

# Amphenol

164-SERIES

WATERPROOF AUDIO CONNECTORS

AC16403 0118





# Introduction

Amphenol 164 series connectors are water resistant, five & six pin contact electrical connectors for use in low voltage audio frequency circuits & applications. They employ three-point bayonet coupling for quick disconnect & self wipe contact.

These connectors are extensively used in military communication equipments, where high reliability is paramount & severe environmental conditions are encountered.

Amphenol 164 series connectors are qualified to MIL specification MIL-DTL-55116. They are intermatable with any other manufacturers product which is designed as per MIL-DTL-55116.

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## Electrical

|                       |                       |
|-----------------------|-----------------------|
| Operating Current     | 500 m A per contact   |
| Operating Voltage     | 60V max.              |
| Contact Resistance    | 0.050 ohms max.       |
| Insulation Resistance | 1000 M ohm @ 100 V DC |
| Dielectric Strength   | 500V rms              |

## Mechanical

|                    |                             |
|--------------------|-----------------------------|
| Number of Contacts | 5 or 6                      |
| Air Pressure       | 2.5 PSI                     |
| Durability         | 3000 cycles, mate & unmate. |
| Immersion          | 48 hrs. At 6ft.             |

## Environmental

|                       |                   |
|-----------------------|-------------------|
| Operating Temperature | -55° C to +85° C. |
|-----------------------|-------------------|

## Material & Finishes

| Part        | Material                                     | Finish                  |
|-------------|--|-------------------------|
| Shell & Nut | Stainless Steel                              | Sand Blasted            |
| Insulator   | Diallyphthalate as per ASTM D5948 Type SDG-F | -                       |
| Contact     | Copper Alloy -Brass                          | 0.75µm Gold over Nickel |



Defence Logistics Agency  
 Defence Supply Centre, Columbus  
 Post Office Box 3990  
 Columbus, OH 43218-3990

MAR 18 2009

DSCC-VQP-09-017606 (Mr. Funk/614-692-6608/jf)  
 Subject: Qualification for MIL-DTL-55116  
 DSCC Test Report Number 55116-2285-08  
 FSC 5935, Preparing Activity:DLA-CC

Amphenol Interconnect India Pvt. Ltd.  
 105, Bhosari Industrial Estate  
 Pune-411026 (India)

We have received Amphenol Interconnect India's test report and supporting data dated February 18, 2009. Qualification of your products is granted under the Military Specification Sheets listed below as a result of providing exhibit samples that demonstrate your capability to manufacture these products to Military Specification MIL-DTL-55116.

|   |   |
|---|---|
| Supplier: Amphenol Interconnect India Pvt. Ltd. | Supplier: Amphenol Interconnect India Pvt. Ltd. |
| Government Designation: M55116/1-( )            | Government Designation: M55116/2-( )            |
| Manufacturer's Designation: 164-229-( )         | Manufacturer's Designation: 164-229-6-( )       |
| Cable Accommodation: 1, 2, 3, 4, 5              | Cable Accommodation: 1, 2, 3, 4, 5              |
| Test or Qualification Reference: 55116-2285-08  | Test or Qualification Reference: 55116-2285-08  |
| Supplier: Amphenol Interconnect India Pvt. Ltd. | Supplier: Amphenol Interconnect India Pvt. Ltd. |
| Government Designation: M55116/3-( )            | Government Designation: M55116/4-( )            |
| Manufacturer's Designation: 164-229-S-( )       | Manufacturer's Designation: 164-229-6S-( )      |
| Cable Accommodation: 1, 2, 3, 4, 5              | Cable Accommodation: 1, 2, 3, 4, 5              |
| Test or Qualification Reference: 55116-2285-08  | Test or Qualification Reference: 55116-2285-08  |
| Supplier: Amphenol Interconnect India Pvt. Ltd. | Supplier: Amphenol Interconnect India Pvt. Ltd. |
| Government Designation: M55116/5-( )            | Government Designation: M55116/6-( )            |
| Manufacturer's Designation: 164-182-( )         | Manufacturer's Designation: 164-182-6-( )       |
| Cable Accommodation: 1, 2, 3, 4, 5              | Cable Accommodation: 1, 2, 3, 4, 5              |
| Test or Qualification Reference: 55116-2285-08  | Test or Qualification Reference: 55116-2285-08  |
| Supplier: Amphenol Interconnect India Pvt. Ltd. | Supplier: Amphenol Interconnect India Pvt. Ltd. |
| Government Designation: M55116/7-( )            | Government Designation: M55116/8-( )            |
| Manufacturer's Designation: 164-182-S( )        | Manufacturer's Designation: 164-182-6S-( )      |
| Cable Accommodation: 1, 2, 3, 4, 5              | Cable Accommodation: 1, 2, 3, 4, 5              |
| Test or Qualification Reference: 55116-2285-08  | Test or Qualification Reference: 55116-2285-08  |



|   |   |
|---|---|
| Supplier: Amphenol Interconnect India Pvt. Ltd. | Supplier: Amphenol Interconnect India Pvt. Ltd. |
| Government Designation: M55116/9-( )            | Government Designation: M55116/10-( )           |
| Manufacturer's Designation: 164-183-( )         | Manufacturer's Designation: 164-183-6-( )       |
| Cable Accommodation: 0                          | Cable Accommodation: 0                          |
| Test or Qualification Reference: 55116-2285-08  | Test or Qualification Reference: 55116-2285-08  |
|   |   |
| Supplier: Amphenol Interconnect India Pvt. Ltd. | Supplier: Amphenol Interconnect India Pvt. Ltd. |
| Government Designation: M55116/11-( )           | Government Designation: M55116/12-( )           |
| Manufacturer's Designation: 164-228-( )         | Manufacturer's Designation: 164-228-6-( )       |
| Cable Accommodation: 1, 2, 3, 4, 5              | Cable Accommodation: 1, 2, 3, 4, 5              |
| Test or Qualification Reference: 55116-2285-08  | Test or Qualification Reference: 55116-2285-08  |
|   |   |
| Supplier: Amphenol Interconnect India Pvt. Ltd. | Supplier: Amphenol Interconnect India Pvt. Ltd. |
| Government Designation: M55116/13-( )           | Government Designation: M55116/14-( )           |
| Manufacturer's Designation: 164-228-S-( )       | Manufacturer's Designation: 164-228-6S-( )      |
| Cable Accommodation: 1, 2, 3, 4, 5              | Cable Accommodation: 1, 2, 3, 4, 5              |
| Test or Qualification Reference: 55116-2285-08  | Test or Qualification Reference: 55116-2285-08  |

A detailed listing of the connector type under the Military Specification Sheet will be listed on the Qualified Products List (QPL) 55116. This qualification is subject to the conditions stated in DoD 4120.24-M and SD-6.

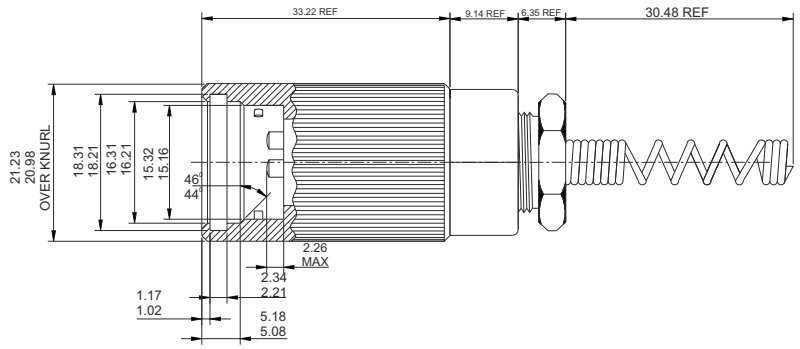
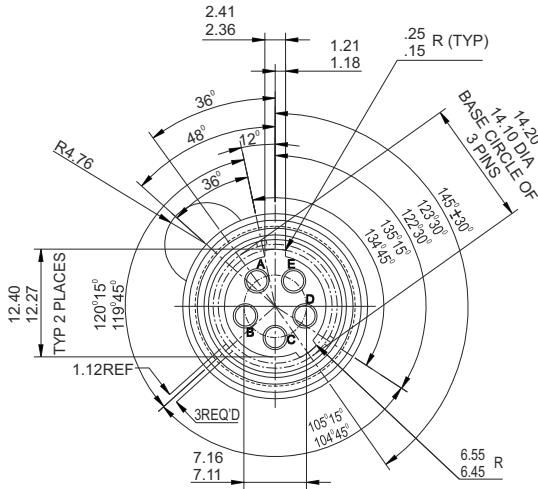
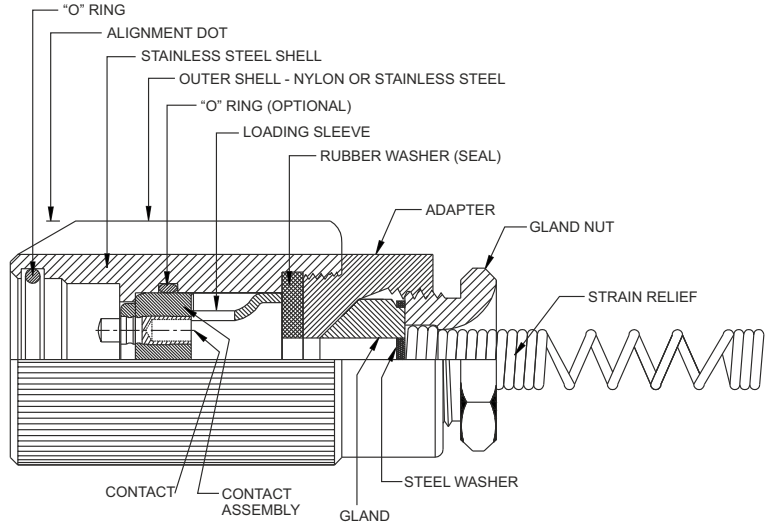
Because we are held responsible for the accuracy and currency of this QPL, please let us know if your company discontinues production of these products.

If you have any questions concerning this letter, please contact Mr. Funk at 614-692-6608 or email [Jeremy.Funk@dla.mil](mailto:Jeremy.Funk@dla.mil).

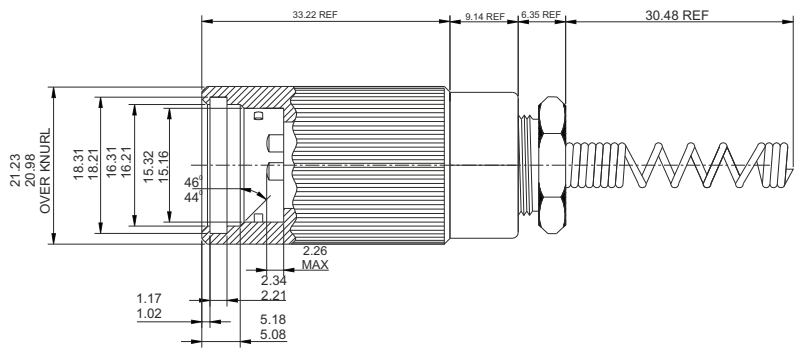
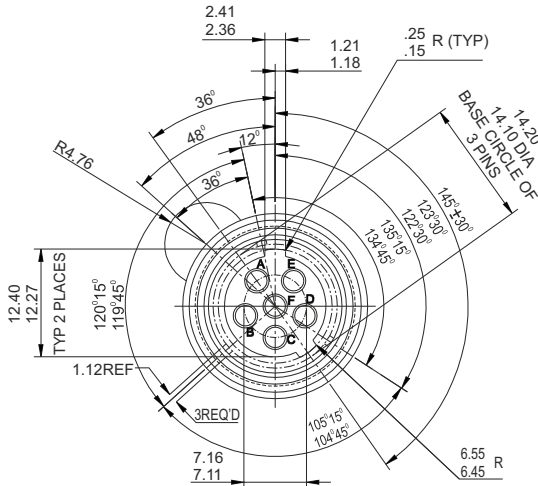
Sincerely,



JOSEPH GEMPERLINE  
 Chief  
 Sourcing and Qualifications Division



**M55116/1-X**

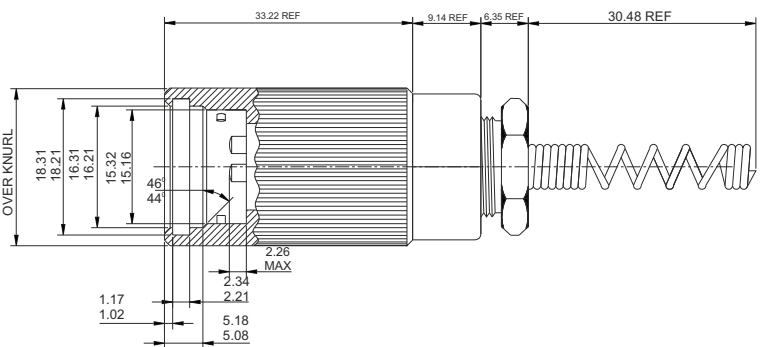
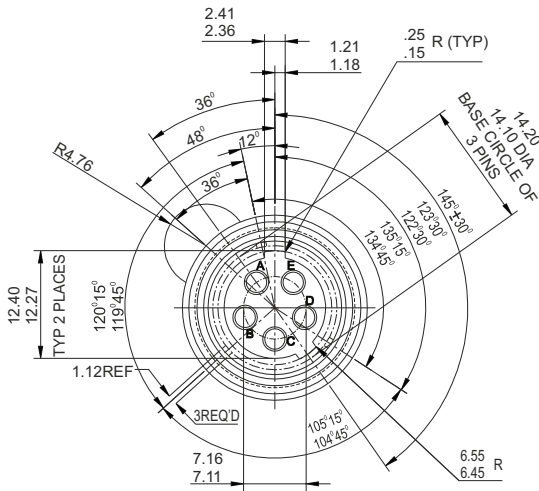
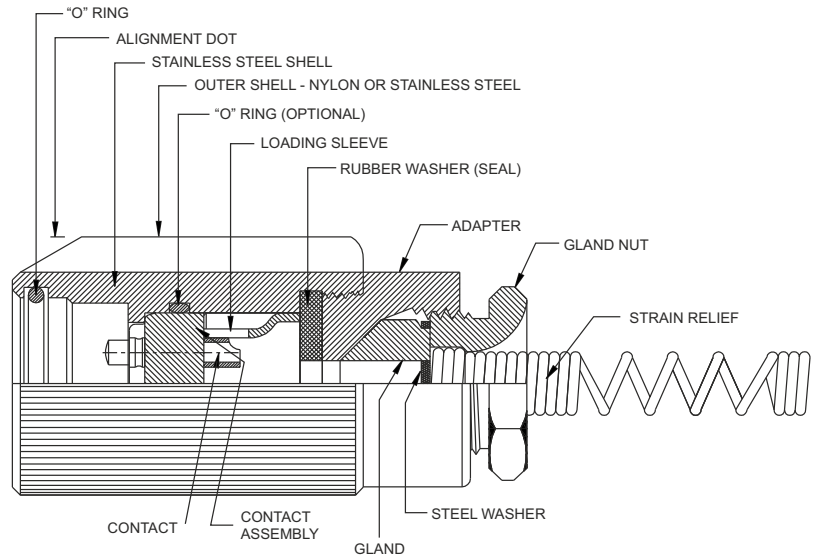


**M55116/2-X**

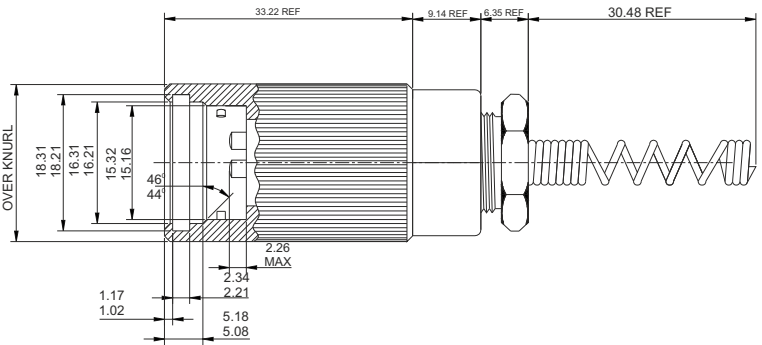
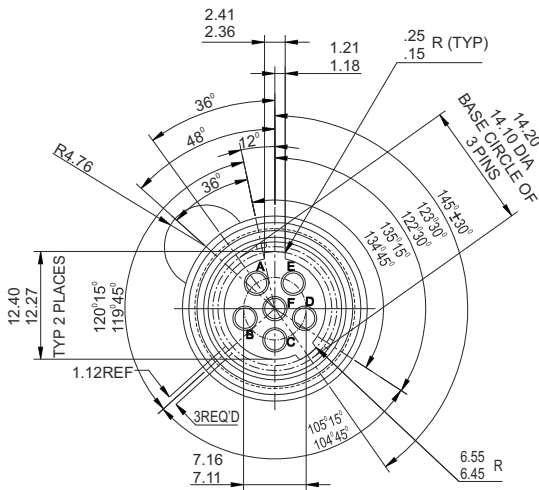
| Sr No. | Description  | MIL Designation | Amphenol Designation |
|--------|--|-----------------|----------------------|
| 1      | 5 Pin Audio plug connector with crimp sleeve terminal & wire strain relief | M55116/1-X      | 164-229-X            |
| 2      | 6 Pin Audio plug connector with crimp sleeve terminal & wire strain relief | M55116/2-X      | 164-229-6-X          |

| Dash no-X | Cable diameter |
|-----------|----------------|
| -0        | N/A            |
| -1        | 4.19 ± 0.25    |
| -2        | 5.79 ± 0.25    |
| -3        | 6.35 ± 0.25    |
| -4        | 7.36 ± 0.25    |
| -5        | 8.12 ± 0.25    |

X Stands for the Cable size accommodation, is identified by a dash number as shown in above table. This number indicates the outside diameter of the cable that the connector will accommodate.



**M55116/3-X**



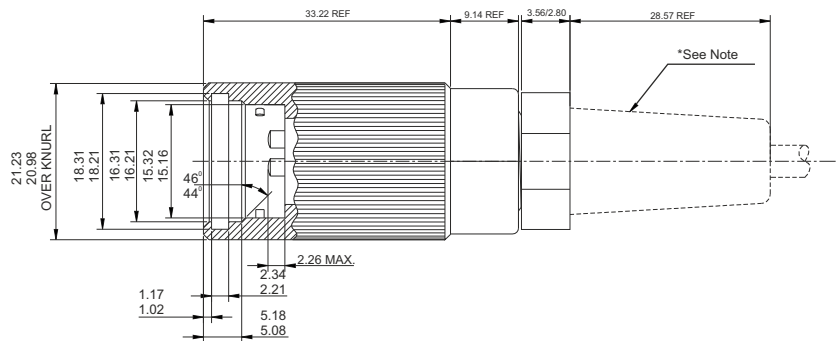
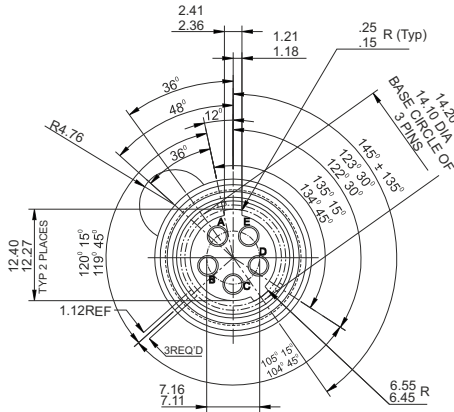
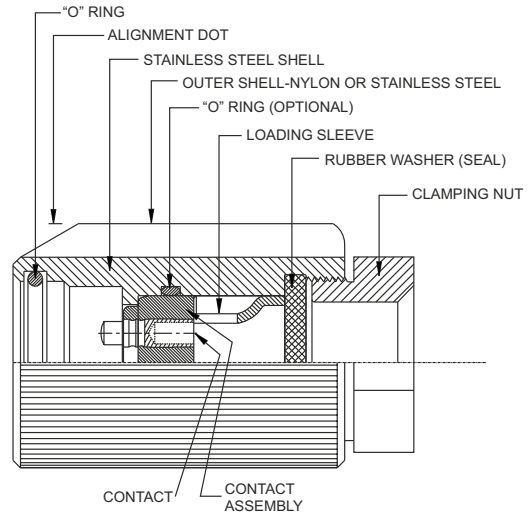
**M55116/4-X**

| Sr No. | Description  | MIL Designation | Amphenol Designation |
|--------|--|-----------------|----------------------|
| 1      | 5 Pin Audio plug connector with Solder Cup Terminal & wire strain relief | M55116/3-X      | 164-229-S-X          |
| 2      | 6 Pin Audio plug connector with Solder Cup Terminal & wire strain relief | M55116/4-X      | 164-229-6S-X         |

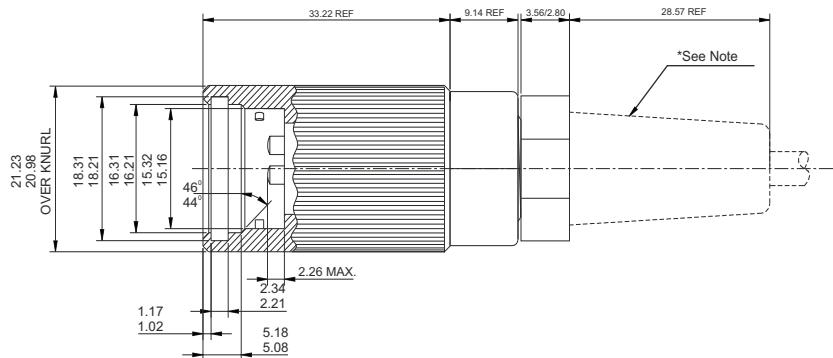
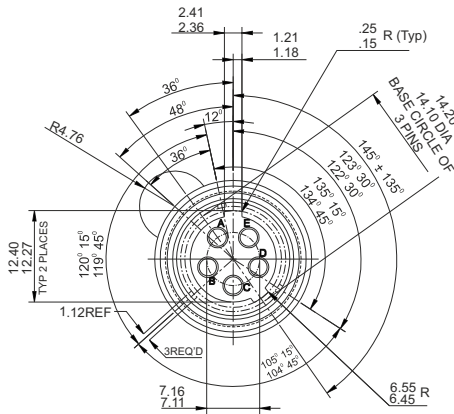
| Dash no-X | Cable diameter |
|-----------|----------------|
| -0        | N/A            |
| -1        | 4.19 ± 0.25    |
| -2        | 5.79 ± 0.25    |
| -3        | 6.35 ± 0.25    |
| -4        | 7.36 ± 0.25    |
| -5        | 8.12 ± 0.25    |

X Stands for the Cable size accommodation, is identified by a dash number as shown in above table. This number indicates the outside diameter of the cable that the connector will accommodate.





**M55116/5-X**



**M55116/6-X**

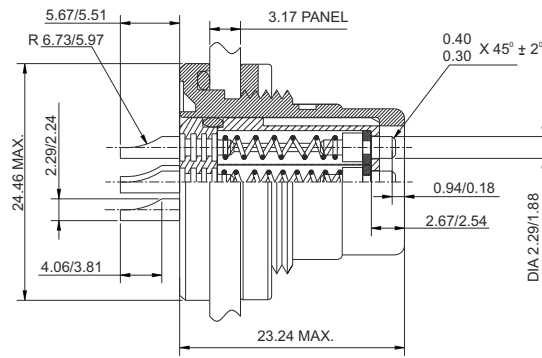
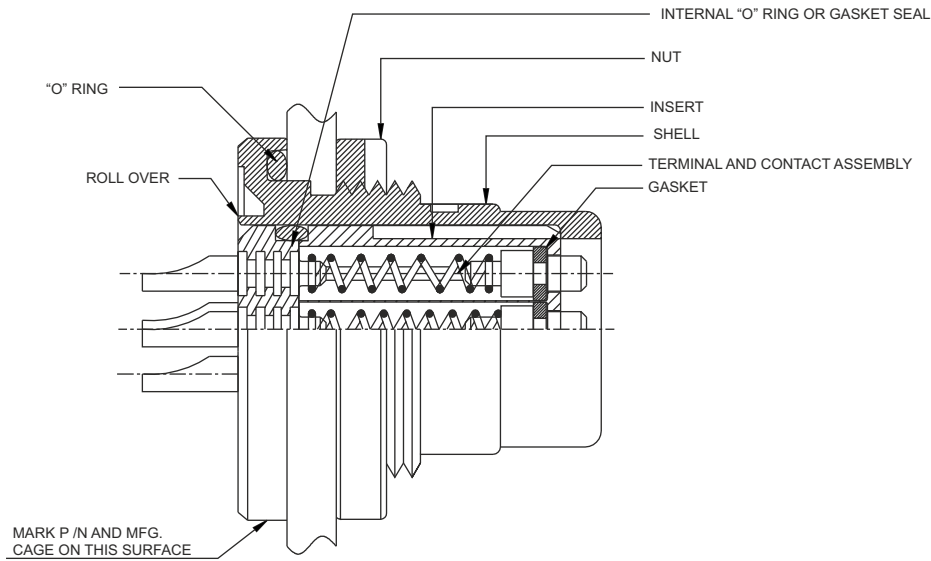
| Sr No. | Description   | MIL Designation | Amphenol Designation |
|--------|---|-----------------|----------------------|
| 1      | 5 Pin Audio plug connector with crimp sleeve terminal & molded strain relief (Not supplied) | M55116/5-X      | 164-182-X            |
| 2      | 6 Pin Audio plug connector with crimp sleeve terminal & molded strain relief (Not supplied) | M55116/6-X      | 164-182-6-X          |

| Dash no-X | Cable diameter |
|-----------|----------------|
| -0        | N/A            |
| -1        | 4.19 ± 0.25    |
| -2        | 5.79 ± 0.25    |
| -3        | 6.35 ± 0.25    |
| -4        | 7.36 ± 0.25    |
| -5        | 8.12 ± 0.25    |

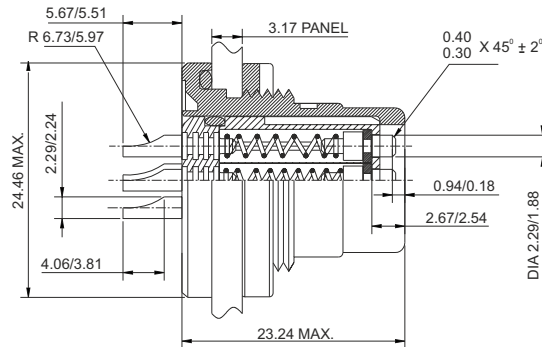
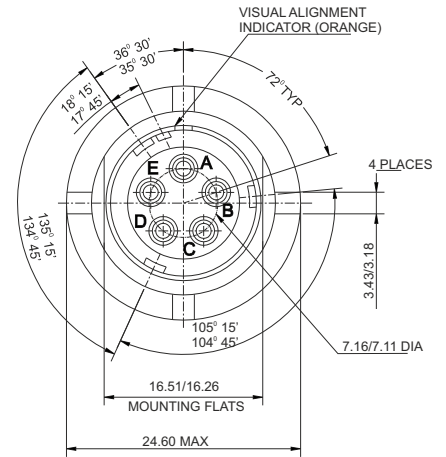
X Stands for the Cable size accommodation, is identified by a dash number as shown in above table. This number indicates the outside diameter of the cable that the connector will accommodate.

\*Nylon molded strain relief on request

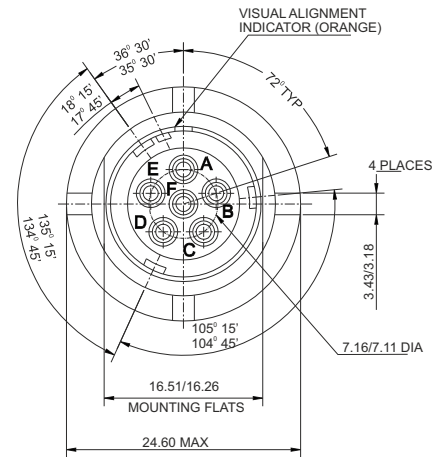




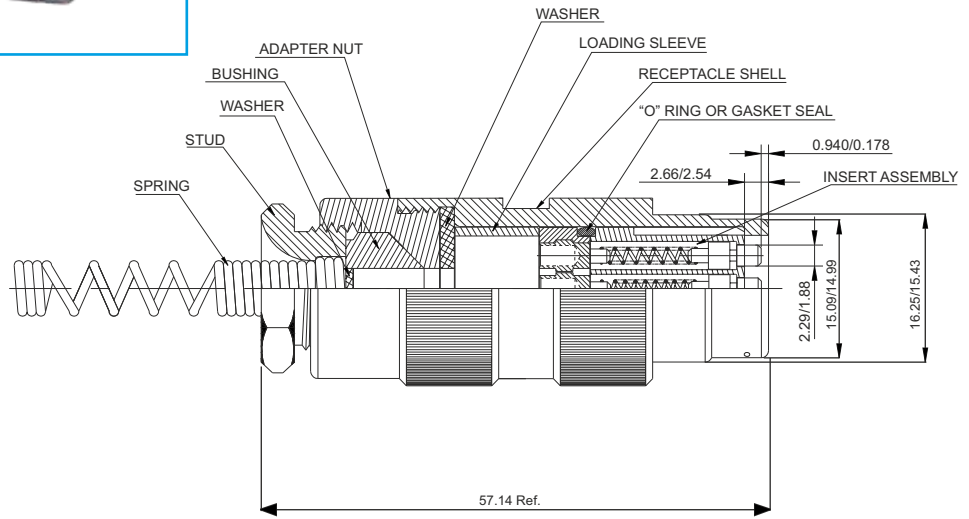
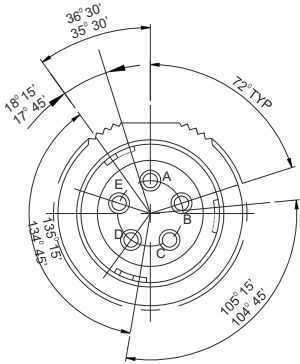
M55116/9



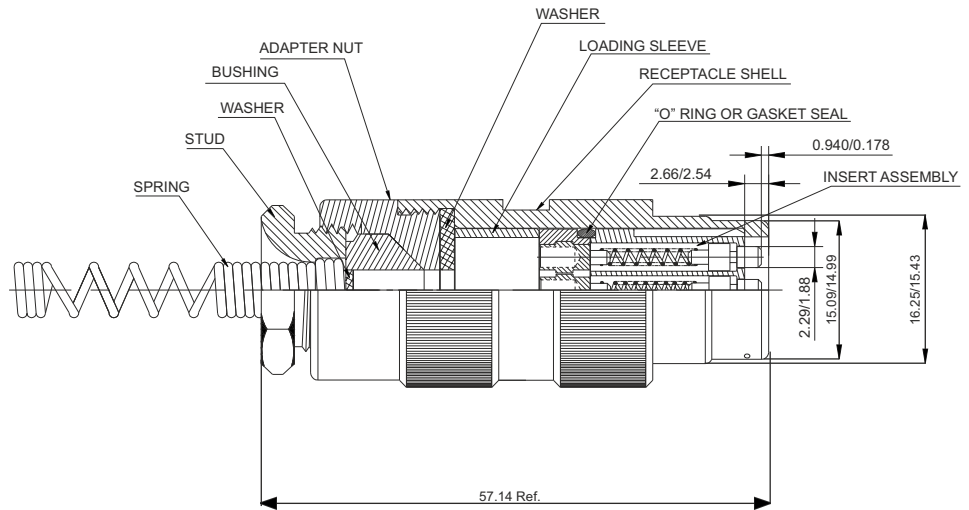
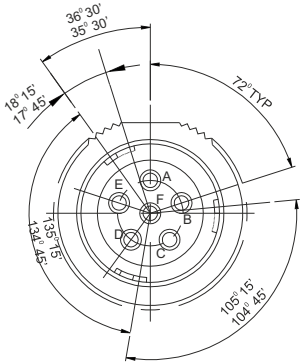
M55116/10



| Sr No. | Description  | MIL Designation | Amphenol Designation |
|--------|--|-----------------|----------------------|
| 1      | 5 Pin Audio Receptacle with solder cup terminal, Panel Mount | M55116/9        | 164-183              |
| 2      | 6 Pin Audio Receptacle with solder cup terminal, Panel Mount | M55116/10       | 164-183-6            |



M55116/11-X



M55116/12-X

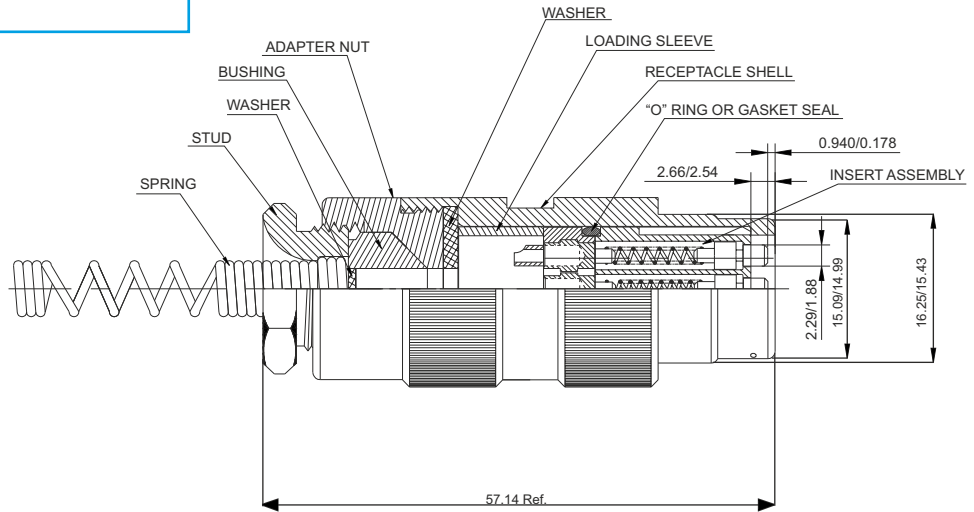
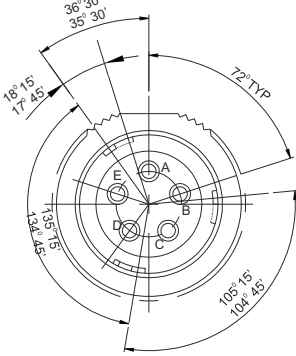
| Sr No. | Description  | MIL Designation | Amphenol Designation |
|--------|--|-----------------|----------------------|
| 1      | 5 Pin Audio Receptacle with Crimp sleeve terminal & wire strain relief | M55116/11-X     | 164-228-X            |
| 2      | 6 Pin Audio Receptacle with Crimp sleeve terminal & wire strain relief | M55116/12-X     | 164-228-6-X          |

| Dash no-X | Cable diameter |
|-----------|----------------|
| -0        | N/A            |
| -1        | 4.19 ± 0.25    |
| -2        | 5.79 ± 0.25    |
| -3        | 6.35 ± 0.25    |
| -4        | 7.36 ± 0.25    |
| -5        | 8.12 ± 0.25    |

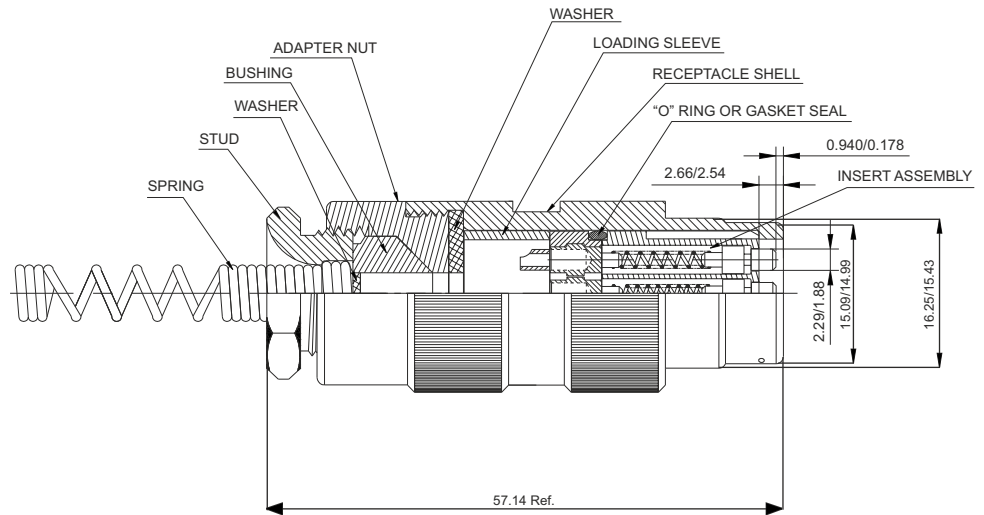
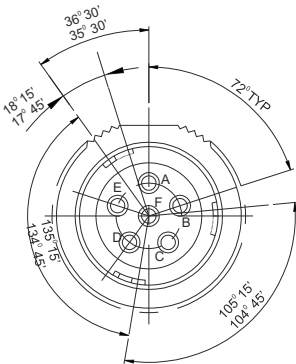
X Stands for the Cable size accommodation, is identified by a dash number as shown in above table. This number indicates the outside diameter of the cable that the connector will accommodate.

# F

## ive & Six Pin Audio Receptacle Connector Solder Cup Terminal



M55116/13-X



M55116/14-X

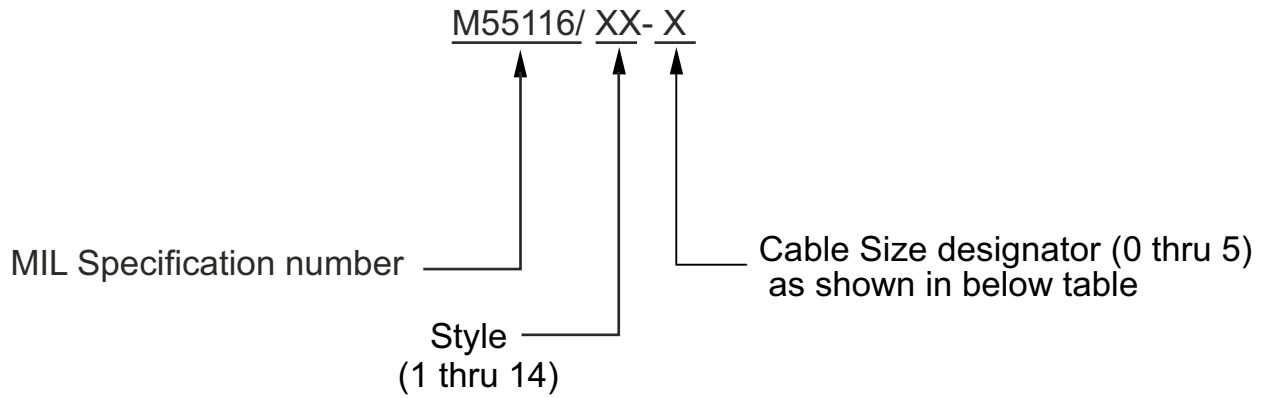
| Sr No. | Description  | MIL Designation | Amphenol Designation |
|--------|--|-----------------|----------------------|
| 1      | 5 Pin Audio Receptacle with solder cup terminal & wire strain relief | M55116/13-X     | 164-228-S-X          |
| 2      | 6 Pin Audio Receptacle with solder cup terminal & wire strain relief | M55116/14-X     | 164-228-6S-X         |

| Dash no-X | Cable diameter |
|-----------|----------------|
| -0        | N/A            |
| -1        | 4.19 ± 0.25    |
| -2        | 5.79 ± 0.25    |
| -3        | 6.35 ± 0.25    |
| -4        | 7.36 ± 0.25    |
| -5        | 8.12 ± 0.25    |

X Stands for the Cable size accommodation, is identified by a dash number as shown in above table. This number indicates the outside diameter of the cable that the connector will accommodate.

# List of Qualified Part Numbers

| Sr. No. | MIL Specification Designation | Amphenol Designation |
|---------|-------------------------------|----------------------|
| 1       | M55116/1-1                    | 164-229-1            |
| 2       | M55116/1-2                    | 164-229-2            |
| 3       | M55116/1-3                    | 164-229-3            |
| 4       | M55116/1-4                    | 164-229-4            |
| 5       | M55116/1-5                    | 164-229-5            |
| 6       | M55116/2-1                    | 164-229-6-1          |
| 7       | M55116/2-2                    | 164-229-6-2          |
| 8       | M55116/2-3                    | 164-229-6-3          |
| 9       | M55116/2-4                    | 164-229-6-4          |
| 10      | M55116/2-5                    | 164-229-6-5          |
| 11      | M55116/3-1                    | 164-229-S-1          |
| 12      | M55116/3-2                    | 164-229-S-2          |
| 13      | M55116/3-3                    | 164-229-S-3          |
| 14      | M55116/3-4                    | 164-229-S-4          |
| 15      | M55116/3-5                    | 164-229-S-5          |
| 16      | M55116/4-1                    | 164-229-6S-1         |
| 17      | M55116/4-2                    | 164-229-6S-2         |
| 18      | M55116/4-3                    | 164-229-6S-3         |
| 19      | M55116/4-4                    | 164-229-6S-4         |
| 20      | M55116/4-5                    | 164-229-6S-5         |
| 21      | M55116/5-1                    | 164-182-1            |
| 22      | M55116/5-2                    | 164-182-2            |
| 23      | M55116/5-3                    | 164-182-3            |
| 24      | M55116/5-4                    | 164-182-4            |
| 25      | M55116/5-5                    | 164-182-5            |
| 26      | M55116/6-1                    | 164-182-6-1          |
| 27      | M55116/6-2                    | 164-182-6-2          |
| 28      | M55116/6-3                    | 164-182-6-3          |
| 29      | M55116/6-4                    | 164-182-6-4          |
| 30      | M55116/6-5                    | 164-182-6-5          |
| 31      | M55116/7-1                    | 164-182-S-1          |
| 32      | M55116/7-2                    | 164-182-S-2          |
| 33      | M55116/7-3                    | 164-182-S-3          |
| 34      | M55116/7-4                    | 164-182-S-4          |
| 35      | M55116/7-5                    | 164-182-S-5          |
| 36      | M55116/8-1                    | 164-182-6S-1         |
| 37      | M55116/8-2                    | 164-182-6S-2         |
| 38      | M55116/8-3                    | 164-182-6S-3         |
| 39      | M55116/8-4                    | 164-182-6S-4         |
| 40      | M55116/8-5                    | 164-182-6S-5         |
| 41      | M55116/9                      | 164-183              |
| 42      | M55116/10                     | 164-183-6            |
| 43      | M55116/11-1                   | 164-228-1            |
| 44      | M55116/11-2                   | 164-228-2            |
| 45      | M55116/11-3                   | 164-228-3            |
| 46      | M55116/11-4                   | 164-228-4            |
| 47      | M55116/11-5                   | 164-228-5            |
| 48      | M55116/12-1                   | 164-228-6-1          |
| 49      | M55116/12-2                   | 164-228-6-2          |
| 50      | M55116/12-3                   | 164-228-6-3          |
| 51      | M55116/12-4                   | 164-228-6-4          |
| 52      | M55116/12-5                   | 164-228-6-5          |
| 53      | M55116/13-1                   | 164-228-S-1          |
| 54      | M55116/13-2                   | 164-228-S-2          |
| 55      | M55116/13-3                   | 164-228-S-3          |
| 56      | M55116/13-4                   | 164-228-S-4          |
| 57      | M55116/13-5                   | 164-228-S-5          |
| 58      | M55116/14-1                   | 164-228-6S-1         |
| 59      | M55116/14-2                   | 164-228-6S-2         |
| 60      | M55116/14-3                   | 164-228-6S-3         |
| 61      | M55116/14-4                   | 164-228-6S-4         |
| 62      | M55116/14-5                   | 164-228-6S-5         |



| Dash no-X | Cable diameter |
|-----------|----------------|
| -0        | N/A            |
| -1        | 4.19 ± 0.25    |
| -2        | 5.79 ± 0.25    |
| -3        | 6.35 ± 0.25    |
| -4        | 7.36 ± 0.25    |
| -5        | 8.12 ± 0.25    |

Note : Standard plug connector supplied with nylon over molding. For Stainless Steel version please add prefix S01 at the end of part number ordering information.

# Special Products



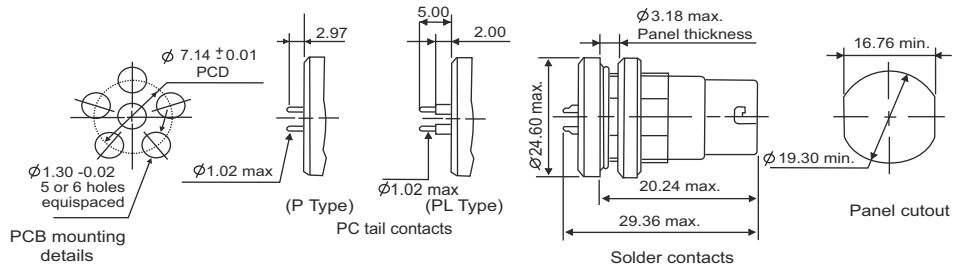
## Receptacles With PC Tail Contacts



Barrel Rigid Contact  
(Crimp Sleeve Terminal)



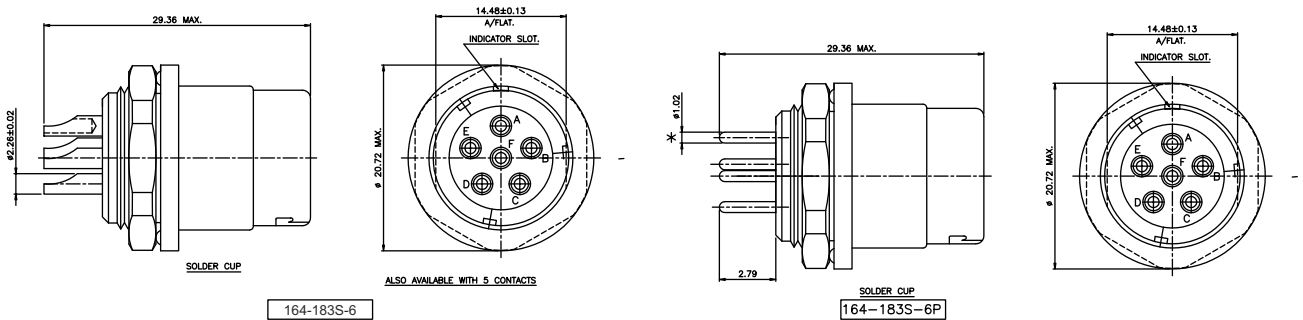
Solder Rigid Contact  
(Solder Cup Terminal)



All dimensions in mm

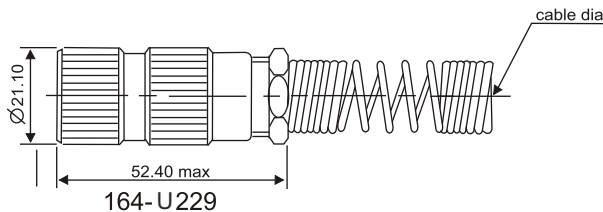
| Part Number | No. of Contacts | Contact Type          | Mates With                       |
|-------------|-----------------|-----------------------|----------------------------------|
| 164-183-P   | 5               | PC tail spring loaded | 164-229, 164-229-S, 164-182      |
| 164-183-PL  | 5               | PC tail spring loaded | 164-182-S, 164-182-L, 164-182-LS |
| 164-183-6P  | 6               | PC tail spring loaded | 164-229-6, 164-229-6S, 164-182-6 |
| 164-183-6PL | 6               | PC tail spring loaded | 164-182-6S, 164-182-6L           |

## Rear Mount Receptacles 6 Pins



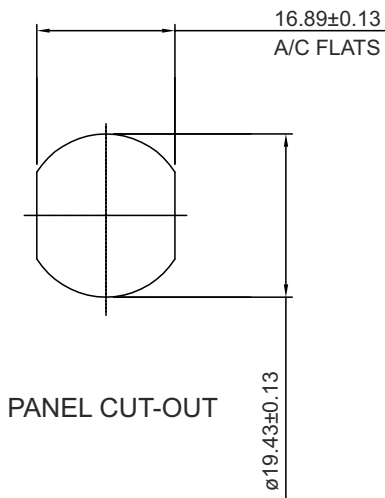
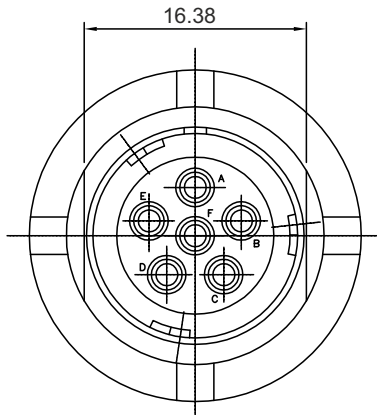
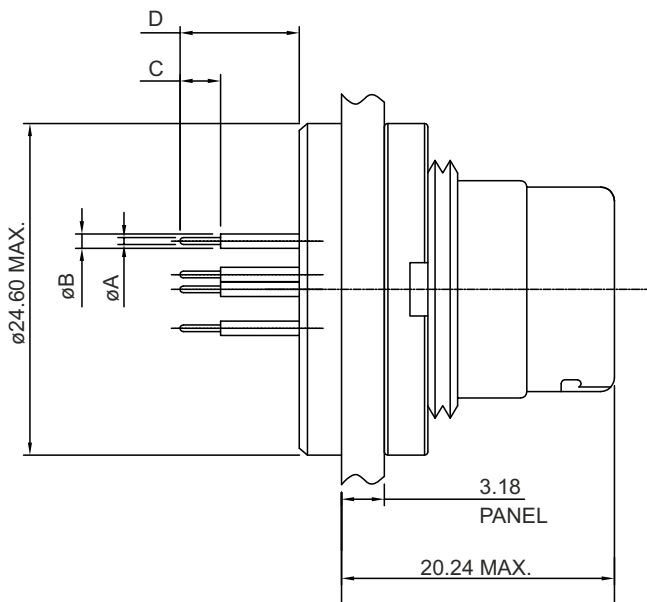
Note: For 5 Pin Connector Contact Factory

## Plug Connector Without Nylon Overmoulded



| Part Number   | No of contact | Contact Type | Dash no-X | Cable diameter  |
|---------------|---------------|--------------|-----------|-----------------|
| 164-U229-X    | 5             | Barrel Rigid | -0        | N/A             |
| 164-U229-S-X  | 5             | Solder Rigid | -1        | 4.19 $\pm$ 0.25 |
| 164-U229-6-X  | 6             | Barrel Rigid | -2        | 5.79 $\pm$ 0.25 |
| 164-U229-6S-X | 6             | Solder Rigid | -3        | 6.35 $\pm$ 0.25 |
|               |               |              | -4        | 7.36 $\pm$ 0.25 |
|               |               |              | -5        | 8.12 $\pm$ 0.25 |

### 164 Receptacle Connector With PC Tail Contact



164-183-5PL-XX

(FOR 5 PIN)

| MODIFIER    | $\phi A$ | $\phi B$ | $C \pm 0.50$ | $D \pm 0.50$ |
|-------------|----------|----------|--------------|--------------|
| NO MODIFIER | 1.02     | 1.78     | 3.00         | 5.00         |
| -1          | 1.02     | 2.26     | 2.92         | 4.29         |
| -5          | 0.71     | 2.26     | 3.18         | 4.93         |
| -8          | 0.71     | 2.26     | 4.78         | 14.99        |
| -9          | 1.02     | 1.02     | 11.10        | 11.10        |
| -10         | 0.71     | 2.26     | 5.54         | 6.53         |
| -12         | 1.02     | 1.02     | 2.79         | 2.79         |
| -13         | 0.71     | 2.26     | 3.81         | 11.10        |
| -14         | 0.76     | 0.76     | 3.05         | 3.05         |
| -15         | 0.71     | 2.26     | 3.56         | 9.91         |
| -16         | 1.02     | 1.02     | 18.90        | 18.90        |
| -20         | 0.76     | 0.76     | 14.33        | 14.33        |
| -21         | 1.02     | 1.02     | 2.79         | 2.79         |
| -22         | 0.65     | 2.25     | 3.10         | 5.00         |
| -23         | 1.02     | 1.78     | 2.00         | 5.00         |

164-183-6PL-XX

(FOR 6 PIN)

| MODIFIER    | $\phi A$ | $\phi B$ | $C \pm 0.50$ | $D \pm 0.50$ |
|-------------|----------|----------|--------------|--------------|
| NO MODIFIER | 1.02     | 1.78     | 3.00         | 5.00         |
| -1          | 1.02     | 2.26     | 2.92         | 4.29         |
| -2          | 1.02     | 1.02     | 11.10        | 10.10        |
| -8          | 0.71     | 2.26     | 4.78         | 14.99        |
| -9          | 0.71     | 2.26     | 3.18         | 4.93         |
| -10         | 0.71     | 2.26     | 5.54         | 6.53         |
| -12         | 1.02     | 1.02     | 2.79         | 2.79         |
| -13         | 0.71     | 2.26     | 3.81         | 11.10        |
| -14         | 0.76     | 0.76     | 3.05         | 3.05         |
| -15         | 0.71     | 2.26     | 3.56         | 9.91         |
| -16         | 1.02     | 1.02     | 18.90        | 18.90        |
| -20         | 0.76     | 0.76     | 14.33        | 14.33        |
| -21         | 1.02     | 1.02     | 2.79         | 2.79         |
| -22         | 0.65     | 2.25     | 3.10         | 5.00         |
| -23         | 1.02     | 1.78     | 2.00         | 5.00         |

Note: Consult Factory For Other Pcb Termination Styles And Availability

## Filtered Audio Receptacle Connector

Connector Meets All Requirement Of MIL-C-55116/5081

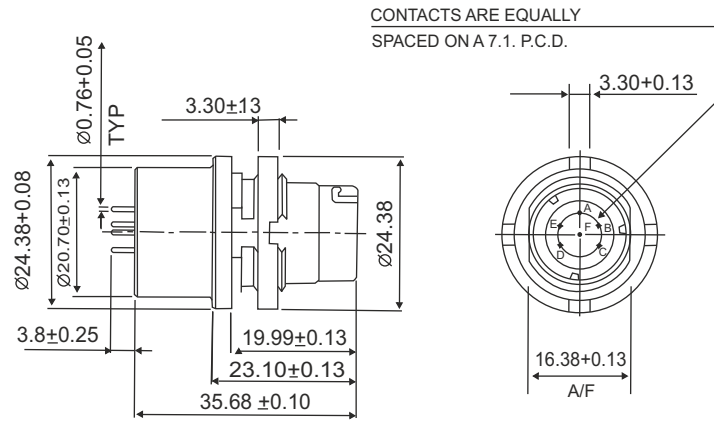
### Filter Specifications:

|   |   |
|---|---|
| Capacitance ( 1KHz, 25° )                           | :8000PF TYP                                   |
| Insertion Loss (TYP.)<br>(MIL-STD-220, No Load 25°) | :1Mhz - 4dB<br>:10Mhz - 25dB<br>:50Mhz - 60dB |
| Working Voltage                                     | :100DVC                                       |
| Dielectric Voltage Breakdown                        | :300VDC                                       |
| Insulation Resistance<br>(100VDC, 25° C)            | :10000 Mohms Min.                             |
| RF Current  | :0.25 A Max.                                  |

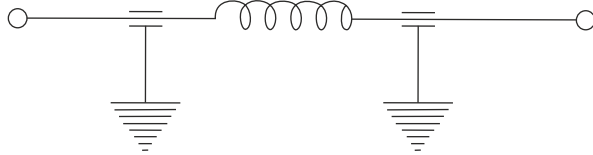
### Method Of Designation

| Connector Number | Description                             | No. Of Contacts | Contact Termination |
|------------------|---|-----------------|---------------------|
| 164F-1836B-527   | 164 Filtered Audio Receptacle Connector | 6               | PC Tail             |
| 164F-1835B-527   | 164 Filtered Audio Receptacle Connector | 5               | PC Tail             |

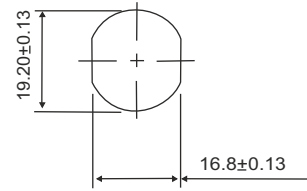
164F-1836B -527 Filtered Audio Receptacle Connector



SCHEMATIC DIAGRAM OF 'PI' FILTER



PANEL CUTOUT



## 164F - 1836B -527 Filtered Audio Receptacle Connector

### Specifications (Technical Data):

### Materials

|                     |   |
|---------------------|---|
| Shell and Panel Nut | : Stainless Steel   |
| Contacts            | : Copper Alloy  |
| Insulator           | : Diallyl Pthalate Per MIL-M-14 Type MDG/Polyethersulfone |

### Finish Colour

|                     |  |
|---------------------|--|
| Shell and Panel Nut | : Sand blasted and Passivated                                  |
| Contacts            | : 0.75 $\mu$ Thick Gold Plate Over Nickel Undercoat 2.54 $\mu$ |
| Insulator           | : Blue/Black   |

### Electrical Properties

|                           |                      |
|---------------------------|----------------------|
| Operating Voltage         | : 60V Max. Potential |
| Current Rating            | : 0.5A Max.          |
| Dielectric Breakdown      | : 300V DC            |
| Insulation Resistance     | : 1000M Ohms         |
| Contact Resistance(Mated) | : 0.050 Ohms Max.    |

### Mechanical Properties

|                 |                             |
|-----------------|-----------------------------|
| Air Pressure    | : 2.5 P.S.I.                |
| Water Immersion | : 48 Hrs. At 6 Feet         |
| Durability      | : 3000 Cycles Mate & Unmate |

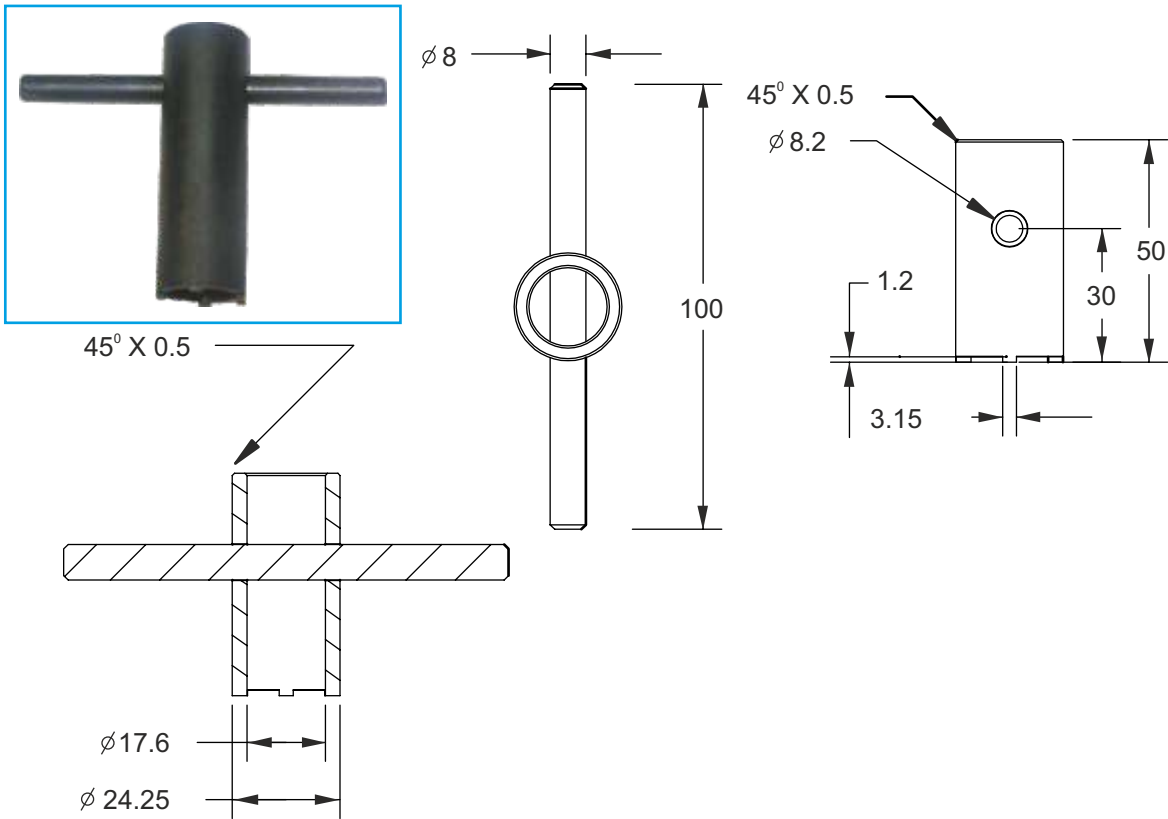
Operating Temperature Range: -55<sup>o</sup> C TO 85<sup>o</sup> C

Amphenol 164 F-1836B-527 Receptacle Mates With:

Amphenol 164-229-6 & 164-229

Amphenol 164-229-6S & 164-229-S

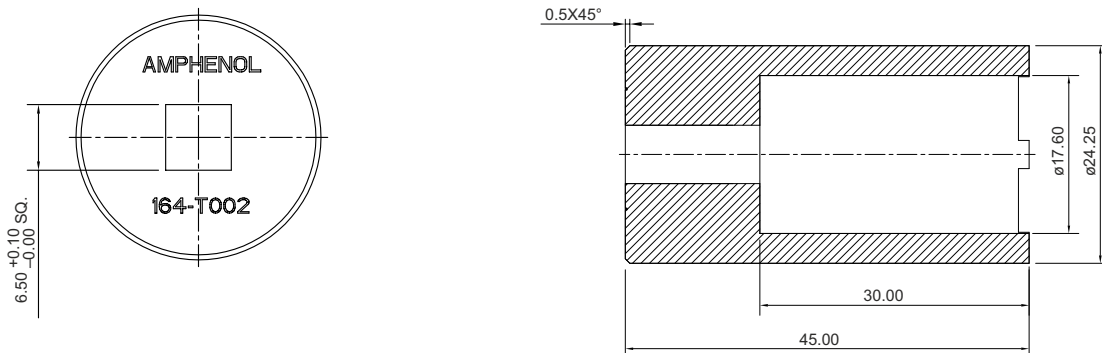
**Tightening Spanner (164-T001)**  
(Panel Nut Tightening For 164-183 Connector)



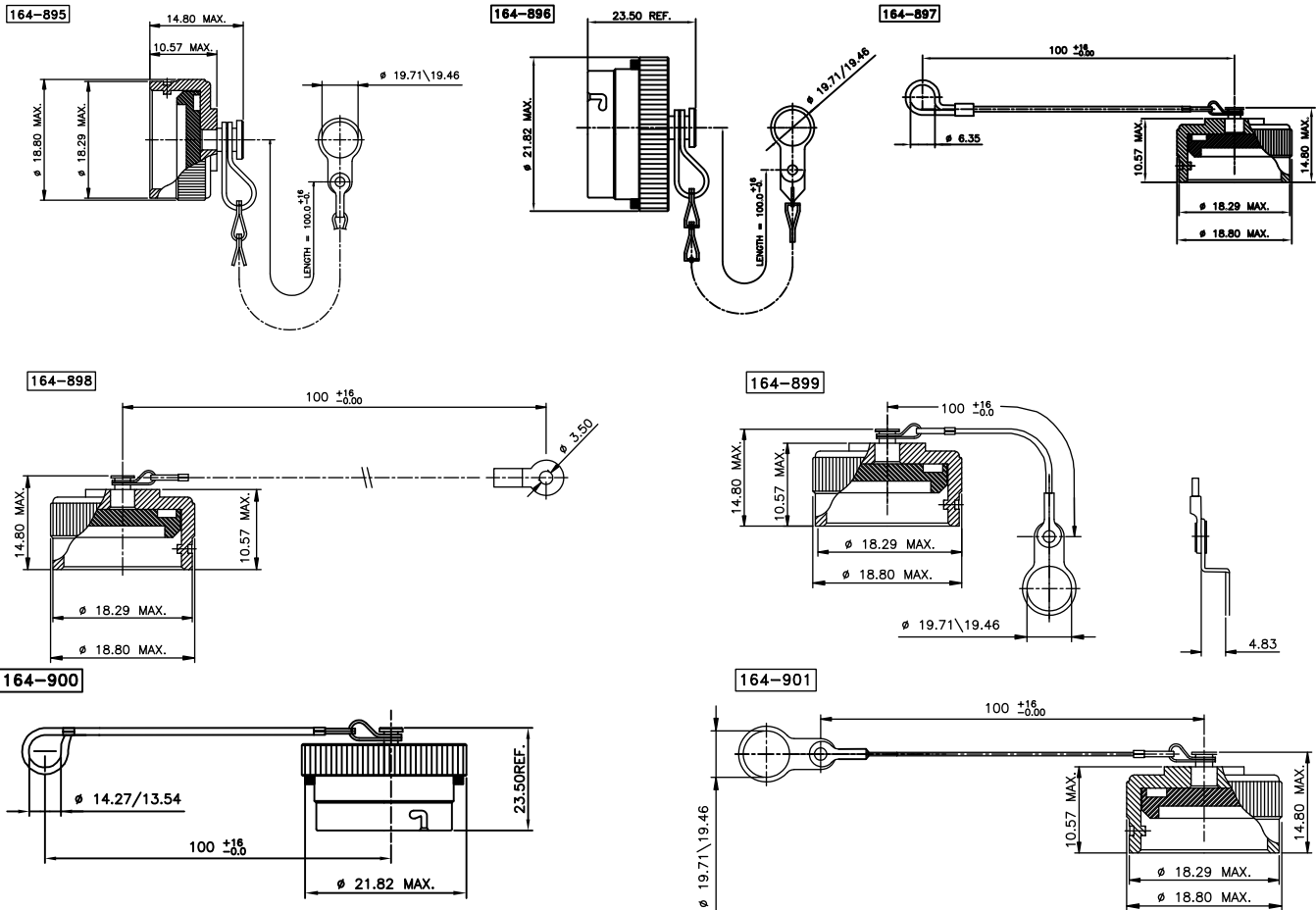
**Tightening Spanner (164-T002)**  
(Panel Nut Tightening For 164-183 Connector - Torque Wrench Provision)



Ordering Part No. - 164- T002



Accessories - Caps For 5 & 6 Pin Connectors



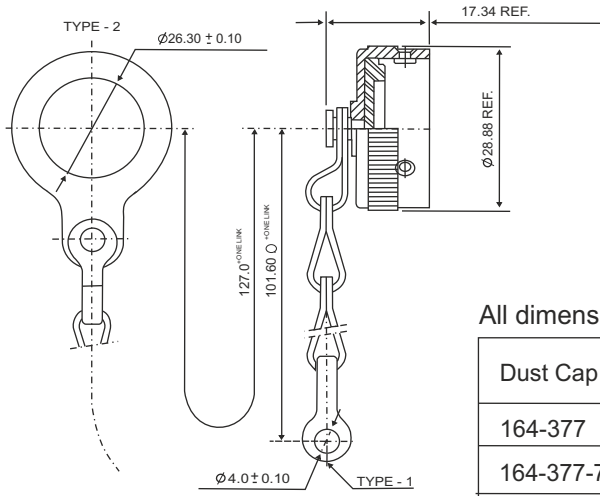
ORDERING INFORMATION FOR 164 DUST CAP

- Series Designation 164 MIL 55116 Audio Connector Caps  
 Shell Style 895
- 895:-Receptacle dust caps for 5 & 6 pin audio connector with chain & solid ring
  - 896:-Plug dust caps for 5 & 6 pin audio connector with chain & solid ring
  - 897:-Receptacle dust caps for 5 & 6 pin audio connector with nylon rope & loop
  - 898:-Receptacle dust caps for 5 & 6 pin audio connector with nylon rope & SS lug
  - 899:-Receptacle dust caps for 5 & 6 pin audio connector with SS rope & lug
  - 900:-Plug caps for 5 & 6 pin audio connector with SS rope & loop
  - 901:-Receptacle dust caps for 5 & 6 pin audio connector with nylon rope & solid ring

- Finish CD LXX
- Special Deviation for length for standard none for Non std. mention length in mm
- Standard Black anodic caps
  - CD - Cadmium olive green finish
  - 622 - Zn Co olive green finish
  - 624 - Zn Co black finish

| MATERIAL |                                 |
|----------|---------------------------------|
| Cover    | : Machined Alluminium Alloy     |
| Gasket   | : Silicon elastomer             |
| Chain    | : Stainless steel passivated    |
| Ring     | : Stainless steel passivated    |
| SS Rope  | : Stainless steel teflon coated |
| Rope     | : Nylon (olive green)           |
| Fastners | : Stainless steel passivated    |

Dust Cap for 10 Pin Receptacle



All dimensions in mm

Table 1

| Dust Cap No.   | Link Type | Cap Finish                                |
|----------------|-----------|---|
| 164-377        | Type -2   | Black Anodised                            |
| 164-377-714    | Type-2    | Cadmium Plate with Electroless Under Coat |
| 164-377-01     | Type-1    | Black Anodised                            |
| 164-377-01-714 | Type-1    | Cadmium Plate with Electroless Under Coat |



## Specifications:

### 1. Materials & Finish

|                  |   |
|------------------|---|
| Receptacle Shell | : Stainless Steel, passivated, sand blasted                 |
| Plug Shell       | : Stainless Steel, black passivated                         |
| Rear Shell       | : Aluminium alloy, black oxide<br>: Zinc Black for shielded |
| Inserts          | : Diallylphthalate as per MIL-M-14F, type MDG               |
| Contacts         | : Copper Alloy, Gold plated .000030 In                      |
| Panel Nuts       | : Stainless Steel, passivated sand blasted                  |

### 2. Mechanical Properties

|              |                    |
|--------------|--------------------|
| Durability   | : 3000 Cycles Min. |
| Air Pressure | : 2.5psi.          |
| Immersion    | : 48 Hrs at 6 ft.  |

### 3. Electrical Performance

|                            |                        |
|----------------------------|------------------------|
| Dielectric Strength        | : 500 vRms             |
| Insulation Resistance      | : 1000 Megha Ohms Min. |
| Contact Resistance (mated) | : .015 Ohms (Max.)     |

### 4. Reference Standard

MIL-C-10544

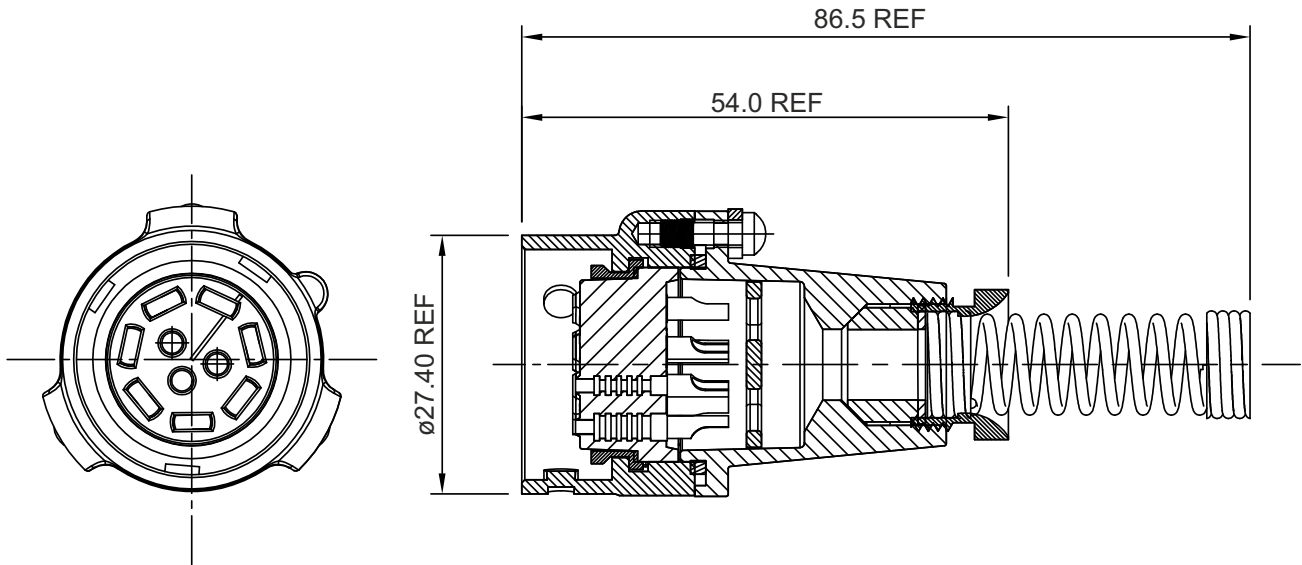
### 5. Environmental

Operating Temperature :- -55°C to +85°C

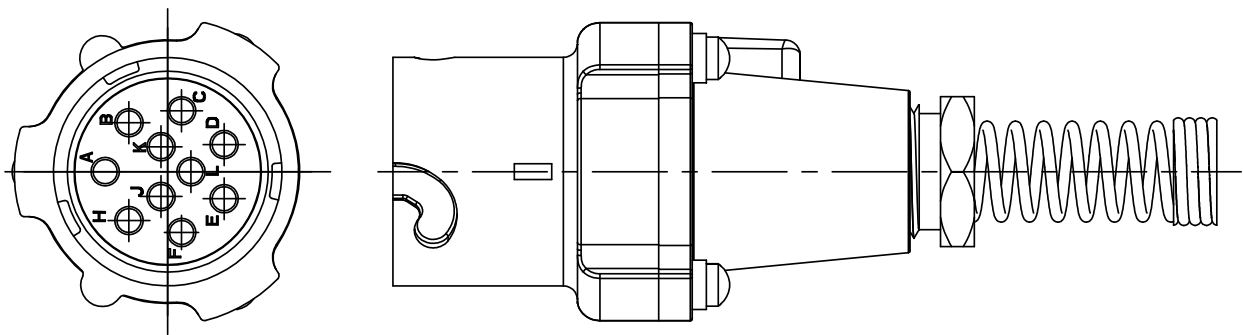
### 6. Ordering Information

| SL. NO. | MIL PART NUMBER | AMPHENOL PART NUMBER | CONNECTOR  | NO. OF CONTACTS | TYPE OF TERMINATION | REAR SHELL DESIGN |
|---------|-----------------|----------------------|------------|-----------------|---------------------|-------------------|
| 1       | U-77()/U        | 164-77/U             | PLUG       | 10              | SOLDER POCKET       | STRAIGHT          |
| 2       | U-78()/U        | 164-78/U             | PLUG       | 10              | SOLDER POCKET       | STRAIGHT          |
| 3       | U-79()/U        | 164-79/U             | RECEPTACLE | 10              | SOLDER POCKET       | STRAIGHT          |
| 4       | U-126()/U       | 164-126/U*           | RECEPTACLE | 10              | SOLDER POCKET       | STRAIGHT          |
| 5       | U-127()/U       | 164-127/U*           | PLUG       | 10              | SOLDER POCKET       | RIGHT ANGLE       |
| 6       | U-161()/U       | 164-161/U            | PLUG       | 10              | TAPER PIN           | STRAIGHT          |

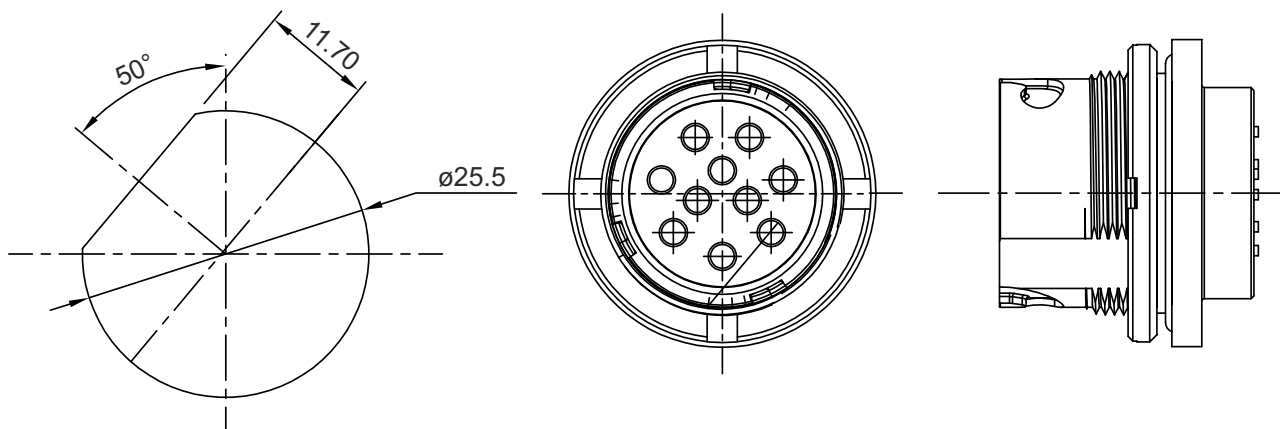
**164-77/U Plug With Rigid Contacts, Solder Pocket Terminal, Straight Rear Shell**



**164-78/U Receptacle With Non Rigid Contacts, Solder Pocket Terminal, Straight Rear Shell**

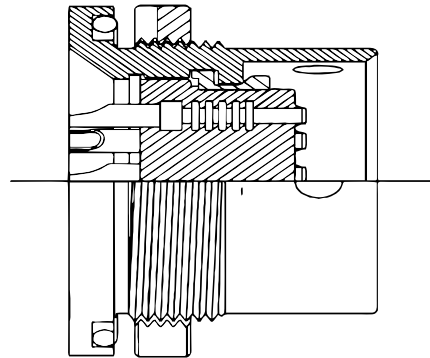


**164-79/U Panel Mount Receptacle With Non Rigid Contacts, Solder Pocket Terminal**

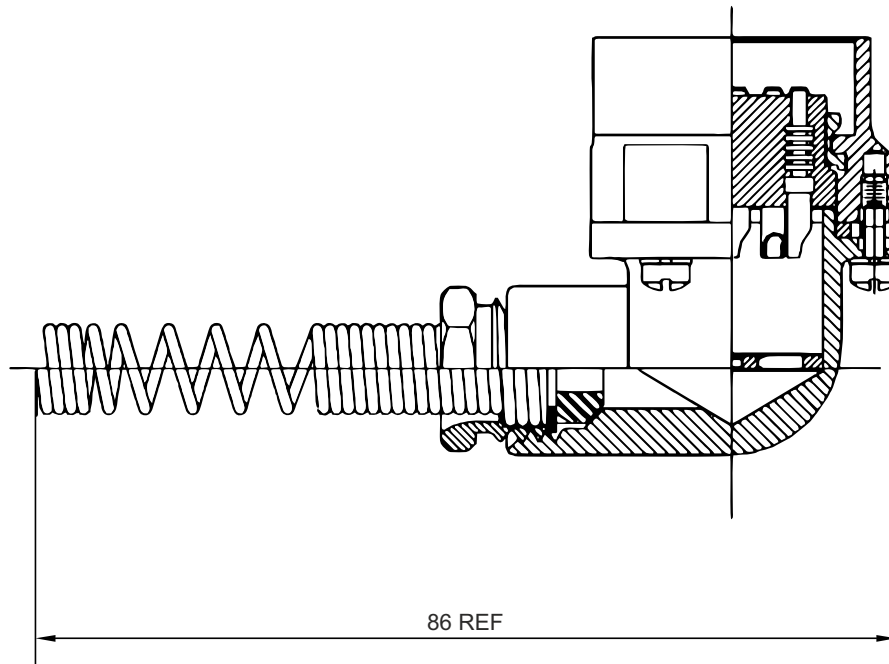


Recommended Panel Cut Out

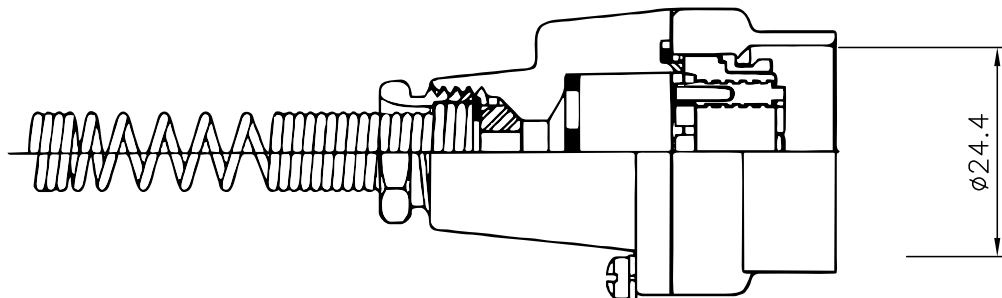
164-126/U Panel Mount Plug With Rigid Contacts, Solder Pocket Terminal

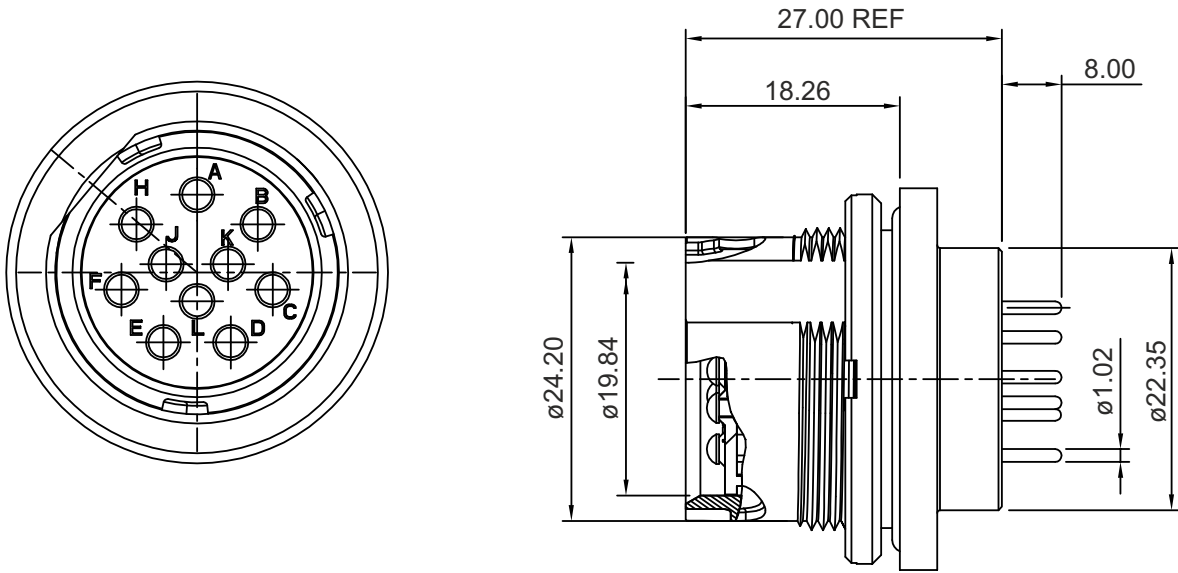


164-127/U Plug With Rigid Contacts, Solder Pocket Terminal, Right Angled Rear Shell

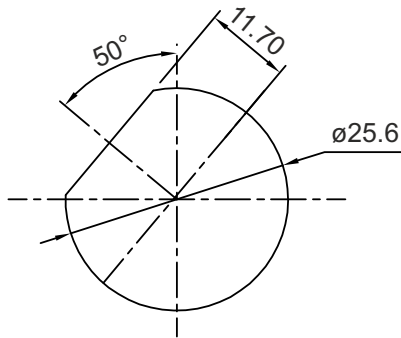


164-161/U Plug With Rigid Contacts, Solder Pocket Terminal, Right Angled Rear Shell

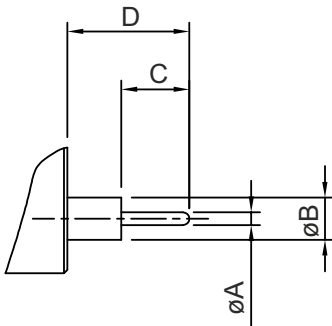




164-79/U—P PLAIN PIN DESIGN



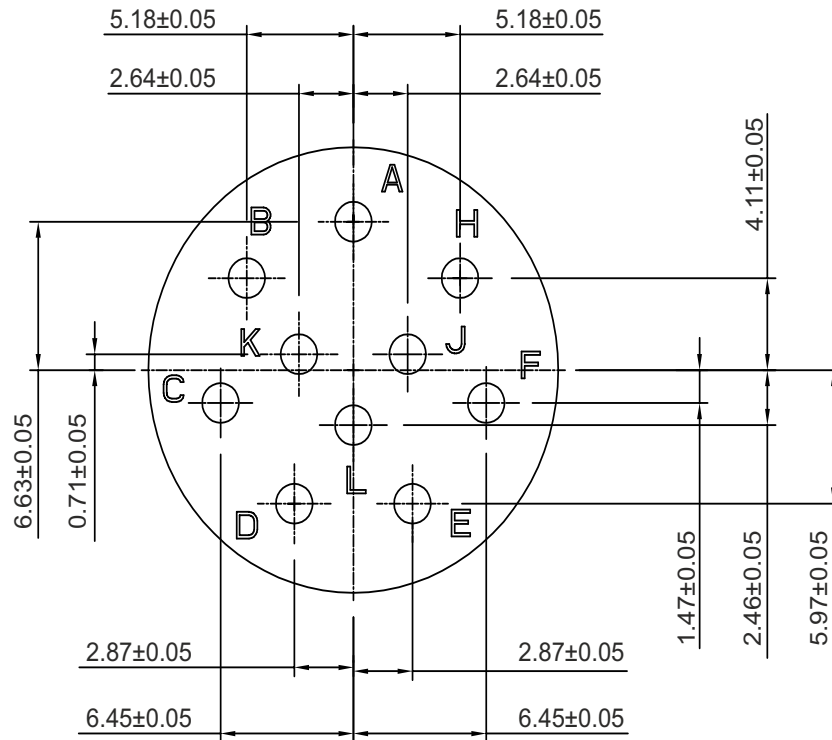
RECOMANDED PANEL CUT OUT



164-79/U—PL—XX STEPPED PIN DESIGN

| MODIFIER(XX) | $\phi A$ | $\phi B$ | C     | D     |
|--------------|----------|----------|-------|-------|
| NO MODIFIER  | 1.02     | 1.78     | 3.00  | 5.00  |
| -1           | 1.02     | 2.26     | 2.92  | 4.29  |
| -2           | 1.02     | 1.02     | 11.10 | 11.10 |
| -8           | 0.71     | 2.26     | 4.78  | 14.99 |
| -9           | 0.71     | 2.26     | 3.18  | 4.93  |
| -10          | 0.71     | 2.26     | 5.54  | 6.53  |
| -12          | 1.02     | 1.02     | 2.79  | 2.79  |
| -13          | 0.71     | 2.26     | 3.81  | 11.10 |
| -14          | 0.76     | 0.76     | 3.05  | 3.05  |
| -15          | 0.71     | 2.26     | 3.56  | 9.91  |
| -16          | 1.02     | 1.02     | 18.90 | 18.90 |
| -20          | 0.76     | 0.76     | 14.33 | 14.33 |
| -21          | 1.02     | 1.02     | 2.79  | 2.79  |
| -22          | 0.65     | 2.25     | 3.10  | 5.00  |
| -23          | 1.02     | 1.78     | 2.00  | 5.00  |

## PCB Pin Co-ordinates



## Specifications:

### 1. Ordering Information

|            |                      |
|------------|----------------------|
| 164—79/U—P | : Plain Pin Design   |
| 164—79/U—P | : Stepped Pin Design |

### 2. Materials & Finish

|             |   |
|-------------|---|
| Front Shell | : Stainless Steel, Sand Blasted Finish.       |
| Spanner Nut | : Stainless Steel, Sand Blasted Finish.       |
| Inserts     | : Diallylphthalate as per MIL—M—14F, type MDG |
| Contacts    | : Copper Alloy, Gold plated .000030 In        |

### 3. Mechanical Properties

|              |                        |
|--------------|------------------------|
| Durability   | : 3000 Cycles Minimum. |
| Air Pressure | : 2.5psi.              |
| Immersion    | : 48 Hrs at 6 ft.      |

### 4. Electrical Performance

|                            |                       |
|----------------------------|-----------------------|
| Dielectric Strength        | : 500 vRms            |
| Insulation Resistance      | : 1000 Megha Ohms Min |
| Contact Resistance (mated) | : .015 Ohms (Max)     |

### 5. Reference Standard

|         |                 |
|---------|-----------------|
| STD     | : — MIL—C—10544 |
| PART NO | : — U—79/U      |

Notice: All information, including illustrations given herein is believed to be accurate at the time of printing. In lieu of design advances, Amphenol reserves the right to change specifications without notice. This publication Series 164 Connectors AC16403 0118 supercedes all existing Amphenol literature on Series 164 Connectors.

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