



**G**lenair®

**NFF 61030 QUALIFIED CONNECTORS**

# **ITH SERIES**

**EASY-TO-ASSEMBLY, RIGID INSERT POWER AND SIGNAL  
RELIABLE REVERSE BAYONET COUPLING CONNECTORS**

**JUNE 2013**



# High Voltage Electrical Power Distribution



## From 0 to 60 in 3.9 Seconds

**H**igh voltage electrical power distribution is a critical component of the 100% electric Tesla Roadster.

The reliable distribution of electrical energy from the car's lithium-ion energy storage system to the vehicle's motor, electronic control module, HVAC system, transmission and regenerative braking unit depends on a high-performance wiring system made up of high-temperature

shielded conduit and ruggedized reverse-bayonet power connectors—all made by Glenair.

Glenair is on the forefront of innovative efforts to advance the reliability and performance of electric vehicles. Glenair power connectors, cables and conduit are deployed in high-voltage power management and distribution applications for systems as demanding as military vehicles—and as fast as the Tesla Roadster.



EU Sales: Glenair Connectors Italia, S.r.L. Tel: +39-02-91082121 Email: [sales-italia@glenair.com](mailto:sales-italia@glenair.com)  
North American Sales: Glenair Connecticut, Tel: 203-741-1115 Email: [sales@glenair.com](mailto:sales@glenair.com)  
Factory Support: Commital S.p.a. (Italy) Tel: +39-51-7821811 Email: [commital@commital.com](mailto:commital@commital.com)

[www.glenair.com](http://www.glenair.com)

## Series ITH Rigid Inserts and Crimp Contacts Save Assembly Time and Improve Electrical Insulation Performance

The Glenair Committal ITH connector series is based on the MIL-C-5015 standard, but features an improved reverse bayonet coupling technology in place of the threaded coupling used in MIL-C-5015. The ITH Series is also notable for its rigid inserts and crimp contacts that provide both better electrical insulation as well as reduced assembly time. The connector also features a 3-point reverse bayonet coupling mechanism which provides easier mating when the connector is in an awkward position. Positive locking of the three stainless steel pins provides reliable resistance to vibration and shock, and prevents connector de-coupling in even the most rugged applications such as locomotives and mass-transit cars. The products conform to the VG95234 standard and are currently used throughout Europe on hundreds of ruggedized applications. All connectors in the series conform to French (NFF 61030) electrical standards, as well as EEC compliance directives for electromagnetic compatibility. EMI shield termination accessories are available for both overall as well as individual wire shields.

### Characteristics

Design according to MIL-C-5015 and VG95234

#### Max torque values (full insertion):

| Connector size | Torque (NM) |
|----------------|-------------|
| 18             | 4.0         |
| 20             | 5.0         |
| 22             | 6.0         |
| 24 - 28        | 6.5         |
| 32             | 7.0         |
| 36 - 40        | 8.0         |

**Temperature range:** -40°C to +100°C  
(F7 conductive plating).  
-55°C to +125°C  
(F6 non-conductive plating).

**Insulation resistance:**  $\geq 5 \times 10^9$  MW min in mated conditions (with compressed interfacial seal).

### Material & Finish

#### Metal parts:

Aluminum alloy with cadmium free conductive plating and black passivation (ROHS compliant).

#### Contacts:

Copper alloy with gold plating.

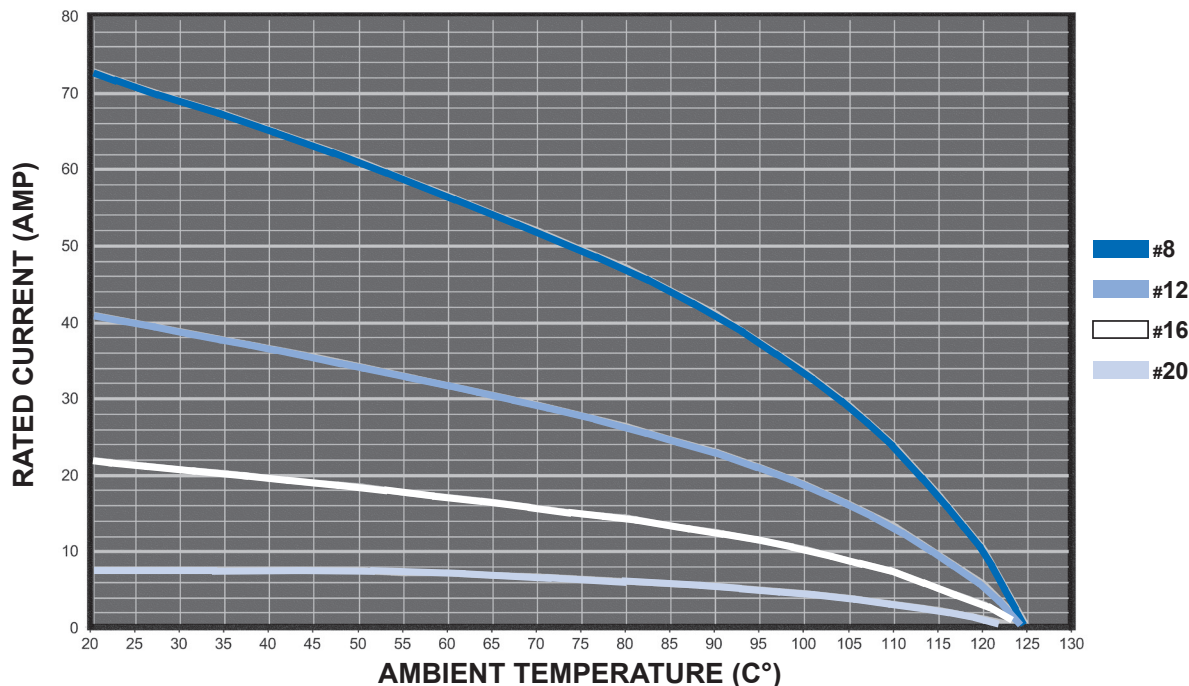
#### Insulating parts:

**Inserts:** Low fire hazard plastic UL94V0 and NFF16-102

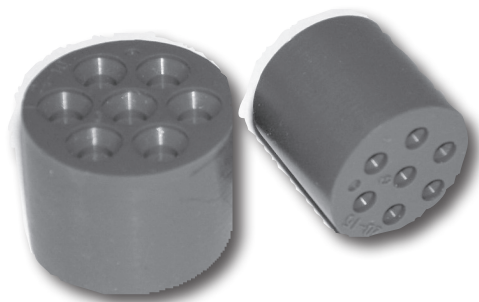
**Gaskets:** Halogen free silicone rubber (NFF 16-102).

| Contact size | Working voltage | Dielectric voltage | Creepage & air clearance distance mm min |
|--------------|-----------------|--------------------|--|
| 20           | 220 Vac         | 2550 Vac           | 9  |
| 16           | 220 Vac         | 2550 Vac           | 9  |
| 12           | 500 Vac         | 3250 Vac           | 12                                       |
| 8            | 500 Vac         | 3250 Vac           | 12                                       |

| Contact size | Rated current according to NFF61-030 |               | Max. Contact resist. |
|--------------|--------------------------------------|---------------|----------------------|
|              | 1 contact                            | A II contacts |                      |
| 20           | 10 A                                 | 5 A           | 3.0 mΩ               |
| 16           | 15 A                                 | 8 A           | 2.5 mΩ               |
| 12           | 20 A                                 | 16 A          | 1.3 mΩ               |
| 8            | 25 A                                 | 25 A          | 0.9 mΩ               |



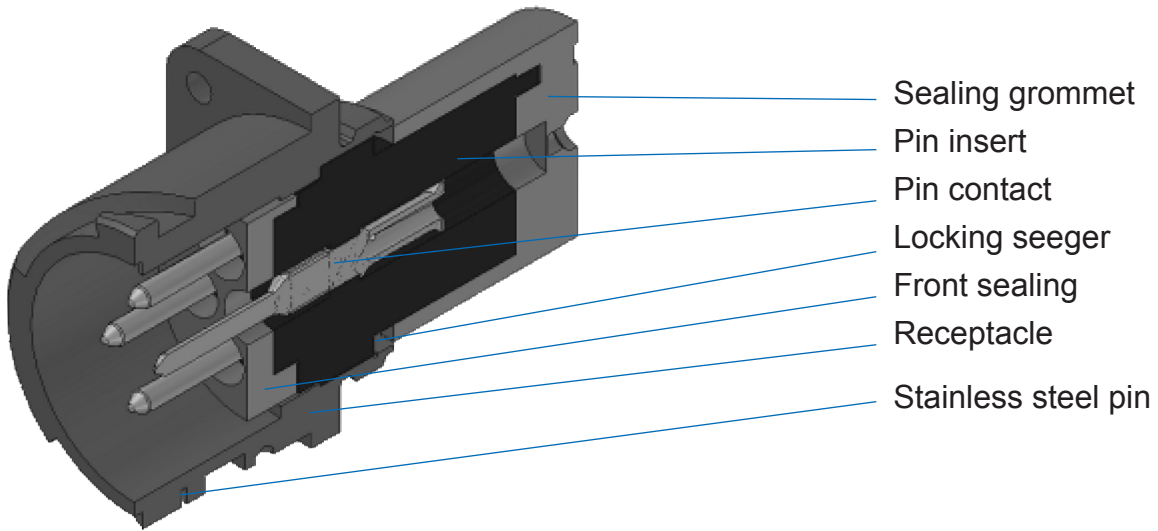
**PL 607-XXP**  
**PL 607-XXS**  
**Insulating Grommet**



| Glenair Part Number |               |                 |
|---------------------|---------------|-----------------|
| Arrangement         | Male (Pin)    | Female (Socket) |
| 20-4                | PL 60720-4P   | PL 60720-4S     |
| 20-7                | PL 60720-7P   | PL 60720-7S     |
| 22-23               | PL 60722-23P  | PL 60722-23S    |
| 18-19               | PL 60718-19P  | PL 60718-19S    |
| 20-15               | PL 60720-15P  | PL 60720-15S    |
| 22-14               | PL 60722-14P  | PL 60722-14S    |
| 24-10               | PL 60724-10P  | PL 60724-10S    |
| 24-A55              | PL 60724-A55P | PL 60724-A55S   |
| 28-21               | PL 60728-21P  | PL 60728-21S    |
| 32-A13              | PL 60732-A13P | PL 60732-A13S   |
| 36-10               | PL 60736-10P  | PL 60736-10S    |
| 36-A22              | PL 60736-22P  | PL 60736-22S    |
| 40-A35              | PL 60740-A35P | PL 60740-A35S   |
| 40-A60              | PL 60740-A60P | PL 60740-A60S   |
| 40-70               | PL 60740-70P  | PL 60740-70S    |

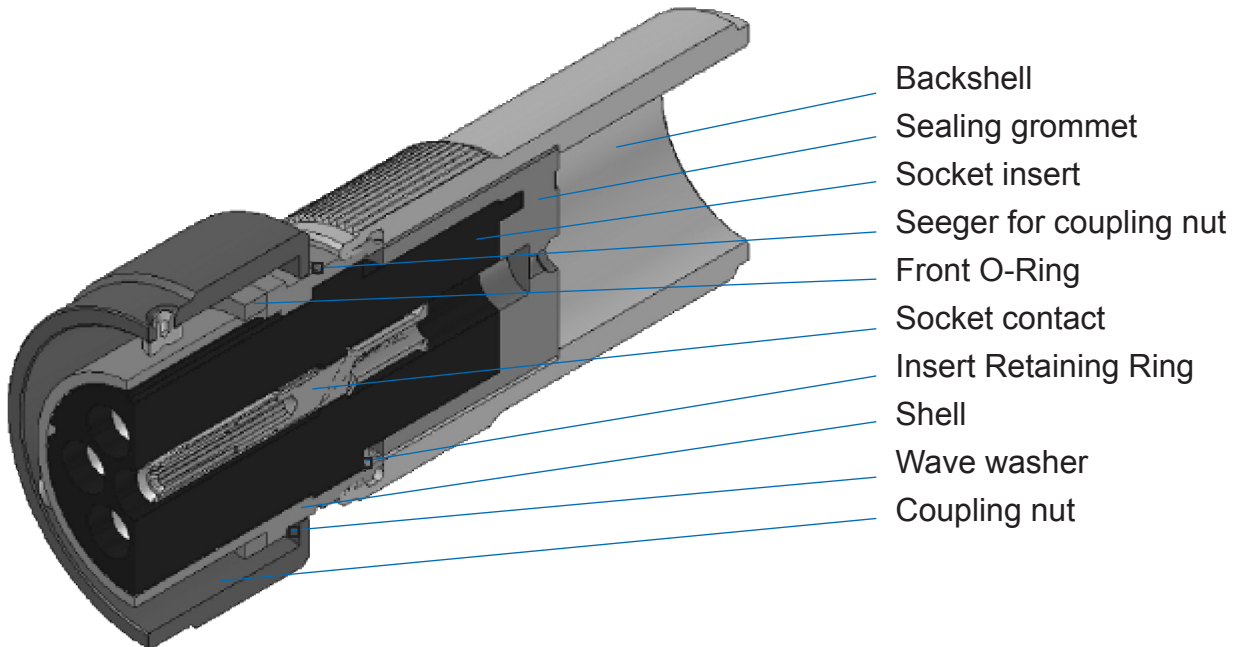


### Wall Mounted Receptacle



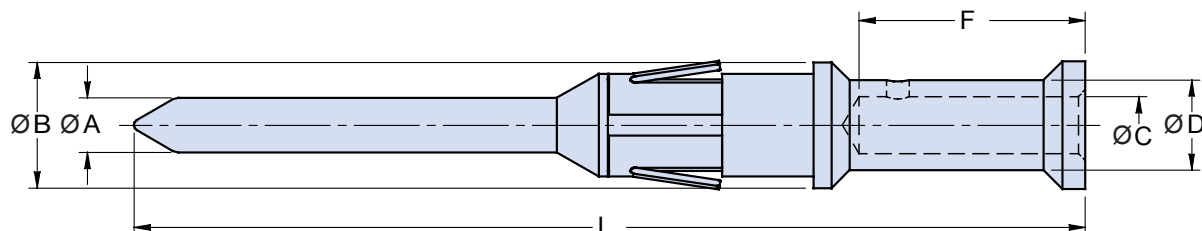
- Sealing grommet
- Pin insert
- Pin contact
- Locking seeger
- Front sealing
- Receptacle
- Stainless steel pin

### Straight Plug



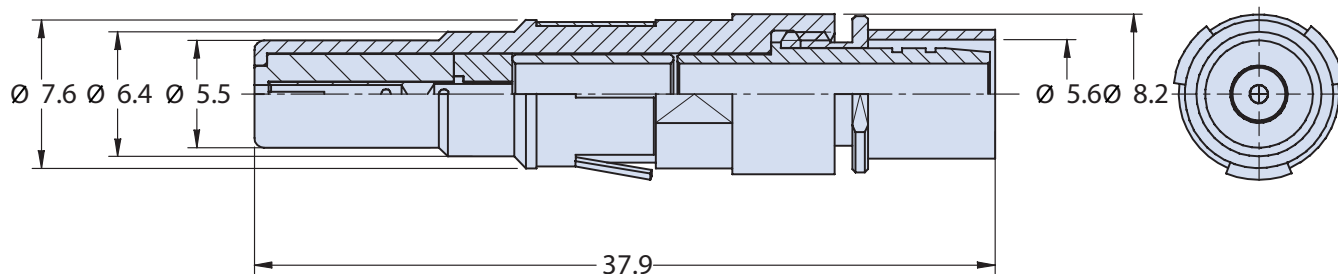
- Backshell
- Sealing grommet
- Socket insert
- Seeger for coupling nut
- Front O-Ring
- Socket contact
- Insert Retaining Ring
- Shell
- Wave washer
- Coupling nut

Crimped Pin Contacts



| Part Number | Size | Wire gauge      |         | ØA<br>±0,1 | ØB<br>+0<br>-0,1 | ØC<br>+0,1<br>-0 | ØD<br>±0,1 | F<br>±0,1 | L<br>±0,2 |
|-------------|------|-----------------|---------|------------|------------------|------------------|------------|-----------|-----------|
|             |      | mm <sup>2</sup> | AWG     |            |                  |                  |            |           |           |
| PL 570-20   | 20   | 0.15 ÷ 0.6      | 26 ÷ 20 | 1.00       | 2.4              | 1.3              | 2          | 4.5       | 32.0      |
| PL 40557    | 16   | 1.5             | 16      | 1.57       | 3.7              | 1.7              | 2.6        | 7.9       | 30.9      |
| PL 40557-12 | 16   | 0.5 ÷ 0.75      | 20      | 1.57       | 3.7              | 1.2              | 2.6        | 7.9       | 30.9      |
| PL 40557-15 | 16   | 1               | 18      | 1.57       | 3.7              | 1.5              | 2.6        | 7.9       | 30.9      |
| PL 40557-20 | 16   | 2               | 14      | 1.57       | 3.7              | 2                | 2.9        | 7.9       | 30.9      |
| PL 40557-26 | 16   | 2.5 ÷ 3.5       | 12      | 1.57       | 3.7              | 2.5              | 3.8        | 7.9       | 30.9      |
| PL 40561    | 12   | 2.5 ÷ 3.5       | 12      | 2.38       | 5.5              | 2.5              | 3.9        | 9.9       | 37.9      |
| PL 40561-12 | 12   | 0.5 ÷ 0.75      | 20      | 2.38       | 5.5              | 1.2              | 2.6        | 9.9       | 37.9      |
| PL 40561-20 | 12   | 1 ÷ 2           | 18 ÷ 14 | 2.38       | 5.5              | 2                | 3.9        | 9.9       | 37.9      |
| PL 40561-30 | 12   | 4               |         | 2.38       | 5.5              | 3                | 4.8        | 9.9       | 37.9      |
| PL 40792    | 8    | 6 ÷ 8           | 8       | 3.59       | 8.2              | 4.5              | 6.9        | 12.2      | 42        |
| PL 40792-30 | 8    | 4               |         | 3.59       | 8.2              | 3                | 4.8        | 12.2      | 42        |
| PL 40792-38 | 8    | 6               |         | 3.59       | 8.2              | 3.60             | 6.80       | 12.2      | 42        |
| PL 40792-50 | 8    | 10              |         | 3.59       | 8.2              | 5.00             | 6.90       | 12.2      | 42        |

Size 8 Coaxial Contact





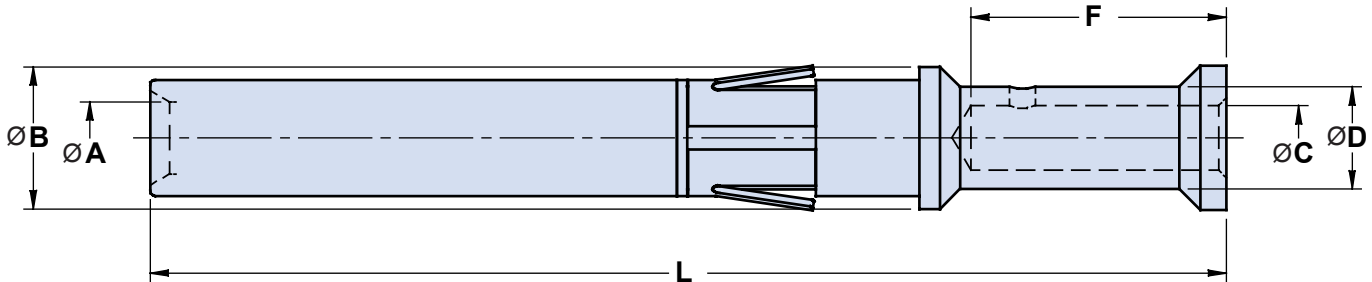
# Series ITH Rigid Insert Reverse Bayonet Connectors

## Dimensional Details

### Socket Contacts

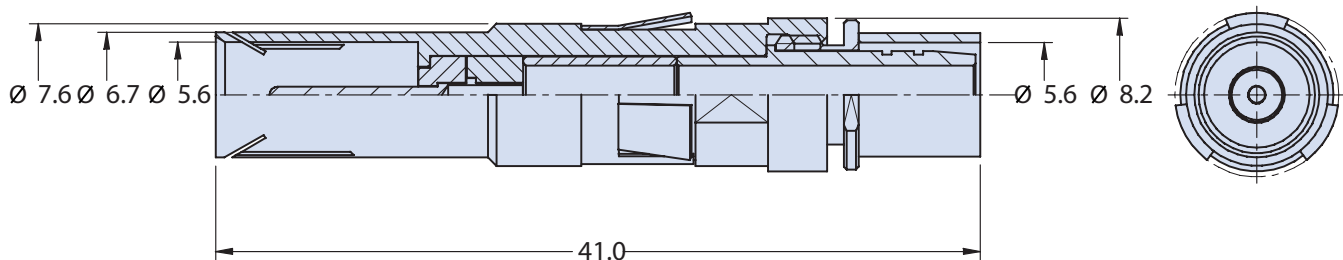


### Crimped Socket Contacts



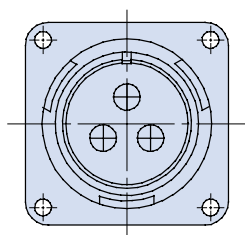
| Part Number | Size | Wire gauge      |         | ØA<br>±0.1 | ØB<br>+0<br>-0.1 | ØC<br>0.1<br>-0 | ØD<br>±0.1 | F<br>±0.1 | L<br>±0.2 |
|-------------|------|-----------------|---------|------------|------------------|-----------------|------------|-----------|-----------|
|             |      | mm <sup>2</sup> | AWG     |            |                  |                 |            |           |           |
| PL 40520    | 20   | 0.15 ÷ 0.6      | 26 ÷ 20 | 1.5        | 2.4              | 1.3             | 2          | 4.5       | 37.7      |
| PL 40556    | 16   | 1.5             | 16      | 1.65       | 3.7              | 1.7             | 2.6        | 7.9       | 34.9      |
| PL 40556-12 | 16   | 0.5 ÷ 0.75      | 20      | 1.65       | 3.7              | 1.2             | 2.6        | 7.9       | 34.9      |
| PL 40556-15 | 16   | 1               | 18      | 1.65       | 3.7              | 1.5             | 2.6        | 7.9       | 34.9      |
| PL 40556-20 | 16   | 2               | 14      | 1.65       | 3.7              | 2               | 2.9        | 7.9       | 34.9      |
| PL 40556-26 | 16   | 2.5 ÷ 3.5       | 12      | 1.65       | 3.7              | 2.5             | 3.8        | 7.9       | 34.9      |
| PL 40560    | 12   | 2.5 ÷ 3.5       | 12      | 2.45       | 5.5              | 2.5             | 3.9        | 9.9       | 37.9      |
| PL 40560-12 | 12   | 0.5 ÷ 0.75      | 20      | 2.45       | 5.5              | 1.2             | 2.6        | 9.9       | 37.9      |
| PL 40560-20 | 12   | 1 ÷ 2           | 18 ÷ 14 | 2.45       | 5.5              | 2               | 3.9        | 9.9       | 37.9      |
| PL 40560-30 | 12   | 4               |         | 2.45       | 5.5              | 3               | 4.8        | 9.9       | 37.9      |
| PL 40793    | 8    | 6 ÷ 8           | 8       | 3.65       | 8.2              | 4.5             | 6.9        | 12.2      | 41.8      |
| PL 40793-30 | 8    | 4               |         | 3.65       | 8.2              | 3               | 4.8        | 12.2      | 41.8      |
| PL 40793-38 | 8    | 6               |         | 3.65       | 8.2              | 3.60            | 6.80       | 12.2      | 41.8      |
| PL 40793-50 | 8    | 10              |         | 3.65       | 8.2              | 5.00            | 6.90       | 12.2      | 41.8      |

### Size 8 Coaxial Contact

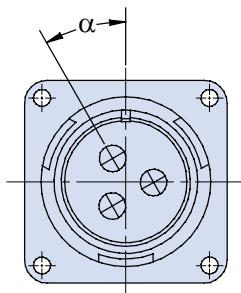


| Contact layout | Contacts |    |    |    | Alternative polarizations |     |     |     |
|----------------|----------|----|----|----|---------------------------|-----|-----|-----|
|                | 8        | 12 | 16 | 20 | Degrees $\alpha$          |     |     |     |
|                |          |    |    |    | W                         | X   | Y   | Z   |
| 18-19          |          |    | 10 |    |                           | 120 | 240 |     |
| 20-15          |          | 7  |    |    | 80                        |     |     | 280 |
| 22-14          |          |    | 19 |    | 80                        |     |     | 280 |
| 24-10          | 7        |    |    |    | 80                        |     |     | 280 |
| 24-A55         |          |    |    | 55 | 80                        | 110 | 250 | 280 |
| 28-21          |          |    | 37 |    | 80                        | 110 | 250 | 280 |
| 32-A13         |          | 13 |    |    | 65                        | 130 | 230 | 295 |
| 36-10          |          |    | 48 |    | 80                        | 125 | 235 | 280 |
| 36-A22         |          | 22 |    |    | 80                        | 110 | 250 | 280 |
| 40-A35         |          | 35 |    |    | 70                        | 130 | 230 | 290 |
| 40-A60         |          |    | 60 |    | 80                        | 110 | 250 | 280 |
| 40-70          |          |    | 70 |    | 80                        | 110 | 250 | 280 |
| 20-4           |          |    | 7  |    | 45                        | 110 | 250 |     |
| 20-7           |          | 8  |    |    | 80                        | 110 | 250 | 280 |
| 22-23          |          | 4  |    |    | 35                        |     | 250 |     |

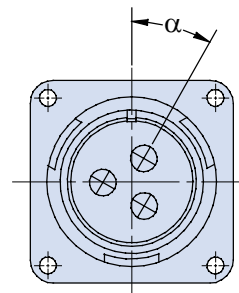
**Insert Rotation (Front View of Pin Insert)**



Normal Position



Alternate Position with Socket Contacts



Alternate Position with Pin Contacts

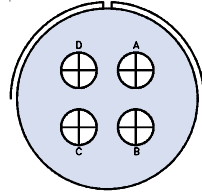


# Series ITH Rigid Insert Reverse Bayonet Connectors

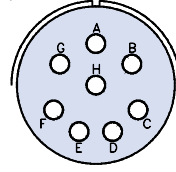
## Contact Arrangements, Polarizations, and Insert Rotations



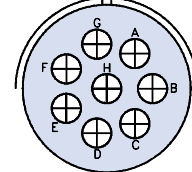
Front View of  
Pin Insert  
Arrangement:  
Contact Size:



20-4  
12

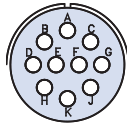


20-7  
16

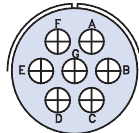


22-23  
12

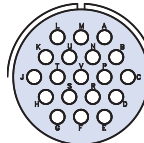
Front View of  
Pin Insert  
Arrangement:  
Contact Size:



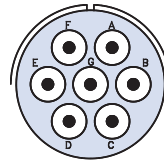
18-19  
16



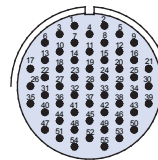
20-15  
12



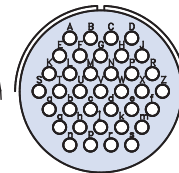
22-14  
16



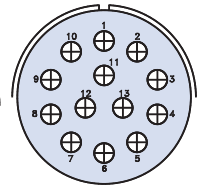
24-10  
8



24-A55  
20

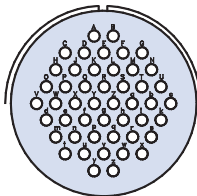


28-21  
16

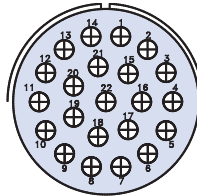


32-A13  
12

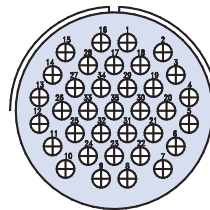
Front View of  
Pin Insert  
Arrangement:  
Contact Size:



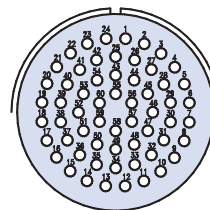
36-10  
16



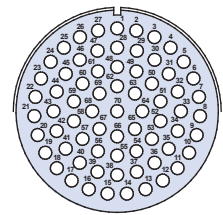
36-A22  
12



40-A35  
12



40-A60  
16



40-70  
16

**CONTACT  
LEGEND**



20



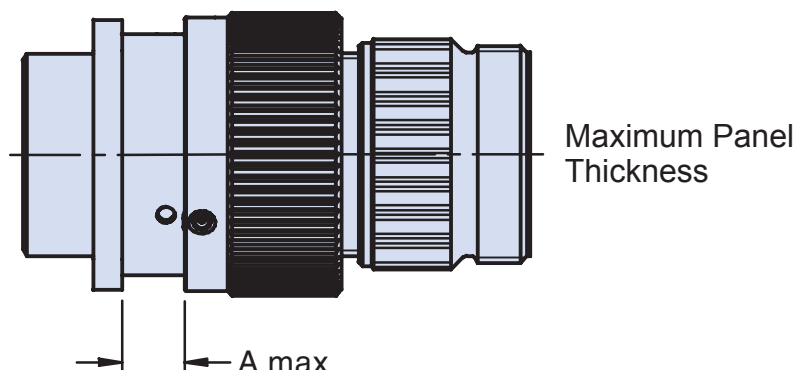
16



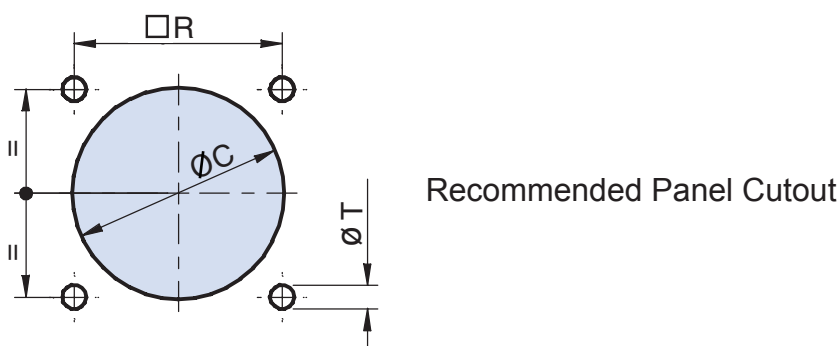
12



8

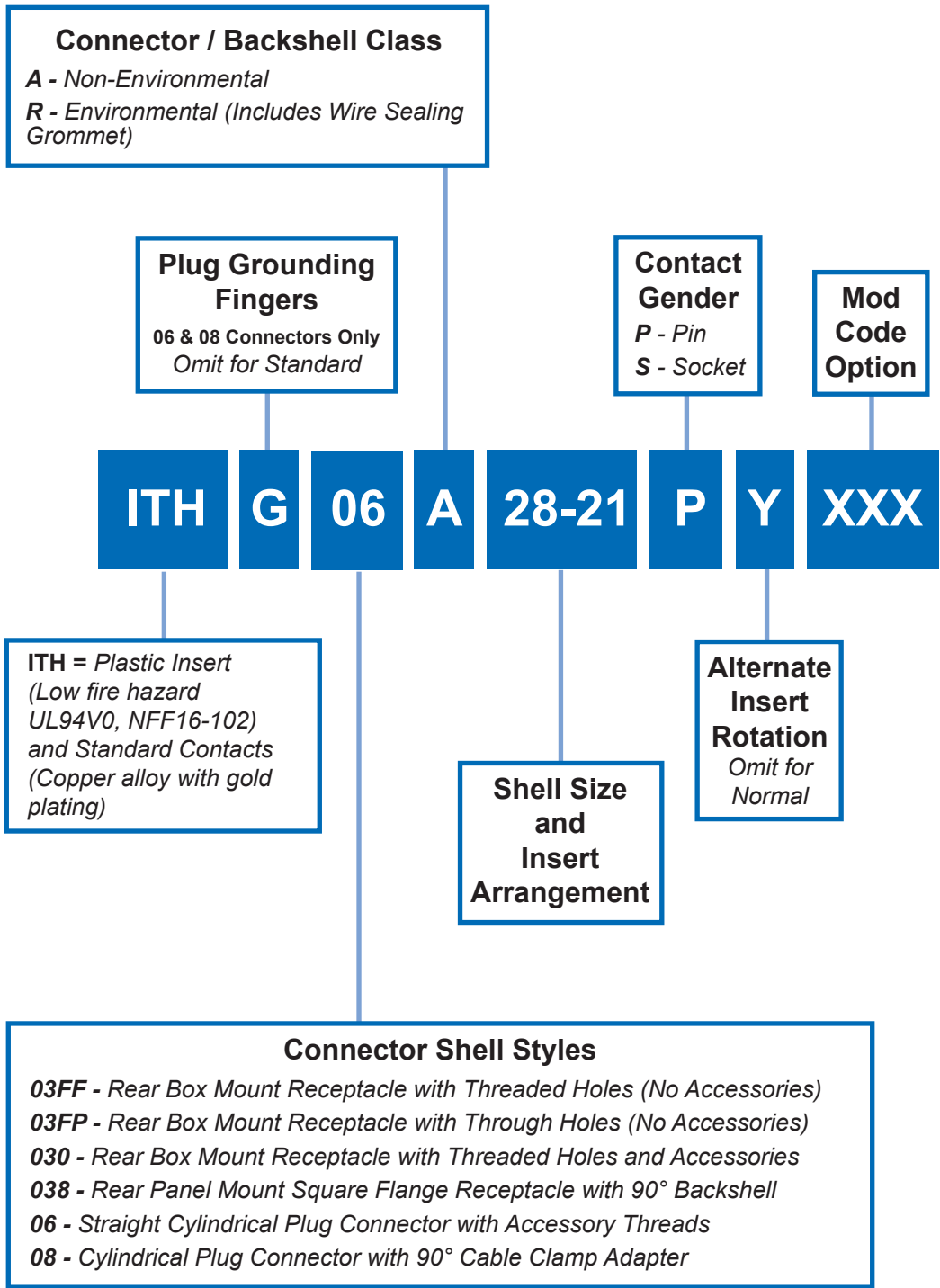


| Panel thickness for type 03 FF and 030 connectors |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|
| Shell size  | 18   | 20   | 22   | 24   | 28   | 32   | 36   | 40   |
| A   | 7,50 | 7,50 | 7,50 | 7,50 | 7,50 | 7,50 | 7,50 | 7,50 |

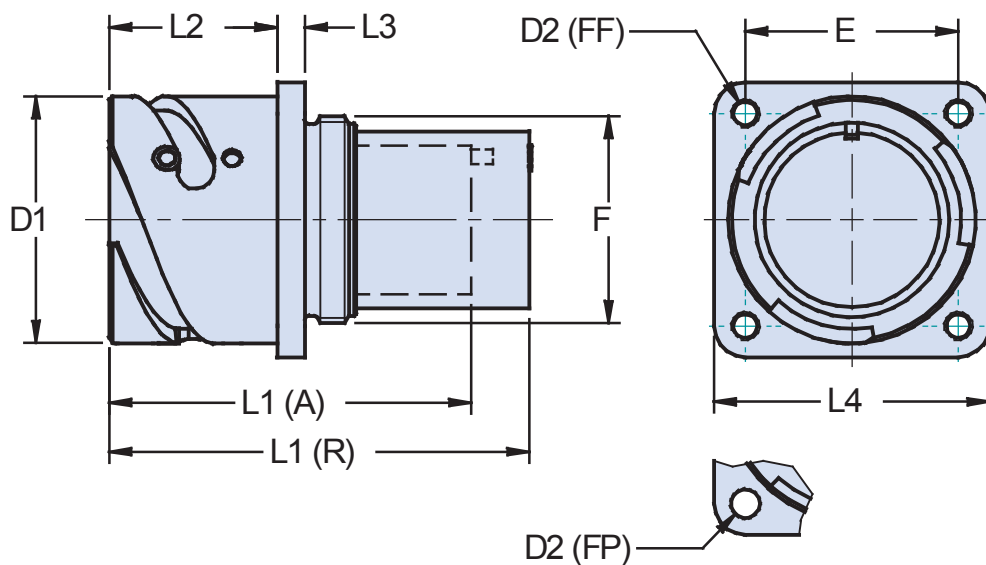
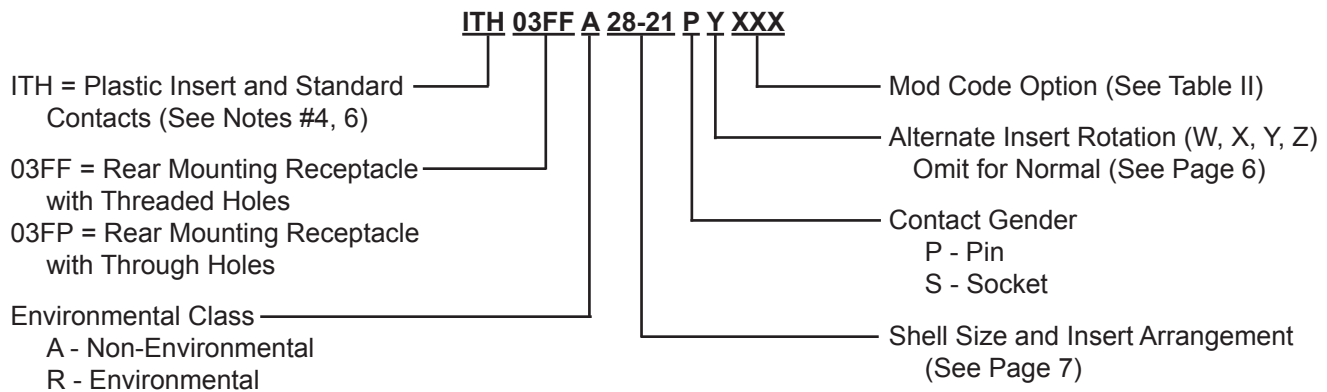


| Panel cutout for type 03 FP connectors (front panel mounting)       |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|
| Shell size  | 18   | 20   | 22   | 24   | 28   | 32   | 36   | 40   |
| ØC  | 26,5 | 30,0 | 33,0 | 36,0 | 42,0 | 48,5 | 55,0 | 61,0 |
| R ±0,1  | 27,0 | 29,4 | 31,8 | 34,9 | 39,7 | 44,5 | 49,2 | 55,5 |
| ØT  | 3,4  | 3,4  | 3,4  | 3,9  | 3,9  | 4,5  | 4,5  | 4,5  |
| Panel cutout for type 03FF and 030 connectors (rear panel mounting) |      |      |      |      |      |      |      |      |
| Shell size  | 18   | 20   | 22   | 24   | 28   | 32   | 36   | 40   |
| ØC  | 31,7 | 35,0 | 38,3 | 41,8 | 47,6 | 54,3 | 60,5 | 66,4 |
| R ±0,1  | 27,0 | 29,4 | 31,8 | 34,9 | 39,7 | 44,5 | 49,2 | 55,5 |
| ØT  | 4,5  | 4,5  | 4,5  | 4,5  | 5,5  | 5,5  | 5,5  | 5,5  |





**ITH 03FF A and ITH 03FP A  
ITH 03FF R and ITH 03FP R  
Box Mount Receptacle Connector  
for Rear Panel Mounting**



**Application Notes:**

1. Box mount receptacle connector with square flange for front or rear panel mounting. Optional threaded or through mounting holes.
2. Environmental class A (non-environmental) not supplied with grommet; Class R (environmental) supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium free conductive plating and black passivation.
4. Standard contact material consists of copper alloy with gold plating.
5. A broad range of other front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.

**ITH 03FF A and ITH 03FP A  
ITH 03FF R and ITH 03FP R  
Box Mount Receptacle Assembly  
for Rear Panel Mounting**



**TABLE I: DIMENSIONS**

| Shell Size | D1          | D2 |           | E    | F thread        | L1        |           | L2         | L3   | L4   |
|------------|-------------|----|-----------|------|-----------------|-----------|-----------|------------|------|------|
|            | +0<br>-0.15 | FF | FP<br>H13 | ±0.1 |                 | A<br>±0.3 | R<br>±0.3 | +0.4<br>-0 | ±0.2 | ±0.3 |
| <b>18</b>  | 30.8        | M4 | 3.2       | 27.0 | 1.0000 - 20UNEF | 50.0      | 58.0      | 23.05      | 4.0  | 35.0 |
| <b>20</b>  | 34.2        | M4 | 3.2       | 29.4 | 1.1250 - 18UNEF | 50.0      | 58.0      | 23.05      | 4.0  | 38.0 |
| <b>22</b>  | 37.4        | M4 | 3.2       | 31.8 | 1.2500 - 18UNEF | 50.0      | 58.0      | 23.05      | 4.0  | 41.0 |
| <b>24</b>  | 40.9        | M4 | 3.7       | 34.9 | 1.3750 - 18UNEF | 50.0      | 58.0      | 23.05      | 4.0  | 44.5 |
| <b>28</b>  | 46.7        | M5 | 3.7       | 39.7 | 1.6250 - 18UNEF | 50.0      | 58.0      | 24.05      | 4.0  | 50.8 |
| <b>32</b>  | 53.4        | M5 | 4.3       | 44.5 | 1.8750 - 16UN   | 50.0      | 58.0      | 24.05      | 4.0  | 57.0 |
| <b>36</b>  | 59.6        | M5 | 4.3       | 49.2 | 2.0625 - 16UN   | 50.0      | 58.0      | 24.05      | 4.0  | 63.5 |
| <b>40</b>  | 65.5        | M5 | 4.3       | 55.5 | 2.3125 - 16UN   | 50.0      | 58.0      | 24.05      | 4.0  | 69.9 |

**TABLE II: MODIFICATION CODES**

| CONTACT OPTIONS   |                              |
|---|------------------------------|
| Sym   | Description                  |
| B0  | Connector less contacts      |
| Omit for standard version (Gold Plated<br>Copper Alloy Contacts Supplied) |                              |
| FINISH OPTIONS  |                              |
| Sym   | Description                  |
| F2  | Bright Nickel Plating        |
| F6  | Black Electrodeposited Paint |
| F8  | Olive Drab Zn-Co Plating     |
| Omit for standard version<br>(Cad free / black passivation Finish)        |                              |

# ITH 030 A and ITH 030 R

## Rear Box Mount Receptacle with Accessory Backshell and a Selection of Cable Clamps

**ITH 030 A 28-21 P Y XXX**

ITH = Plastic Insert and Standard Contacts (See Notes #4, 6)

030 = Rear Mounting Receptacle with Threaded Holes

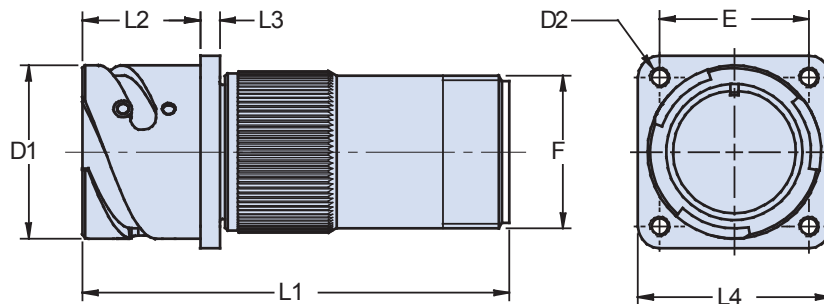
Environmental Class  
A - Non-Environmental  
R - Environmental

Mod Code Option (See Table II)

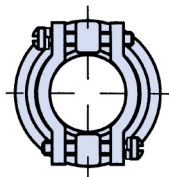
Alternate Insert Rotation (W, X, Y, Z)  
Omit for Normal (See Page 6)

Contact Gender  
P - Pin  
S - Socket

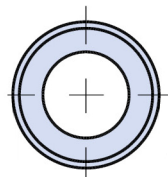
Shell Size and Insert Arrangement (See Page 7)



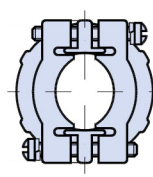
Order Cable Clamps and Sleeves Separately or Use Mod Codes (Table II) to Add Clamp to This Assembly.



**IT 3057 C**  
Cable Clamp



**IT 3420**  
Neoprene Sleeve



**IT 3057 A**  
Cable Clamp

### Application Notes:

1. Box mount receptacle connector with square flange for rear panel mounting and backshell for use with cable clamps or BR backshells. Threaded mounting holes.
2. Environmental class A (non-environmental) not supplied with grommet; Class R (environmental) supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium free conductive plating and black passivation.
4. Standard contact material consists of copper alloy with gold plating.
5. A broad range of other front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.



**ITH 030 A and ITH 030 R**  
**Rear Box Mount Receptacle with Accessory Backshell**  
**and a Selection of Cable Clamps**



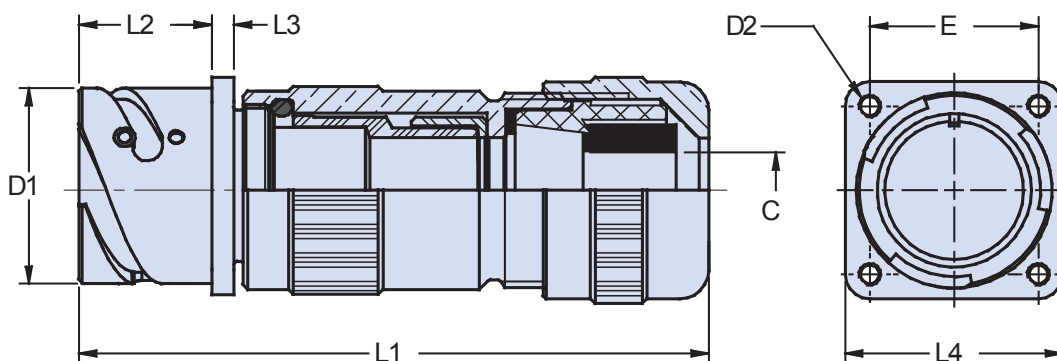
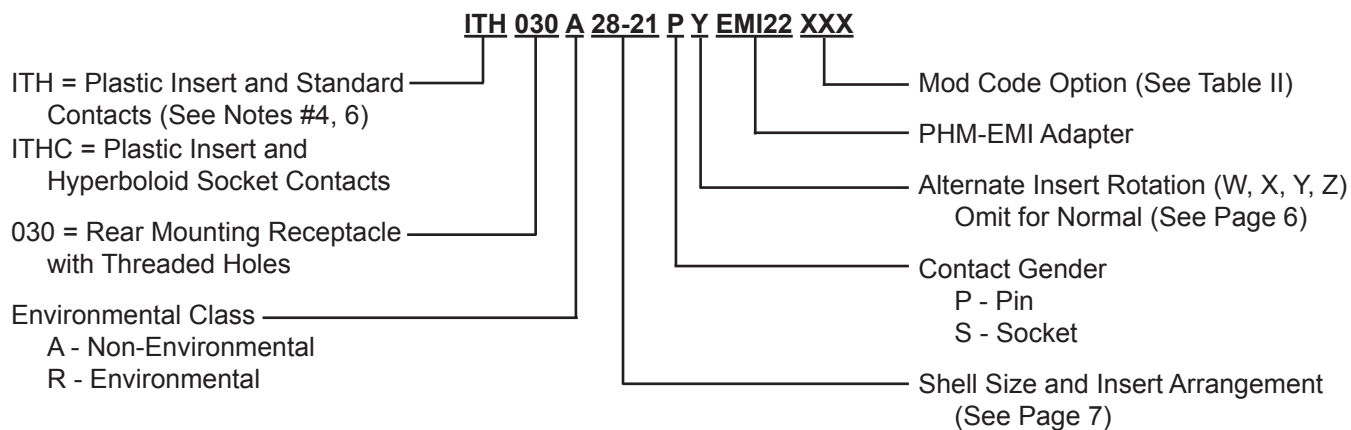
**TABLE I: DIMENSIONS**

| Shell Size | D1<br>+0<br>-0.15 | D2<br>FF | E<br>±0.1 | F thread        | L1<br>Max. | L2<br>+0.4<br>-0 | L3<br>±0.2 | L4<br>±0.3 |
|------------|-------------------|----------|-----------|-----------------|------------|------------------|------------|------------|
| 18         | 30.8              | M4       | 27.0      | 1.0000 - 20UNEF | 89.0       | 23.05            | 4.0        | 35.0       |
| 20         | 34.2              | M4       | 29.4      | 1.1875 - 18UNEF | 89.0       | 23.05            | 4.0        | 38.0       |
| 22         | 37.4              | M4       | 31.8      | 1.1875 - 18UNEF | 89.0       | 23.05            | 4.0        | 41.0       |
| 24         | 40.9              | M4       | 34.9      | 1.4375 - 18UNEF | 89.0       | 23.05            | 4.0        | 44.5       |
| 28         | 46.7              | M5       | 39.7      | 1.4375 - 18UNEF | 93.0       | 24.05            | 4.0        | 50.8       |
| 32         | 53.4              | M5       | 44.5      | 1.7500 - 18UNS  | 93.0       | 24.05            | 4.0        | 57.0       |
| 36         | 59.6              | M5       | 49.2      | 2.0000 - 18UNS  | 105.0      | 24.05            | 4.0        | 63.5       |
| 40         | 65.5              | M5       | 55.5      | 2.2500 - 16UN   | 105.0      | 24.05            | 4.0        | 69.9       |

**TABLE II: MODIFICATION CODES**

| CONTACT OPTIONS  |                              | ACCESSORY OPTIONS         |  |
|--|------------------------------|---------------------------|--|
| Sym  | Description                  |                           |  |
| B0   | Connector less contacts      | N0                        | Connector less backshell   |
| Omit for standard version (Gold Plated Copper Alloy Contacts Supplied) |                              | N1                        | Connector with IT 3057 A cable clamp                             |
|  |                              | N5                        | Connector with IT 3057 C cable clamp                             |
| FINISH OPTIONS   |                              | N12                       | Connector with IT 3057 A cable clamp and IT 3420 neoprene sleeve |
|  |                              | Omit for standard version |  |
| Sym  | Description                  |                           |  |
| F2   | Bright Nickel Plating        |                           |  |
| F6   | Black Electrodeposited Paint |                           |  |
| F8   | Olive Drab Zn-Co Plating     |                           |  |
| Omit for standard version (Cad free / black passivation Finish)        |                              |                           |  |

## ITH 030 (EMI) and ITHC 030 (EMI) Rear Box Mount Receptacle with Backshell for EMI Shielded and Jacketed Cable



### Application Notes:

1. Box mount receptacle connector with square flange for rear panel mounting and backshell to be used with shielded jacket cables. Threaded mounting holes.
2. Environmental class A (non-environmental) not supplied with grommet; Class R (environmental) supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium conductive plating and black passivation.
4. Contact material consists of copper alloy with gold plating.
5. A broad range of other front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.

**ITH 030 (EMI) and ITHC 030 (EMI)  
Rear Box Mount Receptacle  
with Backshell for EMI Shielded and Jacketed Cable**



**TABLE I: DIMENSIONS**

| Shell size | EMI size | C    |      | D1<br>+0<br>-0.15 | D2<br>thread | E<br>±0.1 | L1<br>Max | L2<br>+0.4<br>-0 | L3<br>±0.2 | L4<br>±0.3 |
|------------|----------|------|------|-------------------|--------------|-----------|-----------|------------------|------------|------------|
|            |          | Min  | Max  |                   |              |           |           |                  |            |            |
| 18         | 18       | 2.0  | 16.5 | 30.8              | M4           | 27.0      | 85.0      | 23.05            | 4.0        | 35.0       |
| 20         | 18       | 2.0  | 16.5 | 34.2              | M4           | 29.4      | 85.0      | 23.05            | 4.0        | 38.0       |
| 22         | 18       | 2.0  | 16.5 | 37.4              | M4           | 31.8      | 85.0      | 23.05            | 4.0        | 41.0       |
| 24         | 18       | 2.0  | 16.5 | 40.9              | M4           | 34.9      | 90.0      | 23.05            | 4.0        | 44.5       |
| 28         | 22       | 15.0 | 20.0 | 46.7              | M5           | 39.7      | 90.0      | 24.05            | 4.0        | 50.8       |
|            | 24       | 19.0 | 24.0 |                   |              |           |           |                  |            |            |
| 32         | 22       | 15.0 | 20.0 | 53.4              | M5           | 44.5      | 100.0     | 24.05            | 4.0        | 57.0       |
|            | 24       | 19.0 | 24.0 |                   |              |           |           |                  |            |            |
| 36         | 35       | 23.0 | 35.0 | 59.6              | M5           | 49.2      | 110.0     | 24.05            | 4.0        | 63.5       |
| 40         | 35       | 23.0 | 35.0 | 65.5              | M5           | 55.5      | 110.0     | 24.05            | 4.0        | 69.9       |

**TABLE II: MODIFICATION CODES**

| CONTACT OPTIONS  |                              |
|--|------------------------------|
| Sym  | Description                  |
| B0   | Connector less contacts      |
| Omit for standard version (Gold Plated Copper Alloy Contacts Supplied) |                              |
| FINISH OPTIONS   |                              |
| Sym  | Description                  |
| F2   | Bright Nickel Plating        |
| F6   | Black Electrodeposited Paint |
| F8   | Olive Drab Zn-Co Plating     |
| Omit for standard version (Cad free / black passivation Finish)        |                              |

## ITH 030 A (M) Rear Panel Box Mount Receptacle with Metric Thread Cable Gland Backshell

**ITH 030 A 20-27 P Y M32x1.5 XXX**

ITH = Plastic Insert and Standard Contacts (See Notes #4, 6)

030 = Rear Mounting Receptacle with Threaded Holes

Environmental Class  
A - Non-Environmental  
R - Environmental

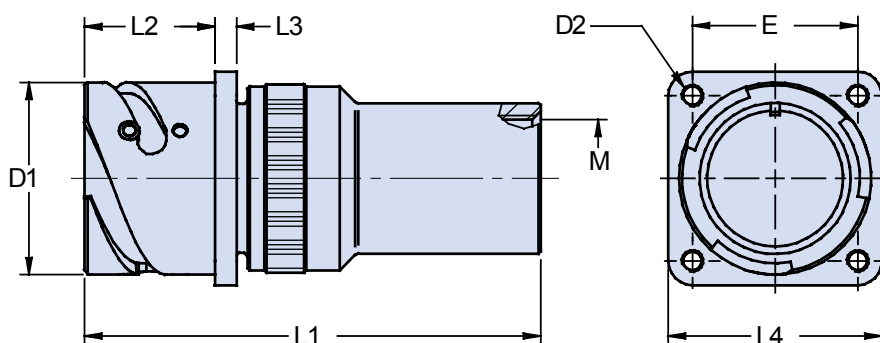
Shell Size and Insert Arrangement (See Page 7)

Mod Code Option (See Table II)

Metric Thread Size

Alternate Insert Rotation (W, X, Y, Z)  
Omit for Normal (See Page 6)

Contact Gender  
P - Pin  
S - Socket



### Application Notes:

1. Rear panel box mount receptacle with metric thread cable gland backshell. Threaded mounting holes.
2. Environmental class A (non-environmental) not supplied with grommet; Class R (environmental) supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium free conductive plating and black passivation.
4. Standard contact material consists of copper alloy with gold plating.
5. A broad range of other front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.
7. Metric cable glands not included.



**ITH 030 A (M)  
Rear Panel Box Mount Receptacle  
with Metric Thread Cable Gland Backshell**



**TABLE I: DIMENSIONS**

| Shell Size | D1<br>+0<br>-0.15 | D2<br>FF | E<br>±0.1 | M thread | L1<br>Max. | L2<br>+0.4<br>-0 | L3<br>±0.2 | L4<br>±0.3 |
|------------|-------------------|----------|-----------|----------|------------|------------------|------------|------------|
| 18         | 30.8              | M4       | 27.0      | M20x1.5  | 89.0       | 23.05            | 4.0        | 35.0       |
| 20         | 34.2              | M4       | 29.4      | M25x1.5  | 89.0       | 23.05            | 4.0        | 38.0       |
| 22         | 37.4              | M4       | 31.8      | M25x1.5  | 89.0       | 23.05            | 4.0        | 41.0       |
| 24         | 40.9              | M4       | 34.9      | M32x1.5  | 89.0       | 23.05            | 4.0        | 44.5       |
| 28         | 46.7              | M5       | 39.7      | M32x1.5  | 93.0       | 24.05            | 4.0        | 50.8       |
| 32         | 53.4              | M5       | 44.5      | M36x1.5  | 93.0       | 24.05            | 4.0        | 57.0       |
| 36         | 59.6              | M5       | 49.2      | M40x1.5  | 105.0      | 24.05            | 4.0        | 63.5       |
| 40         | 65.5              | M5       | 55.5      | M48x1.5  | 105.0      | 24.05            | 4.0        | 69.9       |

**TABLE II: MODIFICATION CODES**

| CONTACT OPTIONS  |                              |
|--|------------------------------|
| Sym  | Description                  |
| B0   | Connector less contacts      |
| Omit for standard version (Gold Plated Copper Alloy Contacts Supplied) |                              |
| FINISH OPTIONS   |                              |
| Sym  | Description                  |
| F2   | Bright Nickel Plating        |
| F6   | Black Electrodeposited Paint |
| F8   | Olive Drab Zn-Co Plating     |
| Omit for standard version (Cad free / black passivation Finish)        |                              |

**ITH 06 A 28-21 P Y NO XXX**

ITH = Plastic Insert and Standard  
Contacts (See Notes #4, 6)

06 = Straight Plug with Accessory  
Threads

Environmental Class  
A - Non-Environmental  
R - Environmental

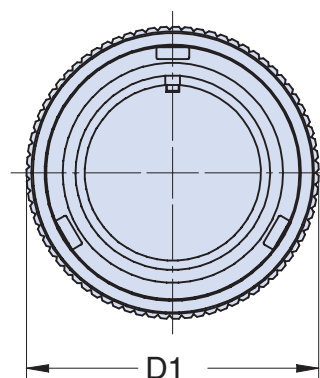
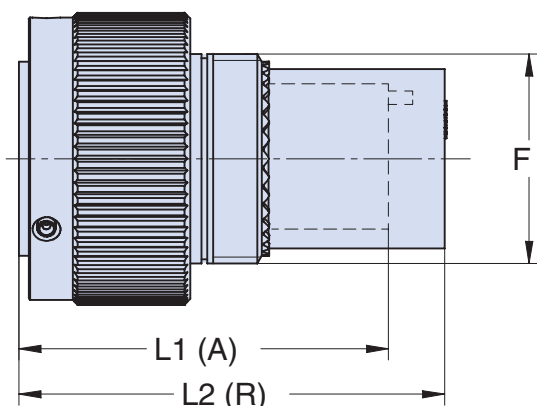
Mod Code Option (See Table II)

No Connector Accessory Provided

Alternate Insert Rotation (W, X, Y, Z)  
Omit for Normal (See Page 6)

Contact Gender  
P - Pin  
S - Socket

Shell Size and Insert Arrangement  
(See Page 7)



**Application Notes:**

1. Straight Plug connector with accessory threads for the mounting of available backshells and cable clamps.
2. Environmental class A (non-environmental) not supplied with grommet; Class R (environmental) supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium free conductive plating and black passivation.
4. Standard contact material consists of copper alloy with gold plating.
5. A broad range of front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.

TABLE I: DIMENSIONS

| Shell size | D1<br>±0.2 | F thread        | L1        |           |
|------------|------------|-----------------|-----------|-----------|
|            |            |                 | A<br>±0.3 | R<br>±0.3 |
| 18         | 36.2       | 1.0000 - 20UNEF | 50.0      | 58.0      |
| 20         | 39.8       | 1.1250 - 18UNEF | 50.0      | 58.0      |
| 22         | 43.0       | 1.2500 - 18UNEF | 50.0      | 58.0      |
| 24         | 46.4       | 1.3750 - 18UNEF | 50.0      | 58.0      |
| 28         | 53.0       | 1.6250 - 18UNEF | 50.0      | 58.0      |
| 32         | 60.0       | 1.8750 - 16UN   | 50.0      | 58.0      |
| 36         | 66.2       | 2.0625 - 16UN   | 50.0      | 58.0      |
| 40         | 72.3       | 2.3125 - 16UN   | 50.0      | 58.0      |

TABLE II: MODIFICATION CODES

| CONTACT OPTIONS   |                              |
|---|------------------------------|
| Sym   | Description                  |
| B0  | Connector less contacts      |
| Omit for standard version (Gold Plated<br>Copper Alloy Contacts Supplied) |                              |
| FINISH OPTIONS  |                              |
| Sym   | Description                  |
| F2  | Bright Nickel Plating        |
| F6  | Black Electrodeposited Paint |
| F8  | Olive Drab Zn-Co Plating     |
| Omit for standard version<br>(Cad free / black passivation Finish)        |                              |

# ITH 06 A and ITH 06 R Straight Plug with Accessory Backshell and a Selection of Cable Clamps

**ITH G 06 A 28-21 P Y XXX**

ITH = Plastic Insert and Standard  
Contacts (See Notes #4, 6)

Grounding Fingers  
(Omit for Standard)

06 = Straight Plug

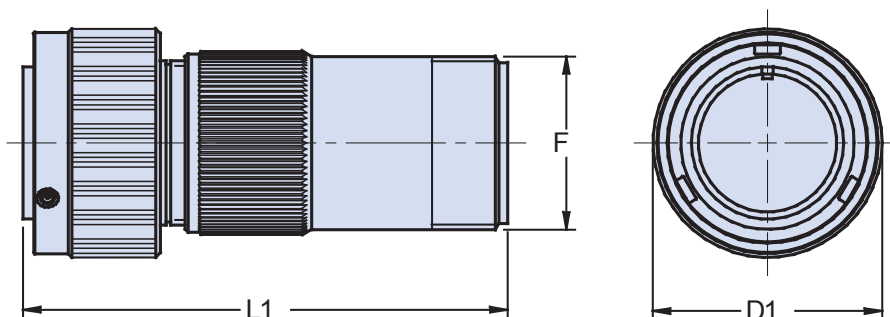
Environmental Class  
A - Non-Environmental  
R - Environmental

Mod Code Option (See Table II)

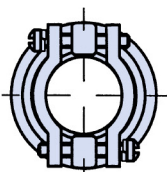
Alternate Insert Rotation (W, X, Y, Z)  
Omit for Normal (See Page 6)

Contact Gender  
P - Pin  
S - Socket

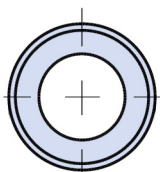
Shell Size and Insert Arrangement  
(See Page 7)



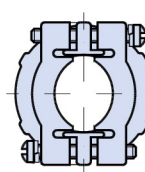
Order Cable Clamps and  
Sleeves Separately or Use  
Mod Codes (Table II) to Add  
Clamp to This Assembly.



**IT 3057 C  
Cable Clamp**



**IT 3420  
Neoprene Sleeve**



**IT 3057 A  
Cable Clamp**

**Application Notes:**

1. Straight plug connector with backshell for use with strain-relief cable clamps.
2. Environmental class A (non-environmental) not supplied with grommet; Class R (environmental) supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium free conductive plating and black passivation.
4. Standard contact material consists of copper alloy with gold plating.
5. A broad range of other front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.



**ITH 06 A and ITH 06 R  
Sraight Plug with Accessory Backshell  
and a Selection of Cable Clamps**



**TABLE I: DIMENSIONS**

| Shell size | D1<br>±0.2 | F thread        | L1<br>Max. |
|------------|------------|-----------------|------------|
| 18         | 36.2       | 1.0000 - 20UNEF | 89.0       |
| 20         | 39.8       | 1.1875 - 18UNEF | 89.0       |
| 22         | 43.0       | 1.1875 - 18UNEF | 89.0       |
| 24         | 46.4       | 1.4375 - 18UNEF | 89.0       |
| 28         | 53.0       | 1.4375 - 18UNEF | 93.0       |
| 32         | 60.0       | 1.7500 - 18UNS  | 93.0       |
| 36         | 66.2       | 2.0000 - 18UNS  | 105.0      |
| 40         | 72.3       | 2.2500 - 16UN   | 105.0      |

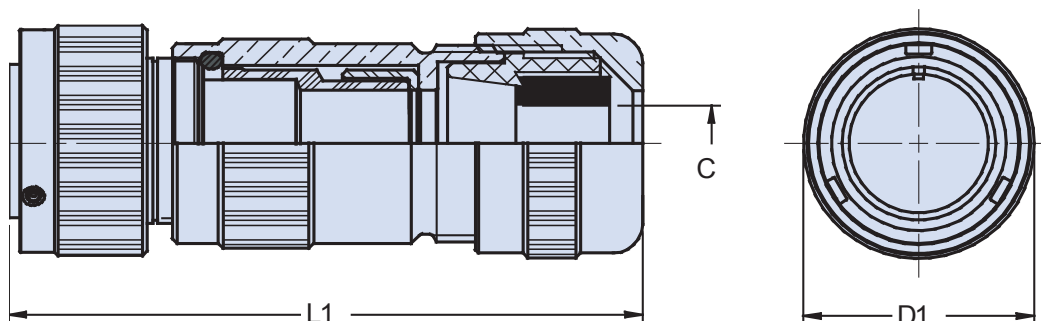
**TABLE II: MODIFICATION CODES**

| CONTACT OPTIONS  |                              | ACCESSORY OPTIONS         |  |
|--|------------------------------|---------------------------|--|
| Sym  | Description                  |                           |  |
| B0   | Connector less contacts      | N0                        | Connector less backshell   |
| Omit for standard version (Gold Plated Copper Alloy Contacts Supplied) |                              | N1                        | Connector with IT 3057 A cable clamp                             |
|  |                              | N5                        | Connector with IT 3057 C cable clamp                             |
| Omit for standard version (Cad free / black passivation Finish)        |                              | N12                       | Connector with IT 3057 A cable clamp and IT 3420 neoprene sleeve |
|  |                              | Omit for standard version |  |
| FINISH OPTIONS   |                              |                           |  |
| Sym  | Description                  |                           |  |
| F2   | Bright Nickel Plating        |                           |  |
| F6   | Black Electrodeposited Paint |                           |  |
| F8   | Olive Drab Zn-Co Plating     |                           |  |

# ITH 06 A (EMI) Straight Plug Connector with Backshell for EMI Shielded and Jacketed Cable

**ITH G 06 A 28-21 P Y EMI22 XXX**

|   |  |
|---|--|
| <p>ITH = Plastic Insert and Standard Contacts (See Notes #4, 6)</p> <p>Grounding Fingers (Omit for Standard)</p> <p>06 = Straight Plug</p> <p>Environmental Class<br/>A = Non-Environmental</p> <p>Shell Size and Insert Arrangement (See Page 7)</p> | <p>Mod Code Option (See Table II)</p> <p>PHM-EMI Adapter</p> <p>Alternate Insert Rotation (W, X, Y, Z)<br/>Omit for Normal (See Page 6)</p> <p>Contact Gender<br/>P - Pin<br/>S - Socket</p> |
|---|--|



**Application Notes:**

1. Straight plug connector with backshell to be used with shielded and jacketed cables.
2. Environmental class A (non-environmental) not supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium free conductive plating and black passivation.
4. Standard contact material consists of copper alloy with gold plating.
5. A broad range of other front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.

**ITH 06 A (EMI)  
Straight Plug Connector  
with Backshell for EMI Shielded and Jacketed Cable**



**TABLE I: DIMENSIONS**

| Shell size | EMI size | C    |      | D1<br>±0.2 | L1<br>Max |
|------------|----------|------|------|------------|-----------|
|            |          | Min  | Max  |            |           |
| 18         | 18       | 2.0  | 16.5 | 36.2       | 85.0      |
| 20         | 18       | 2.0  | 16.5 | 39.8       | 85.0      |
| 22         | 18       | 2.0  | 16.5 | 43.0       | 85.0      |
| 24         | 18       | 2.0  | 16.5 | 46.4       | 90.0      |
| 28         | 22       | 15.0 | 20.0 | 53.0       | 90.0      |
|            | 24       | 19.0 | 24.0 |            |           |
| 32         | 22       | 15.0 | 20.0 | 60.0       | 100.0     |
|            | 24       | 19.0 | 24.0 |            |           |
| 36         | 35       | 23.0 | 35.0 | 66.2       | 110.0     |
| 40         | 35       | 23.0 | 35.0 | 72.3       | 110.0     |

**TABLE II: MODIFICATION CODES**

| CONTACT OPTIONS  |                              |
|--|------------------------------|
| Sym  | Description                  |
| B0   | Connector less contacts      |
| Omit for standard version (Gold Plated Copper Alloy Contacts Supplied) |                              |
| FINISH OPTIONS   |                              |
| Sym  | Description                  |
| F2   | Bright Nickel Plating        |
| F6   | Black Electrodeposited Paint |
| F8   | Olive Drab Zn-Co Plating     |
| Omit for standard version (Cad free / black passivation Finish)        |                              |

# ITH 06 A (M) Straight Plug Connector with Metric Thread Cable Gland Backshell

**ITH G 06 A 20-21 P Y M32x1.5 XXX**

ITH = Plastic Insert and Standard Contacts (See Notes #4, 6)

Grounding Fingers (Omit for Standard)

06 = Straight Plug

Environmental Class  
A = Non-Environmental

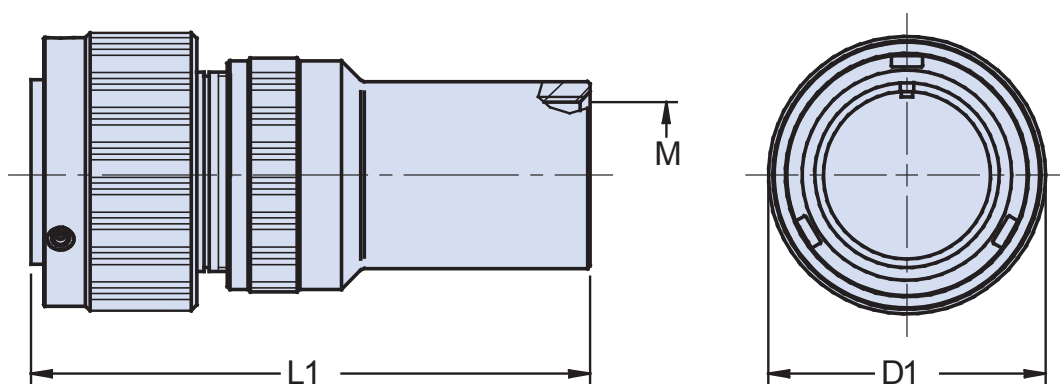
Mod Code Option (See Table II)

Metric Thread Size

Alternate Insert Rotation (W, X, Y, Z)  
Omit for Normal (See page 6)

Contact Gender  
P - Pin  
S - Socket

Shell Size and Insert Arrangement (See Page 7)



**Application Notes:**

1. Straight plug connector with metric thread cable gland backshell.
2. Environmental class A (non-environmental) not supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium free conductive plating and black passivation.
4. Standard contact material consists of copper alloy with gold plating.
5. A broad range of other front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.
7. Metric cable glands not included.



**ITH 06 A (M)**  
**Straight Plug Connector**  
with Metric Thread Cable Gland Backshell



**TABLE I: DIMENSIONS**

| Shell size | D1<br>±0.2 | M thread | L1<br>Max. |
|------------|------------|----------|------------|
| 18         | 36.2       | M20x1.5  | 89.0       |
| 20         | 39.8       | M25x1.5  | 89.0       |
| 22         | 43.0       | M25x1.5  | 89.0       |
| 24         | 46.4       | M32x1.5  | 89.0       |
| 28         | 53.0       | M32x1.5  | 93.0       |
| 32         | 60.0       | M36x1.5  | 93.0       |
| 36         | 66.2       | M40x1.5  | 105.0      |
| 40         | 72.3       | M48x1.5  | 105.0      |

**TABLE II: MODIFICATION CODES**

| CONTACT OPTIONS  |                              |
|--|------------------------------|
| Sym  | Description                  |
| B0   | Connector less contacts      |
| Omit for standard version (Gold Plated Copper Alloy Contacts Supplied) |                              |
| FINISH OPTIONS   |                              |
| Sym  | Description                  |
| F2   | Bright Nickel Plating        |
| F6   | Black Electrodeposited Paint |
| F8   | Olive Drab Zn-Co Plating     |
| Omit for standard version (Cad free / black passivation Finish)        |                              |

# ITH 08 A and ITH 08 R 90° Plug Connector with Accessory Backshell and a Selection of Cable Clamps

**ITH G 08 A 28-21 P Y XXX**

ITH = Plastic Insert and Standard  
Contacts (See Notes #4, 6)

Grounding Fingers  
(Omit for Standard)

08 = 90° Angle Plug

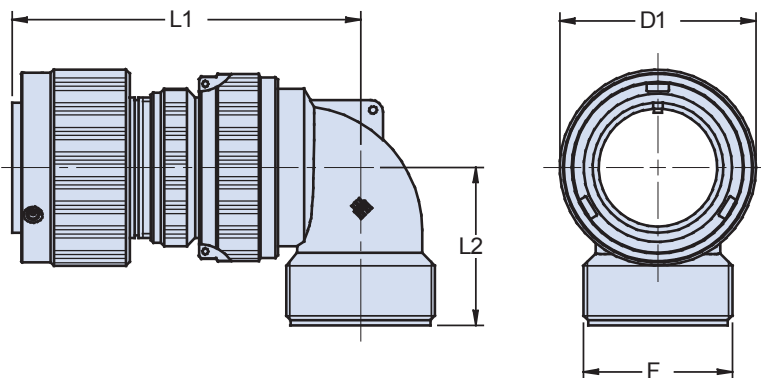
Environmental Class  
A = Non-Environmental  
R = Environmental

Mod Code Option (See Table II)

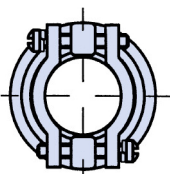
Alternate Insert Rotation (W, X, Y, Z)  
Omit for Normal (See Page 6)

Contact Gender  
P - Pin  
S - Socket

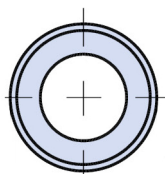
Shell Size and Insert Arrangement  
(See Page 7)



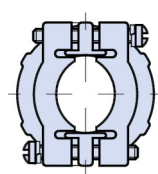
Order Cable Clamps and  
Sleeves Separately or Use  
Mod Codes (Table II) to Add  
Clamp to This Assembly.



**IT 3057 C  
Cable Clamp**



**IT 3420  
Neoprene Sleeve**



**IT 3057 A  
Cable Clamp**

### Application Notes:

1. 90° plug connector with backshell for cable clamps or BR backshells.
2. Environmental class A (non-environmental) not supplied with grommet; Class R (environmental) supplied with grommet.
3. Standard shell materials configuration consists of aluminum alloy with cadmium free conductive plating and black passivation.
4. Standard contact material consists of copper alloy with gold plating.
5. A broad range of other front and rear connector accessories are available. See our website and/or contact the factory for complete information.
6. Standard insert material is Low fire hazard plastic UL94V0 and NFF16-102.

**ITH 08 A and ITH 08 R  
90° Plug Connector with Accessory Backshell  
and a Selection of Cable Clamps**

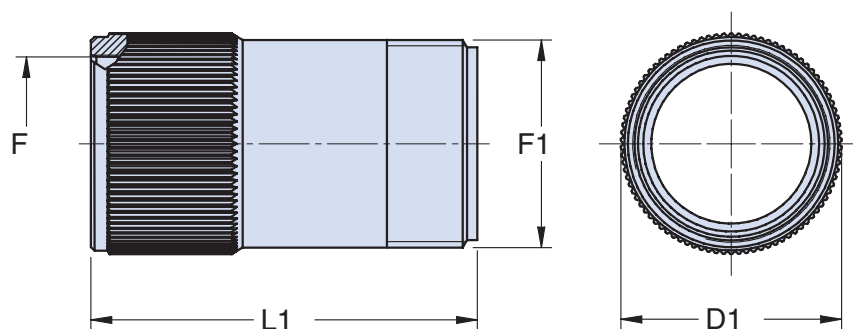


**TABLE I: DIMENSIONS**

| Shell size | D1<br>±0.2 | F thread        | L1<br>Max. | L2<br>±0.2 |
|------------|------------|-----------------|------------|------------|
| 18         | 36.2       | 1.0000 - 20UNEF | 70.0       | 30.0       |
| 20         | 39.8       | 1.1875 - 18UNEF | 75.0       | 32.0       |
| 22         | 43.0       | 1.1875 - 18UNEF | 75.0       | 32.0       |
| 24         | 46.4       | 1.4375 - 18UNEF | 80.0       | 37.0       |
| 28         | 53.0       | 1.4375 - 18UNEF | 80.0       | 38.0       |
| 32         | 60.0       | 1.7500 - 18UNS  | 85.0       | 45.5       |
| 36         | 66.2       | 2.0000 - 18UNS  | 90.0       | 47.2       |
| 40         | 72.3       | 2.2500 - 16UN   | 95.0       | 52.0       |

**TABLE II: MODIFICATION CODES**

| CONTACT OPTIONS  |                              | ACCESSORY OPTIONS         |  |
|--|------------------------------|---------------------------|--|
| Sym  | Description                  |                           |  |
| B0   | Connector less contacts      | N0                        | Connector less backshell   |
| Omit for standard version (Gold Plated Copper Alloy Contacts Supplied) |                              | N1                        | Connector with IT 3057 A cable clamp                             |
| <b>FINISH OPTIONS</b>  |                              | N5                        | Connector with IT 3057 C cable clamp                             |
|  |                              | N12                       | Connector with IT 3057 A cable clamp and IT 3420 neoprene sleeve |
| Omit for standard version (Cad free / black passivation Finish)        |                              | Omit for standard version |  |
| Sym  | Description                  |                           |  |
| F2   | Bright Nickel Plating        |                           |  |
| F6   | Black Electrodeposited Paint |                           |  |
| F8   | Olive Drab Zn-Co Plating     |                           |  |

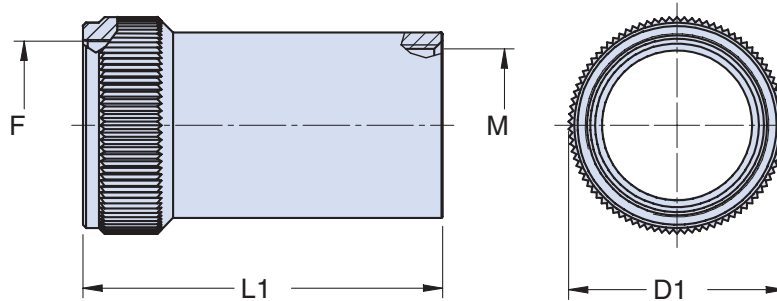


| Commital P.N. | Shell Size | D<br>±0.2 | F thread        | F1 thread       | L1<br>Max. |
|---------------|------------|-----------|-----------------|-----------------|------------|
| PL 37267-18   | 18         | 29.5      | 1.0000 - 20UNEF | 1.0000 - 20UNEF | 56.0       |
| PL 37267-20   | 20         | 32.0      | 1.1250 - 18UNEF | 1.1875 - 18UNEF | 56.0       |
| PL 37267-22   | 22         | 35.0      | 1.2500 - 18UNEF | 1.1875 - 18UNEF | 56.0       |
| PL 37267-24   | 24         | 38.5      | 1.3750 - 18UNEF | 1.4375 - 18UNEF | 56.0       |
| PL 37267-28   | 28         | 45.0      | 1.6250 - 18UNEF | 1.4375 - 18UNEF | 61.0       |
| PL 37267-32   | 32         | 53.2      | 1.8750 - 16UN   | 1.7500 - 18UNS  | 61.0       |
| PL 37267-36   | 36         | 56.2      | 2.0625 - 16UN   | 2.0000 - 18UNS  | 75.0       |
| PL 37267-40   | 40         | 64.0      | 2.3125 - 16UN   | 2.2500 - 16UN   | 76.4       |

**Application Notes:**

1. Backshell adapter for the attachment of IT3057-XXA/C cable clamps or BR backshells.
2. Standard materials configuration consists of aluminum alloy with cadmium free conductive finish and black passivation.
3. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.

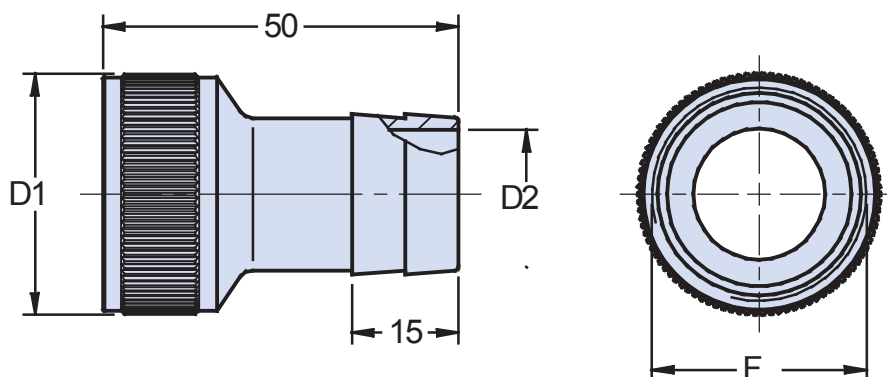
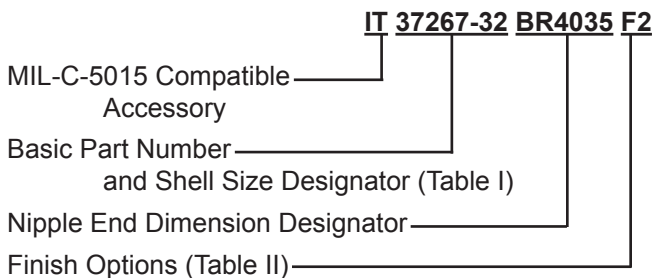
**PL 37267-XXM  
Metric Adapter**



| Commital P.N.      | Shell Size | D1<br>±0.2 | F thread        | M thread | L1<br>Max. |
|--------------------|------------|------------|-----------------|----------|------------|
| PL 37267-18M20x1.5 | 18         | 29.5       | 1.0000 - 20UNEF | M20x1.5  | 56.0       |
| PL 37267-20M25x1.5 | 20         | 32.0       | 1.1250 - 18UNEF | M25x1.5  | 56.0       |
| PL 37267-22M25x1.5 | 22         | 35.0       | 1.2500 - 18UNEF | M25x1.5  | 56.0       |
| PL 37267-24M32x1.5 | 24         | 38.5       | 1.3750 - 18UNEF | M32x1.5  | 56.0       |
| PL 37267-28M32x1.5 | 28         | 45.0       | 1.6250 - 18UNEF | M32x1.5  | 61.0       |
| PL 37267-32M36x1.5 | 32         | 53.2       | 1.8750 - 16UN   | M36x1.5  | 61.0       |
| PL 37267-36M40x1.5 | 36         | 56.2       | 2.0625 - 16UN   | M40x1.5  | 75.0       |
| PL 37267-40M50x1.5 | 40         | 64.0       | 2.3125 - 16UN   | M50x1.5  | 76.4       |

**Application Notes:**

1. Backshell adapter for the attachment of metric thread cable glands.
2. Standard materials configuration consists of aluminum alloy with cadmium free conductive finish and black passivation.
3. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.



**Application Notes:**

1. Backshell for the attachment of UNI4883 type rubber conduit.
2. Standard materials configuration consists of aluminum alloy with cadmium free conductive finish and black passivation.
3. Other types of front and rear connector accessories are available. See our website and/or contact the factory for complete information.



**IT 37267-BRXXX**  
**BR Adapter**  
for Termination of UNI4883 Rubber Conduit



**TABLE I: PART NUMBER AND CONNECTOR SIZE DESIGNATOR**

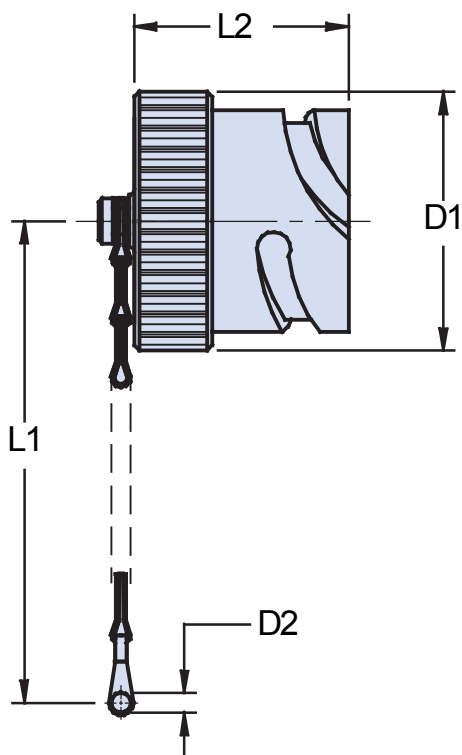
| Part Number       | Shell size | F thread        | D1<br>-0.2 | D2<br>-0.1 |
|-------------------|------------|-----------------|------------|------------|
| IT 37267-18BR2722 | 18         | 1.0000 - 20UNEF | 30.0       | 20.5       |
| IT 37267-20BR1712 | 20 - 22    | 1.1875 - 18UNEF | 34.0       | 10.5       |
| IT 37267-20BR2722 | 20 - 22    | 1.1875 - 18UNEF | 34.0       | 20.5       |
| IT 37267-20BR2833 | 20 - 22    | 1.1875 - 18UNEF | 42.0       | 31.5       |
| IT 37267-28BR2520 | 24 - 28    | 1.4375 - 18UNEF | 45.0       | 16.5       |
| IT 37267-28BR2722 | 24 - 28    | 1.4375 - 18UNEF | 45.0       | 20.5       |
| IT 37267-28BR3126 | 24 - 28    | 1.4375 - 18UNEF | 45.0       | 22.5       |
| IT 37267-28BR3328 | 24 - 28    | 1.4375 - 18UNEF | 45.0       | 26.5       |
| IT 37267-28BR3530 | 24 - 28    | 1.4375 - 18UNEF | 45.0       | 26.5       |
| IT 37267-28BR3833 | 24 - 28    | 1.4375 - 18UNEF | 45.0       | 31.5       |
| IT 37267-28BR5045 | 24 - 28    | 1.4375 - 18UNEF | 45.0       | 36.2       |
| IT 37267-32BR3126 | 32         | 1.7500 - 18UNS  | 53.0       | 24.5       |
| IT 37267-32BR3328 | 32         | 1.7500 - 18UNS  | 53.0       | 26.5       |
| IT 37267-32BR3833 | 32         | 1.7500 - 18UNS  | 53.0       | 31.5       |
| IT 37267-32BR4035 | 32         | 1.7500 - 18UNS  | 53.0       | 31.5       |
| IT 37267-32BR5045 | 32         | 1.7500 - 18UNS  | 53.0       | 40.0       |
| IT 37267-36BR3530 | 36         | 2.0000 - 18UNS  | 57.4       | 26.5       |
| IT 37267-36BR3833 | 36         | 2.0000 - 18UNS  | 57.4       | 31.5       |
| IT 37267-36BR4035 | 36         | 2.0000 - 18UNS  | 57.4       | 31.5       |
| IT 37267-36BR5045 | 36         | 2.0000 - 18UNS  | 57.4       | 43.5       |
| IT 37267-40BR4136 | 40         | 2.2500 - 16UN   | 63.0       | 31.5       |
| IT 37267-40BR4540 | 40         | 2.2500 - 16UN   | 63.0       | 38.5       |
| IT 37267-40BR5045 | 40         | 2.2500 - 16UN   | 63.0       | 43.5       |
| IT 37267-40BR5550 | 40         | 2.2500 - 16UN   | 63.0       | 48.5       |

**TABLE II: MODIFICATION CODES**

| FINISH OPTIONS                         |                              |
|--|------------------------------|
| Sym                                    | Description                  |
| F2                                     | Bright Nickel Plating        |
| F6                                     | Black Electrodeposited Paint |
| F8                                     | Olive Drab Zn-Co Plating     |
| Omit for standard version (See Note 2) |                              |

**ITB 06T-32 F2**

MIL-C-5015 Bayonet  
Compatible Accessory  
Basic Part Number  
and Connector Size Designator  
(Table I)  
Finish Options (Table II)



**TABLE I: PART NUMBER AND CONNECTOR SIZE DESIGNATOR**

| Part Number  | D1<br>Max. | D2<br>+0.6<br>-0 | L1<br>min. | L2<br>Max. |
|--------------|------------|------------------|------------|------------|
| ITB 06T - 18 | 33.5       | 4.3              | 115        | 37         |
| ITB 06T - 20 | 37.0       | 4.7              | 130        | 37         |
| ITB 06T - 22 | 40.0       | 4.7              | 130        | 37         |
| ITB 06T - 24 | 43.5       | 4.7              | 130        | 37         |
| ITB 06T - 28 | 49.5       | 4.7              | 190        | 37         |
| ITB 06T - 32 | 56.0       | 5.5              | 190        | 37         |
| ITB 06T - 36 | 62.5       | 5.5              | 190        | 37         |
| ITB 06T - 40 | 73.0       | 5.5              | 190        | 37         |

**TABLE II: MODIFICATION CODES**

| FINISH OPTIONS                         |                              |
|--|------------------------------|
| Sym                                    | Description                  |
| F2                                     | Bright Nickel Plating        |
| F6                                     | Black Electrodeposited Paint |
| F8                                     | Olive Drab Zn-Co Plating     |
| Omit for standard version (See Note 2) |                              |

Metal cap with stainless steel chain.

**Application Notes:**

1. Metal protective cover for bayonet plug connectors with stainless steel chain.
2. Standard materials configuration consists of aluminum alloy with cadmium free conductive finish and black passivation.
3. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.

# ITB 02T-XX Receptacle Connector Cap with Stainless Steel Chain

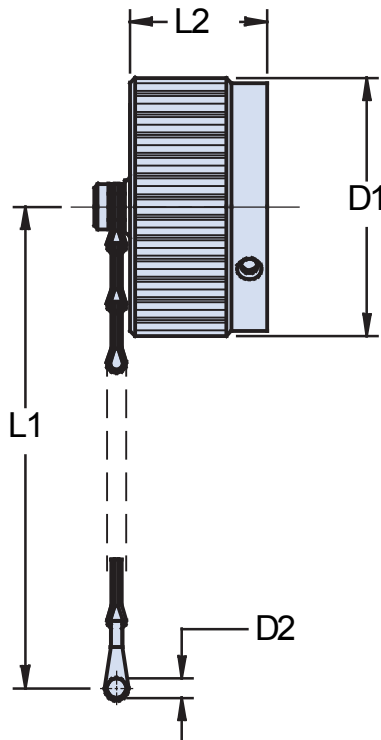


**ITB 02T-18 F2**

MIL-C-5015 Bayonet  
Compatible Accessory

Basic Part Number  
and Connector Size Designator  
(Table I)

Finish Options (Table II)



**TABLE I: PART NUMBER AND CONNECTOR SIZE DESIGNATOR**

| Part Number  | D1<br>Max. | D2<br>+0.6<br>-0 | L1<br>min. | L2<br>Max. |
|--------------|------------|------------------|------------|------------|
| ITB 02T - 18 | 37.5       | 4.3              | 100        | 21.2       |
| ITB 02T - 20 | 41.0       | 4.3              | 115        | 21.2       |
| ITB 02T - 22 | 44.0       | 4.3              | 115        | 21.2       |
| ITB 02T - 24 | 47.5       | 4.3              | 115        | 21.2       |
| ITB 02T - 28 | 54.5       | 5.5              | 160        | 21.2       |
| ITB 02T - 32 | 61.0       | 5.5              | 160        | 21.2       |
| ITB 02T - 36 | 67.5       | 5.5              | 160        | 21.2       |
| ITB 02T - 40 | 72.3       | 5.5              | 160        | 21.2       |

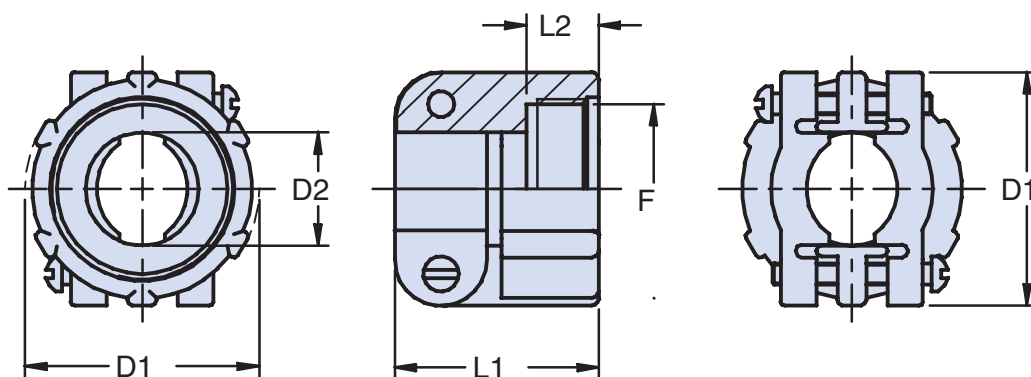
**TABLE II: MODIFICATION CODES**

| FINISH OPTIONS                         |                              |
|--|------------------------------|
| Sym                                    | Description                  |
| F2                                     | Bright Nickel Plating        |
| F6                                     | Black Electrodeposited Paint |
| F8                                     | Olive Drab Zn-Co Plating     |
| Omit for standard version (See Note 2) |                              |

Metal cap with stainless steel chain.

### Application Notes:

1. Metal protective cover for bayonet plug connectors with stainless steel chain.
2. Standard materials configuration consists of aluminum alloy with cadmium free conductive finish and black passivation.
3. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.



| Commital P/N | Shell size | Sleeve     | A  | B    | C    | F thread        | L Max. |
|--------------|------------|------------|----|------|------|-----------------|--------|
| IT 3057-10A  | 18         | IT 3420-10 | 33 | 16.0 | 10.2 | 1.0000 - 20UNEF | 28.5   |
| IT 3057-12A  | 20 - 22    | IT 3420-12 | 35 | 19.0 | 10.2 | 1.1875 - 18UNEF | 24.0   |
| IT 3057-16A  | 24 - 28    | IT 3420-16 | 43 | 23.8 | 10.5 | 1.4375 - 18UNEF | 26.0   |
| IT 3057-20A  | 32         | IT 3420-20 | 51 | 31.7 | 12.5 | 1.7500 - 18UNS  | 28.0   |
| IT 3057-24A  | 36         | IT 3420-24 | 58 | 35.0 | 14.0 | 2.0000 - 18UNS  | 29.4   |
| IT 3057-28A  | 40         | IT 3420-28 | 65 | 41.2 | 14.0 | 2.2500 - 16UN   | 42.8   |

**Application Notes:**

1. General duty cable clamp suitable for jacketed or multi-conductor cable or wire bundles protected by shrink tubing.
2. Standard materials configuration consists of aluminum alloy with cadmium free conductive finish and black passivation.
3. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.

**IT 3057-XXC**  
**General Duty Cable Clamp**  
 for Jacketed or Multipolar Cable or Wires Protected by Tubing

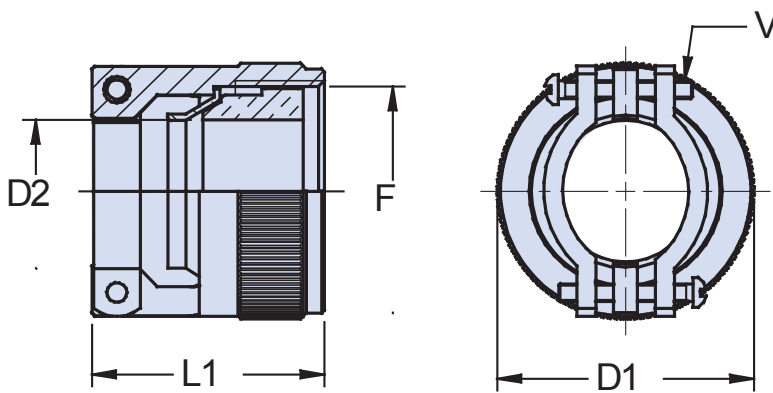


**IT 3057-10C F2**

MIL-C-5015 Compatible  
Accessory

Basic Part Number  
and Shell Size Designator  
(Table I)

Finish Options (Table II)



**TABLE II: MODIFICATION CODES**

| FINISH OPTIONS                         |                              |
|--|------------------------------|
| Sym                                    | Description                  |
| F2                                     | Bright Nickel Plating        |
| F6                                     | Black Electrodeposited Paint |
| F8                                     | Olive Drab Zn-Co Plating     |
| Omit for standard version (See Note 2) |                              |

**TABLE I: PART NUMBER AND CONNECTOR SIZE DESIGNATOR**

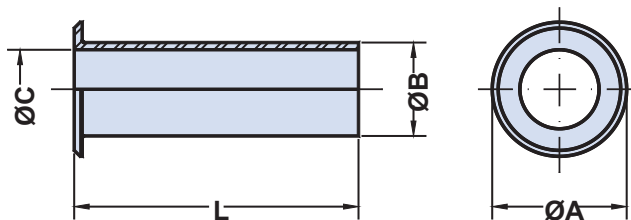
| Part Number | Shell size | Sleeve                    | A    | B     |       | F thread        | L    | V thread   |
|-------------|------------|---------------------------|------|-------|-------|-----------------|------|------------|
|             |            |                           |      | min.  | Max.  |                 |      |            |
| IT 3057-10C | 18         | IT 3420 - 6A / 10A        | 31.0 | 9.60  | 15.87 | 1.0000 - 20UNEF | 35.3 | 6 - 32NC   |
| IT 3057-12C | 20 - 22    | IT 3420 - 8A / 12A        | 37.3 | 11.30 | 19.00 | 1.1875 - 18UNEF | 35.7 | 8 - 32NC   |
| IT 3057-16C | 24 - 28    | IT 3420 - 8A / 12A / 16A  | 42.0 | 15.50 | 23.80 | 1.4375 - 18UNEF | 38.5 | 8 - 32NC   |
| IT 3057-20C | 32         | IT 3420 - 12A / 16A / 20A | 54.0 | 23.40 | 31.75 | 1.7500 - 18UNS  | 44.8 | 250 - 20NC |
| IT 3057-24C | 36         | IT 3420 - 16A / 18A / 24A | 57.1 | 23.40 | 35.00 | 2.0000 - 18UNS  | 51.6 | 250 - 20NC |
| IT 3057-28C | 40         | IT 3420 - 16A / 20A / 28A | 63.5 | 29.90 | 41.25 | 2.2500 - 16UN   | 51.6 | 250 - 20NC |

**Application Notes:**

1. General duty cable clamp suitable for jacketed or multipolar cable or wires protected by tubing.
2. Standard materials configuration consists of aluminum alloy with cadmium free conductive finish and black passivation.
3. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.

**IT 3420-XX (Class A)  
Neoprene Sleeve for Protection & Reduction  
Used with Class A Cable Clamps**

IT 3420-10  
MIL-C-5015 Compatible  
Accessory  
Basic Part Number  
and Shell Size Designator (Table I)



**IT 3420-XX Neoprene Sleeve  
to be used with Class A Cable Clamps**

**TABLE I: PART NUMBER AND SHELL SIZE DESIGNATOR**

| Part Number | A<br>-0.1 | B<br>-0.1 | C<br>-0.1 | L<br>-0.1 |
|-------------|-----------|-----------|-----------|-----------|
| IT3420 - 10 | 22.0      | 15.62     | 14.27     | 60.3      |
| IT3420 - 12 | 27.0      | 18.79     | 15.87     | 57.1      |
| IT3420 - 16 | 33.3      | 23.54     | 19.05     | 53.9      |
| IT3420 - 20 | 40.5      | 31.49     | 23.79     | 50.8      |
| IT3420 - 24 | 46.9      | 34.67     | 31.75     | 47.6      |
| IT3420 - 28 | 52.9      | 40.99     | 34.92     | 44.4      |

**Application Notes:**

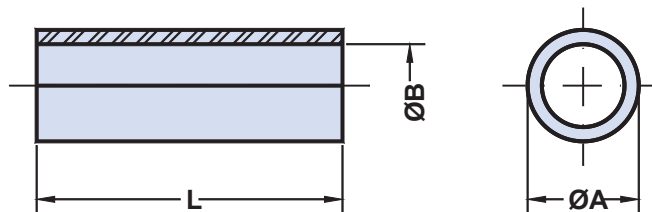
1. IT 3420-XX: Neoprene bushing for protection and reduction, used with class A cable clamps.
2. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.



**IT 3420-XXA (Class C)  
Neoprene Sleeve for Protection & Reduction  
Used with Class C Cable Clamps**



**IT 3420-10A**  
MIL-C-5015 Compatible  
Accessory  
Basic Part Number  
and Shell Size Designator (Table I)



**IT 3420-XXA Neoprene Sleeve  
to be used with Class C Cable Clamps**

**TABLE I: PART NUMBER AND SHELL SIZE DESIGNATOR**

| Part Number  | A<br>-0.1 | B<br>-0.1 | L<br>-0.1 |
|--------------|-----------|-----------|-----------|
| IT3420 - 6A  | 10.50     | 7.93      | 50.5      |
| IT3420 - 8A  | 13.50     | 11.10     | 50.5      |
| IT3420 - 10A | 15.70     | 11.10     | 50.5      |
| IT3420 - 12A | 18.50     | 13.74     | 50.9      |
| IT3420 - 16A | 23.60     | 19.00     | 50.9      |
| IT3420 - 20A | 31.10     | 23.80     | 50.2      |
| IT3420 - 24A | 33.90     | 28.50     | 51.1      |
| IT3420 - 28A | 40.60     | 31.80     | 50.2      |

**Application Notes:**

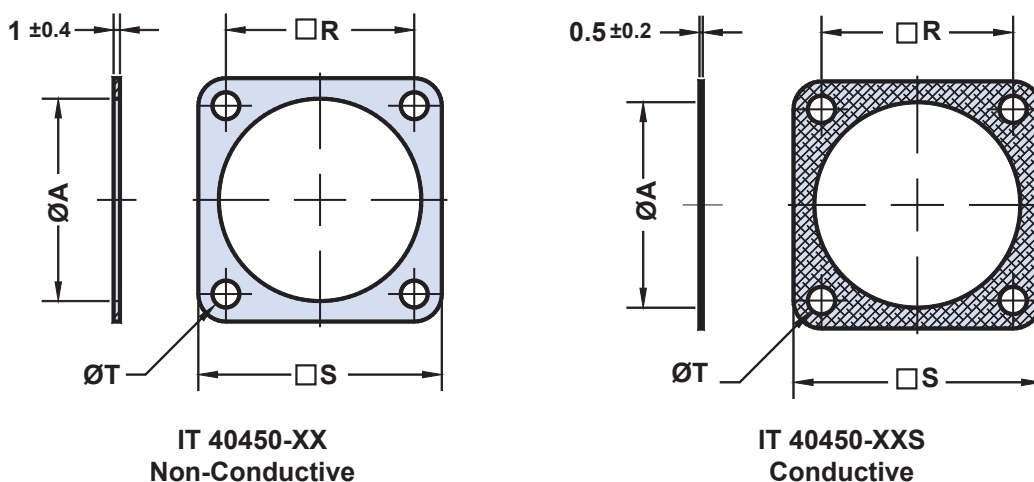
1. IT 3420-XXA: Neoprene bushing for protection and reduction, used with class C cable clamps
2. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.

**IT 40450-18 S**

MIL-C-5015 Compatible  
Accessory

Basic Part Number  
and Shell Size Designator  
(Table I)

S = Conductive  
(Omit for Non-Conductive)



**TABLE I: PART NUMBER AND SHELL SIZE DESIGNATOR**

| Part Number   | Shell size | A<br>+1 | R<br>-0.2 | S<br>-0.5 | T<br>+0.5 |
|---------------|------------|---------|-----------|-----------|-----------|
| IT 40450 - 18 | 18         | 28.4    | 27.0      | 35.0      | 4.2       |
| IT 40450 - 20 | 20         | 31.6    | 29.4      | 38.0      | 4.2       |
| IT 40450 - 22 | 22         | 34.8    | 31.8      | 41.0      | 4.2       |
| IT 40450 - 24 | 24         | 38.0    | 34.9      | 44.5      | 4.2       |
| IT 40450 - 28 | 28         | 44.3    | 39.7      | 50.8      | 5.1       |
| IT 40450 - 32 | 32         | 50.7    | 44.5      | 57.0      | 5.1       |
| IT 40450 - 36 | 36         | 57.0    | 49.2      | 63.5      | 5.1       |
| IT 40450 - 40 | 40         | 61.9    | 55.5      | 69.9      | 5.1       |

**Application Notes:**

1. Conductive and non-conductive gasket for front-mount square flange connectors.
2. Other types of front and rear connector accessories are available. See our website and/or contact the factory for complete information.

**IT 40460-XX and IT 40460-XXS  
Connector Mounting Gaskets  
for Rear-Mounted Square Flange Receptacle**

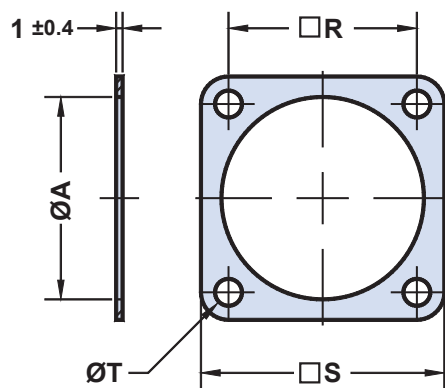


**IT 40460-18 S**

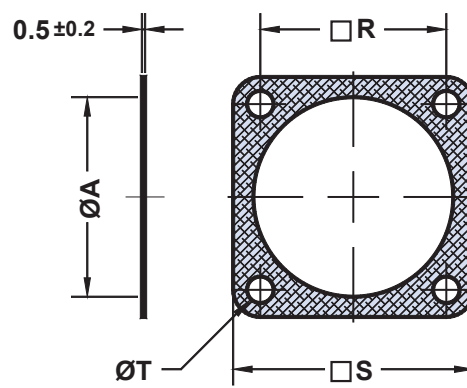
MIL-C-5015 Compatible  
Accessory

Basic Part Number  
and Shell Size Designator  
(Table I)

S = Conductive  
(Omit for Non-Conductive)



**IT 40460-XX  
Non-Conductive**



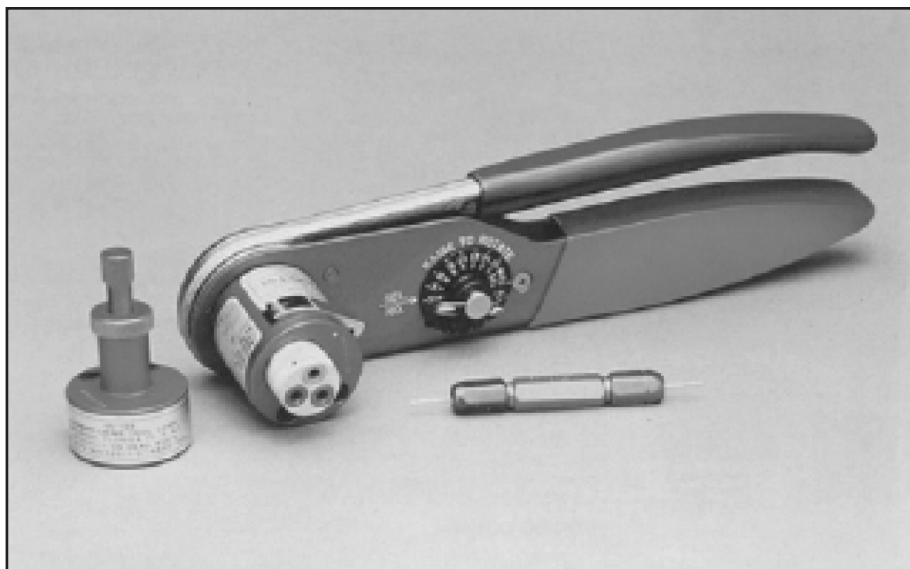
**IT 40460-XXS  
Conductive**

**TABLE I: PART NUMBER AND SHELL SIZE DESIGNATOR**

| Part Number   | Shell size | A<br>+0.3 | R<br>-0.2 | S<br>-0.5 | T<br>+0.5 |
|---------------|------------|-----------|-----------|-----------|-----------|
| IT 40460 - 18 | 18         | 30.8      | 27.0      | 35.0      | 4.2       |
| IT 40460 - 20 | 20         | 34.2      | 29.4      | 38.0      | 4.2       |
| IT 40460 - 22 | 22         | 37.4      | 31.8      | 41.0      | 4.2       |
| IT 40460 - 24 | 24         | 40.9      | 34.9      | 44.5      | 4.2       |
| IT 40460 - 28 | 28         | 46.7      | 39.7      | 50.8      | 5.1       |
| IT 40460 - 32 | 32         | 53.4      | 44.5      | 57.0      | 5.1       |
| IT 40460 - 36 | 36         | 59.6      | 49.2      | 63.5      | 5.1       |
| IT 40460 - 40 | 40         | 65.5      | 55.5      | 69.9      | 5.1       |

**Application Notes:**

1. Conductive and non-conductive gasket for rear-mount square flange connectors.
2. Other types of front and rear connector accessories are available.  
See our website and/or contact the factory for complete information.



### CRIMPING TOOLS

|                     |   |
|---------------------|---|
| <b>M.105001</b>     | Crimping tool for #20 contacts              |
| <b>M.105007</b>     | Crimping tool for #16 and #12 contacts      |
| <b>M.105000</b>     | Crimping tool for #8 contacts               |
| <b>M.112000</b>     | Pneumatic crimping tool for #8 contacts     |
| <b>M.112004</b>     | Hydraulic crimping tool for #8 contacts     |
| <b>M.22520.5.01</b> | Crimping tool for #8 Coaxial contacts       |
| <b>M.104012</b>     | Crimping die for #20 contacts               |
| <b>M.104000</b>     | Positioner for #16 contacts                 |
| <b>M.104001</b>     | Positioner for #12 contacts                 |
| <b>M.104002</b>     | Positioner for #8 contacts                  |
| <b>M.112001</b>     | Crimping die for #8 contacts (for M.112000) |
| <b>M.112005</b>     | Crimping die for #8 contacts (for M.112004) |

Consult The Factory for Custom Toolkits



#### INSERTION & REMOVAL TOOLS

|                 |                                 |
|-----------------|---------------------------------|
| <b>M.104013</b> | Removal tool for #20 contacts   |
| <b>M.104003</b> | Removal tool for #16 contacts   |
| <b>M.104004</b> | Removal tool for #12 contacts   |
| <b>M.104005</b> | Removal tool for #8 contacts    |
| <b>M.104014</b> | Insertion tool for #20 contacts |
| <b>M.117349</b> | Insertion tool for #16 contacts |
| <b>M.117350</b> | Insertion tool for #12 contacts |
| <b>M.117354</b> | Insertion tool for #8 contacts  |

Consult The Factory for Custom Toolkits



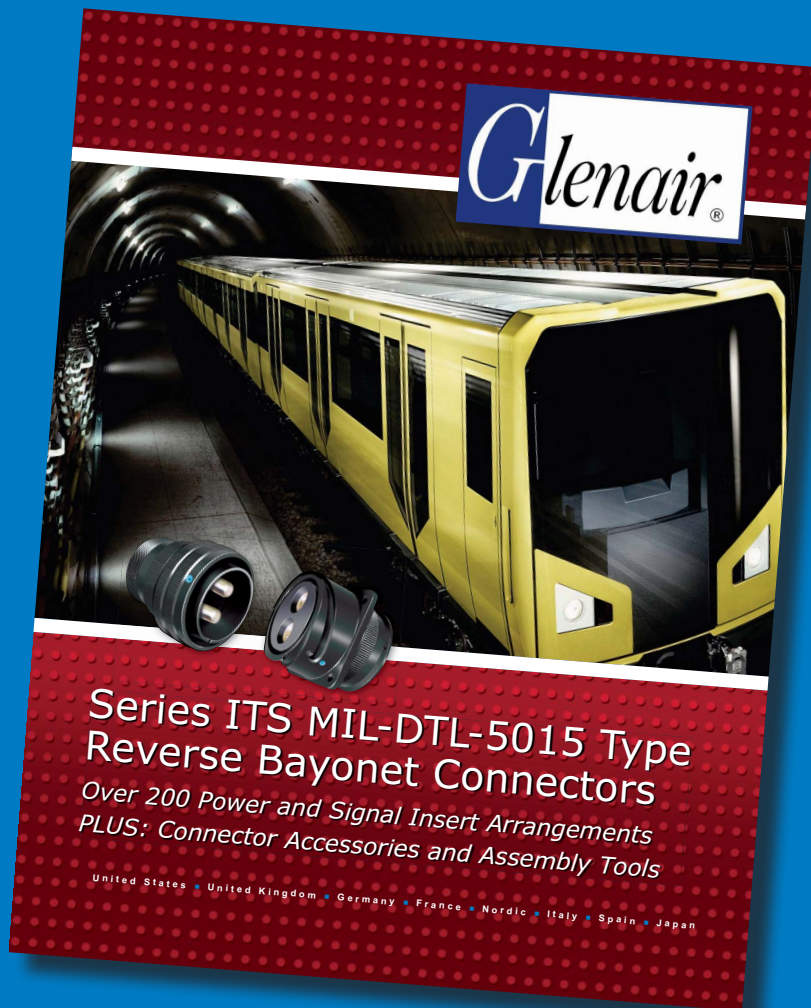
## Series ITH Rigid Insert Reverse Bayonet Connector Products and Part Numbers Table of Contents

|  |           |
|--|-----------|
| Introduction to ITH Reverse Bayonet Connector Assemblies.....  | 1         |
| Electrical Performance: Rated Current and PL 607-XXP/XXS Insulating Gromet.....                                | 2         |
| Exploded View: Wall-Mount Receptacle and Straight Plug.....  | 3         |
| Dimensional Details Pin Contacts.....  | 4         |
| Dimensional Details Socket Contacts.....   | 5         |
| Contact Arrangements, Polarizations, and Insert Arrangements.....  | 6 and 7   |
| Panel Cutout and Thickness Requirements.....   | 8         |
| How to Order .....   | 9         |
| ITH 03FF A, ITH 03FP A, ITH 03FF R & ITH 03FP R Box Mount Receptacle for Rear Panel Mounting.....              | 10        |
| ITH 030 A and ITH 030 R Rear Box Mount Receptacle with Backshell Cable Clamp Adapter.....                      | 12        |
| ITH 030 (EMI) and ITHC 030 (EMI) Rear Box Mount Receptacle with Backshell for Shielded and Jacketed Cable ...  | 14        |
| ITH 030 A (M) Rear Box Mount Receptacle with Metric Thread Cable Gland Backshell.....                          | 16        |
| ITH 06 A / R NO Straight Plug Assembly.....  | 18        |
| ITH 06 A and ITH 06 R Straight Plug with Backshell Cable Clamp Adapter.....                                    | 20        |
| ITH 06 A (EMI) Straight Plug with Backshell for EMI Shielded and Jacketed Cable.....                           | 22        |
| ITH 06 A (M) Straight Plug Connector with Metric Thread Cable Gland Backshell.....                             | 24        |
| ITH 08 A and ITH 08 R 90° Plug Connector with Accessory Backshell for Use with Strain-Relief Cable Clamps..... | 26        |
| PL 37267-XX Type A Adapter.....  | 28        |
| PL 37267-XXM Metric Adapter.....   | 29        |
| IT 37267-BRXXX BR Adapter for Termination of UNI4883 Rubber Conduit.....                                       | 31        |
| ITB 06T-XX Plug Connector Cap with Stainless Steel Chain.....  | 32        |
| ITB 02T-XX Receptacle Connector Cap with Stainless Steel Chain.....  | 33        |
| IT 3057-A Cable Clamp.....   | 34        |
| IT 3057-XXC General Duty Cable Clamp for Jacketed or Multipolar Cable or Wires Protected by Tubing.....        | 35        |
| IT 3420-XX (Class A) and IT 3420-XXA (Class C) Neoprene Sleeve Used with Class A or C Cable Clamps.....        | 36 and 37 |
| IT 40450-XX and IT 40450-XXS Connector Mounting Gaskets for Front-Mounted Square Flange Receptacle.....        | 38        |
| IT 40450-XX and IT 40450-XXS Connector Mounting Gaskets for Rear-Mounted Square Flange Receptacle.....         | 39        |
| Crimping, Insertion and Removal Tools for Termination of ITH Connectors.....                                   | 40 and 41 |
| Table of Contents - Connector Products and Part Numbers.....   | 42        |



# More Options Than Ever Before!

## Glenair Commercial Series ITS Reverse Bayonet Connectors



EU Sales: Glenair Connectors Italia, S.r.L. Tel: +39-02-91082121 Email: [sales-italia@glenair.com](mailto:sales-italia@glenair.com)  
North American Sales: Glenair Connecticut, Tel: 203-741-1115 Email: [sales@glenair.com](mailto:sales@glenair.com)  
Factory Support: Commital S.p.a. (Italy) Tel: +39-51-7821811 Email: [commital@commital.com](mailto:commital@commital.com)

[www.glenair.com](http://www.glenair.com)

*A World of Interconnect Solutions*



*Out of This World*  
**INTERCONNECT  
SOLUTIONS**

**Glenair, Inc.**

1211 Air Way • Glendale, California • 91201-2497  
Telephone: 818-247-6000 • Fax: 818-500-9912 • sales@glenair.com  
**www.glenair.com**

**Glenair Power  
Products Group**

860 N. Main Street Extension  
Wallingford, CT  
06492

Telephone:  
203-741-1115  
Facsimile:  
203-741-0053  
sales@glenair.com

**Glenair UK Ltd**

40 Lower Oakham Way  
Oakham Business Park  
P.O. Box 37, Mansfield  
Notts, NG18 5BY England

Telephone:  
+44-1623-638100  
Facsimile:  
+44-1623-638111  
sales@glenair.co.uk

**Glenair Microway Systems**

7000 North Lawndale Avenue  
Lincolnwood, IL  
60712

Telephone:  
847-679-8833  
Facsimile:  
847-679-8849

**Glenair Nordic AB**

Gustav III : S Boulevard 46  
S - 169 27 Solna  
Sweden

Telephone:  
+46-8-50550000  
Facsimile:  
+46-8-50550001  
sales@glenair.se

**Glenair Electric GmbH**

Schaberweg 28  
D. 61348 Bad Homburg  
Germany

Telephone:  
06172 / 68 16 0  
Facsimile:  
06172 / 68 16 90  
germany@glenair.com

**Glenair Iberica**

C/ La Vega, 16  
45612 Velada  
Spain

Telephone:  
+34-925-89-29-88  
Facsimile:  
+34-925-89-29-87  
sales@glenair.es

**Glenair Italia S.p.A.**

Via Del Lavoro, 7  
40057 - Quarto Inferiore  
Granarolo dell'Emilia  
Bologna, Italy

Telephone:  
+39-051-782811  
Facsimile:  
+39-051-782259  
info@glenair.it

**Glenair France SARL**

7, Avenue Parmentier  
Immeuble Central Parc #2  
31200 Toulouse  
France

Telephone:  
+33-5-34-40-97-40  
Facsimile:  
+33-5-61-47-86-10  
sales@glenair.fr

