 180 = \varnothing 0.171"-0.208" [4.34-5.28mm]



USB PANEL MOUNT FEED-THRU CONNECTORS PART NUMBER CHART			
USB FIELD INSTALLABLE PANEL HOUSING ASSEMBLY	RECEPTACLE TYPE (SEALED END)	COUPLING TYPE	RECEPTACLE TYPE (NON-SEALED END)
DCP	USBA = USB "A" 2.0 USBB = USB "B" 2.0	B = QUICK CONNECT T = THREADED	USBA = USB "A" 2.0 * USBB = USB "B" 2.0 **

* (NOT AVAILABLE WITH USBA ON SEALED END)
 ** (NOT AVAILABLE WITH USBB ON SEALED END)



SEALED MINI USB CONNECTORS

0.71" [18MM] OD



QUICK CONNECT CABLE END
MATES WITH PANEL MOUNT



PANEL MOUNT
MATES WITH CABLE END



REAR VIEW - PC TAIL



REAR VIEW - FEED-THRU TERMINATION



REAR VIEW - SOLDER HOLES

SPECIFICATIONS

Mechanical Specifications

Life:	500 insertion / withdrawal cycles minimum
Vibration:	Mil-Std 202G Method 201A
Hex Nut Torque:	10-12 in-lb
Coupling Locking Style:	Quick Connect (Bayonet)
Backshell Style:	Threaded

Electrical Specifications

Tested Per USB 2.0 Specifications

Environmental Specifications

Operating Temperature Rating:	-20 °C to +75 °C (-4°F to +167°F)
Moisture Resistance:	Mil-Std 202G method 106G
Insulation Resistance:	Mil-Std 202G Method 302G
Thermal Shock:	Mil-Std 202G Method 107G
Weathertight:	IP67 & IP68, NEMA 250 (6P) (when mated)

Material Specifications

Plug Nut, Coupling Nut:	Thermoplastic
Plug Housing, Insert:	Thermoplastic
Sealing Ring, O-Ring:	Elastomer
Panel Housing, Hex Nut:	Thermoplastic
Gasket:	Elastomer
Printed Circuit Board (PCB):	FR-4

Header:

Insulator:	Thermoplastic UL94V-0, Black
Contacts:	Copper Alloy, Gold Plated

USB Mini-B Plug:

Insulator:	Thermoplastic UL94V-0, Black
Contacts:	Copper Alloy, Gold Plated (Contact Area)
Metal Shield:	Steel, Tin Plated

USB Mini-B Receptacle:

Insulator:	Thermoplastic UL94V-0, Black
Contacts:	Copper Alloy, Gold Plated (Contact Area)
Metal Shield:	Copper Alloy, Nickel Plated

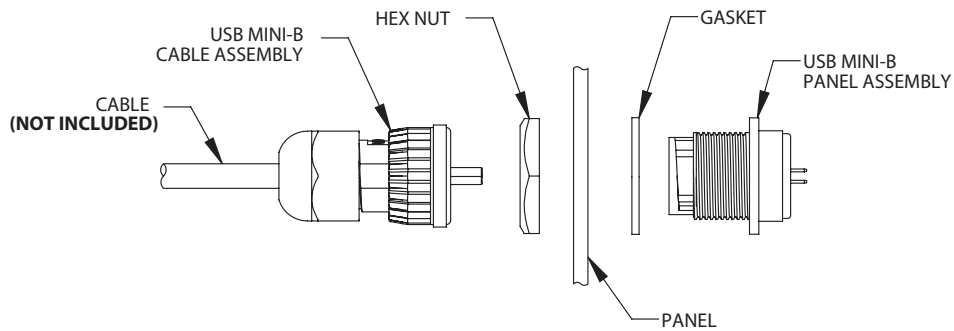
Molded Cable Assemblies

Consult factory for molded options

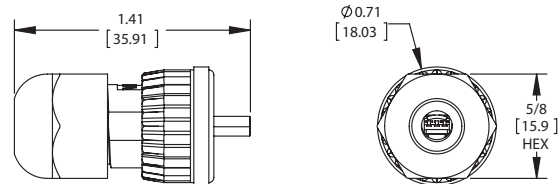
Other

Recommended Cable O.D. Range:	Ø0.161"-Ø0.181" [4.1mm-4.6mm]
Recommended Panel Thickness:	Ø0.031"-Ø0.187" [0.8mm-4.8mm]

DATA-CON-X®: SEALED MINI USB CONNECTORS



DCC-USBNB-160
USB MINI-B CABLE PLUG FIELD INSTALLABLE



PART NUMBER TO ORDER

Part Number	Style	Description
DCC-USBNB-160	Plug	Field Installable Cable Plug
DCP-USBNB-MNHD	Receptacle	Panel Mount: USB Mini-B to PC Tails
DCP-USBNB-MNSC	Receptacle	Panel Mount: USB Mini-B to Solder Holes
DCP-USBNB-USBN	Receptacle	Panel Mount: USB Mini-B Feed-thru

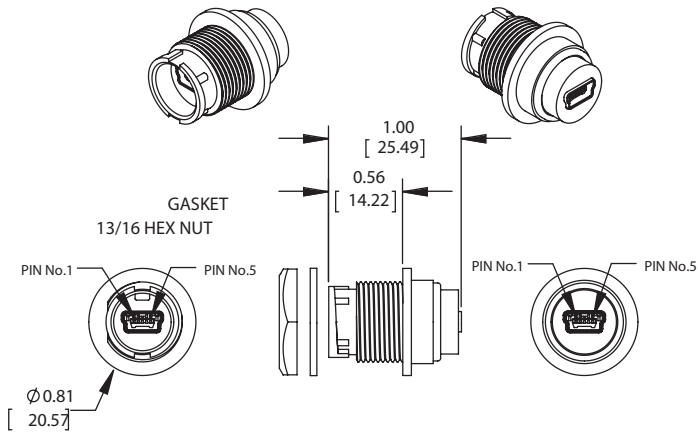
All dimensions are for reference only. Units shown: in[mm].

SEALED MINI USB CONNECTORS

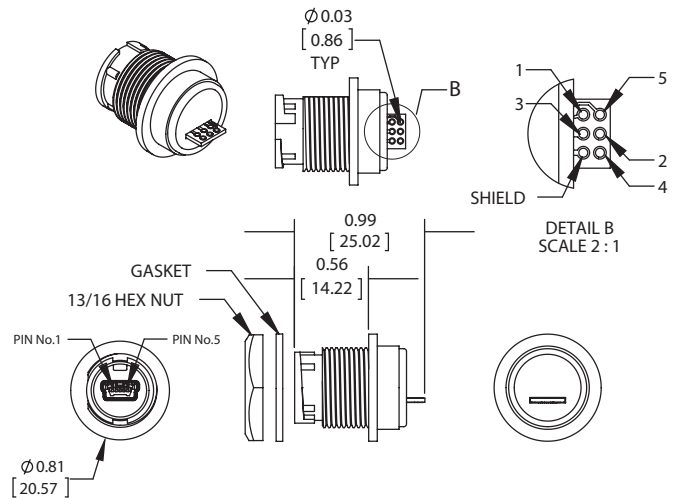
0.71" [18MM] OD

PANEL MOUNT ASSEMBLY KITS

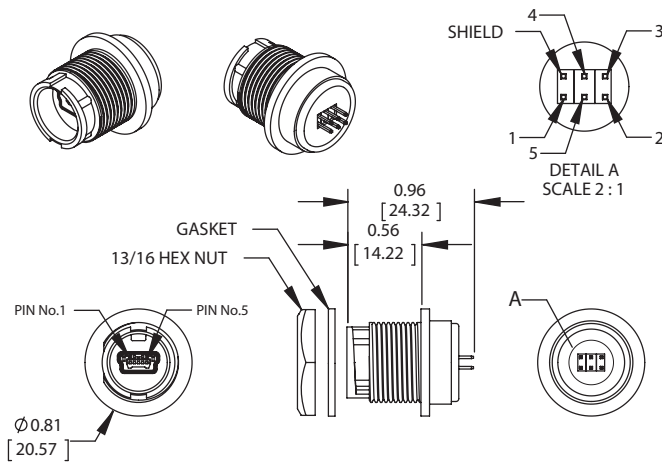
DCP-USBNB-USBN
USB MINI-B FEED-THRU



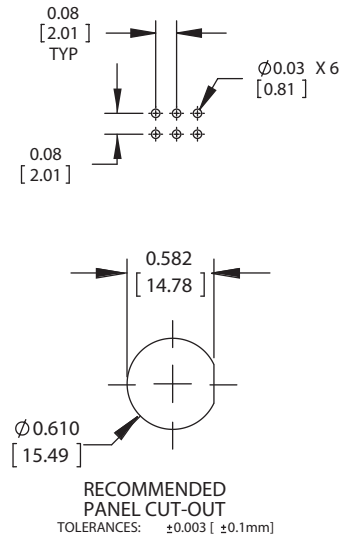
DCP-USBNB-MNSC
USB MINI-B TO SOLDER HOLES



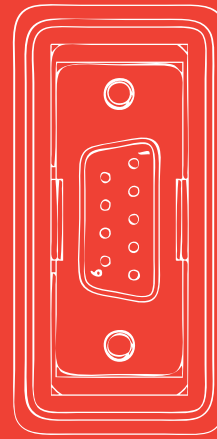
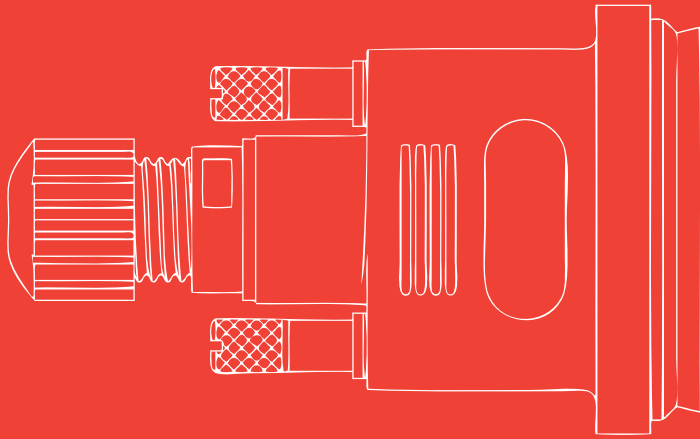
DCP-USBNB-MNHD
USB MINI-B TO PC TAILS



PCB HOLE LAYOUT FOR DCP-USBNB-MNHD



All dimensions are for reference only. Units shown: in[mm].



SEALED D-SUB CONNECTORS

9 OR 15 CONTACTS



9 PIN STANDARD CABLE MOUNT-SOCKET
MATES WITH PANEL MOUNT



9 PIN STANDARD CABLE MOUNT-PIN
MATES WITH PANEL MOUNT



9 PIN STANDARD PANEL MOUNT
MATES WITH CABLE MOUNT



15 PIN HIGH DENSITY CABLE MOUNT-SOCKET
MATES WITH PANEL MOUNT



15 PIN HIGH DENSITY CABLE MOUNT-PIN
MATES WITH PANEL MOUNT



15 PIN HIGH DENSITY PANEL MOUNT
MATES WITH CABLE MOUNT



CAP FOR PANEL MOUNT
P/N DBSCAP

SPECIFICATIONS

Mechanical Specifications

Life:	500 insertion / withdrawal cycles minimum
Coupling Locking Style:	Standard Jackscrew
Backshell Style:	Threaded

Electrical Specifications

Voltage Rating:	1000V AC for 1 Minute
Current Rating:	5.0A- Standard D-Sub (9 Contacts) 2.0A- High Density D-Sub (15 Contacts)
Contact Resistance:	25 mΩ max
Insulation Resistance:	500MΩ at

Environmental Specifications

Operating Temperature Rating:	-55 °C to +85 °C (-67°F to +185°F)
Thermal Shock:	MIL-STD 202G Method 107G, Condition A
Weathertight:	IP67 (when mated)

Material Specifications

D-Sub Backshell Kit

Housing, Clamp, & Nut:	Thermoplastic, Black
Insulator:	Thermoplastic (UL94V-0)
Gasket & Seal:	Elastomer, Black
Shell:	Steel, Tin Plated
Screw:	Copper Alloy, Nickel Plated
Contact Pins:	Copper Alloy, Gold Plated

D-Sub Panel Mount Connector

Flange & Insulator:	Thermoplastic (UL94V-0)
Shell:	Steel, Tin Plated
Epoxy:	Epoxy, Black
O-Ring:	Elastomer, Light Blue
Screw:	Copper Alloy, Nickel Plated
Contact Pin:	Copper Alloy, Gold Plated

D-Sub Connector Cap

Body:	Thermoplastic, Black
Gasket & O-ring:	Elastomer, Black
Screw:	Copper Alloy, Nickel Plated
Chain:	Stainless Steel

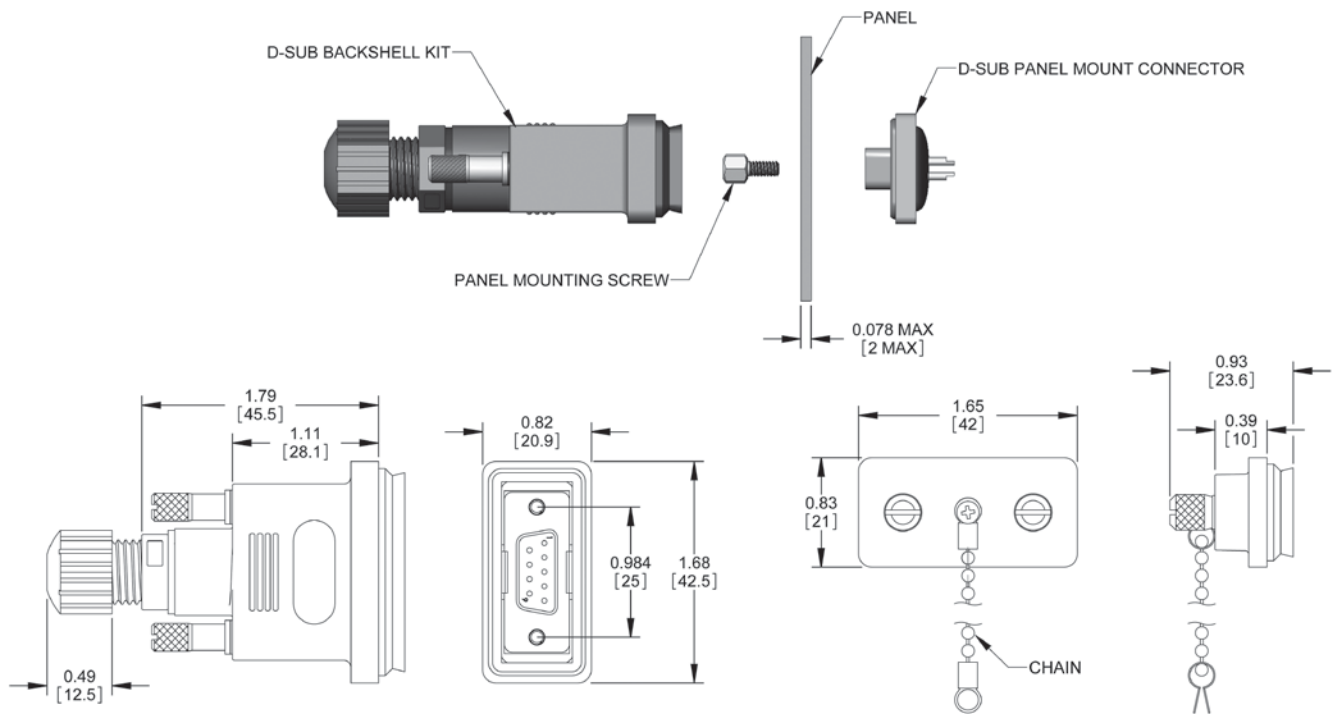
Other

Flame Rating:	UL 94V-0
Recommended Panel Thickness:	0.048" - 0.078" [1.22mm to 1.98mm]

Recommended Cable Type

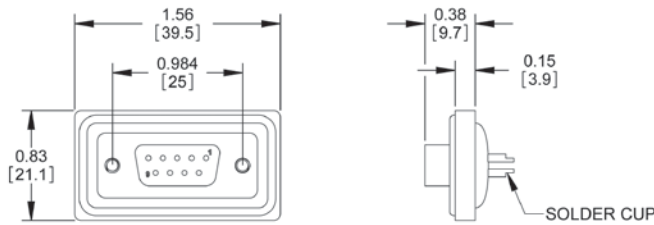
Conductor Type:	Solid or Stranded Conductors, 22-26 AWG
Outer Cable O.D. Range:	Ø0.138" - Ø0.276" [3.51mm to 7.01mm]

DATA-CON-X®: SEALED D-SUB

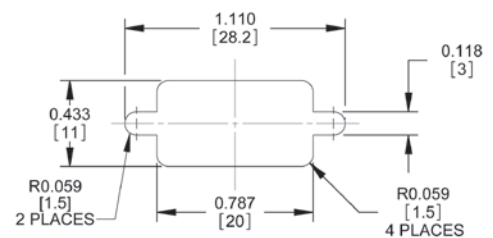


D-SUB BACKSHELL KIT
(9 PIN MALE D-SUB SHOWN)

D-SUB CONNECTOR CAP



PANEL MOUNT SOLDER CONNECTOR
(9 PIN FEMALE D-SUB SHOWN)



RECOMMENDED PANEL CUT-OUT

All dimensions are for reference only. Units shown: in[mm].

SEALED D-SUB CONNECTORS

9 OR 15 CONTACTS

PART NUMBER TO ORDER

DCP	XXXX	X	SC	P
D-Sub Panel Mount Series	D-Sub	Gender	Termination Style	Panel
DCP	DB09 = 9 pin Standard HD15 = 15 Pin, High Density	M = Male F = Female	SC = Solder Cup	1 = 0.48-0.78 in [1.22-1.98 mm]

DCC	XXXX	X
D-Sub Backshell Kit Series	D-Sub	Gender
DCC	DB09 = 9 pin Standard HD15 = 15 Pin, High Density	M = Male F = Female

MOLDED CABLE ASSEMBLY CHECKLIST

CUSTOMER INFORMATION

Company: _____ Date: _____
Contact Name: _____ Email: _____ Phone: _____
Address: _____
City, State, Zip, Country: _____

PROJECT INFORMATION

Project Name: _____ Quantity requested to quote: _____
Application / Description: _____

CONNECTOR REQUIREMENTS

End "A" Part Number: _____ Is right angle required? (Y/N): _____
End "B" Part Number: _____ Is right angle required? (Y/N): _____
If single ended cable, how should "B" side be terminated? _____
Yes No
_____ Strip & Tin (S&T)
_____ Standard 1/4" outer jacket, 1/8" inner jacket
_____ Straight cut-off (SCO)
_____ Other (Please specify) _____

Please note some insulation may be removed for quality control. _____

CABLE REQUIREMENTS

Cable vendor & P/N: _____
If cable vendor is known, is equivalent cable acceptable? (Y/N): _____
UL # of cable (if applicable): _____
Outer cable jacket material (PUR, PVC, Other): _____
Outer cable jacket color (Black, Grey, Other): _____
Number of conductors: _____ Conductor AWG: _____
Is cable shielded? If yes, what type of shield (foil, braided, etc.): _____
Is there a drain wire (Y/N): _____ If yes, where terminated?: _____
Overall length of assembly. Determined by connector ends. Please specify units: _____
Does cable have any environment requirements? (Temperature, UV, other): _____
Is an adhesive moisture bond to the outer jacket of the cable required? (Y/N): _____
Comments / Special Notes: _____

NOTE: Please submit completed form and drawing (if available) by fax to 630-834-8540 or email: sales@switchcraft.com. If a single ended assembly is requested, a diagram of the wire color code illustrating the conductors and the corresponding contact position is required. Also show drain wire and shield terminators if applicable. We thank you for giving us the opportunity to quote your cable assembly requirements. MADE IN USA.

CON-X® ELECTRICAL CURRENT RATING CHART

CONTACT SIZE	CONDUCTOR SIZE - AWG	NUMBER OF CONDUCTORS	CURRENT RATING
#12	#12	1 through 7	23.0A
	#14	1 through 3	17.0A
		4 through 6	12.75A
		7 through 9	11.0A
	#16	1 through 3	13.0A
		4 through 6	9.75A
7		8.45A	
#16	#16	1 through 10	13.0A
		11 and 12	7.5A
	#18	1 through 3	10.0A
		4 through 12	7.5A
#20	#18	1 through 3	7.5A
		4 through 20	5.6A
		21 through 31	2.3A
	#20	1 through 3	7.5A
		4 through 20	5.6A
		21 through 31	2.3A
	#20 Multi-Con-X	10 through 12	5.0A
	#22	1 through 3	6.0A
		4 through 20	2.5A
		21 through 31	2.5A
	#24	1 through 3	4.5A
		4 through 20	2.0A
21 through 31		1.5A	
#22	#22	4	5.5A
	#24	4	5.0A
#26	#24	5 to 6	4.0A
	#24	7	3.5A
	#26	5 to 6	2.5A
	#26	7	2.5A
	#28*	5 to 6	2.0A
	#28*	7	2.0A

*Not UL tested for this wire conductor size

MAX. NUMBER AND SIZE OF CONTACTS PER SERIES:

4 - #12 Multi-Con-X	6 - #16 Multi-Con-X	8 - #20 Mini-Con-X	31 - #20 Mega-Con-X
7 - #12 Maxi-Con-X	12 - #16 Maxi-Con-X	9 - #20 Multi-Con-X	4 - #22 Micro-Con-X
5 - #16 Mini-Con-X	3 - #20 Micro-Con-X	20 - #20 Maxi-Con-X	7 - #26 Micro-Con-X

MIL-E-QUAL[®] ELECTRICAL CURRENT RATING CHART

CONTACT SIZE	CONDUCTOR SIZE - AWG	NUMBER OF CONDUCTORS	CURRENT RATING
#12	#12	1 through 3	23.0A
		4 through 6	17.0A
		7 through 9	13.0A
	#14	1 through 3	17.0A
		4 through 6	12.75A
		7 through 9	11.0A
	#16	1 through 3	13.0A
		4 through 6	9.75A
		7 through 9	8.45A
#16	#16	1 through 3	13.0A
		4 through 6	9.75A
		7 through 10	8.45A
		10 through 20	5.85A
		21 through 30	4.55A
		31 and up	3.9A
	#18	1 through 3	10.0A
		4 through 6	7.5A
		7 through 9	6.5A
		10 through 20	4.5A
		21 through 30	3.5A
		31 and up	3.0A
	#20	1 through 3	7.5A
		4 through 6	5.6A
		7 through 9	4.8A
		10 through 20	3.4A
		21 through 30	2.62A
		31 and up	2.3A

EN2™ & EN3® ELECTRICAL CURRENT RATING CHART

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

EN3® SERIES CURRENT RATING TABLE

CONTACT SIZE	CONDUCTOR SIZE - AWG	NUMBER OF CONDUCTORS	CURRENT RATING
#16	16	2 through 3	13.0A
	18		
#20	20	2 through 6	7.5A
	22		
	20	7 through 8	6.5A
	22		
#26	26	9 through 18	3A
	28		

CON-X® MANUAL CONTACT CRIMPING TOOL

Handle	Description	Positioner	Contact Sizes	Wire Sizes	Conductor Strip Length
359-24	Multi Contact Turret Crimp Tool	357-124	#12	12-14 AWG	7/32 in
			#16	16-18-20 AWG	7/32 in
			#20	20-22-24 AWG	3/16 in
359-21	Single Contact Crimp Tool	357-122	#20	20-22-24 AWG	3/16 in
		357-125	#22	22-24 AWG	5/32 in
		357-126	#26(Cable Pin Only)	24-26-28 AWG	3/16 in
		357-127	#26(Panel Pin, Cable & Panel Socket)	24-26-28 AWG	3/16 in

CON-X® MANUAL CONTACT INSERTION TOOL

Handle	Description	Insertion Bits	Contact Sizes
356-1	Single Contact Hand Tool	356-12	#12
		356-16	#16
		356-20	#20
		356-22	#22 (20 AWG Crimp Barrel)
		356-22-1	#22 (22 AWG Crimp Barrel)
		356-26	#26

MIL-E-QUAL® MANUAL CONTACT CRIMPING TOOL

Handle	Description	Positioner	Contact Sizes	Wire Sizes	Conductor Strip Length
359-24	Hand Crimp Tool	358-112	#12	12-14 AWG	7/32 in
			#16	16-18-20 AWG	9/32 in

MIL-E-QUAL® MANUAL CONTACT INSERTION TOOL

Handle	Description	Insertion Bits	Contact Sizes
356-1	Single Contact Hand Tool	356-12	#12
		356-16	#16

TOOLING

EN2™ & EN3® CONTACT CRIMPING TOOL

Handle	Description	Positioner	Contact Sizes	Wire Sizes
EN3CR	Crimp Hand Tool	EN3POS16	#16	16 AWG
		EN3POS20	#20	20 & 22 AWG
		EN3POS26	#26	26, 28 & 30 AWG
EN3CRAUTO	Pneumatic Crimp Tool	EN3POS16	#16	16 AWG
		EN3POS20	#20	20 & 22 AWG
		EN3POS26	#26	26, 28 & 30 AWG

EN2™ & EN3® INSERTION / EXTRACTION TOOLS

Part Number	Contact Sizes	Description
EN3INS16	#16	Insertion / Extraction Tool for 16 AWG
EN3INS20	#20, #22	Insertion / Extraction Tool for 20 & 22 AWG
EN3INS26	#26	Insertion / Extraction Tool for 26, 28 & 30 AWG

EN2™ & EN3® 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			

NOTES



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