

# Amphenol

the ultimate connection



## SCE Series

Interconnect  
Solutions



For more information call **210 372 0631**  
**Amphenol PCD**

[mhands@amphenolpcd.com](mailto:mhands@amphenolpcd.com)

## **SCE**

### **Snatch Connector Electrical Series**

### **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.

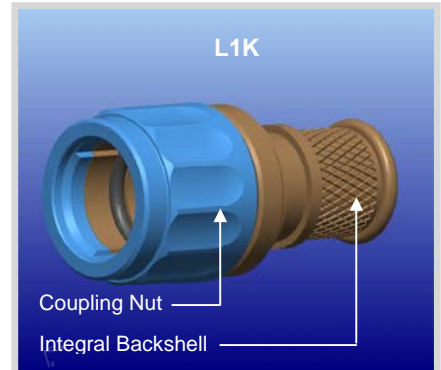
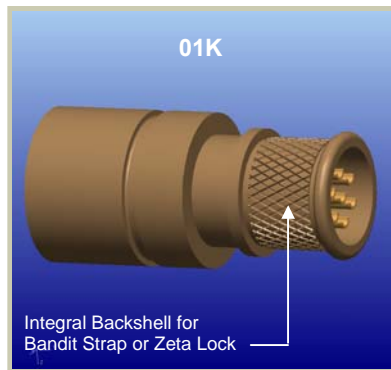
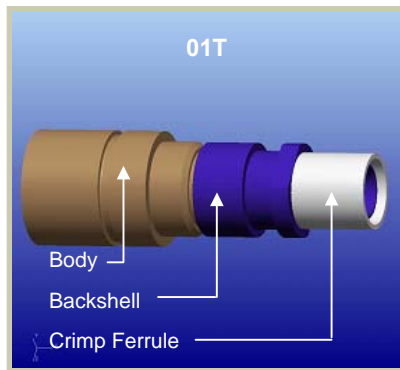
The chassis mounting plug remains unchanged to allow the user to select either a snatch or latch cable receptacle without changing the equipment interface.

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.

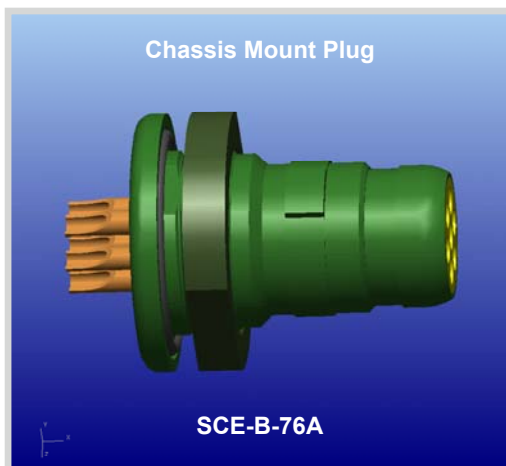
Amphenol offers full cable harness solutions with overmoulding capabilities or, where preferred, a heat shrink boot can be used.



## 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

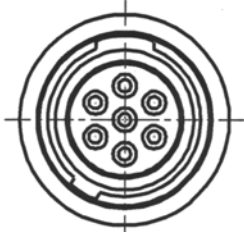
INSERT SPECIFICATIONS	
Working Voltage (Sea Level)	115 Vac
DWV (Sea Level)	500 Vac
Insulation Resistance (Sea Level)	1GΩ @ 500 Vdc
Current Rating (Individual Contact)	3A #22 / 7.5A #16
Current Rating (all Contacts simultaneously)	1A #22 / 5A #16

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

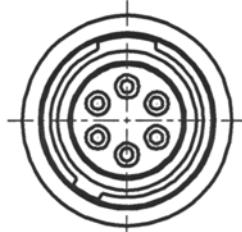
MECHANICAL	
Durability	2000 Matings
Materials	Shell : Brass – Standard plating finish Black Silver
	Contacts : Turned, Gold Plated
	Inserts and Seal : Proprietary Thermoplastic Polyester Elastomer

## SCE Insert Availability – Shell Size 06

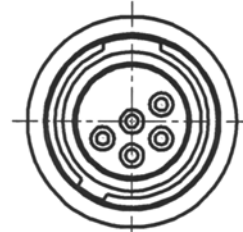
### RECEPTACLES – PIN CONTACTS ONLY



FRONT FACE VIEW  
SCE 7 WAY



FRONT FACE VIEW  
SCE 6 WAY



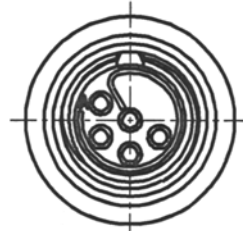
FRONT FACE VIEW  
SCE 5 WAY



REAR FACE VIEW  
SCE 7 WAY

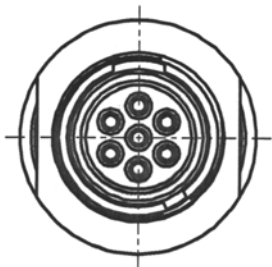


REAR FACE VIEW  
SCE 6 WAY

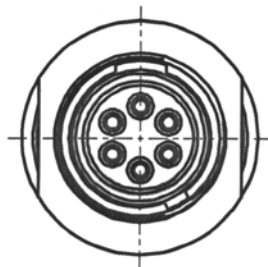


REAR FACE VIEW  
SCE 5 WAY

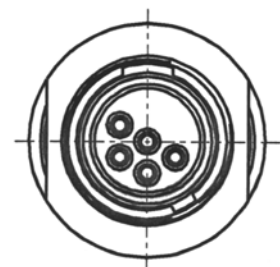
### PLUGS – SOCKET CONTACTS ONLY



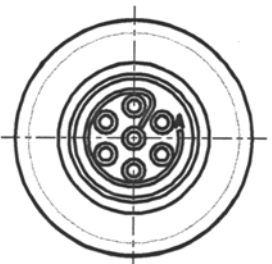
FRONT FACE VIEW  
SCE 7 WAY



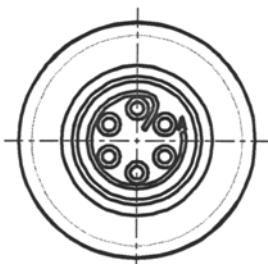
FRONT FACE VIEW  
SCE 6 WAY



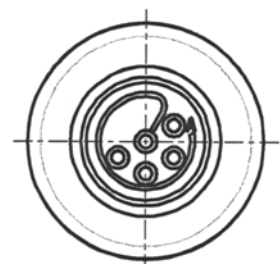
FRONT FACE VIEW  
SCE 5 WAY



REAR FACE VIEW  
SCE 7 WAY



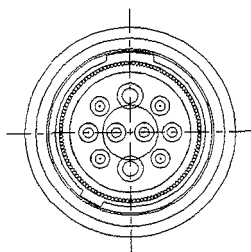
REAR FACE VIEW  
SCE 6 WAY



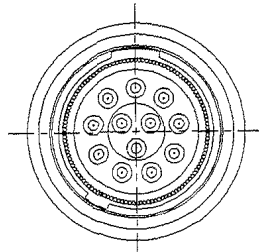
REAR FACE VIEW  
SCE 5 WAY

## SCE Insert Availability – Shell Size 07

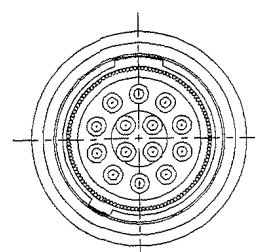
### RECEPTACLES – PIN SOCKETS ONLY



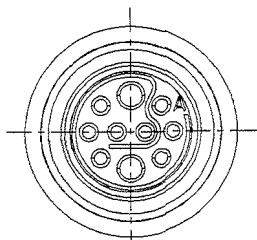
FRONT FACE VIEW  
10 WAY



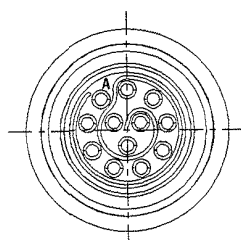
FRONT FACE VIEW  
12 WAY



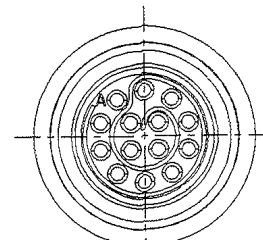
FRONT FACE VIEW  
14 WAY



REAR FACE VIEW  
10 WAY

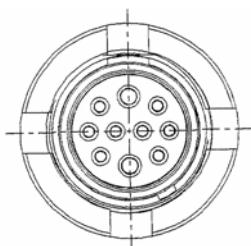


REAR FACE VIEW  
12 WAY

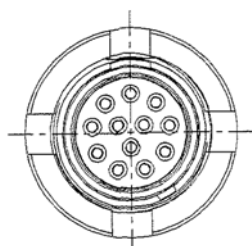


REAR FACE VIEW  
14 WAY

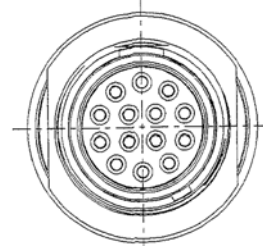
### PLUGS – SOCKET CONTACTS ONLY



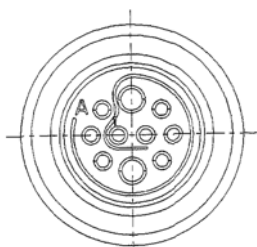
FRONT FACE VIEW  
10A WAY



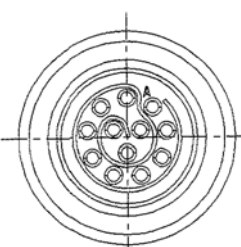
FRONT FACE VIEW  
12 WAY



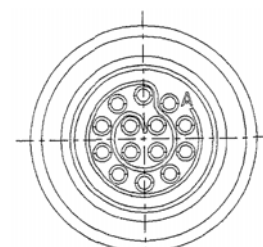
FRONT FACE VIEW  
14 WAY



REAR FACE VIEW  
10A WAY



REAR FACE VIEW  
12 WAY

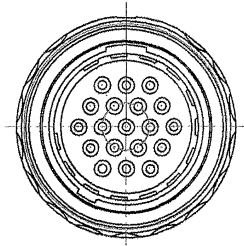


REAR FACE VIEW  
14 WAY

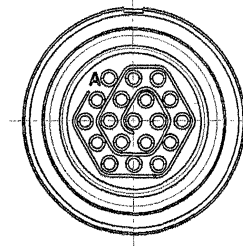


## SCE Insert Availability – Shell Size 08

### RECEPTACLES – PIN CONTACTS ONLY

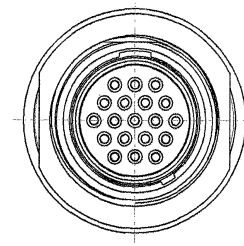


FRONT FACE VIEW  
19 WAY

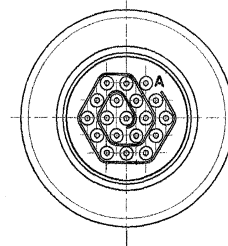


REAR FACE VIEW  
19 WAY

### 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

<div>SCE-B-01T06-XXPX-003</div> <div>In Line Receptacle</div> <div>Solder Bucket Contacts</div>		
<div> <p>Technical drawing of the SCE-B-01T06-XXPX-003 In Line Receptacle. The drawing includes a side view, a front view, and a rear view. The side view shows a cylindrical body with a crimp ferrule at the rear. The front view shows a circular face with six solder bucket contacts arranged in a hexagonal pattern. The rear view shows the crimp ferrule and the contact arrangement. Dimensions are provided in inches and millimeters (in brackets). The overall length is 1.377 (26.00). The diameter of the body is 0.462 (11.75). The distance from the crimp ferrule to the contact face is 0.912 (23.25). The contact pitch is 0.150 (3.80). The contact diameter is 0.062 (1.58). The contact spacing is 0.314 (8.00). The contact pitch is 60°.</p> </div>		
<div>All Dimensions are for reference only (Dimensions in brackets are in mm)</div>		



<div>SCE-B-01K06-XXPX</div> <div>Snatch In Line Receptacle</div> <div>Integral Backshell</div> <div>Shell Size 06</div>		
<div> <p>Technical drawing of the SCE-B-01K06-XXPX Snatch In Line Receptacle. The drawing includes a side view, a front view, and a rear view. The side view shows a cylindrical body with an integral backshell. The front view shows a circular face with six contacts arranged in a hexagonal pattern. The rear view shows the backshell and the contact arrangement. Dimensions are provided in inches and millimeters (in brackets). The overall length is 0.912 REF. The distance from the backshell to the contact face is 0.522 REF. The diameter of the body is 0.462 REF. The contact pitch is 0.150 (3.80). The contact diameter is 0.062 (1.58). The contact spacing is 0.314 (8.00). The contact pitch is 60°.</p> </div>		
<div>22 A.W.G CONTACTS (1 OFF)</div>		

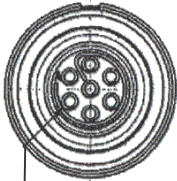
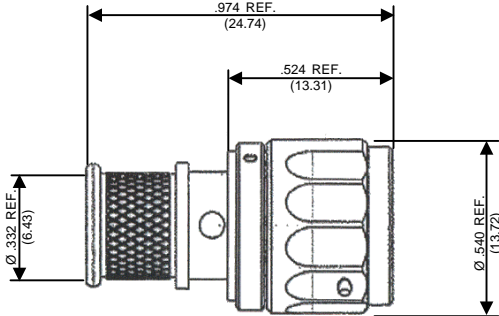
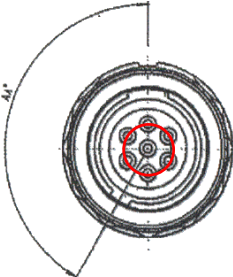


# SCE Table of Styles – Up to 7 Ways

SCE-B-L1K06-XXPX

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


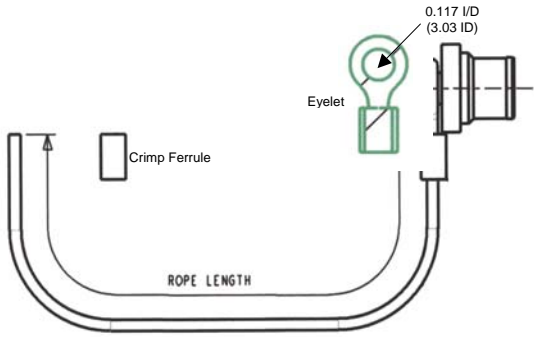




SOLDER BUCKET WILL ACCEPT  
22 A.W.G. WIRE MAX

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

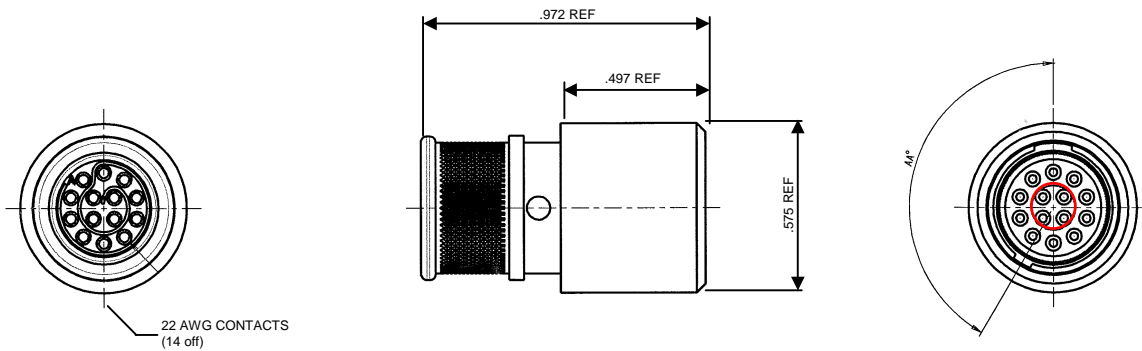
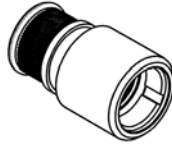
CRIMP/EYELET

LENTH OF ROPE  
130 – 130mm  
140 – 140mm

## SCE Table of Styles – Up to 14 Ways

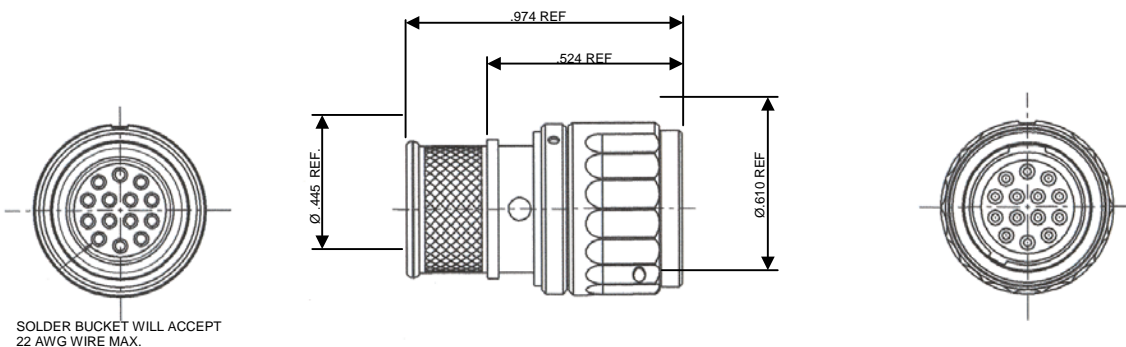
### SCE-B-01K07-XXPX

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

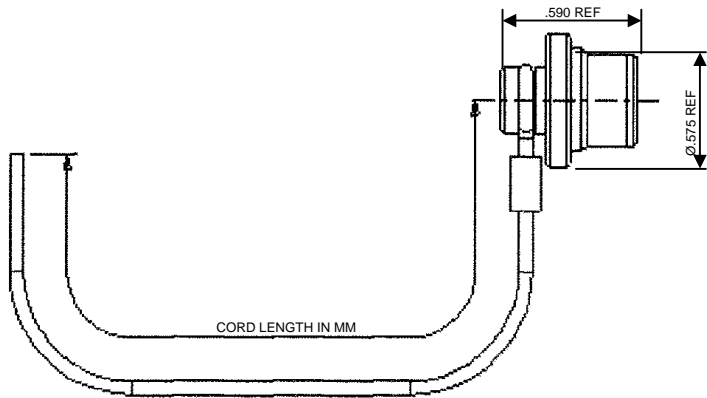
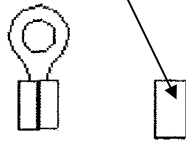
## SCE Table of Styles

**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

SEE TABLE 1



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)

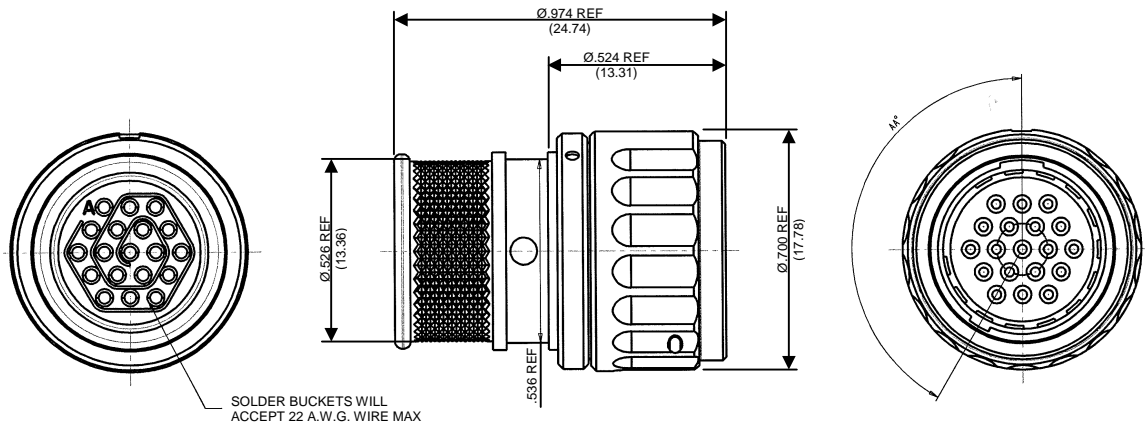
SERIES  
 STYLE  
 CAP FOR SCE RECEPTACLE  
 SIZE 07

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

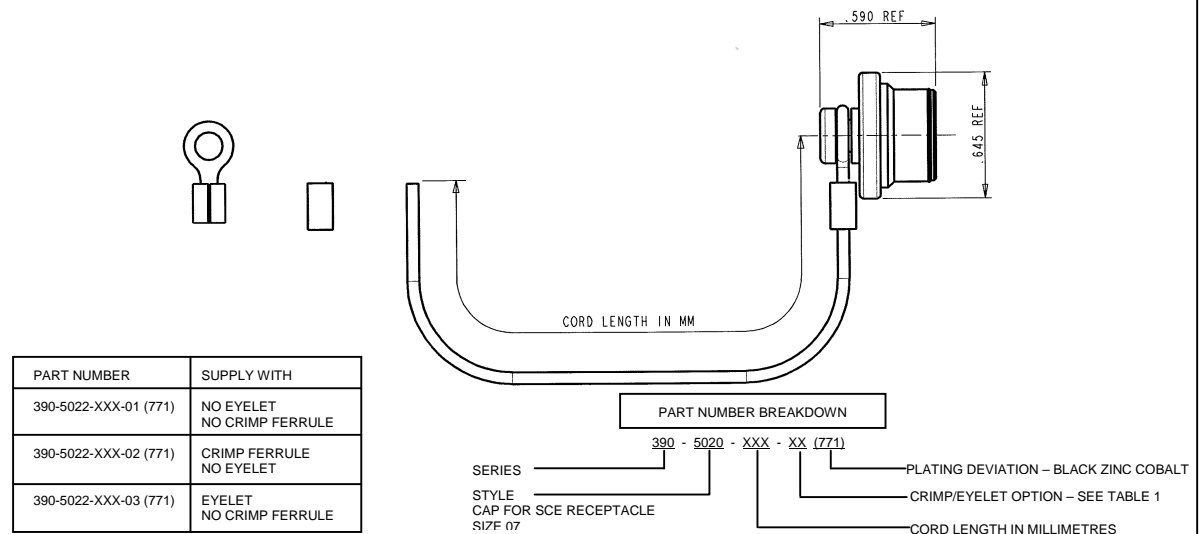


For Grounded Latch connector, please add (985) to the end of part number

### 390-5022-XXX-XX(771)

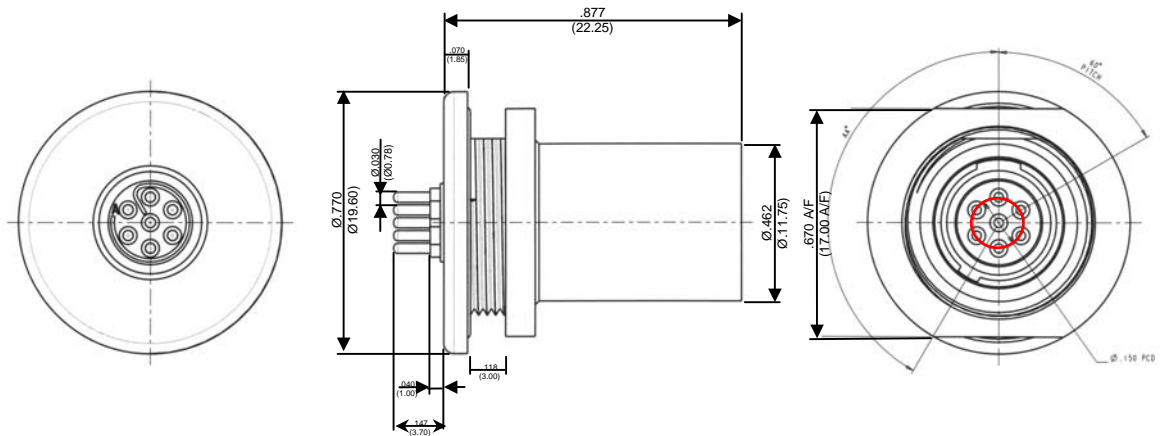
Receptacle Dust Cap and Cord  
Will suit Snatch and Latch  
Shell Size 08

Cord is Black  
Eyelet and Crimp Ferrule Black Zinc Cobalt

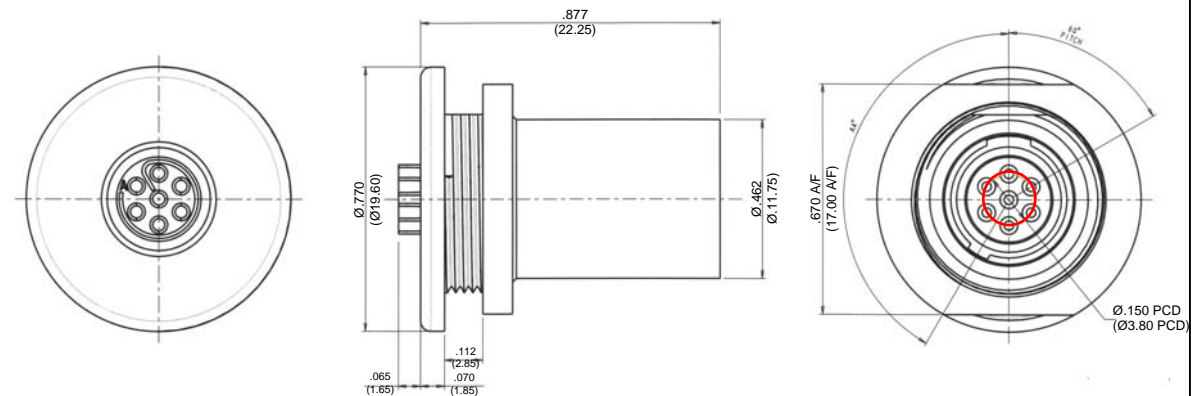


## SCE Table of Styles

## Jam Nut Rear Mount Receptacles PCB Contacts



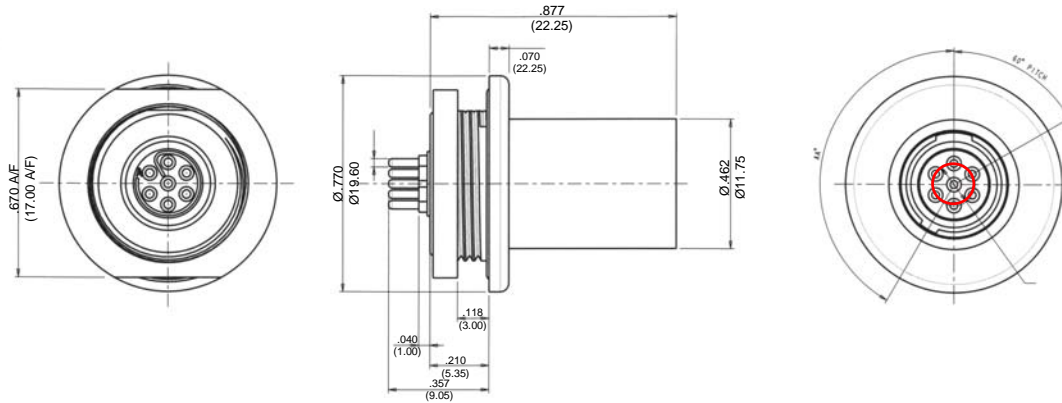
## Jam Nut Rear Mount Receptacles Solder Bucket Contacts



## SCE Table of Styles

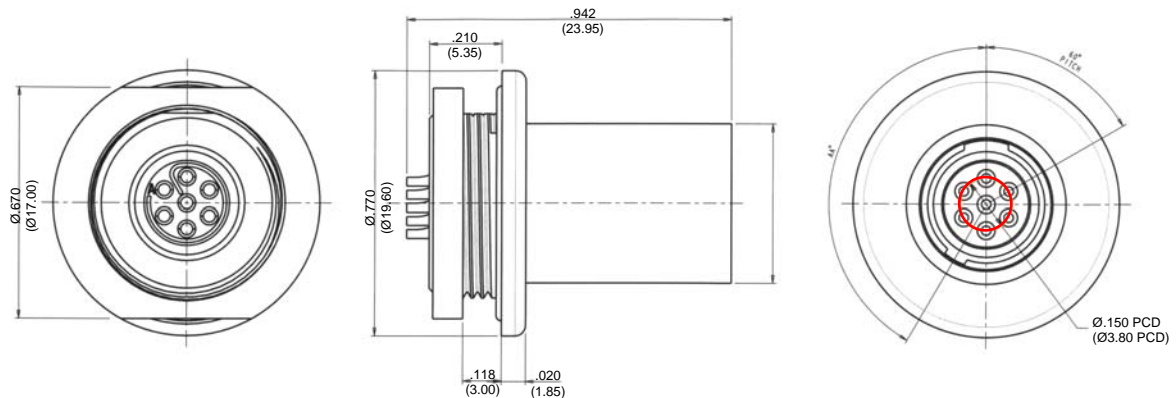
### SCE-B-17A06-XXPX-001

Jam Nut Front Mount Receptacles  
PCB Contacts



### SCE-B-17A06-XXPX-002

Jam Nut Front Mount Receptacles  
Solder Bucket Contacts

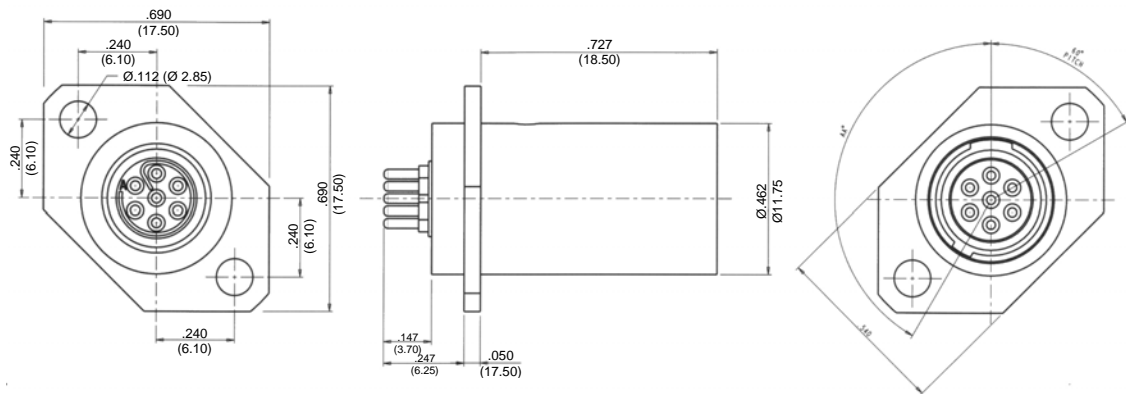




## SCE Table of Styles

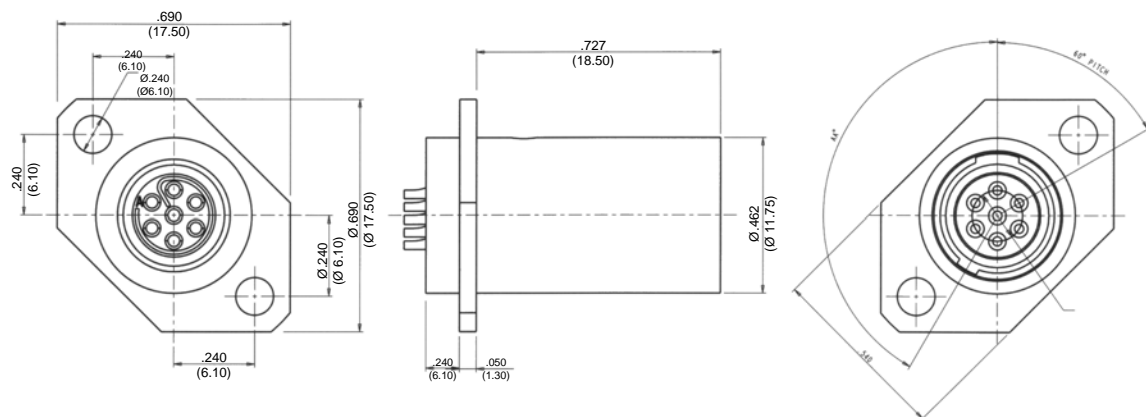
### SCE-B-20A06-XXPX-001

2 Hole Mount Receptacle  
PCB Contacts



### SCE-B-20A06-XXPX-002

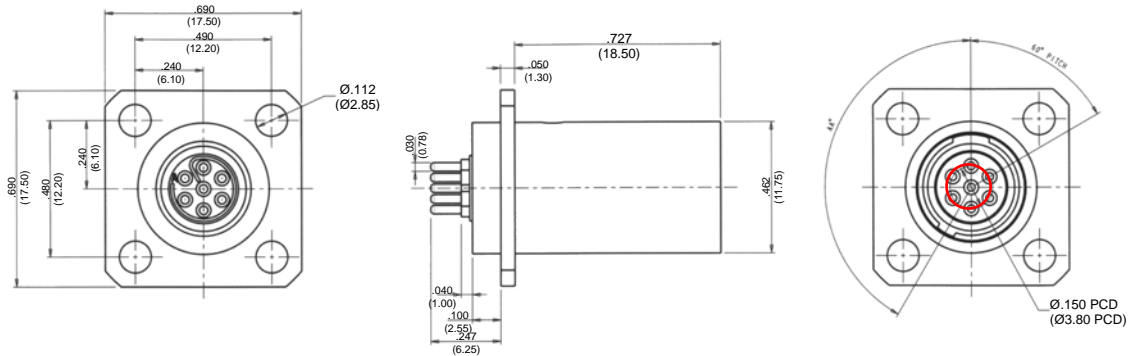
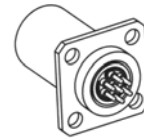
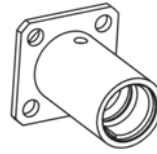
2 Hole Mount Receptacle  
Solder Bucket Contacts



## SCE Table of Styles

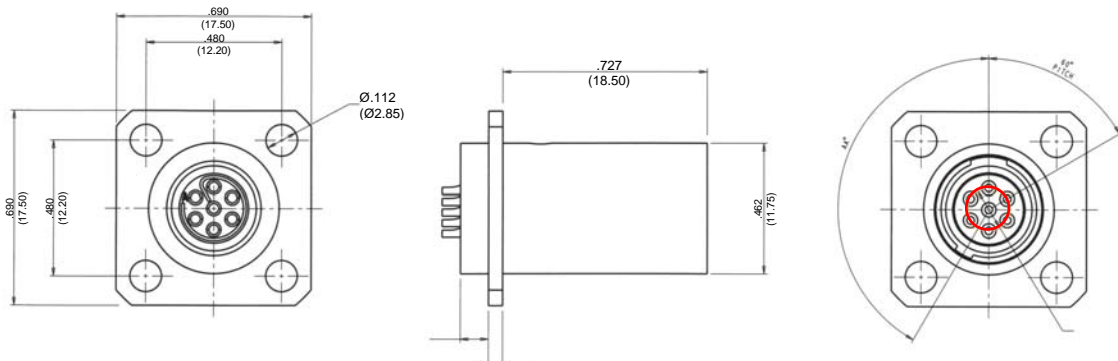
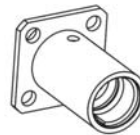
**SCE-B-00A06-XXPX-001**

**4 Hole Mount Receptacle  
PCB Contacts**

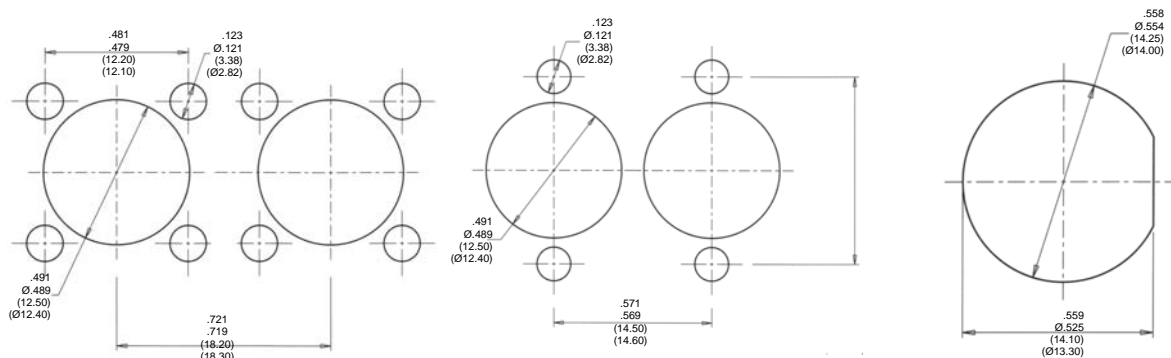


**SCE-B-00A06-XXPX-002**

**4 Hole Mount Receptacle  
Solder Bucket Contacts**



### Panel Mounting Details – Shell Size 06

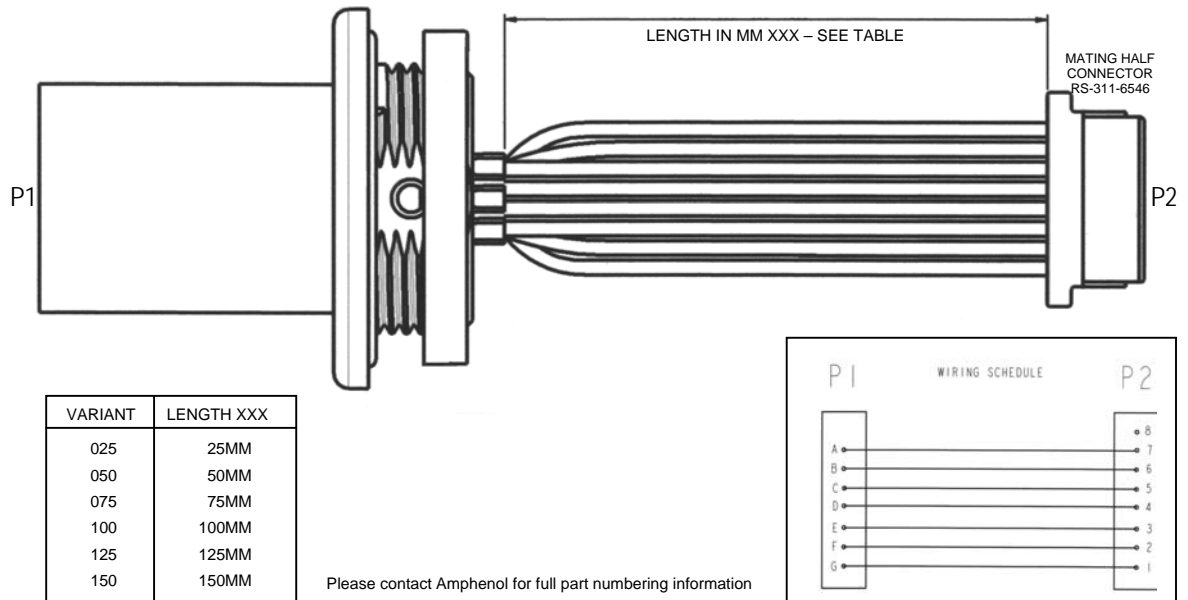




## SCE Table of Styles

### 20GB-SCE-6XXX-XXX

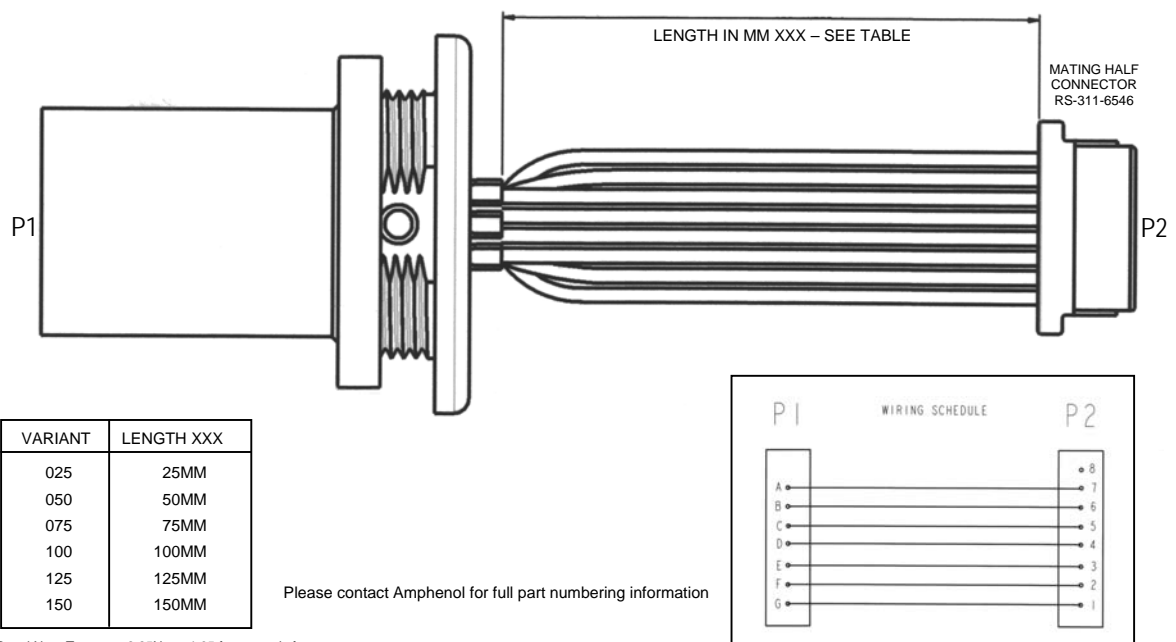
#### Front Mount Jam Nut Receptacle to Header Assembly



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

### 20GB-SCE-6XXX-XXX

#### Rear Mount Jam Nut Receptacle to Header Assembly

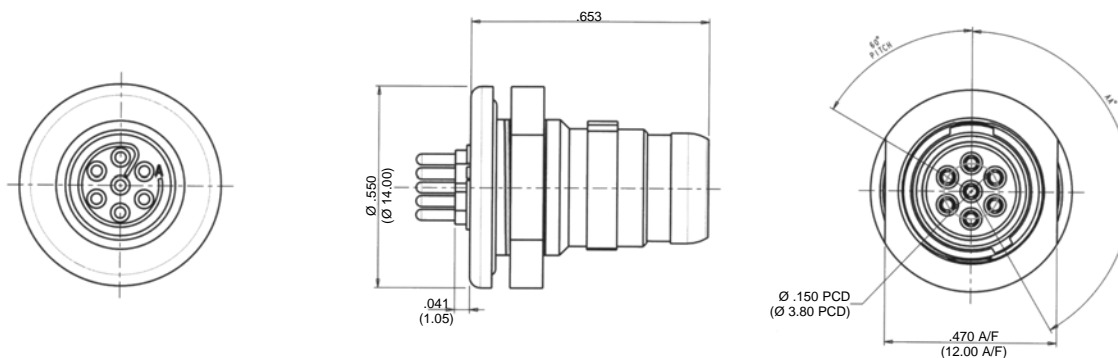


Panel Nut - Torque to 2.25Nm = 1.65 foot pounds force

## SCE Table of Styles – Up to 7 Ways

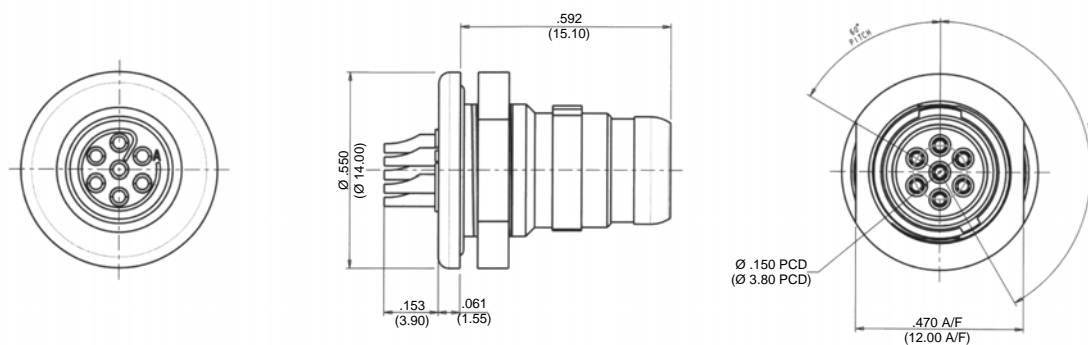
**SCE-X-76A06-XXSX-001**

**Rear Mount Plug  
PCB Contacts**



**SCE-X-76A06-XXSX-002**

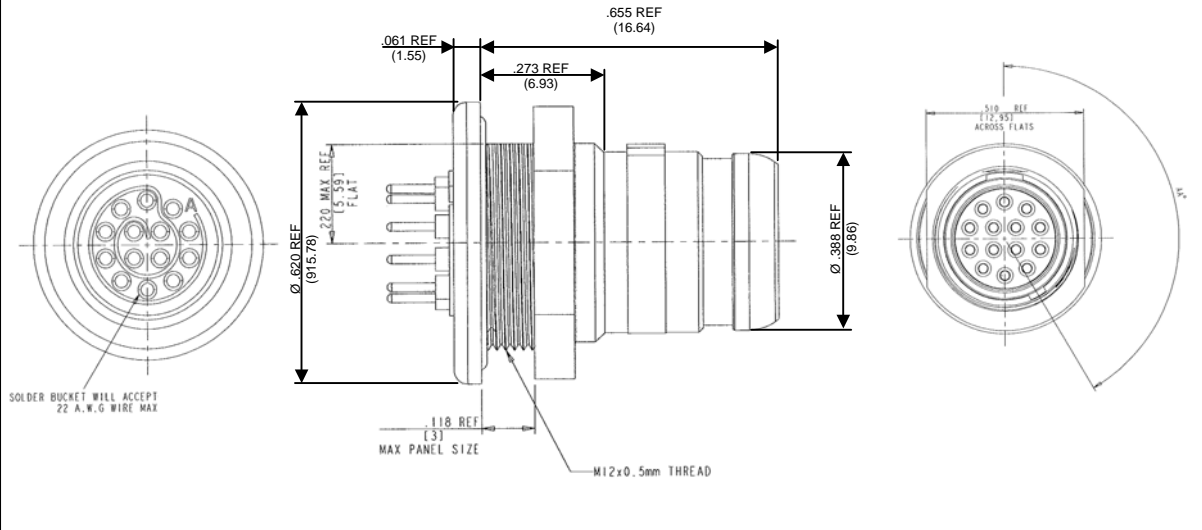
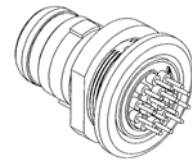
**Rear Mount Plug  
Solder Bucket Contacts**



## SCE Table of Styles – Up to 14 Ways

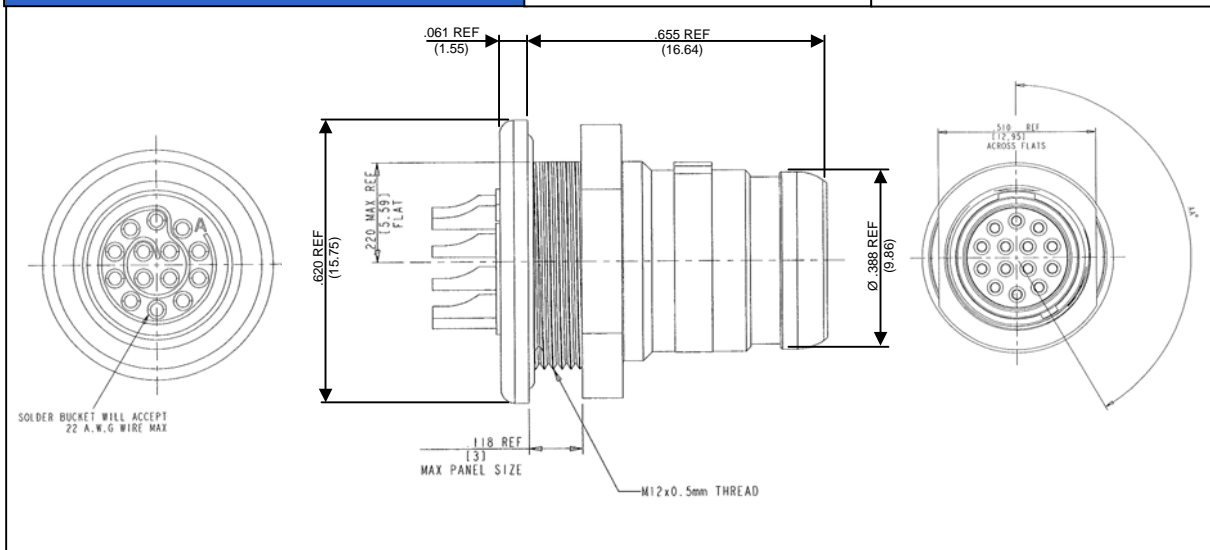
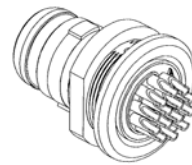
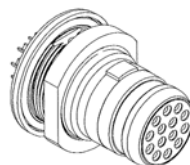
**SCE-B-76A07-XXSX-001**

**Jam Nut Front Mount Plug  
PCB Bucket Contacts**



**SCE-B-76A07-XXSX-002**

**Jam Nut Front Mount Plug  
Solder Bucket Contacts**

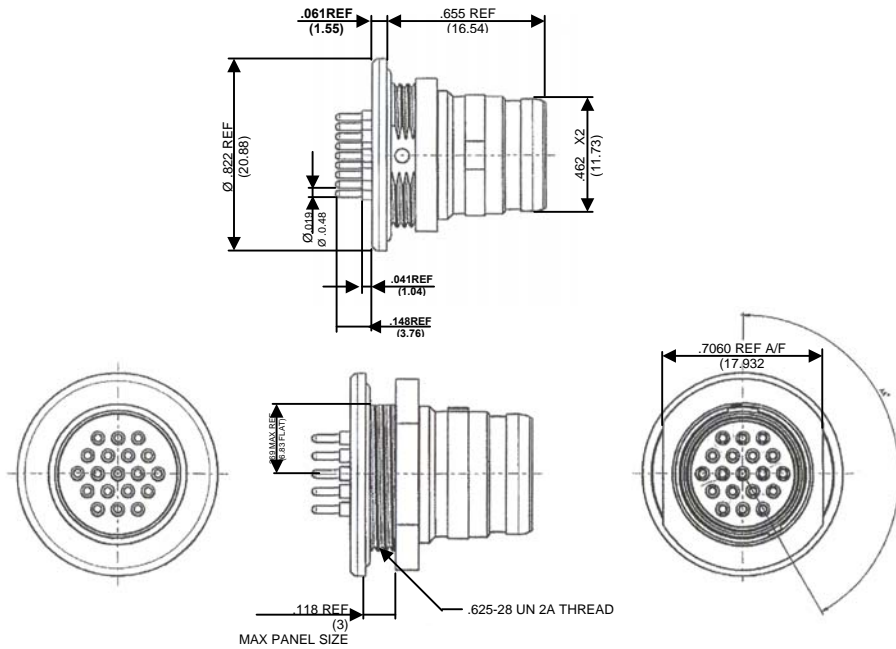
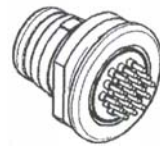




## SCE Table of Styles – Up to 19 Ways

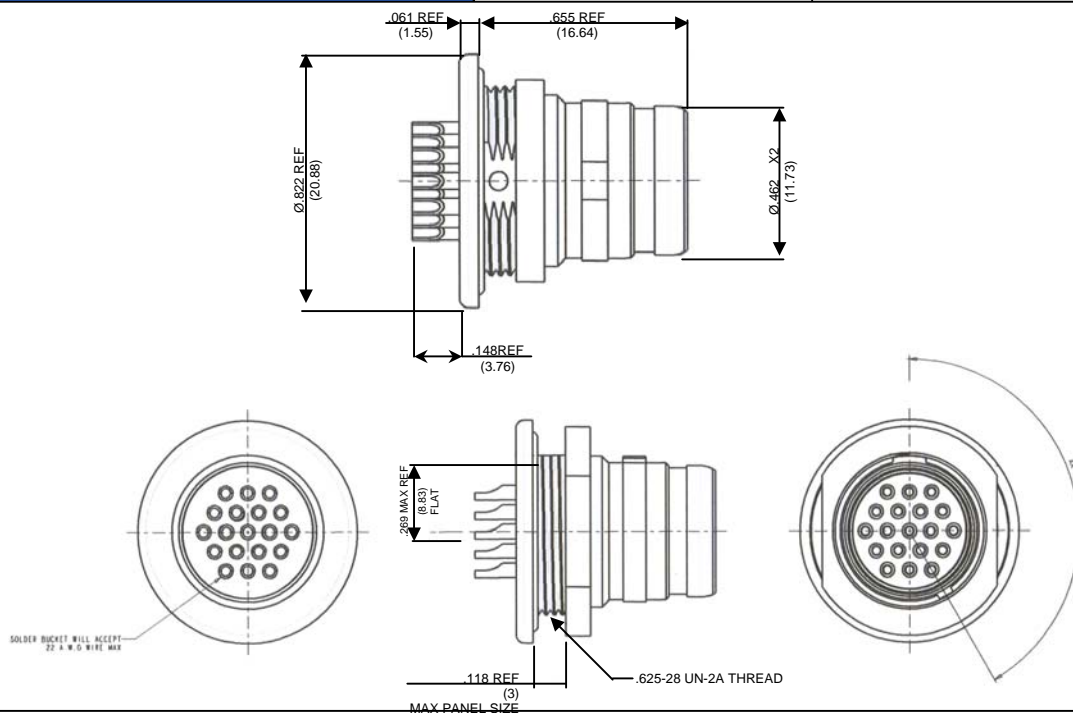
**SCE-B-76A08-19SX-001**

**Jam Nut Front Mount Plug  
PCB Bucket Contacts**



**SCE-B-76A08-19SX-002**

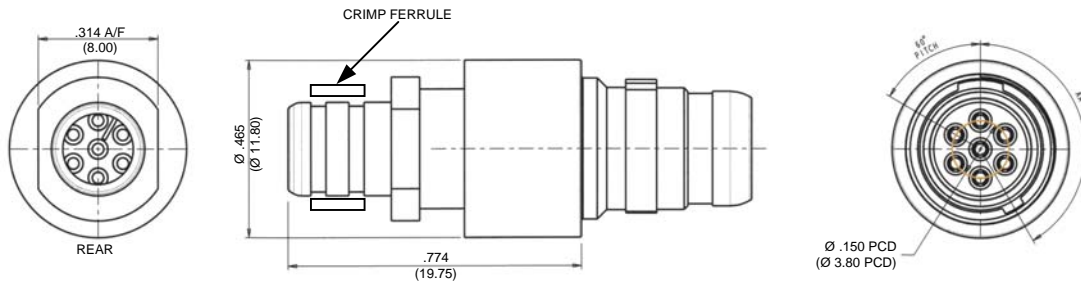
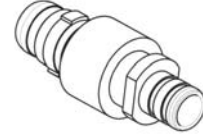
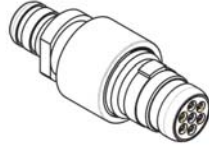
**Jam Nut Front Mount Plug  
Solder Bucket Contacts**



## SCE Table of Styles – Up to 7 Ways

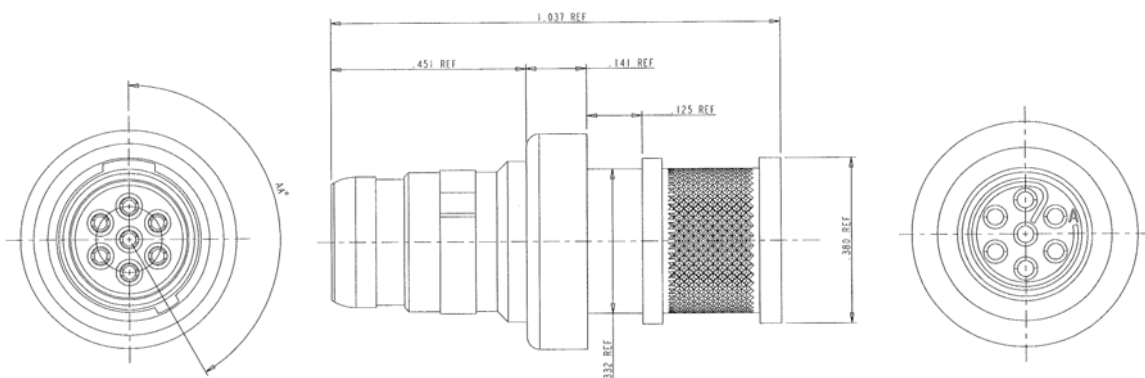
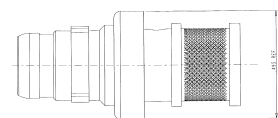
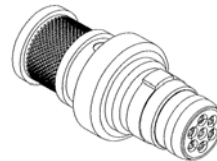
### SCE-X-06T06-XXSX-003

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



### SCE-B-06K06-XXPX

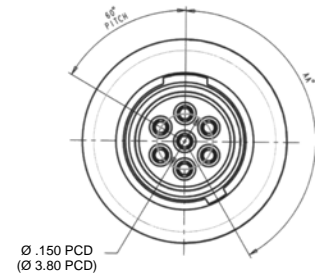
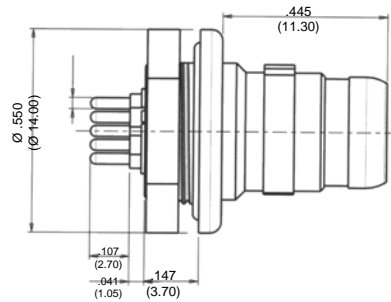
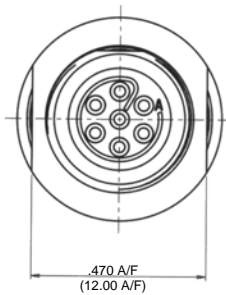
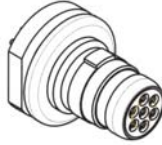
In Line Plug  
Integral Backshell, Solder Bucket Contacts  
Shell Size 06



## SCE Table of Styles – Up to 7 Ways

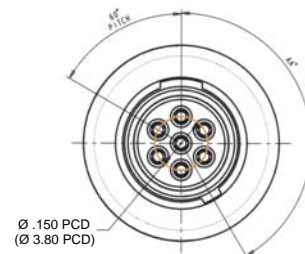
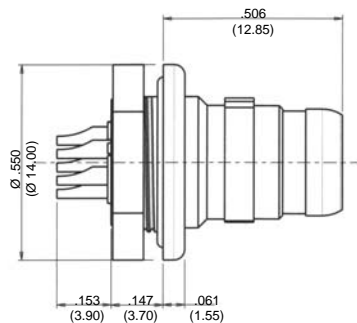
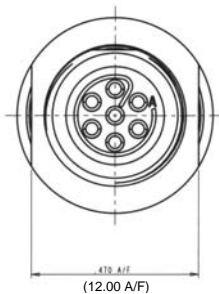
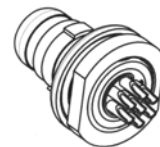
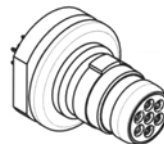
### SCE-X-67A06-XXSX-001

#### Front Mount Plug PCB Contacts



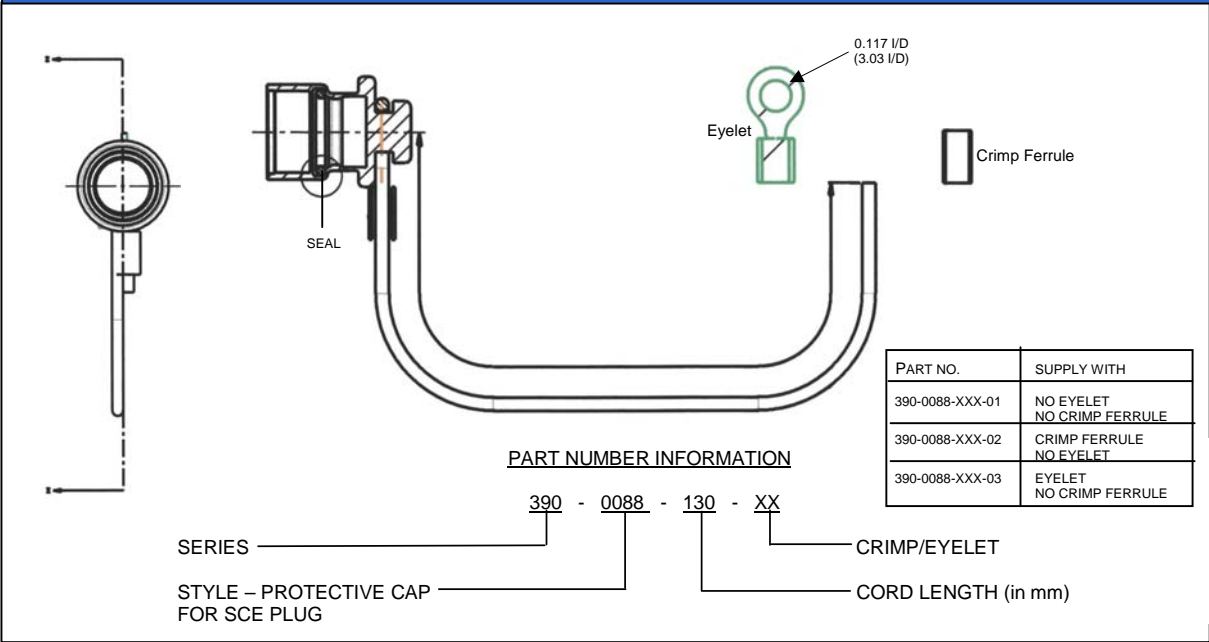
### SCE-X-67A06-XXSX-002

#### Front Mount Plug Solder Bucket Contacts



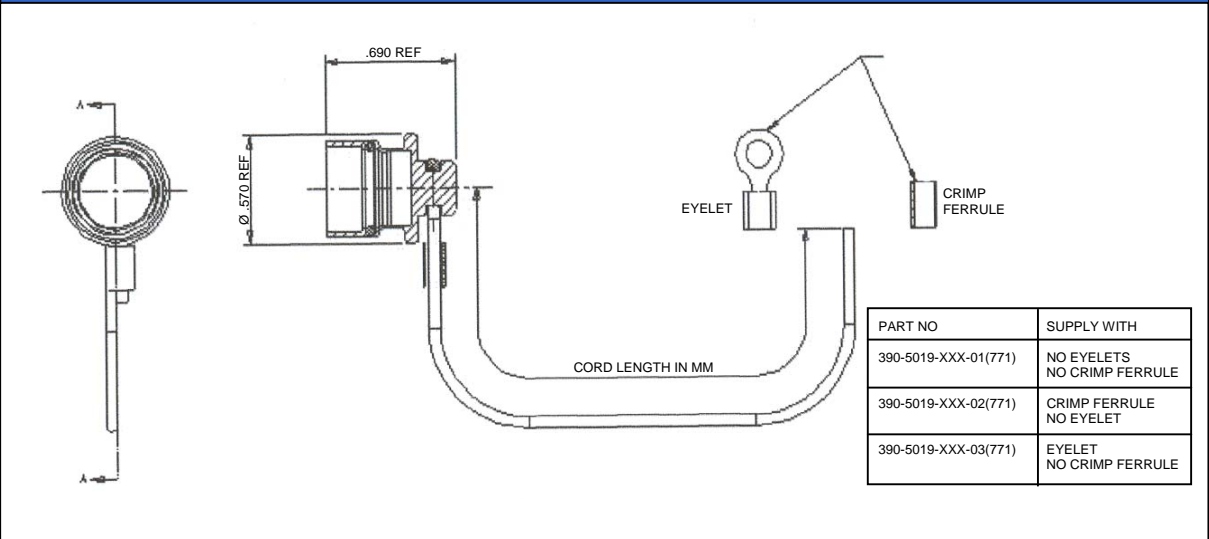
SCE Table of Styles

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



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

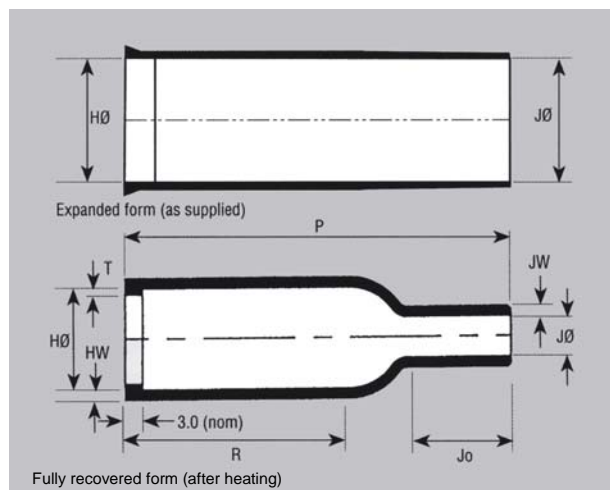


## Heatshrink Boots

### 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.

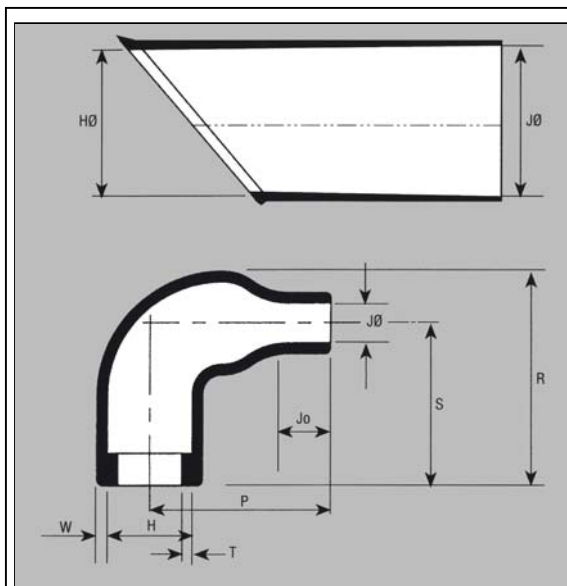


This style is used in conjunction with the backshell (see page 13) providing strain relief and environmental sealing

Dimensions apply to all materials unless otherwise indicated

Hellermann Part No	Expanded (Min)				Recovered (Max)		Recovered Dimensions Fully Shrunk					
	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



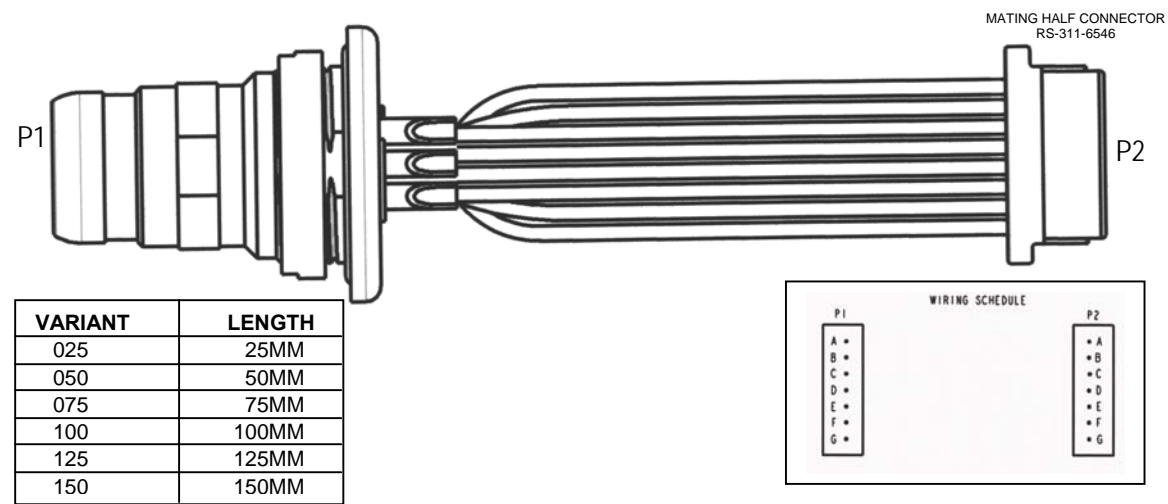
The style provides strain relief for harness systems when used in conjunction with the backshell (see page 13)

Dimensions apply to all materials unless otherwise indicated

Hellermann Part No	Expanded (Min)		Recovered (Max)		Recovered Dimensions Fully Shrunk					
	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

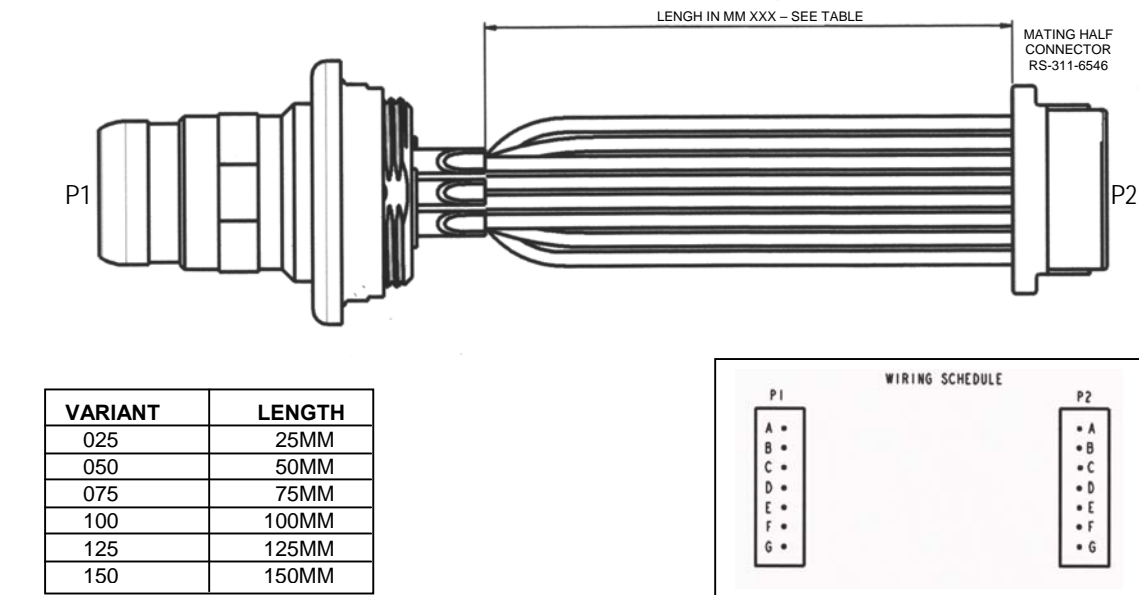
20GB-SCE-6XXX-XXX  
Jam Nut Plug Rear Mount to Header Assembly – Solder Bucket Contacts only



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



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

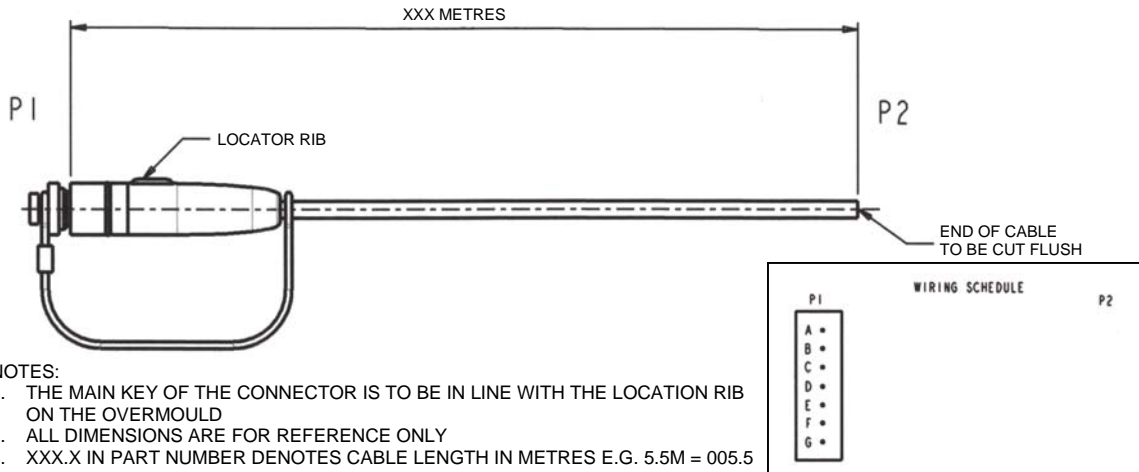
Please contact Amphenol for full part numbering information



## 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:

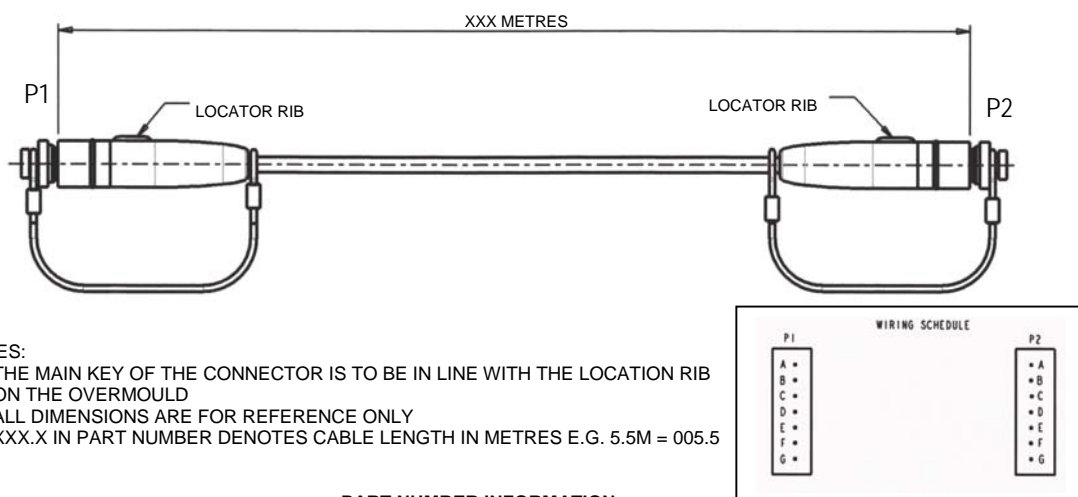
1. THE MAIN KEY OF THE CONNECTOR IS TO BE IN LINE WITH THE LOCATION RIB ON THE OVERMOULD
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY
3. XXX.X IN PART NUMBER DENOTES CABLE LENGTH IN METRES E.G. 5.5M = 005.5

#### PART NUMBER INFORMATION

CONNECTOR SERIES — 20GB SCE — 5XXX — XXX.X — 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 Cable Assembly



#### NOTES:

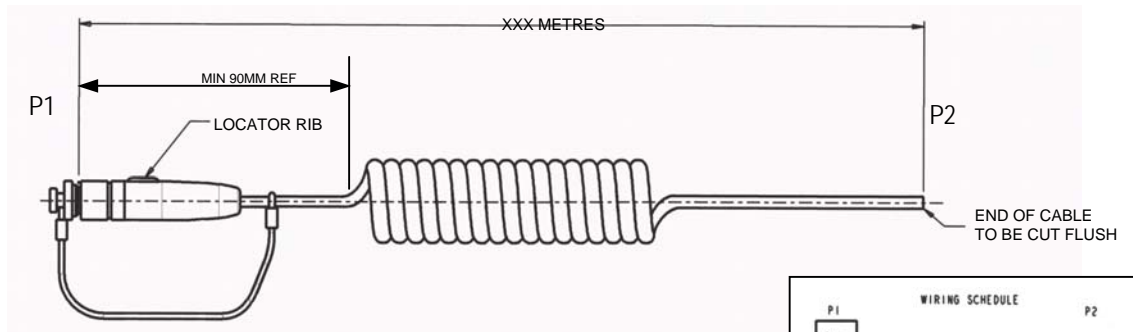
1. THE MAIN KEY OF THE CONNECTOR IS TO BE IN LINE WITH THE LOCATION RIB ON THE OVERMOULD
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY
3. XXX.X IN PART NUMBER DENOTES CABLE LENGTH IN METRES E.G. 5.5M = 005.5

#### PART NUMBER INFORMATION

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

## SCE - Cable Assemblies

### Up to 7 Way Single-Ended Receptacle Coiled Cable Assembly



#### NOTES:

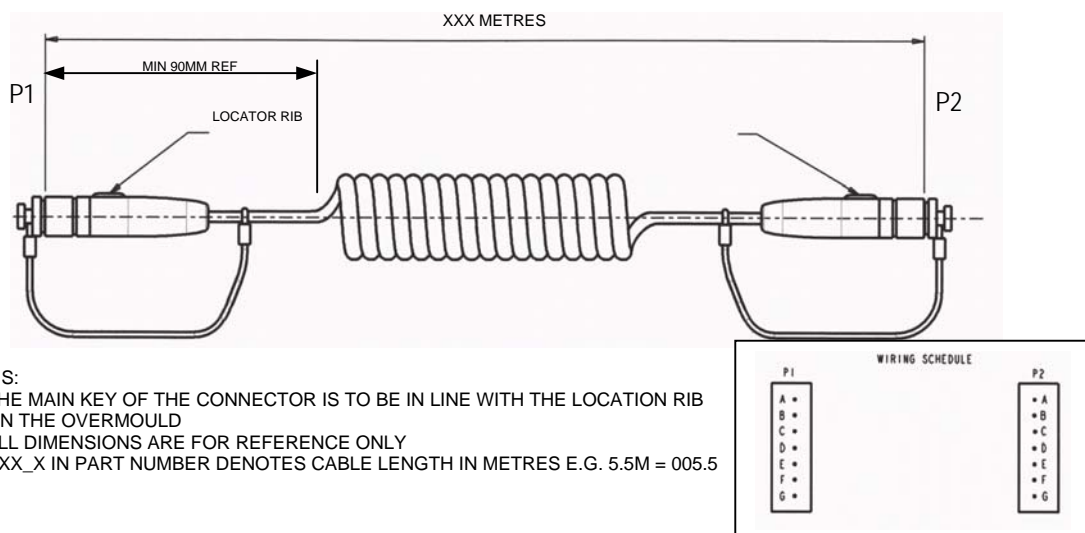
1. THE MAIN KEY OF THE CONNECTOR IS TO BE IN LINE WITH THE LOCATION RIB ON THE OVERMOULD
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY
3. XXX.X IN PART NUMBER DENOTES CABLE LENGTH IN METRES E.G. 5.5M = 005.5

#### PART NUMBER INFORMATION

CONNECTOR SERIES — 20GB SCE — 5XXX — XXX.X — 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



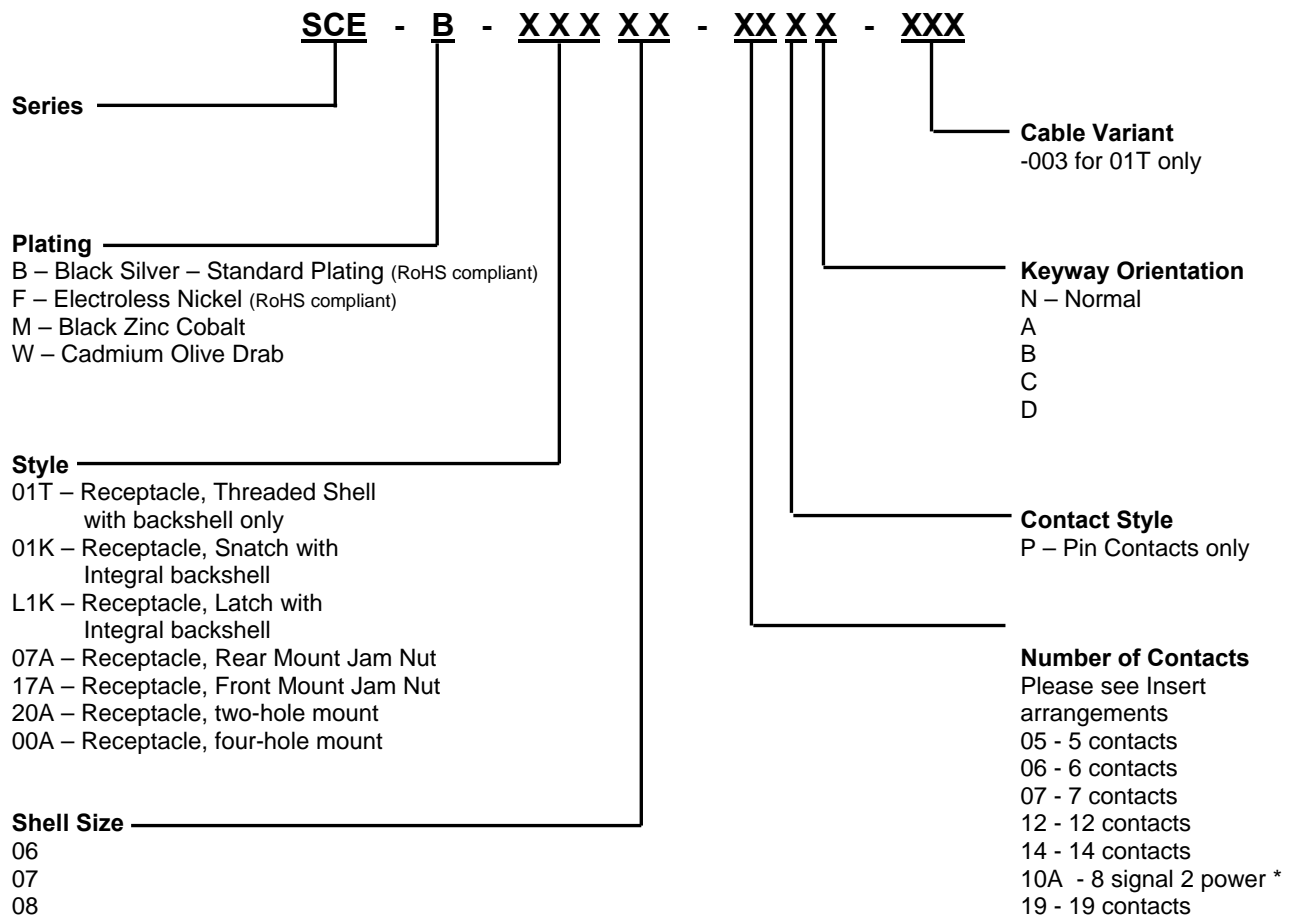
#### NOTES:

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

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

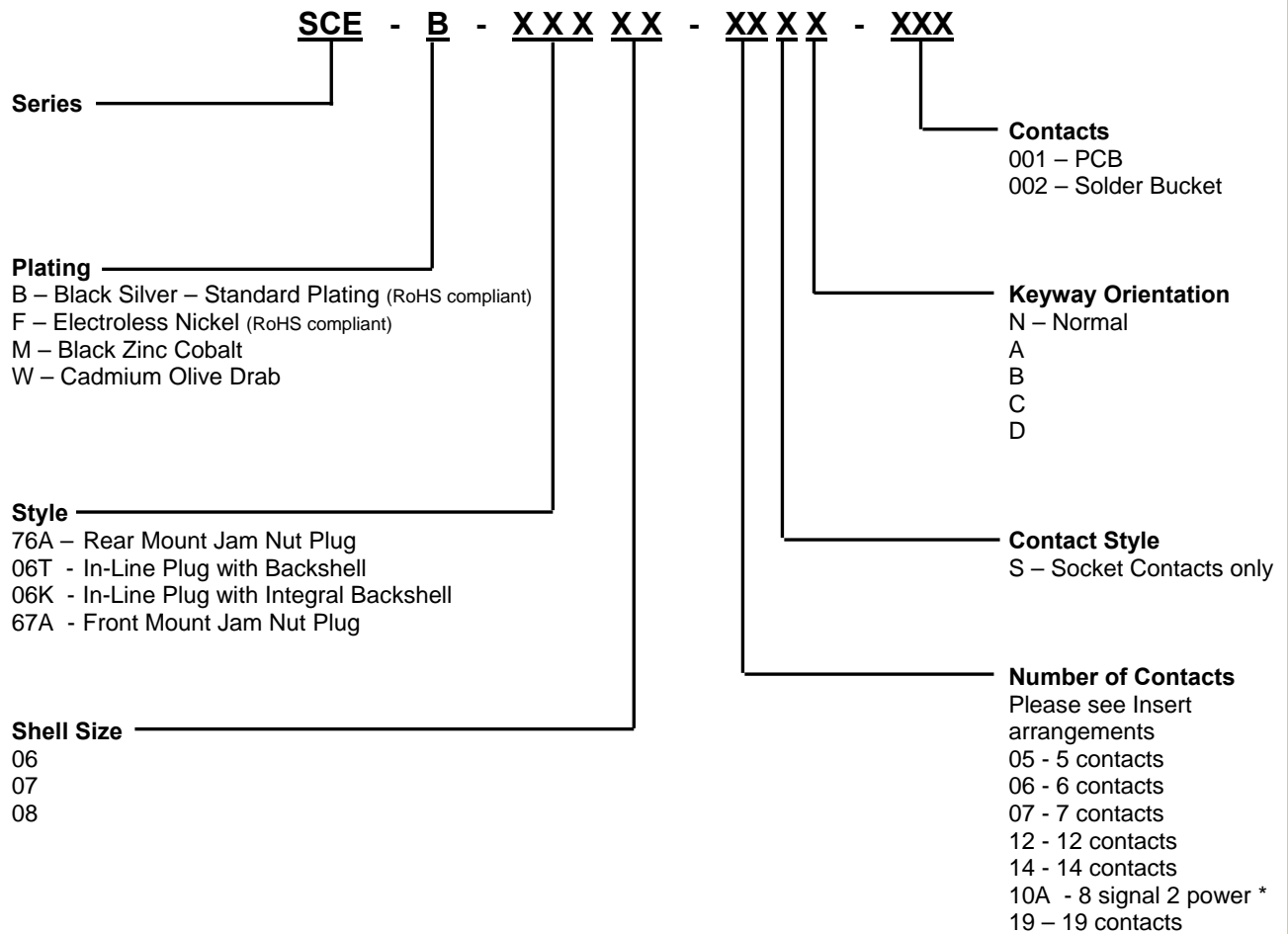
## SCE Connector Part Numbers – Receptacles only



\* 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



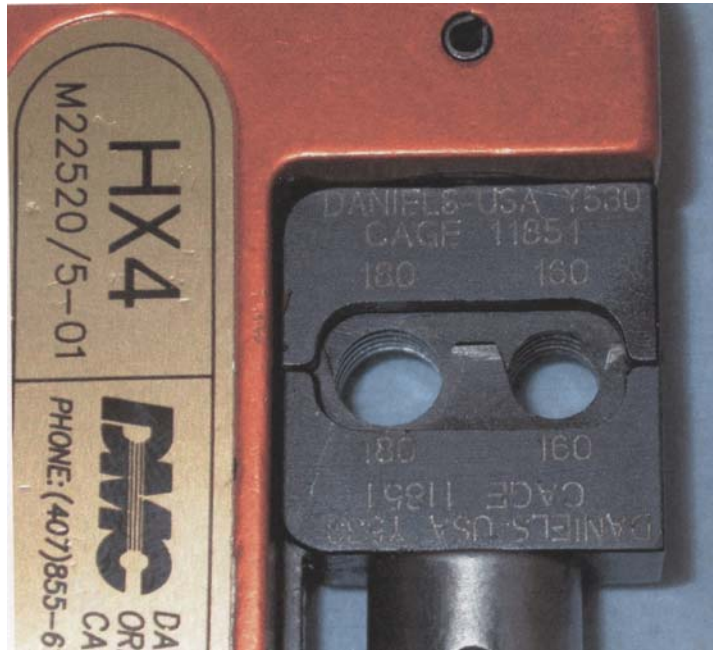
\* Please consult factory.

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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**Amphenol PCD**

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