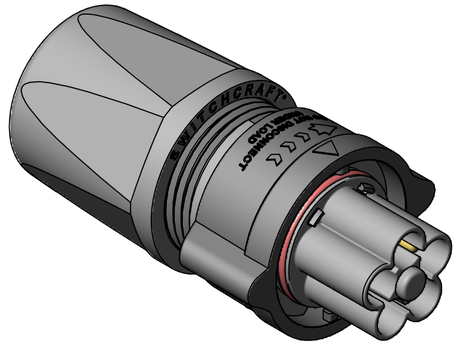
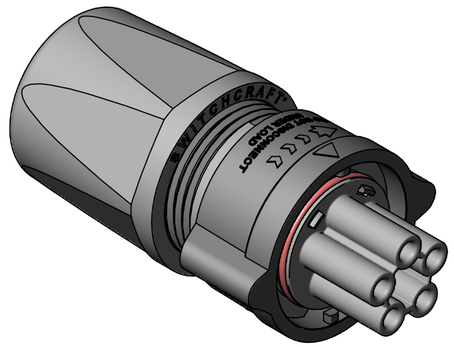


TYPICAL CABLE-END PINS (MALE)
(EP7C5M10C SHOWN HERE)

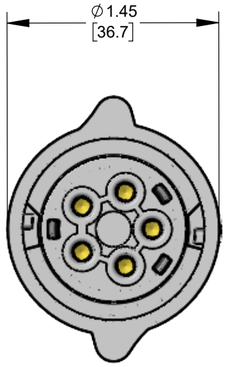


TYPICAL CABLE-END SOCKETS (FEMALE)
(EP7C5F10C SHOWN HERE)

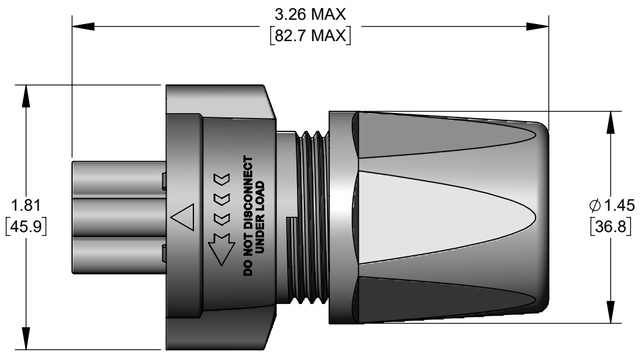
EP7 C _ _ 10 _ - _ _

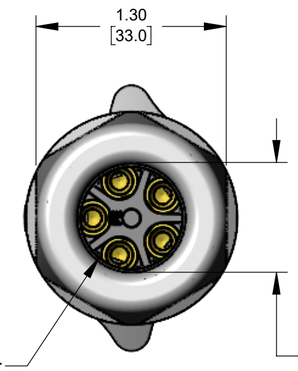
- EP7 SERIES
- **C** - CABLE-END CONNECTOR
- # OF CONTACTS:
  3-5 #10
- GENDER:
  M - PIN (MALE)
  F - SOCKET (FEMALE)
- CONTACT SIZE - (WIRE SIZES):
  10 - (10, 12, 14 AWG)
- CLAMP SET PER CABLE O.D. RANGE:
  A - 0.375 - 0.500 [9.5 - 12.7]
  B - 0.500 - 0.600 [12.7 - 15.2]
  C - 0.600 - 0.700 [15.2 - 17.8]
- KIT PACKAGING OPTION:
  K - ONE UNIT / BAG

REFER TO "EP7P SERIES" DRAWING FOR MATING PANEL-MOUNT CONNECTORS.
REFER TO "EP7L SERIES" DRAWING FOR MATING CABLE-TO-CABLE CONNECTORS.



EP7C5F10C SHOWN HERE





GROMMET I.D.:
SIZE A: 0.500 [12.7] DIA.
SIZE B: 0.600 [15.2] DIA.
SIZE C: 0.700 [17.8] DIA.

BACK NUT I.D.:
⌀0.75 [19.0]
⌀0.65 [16.5]

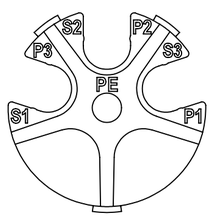
SPECIFICATIONS:	
MECHANICAL	
Mating / Locking Type:	Spring Loaded Automatic Latching Mechanism
Life	400 cycles minimum
Operating Forces	10 lb. [44.5 N] maximum Insertion or Withdrawal
Vibration	Mil-Std 202G Method 201A
Panel-Mount Hex Nut Torque	12 in-lb [1.36 Nm] maximum
Cable Securing System:	Treaded-on Clamp
ELECTRICAL	
Voltage Rating	600 V AC/DC
Current Rating	Refer to Current Carry Capacity Table
Insulation Resistance	1000 MΩ minimum
Contact Resistance	10 mΩ typical
ENVIRONMENTAL	
Temperature Limits	-40ºC to +135ºC (-40ºF to +275°F)
Operating Temperature Range	Refer to Current Carry Capacity Table
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 A
Ingress Protection Ratings	IP66, IP67, IP68 (6 ft. for 24 hours) per IEC60529, IP69K per DIN 40050-9, NEMA 250 6P
MATERIAL	
Outer Shell (Insulator), Hardware	Thermoplastic (PA)
Seal Grommets	Thermoplastic Elastomer (TPV)
Seal O-rings	Thermoplastic Elastomer (VMQ)
Electrical Contacts	Copper Alloy, Gold Plated
Spring, Terminal Screw	Stainles Steel

ALL DIMENSIONS FOR REFERENCE ONLY.
CONNECTORS PROVIDED UNASSEMBLED, SHOWN ASSEMBLED HERE.

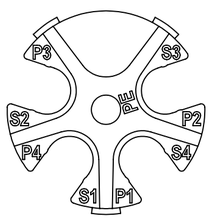
Contacts	Wire (awg)	Current Rating (A) at Operating Temperature (°C)					Minimum Test Voltage (V rms)	Voltage (V rms) tested per UL2238
		45°C max.	65°C max.	85°C max.	100°C max.	110°C max.		
3 #10	10	30	30	30	**25***	20	2200	600
	12	25	25	25	**20***	15		
	14	20	20	20	**15***	10		
4 #10	10	30	30	30	**25***	20		
	12	25	25	25	**20***	15		
	14	20	20	20	**15***	10		
5 #10	10	30	30	30	**25***	20		
	12	25	25	25	**20***	15		
	14	20	20	20	**15***	10		

*Temperature Rise does not exceed 30°C when tested according to UL2238. All other recommended current ratings are based on the Relative Thermal Index of the insulating material.

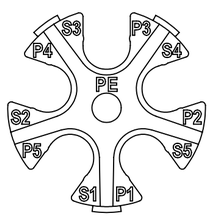
WARNING NOTE: DO NOT DISCONNECT THESE CONNECTORS UNDER LOAD



3-POLE



4-POLE



5-POLE

INSERTS (CONTACT CARRIERS) REAR VIEW SHOWN HERE FOR CLARITY
S1-S5: SOCKET CONTACT POSITIONS, COUNTED CLOCKWISE
P1-P5: PIN CONTACT POSITIONS, COUNTED COUNTERCLOCKWISE
PE: PROTECTIVE EARTH

PRELIMINARY

CUSTOMER DRAWING

REV	ECO NUMBER	DATE	BY	APVD
0C	P & S changed to M & F	5/7/24	PNK	SRC
0B	"DO NOT DISCONNECT UNDER LOAD" ADDED	5/2/24	PNK	SRC
0A	PRELIMINARY	4/4/23	PNK	SRC

REVISIONS

UNLESS OTHERWISE SPECIFIED
1. ALL DIMENSIONS IN INCHES [mm]
- TWO PLACE DECIMALS ±0.02 [0.5]
- THREE PLACE DECIMALS ±0.005 [0.13]

DO NOT SCALE DRAWING

SIZE	WIDTH	MULT	LBS/M	TEMPER

FINISH
SPEC No.

MATERIAL
SPEC No.

FIRST USED ON

SCALE 1.25:1

DATE DRAWN	BY	CHKD	APVD
4/4/23	PNK	PNK 4/4/23	SRC 4/4/23

Switchcraft®

SHEET 1 OF 2

NAME CABLE-END EP7C SERIES CONNECTORS

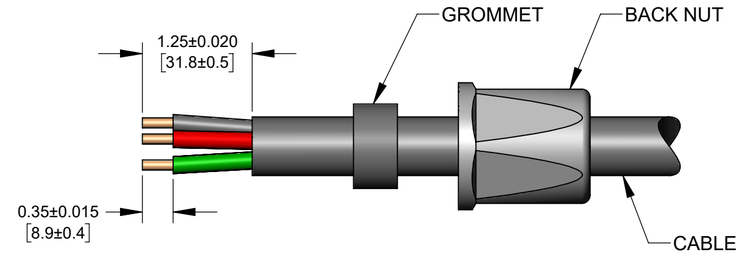
PART No. EP7C SERIES

REV 0C

SolidWorks CAD File

C

STEP 1

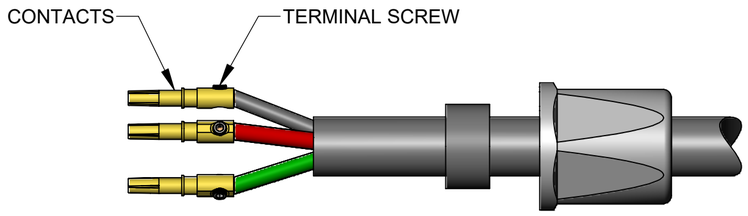


FEED THE FREE END OF CABLE THROUGH THE BACK NUT AND GROMMET IN THE ORDER SHOWN.

STRIP THE CABLE JACKET AND THE CONDUCTORS AS SHOWN.

STEP 2

5-POSITION SOCKETS SHOWN HERE



INSERT EACH STRIPPED CONDUCTOR INTO BARREL OF EACH CONTACT AND TIGHTEN TERMINAL SCREW USING A HEX DRIVE SIZE 2.

NOTE: THE PRE-ASSEMBLED TERMINAL SCREW ONTO CONTACT MAY HAVE TO BE BACKED OFF A LITTLE IN ORDER TO FIT THE 10 AWG WIRE IN THE BARREL WELL WITH EASE.

STEP 3

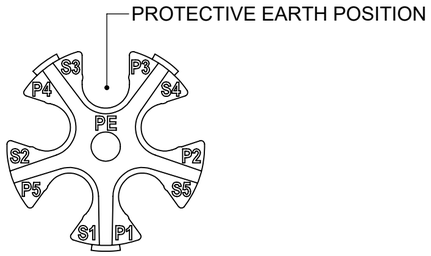
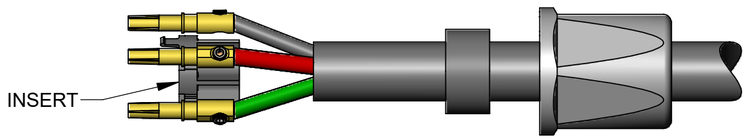


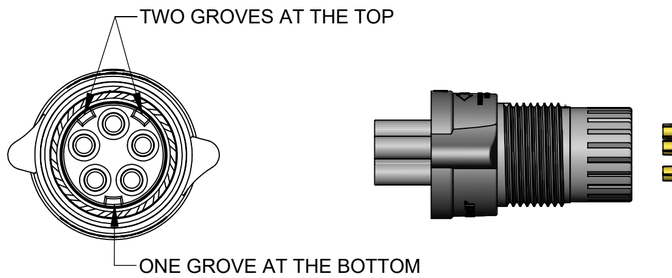
FIG A: INSERT REAR VIEW
S1-S5: SOCKET CONTACT POSITIONS, COUNTED CLOCKWISE
P1-P5: PIN CONTACT POSITIONS, COUNTED COUNTERCLOCKWISE



SPREAD THE WIRED CONTACTS APART RADIALLY AND POSITION INSERT BETWEEN CONTACTS PER WIRING DIAGRAM SHOWN IN FIG A.

ALIGN AND SNAP EACH CONTACT IN THE APPROPRIATE INSERT POCKET BY PUSHING FROM THE SIDE.

STEP 4



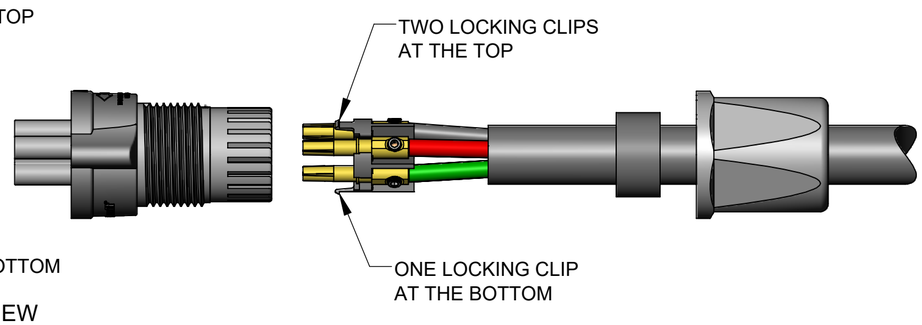
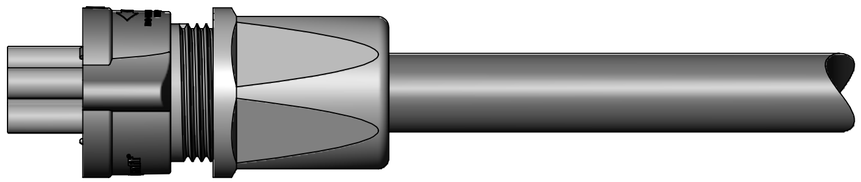


FIG B: SHELL ASSEMBLY REAR VIEW

ALIGN LOCKING CLIPS OF INSERT ASSEMBLY INTO GROOVES ON THE REAR OF THE SHELL ASSEMBLY (SEE FIG B) AND PUSH FORWARD UNTIL IT LOCKS IN PLACE.

STEP 5



FINISHED ASSEMBLY

SLIDE GROMMET INTO THE REAR OF SHELL. TIGHTEN BACK NUT TO SECURE CABLE. A 33 mm WRENCH CAN BE USED, IF NECESSARY.

SCALE 1:1	Switchcraft®
DATE DRAWN 4/4/23	SHEET 2 OF 2
DRAWN BY PNK	PART No. EP7C SERIES / REV 0C

SolidWorks CAD File C