

# 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

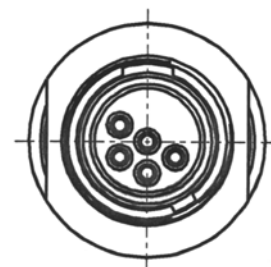
### PLUGS – SOCKET CONTACTS ONLY



FRONT FACE VIEW  
SCE 7 WAY



FRONT FACE VIEW  
SCE 6 WAY



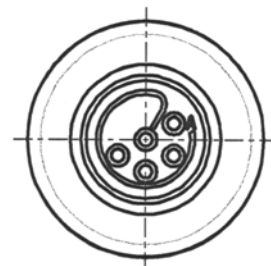
FRONT FACE VIEW  
SCE 5 WAY



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

**SCE-B-01T06-XXPX-003**  
**In Line Receptacle**  
**Solder Bucket Contacts**



**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)**



## 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<br>NO CRIMP FERRULE |
| 390-5016-XXX-02 | CRIMP FERRULE<br>NO EYELET    |
| 390-5016-XXX-03 | EYELET<br>NO CRIMP FERRULE    |

### PART NUMBER



## 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**



# 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

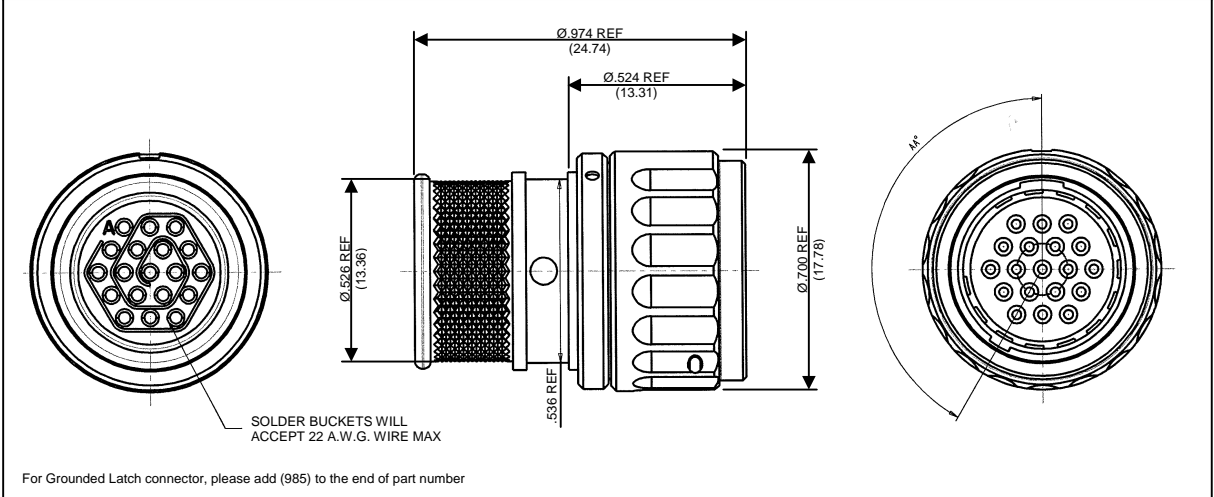
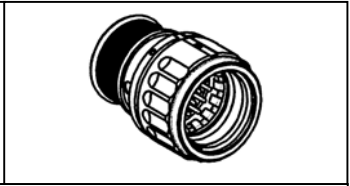


| PART NUMBER           | SUPPLY WITH                   |
|-----------------------|-------------------------------|
| 390-5020-XXX-01 (771) | NO EYELET<br>NO CRIMP FERRULE |
| 390-5020-XXX-02 (771) | CRIMP FERRULE<br>NO EYELET    |
| 390-5020-XXX-03 (771) | EYELET<br>NO CRIMP FERRULE    |



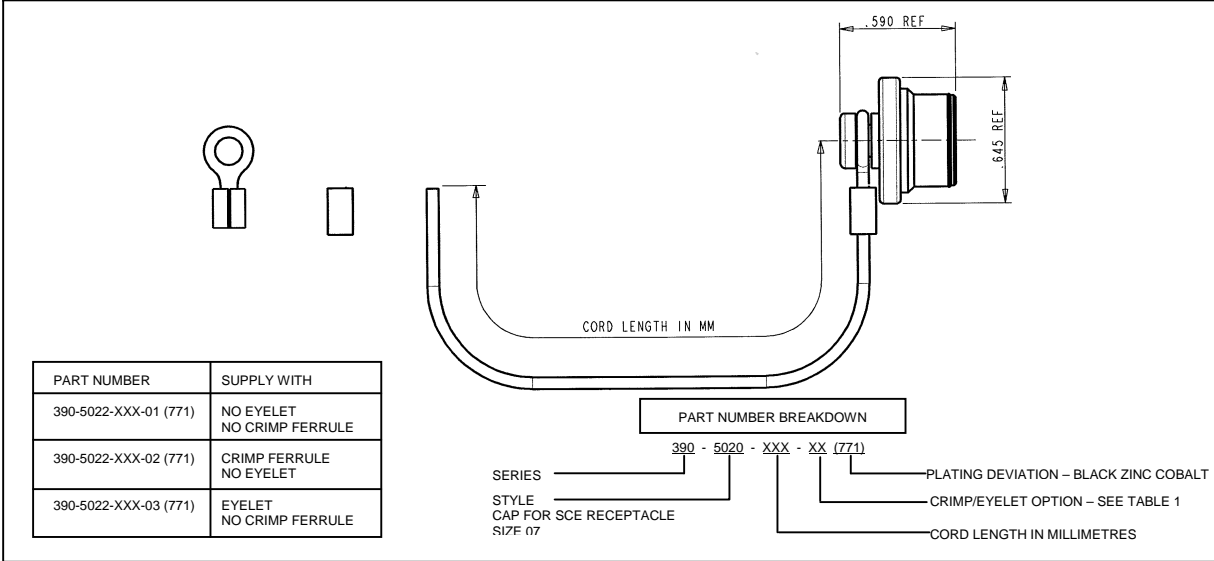
## SCE Table of Styles – Up to 19 Ways

**SCE-B-L1K08-XXPX**  
**Latch In Line Receptacle**  
**Integral Backshell, Non-Grounded**  
**Shell Size 08**



**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

**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

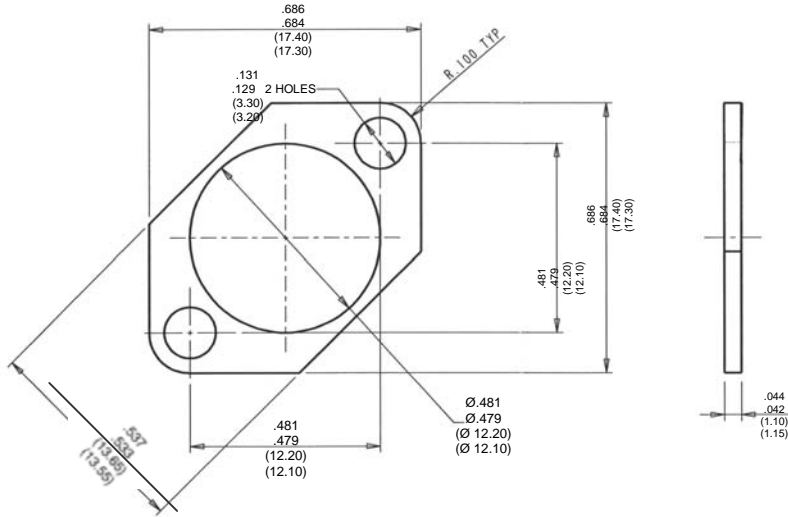




## SCE Table of Styles

**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

LENGTH IN MM XXX – SEE TABLE

MATING HALF CONNECTOR  
RS-311-6546

P1 P2

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

WIRING SCHEDULE

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

LENGTH IN MM XXX – SEE TABLE

MATING HALF CONNECTOR  
RS-311-6546

P1 P2

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

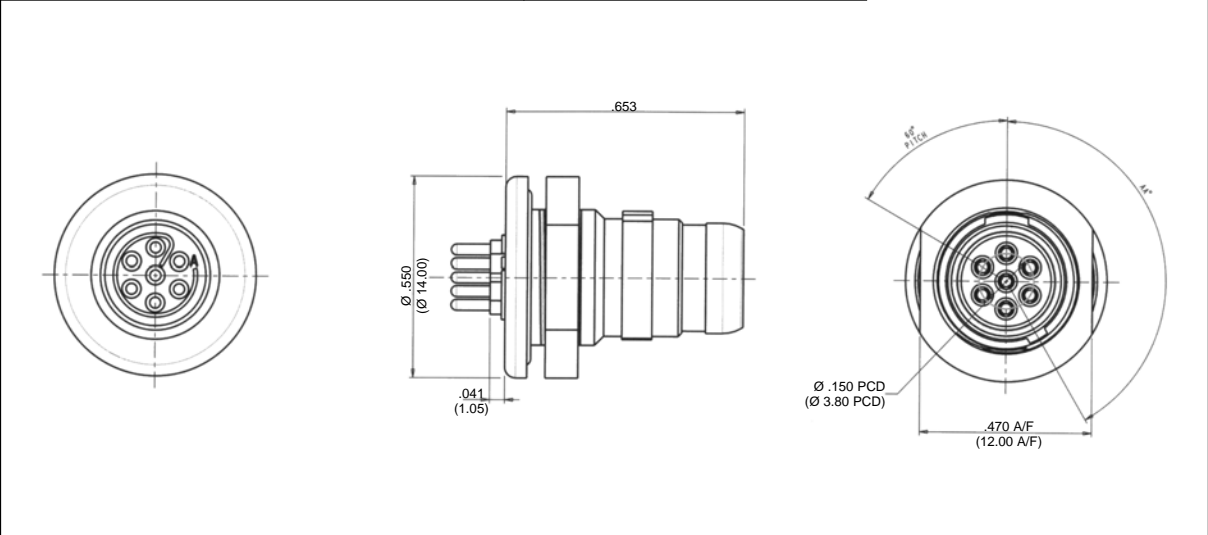
WIRING SCHEDULE

Please contact Amphenol for full part numbering information

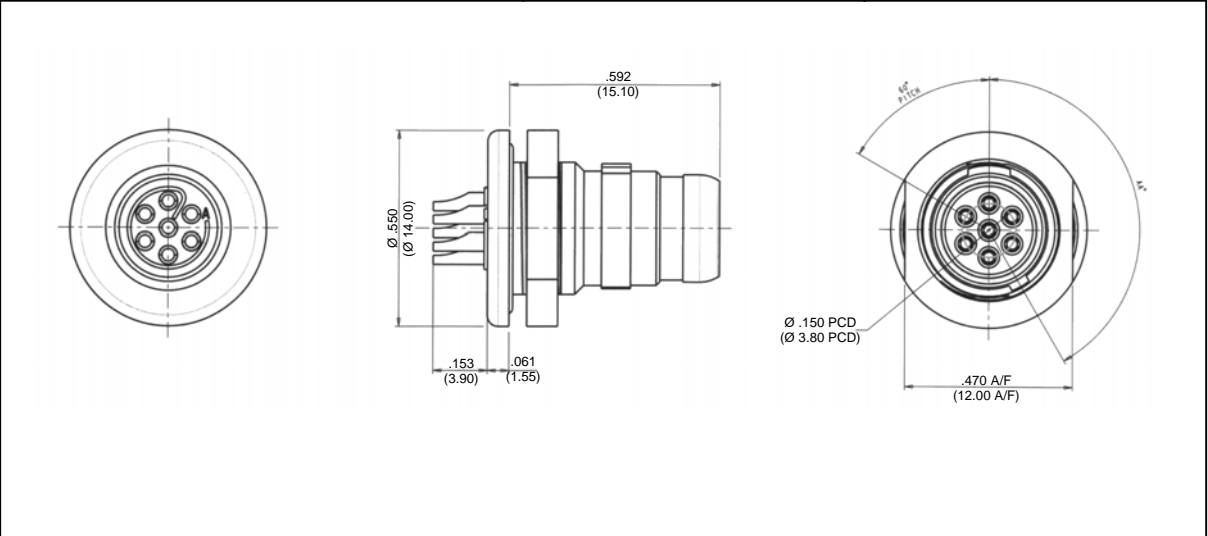
Panel Nut - Torque to 2.25Nm = 1.65 foot pounds force

## 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**



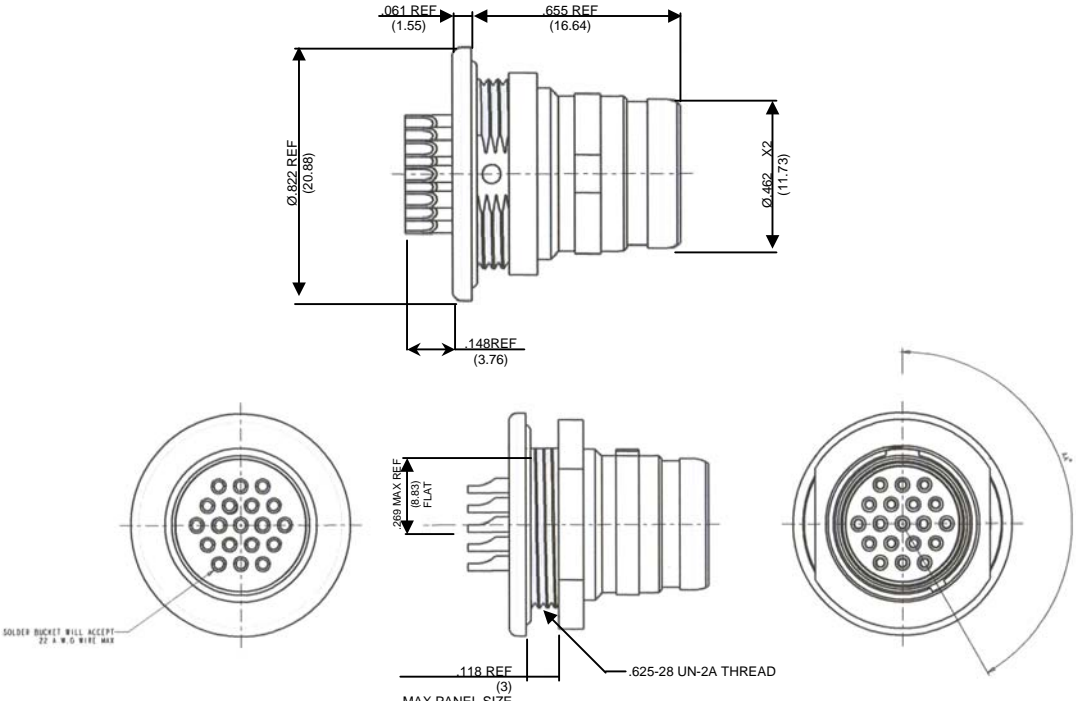


**SCE-B-76A07-XXSX-002**  
**Jam Nut Front Mount Plug**  
**Solder Bucket Contacts**



## SCE Table of Styles – Up to 19 Ways

|   |   |   |
|---|---|---|
| <p><b>SCE-B-76A08-19SX-001</b></p> <p><b>Jam Nut Front Mount Plug<br/>PCB Bucket Contacts</b></p>   |  |  |
|  <p>Technical drawing showing dimensions for SCE-B-76A08-19SX-001:</p> <ul style="list-style-type: none"> <li>Overall length: .655 REF (16.54)</li> <li>Thread length: .462 X2 (11.73)</li> <li>Panel diameter: Ø .822 REF (20.88)</li> <li>Panel thickness: .061 REF (1.55)</li> <li>Panel hole diameter: Ø .018</li> <li>Panel hole diameter: Ø .048</li> <li>Panel hole diameter: Ø .041 REF (1.04)</li> <li>Panel hole diameter: .148 REF (3.76)</li> <li>Panel hole diameter: .118 REF (3) MAX PANEL SIZE</li> <li>Thread: .625-28 UN 2A THREAD</li> <li>Panel hole diameter: .7060 REF A/F (17.932)</li> <li>Panel hole diameter: Ø MAX (8.33) FLAT</li> </ul> |   |   |

|  |   |   |
|--|---|---|
| <p><b>SCE-B-76A08-19SX-002</b></p> <p><b>Jam Nut Front Mount Plug<br/>Solder Bucket Contacts</b></p>   |  |  |
|  <p>Technical drawing showing dimensions for SCE-B-76A08-19SX-002:</p> <ul style="list-style-type: none"> <li>Overall length: .655 REF (16.64)</li> <li>Thread length: .462 X2 (11.73)</li> <li>Panel diameter: Ø .822 REF (20.88)</li> <li>Panel thickness: .061 REF (1.55)</li> <li>Panel hole diameter: .148 REF (3.76)</li> <li>Panel hole diameter: .118 REF (3) MAX PANEL SIZE</li> <li>Thread: .625-28 UN-2A THREAD</li> <li>Panel hole diameter: Ø MAX (8.33) FLAT</li> <li>Note: SOLDER BUCKET WILL ACCEPT 22 AWG WIRE MAX</li> </ul> |   |   |

## 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 NUMBER INFORMATION**

390 - 0088 - 130 - XX

SERIES ————— 390

STYLE – PROTECTIVE CAP FOR SCE PLUG ————— 0088

CORD LENGTH (in mm) ————— 130

CRIMP/EYELET ————— XX

| PART NO.        | SUPPLY WITH                   |
|-----------------|-------------------------------|
| 390-0088-XXX-01 | NO EYELET<br>NO CRIMP FERRULE |
| 390-0088-XXX-02 | CRIMP FERRULE<br>NO EYELET    |
| 390-0088-XXX-03 | EYELET<br>NO CRIMP FERRULE    |

## 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**

CORD LENGTH IN MM

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

| Hellermann Part No | Expanded (Min)   |                  |                  |                  | Recovered (Max) |                 | Recovered Dimensions Fully Shrank |                  |                 |                 |                 |                 |
|--------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------------------------|------------------|-----------------|-----------------|-----------------|-----------------|
|                    | 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<br>(10.7) | 0.3976<br>(10.7) | 0.1811<br>(4.6)  | 0.1811<br>(4.6)  | 0.3110<br>(7.9) | 0.0787<br>(2.0) | 1.0<br>(25.4)                     | 0.5709<br>(14.5) | 0.1811<br>(4.6) | 0.0512<br>(1.3) | 0.0512<br>(1.3) | 0.0394<br>(1.0) |
| 104-4-G-WM250      | 0.6456<br>(16.4) | 0.6456<br>(16.4) | 0.6456<br>(16.4) | 0.6456<br>(16.4) | 0.3110<br>(7.9) | 0.149<br>(3.8)  | 1.0<br>(25.4)                     | 0.5590<br>(14.2) | 0.2716<br>(6.9) | 0.0512<br>(1.3) | 0.0512<br>(1.3) | 0.0394<br>(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 Shrank |                  |                  |                 |                 |                 |
|--------------------|------------------|------------------|-------------------|-----------------|-----------------------------------|------------------|------------------|-----------------|-----------------|-----------------|
|                    | H                | JØ               | H                 | JØ              | P ±10%                            | R ±10%           | S ±10%           | Jo ±10%         | W ±20%          | T ±20%          |
| 1108-4-G-WM250     | 0.6496<br>(16.5) | 0.6496<br>(16.5) | 0.3110<br>(7.9)   | 0.1496<br>(3.8) | 0.6875<br>(17.3)                  | 0.7969<br>(20.1) | 0.6005<br>(15.2) | 0.1614<br>(4.1) | 0.0394<br>(1.0) | 0.0394<br>(1.0) |
| 1106-4-G-WM250     | 0.9173<br>(23.3) | 0.9173<br>(23.3) | 0.4094<br>(10.04) | 0.2204<br>(5.6) | 0.7992<br>(20.3)                  | 0.9015<br>(22.9) | 0.6005<br>(15.2) | 0.2283<br>(5.8) | 0.0511<br>(1.3) | 0.0394<br>(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**



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**



# 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**



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**



## 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.



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**Amphenol PCD**

72 Cherry Hill Rd, Beverly, MA 01915, USA Tel: 978-624-3400