Amphenol

the ultimate connection

SCE Series

Interconnect
Solutions

For more information call 210 372 0631
Amphenol PCD mhands@amphenolpcd.com

SCE

Snatch **C**onnector **E**lectrical **S**eries

The Ultimate Connector Series

SCE is a miniature product with a silent push to mate and pull to release design across two styles of cable receptacles. All inserts and contacts are moulded in place, achieving high environmental sealing to IP68. The metalwork is machined from brass, giving an increased number of mating cycles over traditional aluminium connectors.

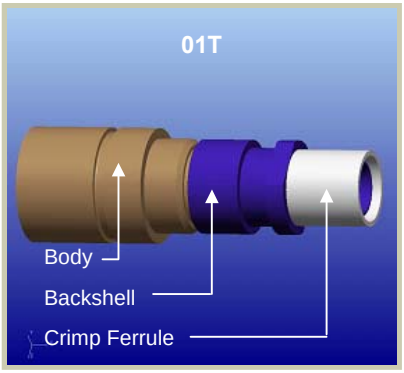
The snatch push pull design is fully grounded and cannot be locked when mated, as the cable receptacle has no moving parts, i.e. coupling nut, thus eliminating the path for the ingress of moisture and dust to the interface. The latch push pull design can be non-grounded or grounded and is locked when mated by rotating the coupling nut fitted to the cable receptacle by 30°. This coupling mechanism locks the connectors together, ensuring that they cannot be inadvertently demated. Both are fitted with internal and external o-rings for sealing.

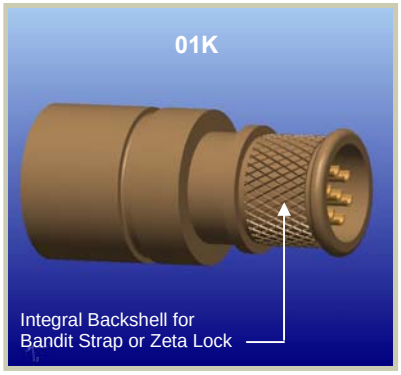
The chassis mounting plug remains unchanged to allow the user to select either a snatch or latch cable receptacle without changing the equipment interface.

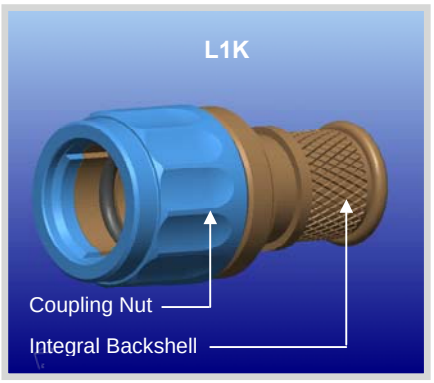
Scoop proof shell to shell keying is provided with five different key options of A, B, C, D and N positions, to prevent mis-mating between shells of different operations.

Amphenol offers full cable harness solutions with overmoulding capabilities or, where preferred, a heat shrink boot can be used.

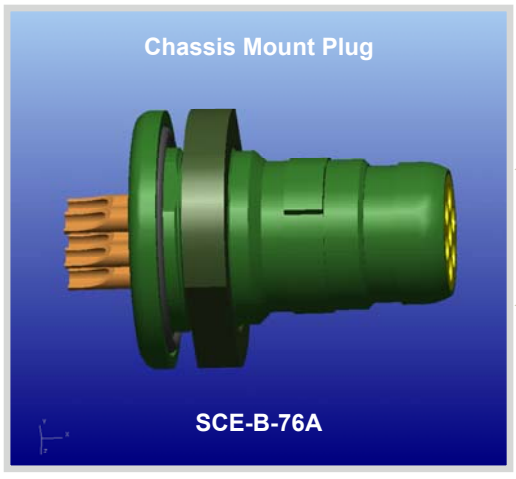
SCE Terminology







SCE Mating Options



Chassis Mount Plug remains same to mate with Snatch or Latch Receptacle

SCE Performance Information

INSERT AVAILABILITY	
06-05	5 #22 AWG Contacts
06-06	6 #22 AWG Contacts
06-07	7 #22 AWG Contacts
07-10A	8 #22 AWG Contacts and 2 #16 AWG Contacts
07-12	12 #22 AWG Contacts
07-14	14 #22 AWG Contacts
08-19	19 #22 AWG Contacts

CONTACT SPECIFICATIONS		
Contact Resistance	5 mΩ initially	Less than 10 mΩ
Shell to Shell Conductivity	5 mΩ initially	Less than 10 mΩ

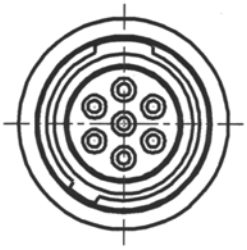
INSERT SPECIFICATIONS	
Working Voltage (Sea Level)	115 Vac
DWV (Sea Level)	500 Vac
Insulation Resistance (Sea Level)	1GΩ @ 500 Vdc
Current Rating (Individual Contact)	3A #22 / 7.5A #16
Current Rating (all Contacts simultaneously)	1A #22 / 5A #16

ENVIRONMENTAL	
Temperature	-55°C / +200°C
Salt Spray Resistance	500 hours
Fluids	As per MIL-C-26482 Series I
Vibration and Shock	As per MIL-C-26482 Series I
IP Rating	IP68 through Unmated Bulkhead Connectors
	IP68 Mated Pair Interface
Sand and Dust	DEF STAN 07-55 (Part 2) Test D1
Icing/Frosting	DEF STAN 07-55 (Part 2) Test B10

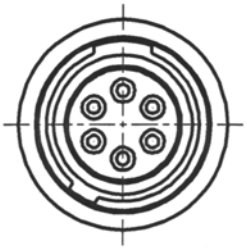
MECHANICAL	
Durability	2000 Matings
Materials	Shell : Brass – Standard plating finish Black Silver
	Contacts : Turned, Gold Plated
	Inserts and Seal : Proprietary Thermoplastic Polyester Elastomer

SCE Insert Availability – Shell Size 06

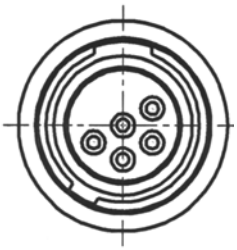
RECEPTACLES – PIN CONTACTS ONLY



FRONT FACE VIEW
SCE 7 WAY



FRONT FACE VIEW
SCE 6 WAY



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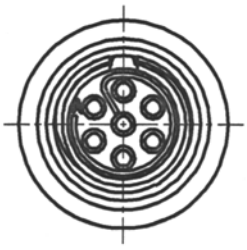
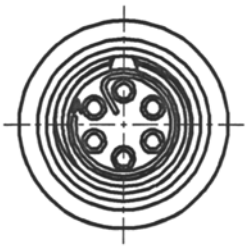
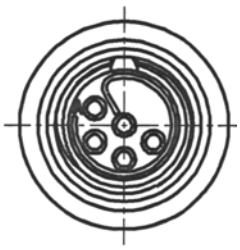
SCE 5 WAY



REAR FACE VIEW
SCE 7 WAY

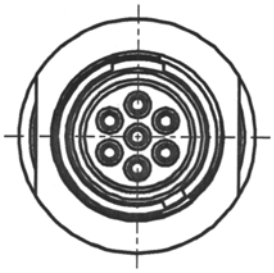


REAR FACE VIEW
SCE 6 WAY



REAR FACE VIEW
SCE 5 WAY

PLUGS – SOCKET CONTACTS ONLY



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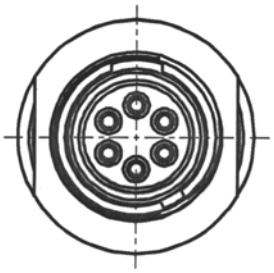

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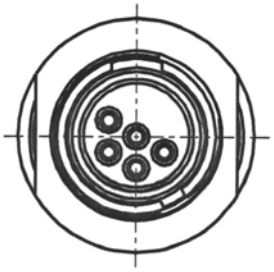

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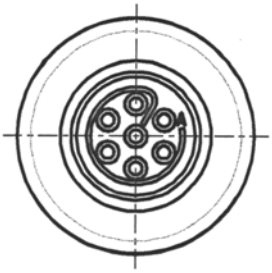
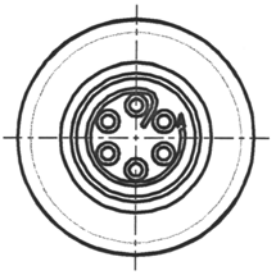
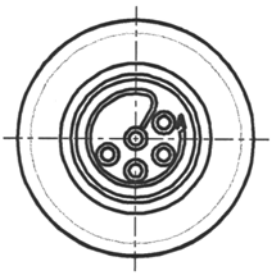
SCE 5 WAY



REAR FACE VIEW
SCE 7 WAY



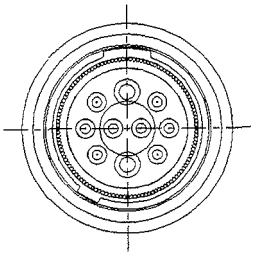
REAR FACE VIEW
SCE 6 WAY



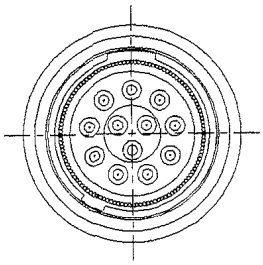
REAR FACE VIEW
SCE 5 WAY

SCE Insert Availability – Shell Size 07

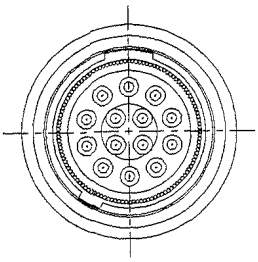
RECEPTACLES – PIN SOCKETS ONLY



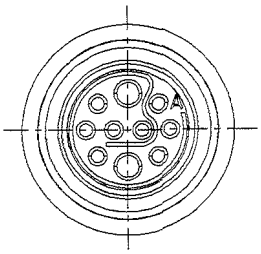
FRONT FACE VIEW
10 WAY



FRONT FACE VIEW
12 WAY



FRONT FACE VIEW
14 WAY



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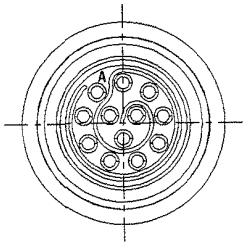
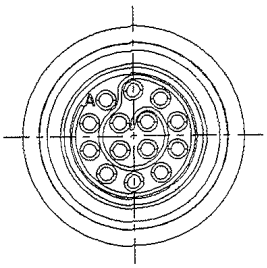
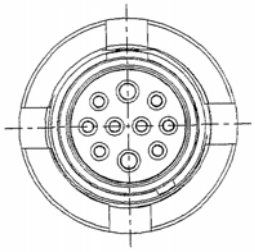


REAR FACE VIEW
12 WAY

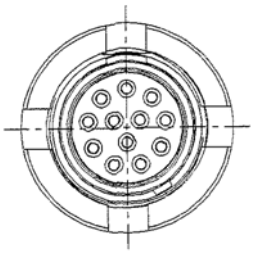


REAR FACE VIEW
14 WAY

PLUGS – SOCKET CONTACTS ONLY



FRONT FACE VIEW
10A WAY



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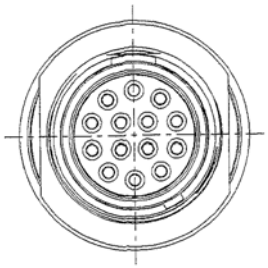
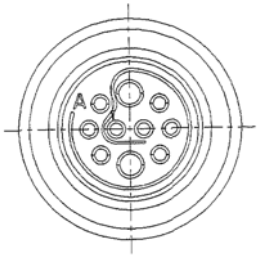


FRONT FACE VIEW
14 WAY



REAR FACE VIEW
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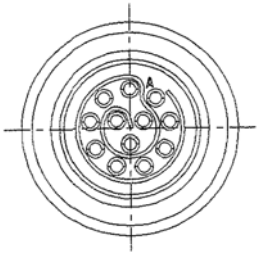
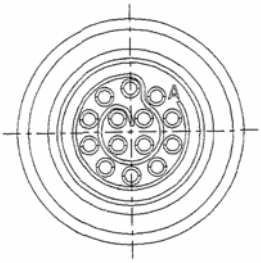


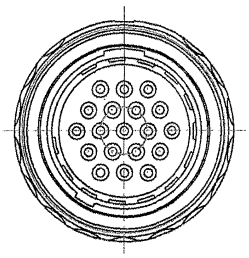
REAR FACE VIEW
12 WAY



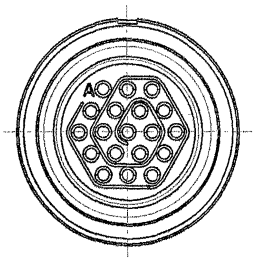
REAR FACE VIEW
14 WAY

SCE Insert Availability – Shell Size 08

RECEPTACLES – PIN CONTACTS ONLY

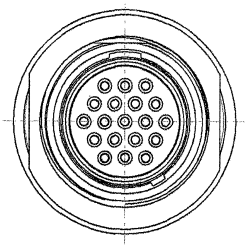


FRONT FACE VIEW
19 WAY

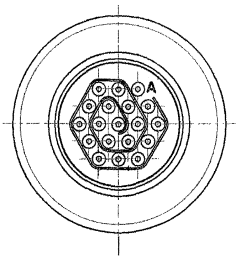


REAR FACE VIEW
19 WAY

PLUGS – SOCKET CONTACTS ONLY



FRONT FACE VIEW
19 WAY



REAR FACE VIEW
19 WAY

SCE Keyway Orientation

Part Number	Keyway Position	AA'
SCE-B-76A**-**SN-****	NORMAL	180
SCE-B-76A**-**SA-****	A	150
SCE-B-76A**-**SB-***	B	210
SCE-B-76A**-**SC-***	C	120
SCE-B-76A**-**SD-***	D	240

Part Number	Keyway Position	AA'
SCE-B-01K**-**PN	NORMAL	180
SCE-B-01K**-**PA	A	150
SCE-B-01K**-**PB	B	210
SCE-B-01K**-**PC	C	120
SCE-B-01K**-**PD	D	240

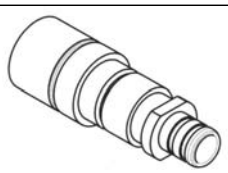
Part Number	Keyway Position	AA'
SCE-B-06K-**-**PN	NORMAL	180
SCE-B-06K-**-**PA	A	150
SCE-B-06K-**-**PB	B	210
SCE-B-06K-**-**PC	C	120
SCE-B-06K-**-**PD	D	240

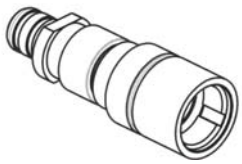
Part Number	Keyway Position	AA'
SCE-B-L1K**-**PN	NORMAL	180
SCE-B-L1K**-**PA	A	150
SCE-B-L1K**-**PB	B	210
SCE-B-L1K**-**PC	C	120
SCE-B-L1K**-**PD	D	240

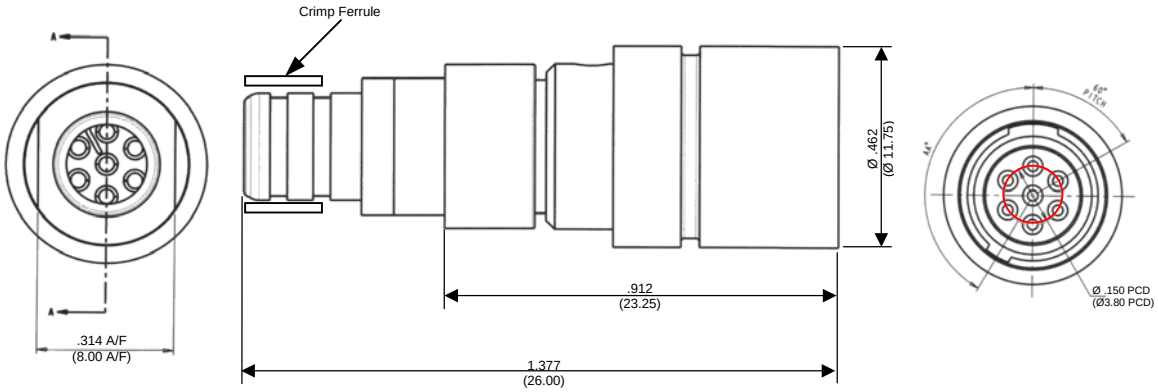
SCE Table of Styles – Up to 7 Ways

SCE-B-01T06-XXPX-003

In Line Receptacle
Solder Bucket Contacts



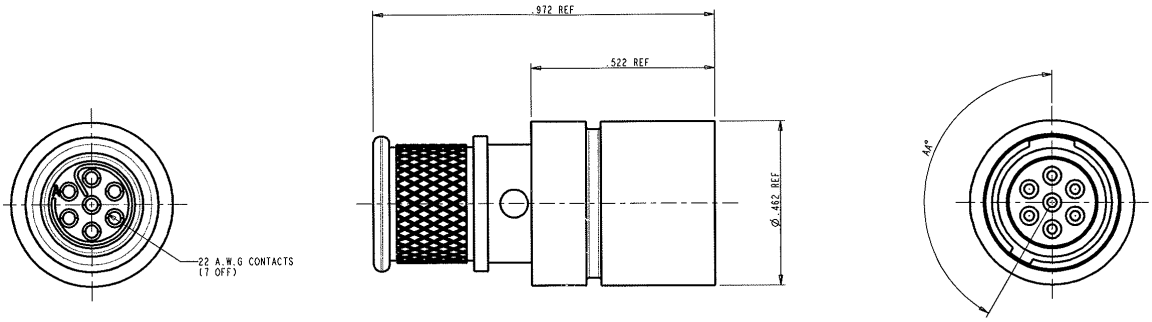




All Dimensions are for reference only
(Dimensions in brackets are in mm)

SCE-B-01K06-XXPX

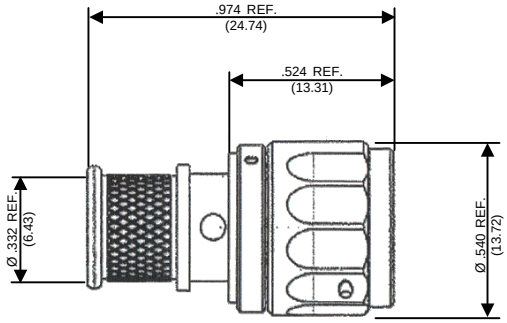
Snatch In Line Receptacle
Integral Backshell
Shell Size 06

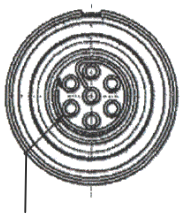


SCE Table of Styles – Up to 7 Ways

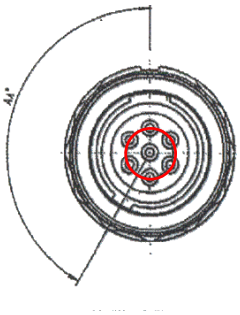
SCE-B-L1K06-XXPX

Latch In Line Receptacle
Integral Backshell,
Non-Grounded (Shell Size 06)



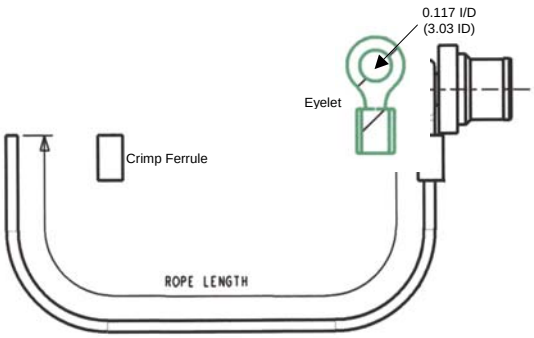


SOLDER BUCKET WILL ACCEPT
22 A.W.G. WIRE MAX



For Grounded Latch connector, please add (985) to the end of part number

390-5016-XXX
Receptacle Dust Cap and Cord
Will suit Snatch and Latch
Shell Size 06



PART NO.	SUPPLY WITH
390-5016-XXX-01	NO EYELET NO CRIMP FERRULE
390-5016-XXX-02	CRIMP FERRULE NO EYELET
390-5016-XXX-03	EYELET NO CRIMP FERRULE

PART NUMBER

390 - 5016 - XXX - XX

SERIES

STYLE – CAP FOR RECEPTACLE

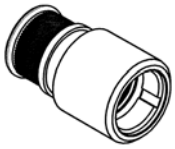
CRIMP/EYELET

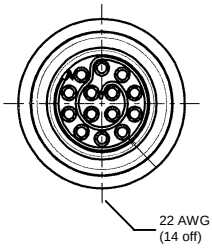
LENTH OF ROPE
130 – 130mm
140 – 140mm

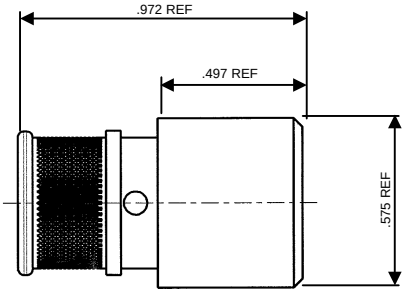
SCE Table of Styles – Up to 14 Ways

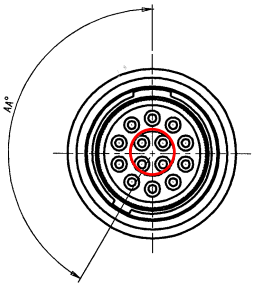
SCE-B-01K07-XXPX

Snatch In Line Receptacle
Integral Backshell
Shell Size 07



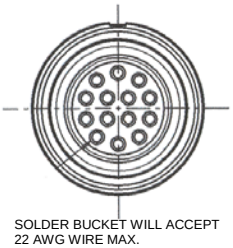


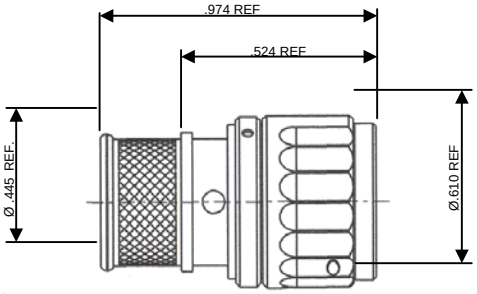


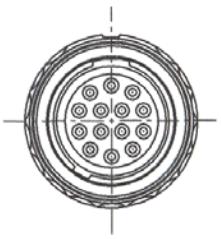


SCE-B-L1K07-XXPX

Latch In Line Receptacle
Integral Backshell, Non Grounded
Shell Size 07







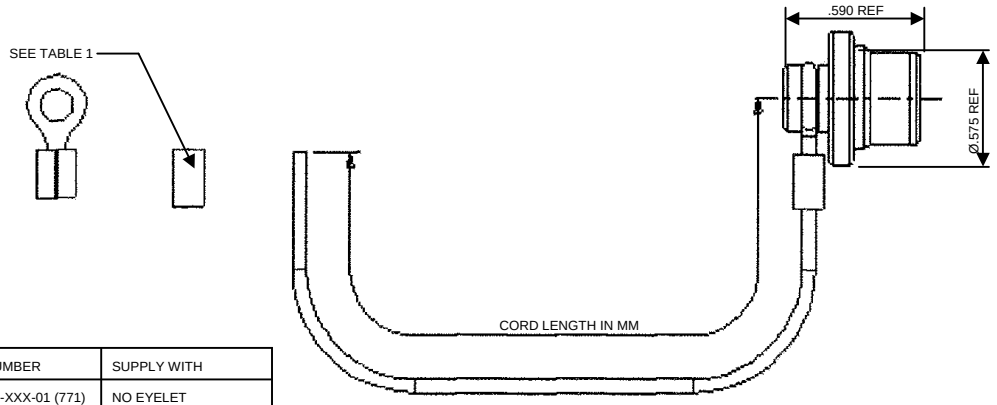
For Grounded Latch connector, please add (985) to the end of part number

SCE Table of Styles

390-5020-XXX-XX(771)

Receptacle Dust Cap and Cord
Will suit Snatch and Latch
Shell Size 07

Cord is Black
Eyelet and Crimp Ferrule Black Zinc Cobalt



PART NUMBER	SUPPLY WITH
390-5020-XXX-01 (771)	NO EYELET NO CRIMP FERRULE
390-5020-XXX-02 (771)	CRIMP FERRULE NO EYELET
390-5020-XXX-03 (771)	EYELET NO CRIMP FERRULE

PART NUMBER BREAKDOWN

390 - 5020 - XXX - XX (771)

SERIES

STYLE
CAP FOR SCE RECEPTACLE
SIZE 07

PLATING DEVIATION – BLACK ZINC COBALT

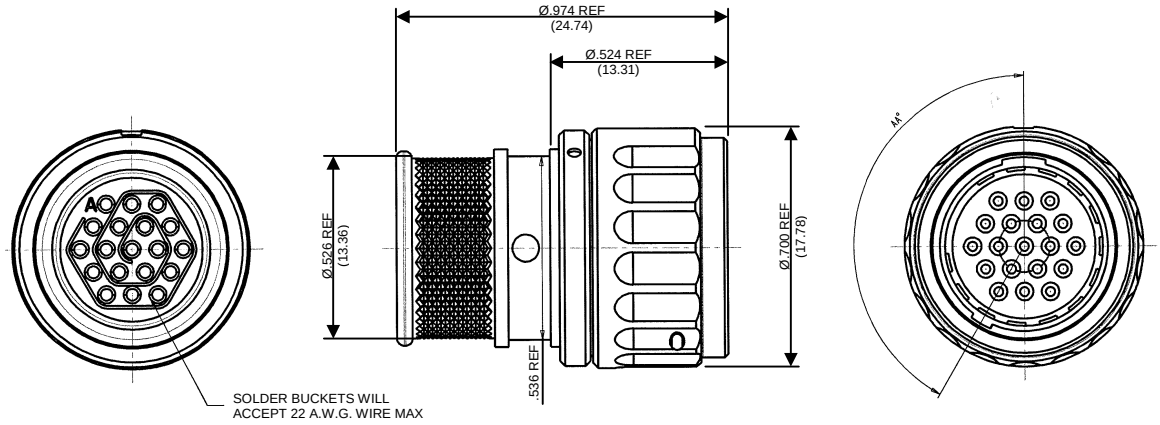
CRIMP/EYELET OPTION

CORD LENGTH IN MILLIMETRES

SCE Table of Styles – Up to 19 Ways

SCE-B-L1K08-XXPX

Latch In Line Receptacle
Integral Backshell, Non-Grounded
Shell Size 08

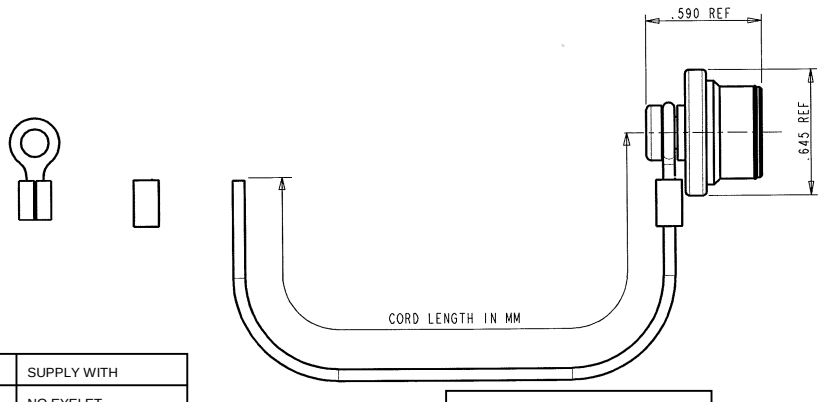


For Grounded Latch connector, please add (985) to the end of part number

390-5022-XXX-XX(771)

Receptacle Dust Cap and Cord
Will suit Snatch and Latch
Shell Size 08

Cord is Black
Eyelet and Crimp Ferrule Black Zinc Cobalt



PART NUMBER	SUPPLY WITH
390-5022-XXX-01 (771)	NO EYELET NO CRIMP FERRULE
390-5022-XXX-02 (771)	CRIMP FERRULE NO EYELET
390-5022-XXX-03 (771)	EYELET NO CRIMP FERRULE

PART NUMBER BREAKDOWN

390 - 5020 - XXX - XX (771)

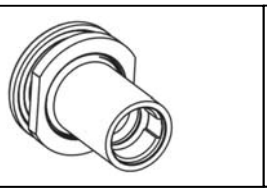
SERIES
STYLE
CAP FOR SCE RECEPTACLE
SIZE 07

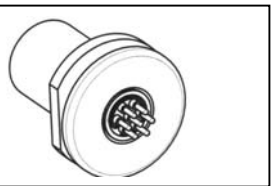
PLATING DEVIATION – BLACK ZINC COBALT
CRIMP/EYELET OPTION – SEE TABLE 1
CORD LENGTH IN MILLIMETRES

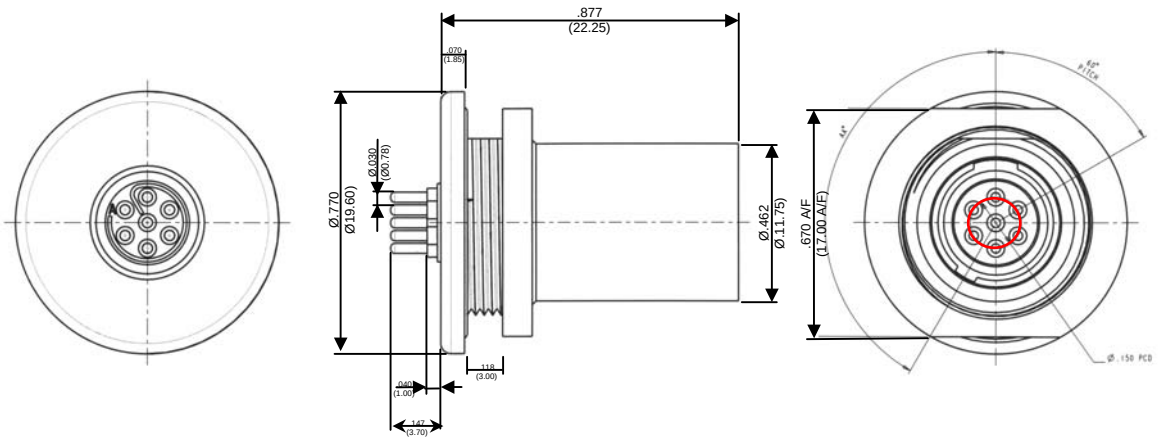
SCE Table of Styles

SCE-B-07A06-XXPX-001

Jam Nut Rear Mount Receptacles
PCB Contacts

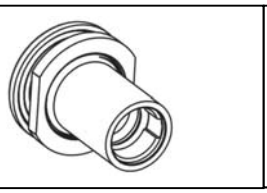


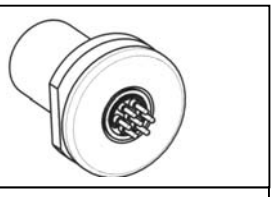


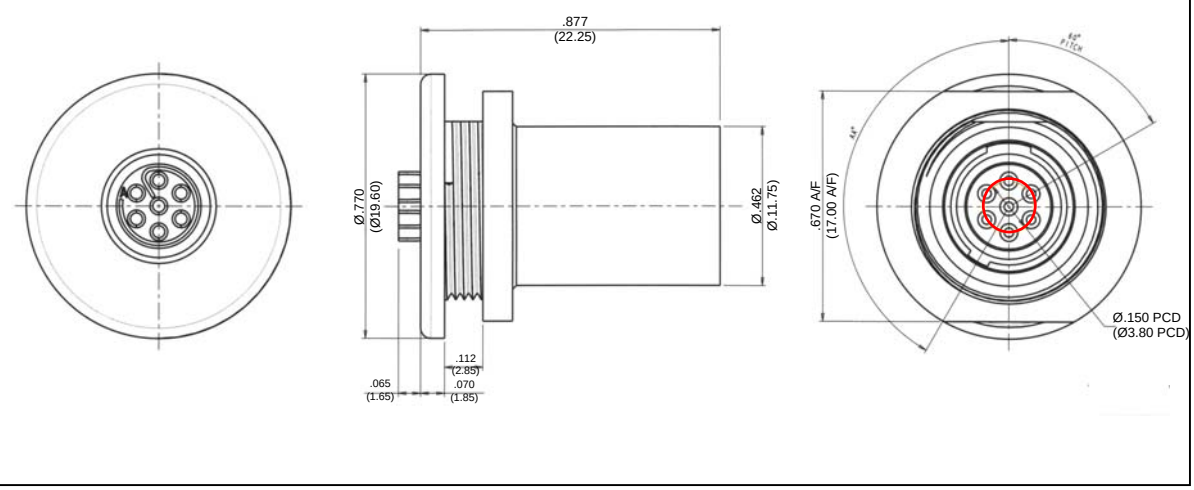


SCE-B-07A06-XXPX-002

Jam Nut Rear Mount Receptacles
Solder Bucket Contacts



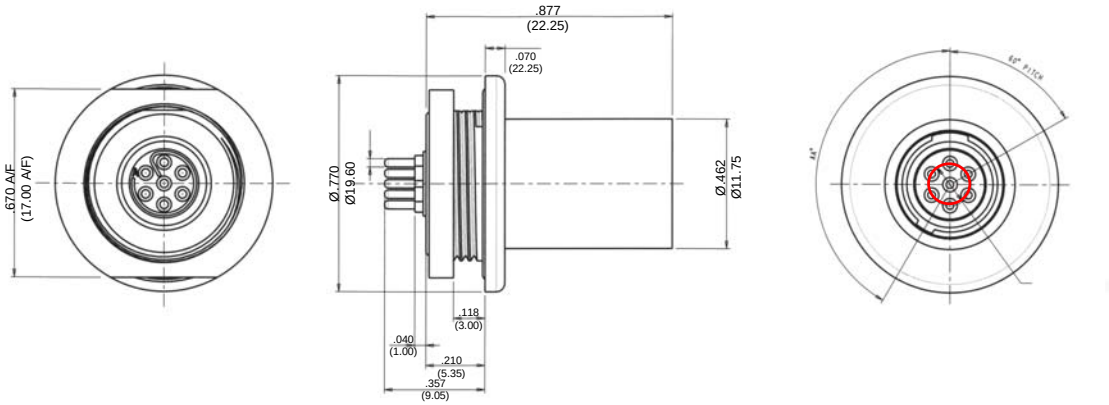




SCE Table of Styles

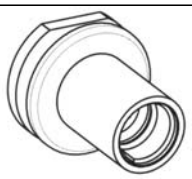
SCE-B-17A06-XXPX-001

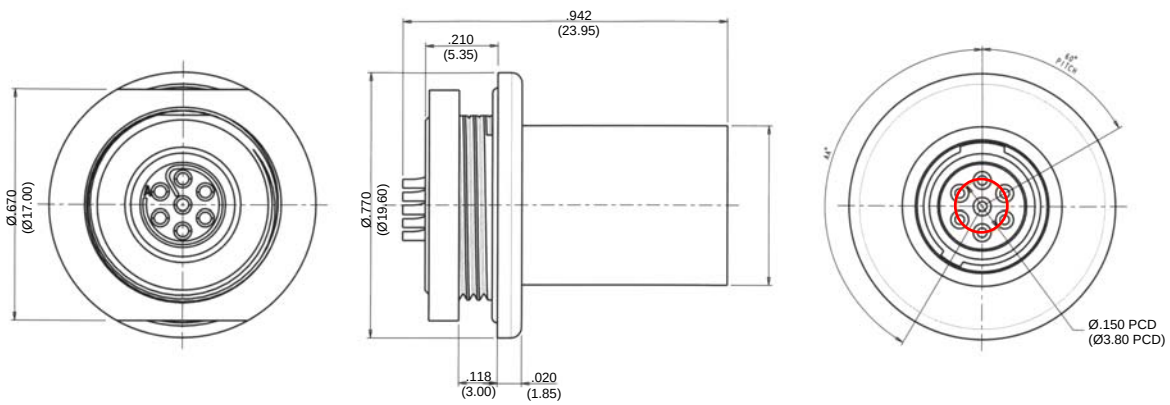
Jam Nut Front Mount Receptacles
PCB Contacts



SCE-B-17A06-XXPX-002

Jam Nut Front Mount Receptacles
Solder Bucket Contacts

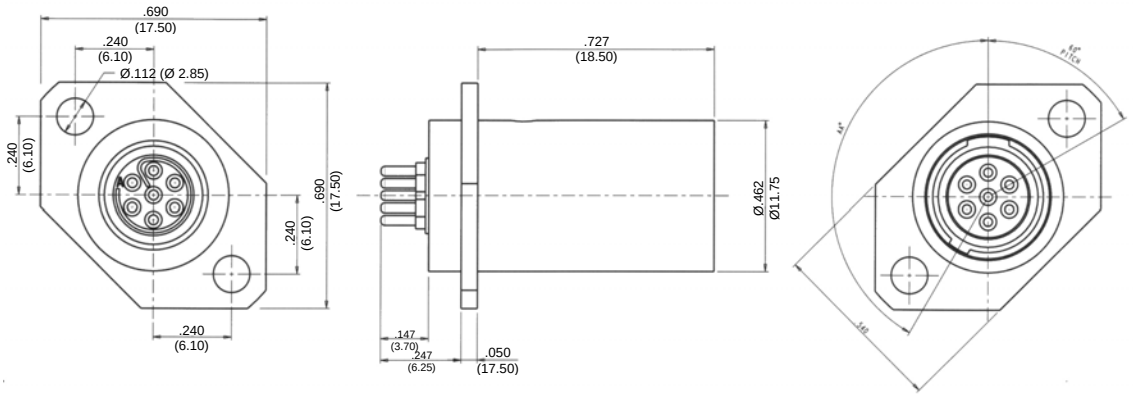




SCE Table of Styles

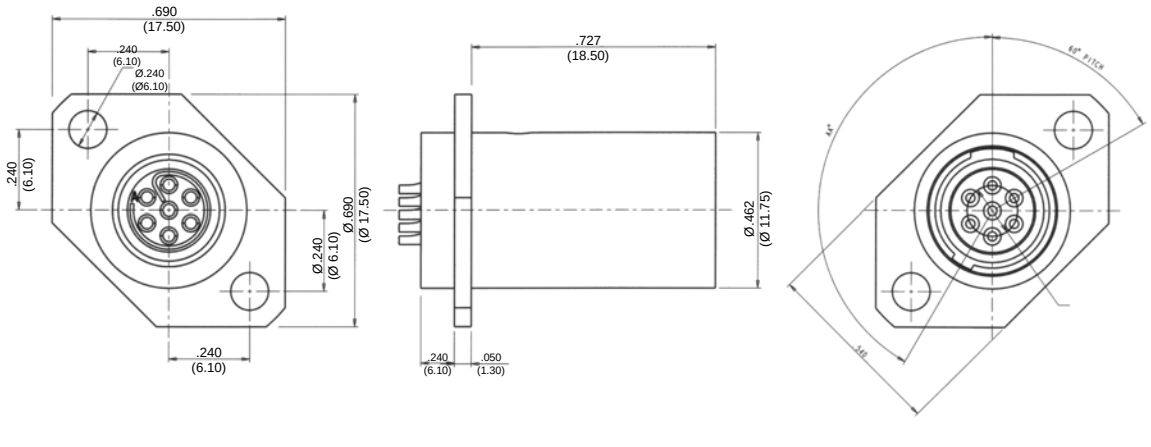
SCE-B-20A06-XXPX-001

2 Hole Mount Receptacle
PCB Contacts



SCE-B-20A06-XXPX-002

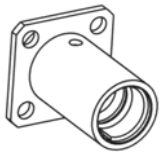
2 Hole Mount Receptacle
Solder Bucket Contacts

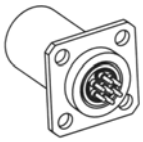


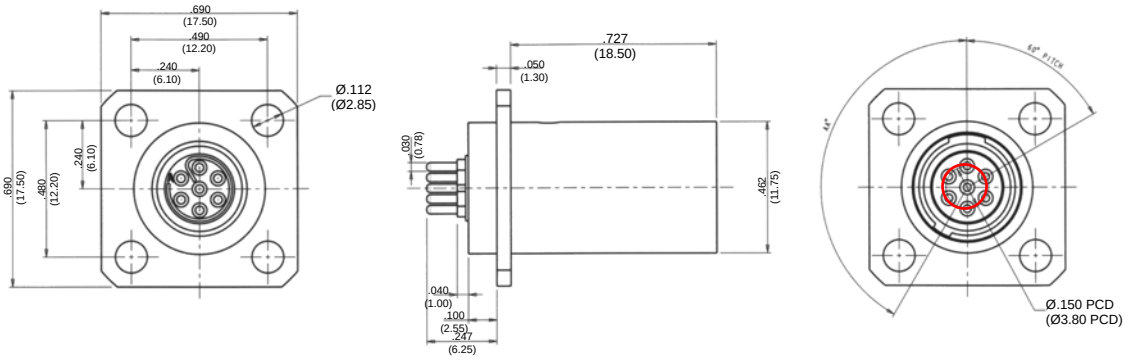
SCE Table of Styles

SCE-B-00A06-XXPX-001

4 Hole Mount Receptacle
PCB Contacts

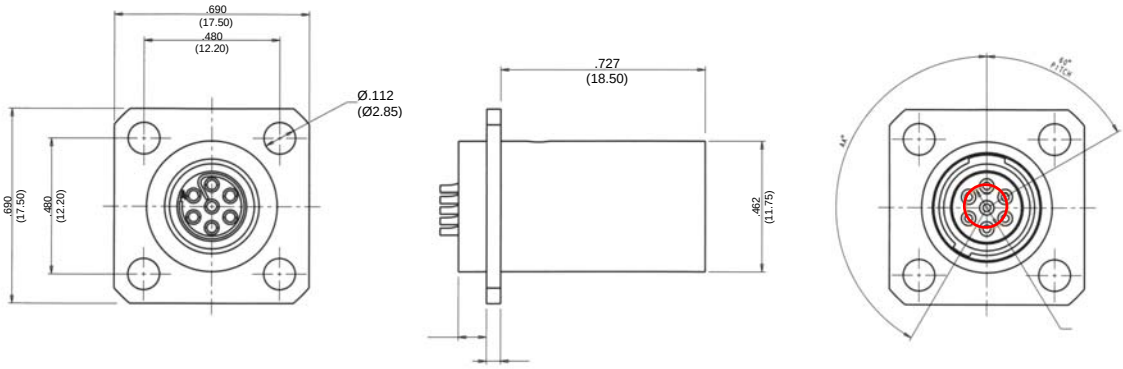




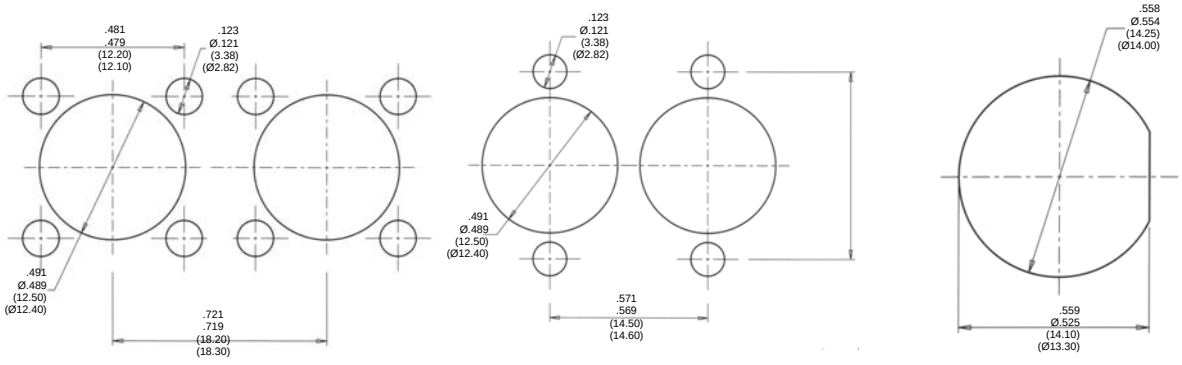


SCE-B-00A06-XXPX-002

4 Hole Mount Receptacle
Solder Bucket Contacts



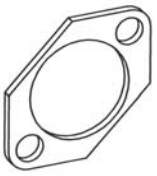
Panel Mounting Details – Shell Size 06

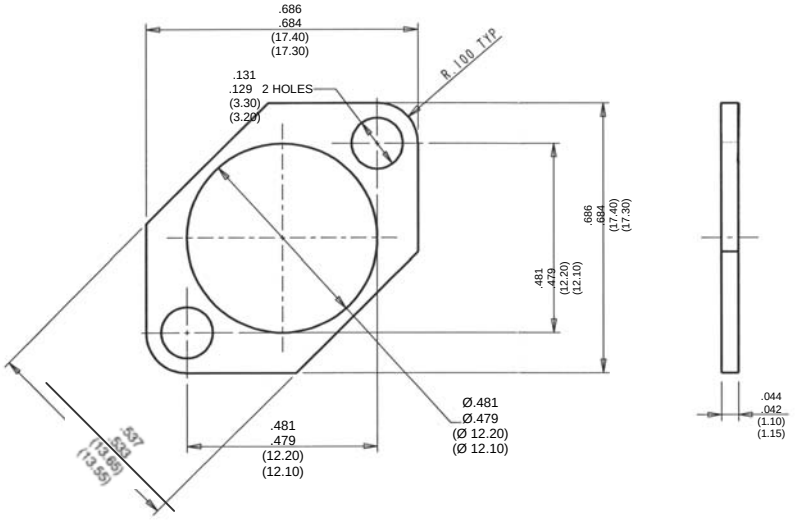


SCE Table of Styles

390-0120-01

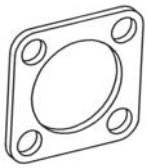
2 Hole Gasket
for 2 Hole Mount Plug

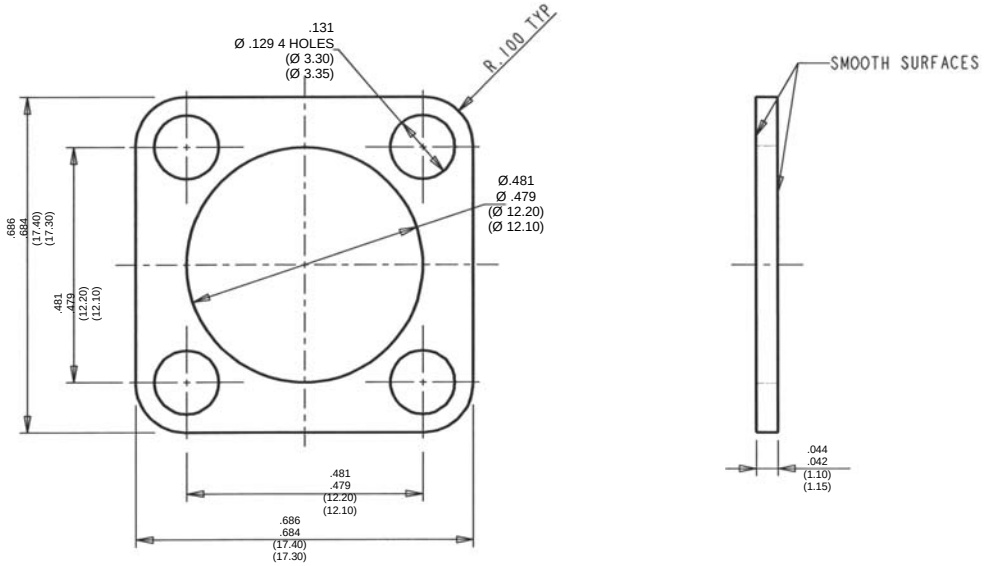




390-0121-01

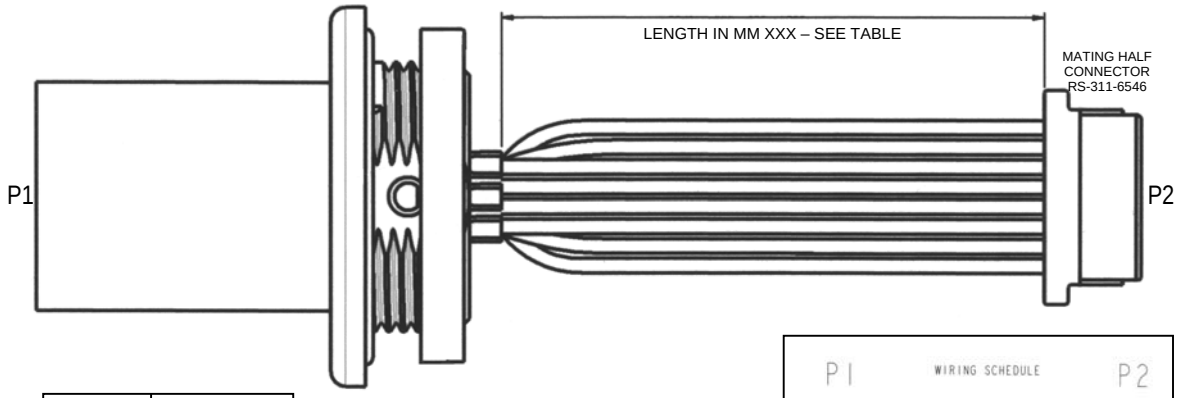
4 Hole Gasket
for 4 Hole Mount Plug





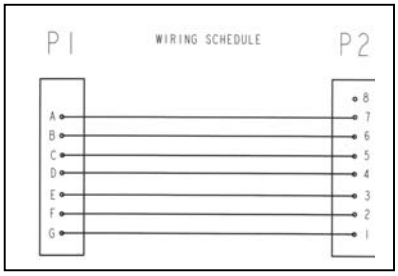
SCE Table of Styles

20GB-SCE-6XXX-XXX
Front Mount Jam Nut Receptacle to Header Assembly



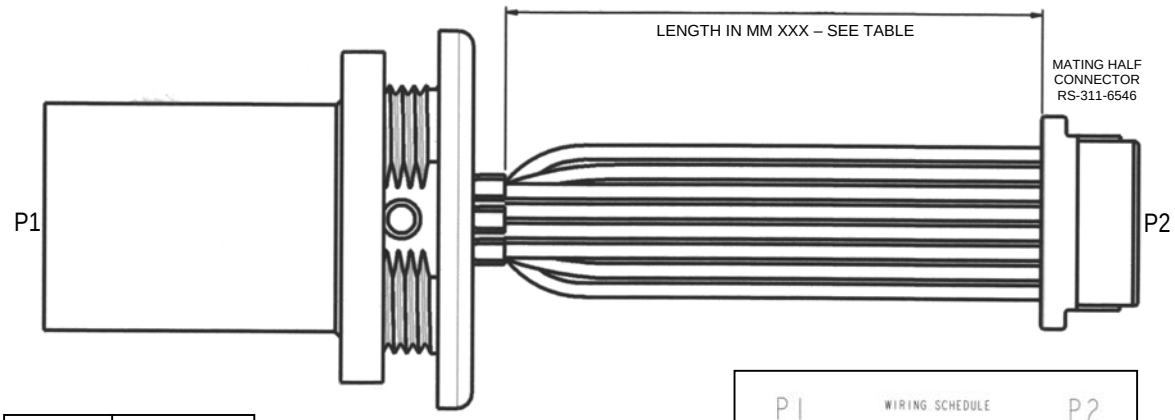
VARIANT	LENGTH XXX
025	25MM
050	50MM
075	75MM
100	100MM
125	125MM
150	150MM

Please contact Amphenol for full part numbering information



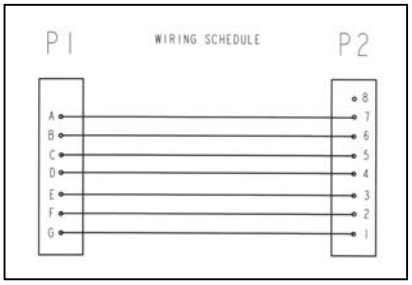
Panel Nut - Torque to 2.25Nm = 1.65 foot pounds force

20GB-SCE-6XXX-XXX
Rear Mount Jam Nut Receptacle to Header Assembly



VARIANT	LENGTH XXX
025	25MM
050	50MM
075	75MM
100	100MM
125	125MM
150	150MM

Please contact Amphenol for full part numbering information

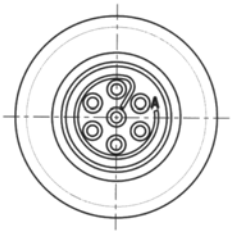


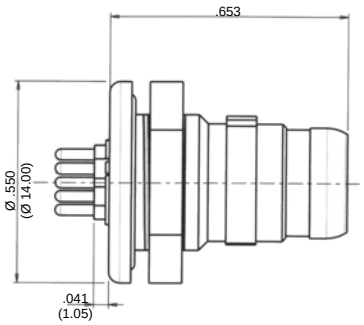
Panel Nut - Torque to 2.25Nm = 1.65 foot pounds force

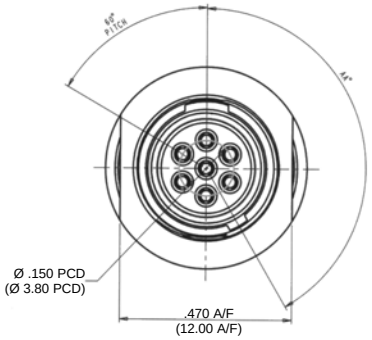
SCE Table of Styles – Up to 7 Ways

SCE-X-76A06-XXSX-001

Rear Mount Plug
PCB Contacts

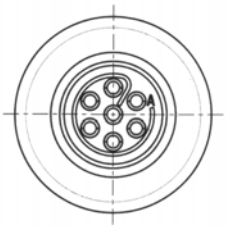


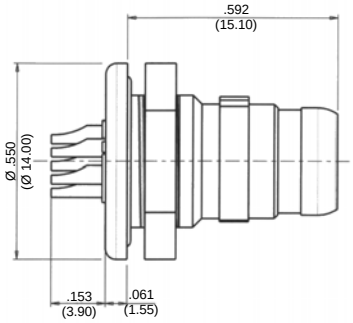


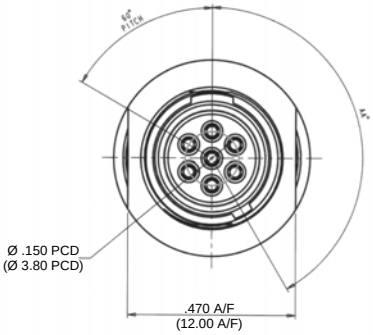


SCE-X-76A06-XXSX-002

Rear Mount Plug
Solder Bucket Contacts



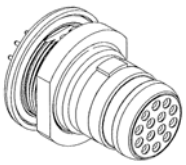


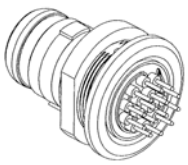


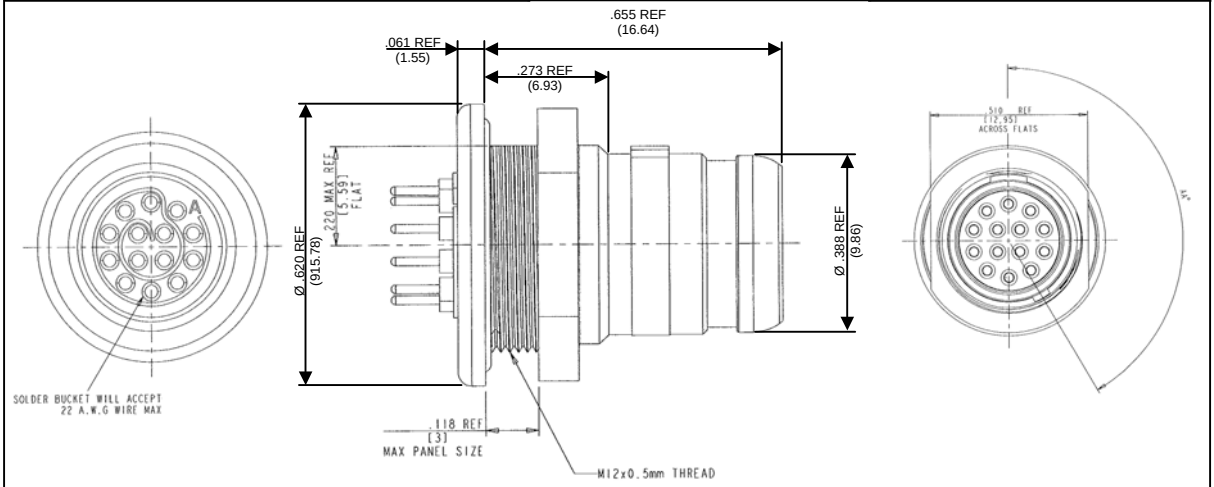
SCE Table of Styles – Up to 14 Ways

SCE-B-76A07-XXSX-001

Jam Nut Front Mount Plug
PCB Bucket Contacts

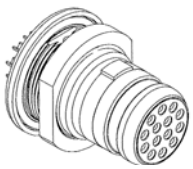


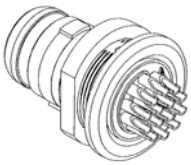


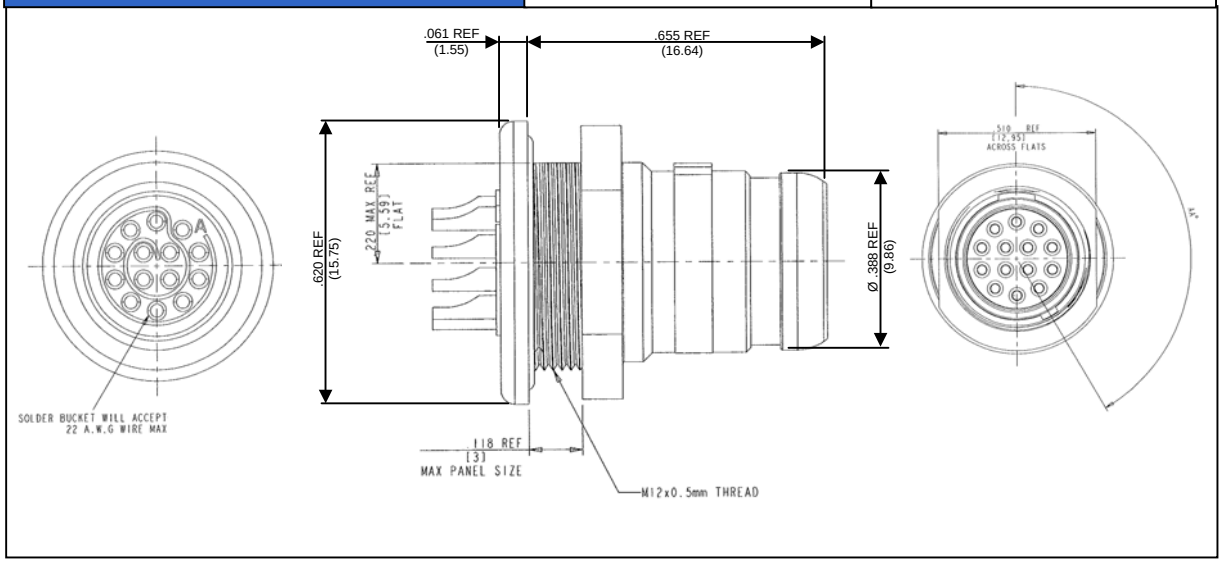


SCE-B-76A07-XXSX-002

Jam Nut Front Mount Plug
Solder Bucket Contacts



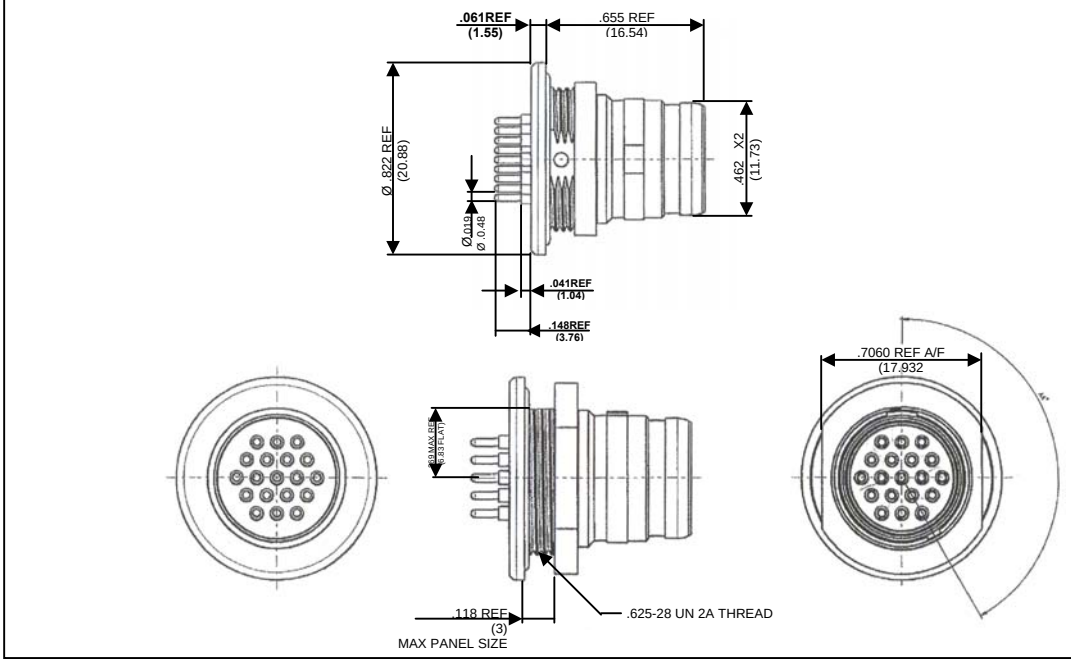




SCE Table of Styles – Up to 19 Ways

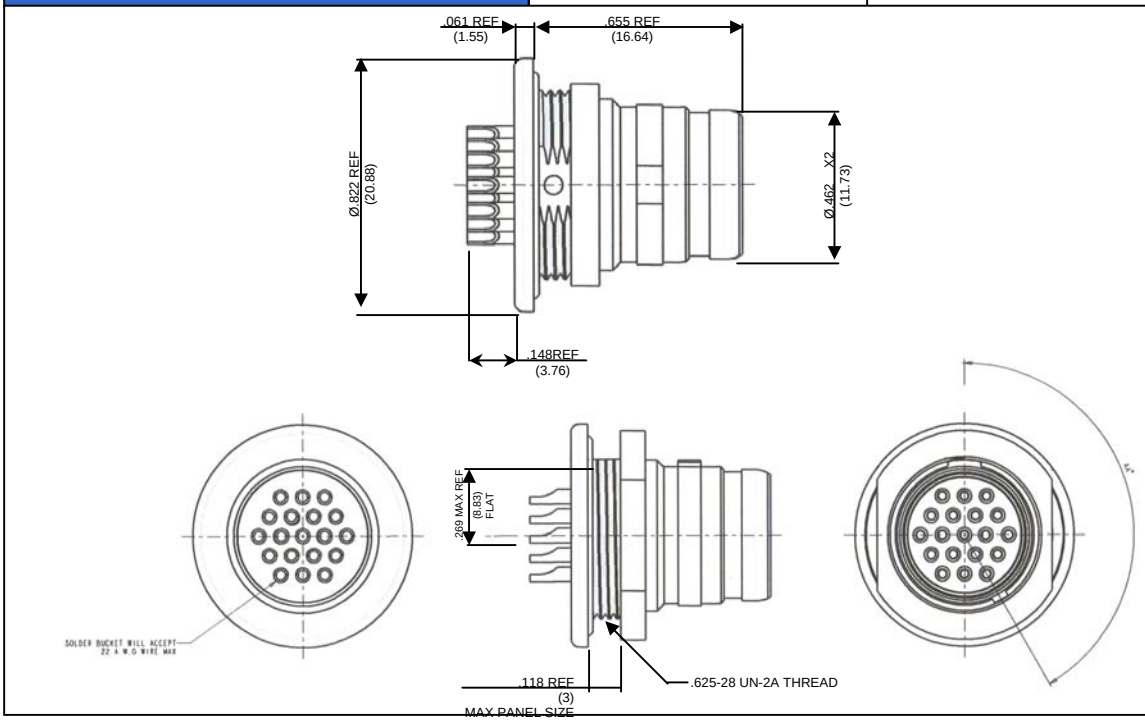
SCE-B-76A08-19SX-001

Jam Nut Front Mount Plug
PCB Bucket Contacts



SCE-B-76A08-19SX-002

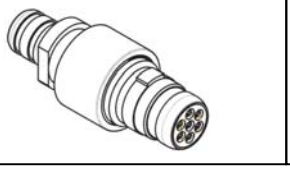
Jam Nut Front Mount Plug
Solder Bucket Contacts

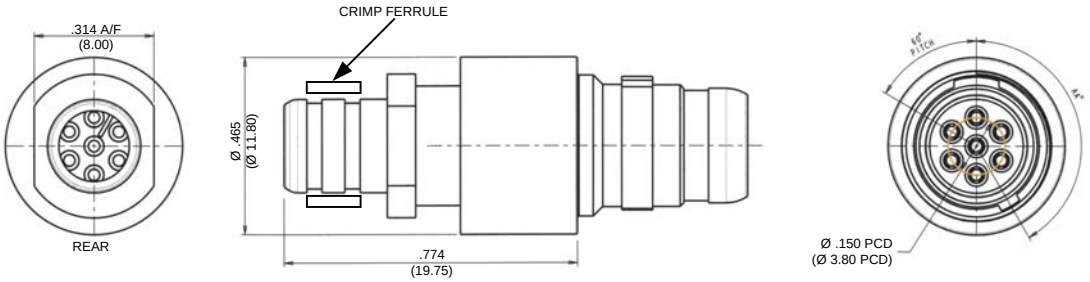


SCE Table of Styles – Up to 7 Ways

SCE-X-06T06-XXSX-003

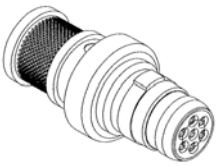
In Line Plug
Solder Bucket Contacts only
(complete with Backshell)

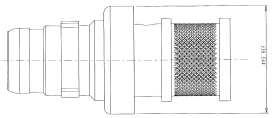


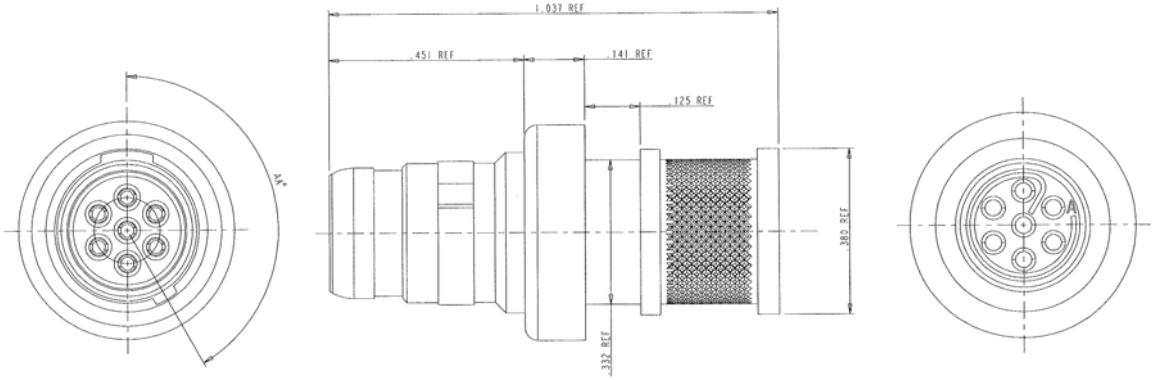


SCE-B-06K06-XXPX

In Line Plug
Integral Backshell, Solder Bucket Contacts
Shell Size 06



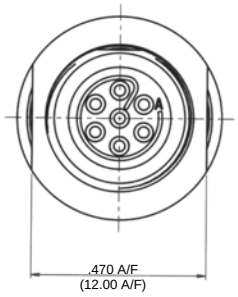


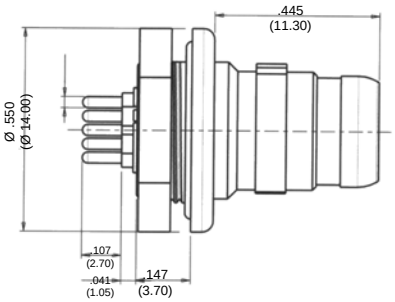


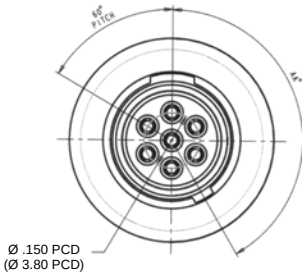
SCE Table of Styles – Up to 7 Ways

SCE-X-67A06-XXSX-001

Front Mount Plug
PCB Contacts

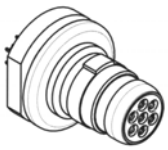


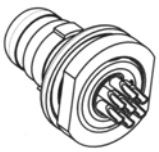


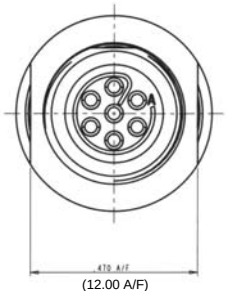


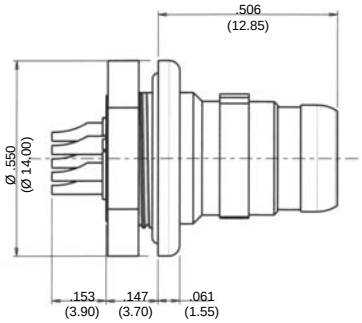
SCE-X-67A06-XXSX-002

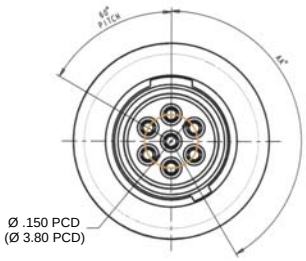
Front Mount Plug
Solder Bucket Contacts





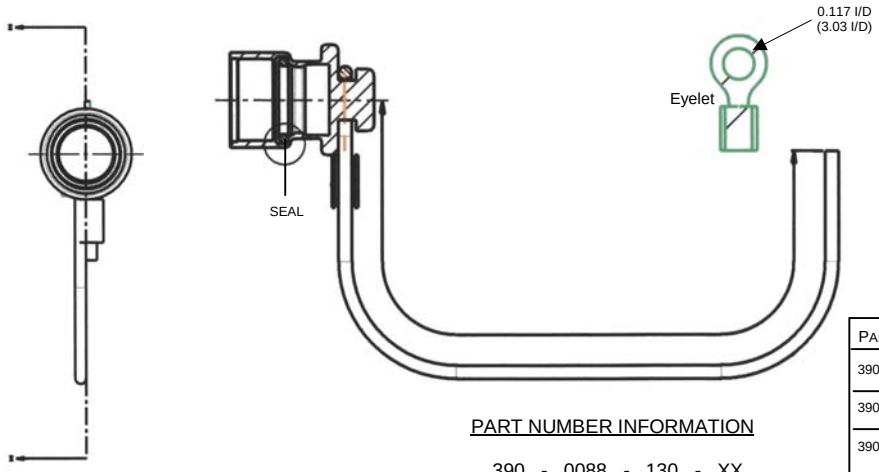






SCE Table of Styles

390-0088-130-XX
Plug Dust Cap and Cord
Will suit Plugs
Shell Size 06



PART NO.	SUPPLY WITH
390-0088-XXX-01	NO EYELET NO CRIMP FERRULE
390-0088-XXX-02	CRIMP FERRULE NO EYELET
390-0088-XXX-03	EYELET NO CRIMP FERRULE

PART NUMBER INFORMATION

390 - 0088 - 130 - XX

SERIES

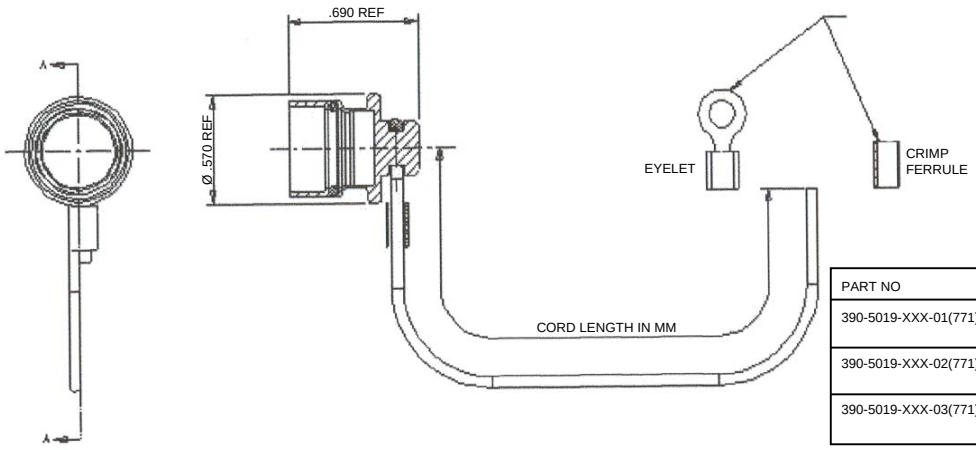
STYLE – PROTECTIVE CAP FOR SCE PLUG

CRIMP/EYELET

CORD LENGTH (in mm)

390-5019-XXX-XX(771)
Receptacle Dust Cap and Cord
Will suit Snatch and Latch
Shell Size 07

Cord is Black
Eyelet and crimp ferrule black zinc cobalt



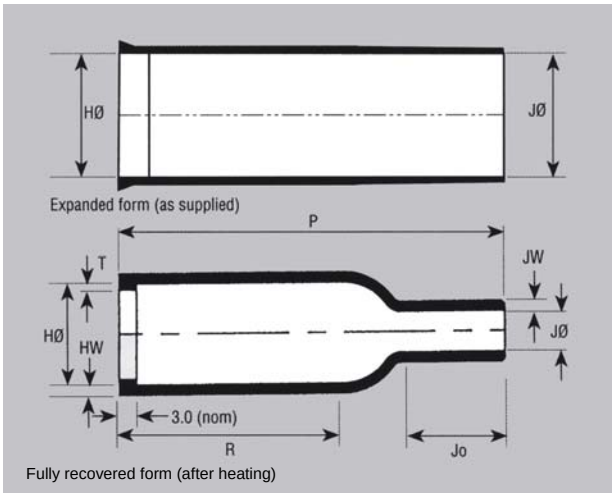
PART NO	SUPPLY WITH
390-5019-XXX-01(771)	NO EYELETS NO CRIMP FERRULE
390-5019-XXX-02(771)	CRIMP FERRULE NO EYELET
390-5019-XXX-03(771)	EYELET NO CRIMP FERRULE

Heatshrink Boots

100 Series – Bottle Shapes with Rib – MIL Style

For use with SCE-06T and SCE-01T

We have selected Heatshrink Boots from Hellermann Tyton. Heatshrink Boots from other manufacturers may be used if appropriate.

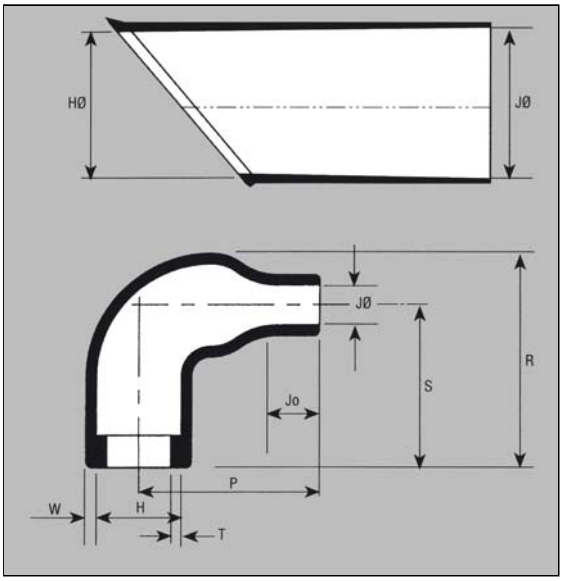


This style is used in conjunction with the backshell (see page 13) providing strain relief and environmental sealing

Dimensions apply to all materials unless otherwise indicated

	Expanded (Min)				Recovered (Max)		Recovered Dimensions Fully Shrunk					
Hellermann Part No	H	H -H matl	JØ	J -H matl	H	JØ	P ±10%	R ±10%	Jo ±10%	HW ±10%	JW ±10%	T ±10%
113-4-G-WM250	0.3976 (10.7)	0.3976 (10.7)	0.1811 (4.6)	0.1811 (4.6)	0.3110 (7.9)	0.0787 (2.0)	1.0 (25.4)	0.5709 (14.5)	0.1811 (4.6)	0.0512 (1.3)	0.0512 (1.3)	0.0394 (1.0)
104-4-G-WM250	0.6456 (16.4)	0.6456 (16.4)	0.6456 (16.4)	0.6456 (16.4)	0.3110 (7.9)	0.149 (3.8)	1.0 (25.4)	0.5590 (14.2)	0.2716 (6.9)	0.0512 (1.3)	0.0512 (1.3)	0.0394 (1.0)

1100 Series – Right Angle Shapes with Rib – MIL Style



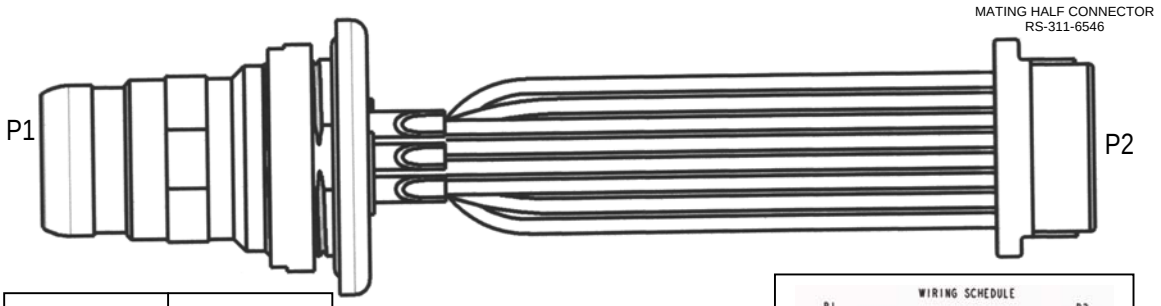
The style provides strain relief for harness systems when used in conjunction with the backshell (see page 13)

Dimensions apply to all materials unless otherwise indicated

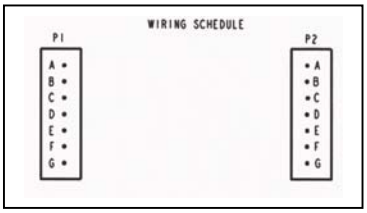
	Expanded (Min)		Recovered (Max)		Recovered Dimensions Fully Shrunk					
Hellermann Part No	H	JØ	H	JØ	P ±10%	R ±10%	S ±10%	Jo ±10%	W ±20%	T ±20%
1108-4-G-WM250	0.6496 (16.5)	0.6496 (16.5)	0.3110 (7.9)	0.1496 (3.8)	0.6875 (17.3)	0.7969 (20.1)	0.6005 (15.2)	0.1614 (4.1)	0.0394 (1.0)	0.0394 (1.0)
1106-4-G-WM250	0.9173 (23.3)	0.9173 (23.3)	0.4094 (10.04)	0.2204 (5.6)	0.7992 (20.3)	0.9015 (22.9)	0.6005 (15.2)	0.2283 (5.8)	0.0511 (1.3)	0.0394 (1.0)

SCE Plug to Header Cable Assemblies

20GB-SCE-6XXX-XXX
Jam Nut Plug Rear Mount to Header Assembly – Solder Bucket Contacts only



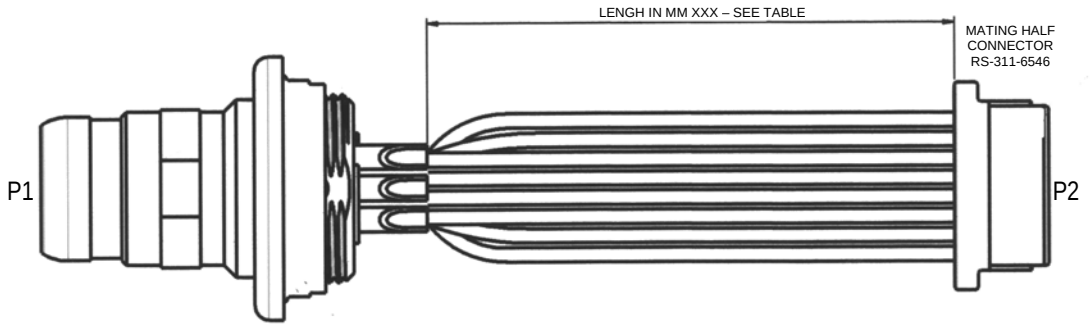
VARIANT	LENGTH
025	25MM
050	50MM
075	75MM
100	100MM
125	125MM
150	150MM



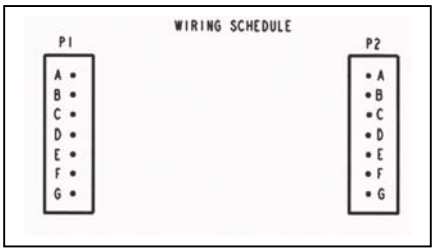
Panel Nut - Torque to 2.25Nm = 1.65 foot lbs force

Please contact Amphenol for full part numbering information

20GB- SCE-6XXX-XXX
Jam Nut Plug Front Mount to Header Assembly – Solder Bucket Contacts only



VARIANT	LENGTH
025	25MM
050	50MM
075	75MM
100	100MM
125	125MM
150	150MM



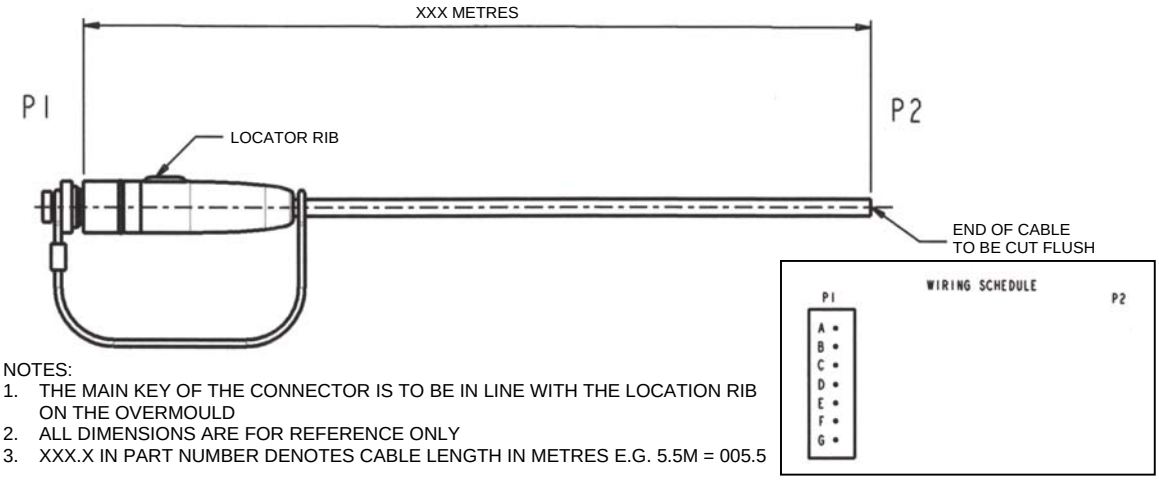
Panel Nut -Torque to 2.25Nm = 1.65 foot lbs force

Please contact Amphenol for full part numbering information

SCE - Cable Assemblies

Amphenol can supply complete overmoulded cable harness solutions to your specifications. Please consult factory for cable number allocation.

Up to 7 Way Single-Ended Receptacle Cable Assembly



NOTES:
1. THE MAIN KEY OF THE CONNECTOR IS TO BE IN LINE WITH THE LOCATION RIB ON THE OVERMOULD
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY
3. XXX.X IN PART NUMBER DENOTES CABLE LENGTH IN METRES E.G. 5.5M = 005.5

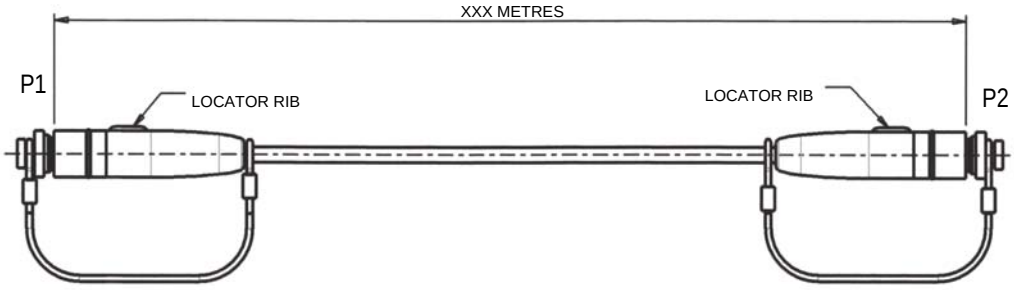
PART NUMBER INFORMATION

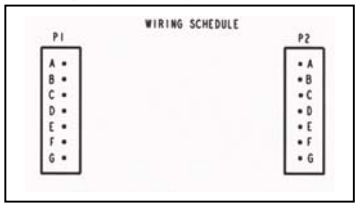
20GB.SCE - 5XXX - XXX.X

- 20GB.SCE — CONNECTOR SERIES
- XXX.X — CABLE LENGTH
- 5XXX — TECHNICAL DESCRIPTION - CONSULT FACTORY

All Dimensions are for reference only
(Dimensions in brackets are in mm)

Up to 7 Way Double-Ended Receptacle to Receptacle Cable Assembly





NOTES:
1. THE MAIN KEY OF THE CONNECTOR IS TO BE IN LINE WITH THE LOCATION RIB ON THE OVERMOULD
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY
3. XXX.X IN PART NUMBER DENOTES CABLE LENGTH IN METRES E.G. 5.5M = 005.5

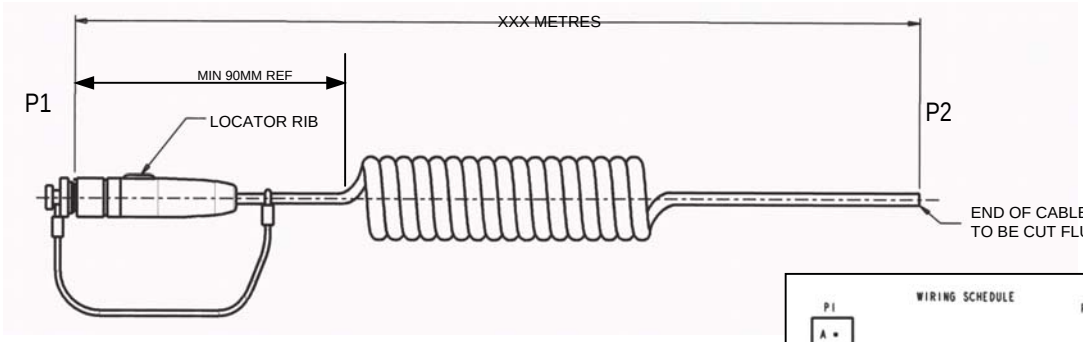
PART NUMBER INFORMATION

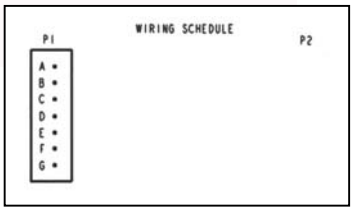
20GB SCE - 5XXX - XXX.X

- 20GB SCE — CONNECTOR SERIES
- XXX.X — CABLE LENGTH
- 5XXX — TECHNICAL DESCRIPTION - CONSULT FACTORY

SCE - Cable Assemblies

Up to 7 Way Single-Ended Receptacle Coiled Cable Assembly





NOTES:
1. THE MAIN KEY OF THE CONNECTOR IS TO BE IN LINE WITH THE LOCATION RIB ON THE OVERMOULD
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY
3. XXX.X IN PART NUMBER DENOTES CABLE LENGTH IN METRES E.G. 5.5M = 005.5

PART NUMBER INFORMATION

20GB SCE - 5XXX - XXX.X

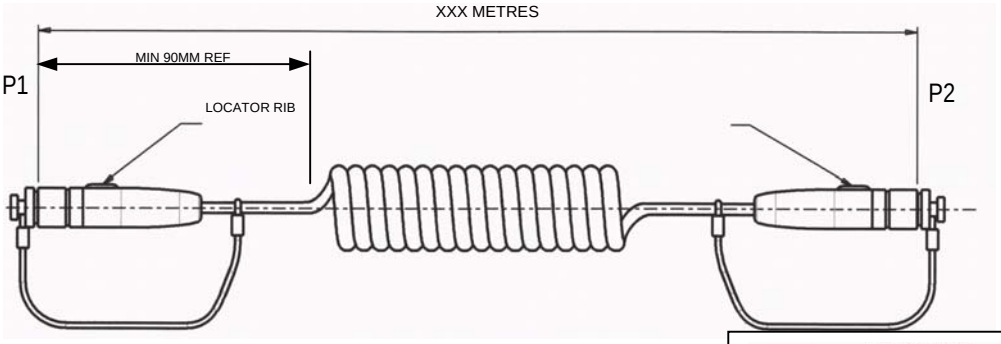
CONNECTOR SERIES

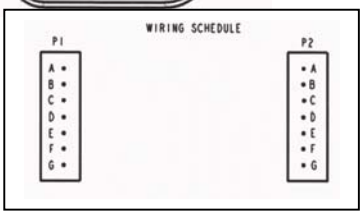
CABLE LENGTH

TECHNICAL DESCRIPTION CONSULT FACTORY

All Dimensions are for reference only
(Dimensions in brackets are in mm)

Up to 7 Way Double-Ended Receptacle to Receptacle Coiled Cable Assembly





NOTES:
1. THE MAIN KEY OF THE CONNECTOR IS TO BE IN LINE WITH THE LOCATION RIB ON THE OVERMOULD
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY
3. XXX_X IN PART NUMBER DENOTES CABLE LENGTH IN METRES E.G. 5.5M = 005.5

PART NUMBER INFORMATION

20GB SCE - 5XXX - XXX.X

CONNECTOR SERIES

CABLE LENGTH

TECHNICAL DESCRIPTION - CONSULT FACTORY

SCE Connector Part Numbers – Receptacles only

SCE - B - XXX XX - XX X X - XXX

Series

Plating
B – Black Silver – Standard Plating (RoHS compliant)
F – Electroless Nickel (RoHS compliant)
M – Black Zinc Cobalt
W – Cadmium Olive Drab

Style
01T – Receptacle, Threaded Shell with backshell only
01K – Receptacle, Snatch with Integral backshell
L1K – Receptacle, Latch with Integral backshell
07A – Receptacle, Rear Mount Jam Nut
17A – Receptacle, Front Mount Jam Nut
20A – Receptacle, two-hole mount
00A – Receptacle, four-hole mount

Shell Size
06
07
08

Cable Variant
-003 for 01T only

Keyway Orientation
N – Normal
A
B
C
D

Contact Style
P – Pin Contacts only

Number of Contacts
Please see Insert arrangements
05 - 5 contacts
06 - 6 contacts
07 - 7 contacts
12 - 12 contacts
14 - 14 contacts
10A - 8 signal 2 power *
19 - 19 contacts

* Please consult factory.

Note: If ordering 01K and L1K receptacles, please omit the cable variant from the part number.

SCE Connector Part Numbers – Plugs only

SCE - B - XXX XX - XX X X - XXX

Series

Plating
B – Black Silver – Standard Plating (RoHS compliant)
F – Electroless Nickel (RoHS compliant)
M – Black Zinc Cobalt
W – Cadmium Olive Drab

Style
76A – Rear Mount Jam Nut Plug
06T - In-Line Plug with Backshell
06K - In-Line Plug with Integral Backshell
67A - Front Mount Jam Nut Plug

Shell Size
06
07
08

Contacts
001 – PCB
002 – Solder Bucket

Keyway Orientation
N – Normal
A
B
C
D

Contact Style
S – Socket Contacts only

Number of Contacts
Please see Insert arrangements
05 - 5 contacts
06 - 6 contacts
07 - 7 contacts
12 - 12 contacts
14 - 14 contacts
10A - 8 signal 2 power *
19 – 19 contacts

* Please consult factory.

Note: For castellated panel nut, please add (981) at the end of plug part number

SCE Crimp Tool

For Braid Termination Style 003

Crimp the Braid into place so that the ferrule butts up against the shoulder of the backshell. Use crimp tool Daniels HX4 M22520/5-01 handle, crimp die set Daniels Y530 CAGE 11851 at setting 180.

July 2006

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