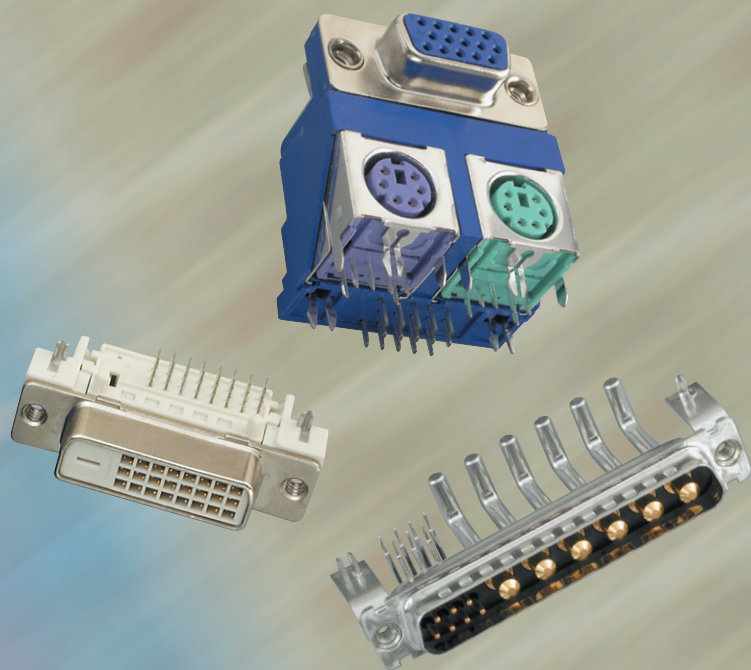


# D-SUBMINIATURE CONNECTORS



# Amphenol<sup>®</sup>

ACCESSORIES

STANDARD DENSITY

SURFACE MOUNT RECEPTACLES

HIGH DENSITY

#### GENERAL DESCRIPTION:

---

Amphenol's line of D-Subminiature rack and panel connectors is part of an industry standard for applications requiring reliable, rugged, connectors. These connectors are designed to accommodate rack and panel, cable to panel and cable to cable applications. D-Subminiature connectors are pin and socket devices that employ contacts encased in a molded dielectric insert surrounded by a "D" shaped shell for polarization.

#### MARKETS:

---

Amphenol D-Subminiature connectors can be used in commercial, industrial or military markets. We offer a broad selection of dielectric materials and contact styles and configurations to meet all of your design requirements.

#### APPLICATIONS INCLUDE:

---

- Business equipment
- Electronic office systems
- Data communications
- Medical equipment
- Mobile communications
- Consumer electronics

#### AMPHENOL D-SUB FEATURES:

---

- Industry standard interfacing RS232 and RS449 mating configurations per EIA standards.
- UL Component Recognition File number E64911 (617, 841, 17, 17D, 17HD, ED, 17RR, 17SD, 117DF, 17BH, 17TW)
- Variations available:
  - Solder cup
  - Straight pc mount solder
  - Right angle pc mount solder
  - Solderless wire wrap
  - Crimp
  - High Density Right Angle
  - High Density Straight
  - Stacked Right Angle PC mount
  - Surface mount
- Five shell sizes offer widest choice of contact positions: 9, 15, 25, 37 and 50 in standard density and 15, 26, 44, 62 and 78 positions in high-density.
- Inserts are flame-retardant thermoplastic.
- Accessories for all applications are available including strain reliefs, cable clamps, shielded backshells, mating hardware and connector to pc board mounting hardware.
- Automatic and manual tooling is available for both crimp and IDC versions.
- Contact Amphenol for lease information.



## High Density

### SPECIFICATIONS:

#### MATERIALS AND PLATINGS

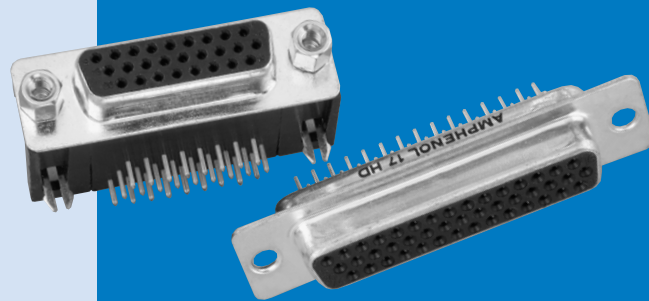
|                   |                                                   |
|-------------------|---------------------------------------------------|
| Shells            | Steel, tin plated, grounding indents on plug.     |
| Contact Material  | Copper alloy                                      |
| Contact Plating   | Engagement area: gold (see ordering information). |
| Termination End   | 150μ" (3.81μm) tin/lead                           |
| Nickel Underplate | 50μ" (1.27μm) entire contact                      |

#### ELECTRICAL DATA

|                                 |                                             |
|---------------------------------|---------------------------------------------|
| Current Rating                  | 3 Amps maximum per contact                  |
| Voltage Rating                  | 125 VAC                                     |
| Dielectric Withstanding Voltage | 1000 VAC (minimum)                          |
| Dielectric                      | Glass filled thermoplastic, black, UL 94 VO |
| Insulation Resistance           | 5,000 Megaohms (minimum)                    |
| Contact Resistance              | 15 Milliohms (maximum)                      |

#### CLIMATIC DATA

|                       |                                |
|-----------------------|--------------------------------|
| Operating Temperature | -67°F (-55°C) to 221°F (105°C) |
|-----------------------|--------------------------------|



## 17E BH/HD SERIES

Amphenol's High Density D-Subminiature connectors complement Amphenol's extensive D-Subminiature connector line. This line of connectors offers many superior features, high performance level and low installation cost.

The connector configurations are available in 15, 26, 44, 62 and 78 positions.

The product offering includes PCB mount connectors in both straight or right angle termination styles. Straight PCB mount are available in both Fixed Screw Machine and Stamped and Formed contacts, while Right Angle PCB mount are only available with Stamped and Formed contacts.

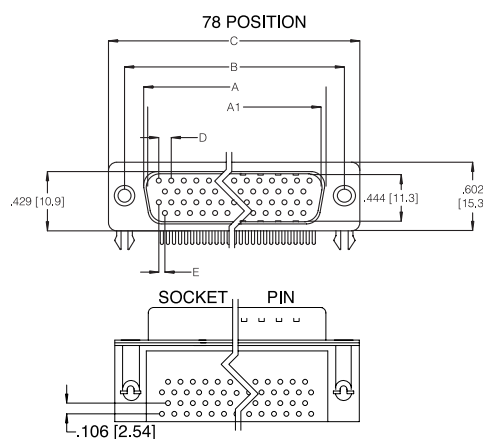
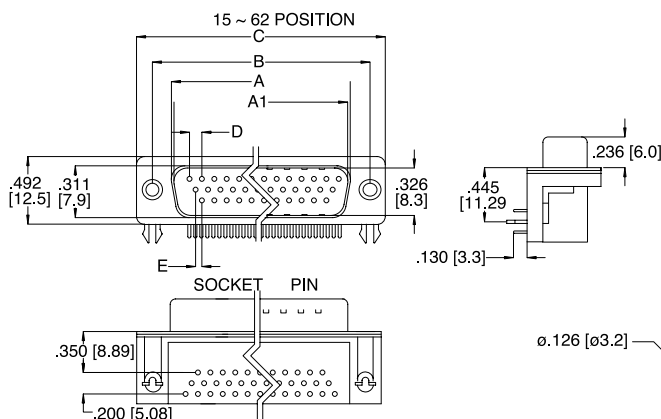
A cable mount version with solder terminations is also available, which can be combined with Amphenol's standard line of shielded or unshielded backshells.

INCHES (MM)

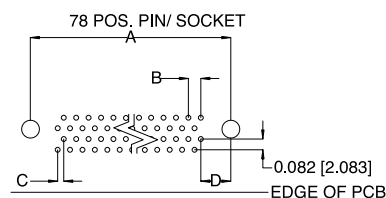
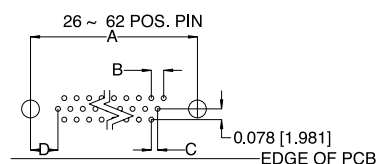
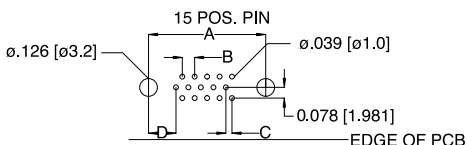
- Industrial
- Telecom
- Any industry standard I / O connections



DIMENSIONS FOR 15 - 62 POSITION (3 ROW)(SHOWN WITH FIXED FEMALE SCREWLOCKS) DIMENSIONS FOR THE 78 POSITION (4 ROW)



| CONTACTS | A<br>SOCKET     | A1<br>PIN        | B               | C               | D              | E               |
|----------|-----------------|------------------|-----------------|-----------------|----------------|-----------------|
| 15       | .642<br>[16.30] | .666<br>[16.92]  | .984<br>[25.0]  | 1.213<br>[30.8] | .090<br>[2.29] | .045<br>[1.145] |
| 26       | .969<br>[24.6]  | .994<br>[25.25]  | 1.311<br>[33.3] | 1.543<br>[39.2] | .090<br>[2.29] | .045<br>[1.145] |
| 44       | 1.508<br>[38.3] | 1.534<br>[38.96] | 1.854<br>[47.1] | 2.091<br>[53.1] | .090<br>[2.29] | .045<br>[1.145] |
| 62       | 2.157<br>[54.8] | 2.182<br>[55.42] | 2.50<br>[63.5]  | 2.732<br>[69.4] | .095<br>[2.41] | .047<br>[1.205] |
| 78       | 2.05<br>[52.20] | 2.079<br>[52.81] | 2.40<br>[61.0]  | 2.638<br>[67.0] | .095<br>[2.41] | .047<br>[1.205] |



| CONTACTS | A               | B              | C               | D              |
|----------|-----------------|----------------|-----------------|----------------|
| 15       | .984<br>[25.0]  | .090<br>[2.29] | .045<br>[1.145] | .277<br>[7.04] |
| 26       | 1.311<br>[33.3] | .090<br>[2.29] | .045<br>[1.145] | .271<br>[6.88] |
| 44       | 1.854<br>[47.1] | .090<br>[2.29] | .045<br>[1.145] | .271<br>[6.88] |
| 62       | 2.50<br>[63.5]  | .095<br>[2.41] | .047<br>[1.205] | .275<br>[7.00] |
| 78       | 2.402<br>[61.0] | .095<br>[2.41] | .047<br>[1.205] | .300<br>[7.63] |

## ORDERING INFORMATION

## 17EBH Series High Density D-Sub

Front Metal Shell, Right-Angle PC Mount

17EBH 0XX X XX X XX

Series

Number Of Positions

15, 26, 44, 62, 78

Type

P Pin (male)

S Socket (female)

PCB Mount Options

00 Clear hole

10 Arrowhead Board

Panel Mounting Options

0 .120 (3.05) Clear Hole

1 #4-40 Threaded Hole

2 #4-40 Fixed Female Screw

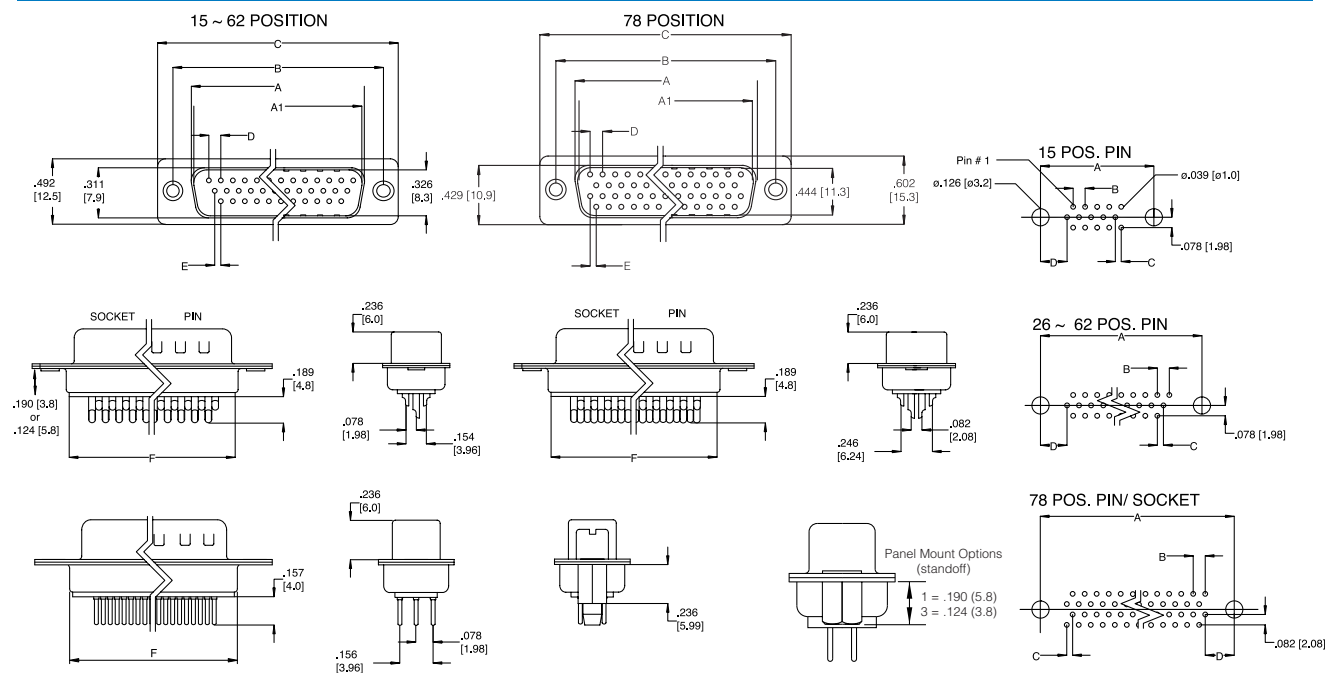
Plating Code

AA Gold Flash over Nickel

AM 30μ" (.76μm) Gold over Nickel



### DIMENSIONS



| CONTACTS | A<br>SOCKET     | A1<br>PIN        | B               | C               | D              | E               | F               |
|----------|-----------------|------------------|-----------------|-----------------|----------------|-----------------|-----------------|
| 15       | .642<br>[16.30] | .666<br>[16.92]  | .984<br>[25.0]  | 1.213<br>[30.8] | .090<br>[2.29] | .045<br>[1.145] | .756<br>[19.2]  |
| 26       | .969<br>[24.6]  | .994<br>[25.25]  | 1.311<br>[33.3] | 1.543<br>[39.2] | .090<br>[2.29] | .045<br>[1.145] | 1.071<br>[27.2] |
| 44       | 1.508<br>[38.3] | 1.534<br>[38.96] | 1.854<br>[47.1] | 2.091<br>[53.1] | .090<br>[2.29] | .045<br>[1.145] | 1.618<br>[41.1] |
| 62       | 2.157<br>[54.8] | 2.182<br>[55.42] | 2.50<br>[63.5]  | 2.732<br>[69.4] | .095<br>[2.41] | .047<br>[1.205] | 2.256<br>[57.3] |
| 78       | 2.05<br>[52.20] | 2.079<br>[52.81] | 2.40<br>[61.0]  | 2.638<br>[67.0] | .095<br>[2.41] | .047<br>[1.205] | 2.169<br>[55.1] |

| CONTACTS | A               | B              | C               | D              |
|----------|-----------------|----------------|-----------------|----------------|
| 15       | .984<br>[25.0]  | .090<br>[2.29] | .045<br>[1.145] | .277<br>[7.04] |
| 26       | 1.311<br>[33.3] | .090<br>[2.29] | .045<br>[1.145] | .277<br>[7.04] |
| 44       | 1.854<br>[47.1] | .090<br>[2.29] | .045<br>[1.145] | .277<br>[7.04] |
| 62       | 2.50<br>[63.5]  | .095<br>[2.41] | .047<br>[0.120] | .275<br>0.699  |
| 78       | 2.402<br>[61.0] | .095<br>[2.41] | .047<br>[0.120] | .275<br>0.699  |

### ORDERING INFORMATION

## 17E HD Series High Density D-Sub

Solder Cup & Straight P.C. Mount, Front Metal Shell Fixed Contact

**17EHD 0XX X XX X XX**

Series

Number Of Positions  
15, 26, 44, 62, 78

Type

P Pin (male)  
S Socket (female)

Termination Types:

00 Solder Cup  
30 Board-mount, Vertical  
32 Board-mount, Vertical with Boardlocks  
33 Board-mount, Vertical with standoff, no boardlock

Panel Mounting Options:

0 .120 (3.05) Clear Hole  
1 #4-40 Threaded Hole .190 (5.8)  
2 #4-40 Fixed Female Screwlock  
3 #4-40 Threaded Hole .124 (3.8)

Plating Code:

AA Gold Flash over Nickel  
AM 30µ" (.76µm) Gold over Nickel

INCHES (MM)

## Right-Angle Board Mount Connectors Front Metal Shell

### SPECIFICATIONS:

#### MATERIALS AND PLATINGS

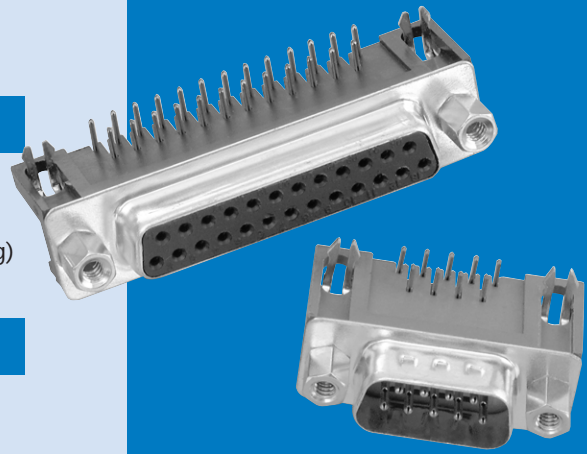
|                 |                                                                         |
|-----------------|-------------------------------------------------------------------------|
| Shells          | Steel, tin plated                                                       |
| Contacts        | Precision formed copper alloy                                           |
| Contact Plating | Gold over nickel                                                        |
| Contact Forces  | Engagement: 12 oz. max. (340.2 g)<br>Separation: .75 oz. min. (21.26 g) |

#### ELECTRICAL DATA

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Current Rating                  | 5 amps                                         |
| Dielectric Withstanding Voltage | 1000 VAC/60 sec.                               |
| Dielectric                      | Glass filled thermoplastic,<br>black, UL 94 VO |
| Contact Resistance              | 15 milliohms max.                              |

#### CLIMATIC DATA

|                   |                                |
|-------------------|--------------------------------|
| Temperature Range | -67°F (-55°C) to 221°F (105°C) |
|-------------------|--------------------------------|



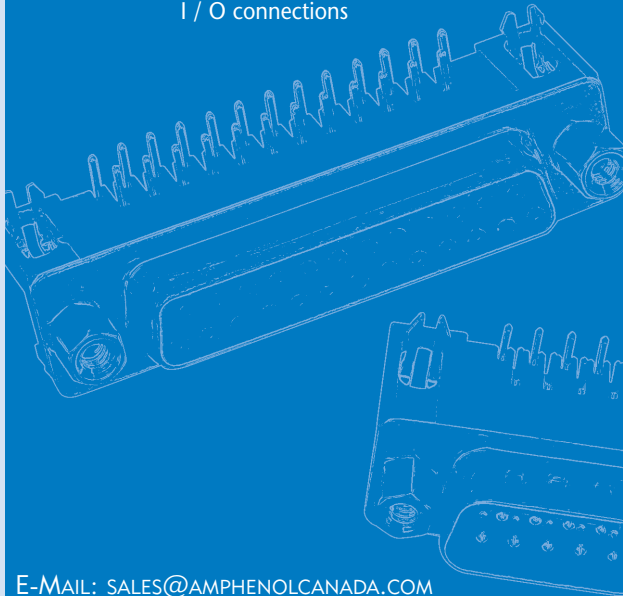
**6E17 SERIES**

Amphenol's 6E17 series of right angle commercial connectors provide high performance at competitive prices.

The front metal shell helps to provide reduced EMI/ RFI emissions, and the contacts are selectively plated to provide additional high performance. The 6E17 series are available in a variety of board mounting and grounding options including arrowhead boardlocks and #4-40 threaded inserts.

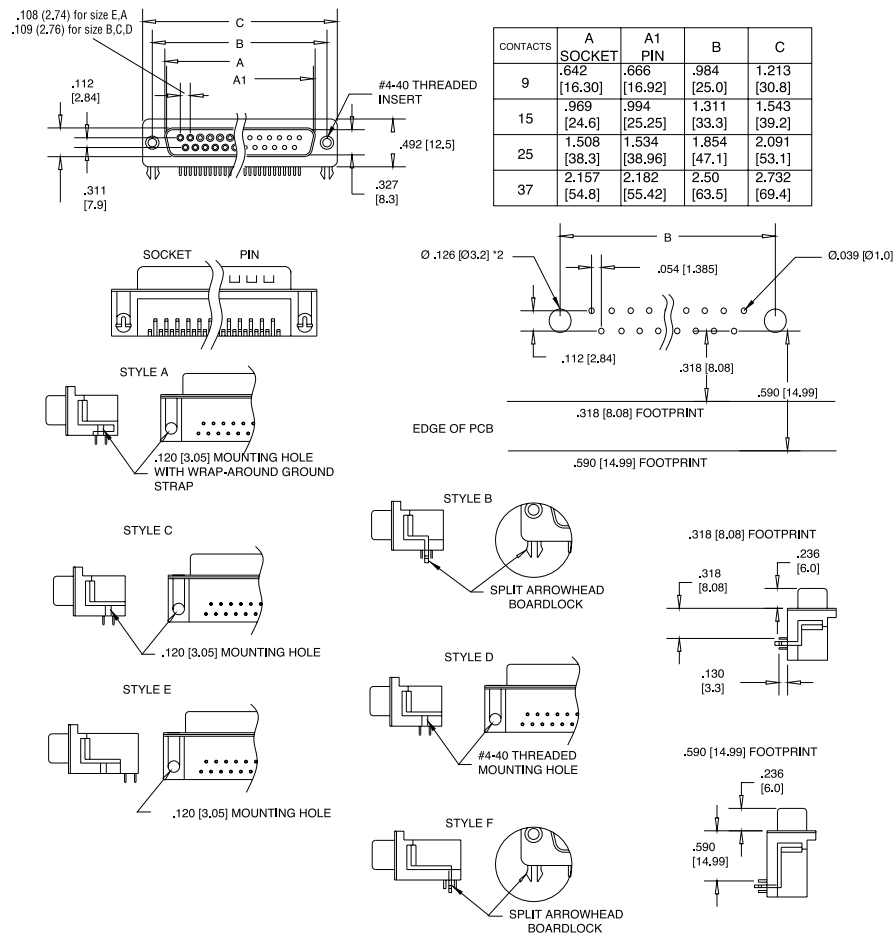
Front mounting holes are also available threaded, un-threaded and with installed female hex screwlocks.

- Industrial
- Telecom
- Any industry standard I / O connections



INCHES (MM)

## DIMENSIONS



## ORDERING INFORMATION

|                        |  |                                      |  |                                         |                                                                                                                                     |
|------------------------|--|--------------------------------------|--|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 6E17 X 0XX X XX X XX X |  |                                      |  | Variation Code<br>E for U & Y Footprint |                                                                                                                                     |
| Series                 |  | Number of Contacts<br>09, 15, 25, 37 |  | Contact                                 | Housing Characteristics                                                                                                             |
|                        |  |                                      |  | 20                                      | Tin plated receptacle                                                                                                               |
|                        |  |                                      |  | 21                                      | Tin plated plug with grounding indents                                                                                              |
|                        |  |                                      |  | Code                                    | Panel Mounting Options                                                                                                              |
|                        |  |                                      |  | 0                                       | .120 (3.05) clear hole                                                                                                              |
|                        |  |                                      |  | 1                                       | #4-40 threaded hole                                                                                                                 |
|                        |  |                                      |  | 2                                       | #4-40 threaded hole with female screwlock                                                                                           |
|                        |  |                                      |  | 4                                       | Fixed female round screwlock                                                                                                        |
|                        |  |                                      |  | Code                                    | Contact Plating                                                                                                                     |
|                        |  |                                      |  | BF                                      | Engagement area 3μ" (.076μm) gold flash, terminal end area 100μ"/200μ" (2.54μm/5.08μm) tin/lead underplate of 50μ" (1.27μm) nickel  |
|                        |  |                                      |  | CF                                      | Engagement area 15μ" (.381μm) gold flash, terminal end area 100μ"/200μ" (2.54μm/5.08μm) tin/lead underplate of 50μ" (1.27μm) nickel |
|                        |  |                                      |  | AJ                                      | Engagement area 30μ" (.76μm) gold, terminal end area 100μ"/200μ" (2.54μm/5.08μm) tin/lead underplate of 50μ" (1.27μm) nickel        |
|                        |  |                                      |  | Code                                    |                                                                                                                                     |
|                        |  |                                      |  | P                                       | Pin (male)                                                                                                                          |
|                        |  |                                      |  | S                                       | Socket (female)                                                                                                                     |

| .318<br>(8.08)<br>Footprint | .590<br>(14.99)<br>Footprint | Description of PC Board Mounting Characteristics            | Style |
|-----------------------------|------------------------------|-------------------------------------------------------------|-------|
| A                           |                              | .120 (3.05) diameter mtg hole with wrap-around ground strap | A     |
| C                           |                              | split arrowhead boardlock                                   | B     |
| D                           | U                            | .120 (3.05) diameter mtg hole                               | C&E   |
| J                           |                              | #4-40 threaded mtg hole                                     | D     |
|                             | Y                            | split arrowhead boardlock                                   | F     |

For filtered version, see page 56.

## Dual Port Connectors

### SPECIFICATIONS:

#### MATERIALS AND PLATINGS

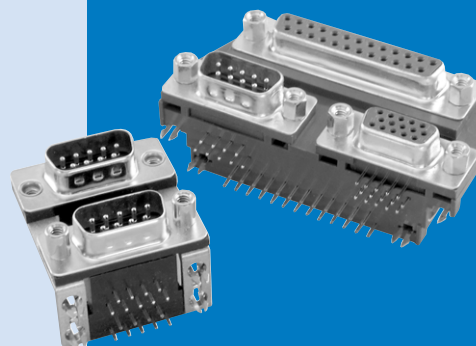
|                 |                                                                         |
|-----------------|-------------------------------------------------------------------------|
| Shells          | Steel, tin plated                                                       |
| Contacts        | Precision formed copper alloy                                           |
| Contact Plating | Gold over nickel                                                        |
| Contact Forces  | Engagement: 12 oz. max. (340.2 g)<br>Separation: .75 oz. min. (21.26 g) |

#### ELECTRICAL DATA

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Current Rating                  | 5 amps                                         |
| Dielectric Withstanding Voltage | 1000 VAC/60 sec.                               |
| Dielectric                      | Glass filled thermoplastic,<br>black, UL 94 VO |
| Contact Resistance              | 15 milliohms max.                              |

#### CLIMATIC DATA

|                   |                                |
|-------------------|--------------------------------|
| Temperature Range | -67°F (-55°C) to 221°F (105°C) |
|-------------------|--------------------------------|



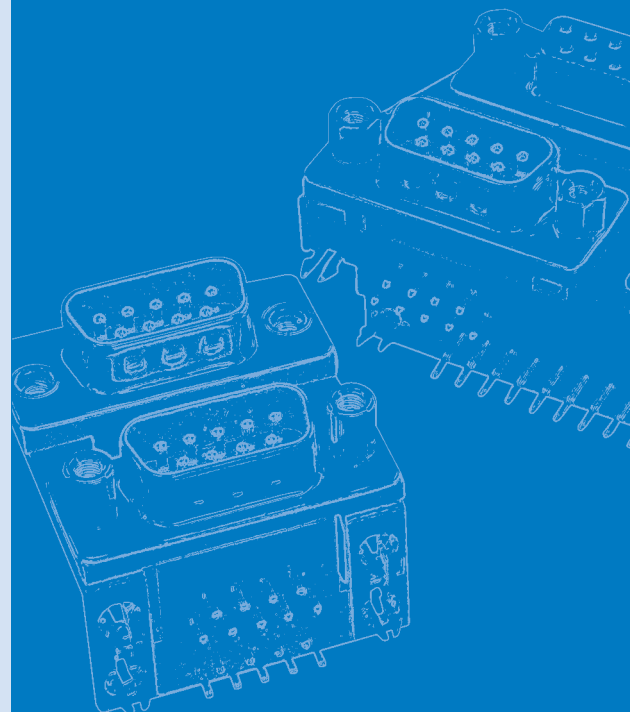
**6E17 H SERIES**

Amphenol's 61E7 series dual port connectors are a state of the art design. The front metal shell helps reduce EMI/RFI emissions.

Contacts are selectively plated for high performance at a low cost.

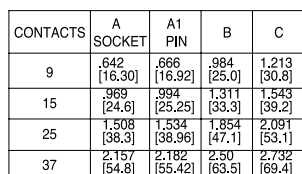
Designed to save PC board space, Amphenol's dual port "D" provides two input output connectors in a minimal amount of board space.

These connectors are available with various stacking options: same gender, mixed gender and multiple pin counts.

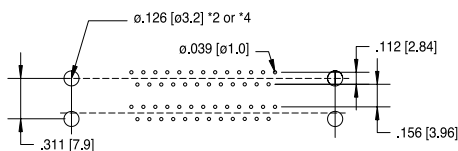


INCHES (MM)





| Code Letter | Product Description |                  | Dimensions                      |                  |
|-------------|---------------------|------------------|---------------------------------|------------------|
|             | Top Connector       | Bottom Connector | E                               | F                |
| A           | Pin                 | Pin              | 0.900 ± 0.010<br>(22.86 ± 0.25) | 1.415<br>(35.94) |
| B           | Socket              | Socket           |                                 |                  |
| C           | Pin                 | Socket           |                                 |                  |
| D           | Socket              | Pin              |                                 |                  |
| E           | Pin                 | Pin              | 0.750 ± 0.010<br>(19.05 ± 0.25) | 1.265<br>(32.13) |
| F           | Socket              | Socket           |                                 |                  |
| G           | Pin                 | Socket           |                                 |                  |
| H           | Socket              | Pin              |                                 |                  |
| J           | Pin                 | Pin              | 0.625 ± 0.010<br>(15.88 ± 0.25) | 1.140<br>(28.96) |
| K           | Socket              | Socket           |                                 |                  |
| L           | Pin                 | Socket           |                                 |                  |
| M           | Socket              | Pin              |                                 |                  |



PCB EDGE

## ORDERING INFORMATION

6E17H X XX X XX X XX X

| Code | Number of Contacts |      |                    |
|------|--------------------|------|--------------------|
| 18   | 2 x 9              | 15   | 15 over blank      |
| 30   | 2 x 15             | 34   | 9 / 25             |
| 50   | 2 x 25             | 43   | 25 / 9+9           |
| 74   | 2 x 37             | H15A | VGA / Triple Audio |
| 40   | 15 / 25            |      |                    |

| Code | Housing Characteristics                                                                                                |
|------|------------------------------------------------------------------------------------------------------------------------|
| 00   | Steel shell, tin plated receptacles without grounding dimples (options B, F, K)                                        |
| 01   | Steel shells, tin plated plugs with grounding dimples (options A, E, J)                                                |
| 03   | Steel shells, tin plated, plug shell with grounding dimples and receptacle shell without dimples (options C,G,L,D,H,M) |

| Code | Panel Mounting Options                    |
|------|-------------------------------------------|
| 0    | 120" clear hole                           |
| 1    | #4-40 threaded hole                       |
| 2    | #4-40 threaded hole with female screwlock |

| Code | Contact Plating                                                                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| BF   | Engagement area 3μ"(.076μm) gold flash,<br>terminal end area 100μ"/200μ" tin/lead, (2.54μm/5.08μm)<br>tin/lead underplate of 50μ" (1.27μm) nickel |
| CF   | Engagement area 15μ"(.381μm) gold flash,<br>terminal end area 100μ"/200μ" (2.54μm/5.08μm)<br>tin/lead underplate of 50μ" (1.27μm) nickel          |
| AJ   | Engagement area 30μ"(.76μm) gold, terminal end area<br>100μ"/200μ" (2.54μm/5.08μm) tin/lead underplate<br>of 50μ" (1.27μm) nickel                 |

| 58.064<br>(22.86)<br>Spacing | 48.388<br>(19.05)<br>Spacing | 40.31<br>(15.87)<br>Spacing | Product Description |                     |
|------------------------------|------------------------------|-----------------------------|---------------------|---------------------|
|                              |                              |                             | Top<br>Connector    | Bottom<br>Connector |
| A                            | E                            | J                           | Pin                 | Pin                 |
| B                            | F                            | K                           | Socket              | Socket              |
| C                            | G                            | L                           | Pin                 | Socket              |
| D                            | H                            | M                           | Socket              | Pin                 |

For filtered version, see page 55.

## High Temperature Straight Board Mount Connectors

### SPECIFICATIONS:

#### MATERIALS AND PLATINGS

|                 |                               |
|-----------------|-------------------------------|
| Shells          | Steel/nickel plated           |
| Contacts        | Precision formed copper alloy |
| Contact Plating | Gold over nickel              |

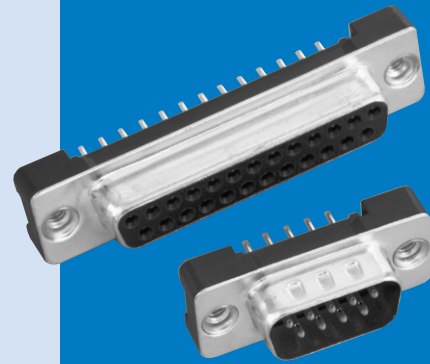
#### ELECTRICAL DATA

|                    |                                                |
|--------------------|------------------------------------------------|
| Current Rating     | 5 amps                                         |
| Voltage Rating     | 600 V                                          |
| Dielectric         | Glass filled thermoplastic,<br>black, UL 94 VO |
| Contact Resistance | 10 milliohms (max.)                            |

#### CLIMATIC DATA

|                       |                                                   |
|-----------------------|---------------------------------------------------|
| Temperature Range     | Environmental:<br>-67°F (-55°C) to 302°F (150°C)  |
| Process Compatibility | IR-Air Convection<br>500°F (260°C) for 20 seconds |

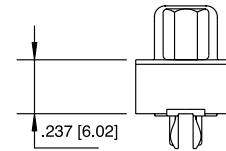
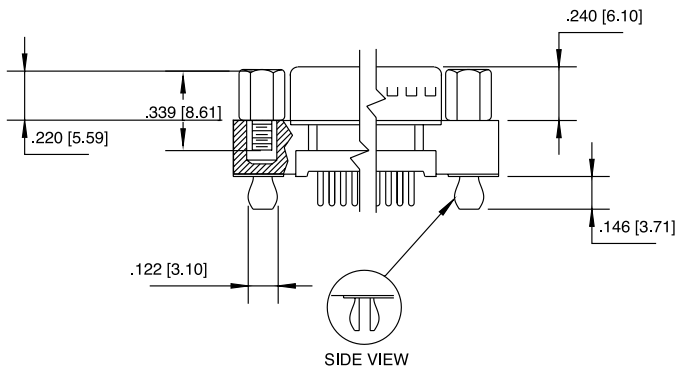
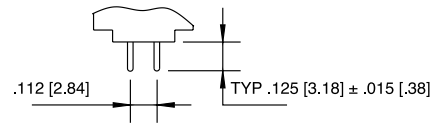
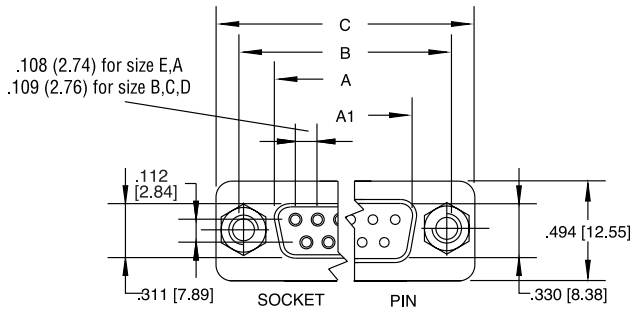
## 6E17S SERIES



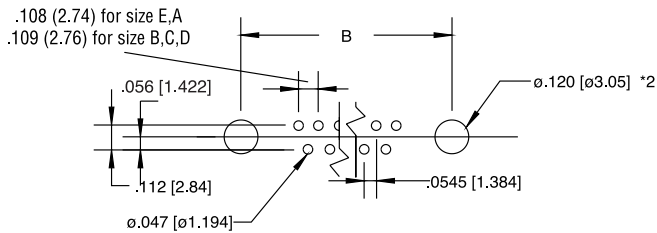
Amphenol's high temperature, low profile D-Sub connector gives you a high quality, reliable commercial connector to meet today's market demands.

INCHES (MM)

## DIMENSIONS



| CONTACTS | A<br>SOCKET     | A1<br>PIN        | B               | C               |
|----------|-----------------|------------------|-----------------|-----------------|
| 9        | .642<br>[16.30] | .666<br>[16.92]  | .984<br>[25.0]  | 1.213<br>[30.8] |
| 15       | .969<br>[24.6]  | .994<br>[25.25]  | 1.311<br>[33.3] | 1.543<br>[39.2] |
| 25       | 1.508<br>[38.3] | 1.534<br>[38.96] | 1.854<br>[47.1] | 2.091<br>[53.1] |
| 37       | 2.157<br>[54.8] | 2.182<br>[55.42] | 2.50<br>[63.5]  | 2.732<br>[69.4] |



## ORDERING INFORMATION

| 6E17S C 0XX X XX X XX |                                                                                                                             |      |                                           |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------|
| Series                |                                                                                                                             | Code | Housing Characteristics                   |
| C                     | Split arrowhead boardlock                                                                                                   | 20   | Tin plated receptacle                     |
| O                     | No boardlock                                                                                                                | 21   | Tin plated                                |
| Number of contacts    | 9, 15, 25 or 37                                                                                                             | Code | Panel Mounting Options                    |
| Code                  | Gender                                                                                                                      | 1    | #4-40 threaded hole                       |
| P                     | Pin (male)                                                                                                                  | 2    | #4-40 threaded hole with female screwlock |
| S                     | Socket (female)                                                                                                             | 3    | M-3 threaded hole                         |
| Code                  | Contact Plating                                                                                                             |      |                                           |
| BJ                    | Engagement area 10μ" (2.54μ) gold, terminal end area 100μ"/200μ" (2.54μ/5.08μ) -tin/lead, underplate of 50μ" (1.27μ) nickel |      |                                           |
| AJ                    | Engagement area 30μ" (.76μ) gold, terminal end area 100μ"/200μ" (2.54μ/5.08μ) -tin/lead, underplate of 50μ" (1.27μ) nickel  |      |                                           |

# ED-EHD

D-Sub connectors - Screw-machined contacts

## STANDARD AND HIGH DENSITY WATERPROOF CONNECTORS



### CHARACTERISTICS

| Materials and Platings |                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel 2.5µm(100µ") min tin over 1.25µm(50µ") min nickel                                       |
| <b>Body</b>            | Glass-filled thermoplastic<br>Flame retardant to UL94 V-0 Color Black                         |
| <b>Contacts</b>        | Copper alloy(Brass for plug, Phosphor bronze for socket)<br>gold over 1.25µm(50µ") min nickel |
| <b>Boardlock</b>       | Copper alloy, 100µ" min. sn over 50µ" min. nickel.                                            |
| <b>Standoff</b>        | Copper alloy, 100µ" min. sn over 50µ" min. nickel.                                            |

| Electrical Data              |                  |
|------------------------------|------------------|
| <b>Current rating</b>        | 5.0A             |
| <b>Voltage rating</b>        | 300V rms at 50Hz |
| <b>Insulation resistance</b> | >5000MΩ          |
| <b>Contact resistance</b>    | 20mΩ Max.        |

| Climatic Data                |                |
|------------------------------|----------------|
| <b>Operating temperature</b> | -55°C to +85°C |
| <b>Salt spray</b>            | 48 hours       |
| <b>Waterproof rating</b>     | IP 67 minimum  |

| Mechanical Data                                   |     |               |              |              |              |
|---------------------------------------------------|-----|---------------|--------------|--------------|--------------|
| <b>Mating and unmating force</b><br>Unit: kg (lb) |     |               |              |              |              |
| No. of Cts                                        |     | ED            |              | EHD          |              |
| ED                                                | EHD | Mate (max)    | Unmate (min) | Mate (max)   | Unmate (min) |
| 9                                                 | 15  | 3.05 (6.74)   | 0.36 (0.79)  | 3.81 (8.42)  | 0.52 (1.14)  |
| 15                                                | 26  | 5.09 (11.24)  | 0.46 (1.01)  | 5.95 (13.16) | 1.05 (2.32)  |
| 25                                                | 44  | 8.44 (18.66)  | 0.81 (1.80)  | 9.26 (20.46) | 1.37 (3.02)  |
| <b>Mating cycles</b>                              |     |               |              |              |              |
|                                                   |     | Gold flash    |              | : 100 cycles |              |
|                                                   |     | 0.76µm (30µ") |              | : 500 cycles |              |

### DESCRIPTION

The 17ED and 17EHD series are suitable for waterproof applications.

The machined contacts provide robustness and reliability.

This series offers:

- Panel mount connectors with solder cup, straight and right angle PCB terminations.

Connectors are waterproof unmated.

*Harsh environment connectors*

### APPLICATIONS

- Marine electronic devices
- Industrial electrical
- Security Monitoring
- Robotics
- Lighting systems

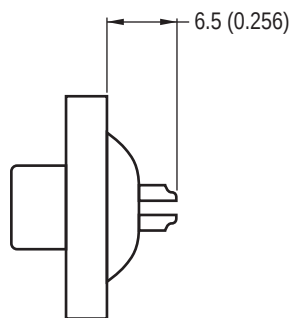


**Amphenol**

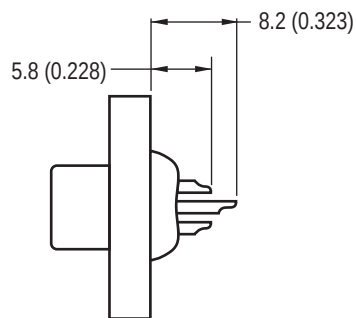
ED-EHD

## Termination

### Solder cup (blank) :

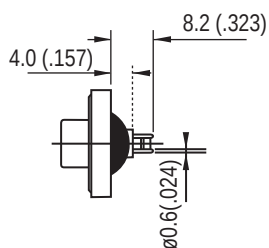


**Standard density**

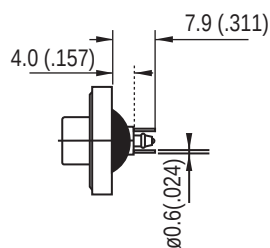


**High density**

### Straight PCB with standoff and boardlocks:

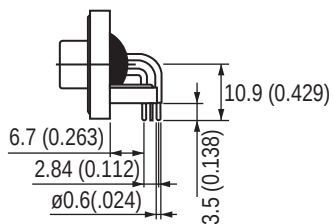


**Standard density**

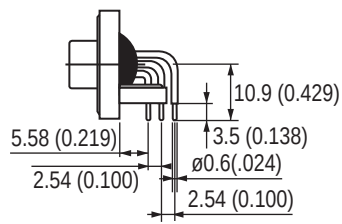


**High density**

### Right angle PCB with brackets and boardlocks:

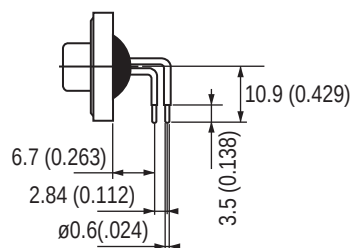


**Standard density**

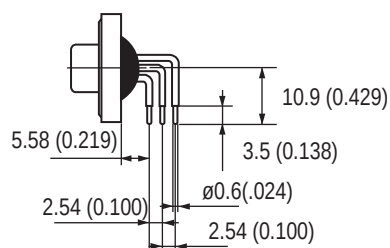


**High density**

### Right angle PCB without brackets and boardlocks:



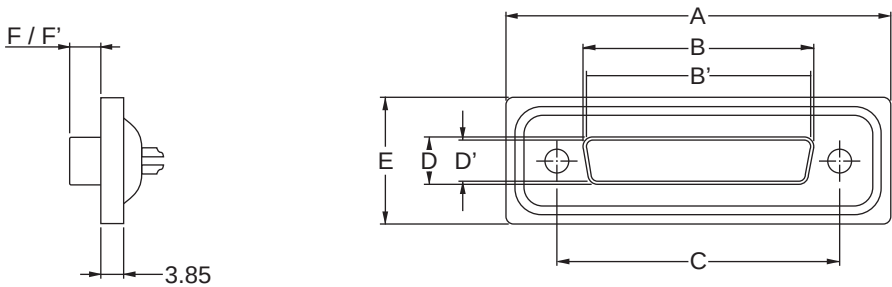
**Standard density**



**High density**

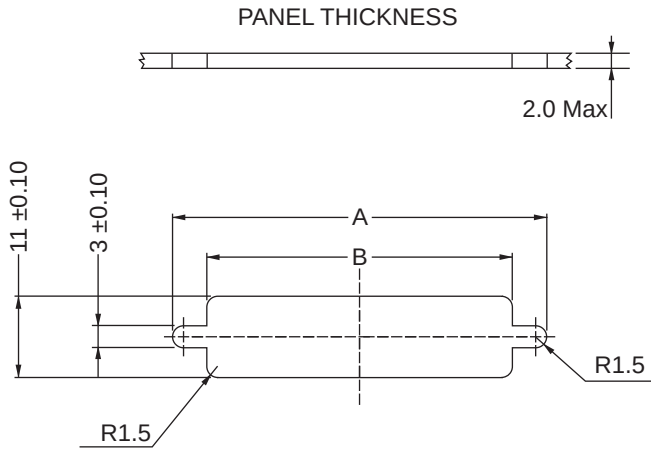


Shell Size Dimensions



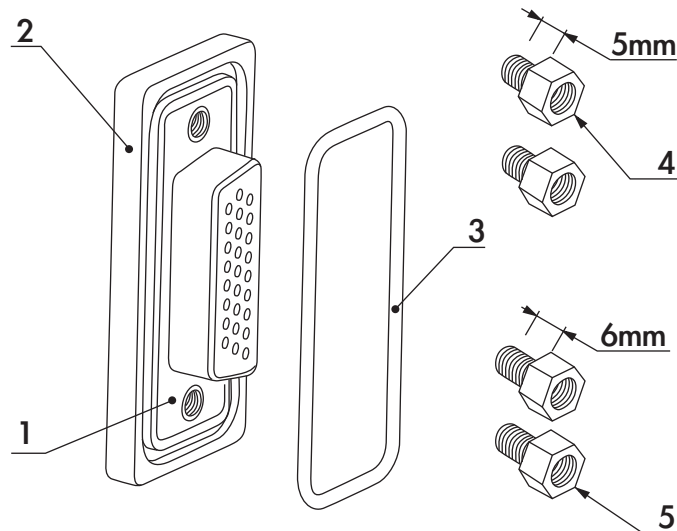
| SHELL SIZE | Contact<br>P: pin<br>S: socket | A<br>±0.25<br>(±.010) | B<br>0 / -0.20<br>(0/- .008) | B'<br>+0.20 / 0<br>(+.008/0) | C<br>±0.10<br>(±.004) | D<br>0 / -0.25<br>(0/- .010) | D'<br>+0.25 / 0<br>(+.010/0) | E<br>±0.25<br>(±.010) | F<br>+0.10/-0.20<br>(+.004/- .008) | F'<br>±0.10<br>(±.004) |
|------------|--------------------------------|-----------------------|------------------------------|------------------------------|-----------------------|------------------------------|------------------------------|-----------------------|------------------------------------|------------------------|
| E          | P                              | 39.4                  |                              | 16.8(0.661)                  | 25.0                  |                              | 8.2(0.325)                   | 21.0                  |                                    | 5.9(0.232)             |
|            | S                              | (1.551)               | 16.4(0.646)                  |                              | (0.984)               | 8.0(0.315)                   |                              | (0.827)               | 6.2(0.244)                         |                        |
| A          | P                              | 47.7                  |                              | 25.1(0.988)                  | 33.3                  |                              | 8.2(0.325)                   | 21.0                  |                                    | 5.9(0.232)             |
|            | S                              | (1.878)               | 24.8(0.976)                  |                              | (1.311)               | 8.0(0.315)                   |                              | (0.827)               | 6.2(0.244)                         |                        |
| B          | P                              | 64.5                  |                              | 28.8(1.528)                  | 47.0                  |                              | 8.2(0.325)                   | 21.0                  |                                    | 5.9(0.232)             |
|            | S                              | (2.539)               | 38.5(1.513)                  |                              | (1.850)               | 8.0(0.315)                   |                              | (0.827)               | 6.2(0.244)                         |                        |

Panel cutouts



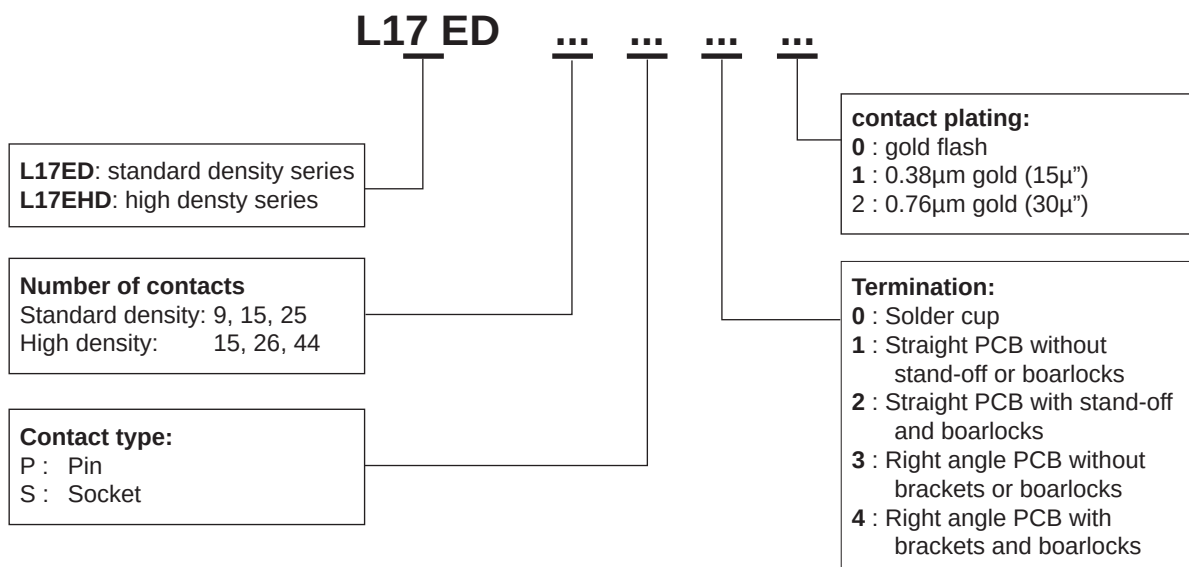
| SHELL SIZE | A<br>±0.10(±.004) | B<br>0 / -0.10(0 / -.004) |
|------------|-------------------|---------------------------|
| E          | 28.8 (1.111)      | 20.0 (0.788)              |
| A          | 36.5 (1.438)      | 28.0 (1.103)              |
| B          | 51.0 (2.009)      | 41.5 (1.635)              |

## Connector Dimensions



| NO | Description            | Material                     | Qty |
|----|------------------------|------------------------------|-----|
| 2  | Housing                | Black thermoplastic UL 94-VO | 1   |
| 1  | Front shell            | Steel tin plated             | 1   |
| 3  | Ring                   | Silicone                     | 1   |
| 4  | #4-40 Front screw lock | Brass tin plated             | 2   |
| 5  | #4-40 Front screw lock | Brass tin plated             | 2   |

## How to order



**For special request, please consult factory**

Do not hesitate to contact us for further information



# Amphenol

## Amphenol IT & Communication Products

Block A3/A4, The 4th Industrial District of  
Industrial Headquarters, Dong Keng Road  
Gong Ming Town, Shen Zhen China  
Fax: +86(0)755 2754 9955

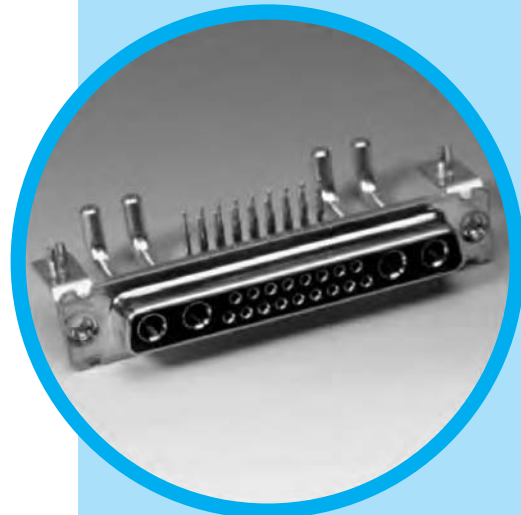
### Technical Support

Tel: +86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>



# TW

## Hybrid D'Sub series



CONTENT

### Specifications

- Connectors according to: MIL C24308 - NFC93425 - HE507

| Materials and platings                   |                                      | Electrical Data                         |                          |
|------------------------------------------|--------------------------------------|-----------------------------------------|--------------------------|
| Shells                                   | Steel-Tin plating                    | Current rating                          |                          |
| Insulators                               | High temperature black thermoplastic | Signal contacts                         | 7.5 A. with 10 A. peaks  |
| Signal contacts                          | Female: machined bronze              | Power contacts                          |                          |
| Material                                 | Male: machined brass                 | PCB terminations                        | 10 to 40 A.              |
| Plating finish                           | 16μ "Au over 79μ" Ni min.            | Solder cup terminations                 | 10 to 40 A.              |
| Or                                       | 30μ "Au over 79μ" Ni min.            | Crimp terminations                      | 10 to 40 A.              |
| Shielded contacts                        | Female: machined bronze              | Shielded contacts                       | 0.5 A.                   |
| Material                                 | Male: machined brass                 | Voltage rating                          |                          |
| Plating                                  |                                      | Signal and power contacts               | 300 V.R.M.S. at 50 Hz    |
| Inner conductor                          | 16μ "Au or 30μm Au over 79μ" Ni      | Shielded contacts                       | 150 V.R.M.S. at 50 Hz    |
| Outer ring                               | 10μ "Au over 79μ" Ni                 | Shielded contacts                       |                          |
| Terminations                             | Tinned                               | Frequency range                         | 0-1 GHz                  |
| Except solder cup and crimp terminations | gold flash                           | Attenuation                             | 0.2dB                    |
| Power contacts                           | Female: machined bronze              | V. S. W. R.                             | 1.4(+0.04/GHz)           |
| Material                                 | Male: machined brass                 | Characteristic impedance                | 50 Ohms                  |
| Plating                                  |                                      | Dielectric withstanding voltage         | ≥ 1000 V.R.M.S. at 50Hz  |
| Contacts                                 | 16μ "Au or 30μ" Au over 79μ" Ni      | Insulation resistance                   | ≥ 5000 M Ohms at 500 VDC |
| Terminations                             | Tinned                               | Contact resistance                      | ≤ 5m Ohms                |
| Except solder cup and crimp terminations | gold flash                           | Shell resistance (electrical grounding) | ≤ 1m Ohm                 |
| Brackets                                 | Steel-Tin plating                    |                                         |                          |
| Front jackscrews                         | Brass-Tin plating                    |                                         |                          |
| Rear clinch nuts                         | Brass-Tin plating                    |                                         |                          |
| Boardlocks                               | Bronze-Tin plating                   |                                         |                          |
| Stand-off                                | Brass-Tin plating                    |                                         |                          |

| Climatic Data         |                                           | Mechanical data                                |                                                                                                                                                                             |
|-----------------------|-------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating temperature | -55°C + 155°C<br>(with peaks up to 180°C) | Shells                                         | With or without dimples                                                                                                                                                     |
| Damp heat             | 56 days (40°C - 95% HR)                   | Contact retention force in dielectric material | > 40N                                                                                                                                                                       |
| Salt spray            | 48 hours                                  | Maximum mating and unmating force              |                                                                                                                                                                             |
|                       |                                           | With dimples                                   | E size = 70 N<br>A size = 80 N<br>B size = 100 N<br>C size = 150 N<br>D size = 180 N<br>E size = 30 N<br>A size = 50 N<br>B size = 80 N<br>C size = 120 N<br>D size = 160 N |
|                       |                                           | Without dimples                                |                                                                                                                                                                             |
|                       |                                           | Compatible with process                        |                                                                                                                                                                             |
|                       |                                           | IR - Air convectioned                          | 260° for 20 s.                                                                                                                                                              |
|                       |                                           | Resistance to solder iron heat                 | 260°C for 30 s.                                                                                                                                                             |
|                       |                                           | Mating cycles                                  | ≥ 200 (classe II) or 500 (classe I)                                                                                                                                         |
|                       |                                           | Blind mating system                            | Available upon request                                                                                                                                                      |
|                       |                                           | Polarization                                   | Available with locking accessories<br>Consult factory                                                                                                                       |



DESCRIPTION

Amphenol D'Sub TW Hybrid Series permits a mix of contacts including signal, power, shielded, high voltage and fiber optics in the same housing with 18 different contacts arrangements.

This economic series was first developed from our military series, and has improved features:

- new contacts
- new high temperature black thermoplastic insert
- PCB configurations come preloaded with fixed contacts and brackets.

These connectors are supplied with screw machined contacts which are fixed in the insulator.

A complete range of housings are also available for cable application.

*A full range of arrangements compatible with reflow process*

APPLICATIONS

- Commercial
- Medical
- Industrial
- Telecom
- Any application requiring optimization of space

TW / E1



**Amphenol**

## Shell and contacts plating

### CLASS II

0.4μm (16μ") Au contacts gold plating  
200 mating cycles

| Types  | Shells and plating                                |
|--------|---------------------------------------------------|
| 77 TW  | Tin plated shell<br><i>*Male and female</i>       |
| 717 TW | Tin plated shell with dimples<br><i>Male only</i> |

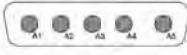
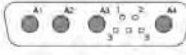
### CLASS I

0.76μm (30μ") Au contacts gold plating  
500 mating cycles

| Types  | Shells and plating                                |
|--------|---------------------------------------------------|
| 177 TW | Tin plated shell<br><i>*Male and female</i>       |
| 777 TW | Tin plated shell with dimples<br><i>Male only</i> |

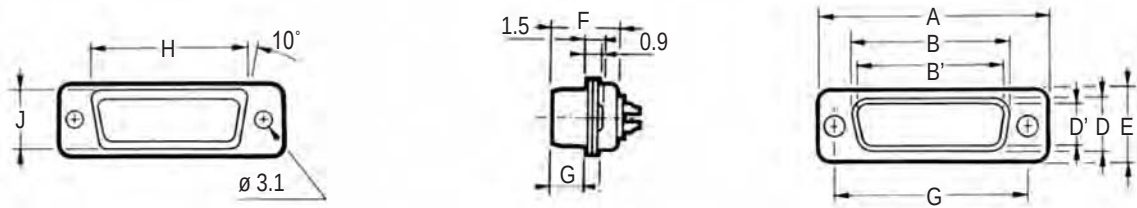
## Housing arrangements

### Male front view

|                                       |                                                                                                  |                                                                                                  |                                                                                                    |
|---------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Arrangement .....<br>Shell size ..... | <br>5W1<br>E    | <br>7W2<br>A    | <br>11W1<br>A   |
| Arrangement .....<br>Shell size ..... | <br>3W3<br>A  | <br>5W5<br>B  | <br>9W4<br>B  |
| Arrangement .....<br>Shell size ..... | <br>13W3<br>B | <br>17W2<br>B | <br>21W1<br>B |
| Arrangement .....<br>Shell size ..... | <br>27W2<br>C | <br>13W6<br>C | <br>17W5<br>C |
| Arrangement .....<br>Shell size ..... | <br>21W4<br>C | <br>8W8<br>C  | <br>25W3<br>C |
| Arrangement .....<br>Shell size ..... | <br>24W7<br>D | <br>36W4<br>D | <br>43W2<br>D |



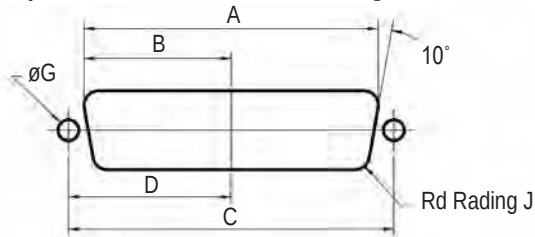
## Shell size dimensions



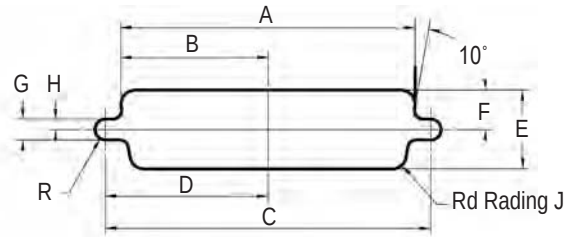
| Shell size | Contact<br>P: Pin<br>S: Socket | A<br>±0.25<br>(±.010) | B<br>0/-0.20<br>(0/- .008) | B'<br>+0.20/0<br>(+.008/0) | C<br>±0.10<br>(±.004) | D<br>0/-0.25<br>(0/- .010) | D'<br>+0.25/0<br>(+.010/0) | E<br>±0.20<br>(±.008) | F<br>+0.05/-0.20<br>(+.002/- .008) | F'<br>+0.10/-0.20<br>(+.004/- .008) | G<br>+0.10/-0.20<br>(+.004/- .008) | G'<br>±0.10<br>(±.004) | H<br>+0.10/-0.40<br>(+.004/- .016) | J<br>0/-0.50<br>(0/- .020) |
|------------|--------------------------------|-----------------------|----------------------------|----------------------------|-----------------------|----------------------------|----------------------------|-----------------------|------------------------------------|-------------------------------------|------------------------------------|------------------------|------------------------------------|----------------------------|
| E          | P                              | 30.7<br>(1.209")      |                            | 16.8<br>(.661")            | 25.0<br>(.984")       |                            | 8.2<br>(.323")             | 12.4<br>(.488")       |                                    | 10.9<br>(.429")                     |                                    | 5.9<br>(.232")         | 19.4<br>(.764")                    | 11.0<br>(.433")            |
|            | S                              |                       | 16.4<br>(.646")            |                            |                       | 8.0<br>(.315")             |                            |                       | 11.1<br>(.437")                    |                                     | 6.2<br>(.244")                     |                        |                                    |                            |
| A          | P                              | 39.0<br>(1.535")      |                            | 25.1<br>(.988")            | 33.3<br>(1.311")      |                            | 8.2<br>(.323")             | 12.4<br>(.488")       |                                    | 10.9<br>(.429")                     |                                    | 5.9<br>(.232")         | 27.7<br>(1.091")                   | 11.0<br>(.433")            |
|            | S                              |                       | 24.8<br>(.976")            |                            |                       | 8.0<br>(.315")             |                            |                       | 11.1<br>(.437")                    |                                     | 6.2<br>(.244")                     |                        |                                    |                            |
| B          | P                              | 52.9<br>(2.083")      |                            | 38.8<br>(1.528")           | 47.0<br>(1.850")      |                            | 8.2<br>(.323")             | 12.4<br>(.488")       |                                    | 11.0<br>(.433")                     |                                    | 5.8<br>(.228")         | 41.4<br>(1.630")                   | 11.0<br>(.433")            |
|            | S                              |                       | 38.5<br>(1.513")           |                            |                       | 8.0<br>(.315")             |                            |                       | 11.1<br>(.437")                    |                                     | 6.2<br>(.244")                     |                        |                                    |                            |
| C          | P                              | 69.2<br>(2.724")      |                            | 55.3<br>(2.177")           | 63.5<br>(2.500")      |                            | 8.2<br>(.323")             | 12.4<br>(.488")       |                                    | 11.0<br>(.433")                     |                                    | 5.8<br>(.228")         | 57.9<br>(2.280")                   | 11.0<br>(.433")            |
|            | S                              |                       | 54.9<br>(2.161")           |                            |                       | 8.0<br>(.315")             |                            |                       | 11.1<br>(.437")                    |                                     | 6.2<br>(.244")                     |                        |                                    |                            |
| D          | P                              | 66.8<br>(2.630")      |                            | 52.7<br>(2.075")           | 61.1<br>(2.406")      |                            | 11.0<br>(.433")            | 15.2<br>(.598")       |                                    | 11.0<br>(.433")                     |                                    | 5.8<br>(.228")         | 55.5<br>(2.185")                   | 13.8<br>(.543")            |
|            | S                              |                       | 52.5<br>(2.067")           |                            |                       | 10.9<br>(.429")            |                            |                       | 11.1<br>(.437")                    |                                     | 6.2<br>(.244")                     |                        |                                    |                            |

## Panel cutouts

Optimal cutout for rear mounting



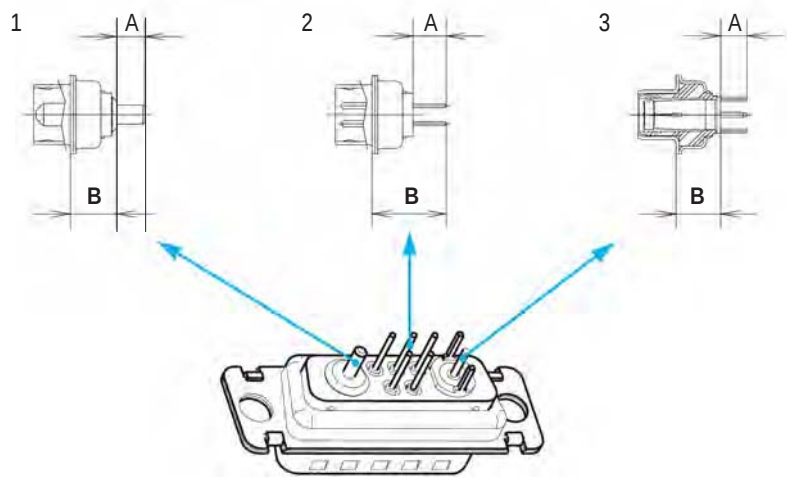
Standard cutout



| Shell size | Mounting method | A<br>±0.20<br>(±.008) | B<br>±0.20<br>(±.008) | C<br>±0.20<br>(±.008) | D<br>±0.20<br>(±.008) | E<br>±0.20<br>(±.008) | F<br>±0.20<br>(±.008) | G<br>±0.20<br>(±.008) | H<br>±0.20<br>(±.008) | J<br>±0.20<br>(±.008) |
|------------|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| E          | Front           | 22.2<br>(.874")       | 11.1<br>(.437")       | 25.0<br>(.984")       | 12.5<br>(.492")       | 13.0<br>(.512")       | 6.5<br>(.256")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 20.5<br>(.807")       | 10.2<br>(.402")       |                       |                       | 11.4<br>(.449")       | 5.7<br>(.224")        |                       |                       | 3.4<br>(.134")        |
| A          | Front           | 30.5<br>(1.201")      | 15.3<br>(.602")       | 33.3<br>(1.311")      | 16.7<br>(.657")       | 13.0<br>(.512")       | 6.5<br>(.256")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 28.8<br>(1.134")      | 14.4<br>(.567")       |                       |                       | 11.4<br>(.449")       | 5.7<br>(.224")        |                       |                       | 3.4<br>(.134")        |
| B          | Front           | 44.3<br>(1.744")      | 22.1<br>(.870")       | 47.0<br>(1.850")      | 23.5<br>(.925")       | 13.0<br>(.512")       | 6.5<br>(.256")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 42.5<br>(1.673")      | 21.3<br>(.839")       |                       |                       | 11.4<br>(.449")       | 5.7<br>(.224")        |                       |                       | 3.4<br>(.134")        |
| C          | Front           | 60.7<br>(2.390")      | 30.4<br>(1.197")      | 63.5<br>(2.500")      | 31.7<br>(1.248")      | 13.0<br>(.512")       | 6.5<br>(.256")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 59.1<br>(2.327")      | 29.5<br>(1.161")      |                       |                       | 11.4<br>(.449")       | 5.7<br>(.224")        |                       |                       | 3.4<br>(.134")        |
| D          | Front           | 58.3<br>(2.295")      | 29.2<br>(1.150")      | 61.1<br>(2.406")      | 30.6<br>(1.205")      | 15.8<br>(.622")       | 7.9<br>(.311")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 56.3<br>(2.217")      | 28.2<br>(1.110")      |                       |                       | 14.1<br>(.555")       | 7.1<br>(.280")        |                       |                       | 3.4<br>(.134")        |



Straight connector footprint



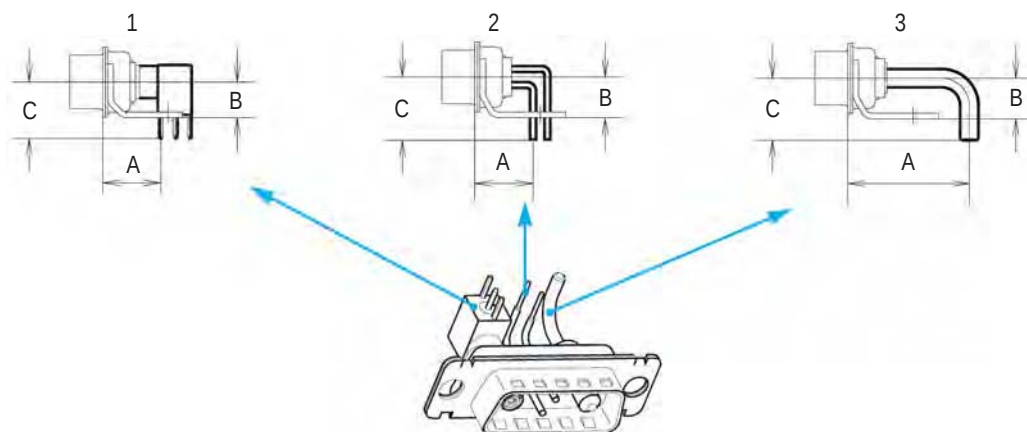
Signal tail 0.6 mm Dia. (.0236")  
1.6 mm (.063")PCB  
For other PCB thickness: consult factory.

| Description              |   | Dimensions         |                     |
|--------------------------|---|--------------------|---------------------|
|                          |   | a                  | b                   |
| Power (.126" tail dia.)  | 1 | 4.80 mm<br>(.198") | 7.2 mm<br>(.283")   |
| Power (.0787" tail dia.) | 1 | 4.80 mm<br>(.198") | 7.2 mm<br>(.283")   |
| Shielded                 | 3 | 4.00 mm<br>(.157") | 7.2 mm<br>(.283")   |
| Signal                   | 2 | 5.00 mm<br>(.196") | 11.50 mm<br>(.453") |

Straight contact combinations

| Arrangement with signal contacts |                                                                                     | Arrangement without signal contacts<br>3W3 - 5W5 - 8W8 |                                                   |
|----------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------|
| See above dimensions             | Size 8 and 20 Contacts                                                              | See above dimensions                                   | Size 8 Contacts                                   |
| ↓                                |                                                                                     | ↓                                                      |                                                   |
| P 3SY                            | Power 3.2 mm DIA. (.126")<br>(20 to 40 A) and signal                                | P 3Y                                                   | Power only<br>3.2 mm DIA. (.126")<br>(20 to 40 A) |
| P 2SY                            | Power 2 mm DIA. (.0787")<br>(10 to 20 A) and signal                                 | P 2Y                                                   | Power only<br>2 mm DIA. (.0787")<br>(10 to 20 A)  |
| CSY                              | Shielded and signal                                                                 | CY                                                     | Shielded only                                     |
| SY                               | Signal only                                                                         |                                                        |                                                   |
| No reference                     | Signal (Size 20)<br>with solder cup terminations<br>Housing preloaded with contacts |                                                        |                                                   |

## Right angle connector footprint



Signal tail 0.6 mm Dia. (.0236")  
1.6 mm (.063") PCB  
For other PCB thickness: consult factory.

|                          |   | Europe                                                                                    |                   |                    | Mix                                                                                     |                   |                    | MIL                                                                                |                   |                    |
|--------------------------|---|-------------------------------------------------------------------------------------------|-------------------|--------------------|-----------------------------------------------------------------------------------------|-------------------|--------------------|------------------------------------------------------------------------------------|-------------------|--------------------|
|                          |   | HE 5 pattern =<br>- Europ. height<br>- Europ. footprint<br>pitch between<br>2 rows: .100" |                   |                    | Mixed pattern =<br>- MIL height<br>- Europ. footprint<br>pitch between<br>2 rows: .100" |                   |                    | MIL pattern =<br>- MIL height<br>- MIL footprint<br>pitch between<br>2 rows: .112" |                   |                    |
| Description              |   | a                                                                                         | b                 | c                  | a                                                                                       | b                 | c                  | a                                                                                  | b                 | c                  |
| Shielded                 | 1 | -                                                                                         | -                 | -                  | 10.30mm<br>(.406")                                                                      | 6.30mm<br>(.248") | 10.00mm<br>(.394") | 10.30mm<br>(.406")                                                                 | 6.30mm<br>(.248") | 10.00mm<br>(.394") |
| Signal                   | 2 | 10.30mm<br>(.406")                                                                        | 7.20mm<br>(.283") | 11.20mm<br>(.441") | 10.30mm<br>(.406")                                                                      | 6.30mm<br>(.248") | 9.50mm<br>(.374")  | 8.10mm<br>(.319")                                                                  | 6.30mm<br>(.248") | 9.50mm<br>(.374")  |
| Power (.0787" tail dia.) | 3 | 11.57mm<br>(.456")                                                                        | 7.20mm<br>(.283") | 10.50mm<br>(.413") | 11.57mm<br>(.456")                                                                      | 6.30mm<br>(.248") | 9.50mm<br>(.374")  | 9.52mm<br>(.375")                                                                  | 6.30mm<br>(.248") | 9.50mm<br>(.374")  |
| Power (.126" tail dia.)  | 3 | 21.46mm<br>(.845")                                                                        | 7.20mm<br>(.283") | 10.50mm<br>(.413") | 21.46mm<br>(.845")                                                                      | 6.30mm<br>(.248") | 9.50mm<br>(.374")  | 21.46mm<br>(.845")                                                                 | 6.30mm<br>(.248") | 9.50mm<br>(.374")  |

Note: above dimensions correspond to sizes E to C. Consult factory for D sizes.  
Connector comes equipped with contacts and brackets.

## Right angle contacts combinations

### Arrangement with signal contacts

| European footprint | Mixed footprint | MIL (U.S.) footprint | Size 8 and 20 Contacts                            |
|--------------------|-----------------|----------------------|---------------------------------------------------|
| EP3SV              | HP3SV           | MP3SV                | Power 3.2 mm DIA. (.126") (20 to 40 A) and signal |
| EP2SV              | HP2SV           | MP2SV                | Power 2 mm DIA. (.0787") (10 to 20 A) and signal  |
| -                  | HCSV            | MCSV                 | Shielded and signal                               |
| ESV                | HSV             | MSV                  | Signal only                                       |

### Arrangement without signal contacts 3W3 - 5W5 - 8W8

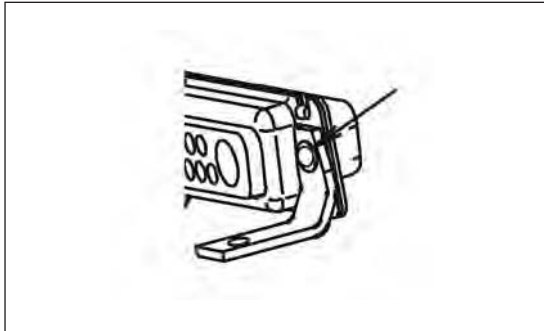
| European footprint | Mixed footprint | MIL (U.S.) footprint | Size 8 contacts only                         |
|--------------------|-----------------|----------------------|----------------------------------------------|
| EP3V               | HP3V            | MP3V                 | Power only 3.2 mm DIA. (.126") (20 to 40 A)  |
| EP2V               | HP2V            | MP2V                 | Power only 2.0 mm DIA. (.0787") (10 to 20 A) |
| -                  | HCV             | MCV                  | Shielded only                                |

## Mounting options

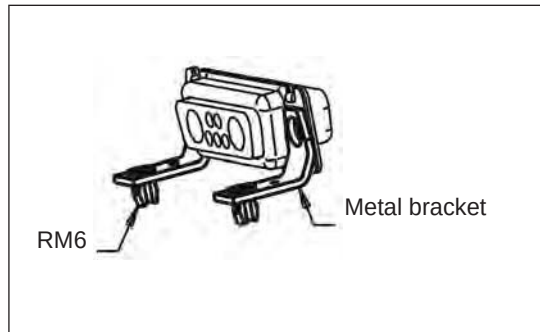
### Right angle version

Connectors come equipped with metal brackets

**BLANK:** 3.10mm (.122") dia mounting hole

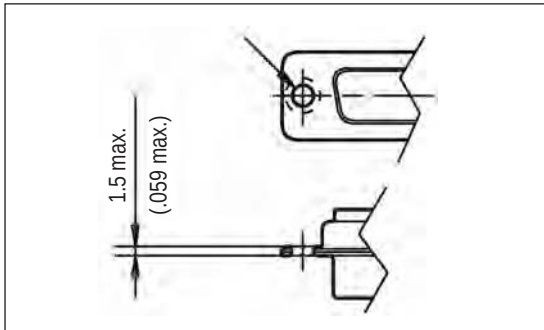


**RM6:** metal brackets + boardlock



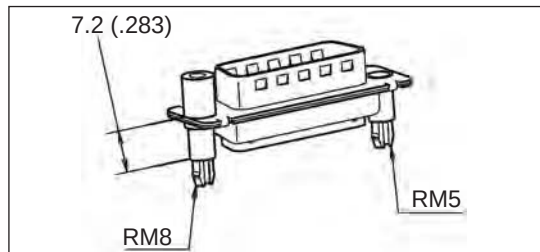
### Straight version

**BLANK:** 3.10mm (.122") dia mounting hole



**RM54:** RM5 4.40 threaded

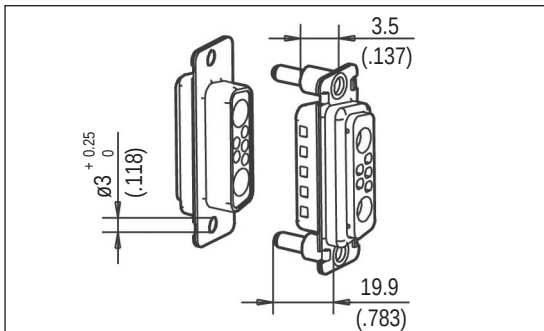
**RM53:** RM5 M3 threaded



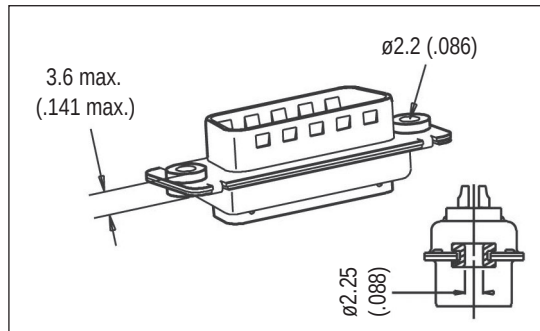
**RM84:** RM8 4.40 threaded

**RM83:** RM8 M3 threaded

**A514:** blind mating system



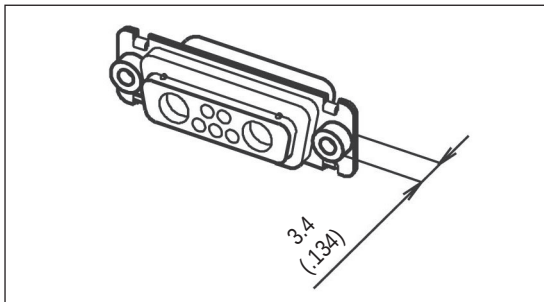
**FM:** float mounting system



### Straight and right angle version

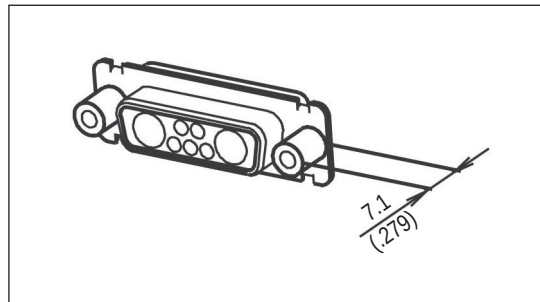
**4R:** 4.40 rear nut

**3R:** M3 rear nut

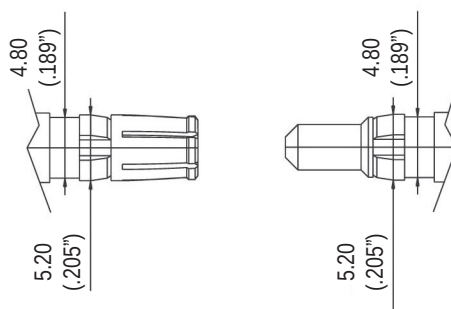


**4F:** 4.40 front female screwlock

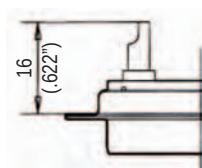
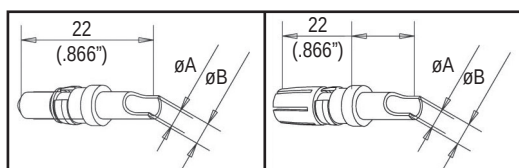
**3F:** M3 front female screwlock



## High power contacts



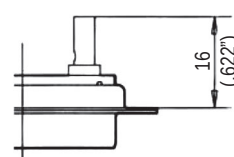
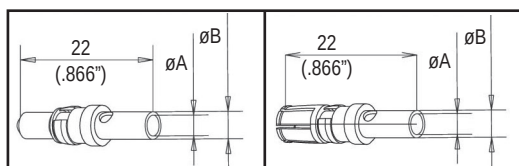
## Solder cup version



| P/N            |                | Current       | Dimensions   |              |
|----------------|----------------|---------------|--------------|--------------|
| Plug           | Socket         |               | A mm (inch)  | B mm (inch)  |
| L 17DM 53745-8 | L 17DM 53744-7 | 10 to 20 Amp. | 1.80 (.071") | 2.55 (.100") |
| L 17DM 53745-7 | L 17DM 53744-6 | 20 to 30 Amp. | 2.80 (.110") | 3.70 (.145") |
| L 17DM 53745-1 | L 17DM 53744-1 | 30 to 40 Amp. | 4.80 (.189") | 5.60 (.220") |

Trim dimensions: 7.5 mm (.295")

## Crimp version



| P/N              |                  | Current       | Dimensions   |              |
|------------------|------------------|---------------|--------------|--------------|
| Plug             | Socket           |               | A mm (inch)  | B mm (inch)  |
| L 17DM 53745-208 | L 17DM 53744-207 | 10 to 20 Amp. | 1.80 (.071") | 2.55 (.100") |
| L 17DM 53745-207 | L 17DM 53744-206 | 20 to 30 Amp. | 2.80 (.110") | 3.70 (.145") |
| L 17DM 53745-201 | L 17DM 53744-201 | 30 to 40 Amp. | 4.80 (.189") | 5.60 (.220") |

Trim dimensions: 7.5 mm (.295")

Crimping tool for all sizes  
L17D479SP



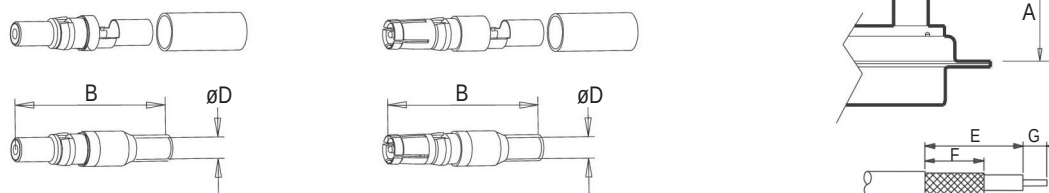
Extraction tool for sizes 8 cts





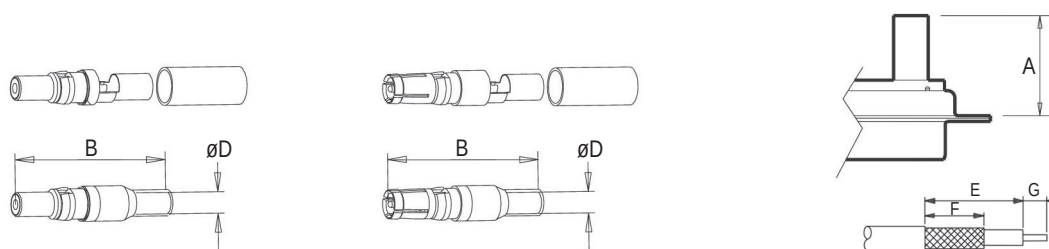
## Straight shielded contacts

### Crimp ferrule and inner solder



| Type   | P/N           | Dimensions (inch) |              |             | Cable - RG      | Trim dimensions (inch) |             |           |
|--------|---------------|-------------------|--------------|-------------|-----------------|------------------------|-------------|-----------|
|        |               | A Max             | B            | D           |                 | E                      | F           | G         |
| plug   | L17DM 53740   | 18.8 (740")       | 23.6 (.929") | 1.0 (.039") | 178 B/U         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| plug   | L17DM 53740-1 | 18.8 (740")       | 23.6 (.929") | 1.7 (.066") | 179 B/U 316 B/U | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| plug   | L17DM 53740-3 | 21.5 (846")       | 23.6 (.929") | 2.8 (.110") | 180 B/U         | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| plug   | L17DM 53740-5 | 21.5 (846")       | 23.6 (.929") | 3.2 (.126") | 58 C/U          | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| socket | L17DM 53742   | 18.8 (740")       | 23.6 (.929") | 1.0 (.039") | 178 B/U         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| socket | L17DM 53742-1 | 18.8 (740")       | 23.6 (.929") | 1.7 (.066") | 179 B/U 316 B/U | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| socket | L17DM 53742-3 | 21.5 (846")       | 23.6 (.929") | 2.8 (.110") | 180 B/U         | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| socket | L17DM 53742-5 | 21.5 (846")       | 23.6 (.929") | 3.2 (.126") | 58 C/U          | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |

### Ferrule and inner solder

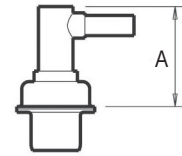
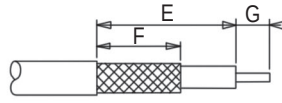
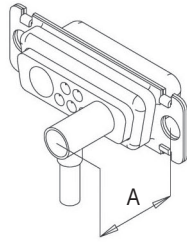


| Type         | P/N               | Dimensions (inch) |               |             | Cable - RG      | Trim dimensions (inch) |             |           |
|--------------|-------------------|-------------------|---------------|-------------|-----------------|------------------------|-------------|-----------|
|              |                   | A Max             | B             | D           |                 | E                      | F           | G         |
| short plug   | L17DM 53740-5000  | 17.0 (669")       | 21.8 (.858")  | 1.0 (.039") | 178 B/U         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| plug         | L17DM 53740-5001  | 18.8 (740")       | 23.6 (.929")  | 1.7 (.066") | 179 B/U 316 B/U | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| plug         | L17DM 53740-5002  | 21.5 (846")       | 26.3 (1.035") | 2.8 (.110") | 180 B/U         | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| plug         | L17DM 53740-5005  | 21.5 (846")       | 26.3 (1.035") | 3.2 (.126") | 58 C/U          | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| plug         | L17DM 53740-5008  | 18.8 (740")       | 23.6 (.929")  | 1.0 (.039") | 178 B/U         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| short socket | L17DM 53742-5000  | 17.0 (669")       | 21.8 (.858")  | 1.0 (.039") | 178 B/U         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| socket       | L17DM 53742-5001  | 18.8 (740")       | 23.6 (.929")  | 1.7 (.066") | 179 B/U 316 B/U | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| socket       | L17DM 53742-5002  | 21.5 (846")       | 26.3 (1.035") | 2.8 (.110") | 180 B/U         | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| socket       | L17DM 53742-5004  | 21.5 (846")       | 26.3 (1.035") | 3.2 (.126") | 58 C/U          | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| socket       | L17DM 53742-50060 | 18.8 (740")       | 23.6 (.929")  | 1.0 (.039") | 178 B/U         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |



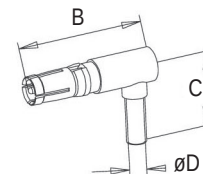
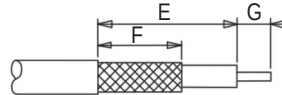
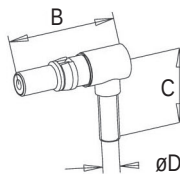
## Right angled shielded contact

### Crimp ferrule and inner solder



| Type   | P/N           | Dimensions (inch) |              |             | Cable - RG      | Trim dimensions (inch) |             |             |
|--------|---------------|-------------------|--------------|-------------|-----------------|------------------------|-------------|-------------|
|        |               | A Max             | B            | D           |                 | E                      | F           | G           |
| plug   | L17DM 53741   | 13.5 (.531")      | 18.6 (.732") | 1.0 (.039") | 178 B/U         | 9.5 (.374")            | 5.9 (.232") | 1.6 (.062") |
| plug   | L17DM 53741-1 | 13.5 (.531")      | 18.6 (.732") | 1.7 (.066") | 179 B/U 316 B/U | 9.5 (.374")            | 5.9 (.232") | 1.6 (.062") |
| plug   | L17DM 53741-3 | 13.5 (.531")      | 18.6 (.732") | 2.8 (.110") | 180 B/U         | 10.7 (.421")           | 7.9 (.311") | 2.4 (.094") |
| plug   | L17DM 53741-4 | 13.5 (.531")      | 18.6 (.732") | 3.2 (.126") | 58 C/U          | 10.7 (.421")           | 7.9 (.311") | 2.4 (.094") |
| socket | L17DM 53743-2 | 13.5 (.531")      | 18.6 (.732") | 1.0 (.039") | 178 B/U         | 9.5 (.374")            | 5.9 (.232") | 1.6 (.062") |
| socket | L17DM 53743-3 | 13.5 (.531")      | 18.6 (.732") | 1.7 (.066") | 179 B/U 316 B/U | 9.5 (.374")            | 5.9 (.232") | 1.6 (.062") |
| socket | L17DM 53743-5 | 13.5 (.531")      | 18.6 (.732") | 2.8 (.110") | 180 B/U         | 10.7 (.421")           | 7.9 (.311") | 2.4 (.094") |
| socket | L17DM 53743-6 | 13.5 (.531")      | 18.6 (.732") | 3.2 (.126") | 58 C/U          | 10.7 (.421")           | 7.9 (.311") | 2.4 (.094") |

### Ferrule and inner solder



| Type   | P/N              | Dimensions (inch) |              |             | Cable - RG      | Trim dimensions (inch) |             |             |
|--------|------------------|-------------------|--------------|-------------|-----------------|------------------------|-------------|-------------|
|        |                  | A Max             | B            | D           |                 | E                      | F           | G           |
| plug   | L17DM 53741-5000 | 13.5 (.531")      | 18.6 (.732") | 1.0 (.039") | 178 B/U         | 9.5 (.374")            | 5.9 (.232") | 1.6 (.062") |
| plug   | L17DM 53741-5001 | 13.5 (.531")      | 18.6 (.732") | 1.7 (.066") | 179 B/U 316 B/U | 9.5 (.374")            | 5.9 (.232") | 1.6 (.062") |
| plug   | L17DM 53741-5003 | 13.5 (.531")      | 18.6 (.732") | 2.8 (.110") | 180 B/U         | 10.7 (.421")           | 7.9 (.311") | 2.4 (.094") |
| plug   | L17DM 53741-5004 | 13.5 (.531")      | 18.6 (.732") | 3.2 (.126") | 58 C/U          | 10.7 (.421")           | 7.9 (.311") | 2.4 (.094") |
| socket | L17DM 53743-5000 | 13.5 (.531")      | 18.6 (.732") | 1.0 (.039") | 178 B/U         | 9.5 (.374")            | 5.9 (.232") | 1.6 (.062") |
| socket | L17DM 53743-5001 | 13.5 (.531")      | 18.6 (.732") | 1.7 (.066") | 179 B/U 316 B/U | 9.5 (.374")            | 5.9 (.232") | 1.6 (.062") |
| socket | L17DM 53743-5003 | 13.5 (.531")      | 18.6 (.732") | 2.8 (.110") | 180 B/U         | 10.7 (.421")           | 7.9 (.311") | 2.4 (.094") |
| socket | L17DM 53743-5004 | 13.5 (.531")      | 18.6 (.732") | 3.2 (.126") | 58 C/U          | 10.7 (.421")           | 7.9 (.311") | 2.4 (.094") |

## Crimping tool

### Hand crimp tool

227-0944 (without dies) (M 22 520/5-01)

| RG cables  | MIL reference | Amphenol P/N | dim. between 2 flat surface |          |
|------------|---------------|--------------|-----------------------------|----------|
|            |               |              | cavity A                    | cavity B |
| RG 58 C/U  | M 22 520/5-05 | 227 1221-05  | 5.41                        | -        |
| RG 178 B/U | M 22 520/5-03 | 227 1221-03  | -                           | 2.67     |
| RG 179 B/U | M 22 520/5-03 | 227 1221-03  | 3.25                        | -        |
| RG 180 B/U | M 22 520/5-05 | 227 1221-05  | -                           | 4.52     |

## Extraction tool

Extraction tool for sizes 8 cts

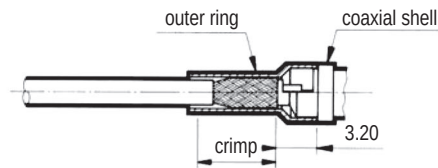
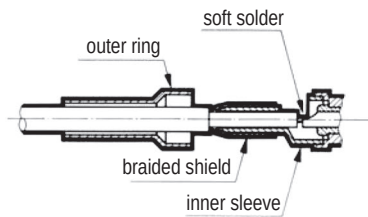
L17D429SP



## Cabling instructions for shielded contacts

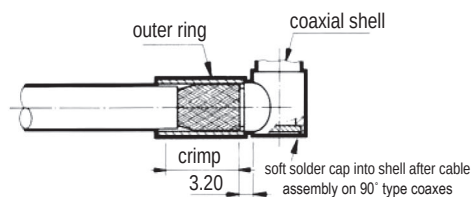
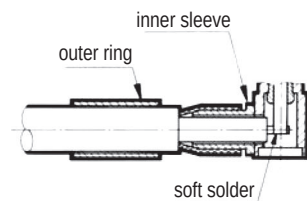
### Straight crimp shielded contacts:

*inner solder contact  
outer crimp contact*



### Right angle crimp shielded contacts:

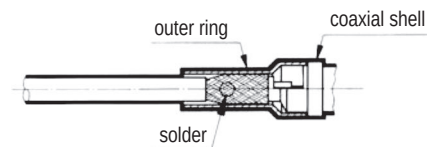
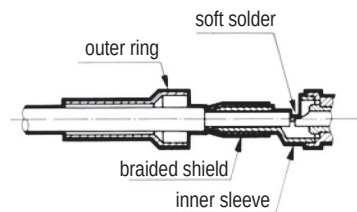
*inner solder contact  
outer crimp contact*



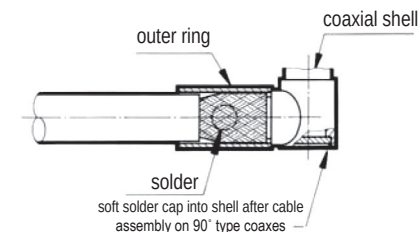
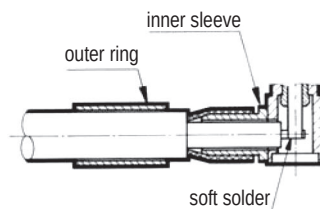
### Assembly method

- Slide the outer ring over the cable jacket. Trim the cable according to the recommended dimensions.
- Insert the cable dielectric and the center conductor inside the inner sleeve.
- Solder the central conductor to the shielded center contacts.
- Slide the outer ring towards the inner sleeve and recover the braid.
- Using crimp hand tool equipped with the appropriate dies, crimp in the area defined.

### Solder straight shielded contacts:



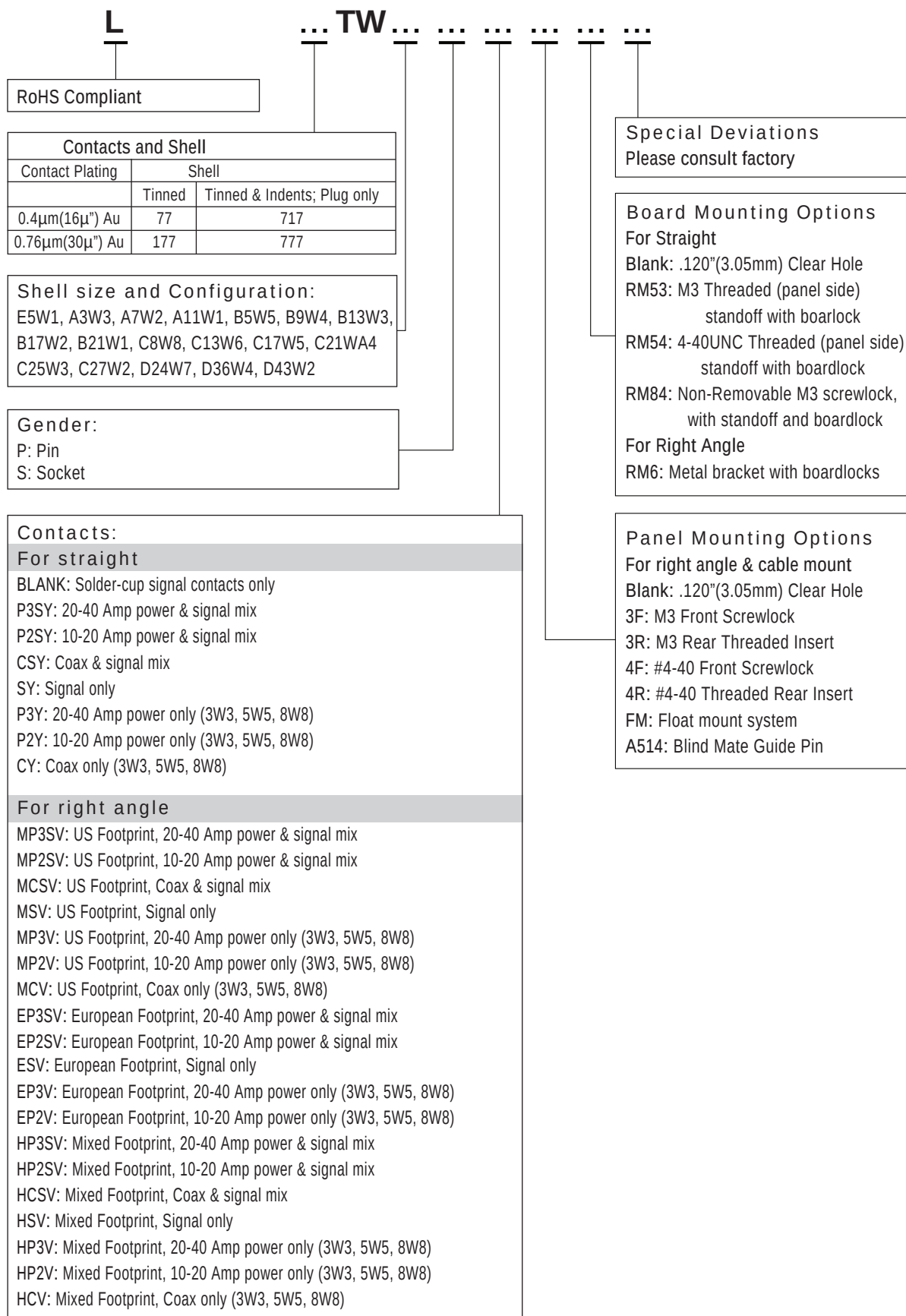
### Solder right angle shielded contacts:



### Assembly method

- Slide the outer ring over the cable jacket. Trim the cable according to the recommended dimensions.
- Insert the cable dielectric and the center conductor inside the inner sleeve.
- Solder the central conductor to the shielded center contacts.
- Slide the outer ring towards the inner sleeve and recover the braid.
- Solder by introducing metal through the outer ring hole.

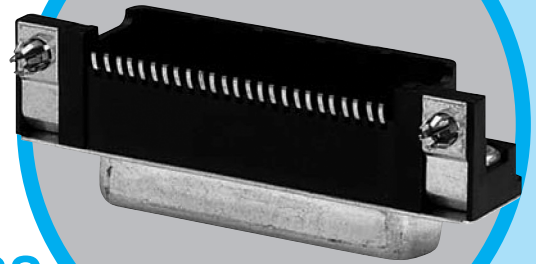
## How to build your part number



# SM2

D-Sub connectors - Stamped and Formed Contacts

## SURFACE MOUNT CONNECTORS



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308 - NFC 93425-HE5

| Materials and Platings |                                                                                                                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel with tin plating                                                                                                                                                                     |
| <b>Insulator</b>       | High temperature (peak at 260°C) glass-filled thermoplastic, UL 94V-0                                                                                                                      |
| <b>Socket contact</b>  | Stamped and formed brass, selected gold in mating area; 2.54µm (100µ") min. tin on termination area, with entire contact under-plated 1.27µm (50µ") min. nickel                            |
| <b>Rear insert</b>     | Brass, 3µm up to 5µm (118µ" up to 197µ") tinned over nickel 2µm up to 3 µm (78µ" to 118µ")                                                                                                 |
| <b>Boardlock</b>       | Tin plating 4µm up to 6µm (157µ" up to 236µ") over nickel 2µm up to 3µm (78µ" up to 118µ"), insertion force:<br>Low Insertion Force = LIF (bronze)<br>Zero Insertion Force = ZeFo (bronze) |
| <b>Screwlock</b>       | Brass, 6µm up to 10µm (236µ" up to 394µ") tinned over nickel 2µm up to 3µm (78µ" up to 118µ")                                                                                              |
| <b>Grounding</b>       | Grounding strap: brass, 4µm up to 6µm tin plating over nickel 2µm up to 3µm (78µ" up to 118µ")                                                                                             |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 3A                               |
| <b>Voltage rating</b>        | 300V AC/rms 50Hz                 |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50Hz for one minute |
| <b>Insulation resistance</b> | 5000MΩ                           |
| <b>Contact resistance</b>    | 10mΩ max                         |

| Climatic Data                |                         |
|------------------------------|-------------------------|
| <b>Operating temperature</b> | 85°C, peak at 105°C     |
| <b>Damp heat</b>             | 56 days (40°C - 95% HR) |

| Mechanical Data                 |                      |
|---------------------------------|----------------------|
| Single contact insertion force  | 1.2N < F < 2.5N      |
| Single contact withdrawal force | 0.4N min             |
| LIF boardlock                   | 8N max per connector |
| Coplanarity of contacts         | 0.2mm (.008”) max    |
| Mating and unmating force       |                      |
| Unit: N                         |                      |
| No. of Cts                      | Mate (max)           |
| 9 (size E)                      | 30                   |
| 15 (size A)                     | 50                   |
| 25 (size B)                     | 83                   |

### DESCRIPTION

Amphenol SMT D-Sub is offered in right angle, receptacle with brackets, as an industry standard for I / O connections.

Boardlock features:

- LIF (Low Insertion Force) boardlock especially designed to be fully compatible with pick and place machine.
- ZeFo (Zero Force Insertion) boardlock has been designed so that once placed and expanded, secures a safe locking.

*Designed for  
Pick and Place  
SMT process*

### APPLICATIONS

- Industrial
- Telecom
- Any industry standard I / O connections

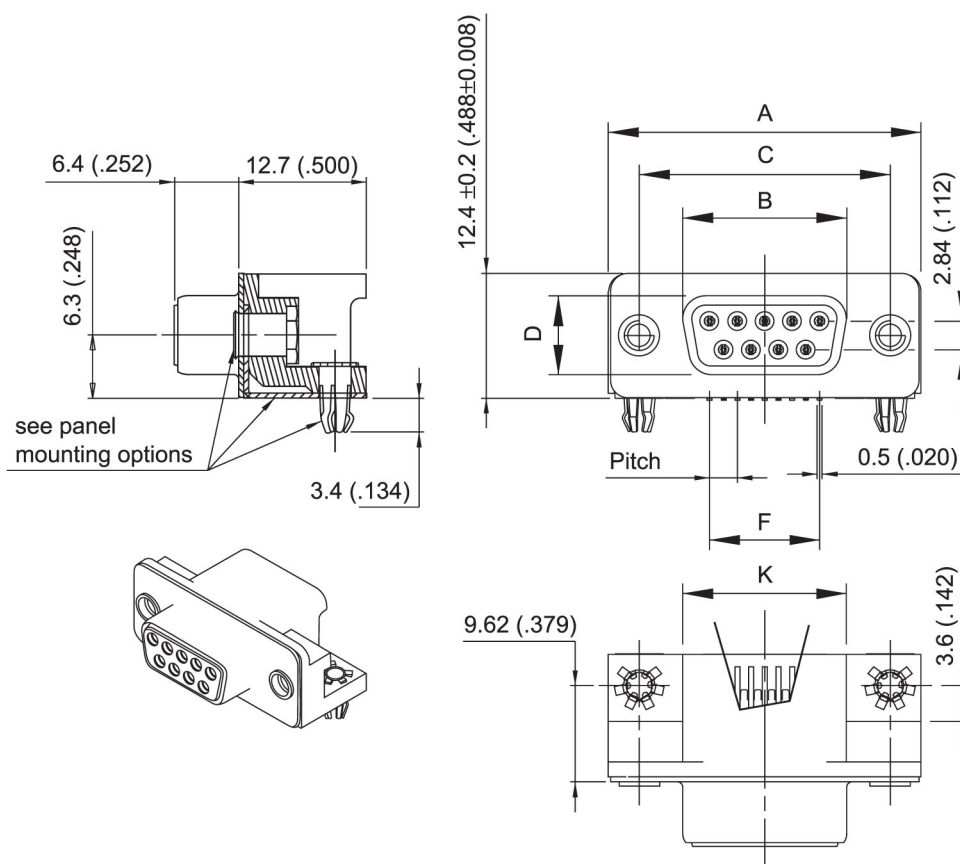


Amphenol

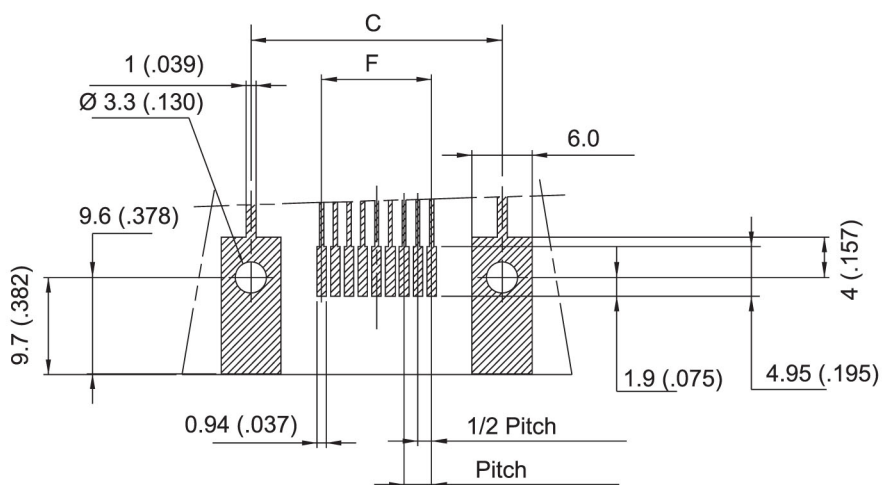
SM2 / E2



## Shell Size Dimensions

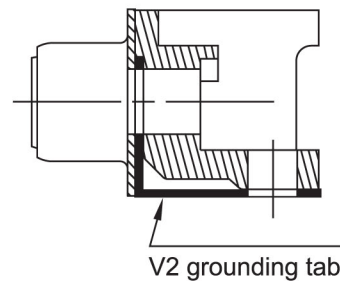
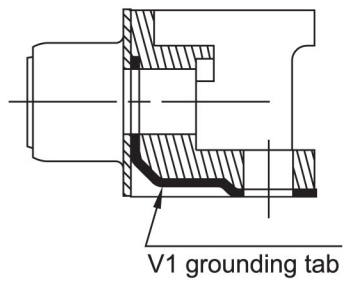
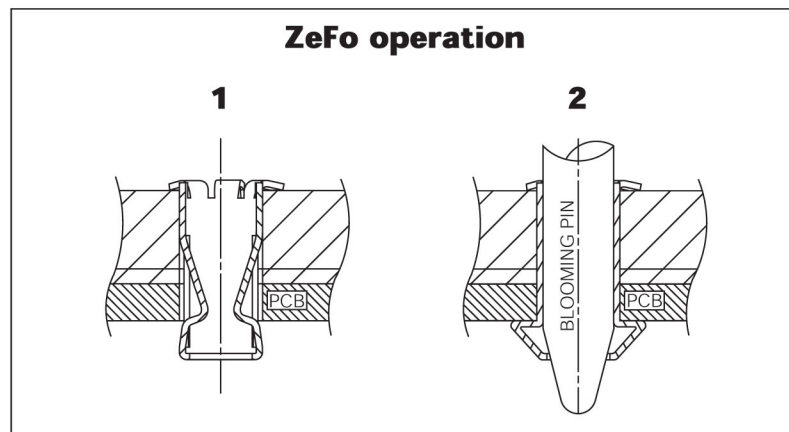
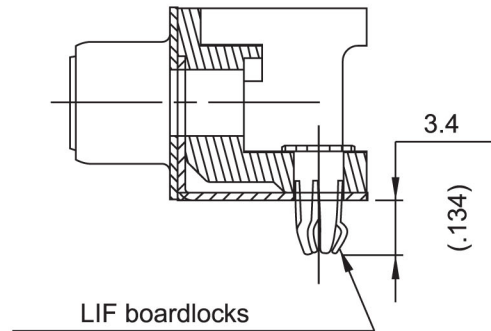
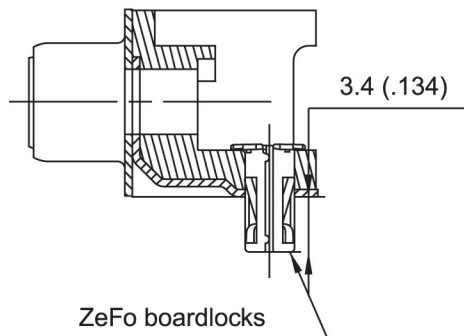
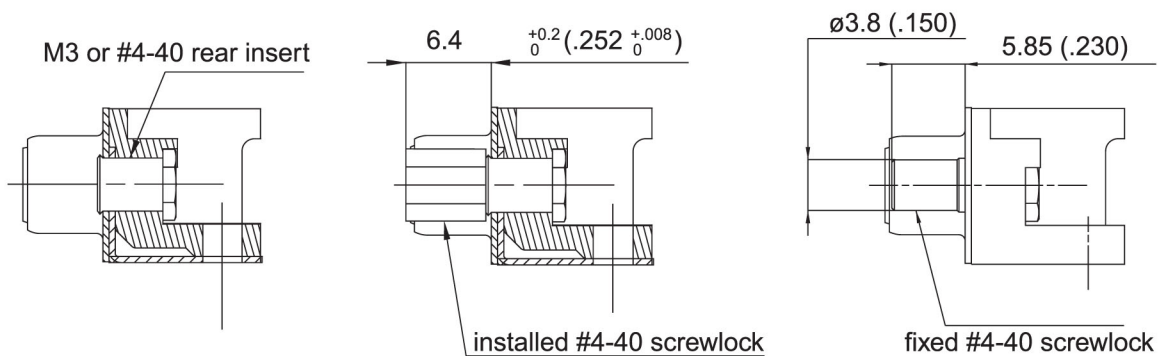


## PCB LAYOUT



| SHELL SIZE | mm (inch)                        |                       |                       |                       |              |               |              |
|------------|----------------------------------|-----------------------|-----------------------|-----------------------|--------------|---------------|--------------|
|            | A<br>+0.05 (.002)<br>-0.1 (.004) | B<br>0<br>-0.2 (.008) | C<br>$\pm 0.1$ (.004) | D<br>0<br>-0.25 (.01) | PITCH        | F             | K            |
| E          | 31.15 (1.226)                    | 16.4 (.645)           | 25 (.984)             | 8.03 (.316)           | 2.74 (.1078) | 10.97 (.432)  | 16.3 (.642)  |
| A          | 39.4 (1.551)                     | 24.8 (.976)           | 33.3 (1.311)          | 8.03 (.316)           | 2.74 (.1078) | 19.2 (.756)   | 24.6 (.968)  |
| B          | 53.3 (2.098)                     | 38.5 (1.515)          | 47 (1.850)            | 8.03 (.316)           | 2.76 (.1086) | 33.12 (1.304) | 38.3 (1.508) |



**Panel mounting option****GROUNDING TABS:****BOARDLOCKS:****FLANGES ACCESSORIES:**

Threaded Rear

**1/2**

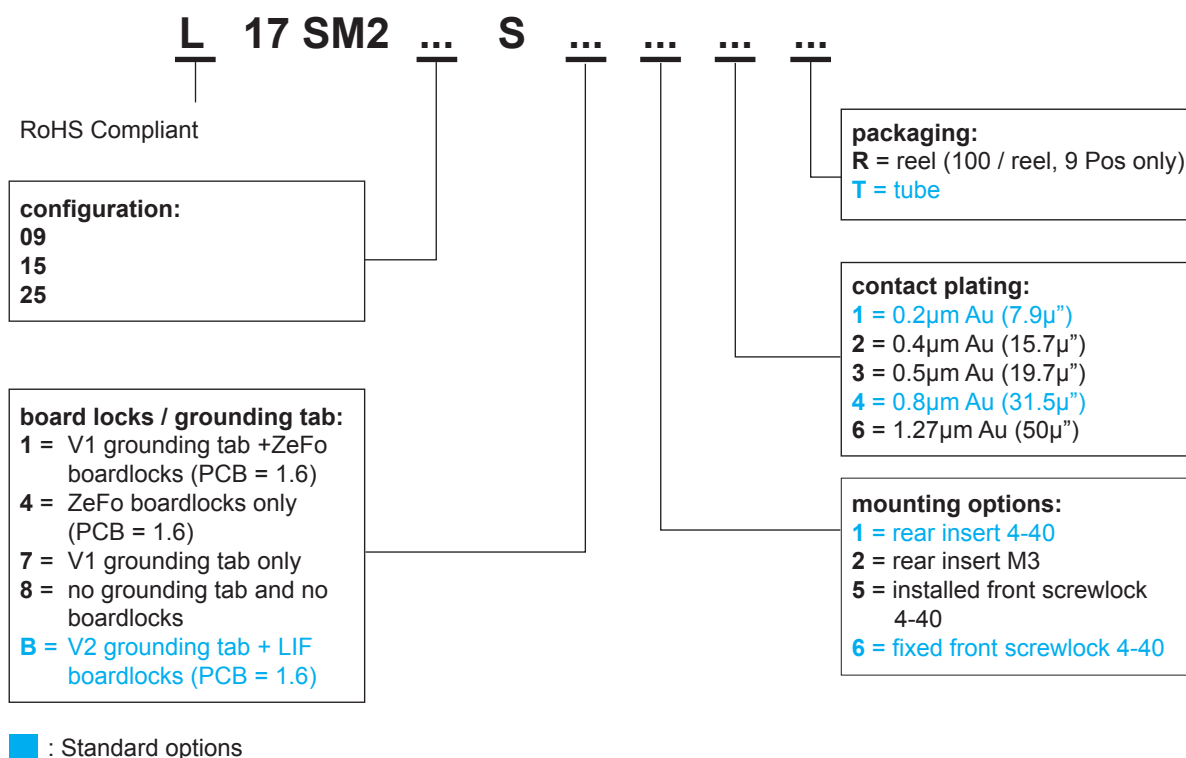
Installed Front Female

**5**

Fixed Front Female

**6**

## How to order



***For special request, please consult factory***

## Memo

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**Do not hesitate to contact us for further information**

# Amphenol

## Amphenol IT & Communication Products

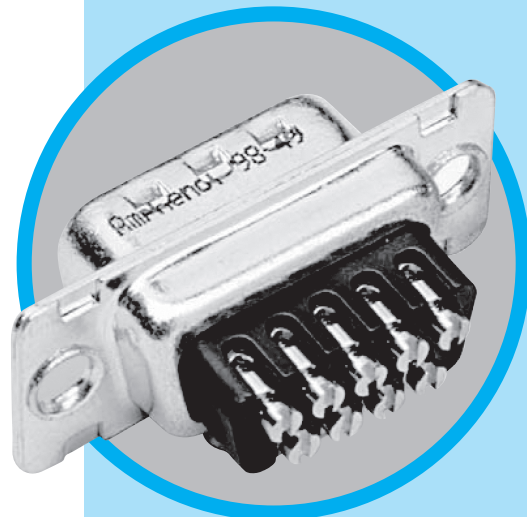
Block A3/A4, The 4th Industrial District of  
Industrial Headquarters, Dong Keng Road  
Gong Ming Town, Shen Zhen China  
Fax: +86(0)755 2754 9955

### Technical Support

Tel:+86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>

# D-ST

## Screw Termination D'Sub series



### CHARACTERISTICS

- Connectors according to: MIL C24308 - NFC 93425-HE5

| Materials and platings |                                                                            |
|------------------------|----------------------------------------------------------------------------|
| Shells                 | Steel, Tin plated                                                          |
| Insulator              | Glass filled thermoplastic, UL 94V-0                                       |
| Contacts               | Machined brass for plug full gold<br>Machined bronze for socket, full gold |

| Electrical Data       |                       |
|-----------------------|-----------------------|
| Current rating        | 7,5 A max             |
| Voltage rating        | 300 V RMS at 50 Hz    |
| Withstanding voltage  | 1000 V RMS at 50 Hz   |
| Insulation resistance | > 5000 MΩ at 500 V DC |
| Contact resistance    | < 5 mΩ                |

| Climatic Data         |                                 |
|-----------------------|---------------------------------|
| Operating temperature | - 55°C to + 85°C, peak at 125°C |
| Damp heat             | 21 days (40°C - 95% HR)         |
| Salt spray            | 48 hours                        |

| Mechanical Data |                                                                     |
|-----------------|---------------------------------------------------------------------|
| Cable type      | Solid or stranded                                                   |
| Cable gage      | 0.75 mm max ( AWG 18 ) - For<br>bigger wire, please consult factory |
| Screw torque    | 0.05 mN max                                                         |
| Mating cycles   | 100 (class II) or 500 (class I)                                     |

### DESCRIPTION

The Amphenol Screw Termination D'Sub series is especially designed for field applications.

These new connectors permit easy wiring without any specific tool : Just a standard electrician's screwdriver is required.

Due to their reduced overall dimensions, these connectors are compatible with all standard hoods and accessories

*Simplify  
Your cable  
assemblies!*

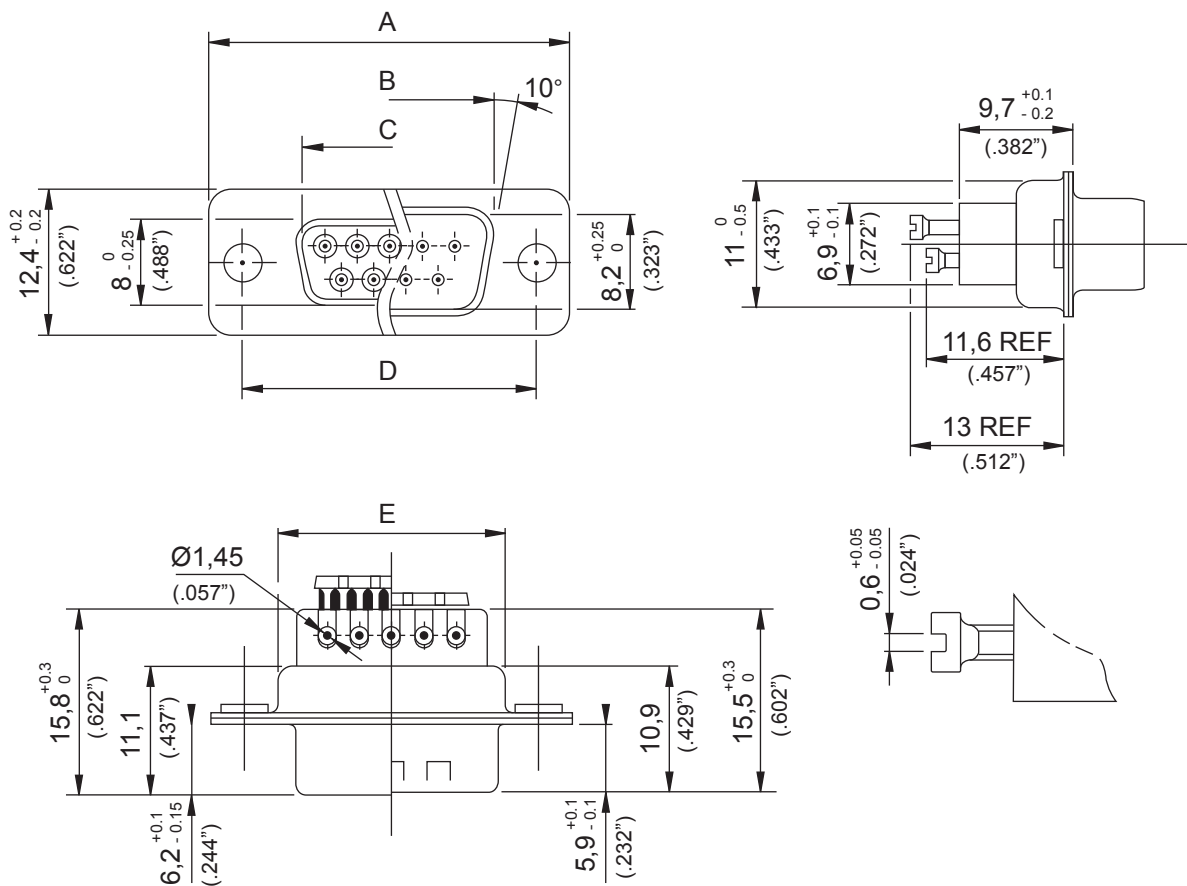
### APPLICATIONS

- Industry control of speed variators,
- Houses and public buildings control of heating, air conditioning, lighting, shutters, fire safety...
- Infrastructures fluids control, motorway

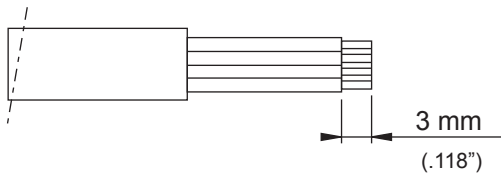


**Amphenol**

**D-ST / E3**



Cable stripping



| SIZE | A<br>+0,25 (.010")<br>-0,25 (.010") | B<br>0<br>-0,2 (.008") | C<br>+0,2 (.008")<br>0 | D<br>+0,1 (.004")<br>-0,1 (.004") | E<br>+0,1 (.004")<br>-0,4 (.016") |
|------|-------------------------------------|------------------------|------------------------|-----------------------------------|-----------------------------------|
| 9    | 30.7<br>(1.209")                    | 16.4<br>(.646")        | 16.8<br>(.661")        | 25<br>(.984")                     | 19.4<br>(.370")                   |
| 15   | 39<br>(1.535")                      | 24.8<br>(.976")        | 25.1<br>(.988")        | 33.3<br>(1.311")                  | 27.7<br>(1.091")                  |
| 25   | 52.9<br>(2.083")                    | 38.5<br>(1.516")       | 38.8<br>(1.528")       | 47<br>(1.850")                    | 41.4<br>(1.630")                  |
| 37   | 69.2<br>(2.724")                    | 54.9<br>(2.161")       | 55.3<br>(2.177")       | 63.5<br>(2.500")                  | 57.9<br>(2.280")                  |

## HOW TO ORDER

RoHS Compliant

L 717D E09 P ST 1



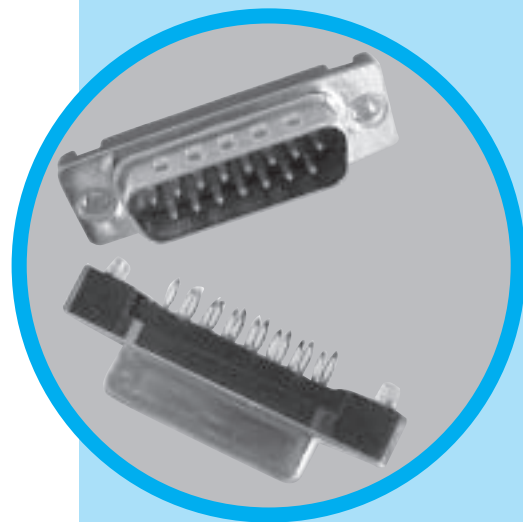
### DVZK Angled cable entry



# TF

D-Sub connectors - Stamped and Formed Contacts

## PRESS FIT STRAIGHT PCB TERMINATION



### CHARACTERISTICS

| Materials and Platings |                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel, tin plated                                                                                                                  |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V-0                                                                                               |
| <b>Pin contact</b>     | Brass, selected gold in mating area;<br>2.54µm (100µ") min. tin<br>on termination area over<br>1.27µm (50µ") min. nickel           |
| <b>Socket contact</b>  | Phosphor bronze, selected gold in<br>mating area; 2.54µm (100µ") min.<br>tin on termination area over;<br>1.27µm(50µ") min. nickel |
| <b>Rear insert</b>     | Brass, 2.54µm (100µ") min. nickel plated                                                                                           |
| <b>Boardlock</b>       | Brass, 2.54µm (100µ") min. nickel plated                                                                                           |
| <b>Screwlock</b>       | Brass, 2.54µm (100µ") min. nickel plated                                                                                           |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 3A                               |
| <b>Voltage rating</b>        | 300V AC                          |
| <b>Withstanding voltage</b>  | 1000V AC/rms 60Hz for one minute |
| <b>Insulation resistance</b> | 1000MΩ                           |
| <b>Contact resistance</b>    | 25mΩ max                         |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |
| <b>Salt spray</b>            | 24 hours        |

| Mechanical Data                             |                                                       |
|---------------------------------------------|-------------------------------------------------------|
| <b>Single contact insertion force</b>       | ≤ 3.60 N                                              |
| <b>Single contact withdrawal force</b>      | ≥ 0.2 N                                               |
| <b>Single contact insertion on board</b>    | ≤ 100 N                                               |
| <b>Single contact withdrawal from board</b> | ≥ 20 N                                                |
| <b>Standard plating thickness</b>           | Gold flash<br>0.4µm (15µ") gold<br>0.76µm (30µ") gold |

|                                  | Terminal Specification                | Boardlock Specification                 |
|----------------------------------|---------------------------------------|-----------------------------------------|
| <b>Finished Hole</b><br>Cu<br>Sn | 1 (+0.09 -0.06)<br>> 25 µm<br>< 15 µm | 3.1 +/- 0.05 mm<br>Min 25 µm<br>5-15 µm |

### DESCRIPTION

The Amphenol "TF" series features eye of needle formed contacts, and insulator with closed entry contacts cavities.

This series gives you Amphenol's high standards of quality and reliability to meet all your technical requirements.

*Solderless  
straight PCB  
mount  
connectors*

### APPLICATIONS

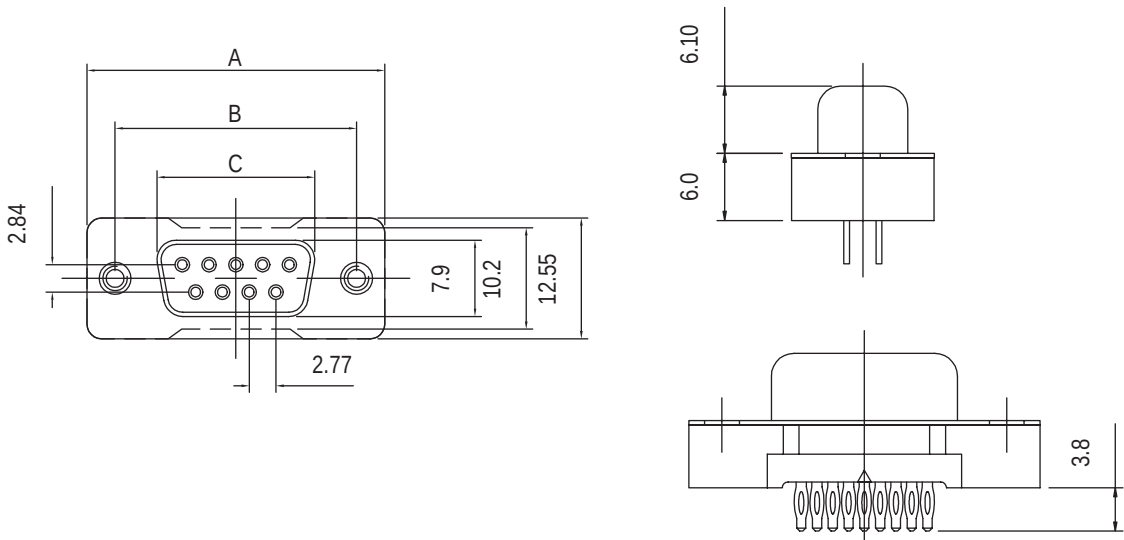
- Industrial
- Telecom
- Any backplanes connections



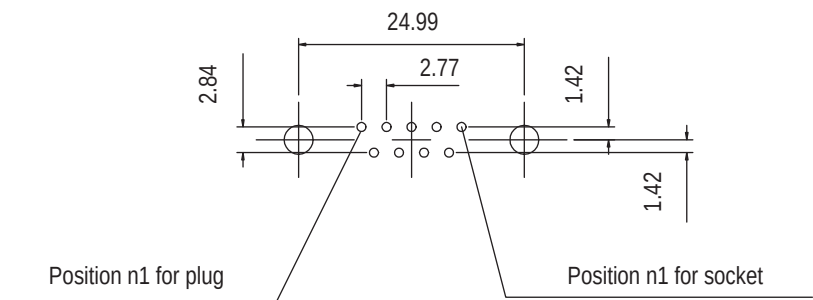
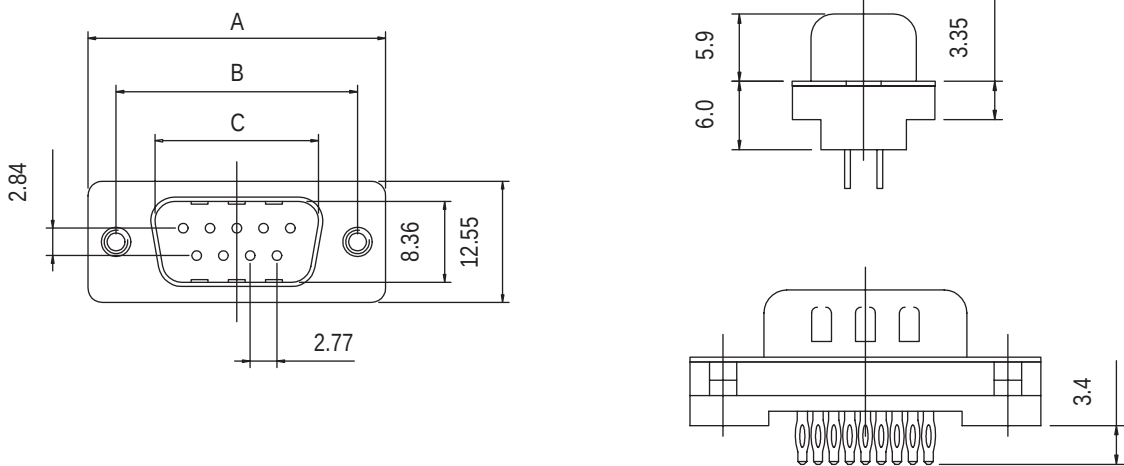
**Amphenol**

TF / E4

Socket version

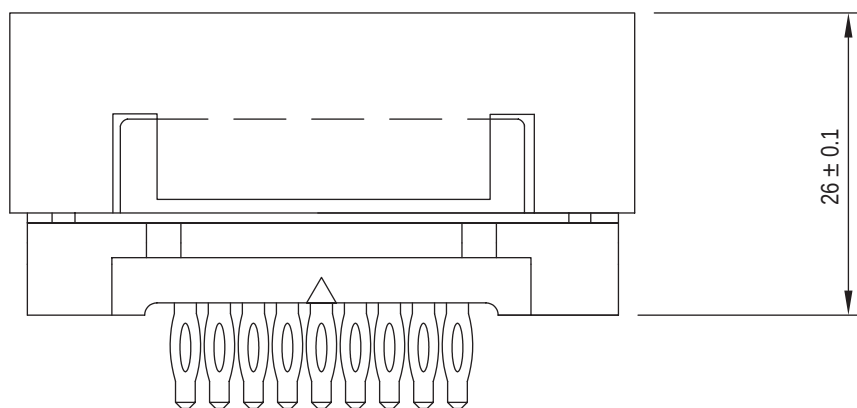


Plug version

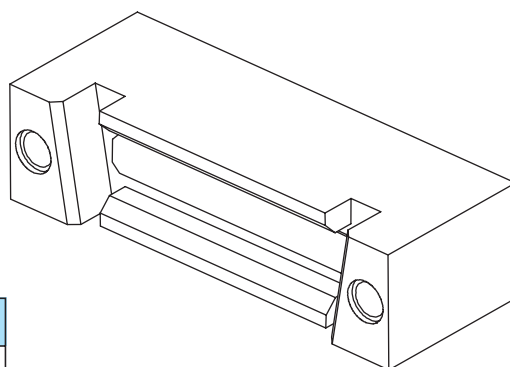


For PCB holes diameters, see on page 1 (finished holes)

| Nb OF CONTACTS | DIMENSIONS mm (inch) |               |               |               |
|----------------|----------------------|---------------|---------------|---------------|
|                | A                    | B             | C plug        | C socket      |
| 9              | 30.81 (1.185)        | 24.99 (0.984) | 16.92 (0.666) | 16.33 (0.643) |
| 15             | 39.14 (1.54)         | 33.32 (1.312) | 25.50 (1.004) | 24.66 (0.97)  |
| 25             | 53.04 (2.088)        | 47.04 (1.852) | 28.96 (1.534) | 38.38 (1.511) |
| 37             | 69.32 (2.729)        | 63.50 (2.5)   | 55.42 (2.182) | 54.84 (2.16)  |

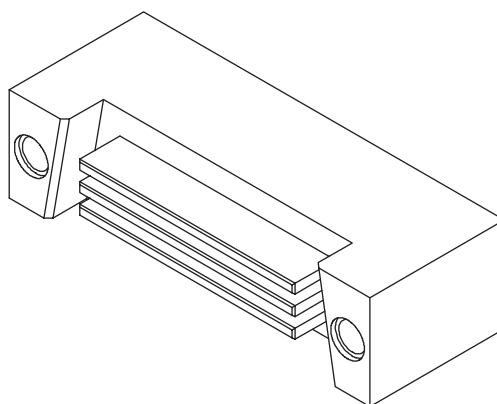


## Female



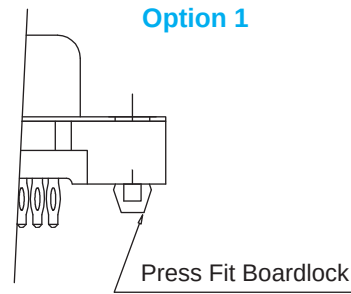
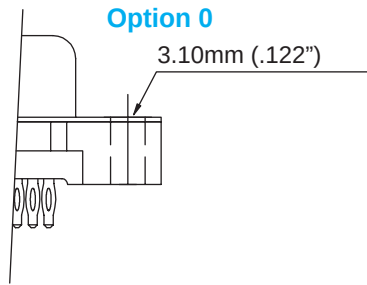
| Size of connectors | Tooling PN |
|--------------------|------------|
| 9                  | 981 MC     |
| 15                 | 982 MC     |
| 25                 | 983 MC     |
| 37                 | 984 MC     |

## Male

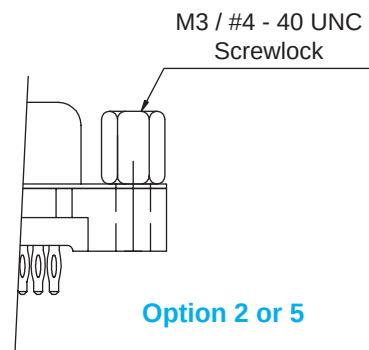
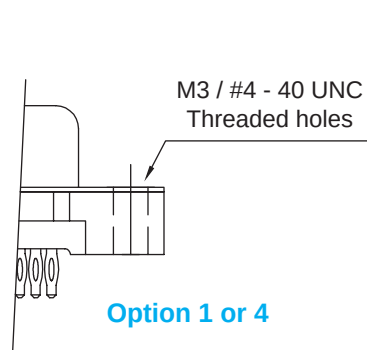


| Size of connectors | Tooling PN |
|--------------------|------------|
| 9                  | 985 MC     |
| 15                 | 986 MC     |
| 25                 | 987 MC     |
| 37                 | 988 MC     |

## Board mounting option



## Flange mounting option



## How to order

**L 17TF** ...

RoHS Compliant

Series

Number of contacts :  
09-15-25-37

Contact type:  
1 = pin  
0 = socket

Contact plating  
0 = gold flash  
1 = 0.4  $\mu\text{m}$  (15 $\mu$ "")  
2 = 0.76  $\mu\text{m}$  (30 $\mu$ "")

Flange mounting option :  
1 = #4-40 threaded hole  
2 = #4-40 threaded hole with #4-40 UNC screwlock installed  
4 = M3 threaded hole  
5 = M3 threaded hole with M3 screwlock installed

Board mounting option  
0 = without boardlock  
1 = with boardlock

Front shell plating  
1 = tin over nickel

Do not hesitate to contact us for further information

# Amphenol

## Amphenol IT & Communication Products

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Fax: +86(0)755 2754 9955

### Technical Support

Tel: +86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>

# SD

D'Sub connectors - Stamped and Formed Contacts

## SOLDER-CUP TERMINATION STANDARD and HIGH DENSITY



### CHARACTERISTICS

#### Specifications

- Connectors according to: MIL C24308 - NFC 93425-HE5

| Materials and Platings |                                                                                                                                     |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel, tin over nickel plating                                                                                                      |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V-0                                                                                                |
| <b>Pin contacts</b>    | Brass, selected gold in mating area;<br>2.54µm (100µ") min. tin<br>on termination area over<br>1.27µm (50µ") min. nickel            |
| <b>Socket contact</b>  | Phosphor bronze, selected gold in<br>mating area; 2.54µm (100µ") min. tin-<br>on termination area over 1.27µm<br>(50µ") min. nickel |
| <b>Rear insert</b>     | Brass, 2.54µm (100µ") min. nickel plated                                                                                            |
| <b>Screwlock</b>       | Brass, 2.54µm (100µ") min. nickel plated                                                                                            |

| Electrical Data              |                                          |
|------------------------------|------------------------------------------|
| <b>Current rating</b>        | Standard Density: 5A<br>High Density: 3A |
| <b>Voltage rating</b>        | 250V AC/rms 50Hz                         |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50Hz for one minute         |
| <b>Insulation resistance</b> | 1000MΩ at 500V DC                        |
| <b>Contact resistance</b>    | 20mΩ max                                 |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |
| <b>Salt spray</b>            | 24 hours        |

| Mechanical Data                 |    |                                                                                                                        |              |               |              |
|---------------------------------|----|------------------------------------------------------------------------------------------------------------------------|--------------|---------------|--------------|
| Single contact insertion force  |    | 0.54kg (1.19lb) max                                                                                                    |              |               |              |
| Single contact withdrawal force |    | SD : 0.06kg (0.13lb) min<br>HD : 0.02kg (0.044lb) min                                                                  |              |               |              |
| Mating and unmating force       |    |                                                                                                                        |              |               |              |
| Unit: kg ( lb)                  |    |                                                                                                                        |              |               |              |
| No. of Cts                      |    | SD                                                                                                                     |              | HD            |              |
| SD                              | HD | Mate (max)                                                                                                             | Unmate (min) | Mate (max)    | Unmate (min) |
| 9                               | 15 | 3.05 (6.74)                                                                                                            | 0.36 (0.79)  | 3.81 (8.42)   | 0.52 (1.14)  |
| 15                              | 26 | 5.09 (11.24)                                                                                                           | 0.46 (1.01)  | 5.95 (13.16)  | 1.05 (2.32)  |
| 25                              | 44 | 8.44 (18.66)                                                                                                           | 0.81 (1.8)   | 9.26 (20.46)  | 1.37 (3.02)  |
| 37                              | 62 | 12.51 (27.65)                                                                                                          | 1.1 (2.47)   | 13.48 (29.78) | 1.76 (3.88)  |
| 50                              | 78 | 14.65 (32.38)                                                                                                          | 1.6 (3.56)   | 15.82 (34.96) | 2.02 (4.46)  |
| Standard plating thickness      |    | <ul style="list-style-type: none"><li>• gold flash</li><li>• 0.4µm (15µ") gold</li><li>• 0.76 µm (30µ") gold</li></ul> |              |               |              |

### DESCRIPTION

The Amphenol "SD" series features precision formed contacts, and insulator with closed entry contacts cavities.

This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements.

*Economical  
solder cup  
connectors*

### APPLICATIONS

- Industrial
- Telecom
- Any industry standard I / O connections

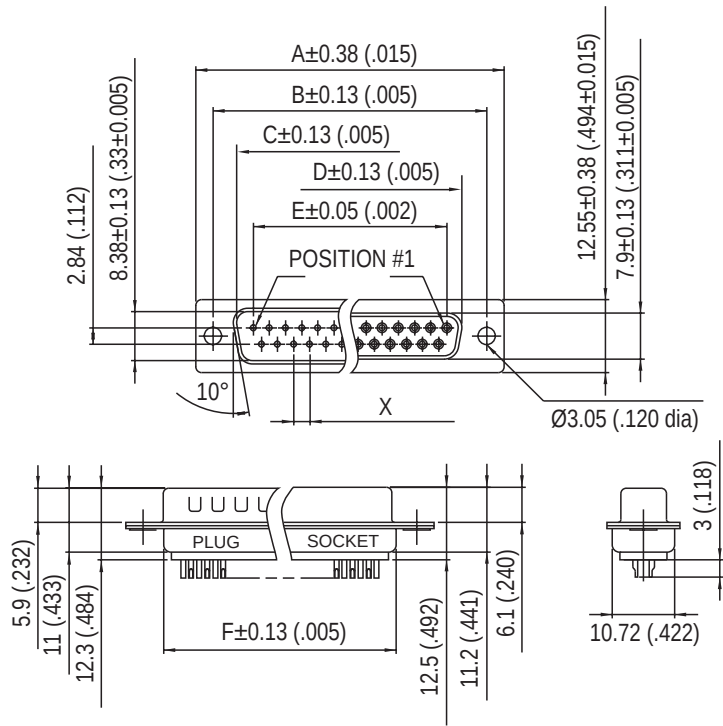


**Amphenol**

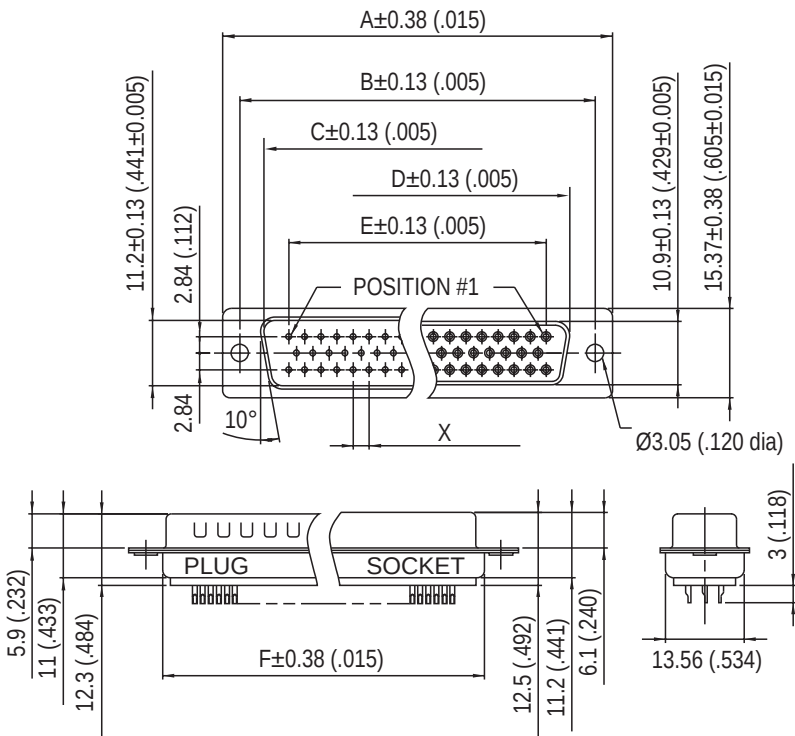
SD / E5



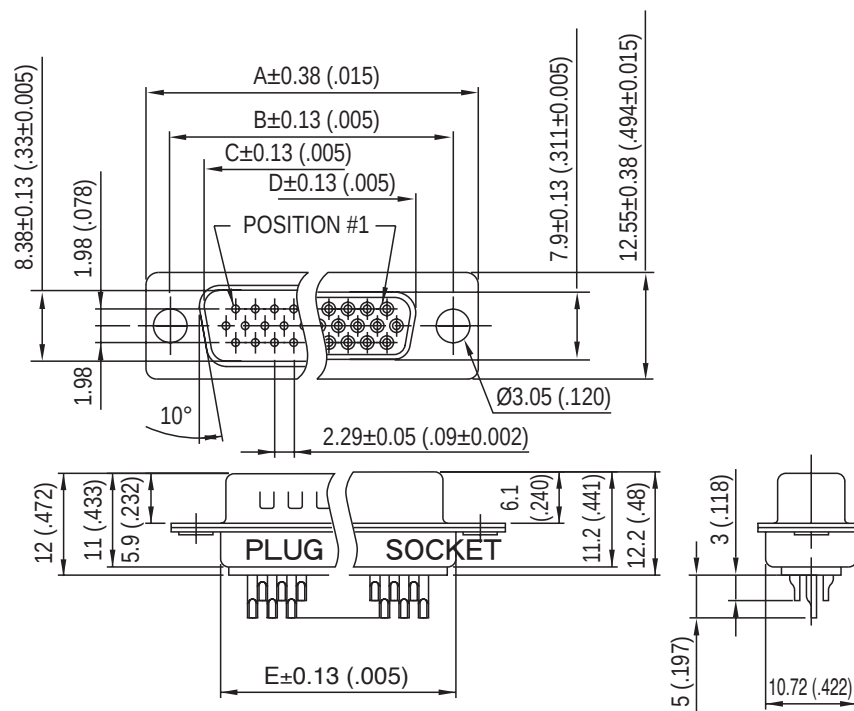
Standard Density



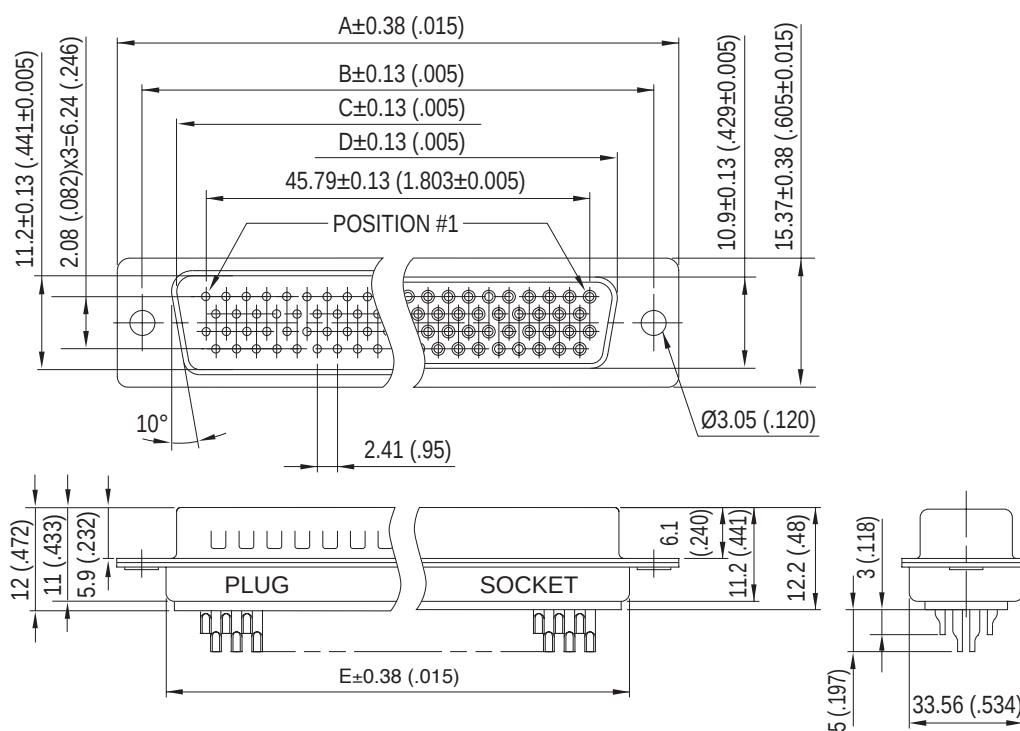
| Nb OF<br>CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |              |      |
|-------------------|----------------------|--------------|--------------|--------------|--------------|--------------|------|
|                   | A                    | B            | C            | D            | E            | F            | X    |
| 9                 | 30.84 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 11.09 (.44)  | 19.28 (.76)  | 2.74 |
| 15                | 39.24 (1.54)         | 33.32 (1.31) | 24.7 (.972)  | 24.56 (.97)  | 19.39 (.76)  | 27.51 (1.08) | 2.74 |
| 25                | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 33.24 (1.31) | 41.30 (1.63) | 2.77 |
| 37                | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 49.86 (1.96) | 57.71 (2.27) | 2.77 |
| 50                | 67 (2.64)            | 61.11 (2.41) | 52.86 (2.08) | 52.34 (2.06) | 44.32 (1.75) | 55.3 (2.18)  | 2.77 |



## High Density

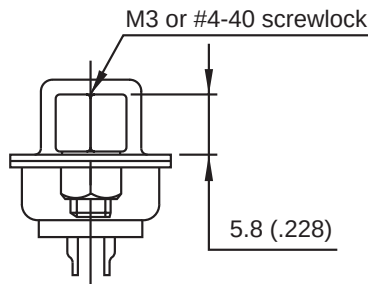


| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |
|----------------|----------------------|--------------|--------------|--------------|--------------|
|                | A                    | B            | C            | D            | E            |
| 15             | 30.84 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 19.28 (.76)  |
| 26             | 39.24 (1.54)         | 33.32 (1.31) | 24.7 (.972)  | 24.56 (.97)  | 27.51 (1.08) |
| 44             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 41.30 (1.63) |
| 62             | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 57.71 (2.27) |
| 78             | 67 (2.64)            | 61.11 (2.41) | 52.86 (2.08) | 52.34 (2.06) | 55.3 (2.18)  |

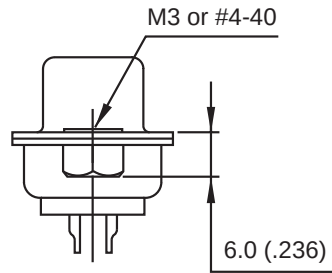


78 CONTACTS

## Panel mounting option

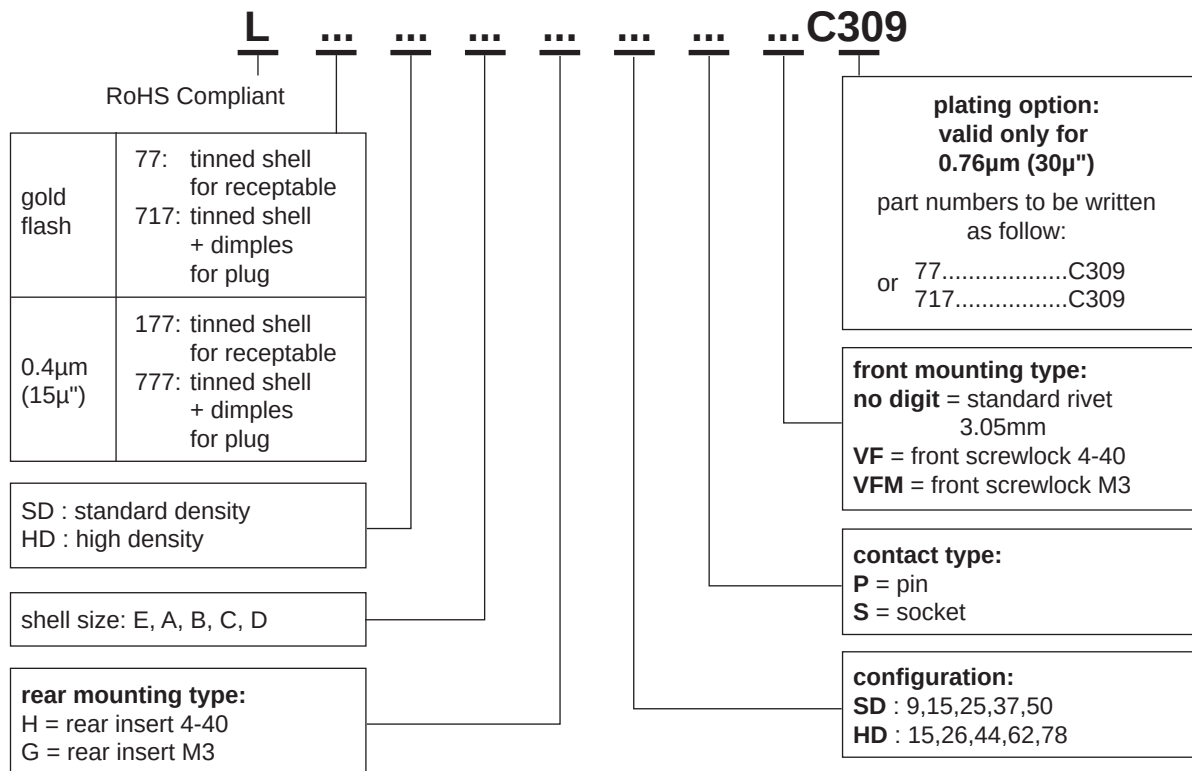


**Front Female Screwlock**  
**VF / VFM**



**Threaded Rear Insert**  
**H / G**

## How to order



**For special request, please consult factory**

Do not hesitate to contact us for further information

# Amphenol

## Amphenol IT & Communication Products

Block A3/A4, The 4th Industrial District of  
Industrial Headquarters, Dong Keng Road  
Gong Ming Town, Shen Zhen China  
Fax: +86(0)755 2754 9955

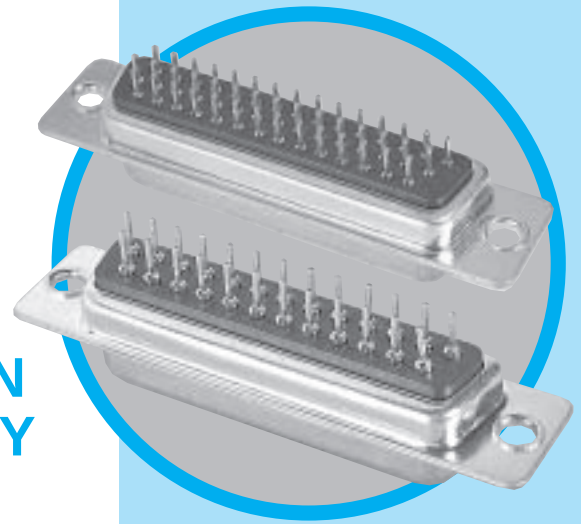
### Technical Support

Tel: +86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>

# SD

D'Sub connectors - Stamped and Formed Contacts

## STRAIGHT PCB TERMINATION STANDARD and HIGH DENSITY



### CHARACTERISTICS

#### Specifications

- Connectors according to: MIL C24308 - NFC 93425-HE5

| Materials and Platings |                                                                                                                      |
|------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel, tin over nickel plating                                                                                       |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V-0                                                                                 |
| <b>Pin contacts</b>    | Brass, selected gold in mating area;<br>2.54µm (100 µ") min.tin on termination area over 1.27µm (50µ") min.nickel    |
| <b>Socket contact</b>  | Phosphor bronze, selected gold in mating area;2.54µ(100µ") min.tin on termination area over 1.27µm (50µ") min.nickel |
| <b>Rear insert</b>     | Brass, 2.54µm (100µ") min.nickel plated                                                                              |
| <b>Boardlock</b>       | Brass, 2.54µm (100µ") min.nickel plated                                                                              |
| <b>Screwlock</b>       | Brass, 2.54µm (100µ") min.nickel plated (removable)                                                                  |

| Electrical Data              |                                        |
|------------------------------|----------------------------------------|
| <b>Current rating</b>        | Standard Density:5A<br>High Density:3A |
| <b>Voltage rating</b>        | 250V AC/ rms 50Hz                      |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50Hz for one minute       |
| <b>Insulation resistance</b> | 1000MΩ at 500V DC                      |
| <b>Contact resistance</b>    | 20mΩ max                               |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |
| <b>Salt spray</b>            | 24 hours        |

| Mechanical Data                 |    |                                                                                                                          |              |               |              |
|---------------------------------|----|--------------------------------------------------------------------------------------------------------------------------|--------------|---------------|--------------|
| Single contact insertion force  |    | 0.54kg (1.19lb) max                                                                                                      |              |               |              |
| Single contact withdrawal force |    | SD : 0.06kg (0.13lb) min<br>HD : 0.02kg (0.044lb) min                                                                    |              |               |              |
| Mating and unmating force       |    |                                                                                                                          |              |               |              |
| Unit: kg ( lb)                  |    |                                                                                                                          |              |               |              |
| No. of Cts                      |    | SD                                                                                                                       |              | HD            |              |
| SD                              | HD | Mate (max)                                                                                                               | Unmate (min) | Mate (max)    | Unmate (min) |
| 9                               | 15 | 3.05 (6.74)                                                                                                              | 0.36 (0.79)  | 3.81 (8.42)   | 0.52 (1.14)  |
| 15                              | 26 | 5.09 (11.24)                                                                                                             | 0.46 (1.01)  | 5.95 (13.16)  | 1.05 (2.32)  |
| 25                              | 44 | 8.44 (18.66)                                                                                                             | 0.81 (1.8)   | 9.26 (20.46)  | 1.37 (3.02)  |
| 37                              | 62 | 12.51 (27.65)                                                                                                            | 1.1 (2.47)   | 13.48 (29.78) | 1.76 (3.88)  |
| 50                              | 78 | 14.65 (32.38)                                                                                                            | 1.6 (3.56)   | 15.82 (34.96) | 2.02 (4.46)  |
| Standard plating thickness      |    | <ul style="list-style-type: none"><li>• gold flash</li><li>• 0.381µm (15µ") gold</li><li>• 0.76 µm (30µ") gold</li></ul> |              |               |              |

### DESCRIPTION

The Amphenol "SD" series features precision formed contacts, and insulator with closed entry contacts cavities. This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements.

*Economical  
straight PCB  
mount connectors*

### APPLICATIONS

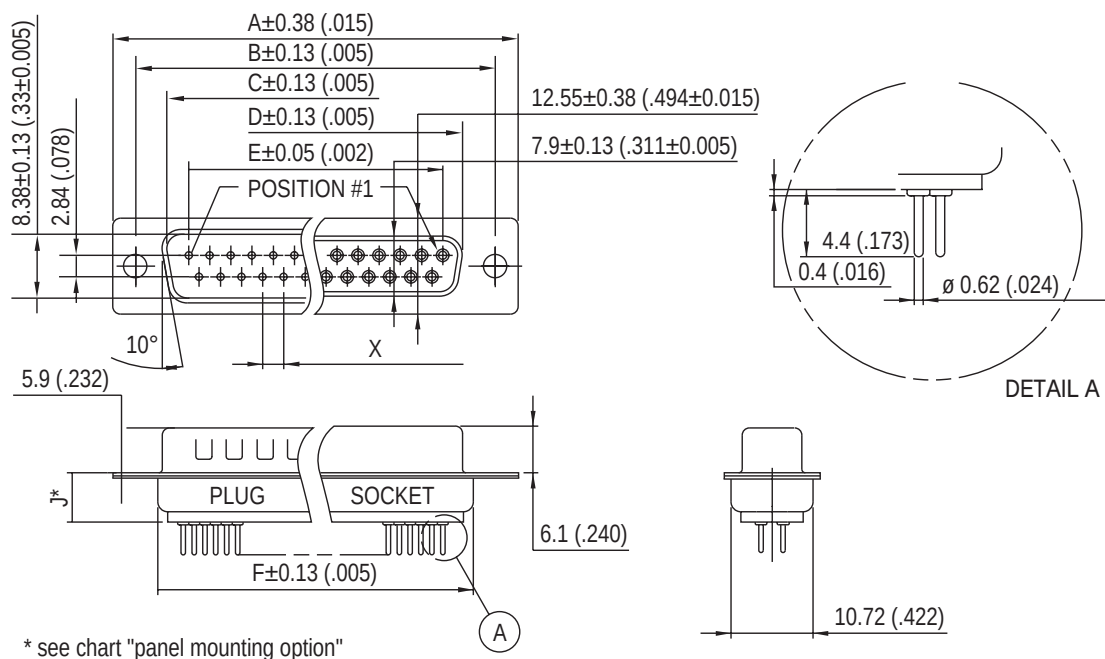
- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

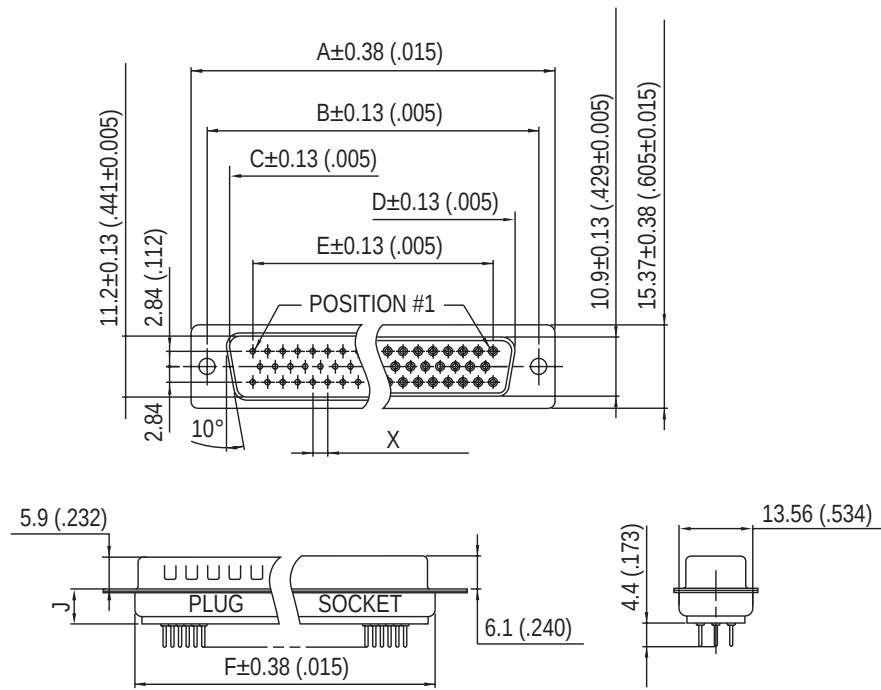
SD / E6

Standard Density



\* see chart "panel mounting option"

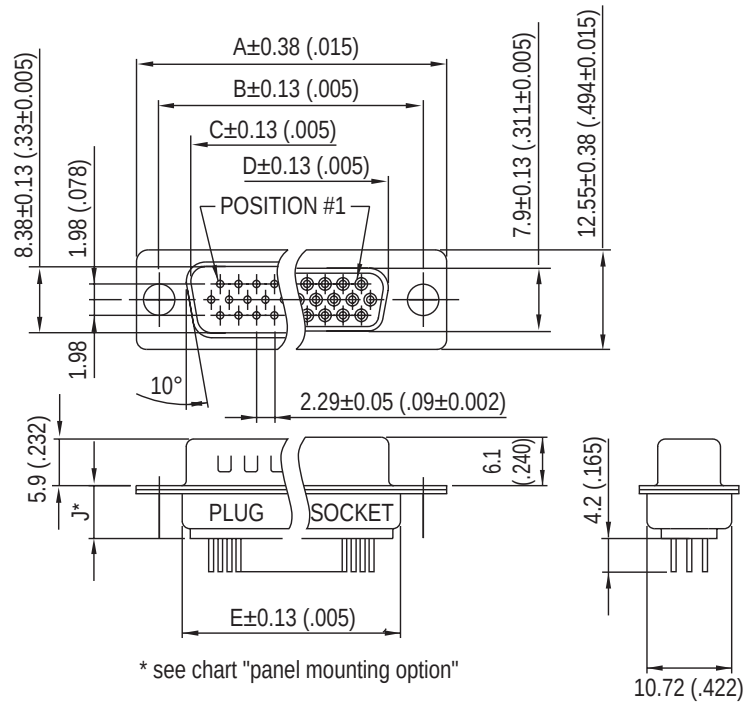
| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |              |      |
|----------------|----------------------|--------------|--------------|--------------|--------------|--------------|------|
|                | A                    | B            | C            | D            | E            | F            | X    |
| 9              | 30.84 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 11.09 (.44)  | 19.28 (.76)  | 2.74 |
| 15             | 39.24 (1.54)         | 33.32 (1.31) | 24.7 (.972)  | 24.56 (.97)  | 19.39 (.76)  | 27.51 (1.08) | 2.74 |
| 25             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 33.24 (1.31) | 41.30 (1.63) | 2.77 |
| 37             | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 49.86 (1.96) | 57.71 (2.27) | 2.77 |
| 50             | 67 (2.64)            | 61.11 (2.41) | 52.86 (2.08) | 52.34 (2.06) | 44.32 (1.75) | 55.3 (2.18)  | 2.77 |



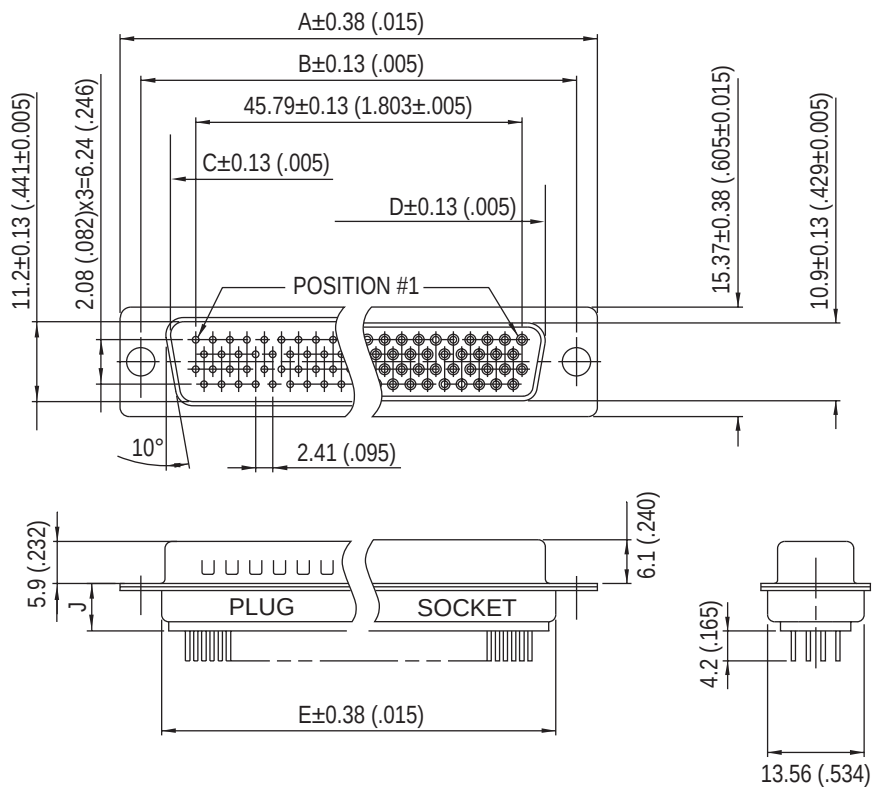
50 CONTACTS



# High Density

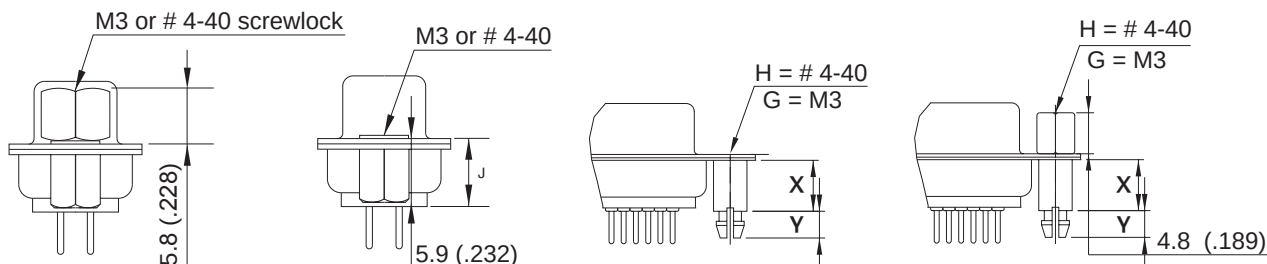


| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |
|----------------|----------------------|--------------|--------------|--------------|--------------|
|                | A                    | B            | C            | D            | E            |
| 15             | 30.84 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 19.28 (.76)  |
| 26             | 39.24 (1.54)         | 33.32 (1.31) | 24.7 (.972)  | 24.56 (.97)  | 27.51 (1.08) |
| 44             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 41.30 (1.63) |
| 62             | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 57.71 (2.27) |
| 78             | 67 (2.64)            | 61.11 (2.41) | 52.86 (2.08) | 52.34 (2.06) | 55.3 (2.18)  |



78 CONTACTS

## Panel mounting option



Front Female Screwlock

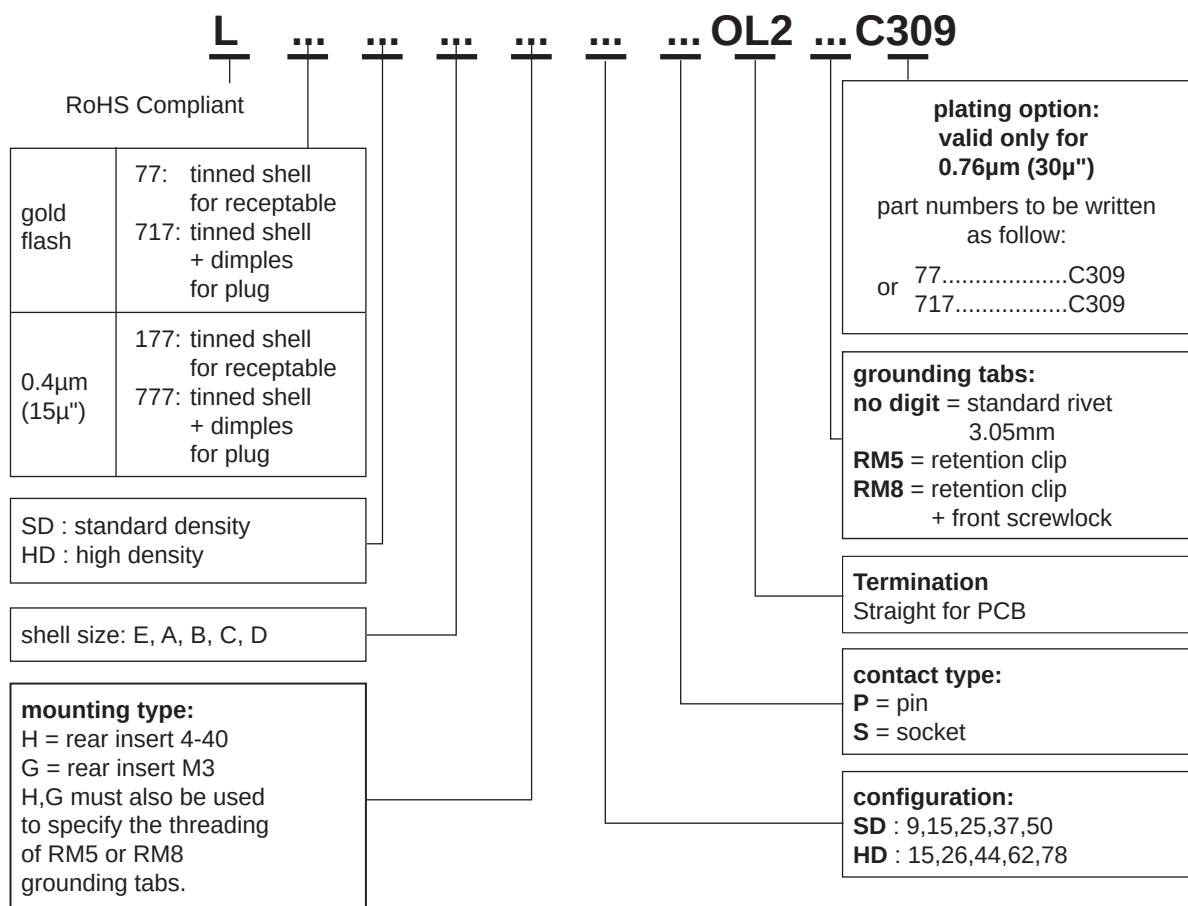
Threaded Rear Insert

RM5 Standoff Boardlock

RM8 Standoff Boardlock

|   | RM5<br>RM8 | RM5G<br>RM8G |
|---|------------|--------------|
| X | 6.0(.236)  | 12.7(.500)   |
| Y | 4.2(.165)  | 3.2(.126)    |
| J | 6.2(.244)  | 10.1(.397)   |

## How to order



**For special request, please consult factory**

Do not hesitate to contact us for further information

# Amphenol

## Amphenol IT & Communication Products

Block A3/A4, The 4th Industrial District of  
Industrial Headquarters, Dong Keng Road  
Gong Ming Town, Shen Zhen China  
Fax: +86(0)755 2754 9955

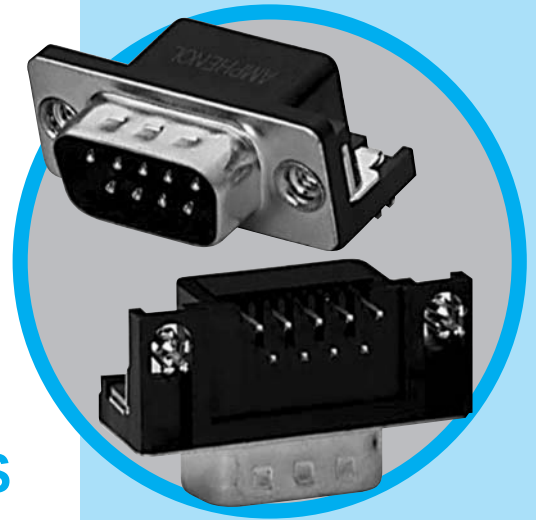
### Technical Support

Tel: +86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>

# SD

D'Sub connectors - Stamped and Formed Contacts

## RIGHT ANGLE BOARD MOUNT CONNECTORS



MAIN CHARACTERISTICS

### Specifications

- Connectors according to: MIL C24308 - NFC 93425-HE5

| Materials and Platings |                                                                                                                      |
|------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel, tin over nickel plating                                                                                       |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V- 0                                                                                |
| <b>Pin contacts</b>    | Brass, selected gold in mating area; 2.54µm (100 µ") min.tin on termination area over 1.27µm (50µ") min.nickel       |
| <b>Socket contact</b>  | Phosphor bronze, selected gold in mating area;2.54µ(100µ") min.tin on termination area over 1.27µm (50µ") min.nickel |
| <b>Rear insert</b>     | Brass, 2.54µm (100µ") min.nickel plated                                                                              |
| <b>Boardlock</b>       | Phosphor bronze or Brass, 2.54µm (100µ") min.nickel plated                                                           |
| <b>Screwlock</b>       | Brass, 2.54µm (100µ") min.nickel plated                                                                              |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 5A                               |
| <b>Voltage rating</b>        | 250V AC/ rms 50Hz                |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50Hz for one minute |
| <b>Insulation resistance</b> | 1000MΩ at 500V DC                |
| <b>Contact resistance</b>    | 15mΩ max                         |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |
| <b>Salt spray</b>            | 24 hours        |

| Mechanical Data                                                                                                          |                     |              |              |              |
|--------------------------------------------------------------------------------------------------------------------------|---------------------|--------------|--------------|--------------|
| Single contact insertion force                                                                                           | 0.54kg (1.19lb) max |              |              |              |
| Single contact withdrawal force                                                                                          | 0.06kg (0.13lb) min |              |              |              |
| Mating and unmating force                                                                                                |                     |              |              |              |
| Unit: kg ( lb)                                                                                                           |                     |              |              |              |
|                                                                                                                          | A4 Style            |              | 1A Style     |              |
| No. of Cts                                                                                                               | Mate (max)          | Unmate (min) | Mate (max)   | Unmate (min) |
| 9                                                                                                                        | 3.05 (6.74)         | 0.36 (0.79)  | 4.6 (10.17)  | 0.4 (0.88)   |
| 15                                                                                                                       | 5.09 (11.24)        | 0.46 (1.01)  | 7.7 (17.02)  | 0.5 (1.10)   |
| 25                                                                                                                       | 8.44 (18.66)        | 0.81 (1.8)   | 12.7 (28.07) | 0.8 (1.77)   |
| 37                                                                                                                       | 12.51 (27.65)       | 1.1 (2.47)   | 17.7 (39.12) | 1.2 (2.65)   |
| Standard plating thickness                                                                                               |                     |              |              |              |
| <ul style="list-style-type: none"><li>• gold flash</li><li>• 0.381µm (15µ") gold</li><li>• 0.76 µm (30µ") gold</li></ul> |                     |              |              |              |

DESCRIPTION

The Amphenol "SD" series features precision formed contacts and boardlocks.

This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements.

*Economical  
right angle PCB  
mount  
connectors*

APPLICATIONS

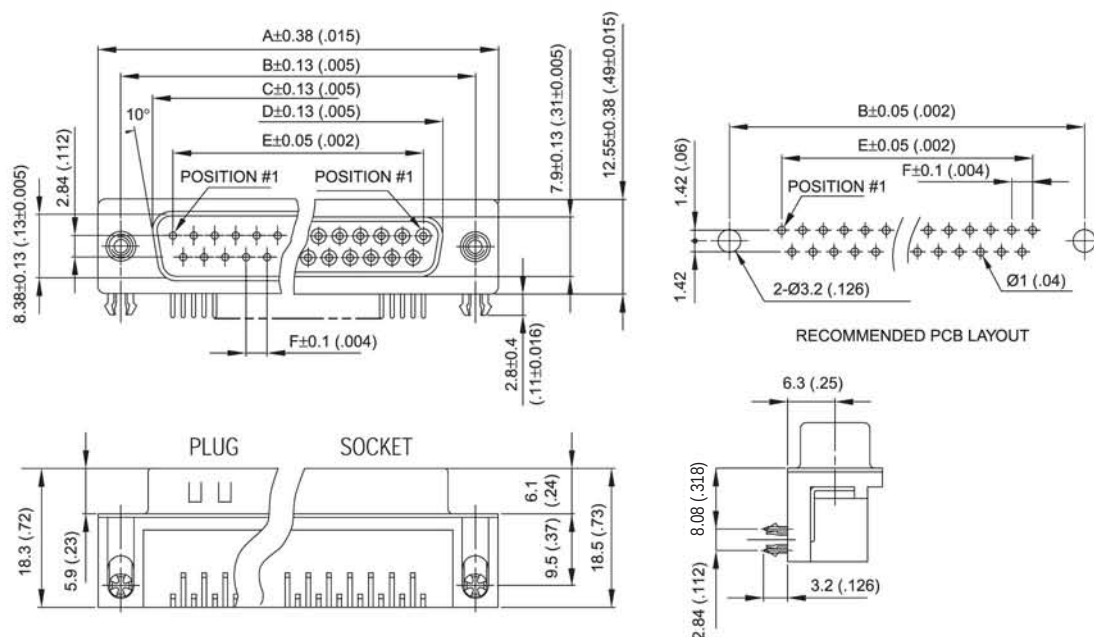
- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

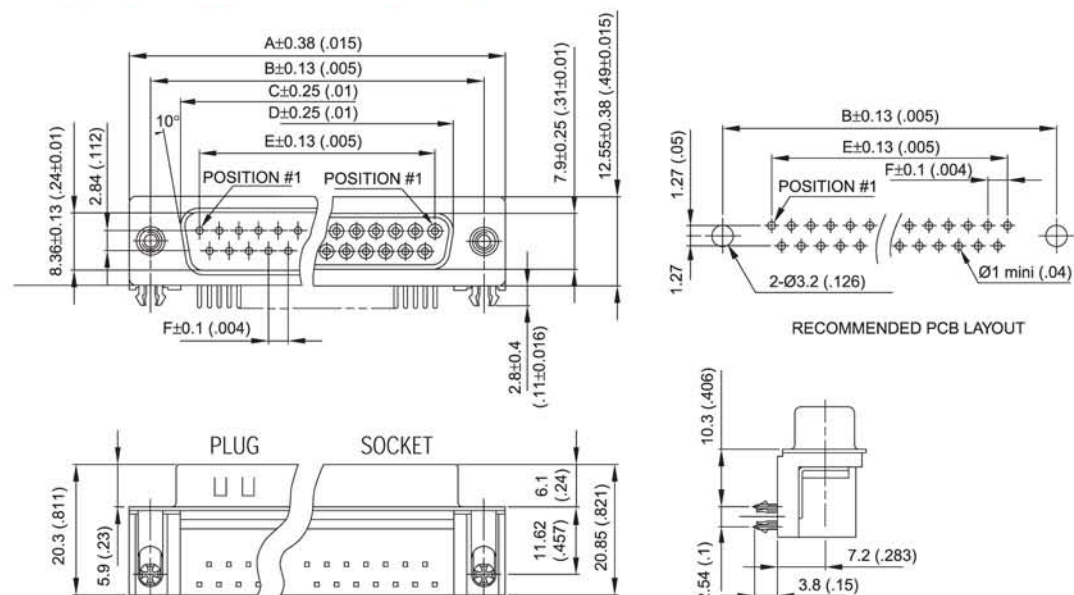
SD / E7

## A4 style (MIL Footprint)



| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |             |
|----------------|----------------------|--------------|--------------|--------------|--------------|-------------|
|                | A                    | B            | C            | D            | E            | F           |
| <b>9</b>       | 30.84 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 11.09 (.44)  | 2.74 (.108) |
| <b>15</b>      | 39.14 (1.54)         | 33.32 (1.31) | 25.25 (.99)  | 24.56 (.97)  | 19.39 (.76)  | 2.74 (.108) |
| <b>25</b>      | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 33.24 (1.31) | 2.77 (.109) |
| <b>37</b>      | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 49.86 (1.96) | 2.77 (.109) |

## 1A style (European Footprint)



| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |             |
|----------------|----------------------|--------------|--------------|--------------|--------------|-------------|
|                | A                    | B            | C            | D            | E            | F           |
| <b>9</b>       | 30.84 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 11.96 (.43)  | 2.74 (.108) |
| <b>15</b>      | 39.1 (1.54)          | 33.32 (1.31) | 25.25 (.99)  | 24.66 (.97)  | 19.18 (.755) | 2.74 (.108) |
| <b>25</b>      | 53.09 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 33.24 (1.31) | 2.77 (.109) |
| <b>37</b>      | 69.4 (2.73)          | 63.50 (2.50) | 55.42 (2.18) | 54.84 (2.16) | 49.86 (1.96) | 2.77 (.109) |



# Amphenol



The diagram illustrates the structure of a part number, with callouts for various options. The part number is shown as **L** **SD** **CH** **C309**, with ellipses indicating optional digits. Callouts are connected to specific parts of the number:

- L**: RoHS Compliant
- SD**:
  - gold flash
  - 0.4μm (15μ")
  - shell size: E, A, B, C
  - configuration: 9, 15, 25, 37
  - contact type:
    - P = pin
    - S = socket
- CH**:
  - plating option: valid only for 0.76μm (30μ")
  - part numbers to be written as follow:
    - 77 SD.....C309
    - 717 SD.....C309
  - mounting options:
    - 4F = front screwlock 4-40
    - 3F = front screwlock M3
    - 4R = rear insert 4-40
    - 3R = rear insert M3
  - PCB locking type:
    - grounding tabs
    - + board locks
  - Footprint:
    - 1A (European)
    - A4 (MIL)

## HOW TO ORDER

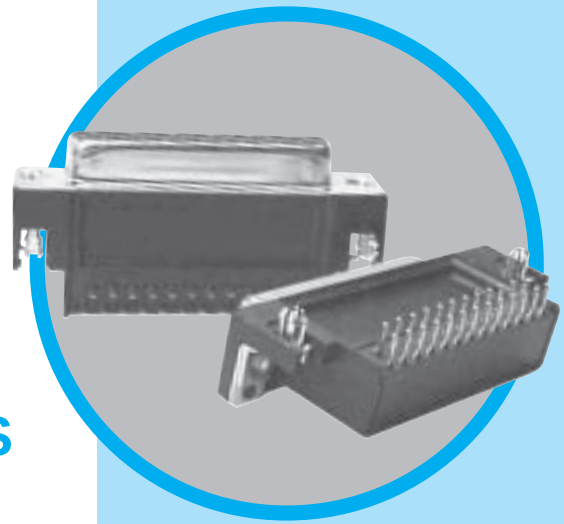
SD/E7



# SD

D-Sub connectors - Stamped and Formed Contacts

## RIGHT ANGLE BOARD MOUNT CONNECTORS FOOTPRINT 14.99 mm (.590")



CHARACTERISTICS

### Specifications

- UL File: E119881
- Connectors according to MIL C24308

| Materials and Platings |                                                                                                                                     |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel, tin over nickel plating                                                                                                      |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V-0                                                                                                |
| <b>Pin contacts</b>    | Brass, selected gold in mating area;<br>2.54µm (100µ") min. tin<br>on termination area over<br>1.27µm (50µ") min. nickel            |
| <b>Socket contact</b>  | Phosphor bronze, selected gold in<br>mating area; 2.54µm (100µ") min. tin-<br>on termination area over 1.27µm<br>(50µ") min. nickel |
| <b>Rear insert</b>     | Brass, 2.54µm (100µ") min. nickel plated                                                                                            |
| <b>Screwlock</b>       | Brass, 2.54µm (100µ") min. nickel plated                                                                                            |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 5A                               |
| <b>Voltage rating</b>        | 600V AC/rms 50Hz                 |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50Hz for one minute |
| <b>Insulation resistance</b> | 5000MΩ                           |
| <b>Contact resistance</b>    | 10mΩ max                         |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |
| <b>Salt Spray</b>            | 24 hours        |

| Mechanical Data                                                                                                            |               |              |
|----------------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| <b>Mating and unmating force</b>                                                                                           |               |              |
| Unit: kg ( lb)                                                                                                             |               |              |
| No. of Cts                                                                                                                 | Mate (max)    | Unmate (min) |
| 9 (size E)                                                                                                                 | 3.05 (6.74)   | 0.36 (0.79)  |
| 15 (size A)                                                                                                                | 5.09 (11.24)  | 0.46 (1.01)  |
| 25 (size B)                                                                                                                | 8.44 (18.66)  | 0.81 (1.8)   |
| 37 (size C)                                                                                                                | 12.51 (27.65) | 1.1 (2.47)   |
| <b>Standard plating thickness</b>                                                                                          |               |              |
| <ul style="list-style-type: none"> <li>• gold flash</li> <li>• 0.4µm (15µ") gold</li> <li>• 0.76 µm (30µ") gold</li> </ul> |               |              |

DESCRIPTION

The Amphenol "SD" series features precision formed contacts and boardlocks.

This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements.

*Economical  
right angle PCB  
mount connectors*

APPLICATIONS

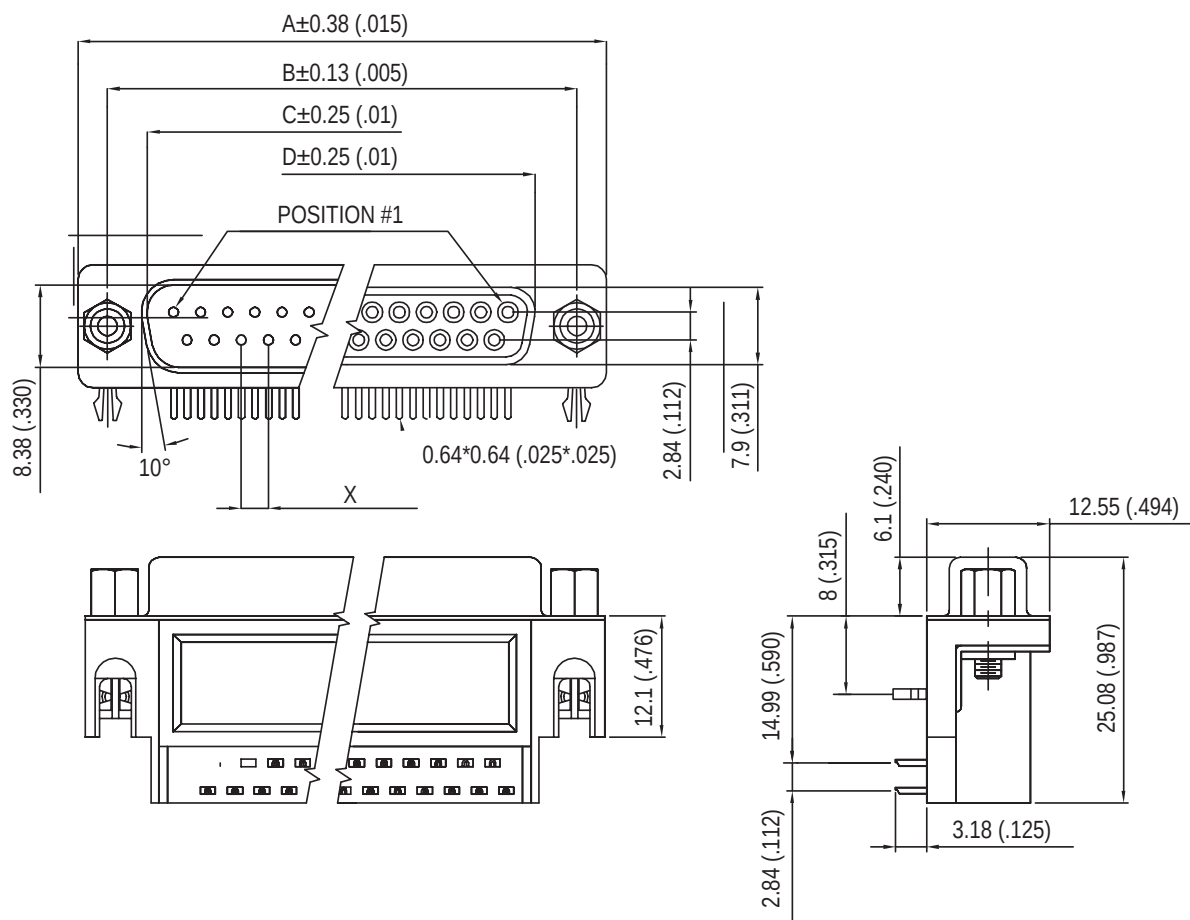
- Industrial
- Telecom
- Any industry standard I / O connections



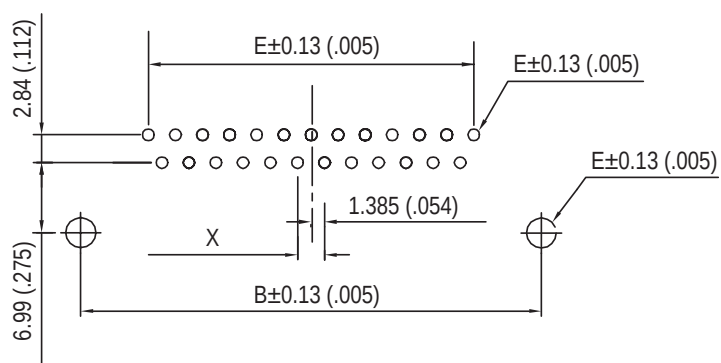
**Amphenol**

SD / E8

## Shell Size Dimensions

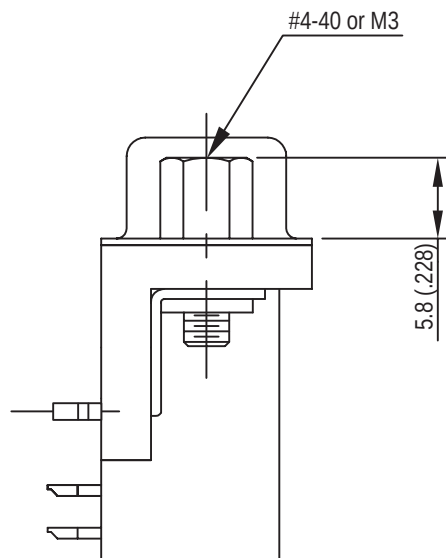


### Recommended P.C.B. Layout

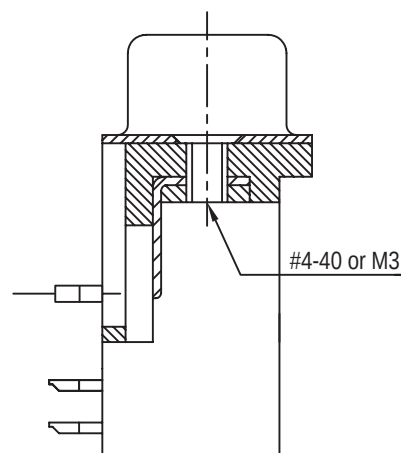


| Nb OF CONTACTS | DIMENSIONS mm (inch) |               |               |               |               |      |
|----------------|----------------------|---------------|---------------|---------------|---------------|------|
|                | A                    | B             | C             | D             | E             | X    |
| 9              | 30.84 (1.214)        | 24.99 (.984)  | 16.92 (.666)  | 16.26 (.640)  | 11.08 (.436)  | 2.74 |
| 15             | 39.24 (1.545)        | 33.32 (1.312) | 25.25 (.994)  | 24.56 (.967)  | 19.39 (.763)  | 2.74 |
| 25             | 53.04 (2.088)        | 47.04 (1.852) | 38.96 (1.534) | 38.30 (1.508) | 33.24 (1.309) | 2.77 |
| 37             | 69.34 (2.730)        | 63.50 (2.500) | 55.42 (2.182) | 54.76 (2.156) | 49.86 (1.963) | 2.77 |

## Panel mounting option



**Front Female Screwlock**  
**4F/3F**



**Threaded Rear Insert**  
**4R/3R**

## How to order

**L**   **...**   **SD**   **...**   **...**   **...**   **AB**   **CH**   **...**   **C309**

|                |                                                                          |
|----------------|--------------------------------------------------------------------------|
| RoHS Compliant |                                                                          |
| gold flash     | 77: tinned shell for receptable<br>717: tinned shell + dimples for plug  |
| 0.4μm (15μ")   | 177: tinned shell for receptable<br>777: tinned shell + dimples for plug |

shell size: E, A, B, C

configuration: 09, 15, 25, 37

contact type:  
P = pin  
S = socket

plating option:  
valid only for 0.76μm (30μ")  
part numbers to be written as follow:  
77SD.....C309  
or  
717SD.....C309

mounting options:  
4F = front screwlock 4-40  
3F = front screwlock M3  
4R = rear insert 4-40  
3R = rear insert M3

PCB locking type:  
grounding tabs + boardlocks

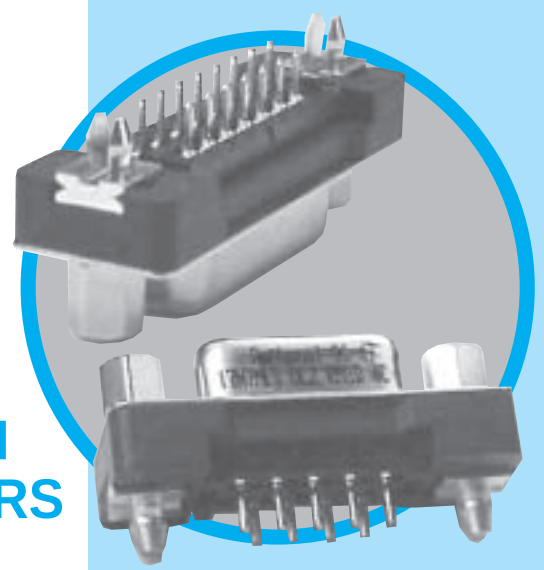
footprint: 14.99 mm (.590")

*For special request, please consult factory*

# TS

D-Sub connectors - Stamped and Formed Contacts

## STRAIGHT PCB TERMINATION ONE METAL SHELL CONNECTORS



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308

| Materials and Platings |                                           |
|------------------------|-------------------------------------------|
| <b>Shells</b>          | Steel, tin over nickel plating            |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V-0      |
| <b>Contacts</b>        | Copper alloy, with selective gold plating |
| <b>Boardlock</b>       | Brass with nickel plating                 |
| <b>Screwlock</b>       | Brass with nickel plating                 |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 5A                               |
| <b>Voltage rating</b>        | 600V AC/rms 50Hz                 |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50Hz for one minute |
| <b>Insulation resistance</b> | 5000MΩ                           |
| <b>Contact resistance</b>    | 10mΩ max                         |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |

| Mechanical Data                                                                                                      |               |              |
|----------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| <b>Mating and unmating force</b>                                                                                     |               |              |
| Unit: kg ( lb)                                                                                                       |               |              |
| No. of Cts                                                                                                           | Mate (max)    | Unmate (min) |
| 9                                                                                                                    | 3.05 (6.74)   | 0.36 (0.79)  |
| 15                                                                                                                   | 5.09 (11.24)  | 0.46 (1.01)  |
| 25                                                                                                                   | 8.44 (18.66)  | 0.81 (1.8)   |
| 37                                                                                                                   | 12.51 (27.65) | 1.1 (2.47)   |
| <b>Standard plating thicknesses</b>                                                                                  |               |              |
| <ul style="list-style-type: none"> <li>gold flash</li> <li>0.4μm (15μ") gold</li> <li>0.76 μm (30μ") gold</li> </ul> |               |              |

### DESCRIPTION

The one shell D-sub Amphenol series features, stamped and formed contacts.

This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements

*Economical  
straight PCB,  
one shell  
connectors*

### APPLICATIONS

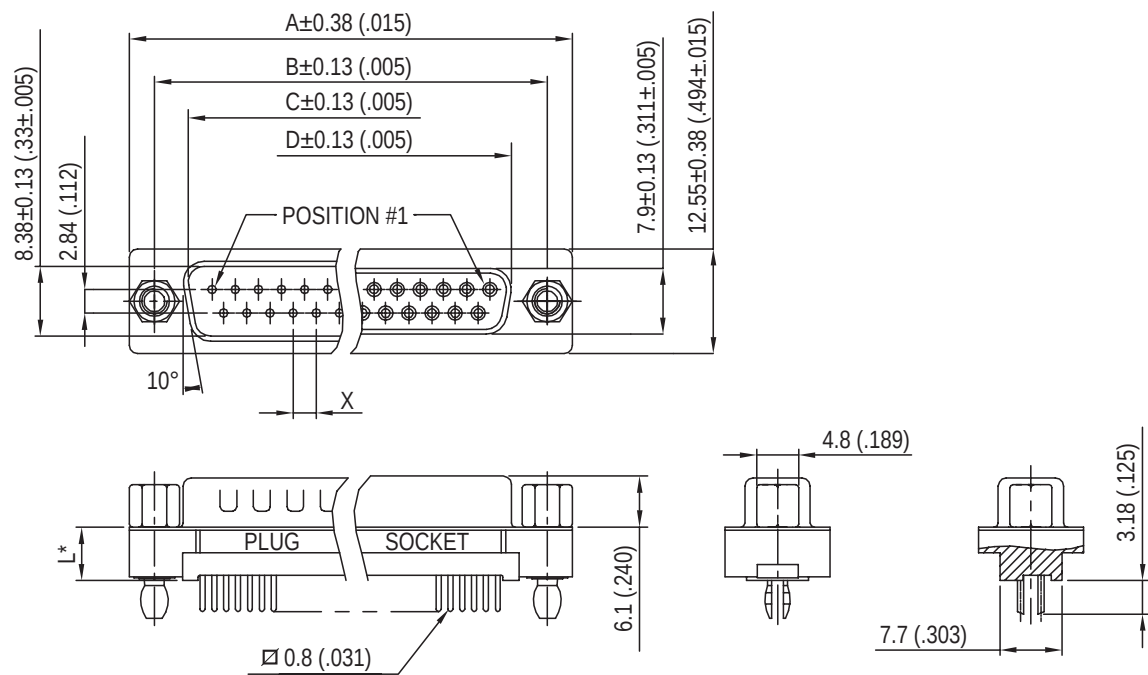
- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

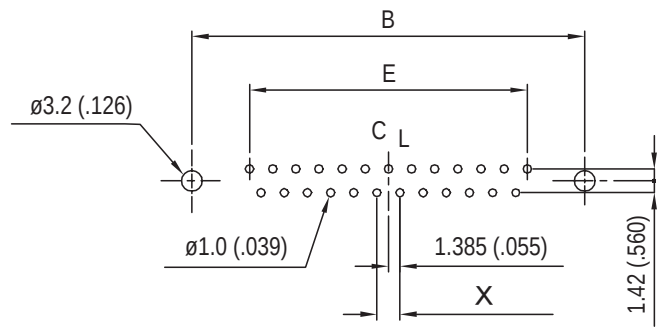
TS / E10

Shell Size Dimensions



\*see chart "how to order"

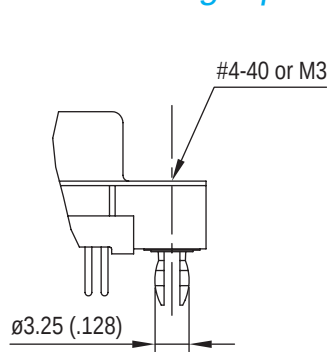
RECOMMENDED P.C.B. LAYOUT



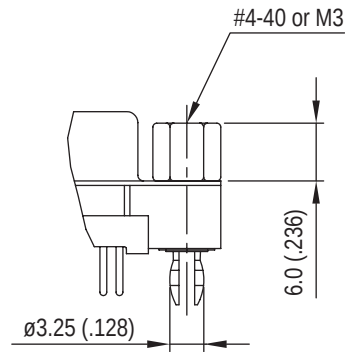
| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |      |
|----------------|----------------------|--------------|--------------|--------------|--------------|------|
|                | A                    | B            | C            | D            | E            | X    |
| 9              | 30.84 (1.21)         | 24.99 (.984) | 16.92 (.666) | 16.26 (.640) | 11.08 (.436) | 2.74 |
| 15             | 39.24 (1.54)         | 33.32 (1.31) | 25.25 (.994) | 24.56 (.967) | 19.39 (.763) | 2.74 |
| 25             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.30 (1.51) | 33.24 (1.31) | 2.77 |
| 37             | 69.34 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 49.86 (1.96) | 2.77 |



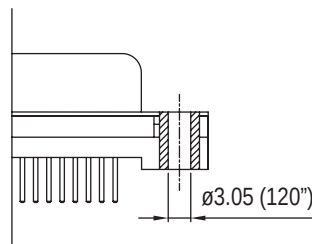
# Panel mounting option



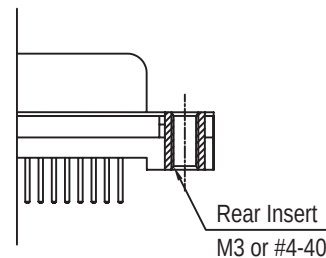
Boardlock with Threaded Insert  
**RM5**



Boardlock with Front Screwlock  
**RM8**



Clear Hole



Rear Insert Threaded

## How to order

**L** ... **TS** ... ... **C309**

|                                                                                                                                                                                 |                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| RoHS Compliant                                                                                                                                                                  |                                                                          |
| gold flash                                                                                                                                                                      | 77: tinned shell for receptable<br>717: tinned shell + dimples for plug  |
| 0.4µm (15µ")                                                                                                                                                                    | 177: tinned shell for receptable<br>777: tinned shell + dimples for plug |
| shell size: E, A, B, C                                                                                                                                                          |                                                                          |
| <b>mounting options:</b><br><b>Blank</b> = Clear Hole<br><b>G</b> = M3<br><b>H</b> = 4.40<br><b>H,G</b> must also be used to specify the threading of RM5 or RM8 grounding tabs |                                                                          |
| configuration: 09, 15, 25, 37                                                                                                                                                   |                                                                          |

**plating option:**  
valid only for 0.76µm (30µ")  
part numbers to be written as follow:  
77.....C309  
or  
717.....C309

**board mounting options:**  
**Blank** = Clear Hole  
**RM5** = retention clip  
**RM8** = retention clip + front screwlock

**termination:**  
**OL2** : L = 6.02mm (.237")  
**OL2C** : L = 11.48mm (.452")

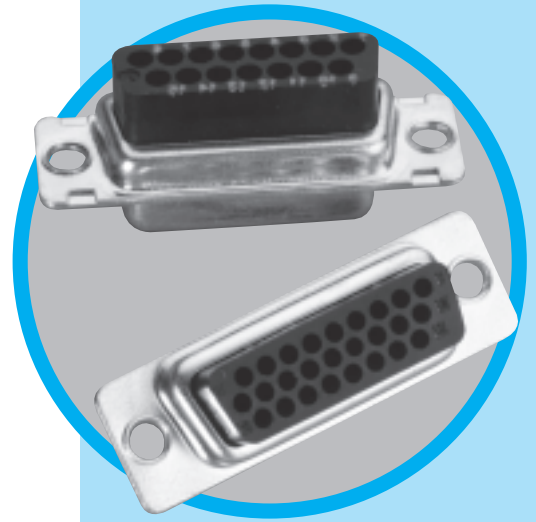
**contact type:**  
**P** = pin  
**S** = socket

For special request, please consult factory

# RR-HR

D-Sub connectors - Stamped and Formed Contacts

## REAR RELEASE CRIMP CONNECTORS



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308

| Materials and Platings     |                                                                                |                   |
|----------------------------|--------------------------------------------------------------------------------|-------------------|
| <b>Shells</b>              | Tinned steel with or without dimples on plug connector                         |                   |
| <b>Insulator Boardlock</b> | Black glass-filled thermoplastic, UL 94V-0                                     |                   |
|                            | Brass, 3µm to 5µm (118µ" to 197µ") tin over nickel 2µm to 3µm (78µ" to 118µ")  |                   |
| <b>Screwlock</b>           | Brass, 6µm to 10µm (236µ" to 394µ") tin over nickel 2µm to 3µm (78µ" to 118µ") |                   |
| <b>Contacts</b>            | <b>Under plating</b>                                                           | <b>Crimp side</b> |
| 0.2µm (8µ") gold           | 2µm (78µ") nickel                                                              | gold flash or tin |
| 0.5µm (20µ") gold          | 2µm (78µ") nickel                                                              | gold flash or tin |
| 0.76µm (30µ") gold         | 2µm (78µ") nickel                                                              | gold flash or tin |

| Electrical Data              |                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------|
| <b>Current rating</b>        | 5A                                                                                     |
| <b>Voltage rating</b>        | 500V AC/rms 50Hz                                                                       |
| <b>Withstanding voltage</b>  | <b>RR:</b> 1000V AC/rms 50Hz for 1 minute<br><b>HR:</b> 1000V AC/rms 60Hz for 1 minute |
| <b>Insulation resistance</b> | <b>RR:</b> 5000MΩ<br><b>HR:</b> 1000MΩ                                                 |
| <b>Contact resistance</b>    | 10mΩ max                                                                               |
| <b>Wire size</b>             | 20-28 AWG max insulation<br>Ø1.27mm (.05")                                             |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |

| Mechanical Data                  |             |               |               |              |             |
|----------------------------------|-------------|---------------|---------------|--------------|-------------|
| <b>Mating and unmating force</b> |             |               |               |              |             |
| Unit: kg ( lb)                   |             |               |               |              |             |
| No. of Cts                       |             | Mate (max)    |               | Unmate (min) |             |
| RR                               | HR          | RR            | HR            | RR           | HR          |
| 9 (size E)                       | 15 (size E) | 3.05 (6.74)   | 3.81 (8.42)   | 0.36 (0.79)  | 0.52 (1.14) |
| 15 (size A)                      | 26 (size A) | 5.09 (11.24)  | 5.95 (13.16)  | 0.46 (1.01)  | 1.05 (2.32) |
| 25 (size B)                      | 44 (size B) | 8.44 (18.66)  | 9.26 (20.46)  | 0.81 (1.8)   | 1.37 (3.02) |
| 37 (size C)                      | 62 (size C) | 12.51 (27.65) | 13.48 (29.78) | 1.1 (2.47)   | 1.76 (3.88) |
| 50 (size D)                      | 78 (size D) | 14.65 (32.38) | 15.82 (34.96) | 1.6 (3.56)   | 2.02 (4.46) |

### DESCRIPTION

Designed for high volume production, Amphenol's rear release crimp connector and contacts provide significant cost saving.

- EMI / RFI shell configuration.
- Removable, reusable contacts.
- Automatic and manual tooling available.

*Simplify  
your cable  
assemblies*

### APPLICATIONS

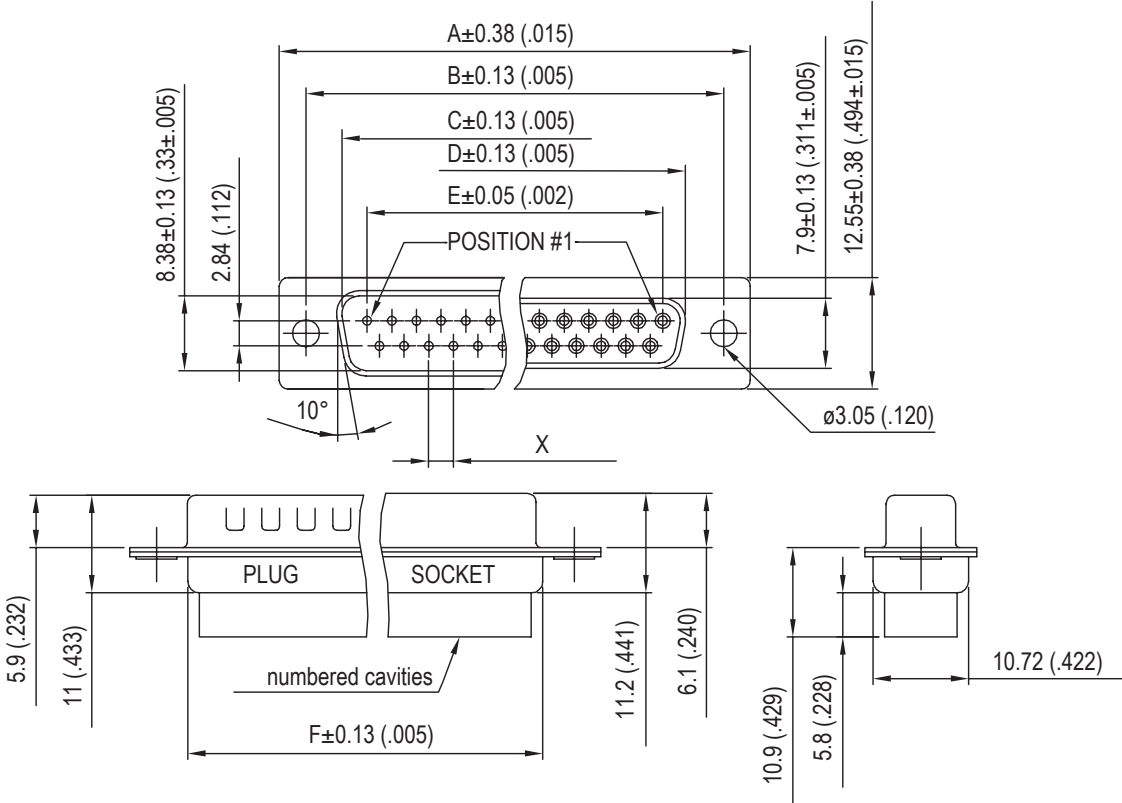
- Commercial
- Industrial
- Telecom
- Any industry standard I / O connections



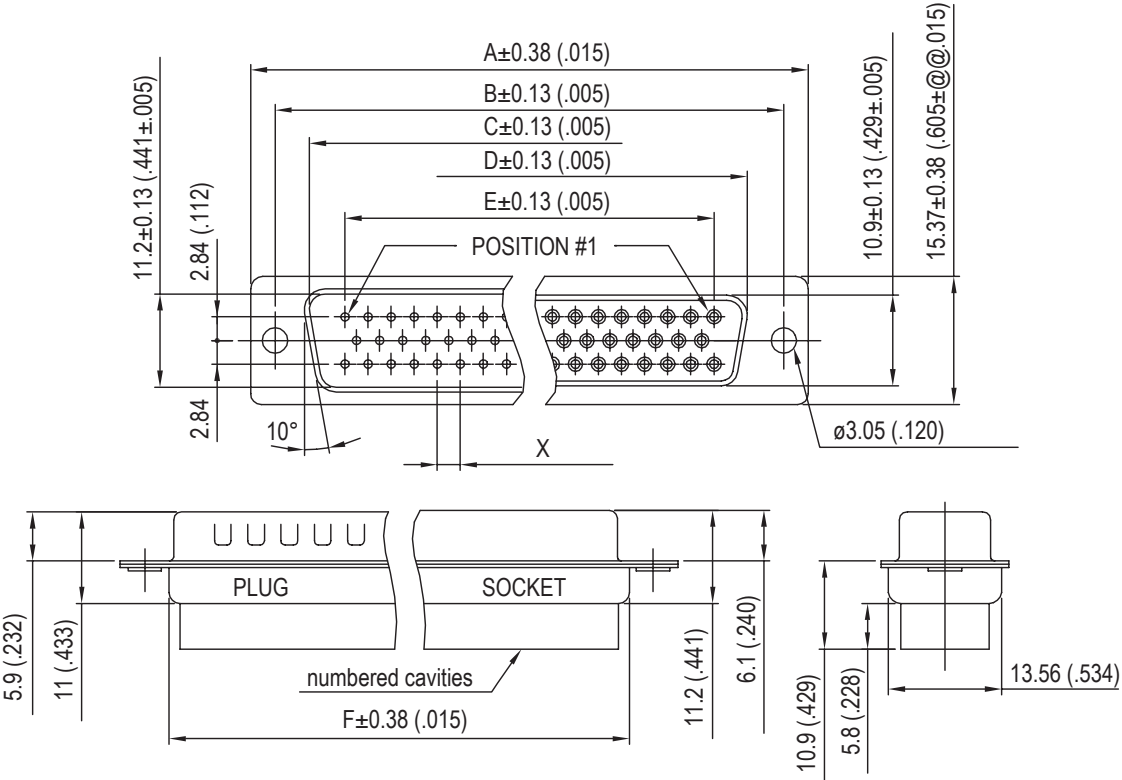
**Amphenol**

RR-HR / E11

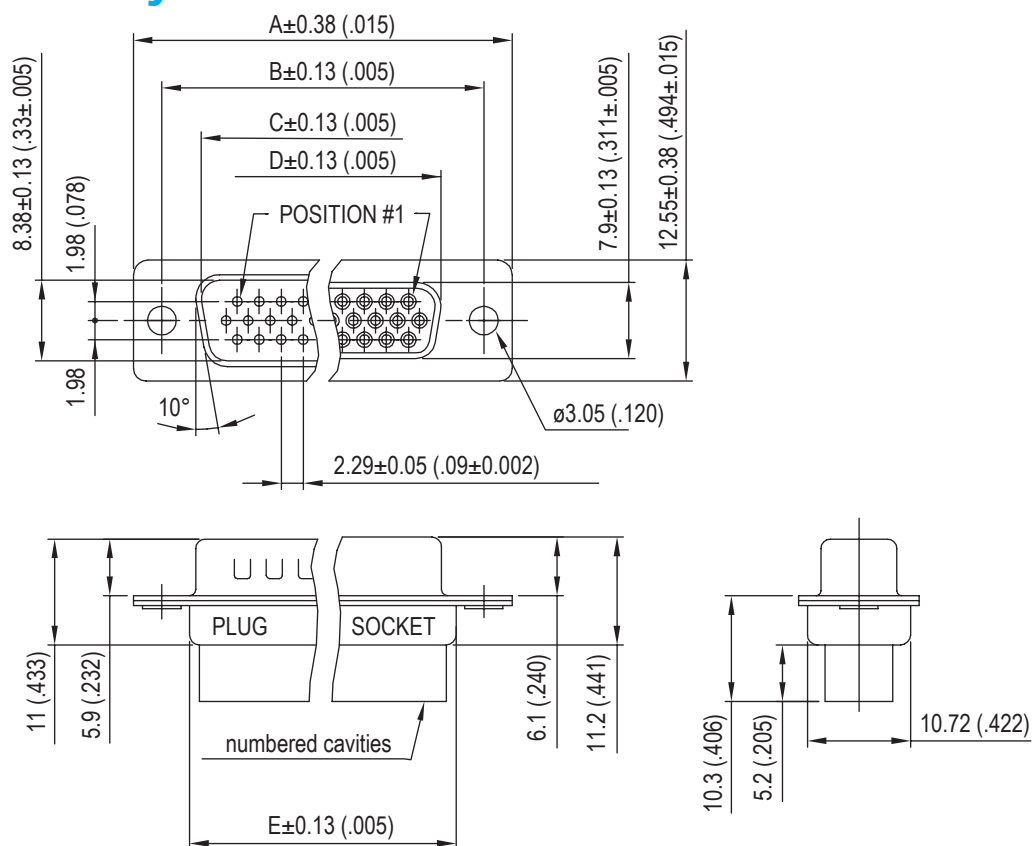
Standard density RR



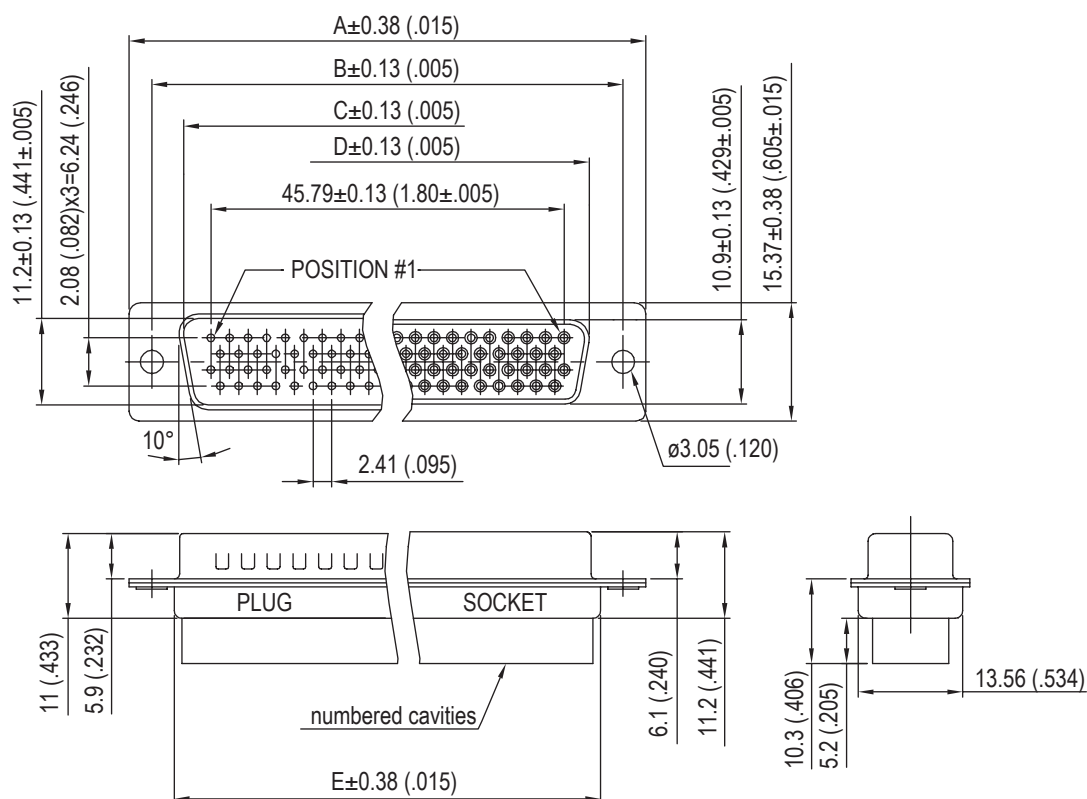
| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |              |      |
|----------------|----------------------|--------------|--------------|--------------|--------------|--------------|------|
|                | A                    | B            | C            | D            | E            | F            | X    |
| 9              | 30.84 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 11.09 (.44)  | 19.28 (.76)  | 2.74 |
| 15             | 39.24 (1.54)         | 33.32 (1.31) | 24.7 (.972)  | 24.56 (.97)  | 19.39 (.76)  | 27.51 (1.08) | 2.74 |
| 25             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 33.24 (1.31) | 41.30 (1.63) | 2.77 |
| 37             | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 49.86 (1.96) | 57.71 (2.27) | 2.77 |
| 50             | 67 (2.64)            | 61.11 (2.41) | 52.86 (2.08) | 52.34 (2.06) | 44.32 (1.75) | 55.3 (2.18)  | 2.77 |



## High density HR

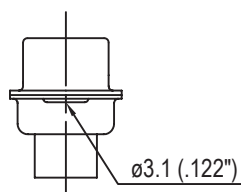


| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |
|----------------|----------------------|--------------|--------------|--------------|--------------|
|                | A                    | B            | C            | D            | E            |
| 15             | 30.84 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 19.28 (.76)  |
| 26             | 39.24 (1.54)         | 33.32 (1.31) | 24.7 (.972)  | 24.56 (.97)  | 27.51 (1.08) |
| 44             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 41.30 (1.63) |
| 62             | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 57.71 (2.27) |
| 78             | 67 (2.64)            | 61.11 (2.41) | 52.86 (2.08) | 52.34 (2.06) | 55.3 (2.18)  |

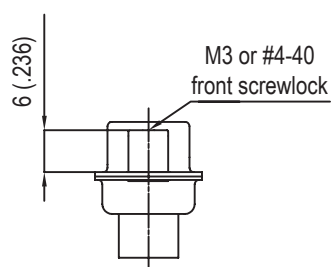


## Panel mounting option

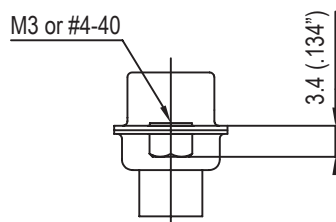
### Standard density:



**Standard rivet ø 3.1mm**  
**no digit**

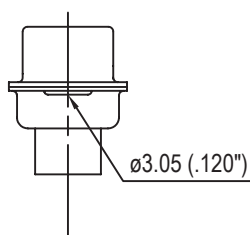


**Fixed front female screwlock**  
**VF / VFM**

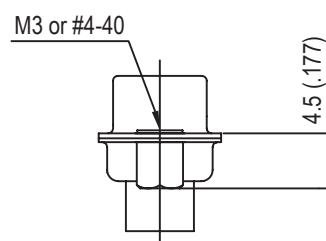


**Threaded rear insert**  
**H / G**

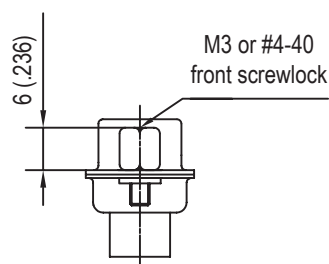
### High density:



**Standard rivet ø3.05mm**  
**no digit**



**Threaded rear insert**  
**H / G**

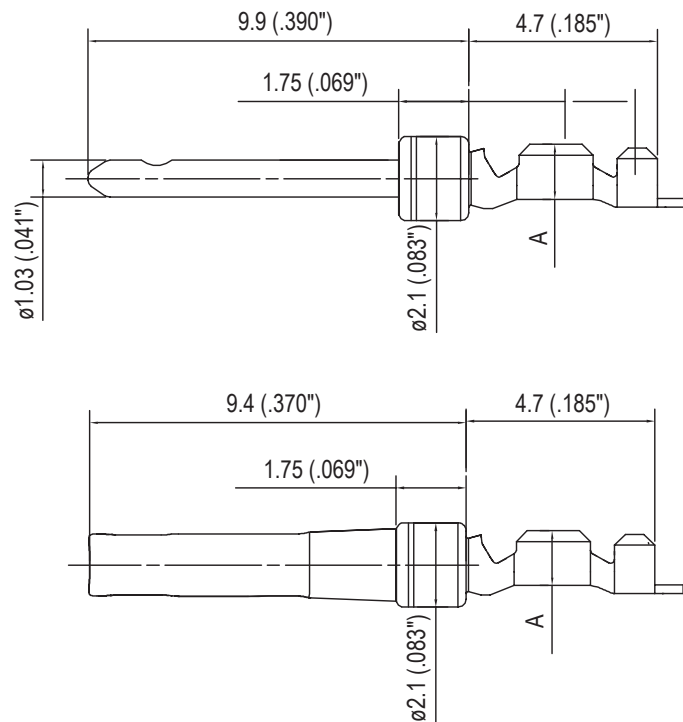
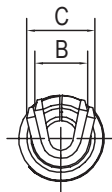


**Fixed front female screwlock**  
**VF / VFM**



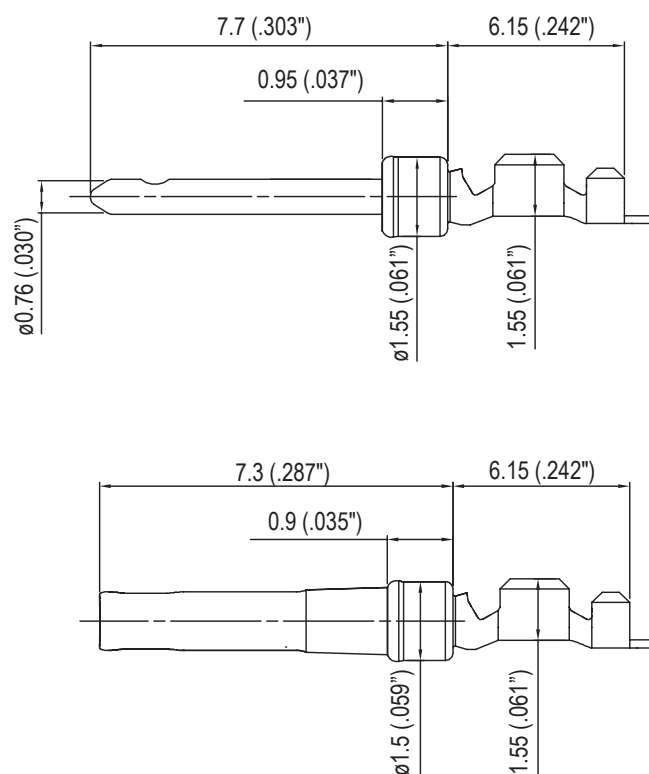
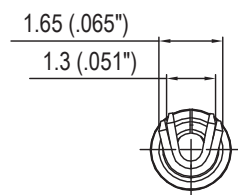
## Contacts

### Standard density:



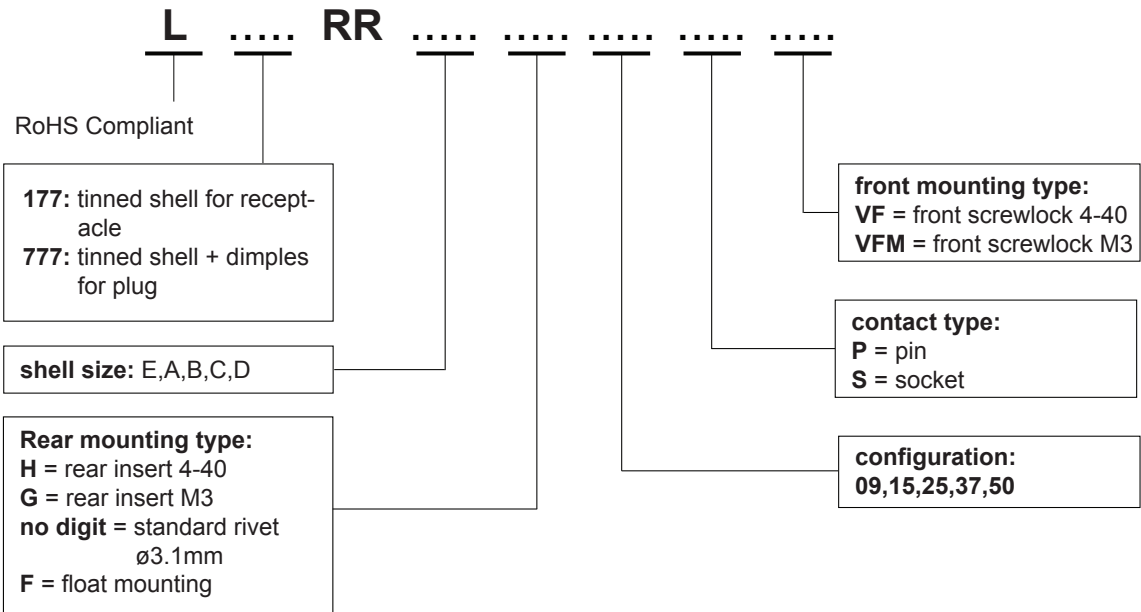
| AWG   | A           | B           | C           |
|-------|-------------|-------------|-------------|
| 20-24 | 1.8 (.071") | 1.9 (.075") | 2.5 (.098") |
| 24-28 | 1.4 (.055") | 1.5 (.059") | 1.7 (.066") |

### High density:

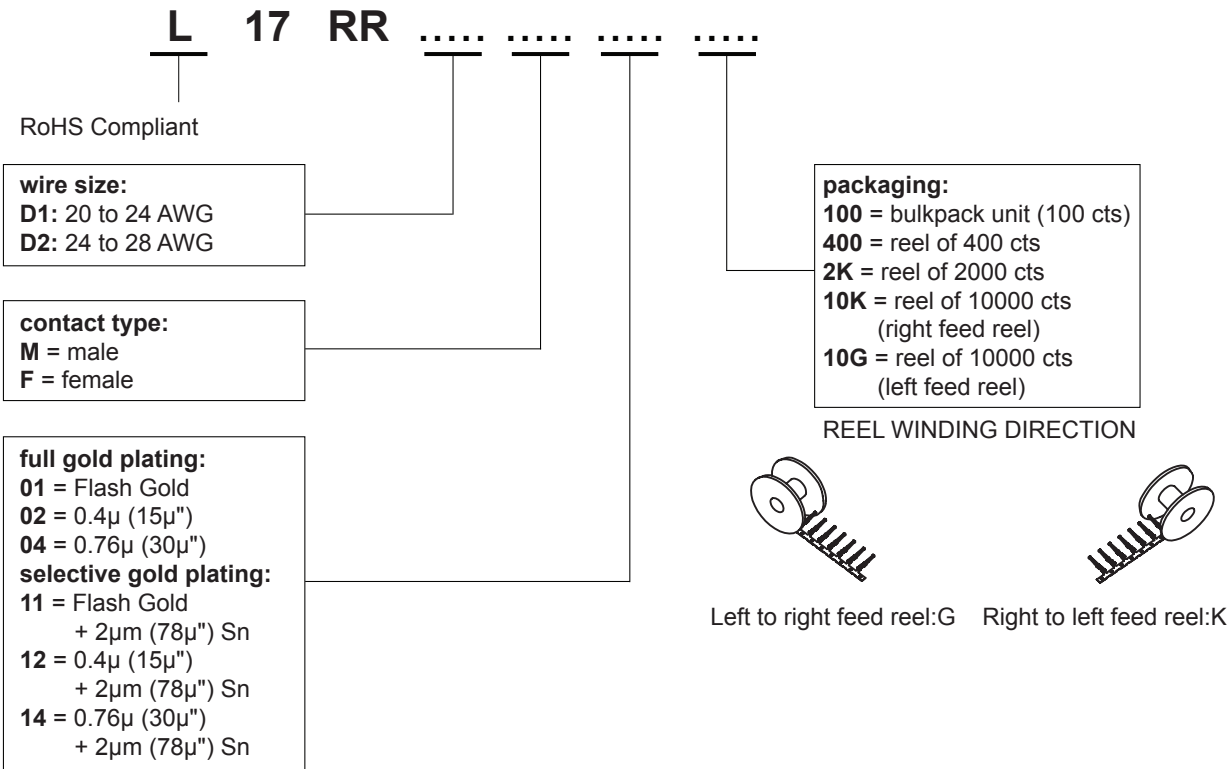


# How to order RR (standard density)

## Housings



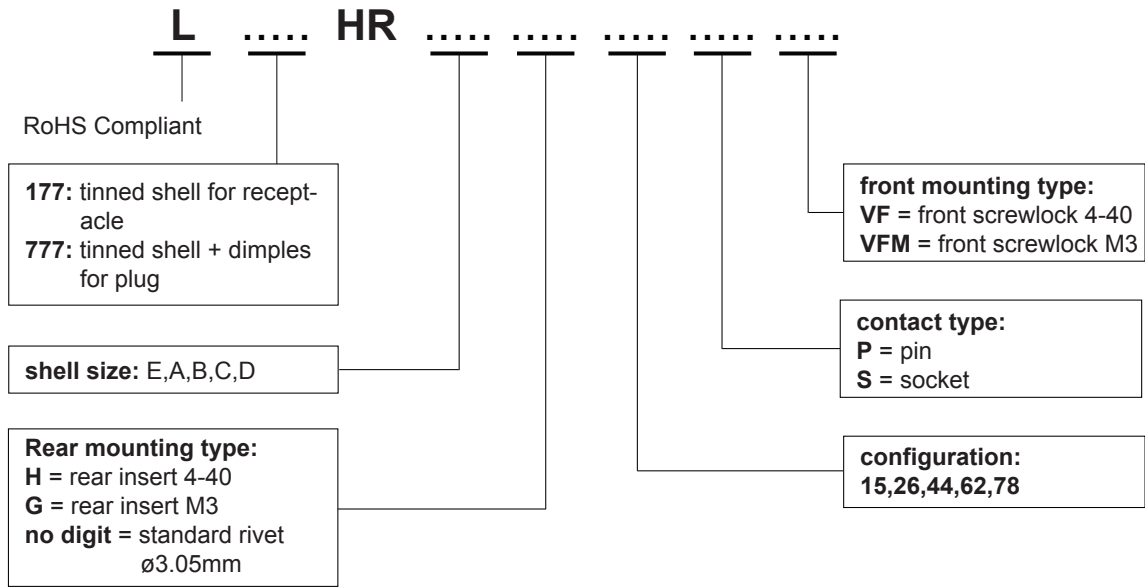
## Contacts



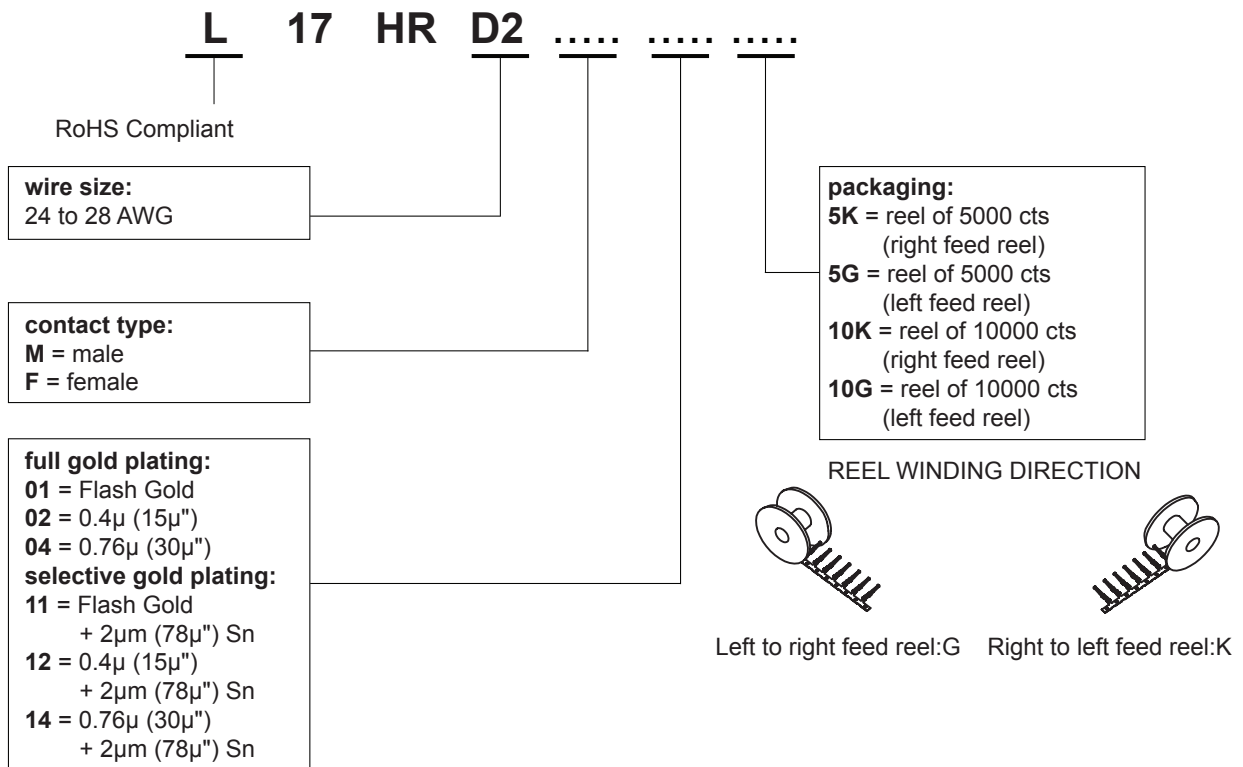
For special request, please consult factory

## How to order HR (high density)

### Housings



### Contacts



*For special request, please consult factory*

## Tooling for crimp contacts

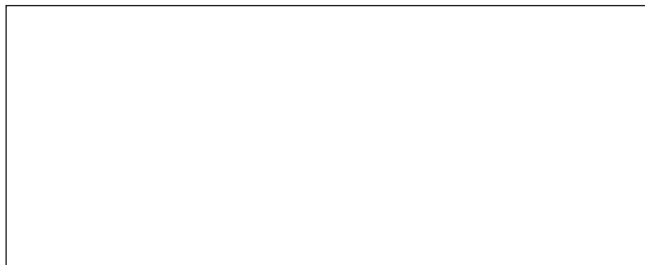
### For standard density crimp contacts: 17RR series

- |                                                               |             |
|---------------------------------------------------------------|-------------|
| • contact insertion and removal tool                          | 17D 438 SP  |
| • hand crimp tool for single contacts AWG 20 to 28            | 17D 440 SP  |
| • hand crimp tool for reels of 400 contacts                   | FA 0000 762 |
| crimp dies: AWG 20 to 24                                      | FA 0000 104 |
| crimp dies: AWG 24 to 28                                      | FA 0000 102 |
| • stripping box                                               | FE 0400     |
| • automatic crimp machine for reels of 2000 to 10000 contacts | 970 MC      |
| crimp dies: AWG 20 to 24                                      | 968 MC      |
| crimp dies: AWG 24 to 28                                      | 972 MC      |

### For high density crimp contacts: 17HR series

- |                                                               |        |
|---------------------------------------------------------------|--------|
| • automatic crimp machine for reels of 2000 to 10000 contacts | 970 MC |
| crimp dies: AWG 24 to 28                                      | 973 MC |

Do not hesitate to contact us for further information



# Amphenol

## Amphenol IT & Communication Products

Block A3/A4, The 4th Industrial District of  
Industrial Headquarters, Dong Keng Road  
Gong Ming Town, Shen Zhen China  
Fax: +86(0)755 2754 9955

### Technical Support

Tel: +86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>

# DFR

D-Sub connectors - Stamped and Formed Contacts

## FLAT RIBBON D-SUB CONNECTORS



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308

| Materials and Platings |                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel with nickel plating                                                                                                          |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V-0                                                                                               |
| <b>Pin contacts</b>    | Brass, selected gold in mating area;<br>2.54µm (100µ") min. tin<br>on termination area over<br>1.27µm (50µ") min. nickel           |
| <b>Socket contact</b>  | Phosphor bronze, selected gold in<br>mating area; 2.54µm (100µ") min. tin<br>on termination area over 1.27µm<br>(50µ") min. nickel |
| <b>Rear insert</b>     | Brass, 2.54µm (100µ") min. nickel plated                                                                                           |
| <b>Screwlock</b>       | Brass, 2.54µm (100µ") min. nickel plated                                                                                           |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 5A                               |
| <b>Voltage rating</b>        | 250V AC/rms 60Hz                 |
| <b>Withstanding voltage</b>  | 1000V AC/rms 60Hz for one minute |
| <b>Insulation resistance</b> | 1000MΩ                           |
| <b>Contact resistance</b>    | 20mΩ max                         |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -40°C to +125°C |

| Mechanical Data                        |                                                                                                                            |                               |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>Single contact insertion force</b>  | 0.54kg (1.19lb) max                                                                                                        |                               |
| <b>Single contact withdrawal force</b> | 0.06kg (0.13lb) min                                                                                                        |                               |
| <b>Mating and unmating force</b>       | Unit: kg ( lb)                                                                                                             |                               |
|                                        | No. of Cts                                                                                                                 | Mate (max)      Unmate (min)  |
|                                        | 9 (size E)                                                                                                                 | 3.05 (6.74)      0.36 (0.79)  |
|                                        | 15 (size A)                                                                                                                | 5.09 (11.24)      0.46 (1.01) |
|                                        | 25 (size B)                                                                                                                | 8.44 (18.66)      0.81 (1.8)  |
|                                        | 37 (size C)                                                                                                                | 12.51 (27.65)      1.1 (2.47) |
| <b>Standard plating thicknesses</b>    | <ul style="list-style-type: none"> <li>• gold flash</li> <li>• 0.4µm (15µ") gold</li> <li>• 0.76 µm (30µ") gold</li> </ul> |                               |

### DESCRIPTION

These connectors are suitable for compact requirement of modern peripheral equipment.

Special contact design allows usage of standard 1.27mm (.05") flat cable. Suitable with all standard D-Sub hoods.

*Simplify  
Your cable  
assemblies!*

### APPLICATIONS

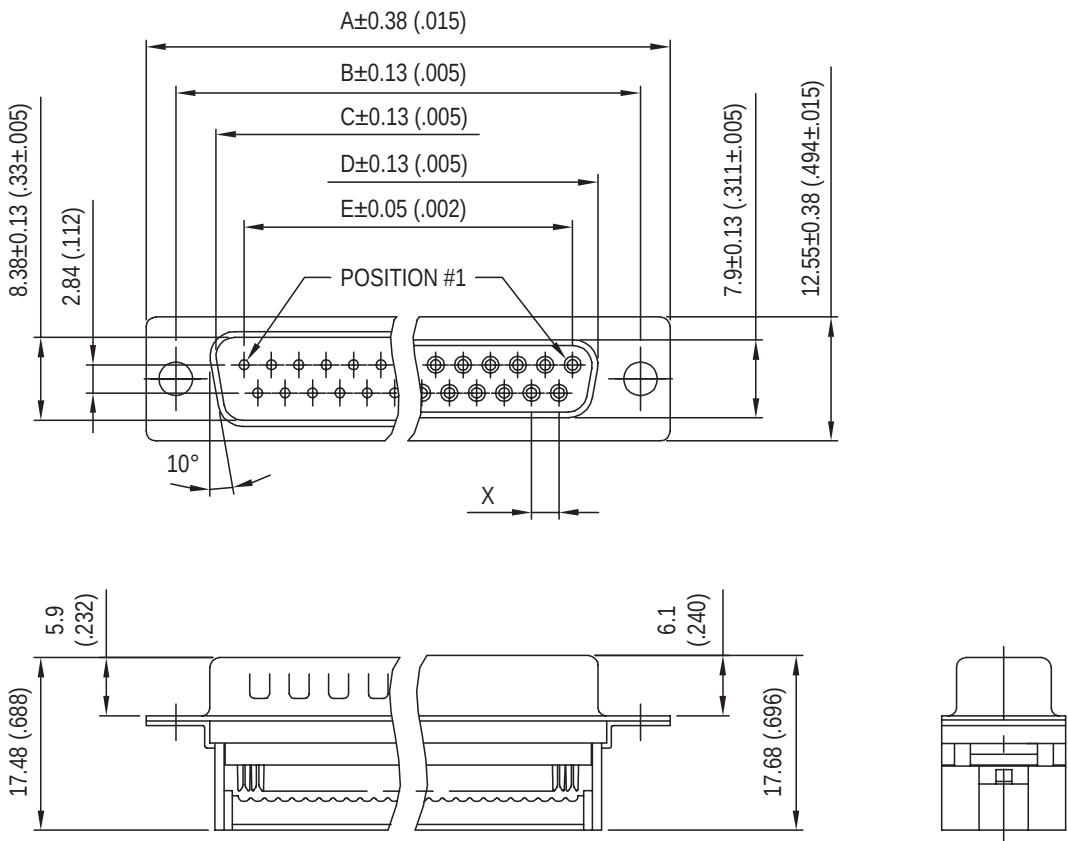
- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

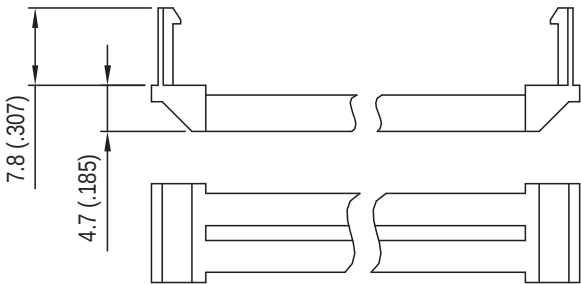
DFR / E12



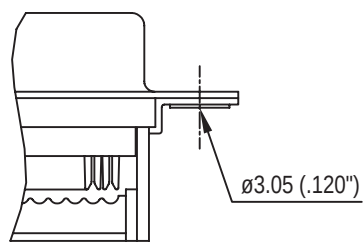


| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |      |
|----------------|----------------------|--------------|--------------|--------------|--------------|------|
|                | A                    | B            | C            | D            | E            | X    |
| 9              | 30.84 (1.21)         | 24.99 (.984) | 16.92 (.666) | 16.24 (.639) | 11.09 (.437) | 2.74 |
| 15             | 39.24 (1.54)         | 33.32 (1.31) | 24.70 (.972) | 24.56 (.967) | 19.39 (.763) | 2.74 |
| 25             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 33.24 (1.31) | 2.77 |
| 37             | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 49.86 (1.96) | 2.77 |

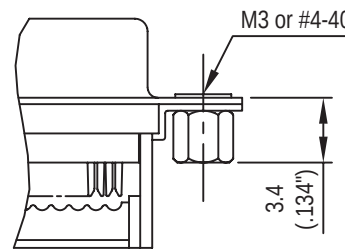
STRAIN RELIEF



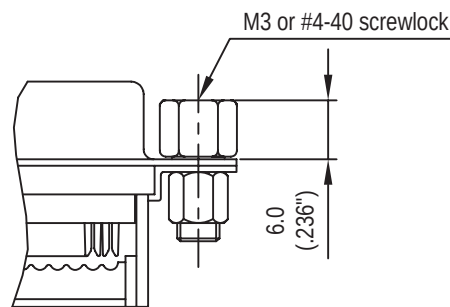
## Panel mounting option



Standard rivet  $\varnothing 3.05\text{mm}$   
no digit

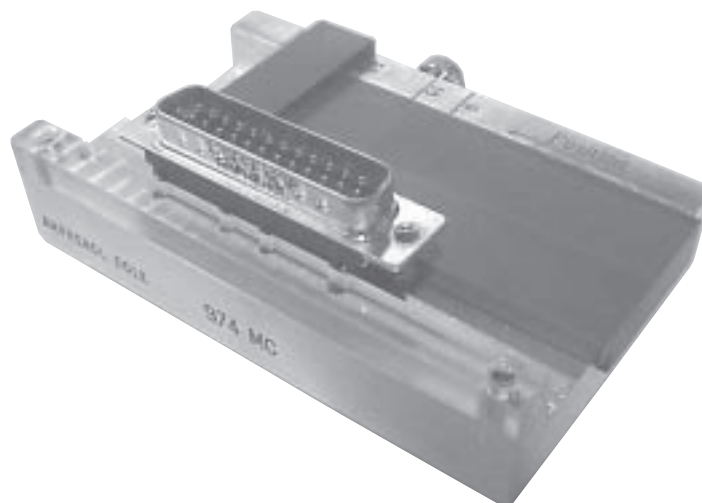


Threaded rear insert  
B / D



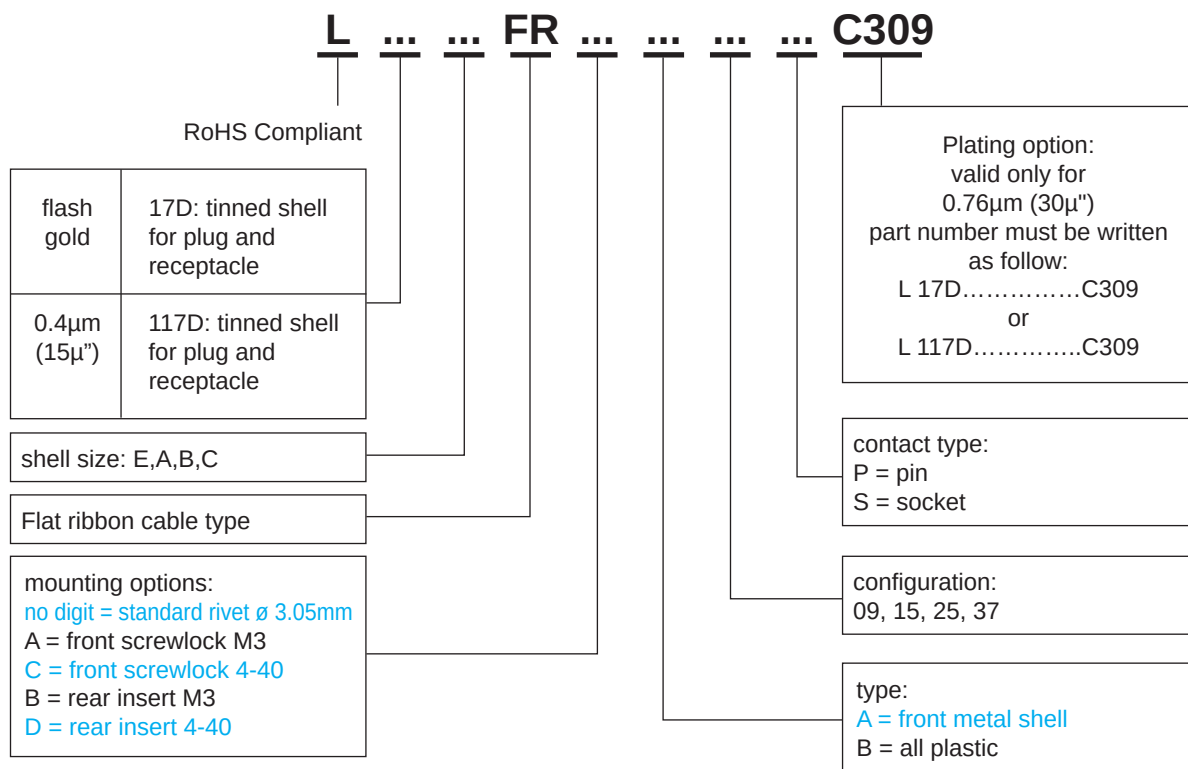
Front female screwlock  
A / C

## Tool



Support for hand termination tool:  
974MC

## How to order



■ : Standard options

*For special request, please consult factory*

Do not hesitate to contact us for further information

# Amphenol

## Amphenol IT & Communication Products

Block A3/A4, The 4th Industrial District of  
 Industrial Headquarters, Dong Keng Road  
 Gong Ming Town, Shen Zhen China  
 Fax: +86(0)755 2754 9955

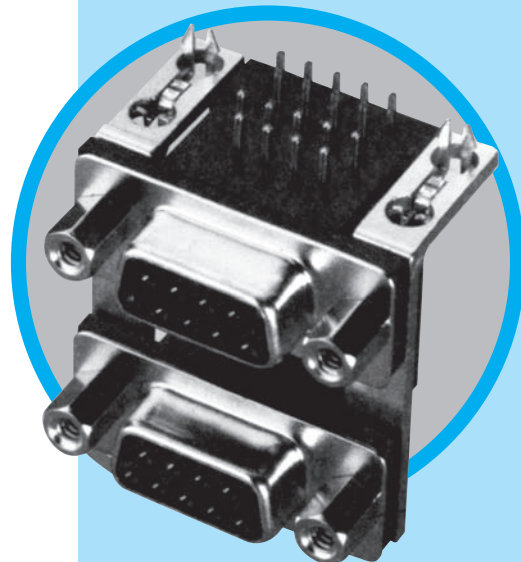
### Technical Support

Tel: +86(0)755 2717 7945  
 Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>

# 17H

D-Sub connectors - Stamped and Formed Contacts

## DUAL PORT D-SUB CONNECTORS



### MAIN CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308

| Materials and platings |                                                                                                                           |
|------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Shells                 | Steel, tin plated                                                                                                         |
| Insulator              | Glass-filled thermoplastic, UL 94V-0                                                                                      |
| Pin contacts           | Brass, selected gold in mating area; 2.54µm (100µ") min. tin on termination area over 1.27µm (50µ") min. nickel           |
| Socket contact         | Phosphor bronze, selected gold in mating area; 2.54µm (100µ") min. tin on termination area over 1.27µm (50µ") min. nickel |
| Rear insert            | Brass, 2.54µm (100µ") min. nickel plated                                                                                  |
| Boardlock              | Phosphor bronze, 2.54µm (100µ") min. tin plated                                                                           |
| Screwlock              | Brass, 2.54µm (100µ") min. nickel plated                                                                                  |

| Electrical Data       |                                  |
|-----------------------|----------------------------------|
| Current rating        | 3A                               |
| Voltage rating        | 250V AC/rms 60Hz                 |
| Withstanding voltage  | 1000V AC/rms 60Hz for one minute |
| Insulation resistance | 1000MΩ                           |
| Contact resistance    | 20mΩ max                         |

| Climatic Data         |                 |
|-----------------------|-----------------|
| Operating temperature | -55°C to +125°C |
| Salt spray            | 24 hours        |

| Mechanical Data                 |                                                              |              |
|---------------------------------|--------------------------------------------------------------|--------------|
| Single contact insertion force  | 0.54kg (1.19lb) max                                          |              |
| Single contact withdrawal force | 0.06kg (0.13lb) min                                          |              |
| Mating and unmating force       | Unit: kg ( lb)                                               |              |
| No. of Cts                      | Mate (max)                                                   | Unmate (min) |
| 9                               | 3.05 (6.74)                                                  | 0.36 (0.79)  |
| 15                              | 5.09 (11.24)                                                 | 0.46 (1.01)  |
| 25                              | 8.44 (18.66)                                                 | 0.81 (1.8)   |
| 15 (Hi-den)                     | 3.81 (8.42)                                                  | 0.52 (1.14)  |
| Standard plating thicknesses    | • gold flash<br>• 0.4µm (15µ") gold<br>• 0.76 µm (30µ") gold |              |

### DESCRIPTION

Amphenol's G17H dual port connectors are a state of the art design. The front metal shell helps reduce EMI / RFI emissions.

Designed to save PC board space, Amphenol's dual port provides two I / O connectors in a minimal amount of board space.

*Economical  
dual port  
connectors*

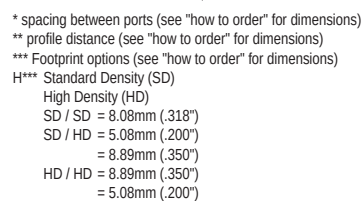
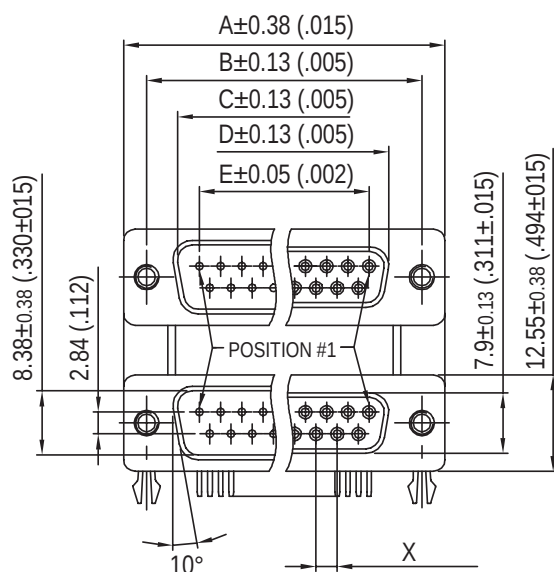
### APPLICATIONS

- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

17H / E13



Technical drawing of a boardlock assembly showing dimensions and tolerances. The drawing includes the following specifications:

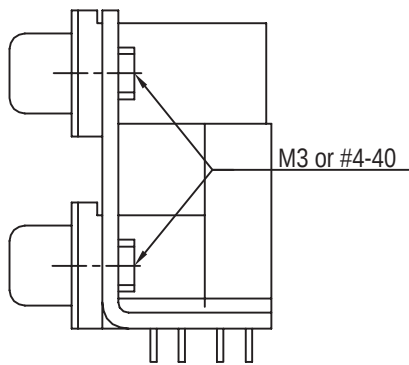
- Overall width:  $3.81 (.150)$
- Top edge thickness:  $1.27 (.050)$
- Bottom edge thickness:  $2.84 (.112)$
- Internal width:  $B \pm 0.13 (.005)$
- Internal width tolerance:  $E \pm 0.05 (.002)$
- Internal width dimension:  $X$
- Top edge diameter:  $\varnothing 3.05 (.120)$
- Bottom edge diameter:  $\varnothing 1.02 (.040)$
- Internal diameter:  $2.84 (.112)$
- Internal diameter tolerance:  $8.08 (.318)$
- Internal diameter dimension:  $8 (.315)$
- Note: "only for quad boardlock"

# Amphenol

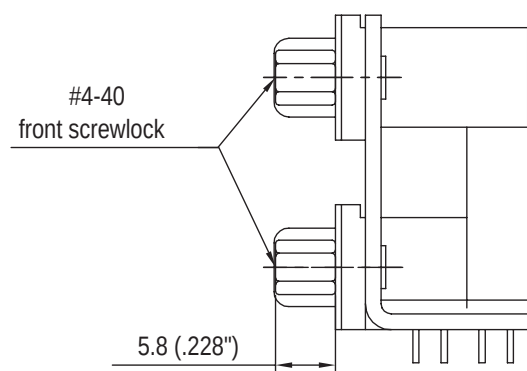


## Panel mounting option

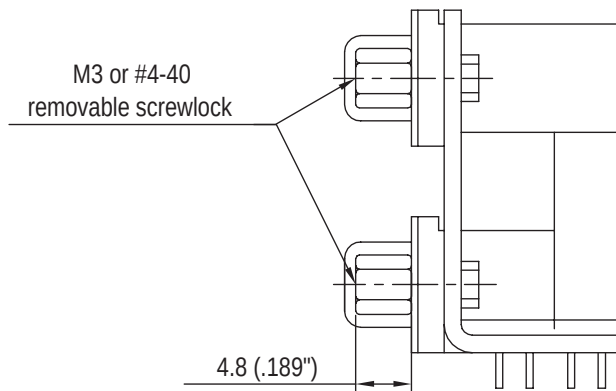
### Flange mounting options:



Threaded rear insert  
0 / 4

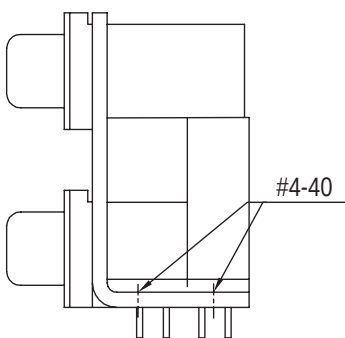


Fixed front female screwlock  
7

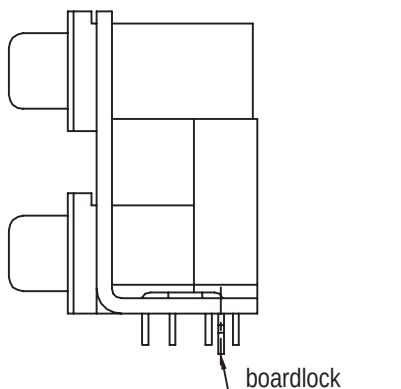


Removable female screwlock  
1 / 5

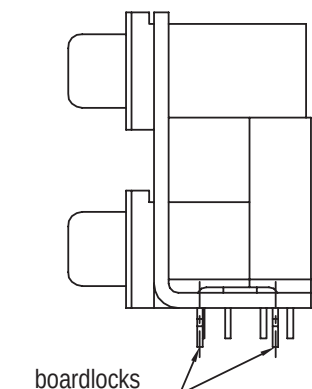
### Board mounting options:



Threaded hole  
1



Dual arrowhead boardlock  
2



Quad arrowhead boardlock  
3

## Dual Port Connectors

L17H X X X X X X X X

## Spacing Between Ports

- 1 - F = 15.88mm (.625")  
G = 28.42mm (1.12")  
2 - F = 19.05mm (.750")  
G = 31.60mm (1.24")  
3 - F = 22.86mm (.900")  
G = 35.41mm (1.39")  
4 - **SCSI**  
G = 12.80mm (.504")  
7 - F = 20.70mm (.815")  
G = 32.20mm (1.26")

## Top Connector

- 1 = 9 Pos. Male  
2 = 9 Pos. Female  
3 = 15 Pos. Male  
4 = 15 Pos. Female  
5 = 25 Pos. Male  
6 = 25 Pos. Female  
7 = 15 Pos. High Density Female  
8 = 50 Pos. Female SCSI  
9 = 26 Pos. High Density Female  
J = 15 Pos. High Density Male  
D = 37 Pos. Male  
E = 37 Pos. Female  
F = 44 Pos. High Density Male  
G = 44 Pos. High Density Female  
M = 62 Pos. High Density Male  
N = 62 Pos. High Density Female  
P = 78 Pos. High Density Male  
Q = 78 Pos. High Density Female

## Bottom Connector

- 1 = 9 Pos. Male  
2 = 9 Pos. Female  
3 = 15 Pos. Male  
4 = 15 Pos. Female  
5 = 25 Pos. Male  
6 = 25 Pos. Female  
7 = 15 Pos. High Density Female  
8 = 50 Pos. Female SCSI  
9 = 26 Pos. High Density Female  
K = 15 Pos. High Density Male  
D = 37 Pos. Male  
E = 37 Pos. Female  
F = 44 Pos. High Density Male  
G = 44 Pos. High Density Female  
M = 62 Pos. High Density Male  
N = 62 Pos. High Density Female  
P = 78 Pos. High Density Male  
Q = 78 Pos. High Density Female  
R = 9 Pos. Male + 9 Pos. Male  
S = 9 Pos. Female + 9 Pos. Female

## Footprint Options

- SD / SD**  
BLANK = 8.08mm (.318")  
**SD / HD**  
BLANK = 5.08mm (.200")  
889 = 8.89mm (.350")  
**HD / HD**  
BLANK = 8.89mm (.350")  
508 = 5.08mm (.200")

## Flange Mounting Options

- 0 = 4-40unc Rear Insert  
1 = 4-40unc Removable Screwlock  
3 = 3.05mm (.120") Clear Hole  
4 = M3 Rear Insert  
5 = M3 Removable Screwlock  
7 = 4-40unc Fixed Front Screwlock

## Board Mounting Options

- 1 = 4 \* Threaded 4-40unc Inserts  
2 = Dual Arrowhead Boardlocks  
3 = Quad Arrowhead Boardlocks  
4 = 3.18mm (.125") Clear Hole

## Shell Plating

- 1 = Bright Tin / Nickel  
2 = Nickel

## Contact Plating

- 0 = Flash Gold  
1 = 0.4μm (15μ") Gold  
2 = 0.76μm (30μ") Gold  
3 = Full Flash Gold  
4 = 1.27μm (50μ") Gold

*For special request, please consult factory*

Do not hesitate to contact us for further information

# Amphenol

## Amphenol IT & Communication Products

Block A3/A4, The 4th Industrial District of  
Industrial Headquarters, Dong Keng Road  
Gong Ming Town, Shen Zhen China  
Fax: +86(0)755 2754 9955

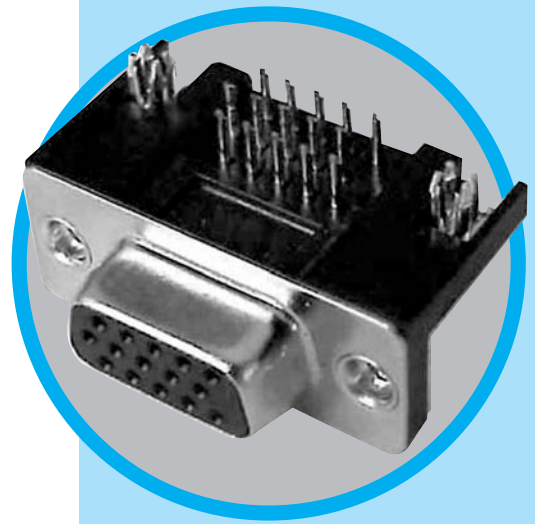
### Technical Support

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http://www.dsubconnector.com

# HT

D-Sub connectors - Stamped and Formed Contacts

## RIGHT ANGLE HIGH TEMPERATURE AND HIGH DENSITY CONNECTORS



CHARACTERISTICS

### Specifications

- Connectors according to MIL C24308

| Materials and Platings |                                      |
|------------------------|--------------------------------------|
| Shell                  | Steel, tin over nickel plating       |
| Insulator              | Glass filled thermoplastic, UL 94V-0 |
| Contacts               | Copper alloy, selective gold plating |
| Rear insert            | Brass with nickel plating            |
| Screwlock              | Brass with nickel plating            |
| Grounding clip         | Copper alloy with tin plating        |

| Electrical Data       |                                  |
|-----------------------|----------------------------------|
| Current rating        | 3A                               |
| Voltage rating        | 300V AC/rms 50Hz                 |
| Withstanding voltage  | 1000V AC/rms 50Hz for one minute |
| Insulation resistance | 5000MΩ                           |
| Contact resistance    | 10mΩ max                         |

| Climatic Data         |                                                      |
|-----------------------|------------------------------------------------------|
| Operating temperature | -55°C to +150°C, resist to short term (30s) at 260°C |

| Mechanical Data                                                                                                                                                 |               |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| <b>Mating and unmating force</b>                                                                                                                                |               |              |
| Unit: kg ( lb)                                                                                                                                                  |               |              |
| No. of Cts                                                                                                                                                      | Mate (max)    | Unmate (min) |
| 15                                                                                                                                                              | 3.81 (8.42)   | 0.52 (1.14)  |
| 26                                                                                                                                                              | 5.95 (13.16)  | 1.05 (2.32)  |
| 44                                                                                                                                                              | 9.26 (20.46)  | 1.37 (3.02)  |
| 62                                                                                                                                                              | 13.48 (29.78) | 1.76 (3.88)  |
| <b>Standard plating thicknesses</b> <ul style="list-style-type: none"> <li>• gold flash</li> <li>• 0.4 μm (15μ") gold</li> <li>• 0.76 μm (30μ") gold</li> </ul> |               |              |

DESCRIPTION

The Amphenol "HT" series allows the customers to use through hole connectors with reflow soldering process.

This series gives you Amphenol's high standards of quality and reliability to meet of your commercial requirements

*Economical  
right angle PCB,  
high temperature  
connectors*

APPLICATIONS

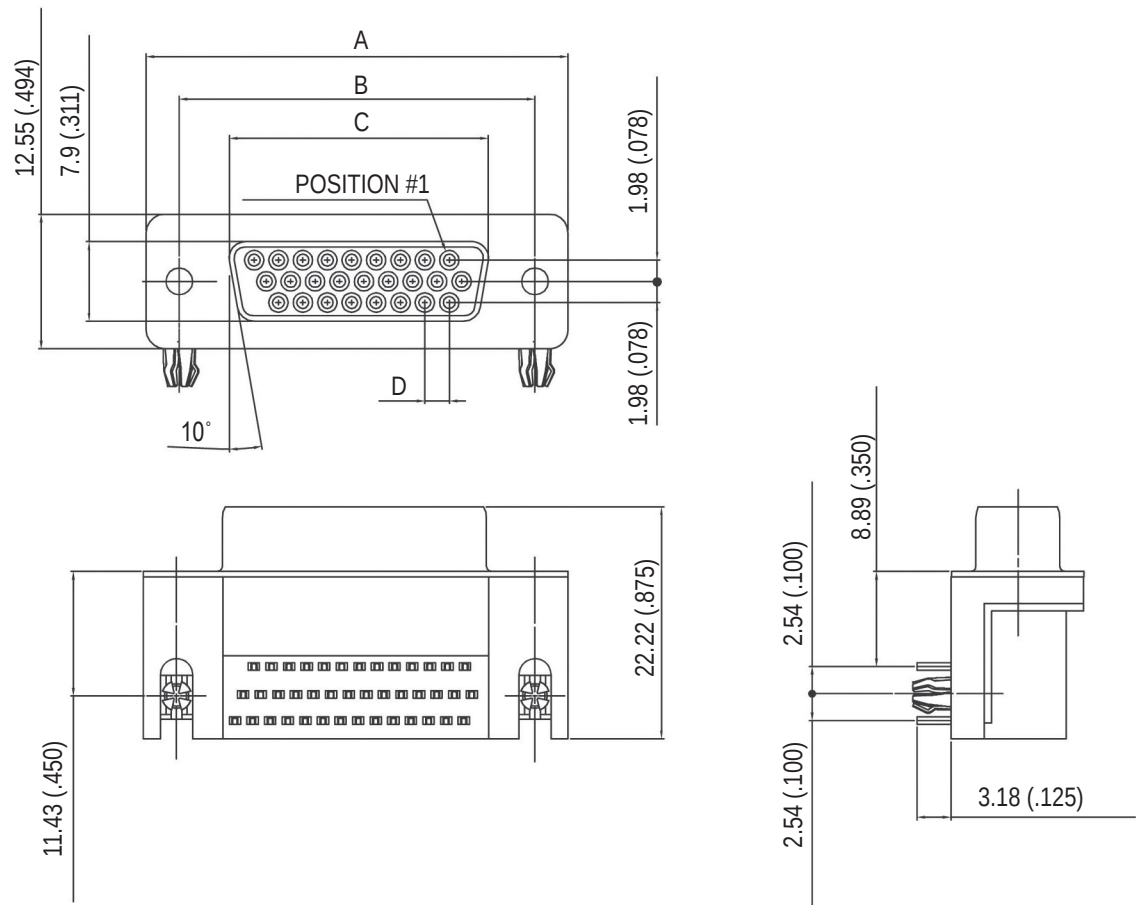
- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

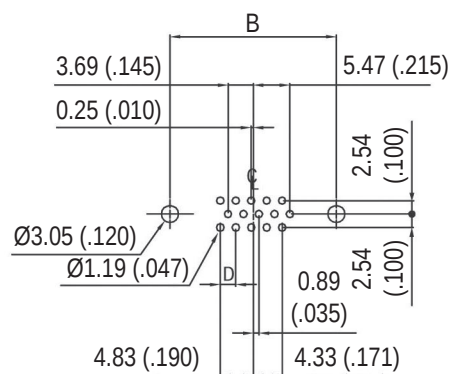
HT / E14

Shell size dimensions

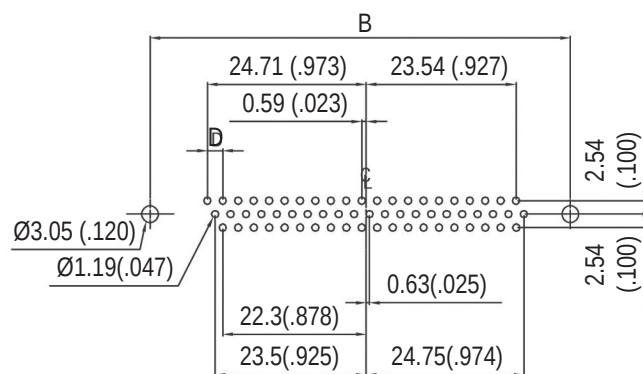


| Nb OF<br>CONTACTS | Dimensions mm (inch) |               |               |             |
|-------------------|----------------------|---------------|---------------|-------------|
|                   | A                    | B             | C             | D           |
| 15                | 30.84 (1.214)        | 24.99 (.984)  | 16.26 (.640)  | 2.29 (.090) |
| 26                | 39.24 (1.545)        | 33.32 (1.312) | 24.56 (.967)  | 2.29 (.090) |
| 44                | 53.04 (2.088)        | 47.04 (1.852) | 38.30 (1.508) | 2.29 (.090) |
| 62                | 69.34 (2.730)        | 63.50 (2.500) | 54.76 (2.156) | 2.41 (.095) |

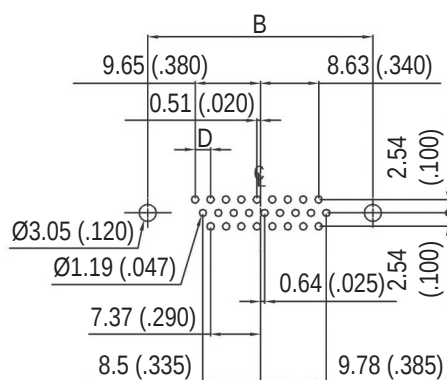
## P.C.B. Layout



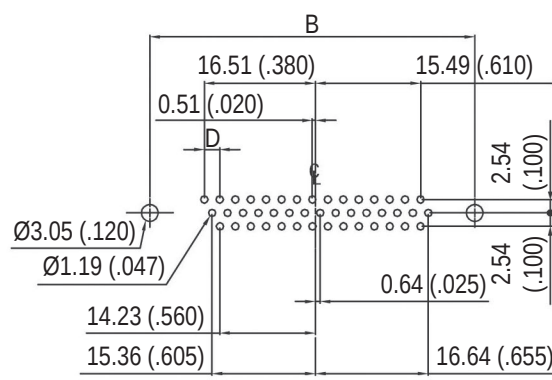
15 PIN



62 PIN

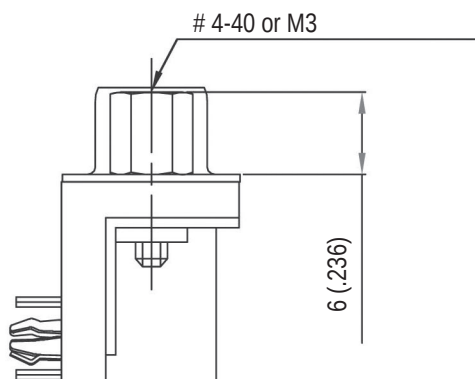


26 PIN

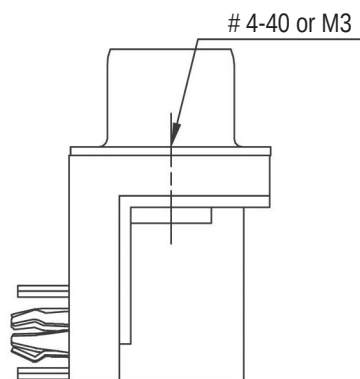


44 PIN

## Panel mounting option



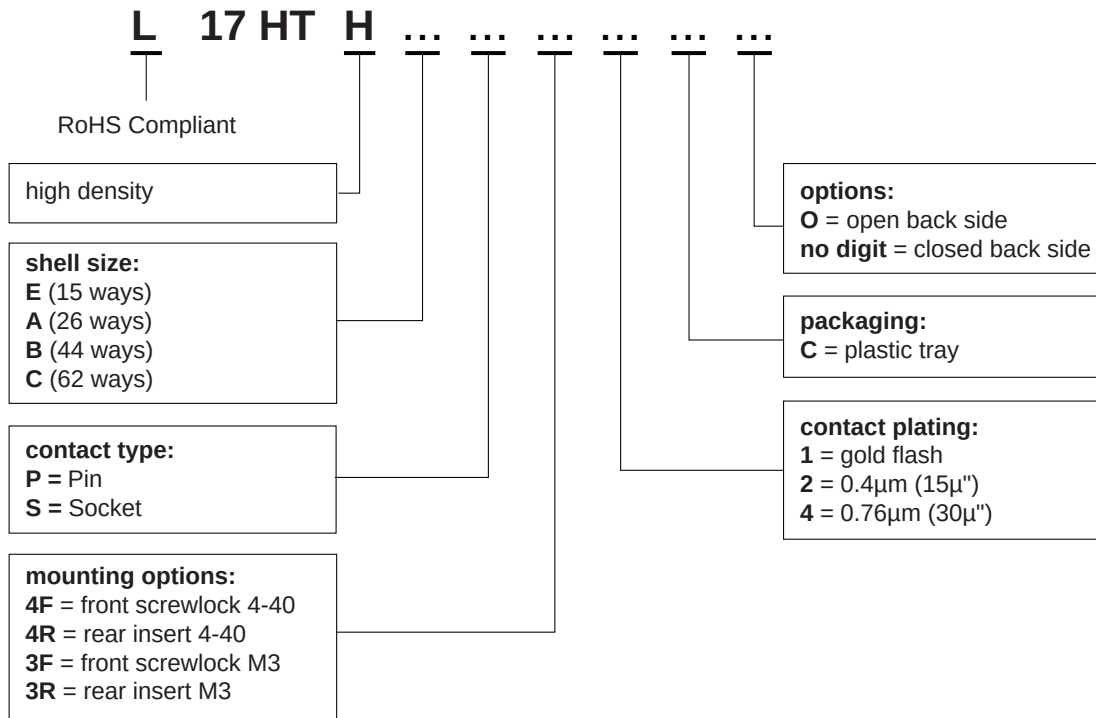
Front female screwlock  
4F/3F



Threaded rear insert  
4F/3F



## How to order



*For special request, please consult factory*

Do not hesitate to contact us for further information

# Amphenol

## Amphenol IT & Communication Products

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Industrial Headquarters, Dong Keng Road  
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Fax: +86(0)755 2754 9955

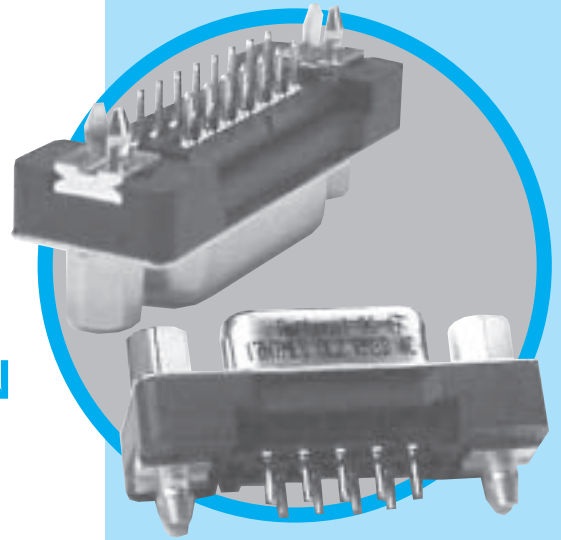
### Technical Support

Tel: +86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>

# HT

D-Sub connectors - Stamped and Formed Contacts

## STRAIGHT PCB TERMINATION HIGH TEMPERATURE CONNECTORS



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308

| Materials and Platings |                                      |
|------------------------|--------------------------------------|
| Shell                  | Steel, tin over nickel plating       |
| Insulator              | Glass-filled thermoplastic, UL 94V-0 |
| Contacts               | Copper alloy, selective gold plating |
| Boardlock              | Brass with nickel plating            |
| Screwlock              | Brass with nickel plating            |

| Electrical Data       |                                  |
|-----------------------|----------------------------------|
| Current rating        | 5A                               |
| Voltage rating        | 600V AC/rms 50Hz                 |
| Withstanding voltage  | 1000V AC/rms 50Hz for one minute |
| Insulation resistance | 5000MΩ                           |
| Contact resistance    | 10mΩ max                         |

| Climatic Data         |                                                      |
|-----------------------|------------------------------------------------------|
| Operating temperature | -55°C to +150°C, resist to short term (30s) at 260°C |

| Mechanical Data                     |               |              |
|-------------------------------------|---------------|--------------|
| <b>Mating and unmating force</b>    |               |              |
| Unit: kg ( lb)                      |               |              |
| No. of Cts                          | Mate (max)    | Unmate (min) |
| 9                                   | 3.05 (6.74)   | 0.36 (0.79)  |
| 15                                  | 5.09 (11.24)  | 0.46 (1.01)  |
| 25                                  | 8.44 (18.66)  | 0.81 (1.8)   |
| 37                                  | 12.51 (27.65) | 1.1 (2.47)   |
| <b>Standard plating thicknesses</b> |               |              |
| • gold flash                        |               |              |
| • 0.76 μm (30μ") gold               |               |              |

### DESCRIPTION

The Amphenol "HT" series allows the customers to use through hole connectors with reflow soldering process.

This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements

*Economical  
straight PCB,  
high temperature  
connectors*

### APPLICATIONS

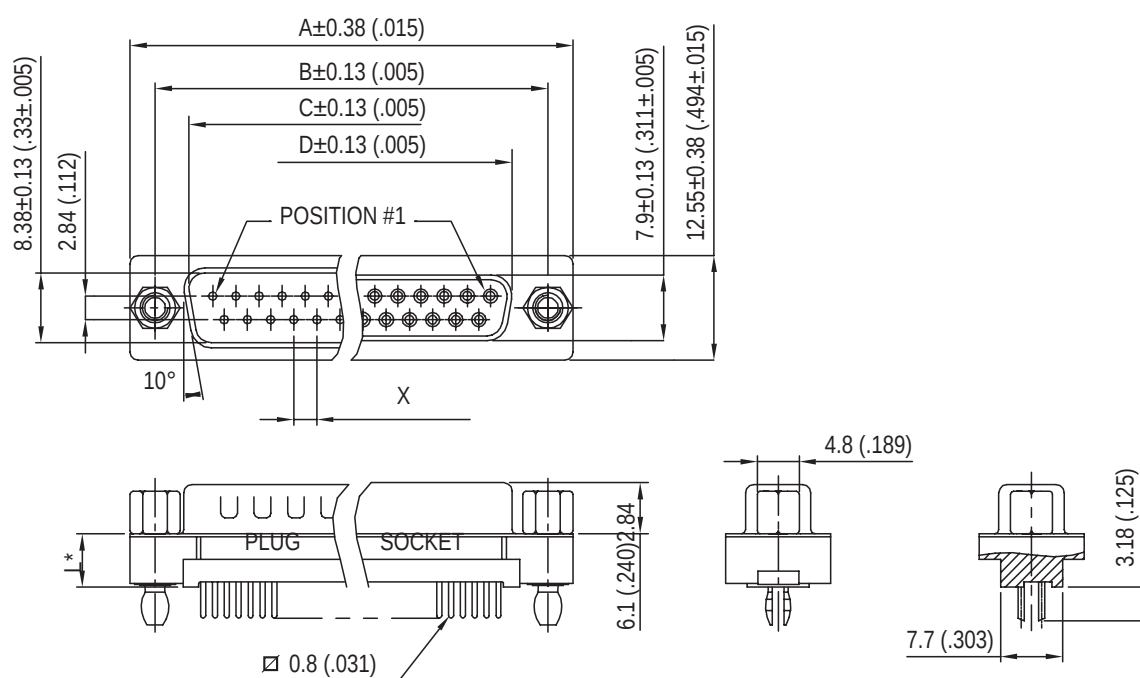
- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

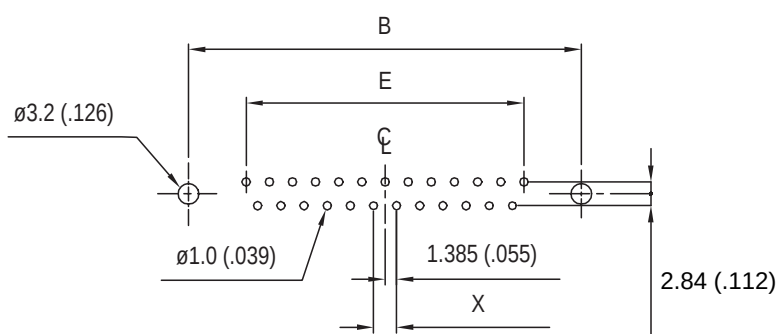
HT / E15

## Shell size dimensions



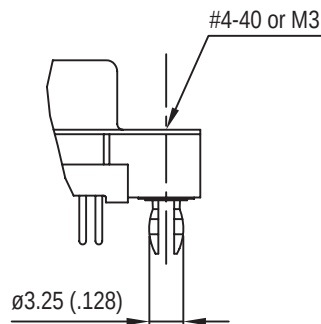
\*see chart "how to order"

### Recommended P.C.B. Layout

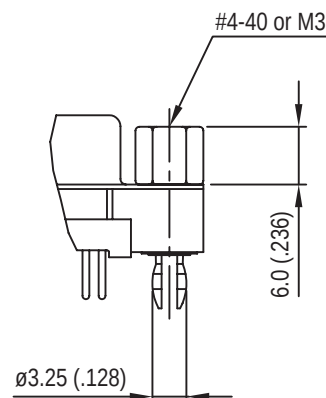


| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |      |
|----------------|----------------------|--------------|--------------|--------------|--------------|------|
|                | A                    | B            | C            | D            | E            | X    |
| 9              | 30.84 (1.21)         | 24.99 (.984) | 16.92 (.666) | 16.26 (.640) | 11.08 (.436) | 2.74 |
| 15             | 39.24 (1.54)         | 33.32 (1.31) | 25.25 (.994) | 24.56 (.967) | 19.39 (.763) | 2.74 |
| 25             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 33.24 (1.31) | 2.77 |
| 37             | 69.34 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 49.86 (1.96) | 2.77 |

# Panel mounting option

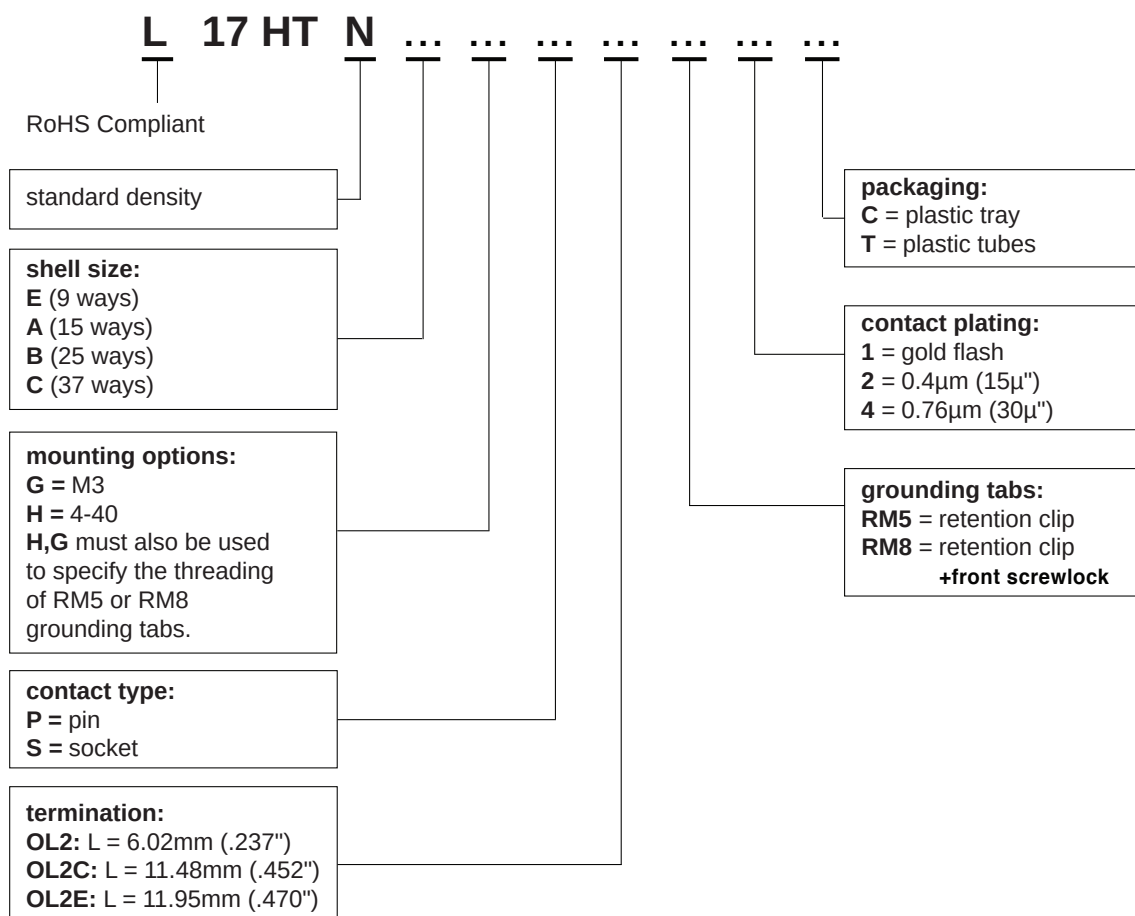


Standoff boardlock  
RM5



Standoff boardlock  
RM8

## How to order

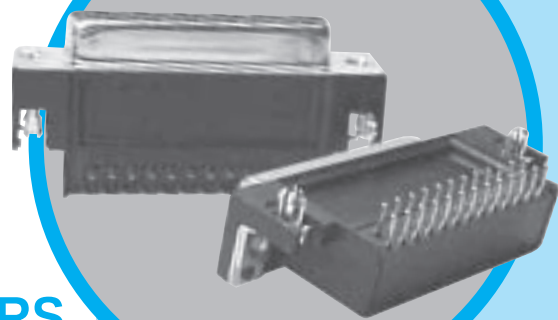


For special request, please consult factory

# HT

D-Sub connectors - Stamped and Formed Contacts

## RIGHT ANGLE HIGH TEMPERATURE CONNECTORS FOOTPRINT 14.99mm (.590")



CHARACTERISTICS

### Specifications

- Connectors according to MIL C24308

| Materials and Platings |                                      |
|------------------------|--------------------------------------|
| <b>Shells</b>          | Steel, tin over nickel plating       |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V-0 |
| <b>Contacts</b>        | Copper alloy, selective gold plating |
| <b>Rear insert</b>     | Brass with nickel plating            |
| <b>Screwlock</b>       | Brass with nickel plating            |
| <b>Grounding clip</b>  | Copper alloy with tin plating        |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 5A                               |
| <b>Voltage rating</b>        | 600V AC/rms 50Hz                 |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50Hz for one minute |
| <b>Insulation resistance</b> | 5000MΩ                           |
| <b>Contact resistance</b>    | 10mΩ max                         |

| Climatic Data                |                                                      |
|------------------------------|------------------------------------------------------|
| <b>Operating temperature</b> | -55°C to +150°C, resist to short term (30s) at 260°C |

| Mechanical Data                                                                                                                                                 |               |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| <b>Mating and unmating force</b>                                                                                                                                |               |              |
| Unit: kg ( lb)                                                                                                                                                  |               |              |
| No. of Cts                                                                                                                                                      | Mate (max)    | Unmate (min) |
| 9                                                                                                                                                               | 3.05 (6.74)   | 0.36 (0.79)  |
| 15                                                                                                                                                              | 5.09 (11.24)  | 0.46 (1.01)  |
| 25                                                                                                                                                              | 8.44 (18.66)  | 0.81 (1.8)   |
| 37                                                                                                                                                              | 12.51 (27.65) | 1.1 (2.47)   |
| <b>Standard plating thicknesses</b> <ul style="list-style-type: none"> <li>• gold flash</li> <li>• 0.4 μm (15μ") gold</li> <li>• 0.76 μm (30μ") gold</li> </ul> |               |              |

DESCRIPTION

The Amphenol "HT" series allows the customers to use through hole connectors with reflow soldering process.

This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements

*Economical  
right angle PCB,  
high temperature  
connectors*

APPLICATIONS

- Industrial
- Telecom
- Any industry standard I / O connections

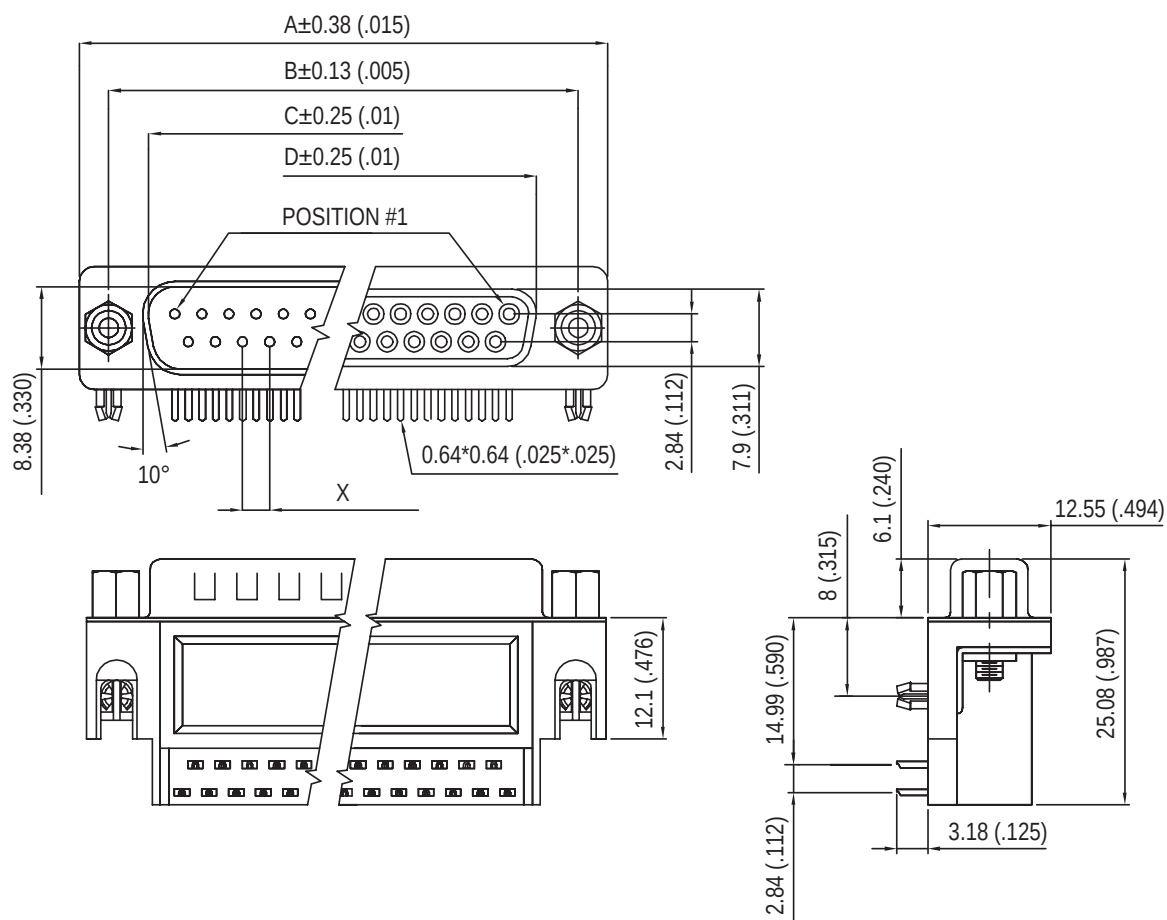


**Amphenol**

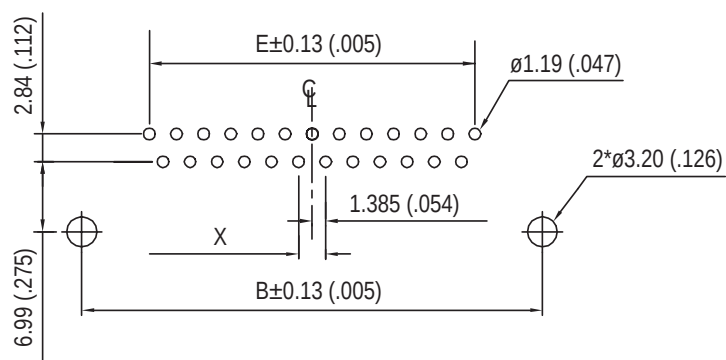
HT / E16



## Shell size dimensions

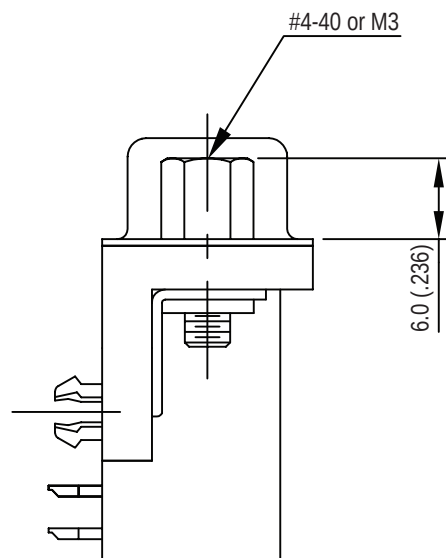


### Recommended P.C.B. Layout

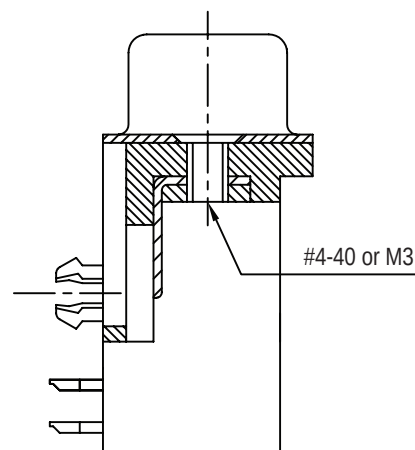


| Nb OF CONTACTS | DIMENSIONS mm (inch) |               |               |               |               |      |
|----------------|----------------------|---------------|---------------|---------------|---------------|------|
|                | A                    | B             | C             | D             | E             | X    |
| 9              | 30.84 (1.214)        | 24.99 (.984)  | 16.92 (.666)  | 16.26 (.640)  | 11.08 (.436)  | 2.74 |
| 15             | 39.24 (1.545)        | 33.32 (1.312) | 25.25 (.994)  | 24.56 (.967)  | 19.39 (.763)  | 2.74 |
| 25             | 53.04 (2.088)        | 47.04 (1.852) | 38.96 (1.534) | 38.30 (1.508) | 33.24 (1.309) | 2.77 |
| 37             | 69.34 (2.730)        | 63.50 (2.500) | 55.42 (2.182) | 54.76 (2.156) | 49.86 (1.963) | 2.77 |

# Panel mounting option

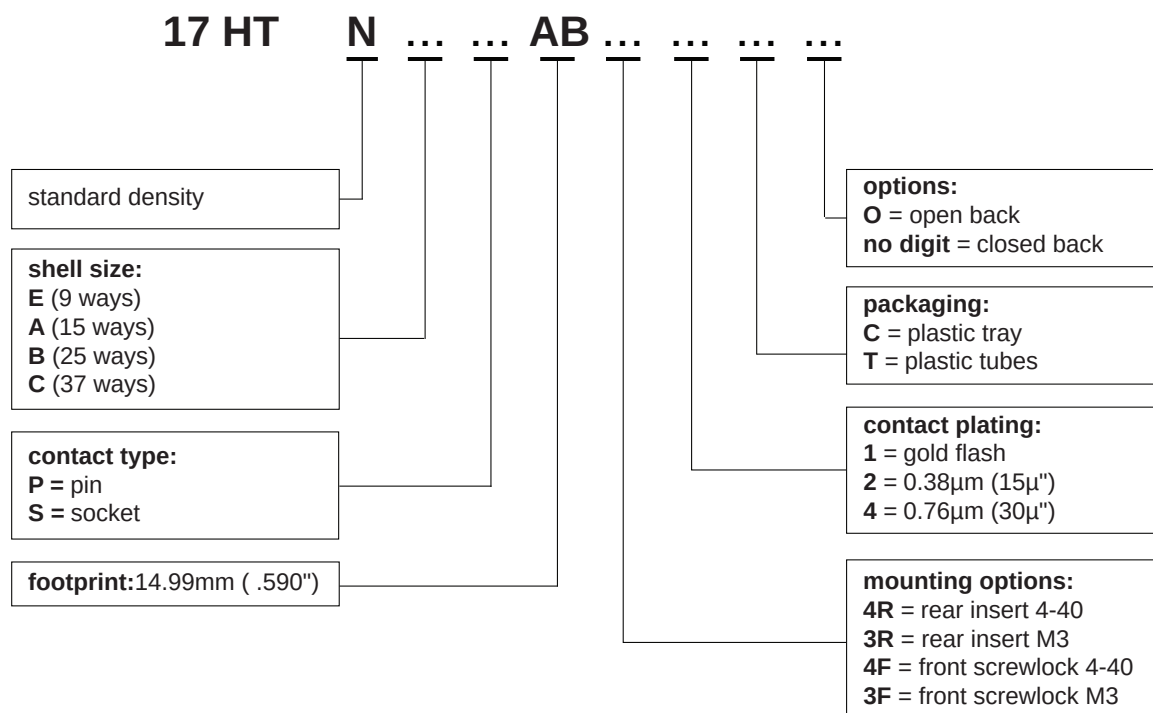


Front female screwlock  
4F/3F



Threaded rear insert  
4R/3R

# How to order

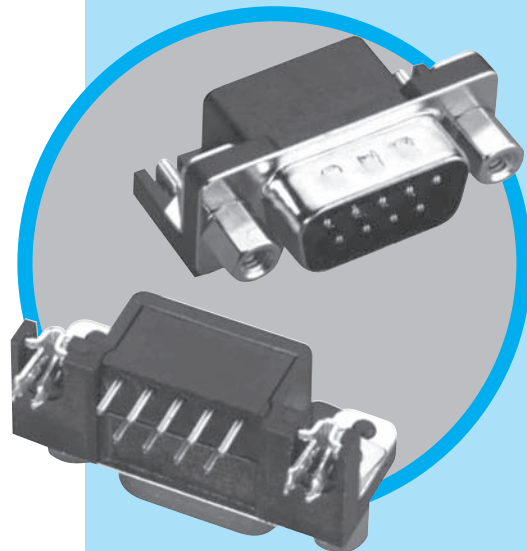


For special request, please consult factory

# HTN

D-Sub connectors - Stamped and Formed Contacts

## RIGHT ANGLE HIGH TEMPERATURE CONNECTORS



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308

| Materials and Platings |                                      |
|------------------------|--------------------------------------|
| Shell                  | Steel, tin over nickel plating       |
| Insulator              | Glass-filled thermoplastic, UL 94V-0 |
| Contacts               | Copper alloy, selective gold plating |
| Rear insert            | Brass, tin over nickel plating       |
| Screwlock              | Brass, tin over nickel plating       |
| Grounding clip         | Copper alloy with tin plating        |

| Electrical Data       |                                  |
|-----------------------|----------------------------------|
| Current rating        | 5A                               |
| Voltage rating        | 600V AC/rms 50Hz                 |
| Withstanding voltage  | 1000V AC/rms 50Hz for one minute |
| Insulation resistance | 5000MΩ                           |
| Contact resistance    | 10mΩ max                         |

| Climatic Data         |                                                                     |
|-----------------------|---------------------------------------------------------------------|
| Operating temperature | -55°C to +150°C, resist to short term soldering at 260°C for 20sec. |

| Mechanical Data                                                                                                       |               |              |
|-----------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| Mating and unmating force                                                                                             |               |              |
| Unit: kg ( lb)                                                                                                        |               |              |
| No. of Cts                                                                                                            | Mate (max)    | Unmate (min) |
| 9                                                                                                                     | 3.05 (6.74)   | 0.36 (0.79)  |
| 15                                                                                                                    | 5.09 (11.24)  | 0.46 (1.01)  |
| 25                                                                                                                    | 8.44 (18.66)  | 0.81 (1.8)   |
| 37                                                                                                                    | 12.51 (27.65) | 1.1 (2.47)   |
| Standard plating thicknesses                                                                                          |               |              |
| <ul style="list-style-type: none"> <li>Gold flash</li> <li>0.4 μm (15μ") Gold</li> <li>0.76 μm (30μ") Gold</li> </ul> |               |              |

### DESCRIPTION

The Amphenol HTN series allows the use of a through hole connector with reflow soldering process. This series gives you Amphenol's high standard of quality and reliability, to meet all of your commercial requirements.

*Economical  
right angle PDB,  
high temperature  
connectors*

### APPLICATIONS

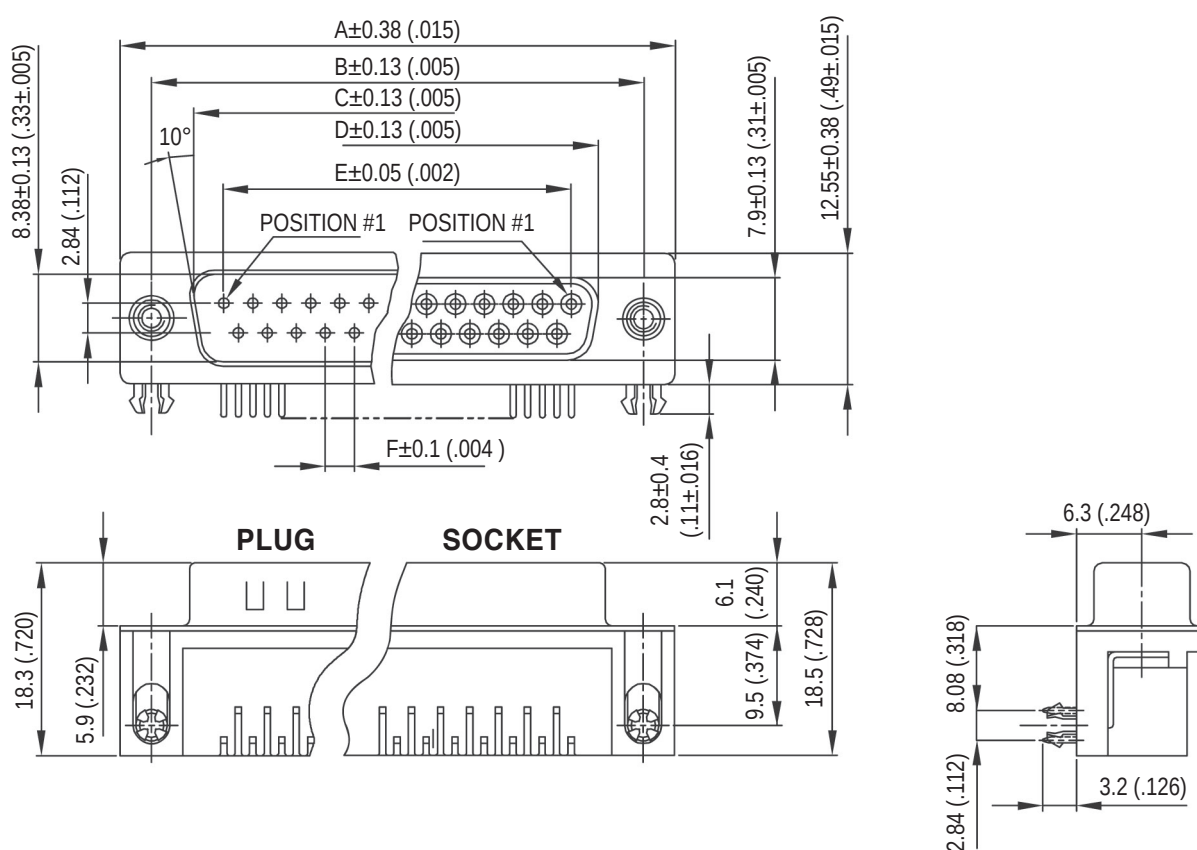
- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

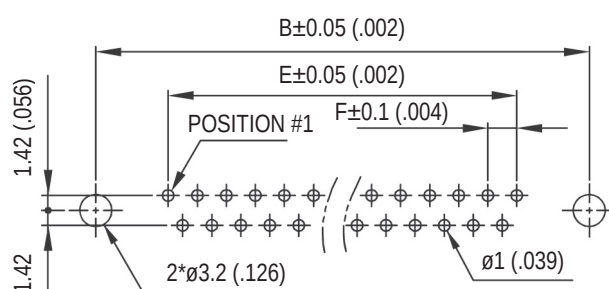
HTN / E17

## Shell size dimensions

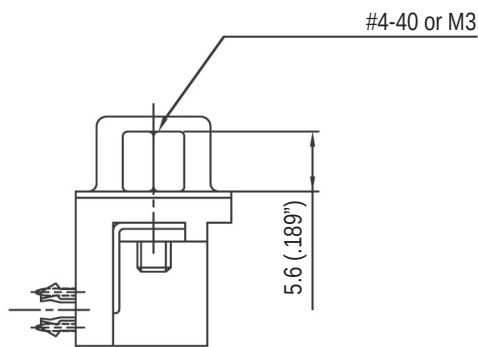


| Nb OF CONTACTS | DIMENSIONS mm (inch) |              |              |              |              |             |
|----------------|----------------------|--------------|--------------|--------------|--------------|-------------|
|                | A                    | B            | C            | D            | E            | F           |
| 9              | 30.81 (1.21)         | 24.99 (.98)  | 16.92 (.67)  | 16.24 (.64)  | 11.09 (.44)  | 2.74 (.108) |
| 15             | 39.14 (1.54)         | 33.32 (1.31) | 25.25 (.99)  | 24.56 (.97)  | 19.39 (.76)  | 2.74 (.108) |
| 25             | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) | 33.24 (1.31) | 2.77 (.109) |
| 37             | 69.32 (2.73)         | 63.50 (2.50) | 55.42 (2.18) | 54.76 (2.16) | 49.86 (1.96) | 2.77 (.109) |

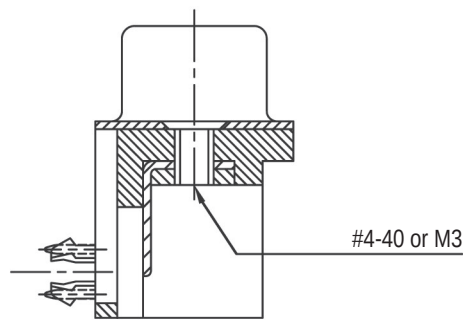
### Recommended P.C.B. Layout



Panel mounting option

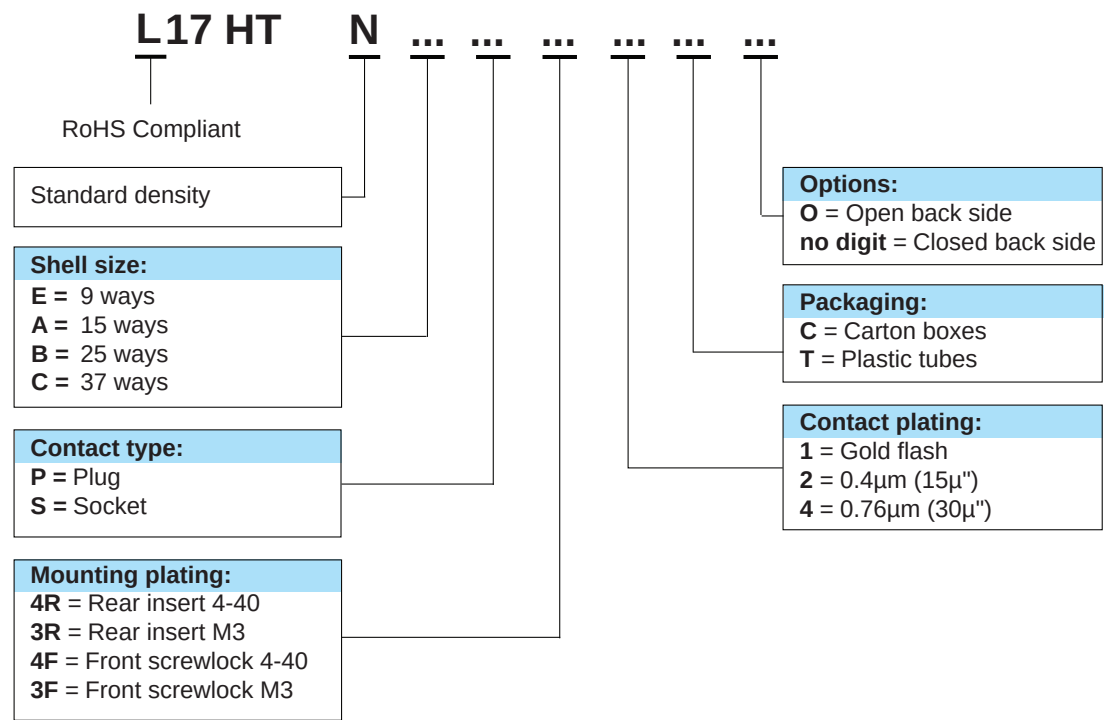


Front female screwlock  
4F/3F



Threaded rear insert  
4R/3R

How to order



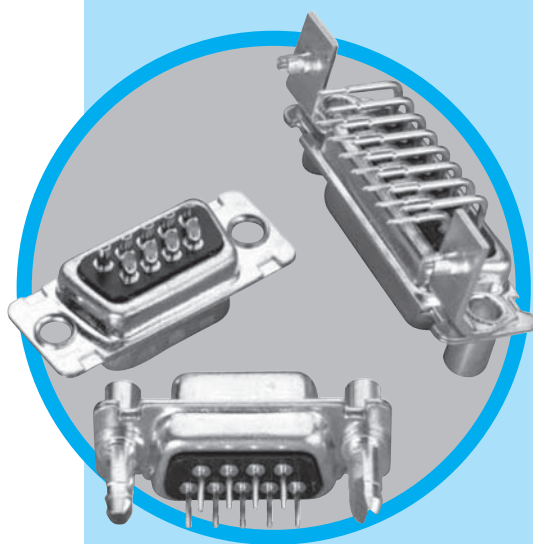
For special request, please consult factory



# D-DF

D-Sub connectors - Screw-machined Contacts

## FIXED MACHINED CONTACT CONNECTOR



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308 - NFC93425-HE5

| Materials and Platings |                                                                                                                                                                                                                                             |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shells</b>          | Steel tinned with dimples on plug connector                                                                                                                                                                                                 |
| <b>Insulator</b>       | Glass-filled thermoplastic, UL 94V-0                                                                                                                                                                                                        |
| <b>Rear insert</b>     | Brass, 3µm up to 5µm (118µ" up to 197µ")<br>tinned over nickel 2µm up to 3µm<br>(78µ" up to 118µ")                                                                                                                                          |
| <b>Boardlock</b>       | Tin plating 4µm up to 6µm<br>(157µ" up to 236µ") over nickel 2µm up to 3µm<br>(78µ" up to 118µ")                                                                                                                                            |
| <b>Screwlock</b>       | Brass, 6µm up to 10µm (236µ" up to 394µ")<br>tinned over nickel 2µm up to 3µm<br>(78µ" up to 118µ")                                                                                                                                         |
| <b>Contacts</b>        | <b>D:</b> brass<br><b>DF:</b> pin = brass<br>socket = copper alloy<br><b>Right angle version:</b> full gold plating over 2µm to<br>3µm nickel<br><b>Straight version:</b> full gold plating over 2µm up to<br>3µm (78µ" up to 118µ") nickel |

| Electrical Data              |                                           |
|------------------------------|-------------------------------------------|
| <b>Current rating</b>        | 7.5A                                      |
| <b>Voltage rating</b>        | 300V AC/rms 50Hz                          |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50Hz for one minute          |
| <b>Insulation resistance</b> | 5000MΩ                                    |
| <b>Contact resistance</b>    | <b>D:</b> 8.5mΩ max<br><b>DF:</b> 5mΩ max |

| Climatic Data                |                                                                         |
|------------------------------|-------------------------------------------------------------------------|
| <b>Operating temperature</b> | <b>D / DF:</b> -55°C to + 125°C                                         |
| <b>Salt spray</b>            | 48 hours                                                                |
| <b>Humidity</b>              | <b>D:</b> 21 days (40°C - 95% HR)<br><b>DF:</b> 56 days (40°C - 95% HR) |

| Mechanical Data                                    |               |              |
|----------------------------------------------------|---------------|--------------|
| <b>Mating and unmating force</b><br>Unit: kg ( lb) |               |              |
| No. of Cts                                         | Mate (max)    | Unmate (min) |
| 9 (size E)                                         | 3.05 (6.74)   | 0.36 (0.79)  |
| 15 (size A)                                        | 5.09 (11.24)  | 0.46 (1.01)  |
| 25 (size B)                                        | 8.44 (18.66)  | 0.81 (1.8)   |
| 37 (size C)                                        | 12.51 (27.65) | 1.1 (2.47)   |
| 50 (size D)                                        | 14.65 (32.38) | 1.6 (3.56)   |

### DESCRIPTION

Amphenol's 17D and 17DF series fixed contact D-Subminiature connector is suitable for industrial or telecom use.

The machined contact provide stability and reliability.

This series offers the broadest range of termination options in the Amphenol line.

*Connectors  
for industrial  
and  
telecom use*

### APPLICATIONS

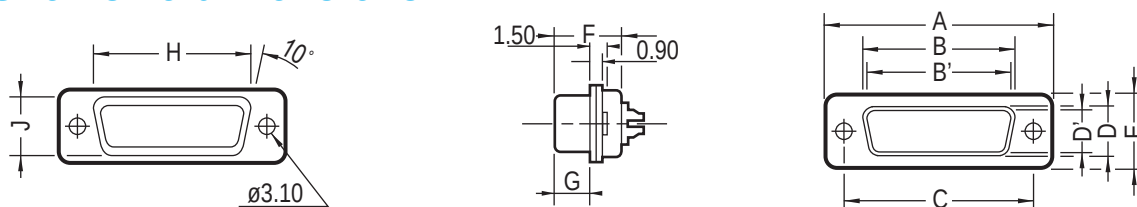
- Medical
- Industrial
- Telecom
- Any industry standard I / O connections



**Amphenol**

**D-DF / E18**

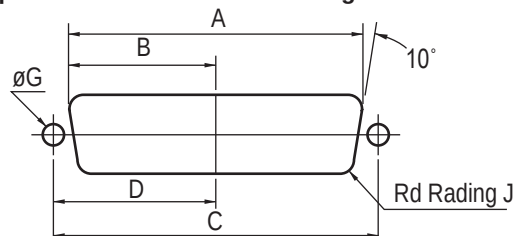
## Shell size dimensions



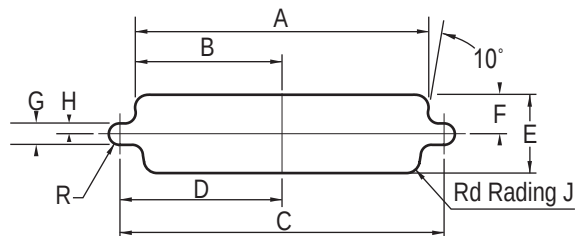
| Shell size | Contact<br>P: Pin<br>S: Socket | A<br>±0.25<br>(±.010) | B<br>0/-0.20<br>(0/- .008) | B'<br>+0.20/0<br>(+.008/0) | C<br>±0.10<br>(±.004) | D<br>0/-0.25<br>(0/- .010) | D'<br>+0.25/0<br>(+.010/0) | E<br>±0.20<br>(±.008) | F<br>+0.05/-0.20<br>(+.002/- .008) | F'<br>+0.10/-0.20<br>(+.004/- .008) | G<br>+0.10/-0.20<br>(+.004/- .008) | G'<br>±0.10<br>(±.004) | H<br>+0.10/-0.40<br>(+.004/- .016) | J<br>0/-0.50<br>(0/- .020) |
|------------|--------------------------------|-----------------------|----------------------------|----------------------------|-----------------------|----------------------------|----------------------------|-----------------------|------------------------------------|-------------------------------------|------------------------------------|------------------------|------------------------------------|----------------------------|
| E          | P                              | 30.7<br>(1.209")      |                            | 16.8<br>(.661")            | 25.0<br>(.984")       |                            | 8.2<br>(.323")             | 12.4<br>(.488")       |                                    | 10.9<br>(.429")                     |                                    | 5.9<br>(.232")         | 19.4<br>(.764")                    | 11.0<br>(.433")            |
|            | S                              |                       | 16.4<br>(.646")            |                            |                       | 8.0<br>(.315")             |                            |                       | 11.1<br>(.437)                     |                                     | 6.2<br>(.244")                     |                        |                                    |                            |
| A          | P                              | 39.0<br>(1.535")      |                            | 25.1<br>(.988")            | 33.3<br>(1.311")      |                            | 8.2<br>(.323")             | 12.4<br>(.488")       |                                    | 10.9<br>(.429")                     |                                    | 5.9<br>(.232")         | 27.7<br>(1.091")                   | 11.0<br>(.433")            |
|            | S                              |                       | 24.8<br>(.976")            |                            |                       | 8.0<br>(.315")             |                            |                       | 11.1<br>(.437)                     |                                     | 6.2<br>(.244")                     |                        |                                    |                            |
| B          | P                              | 52.9<br>(2.083")      |                            | 38.8<br>(1.528")           | 47.0<br>(1.850")      |                            | 8.2<br>(.323")             | 12.4<br>(.488")       |                                    | 11.0<br>(.433")                     |                                    | 5.8<br>(.228")         | 41.4<br>(1.630")                   | 11.0<br>(.433")            |
|            | S                              |                       | 38.5<br>(1.513")           |                            |                       | 8.0<br>(.315")             |                            |                       | 11.1<br>(.437)                     |                                     | 6.2<br>(.244")                     |                        |                                    |                            |
| C          | P                              | 69.2<br>(2.724")      |                            | 55.3<br>(2.177")           | 63.5<br>(2.500")      |                            | 8.2<br>(.323")             | 12.4<br>(.488")       |                                    | 11.0<br>(.433")                     |                                    | 5.8<br>(.228")         | 57.9<br>(2.280")                   | 11.0<br>(.433")            |
|            | S                              |                       | 54.9<br>(2.161")           |                            |                       | 8.0<br>(.315")             |                            |                       | 11.1<br>(.437)                     |                                     | 6.2<br>(.244")                     |                        |                                    |                            |
| D          | P                              | 66.8<br>(2.630")      |                            | 52.7<br>(2.075")           | 61.1<br>(2.406")      |                            | 11.0<br>(.433")            | 15.2<br>(.598")       |                                    | 11.0<br>(.433")                     |                                    | 5.8<br>(.228")         | 55.5<br>(2.185")                   | 13.8<br>(.543")            |
|            | S                              |                       | 52.5<br>(2.067")           |                            |                       | 10.9<br>(.429")            |                            |                       | 11.1<br>(.437)                     |                                     | 6.2<br>(.244")                     |                        |                                    |                            |

## Panel cutouts

Optimal cutout for rear mounting



Standard cutout



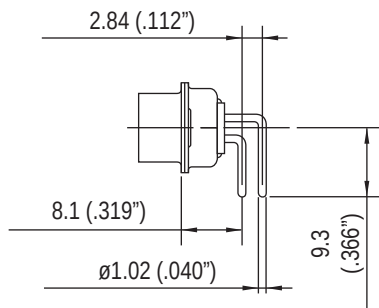
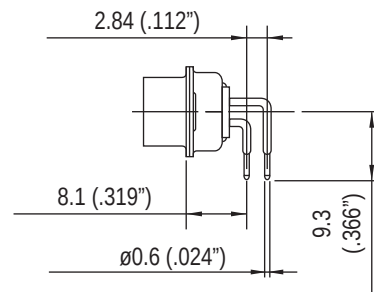
| Shell size | Mounting method | A<br>±0.20<br>(±.008) | B<br>±0.20<br>(±.008) | C<br>±0.20<br>(±.008) | D<br>±0.20<br>(±.008) | E<br>±0.20<br>(±.008) | F<br>±0.20<br>(±.008) | G<br>±0.20<br>(±.008) | H<br>±0.20<br>(±.008) | J<br>±0.20<br>(±.008) |
|------------|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| E          | Front           | 22.2<br>(.874")       | 11.1<br>(.437")       | 25.0<br>(.984")       | 12.5<br>(.492")       | 13.0<br>(.512")       | 6.5<br>(.256")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 20.5<br>(.807")       | 10.2<br>(.402")       |                       |                       | 11.4<br>(.449")       | 5.7<br>(.224")        |                       |                       | 3.4<br>(.134")        |
| A          | Front           | 30.5<br>(1.201")      | 15.3<br>(.602")       | 33.3<br>(1.311")      | 16.7<br>(.657")       | 13.0<br>(.512")       | 6.5<br>(.256")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 28.8<br>(1.134")      | 14.4<br>(.567")       |                       |                       | 11.4<br>(.449")       | 5.7<br>(.224")        |                       |                       | 3.4<br>(.134")        |
| B          | Front           | 44.3<br>(1.744")      | 22.1<br>(.870")       | 47.0<br>(1.850")      | 23.5<br>(.925")       | 13.0<br>(.512")       | 6.5<br>(.256")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 42.5<br>(1.673")      | 21.3<br>(.839")       |                       |                       | 11.4<br>(.449")       | 5.7<br>(.224")        |                       |                       | 3.4<br>(.134")        |
| C          | Front           | 60.7<br>(2.390")      | 30.4<br>(1.197")      | 63.5<br>(2.500")      | 31.7<br>(1.248")      | 13.0<br>(.512")       | 6.5<br>(.256")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 59.1<br>(2.327")      | 29.5<br>(1.161")      |                       |                       | 11.4<br>(.449")       | 5.7<br>(.224")        |                       |                       | 3.4<br>(.134")        |
| D          | Front           | 58.3<br>(2.295")      | 29.2<br>(1.150")      | 61.1<br>(2.406")      | 30.6<br>(1.205")      | 15.8<br>(.622")       | 7.9<br>(.311")        | 3.0<br>(.118")        | 1.5<br>(.059")        | 2.1<br>(.083")        |
|            | Rear            | 56.3<br>(2.217")      | 28.2<br>(1.110")      |                       |                       | 14.1<br>(.555")       | 7.1<br>(.280")        |                       |                       | 3.4<br>(.134")        |

## Termination

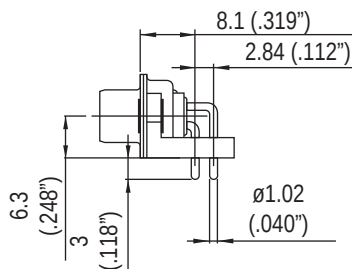
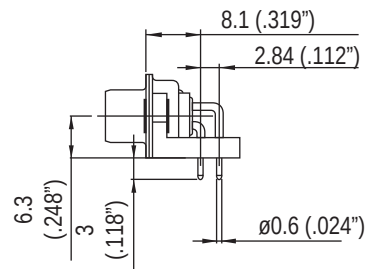
### Right angle

#### MIL Footprint

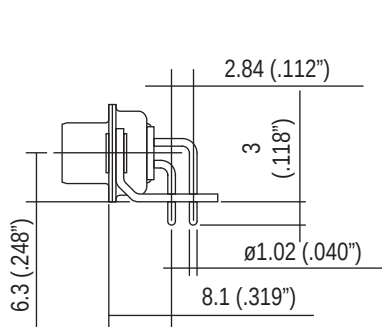
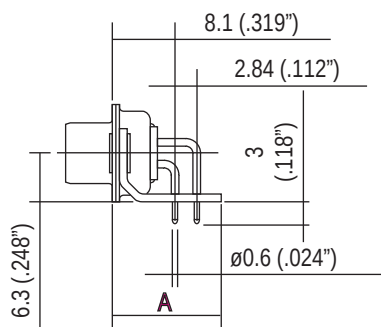
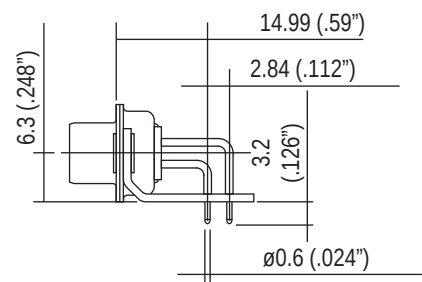
##### without bracket:

**C****A4**

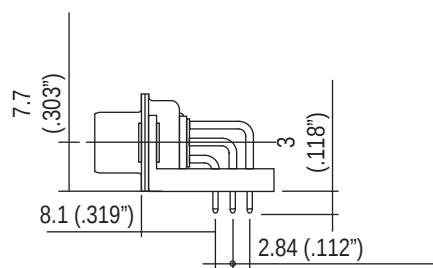
##### plastic bracket:

**AJ3****AJ4**

##### metal bracket:

**A****AM4: A=13.2mm**  
**AZ4: A=11.5mm****AM4B**

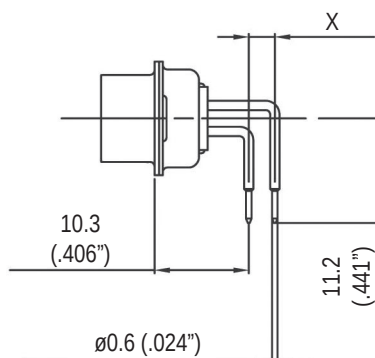
##### 50 contacts:



## Termination

### European footprint

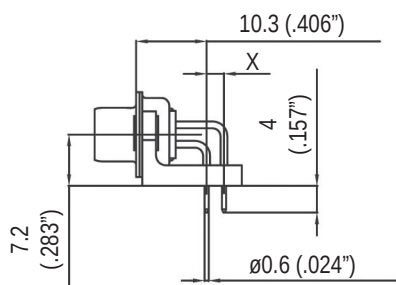
without bracket:



1AON: X=2.54mm

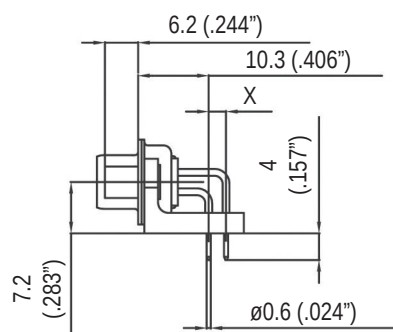
1BON: X=2.84mm

plastic bracket:



1APN: X=2.54mm

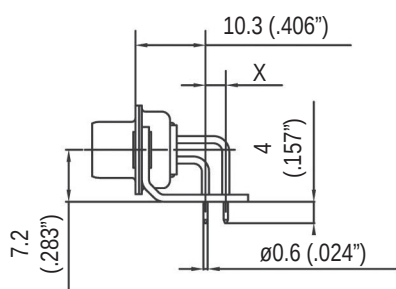
1BPN: X=2.84mm



1AUN: X=2.54mm

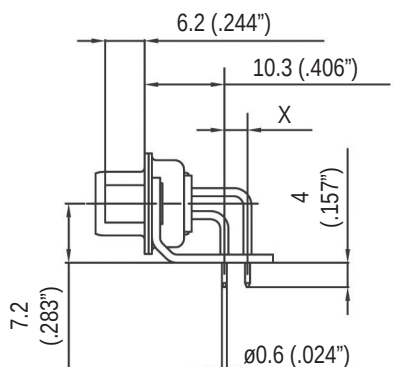
1BUN: X=2.84mm

metal bracket:



1AMN: X=2.54mm

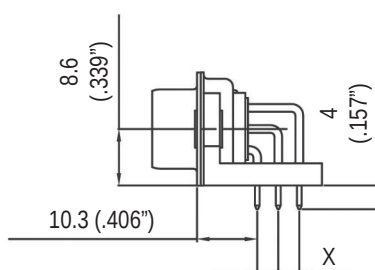
1BMN: X=2.84mm



1ATN: X=2.54mm

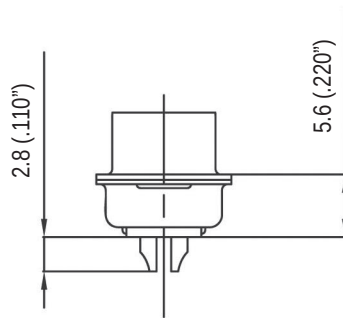
1BTN: X=2.84mm

50 contacts:

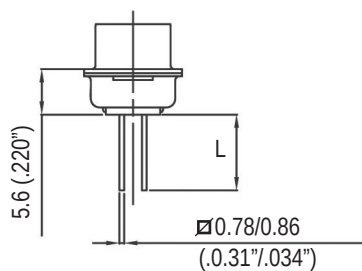


Termination

Solder Cup:

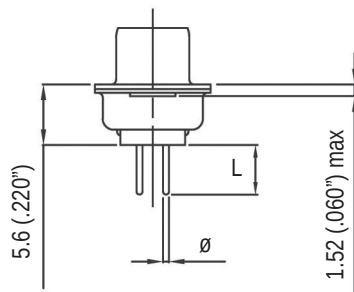


Wire Wrap:



| termination | Nb of wraps | L             |
|-------------|-------------|---------------|
| F179        | 2           | 9.6mm (.378") |
| F179A       | 3           | 13mm (.512")  |

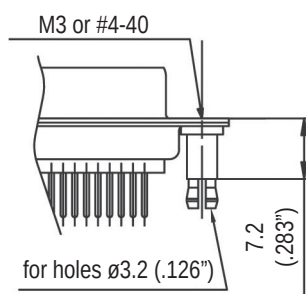
Straight PCB:



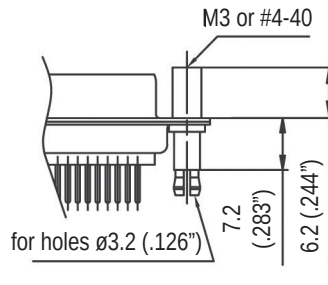
| termination | Ø              | L             |
|-------------|----------------|---------------|
| U           | 0.6mm (.024")  | 3.2mm (.126") |
| V           | 1.02mm (.040") | 2.4mm (.095") |
| T           | 0.6mm (.024")  | 4mm (.157")   |
| OL2         | 0.6mm (.024")  | 5.5mm (.217") |

Grounding tabs:

For straight termination



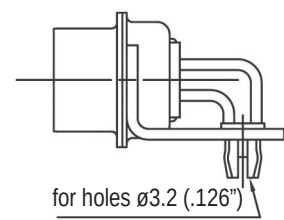
RM5



RM8

For R/A termination

FOR PCB 1.6

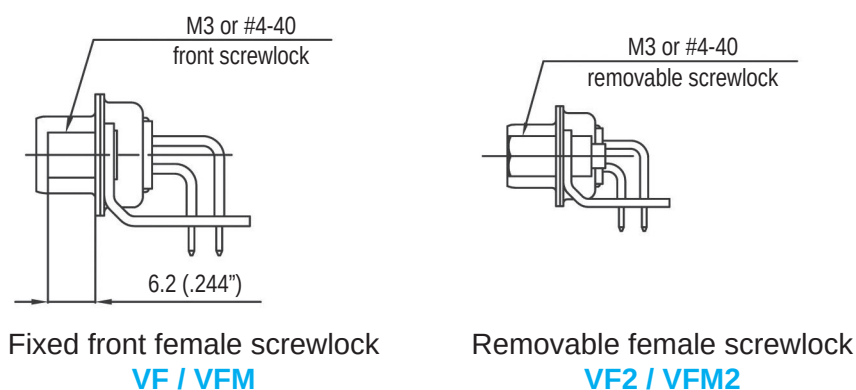
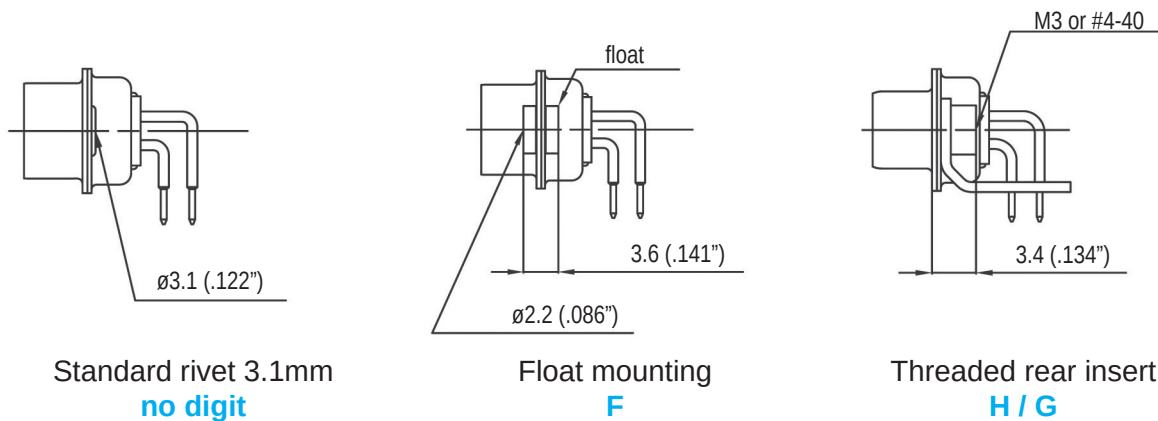


RM6

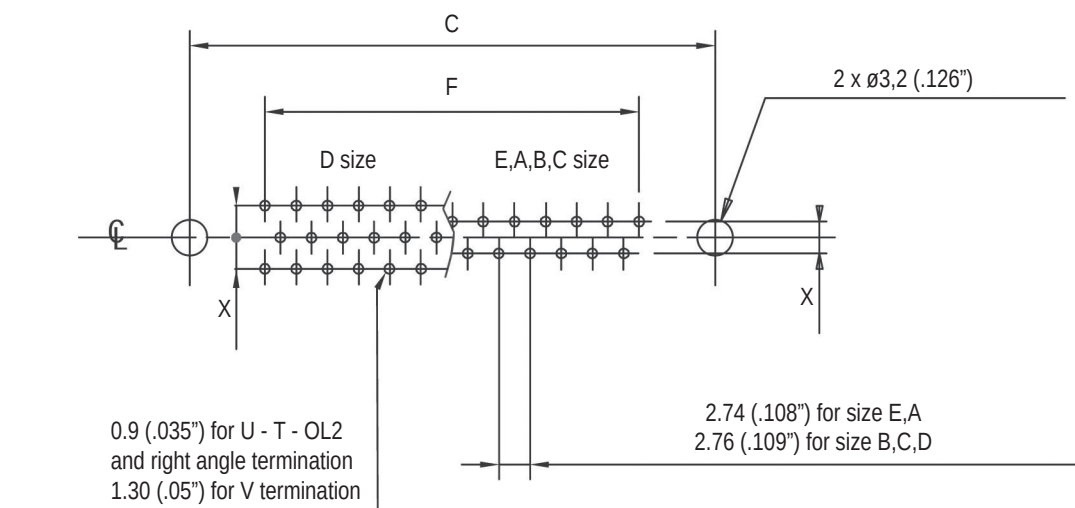


## Panel mounting option

For straight and R/A termination



## Recommended PCB Layout

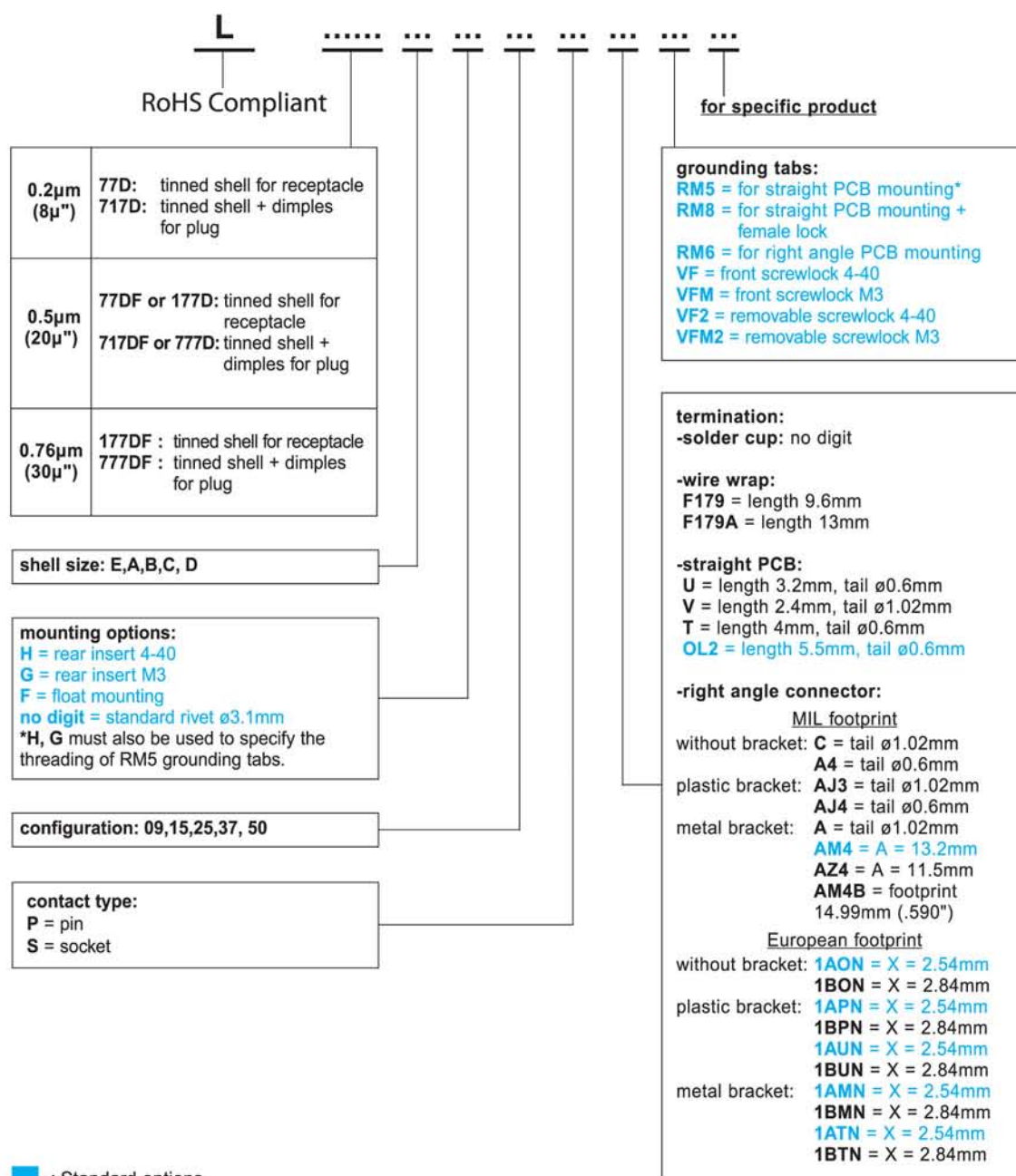


For straight PCB: X = 2.84mm (.112")

For right angle PCB: MIL: X = 2.84mm (.112")

European: X = 2.54mm (.100"), 2.84mm in option

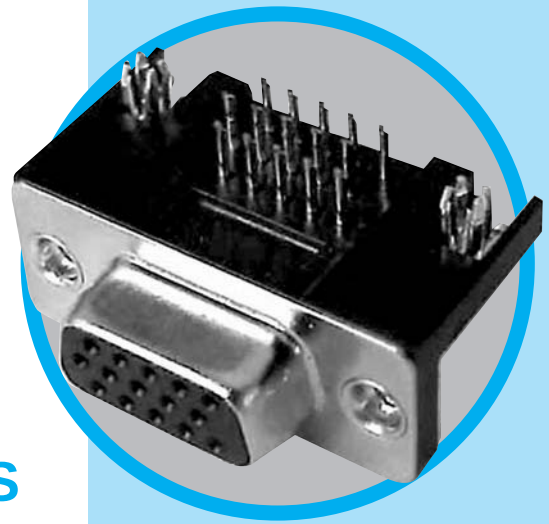
|                                      | size E       | size A       | size B        | size C        | size D       |
|--------------------------------------|--------------|--------------|---------------|---------------|--------------|
| <b>C<math>\pm 0,1</math> (.004)</b>  | 25 (.984)    | 33.3 (1.311) | 47 (1.85)     | 63.5 (2.5)    | 61.1 (2.406) |
| <b>F<math>\pm 0,05</math> (.002)</b> | 10.96 (.431) | 19.18 (.755) | 33.12 (1.304) | 49.68 (1.956) | 44.2 (1.74)  |



**For special request, please consult factory**

# HD

D-Sub connectors - Stamped and Formed Contacts



## RIGHT ANGLE HIGH DENSITY CONNECTORS

MAIN CHARACTERISTICS

### Specifications

- Connectors according to: MIL C24308

| Materials and Platings |                                      |
|------------------------|--------------------------------------|
| <b>Shells</b>          | Steel, tin over nickel plating       |
| <b>Body</b>            | Glass filled thermoplastic, UL 94V-0 |
| <b>Contacts</b>        | Copper alloy, selective gold plating |
| <b>Rear insert</b>     | Brass with nickel plating            |
| <b>Screwlock</b>       | Brass with nickel plating            |
| <b>Grounding clip</b>  | Copper alloy with tin plating        |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 3A                               |
| <b>Voltage rating</b>        | 300V AC/rms 50Hz                 |
| <b>Withstanding voltage</b>  | 1000V AC/rms 50HZ for one minute |
| <b>Insulation resistance</b> | 5000MΩ                           |
| <b>Contact resistance</b>    | 10mΩ Max.                        |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |

| Mechanical Data                                                                                                           |               |              |
|---------------------------------------------------------------------------------------------------------------------------|---------------|--------------|
| <b>Mating and unmating force</b>                                                                                          |               |              |
| Unit: kg (lb)                                                                                                             |               |              |
| No. of Cts                                                                                                                | Mate (max)    | Unmate (min) |
| 15                                                                                                                        | 3.81 (8.42)   | 0.52 (1.14)  |
| 26                                                                                                                        | 5.95 (13.16)  | 1.05 (2.32)  |
| 44                                                                                                                        | 9.26 (20.46)  | 1.37 (3.02)  |
| 62                                                                                                                        | 13.48 (29.78) | 1.76 (3.88)  |
| <b>Standard plating thickness</b>                                                                                         |               |              |
| <ul style="list-style-type: none"> <li>• gold flash</li> <li>• 0.4μm (15μ") gold</li> <li>• 0.76μm (30μ") gold</li> </ul> |               |              |

DESCRIPTION

Amphenol's high density D-Sub connectors complement Amphenol's extensive D-Sub connector line. This line offers many superior features, high performance level and low installation cost.

The decreased contact spacing accommodates greater signal density in comparison to conventional D-Sub connectors.

*Economical  
right angle PCB*

APPLICATIONS

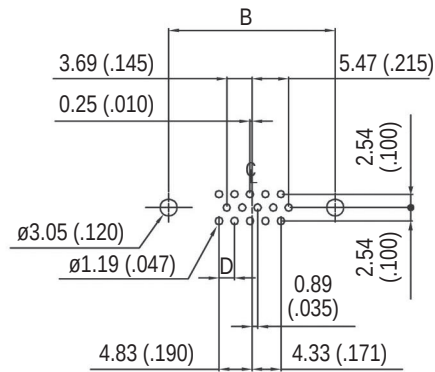
- Industrial
- Telecom
- Any industry standard I / O connections



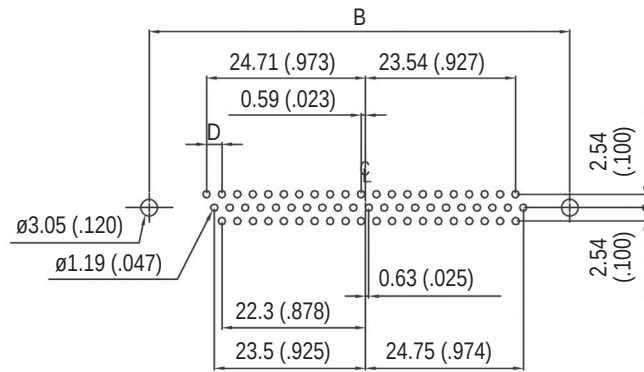
**Amphenol**

HD / E19

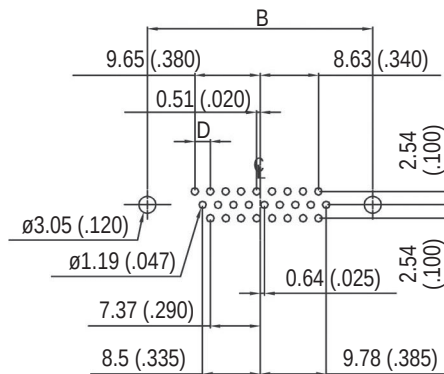
## P.C.B. Layout



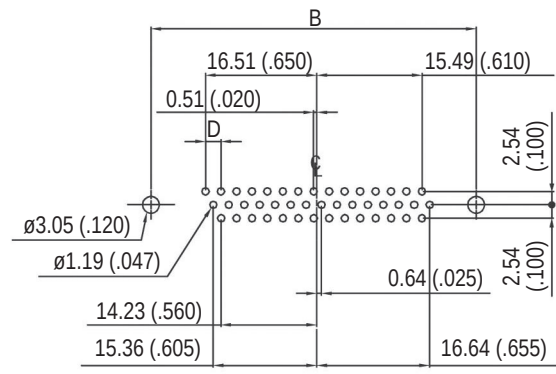
15 PIN



62 PIN



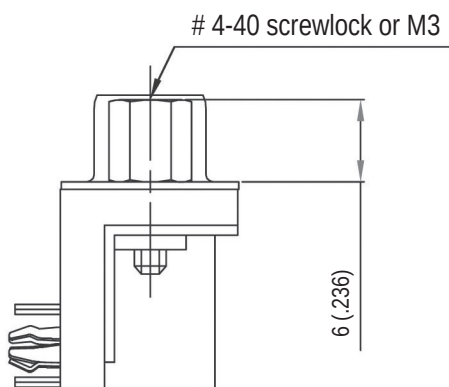
26 PIN



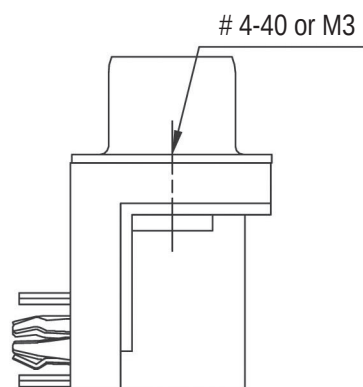
44 PIN

Socket - Top side PCB layouts

## Panel mounting option

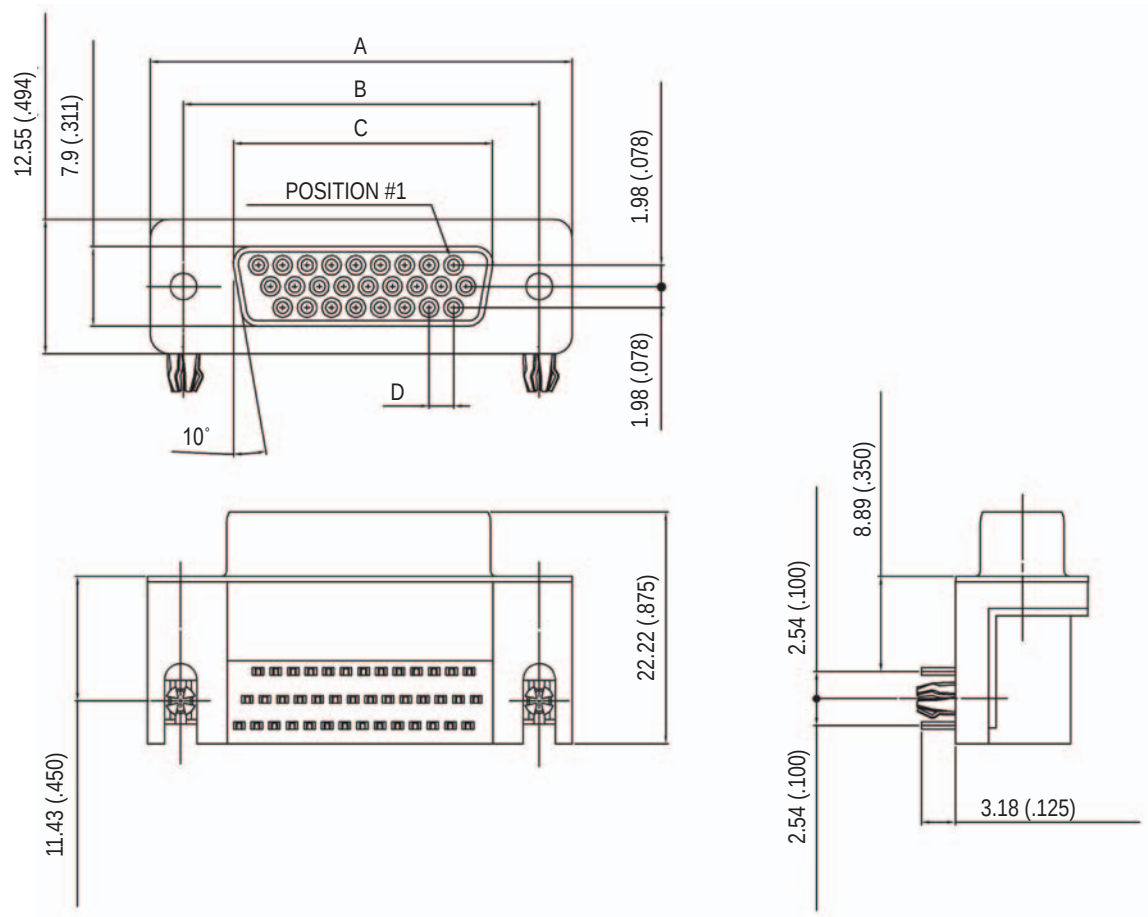


Front female screwlock  
4F / 3F



Threaded rear insert  
4R / 3R

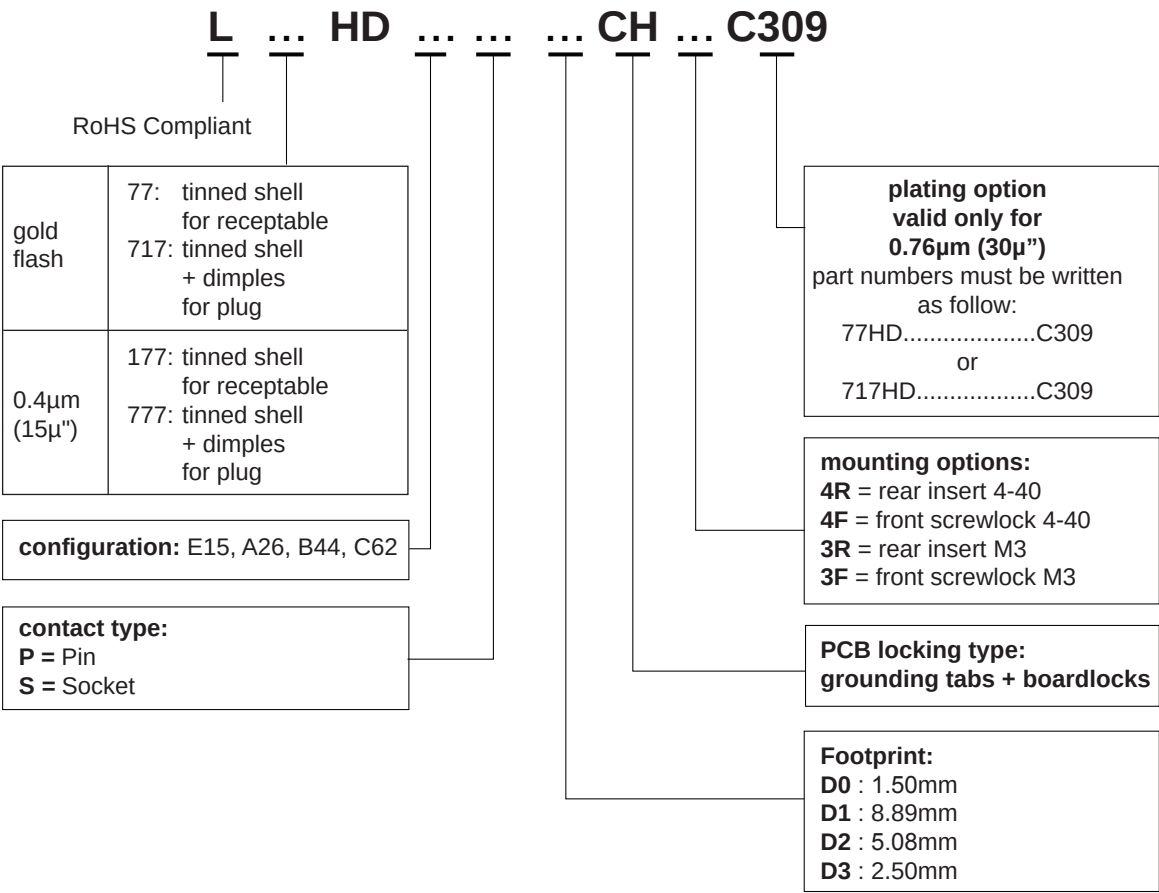
Shell size dimensions



| NB OF CONTACTS | DIMENSIONS mm (inch) |               |               |             |
|----------------|----------------------|---------------|---------------|-------------|
|                | A                    | B             | C             | D           |
| 15             | 30.84 (1.214)        | 24.99 (.984)  | 16.26 (.640)  | 2.29 (.090) |
| 26             | 39.24 (1.545)        | 33.32 (1.312) | 24.56 (.967)  | 2.29 (.090) |
| 44             | 53.04 (2.088)        | 47.04 (1.852) | 38.30 (1.508) | 2.29 (.090) |
| 62             | 69.34 (2.730)        | 63.50 (2.500) | 54.76 (2.156) | 2.41 (.095) |



# How to order



For special request, please consult factory

Do not hesitate to contact us for further information

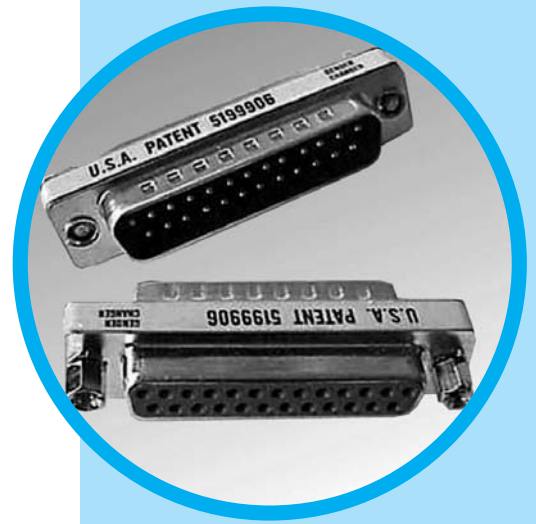
Amphenol

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 Fax: +86(0)755 2754 9955  
**Technical Support**  
 Tel: +86(0)755 2717 7945  
 Info-dsub@amphenol.com.cn  
 http://www.dsubconnector.com

# G517-A

D-Sub connectors - Stamped and Formed Contacts

## GENDER CHANGER



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308

| Materials and Platings |                                                            |
|------------------------|------------------------------------------------------------|
| <b>Shells</b>          | Steel, 2.54µm (100µ") tin over 1.27µm (50µ") nickel plated |
| <b>Insulator</b>       | Glass-filled nylon, UL 94V-0                               |
| <b>Pin contacts</b>    | Brass, gold plated over 1.27µm (50µ") nickel               |
| <b>Screwlock</b>       | Brass, 2.54µm (100µ") min. nickel plated                   |

| Electrical Data              |                                  |
|------------------------------|----------------------------------|
| <b>Current rating</b>        | 5A                               |
| <b>Voltage rating</b>        | 250V AC/rms 60Hz                 |
| <b>Withstanding voltage</b>  | 1000V AC/rms 60Hz for one minute |
| <b>Insulation resistance</b> | 1000MΩ                           |
| <b>Contact resistance</b>    | 20mΩ max                         |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +105°C |

### DESCRIPTION

These connectors allow you to change the gender of your cable assembly, and or panel D-Sub connectors.

This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements.

*Economical  
gender changer  
D-Sub's*

### APPLICATIONS

- Industrial
- Telecom
- Any industry standard I / O connections

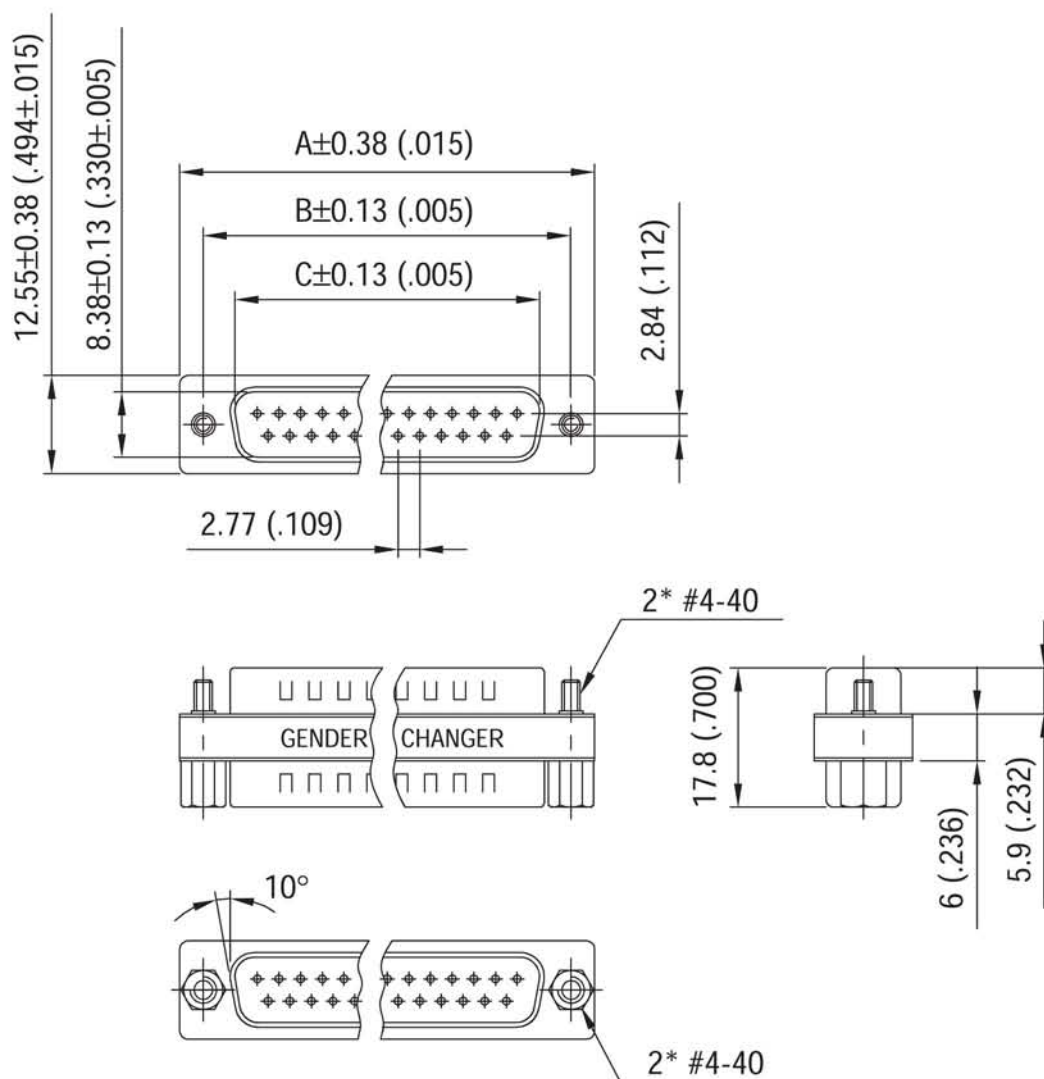


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G517-A / E20

## Shell size dimensions

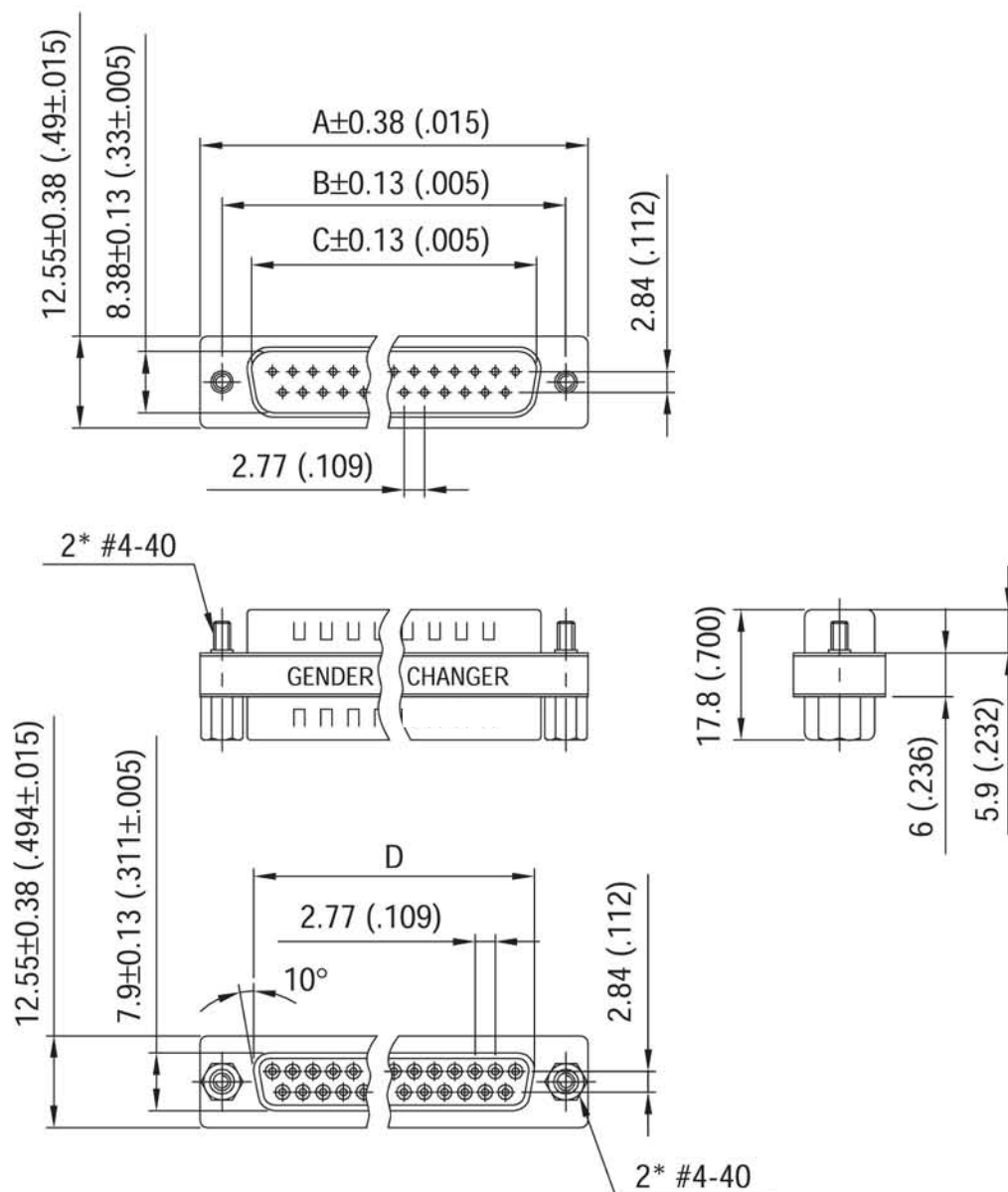
### Male to male adaptor



| PAPT<br>NUMBER | Nb OF<br>CONTACTS | DIMENSIONS mm (inch) |              |              |
|----------------|-------------------|----------------------|--------------|--------------|
|                |                   | A                    | B            | C            |
| L G517 97001   | 9                 | 30.81 (1.21)         | 24.99 (.984) | 16.92 (.666) |
| L G517 97002   | 15                | 39.14 (1.54)         | 33.32 (1.31) | 25.25 (.994) |
| L G517 97003   | 25                | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) |
| L G517 97004   | 37                | 69.32 (2.73)         | 63.5 (2.50)  | 55.42 (2.18) |

## Shell size dimensions

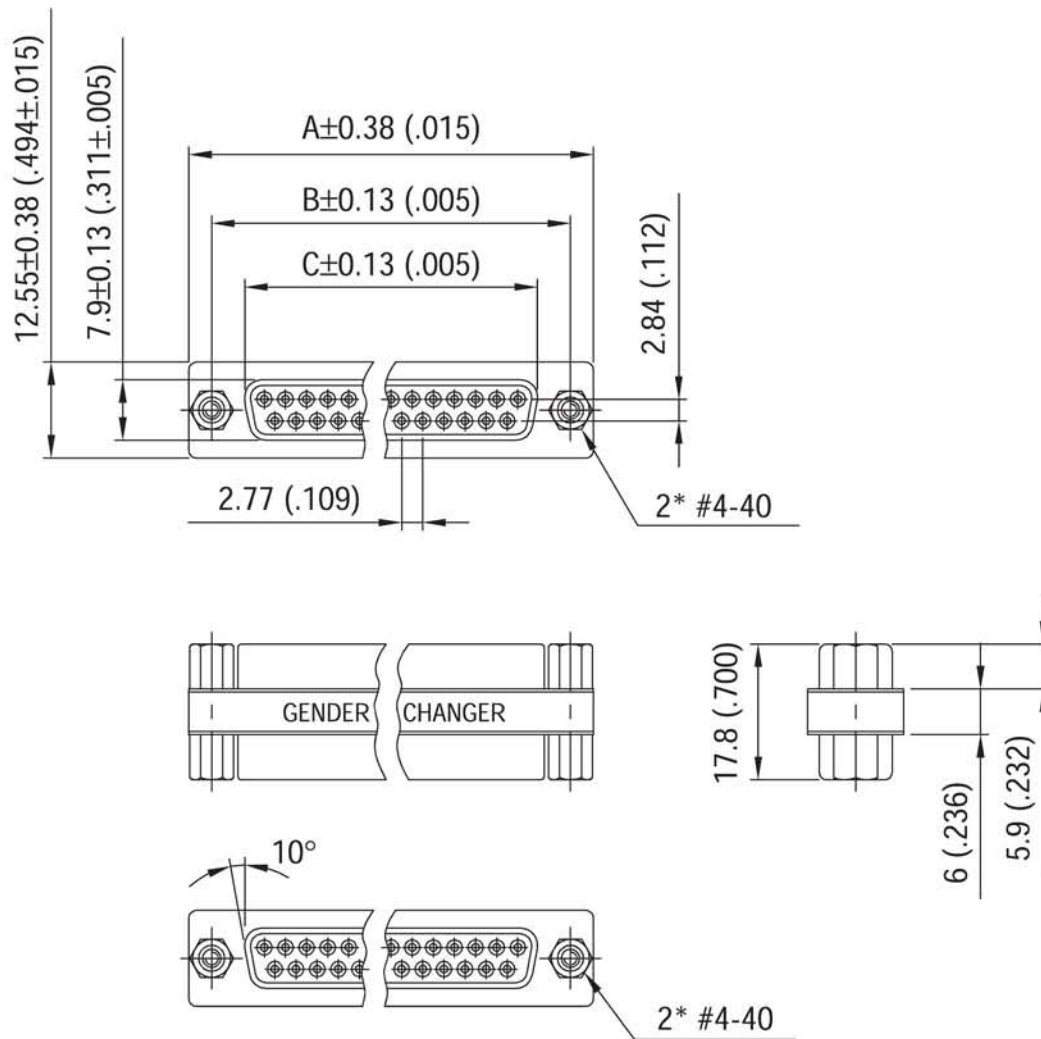
### Male to female adaptor



| PAPT<br>NUMBER | Nb OF<br>CONTACTS | DIMENSIONS mm (inch) |              |              |              |
|----------------|-------------------|----------------------|--------------|--------------|--------------|
|                |                   | A                    | B            | C            | D            |
| L G517 97009   | 9                 | 30.81 (1.21)         | 24.99 (.984) | 16.92 (.666) | 16.33 (.643) |
| L G517 97010   | 15                | 39.14 (1.54)         | 33.32 (1.31) | 25.25 (.994) | 24.66 (.971) |
| L G517 97011   | 25                | 53.04 (2.09)         | 47.04 (1.85) | 38.96 (1.53) | 38.38 (1.51) |
| L G517 97012   | 37                | 69.32 (2.73)         | 63.5 (2.50)  | 55.42 (2.18) | 55.84 (2.20) |

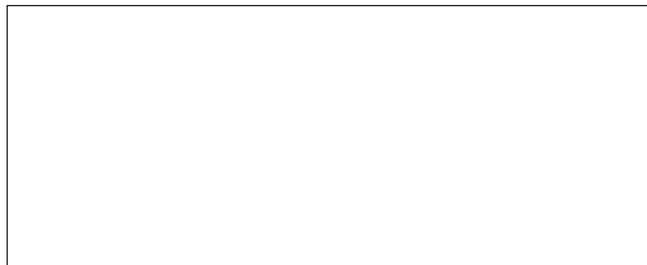
## Shell size dimensions

### Female to female adaptor



| PAPT<br>NUMBER | Nb OF<br>CONTACTS | DIMENSIONS mm (inch) |              |              |
|----------------|-------------------|----------------------|--------------|--------------|
|                |                   | A                    | B            | C            |
| L G517 97005   | 9                 | 30.81 (1.21)         | 24.99 (.984) | 16.33 (.643) |
| L G517 97006   | 15                | 39.14 (1.54)         | 33.32 (1.31) | 24.66 (.971) |
| L G517 97007   | 25                | 53.04 (2.09)         | 47.04 (1.85) | 38.38 (1.51) |
| L G517 97008   | 37                | 69.32 (2.73)         | 63.5 (2.50)  | 55.84 (2.20) |

Do not hesitate to contact us for further information



# Amphenol

## Amphenol IT & Communication Products

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Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>



# G517-B

D-Sub connectors - Stamped and Formed Contacts

## ADAPTORS D-SUB TO D-SUB 9 TO 9 AND 25 TO 25



### CHARACTERISTICS

#### Specifications

- Connectors according to MIL C24308

| Materials and Platings |                                                            |
|------------------------|------------------------------------------------------------|
| Shells                 | Steel, 2.54µm (100µ") tin over 1.27µm (50µ") nickel plated |
| Insulator              | Glass-filled nylon, UL 94V-0                               |
| Pin contacts           | Brass, gold plated over 1.27µm (50µ") nickel               |
| Socket Contact         | Phosphor bronze, gold plated over 1.27µm (50µ") nickel     |
| Overmold               | PVC, UL 94V-0                                              |
| Screw                  | Brass with nickel plating                                  |

| Electrical Data       |                                  |
|-----------------------|----------------------------------|
| Current rating        | 5A                               |
| Voltage rating        | 250V AC/rms 60Hz                 |
| Withstanding voltage  | 1000V AC/rms 60Hz for one minute |
| Insulation resistance | 1000MΩ                           |
| Contact resistance    | 20mΩ max                         |

| Climatic Data         |                 |
|-----------------------|-----------------|
| Operating temperature | -55°C to +105°C |

### DESCRIPTION

This series gives you Amphenol's high standards of quality and reliability to meet all of your commercial requirements.

*Economical  
D-Sub  
adaptors*

### APPLICATIONS

- Industrial
- Telecom
- Any industry standard I / O connections

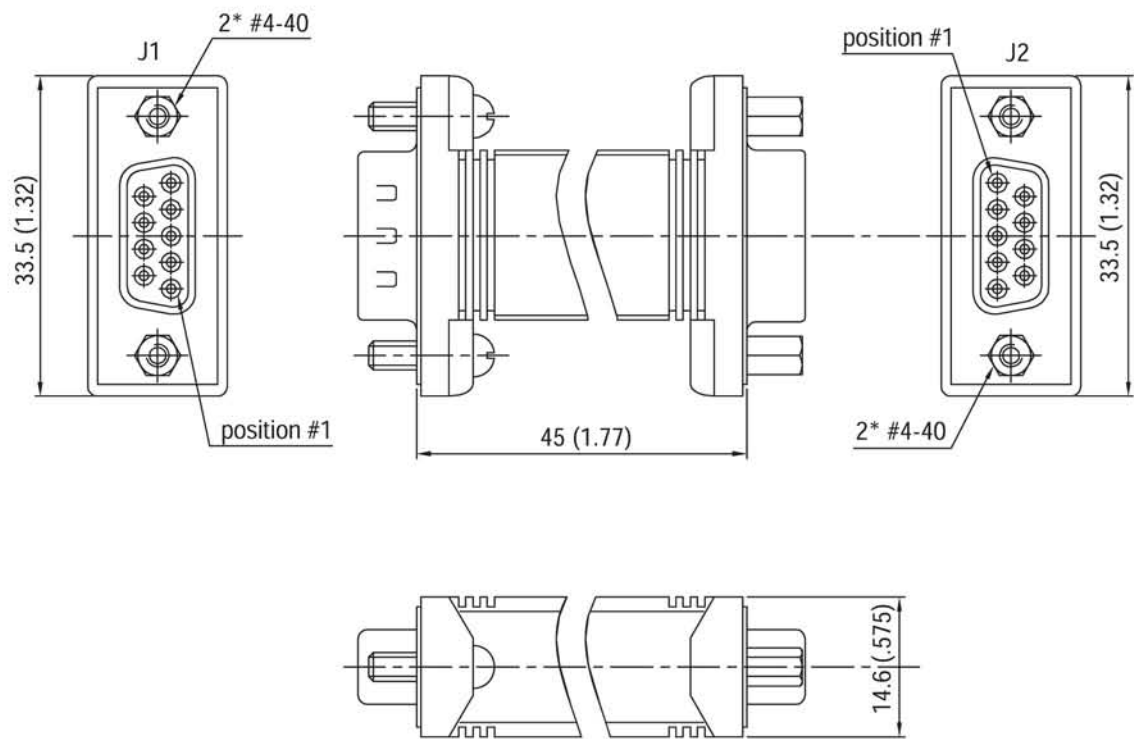


**Amphenol**

**G517-B / E21**

Shell size dimensions

9-position to 9-position



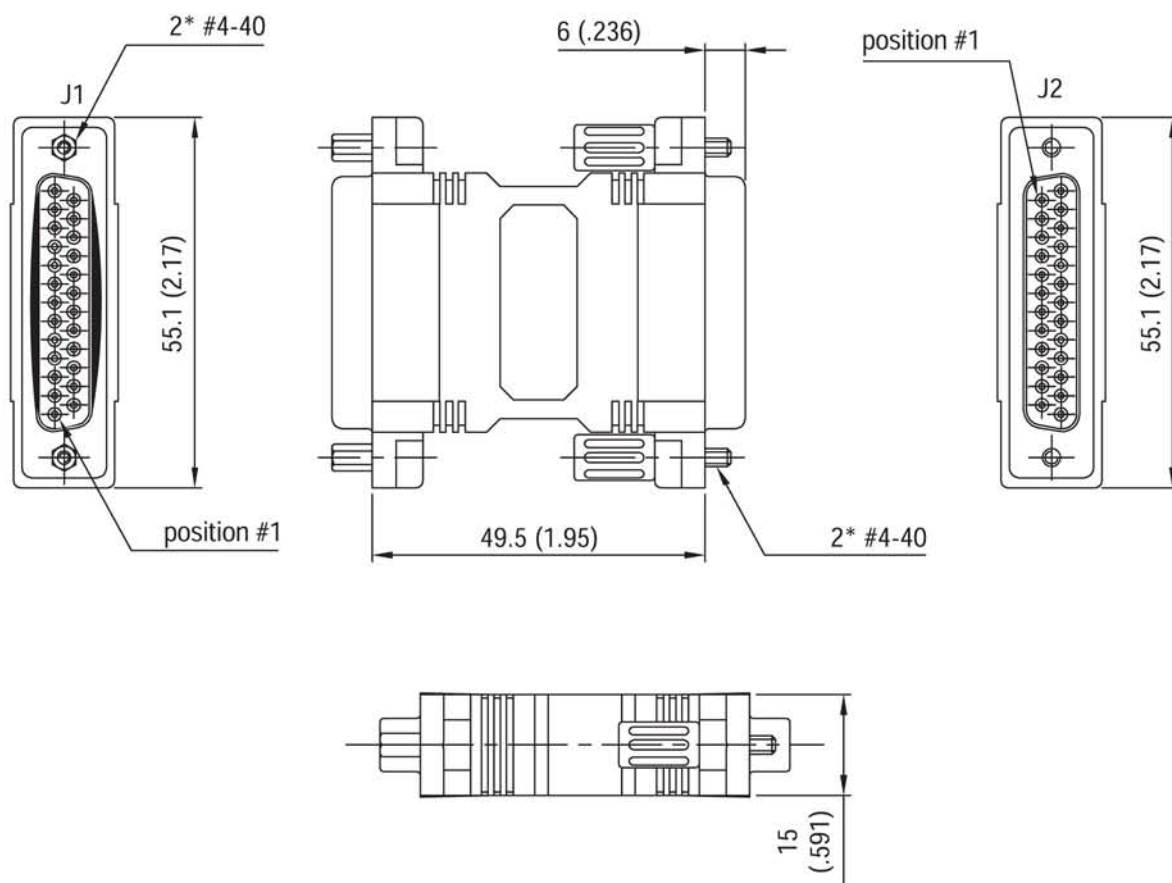
Wiring table

|    |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|
| J1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| J2 | 3 | 2 | 6 | 5 | 4 | 8 | 7 |

| PAPT NUMBER                                  | Description                                | Color                  |
|----------------------------------------------|--------------------------------------------|------------------------|
| L G517 97001<br>L G517 97002<br>L G517 97015 | D-Sub Male 9-pos. to D-sub Male 9-pos.     | beige<br>gray<br>black |
| L G517 97016<br>L G517 97017<br>L G517 97018 | D-Sub Female 9-pos. to D-sub Female 9-pos. | beige<br>gray<br>black |
| L G517 97019<br>L G517 97020<br>L G517 97021 | D-Sub Male 9-pos. to D-sub Female 9-pos.   | beige<br>gray<br>black |

## Shell size dimensions

### 25-position to 25-position



### Wiring table

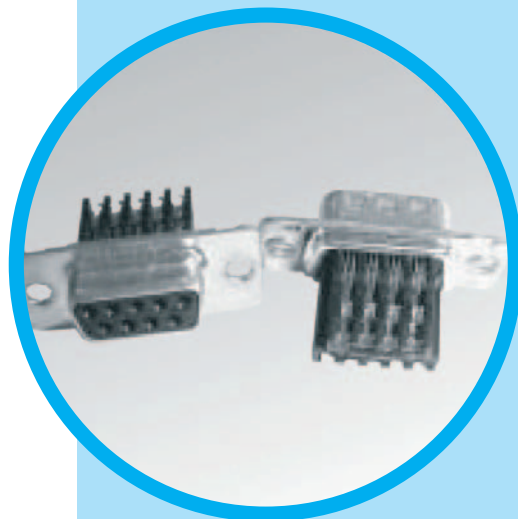
|    |   |   |   |   |     |    |    |
|----|---|---|---|---|-----|----|----|
| J1 | 1 | 2 | 3 | 4 | ... | 24 | 25 |
| J2 | 1 | 2 | 3 | 4 | ... | 24 | 25 |

| PAPT NUMBER                                  | Description                                  | Color                  |
|----------------------------------------------|----------------------------------------------|------------------------|
| L G517 97022<br>L G517 97023<br>L G517 97024 | D-Sub Male 25-pos. to D-sub Male 25-pos.     | beige<br>gray<br>black |
| L G517 97025<br>L G517 97026<br>L G517 97027 | D-Sub Female 25-pos. to D-sub Female 25-pos. | beige<br>gray<br>black |
| L G517 97028<br>L G517 97029<br>L G517 97030 | D-Sub Male 25-pos. to D-sub Female 25-pos.   | beige<br>gray<br>black |

# MP

D-Sub connectors - Stamped and Formed Contacts

## IDC DISCRETE WIRE CONNECTORS



### CHARACTERISTICS

| Materials and Platings |                                                             |
|------------------------|-------------------------------------------------------------|
| <b>Shells</b>          | Steel, tin over nickel                                      |
| <b>Contacts</b>        | Phosphor bronze                                             |
| <b>Plating</b>         | Contact area: gold over nickel<br>IDC area: tin over nickel |
| <b>Wire types</b>      | Solid and stranded wires AWG 24-28                          |

| Electrical Data       |                                         |
|-----------------------|-----------------------------------------|
| <b>Current rating</b> | 5A                                      |
| <b>Voltage rating</b> | 500V AC at sea level                    |
| <b>Dielectric</b>     | Thermoplastic Polyesther UL 94 VO rated |

| Climatic Data                |                 |
|------------------------------|-----------------|
| <b>Operating temperature</b> | -55°C to +125°C |
| <b>Salt spray</b>            | 24 hours        |

| Mechanical Data                   |                                                                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Mating and unmating force</b>  | Size E 30 N Max. 3.5 N Mini.<br>Size A 50 N Max. 4.5 N Mini.<br>Size B 83 N Max. 8.0 N Mini.<br>Size C 123 N Max. 11.0 N Mini. |
| <b>Standard plating thickness</b> | Gold flash<br>0.4µm (15µ") Gold<br>0.76 µm (30µ") Gold                                                                         |

### DESCRIPTION

Amphenol IDC discrete D-sub connectors offer a low-profile design that accommodates many of the compact requirements of computer interfacing, instrumentation and, business equipment. Fast, four-point solderless termination ensures reliable connections. This series is available in 9, 15, 25, & 37 contact configurations. Contacts, including stain relief, are easily removable in case of repair.

*Simplify  
your cable  
assemblies*

### APPLICATIONS

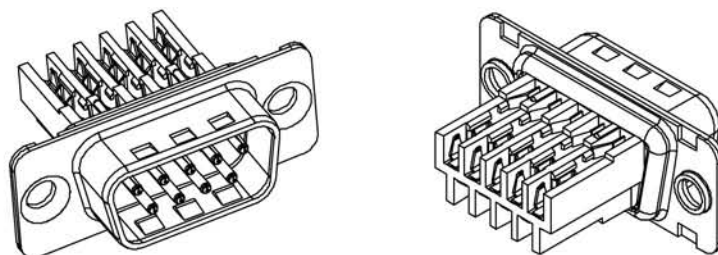
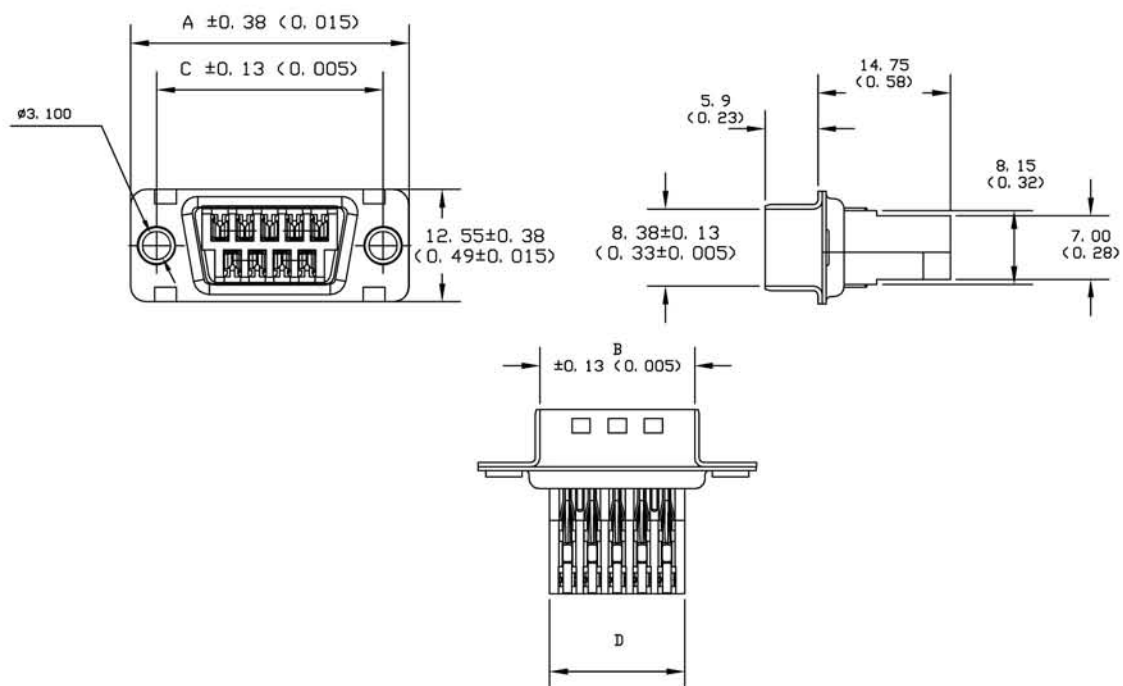
- Industrial
- Telecom
- Any industry standard I/O connections

IDC / E25



**Amphenol**

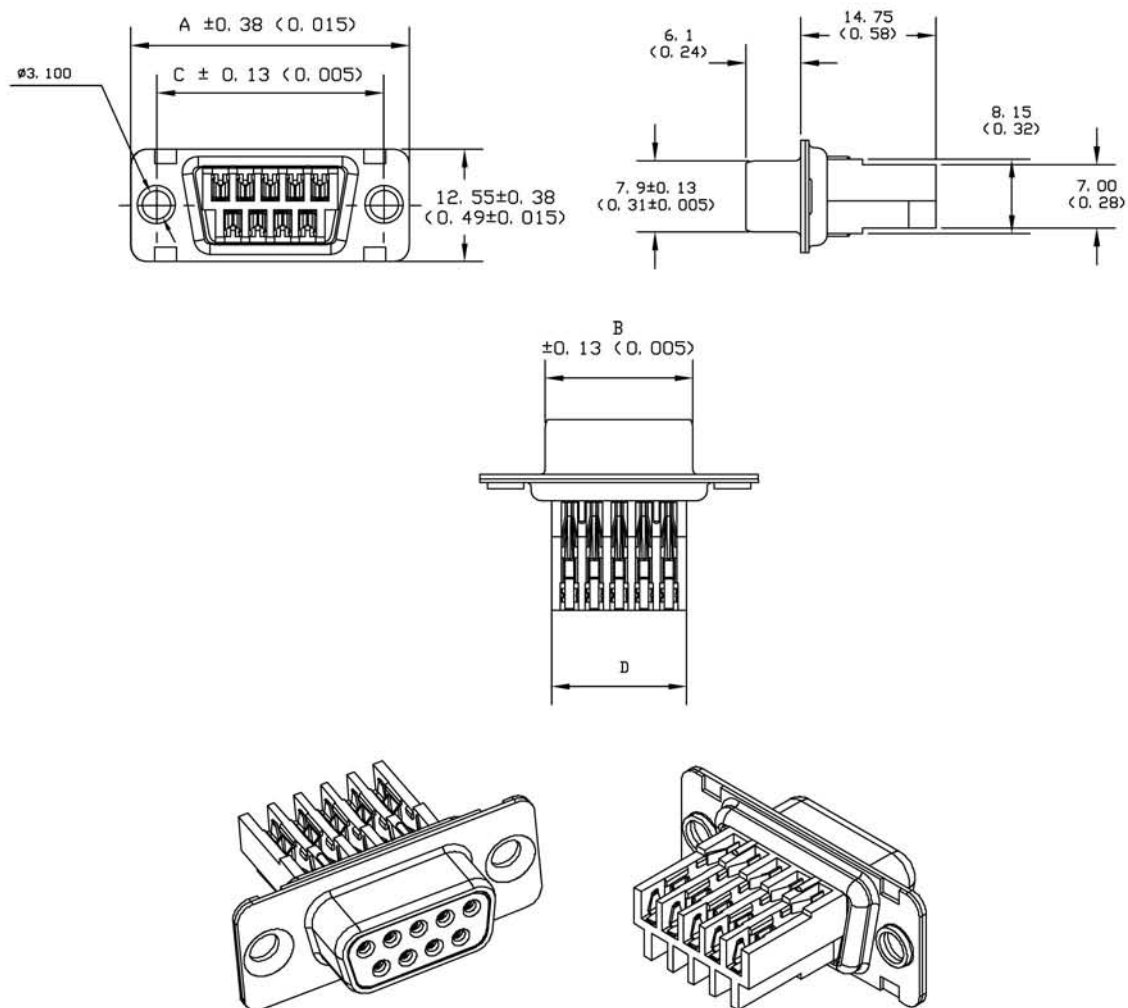
## Plug version



| Nb OF<br>CONTACTS | DIMENSIONS mm ( <i>inch</i> ) |                 |                 |                 |
|-------------------|-------------------------------|-----------------|-----------------|-----------------|
|                   | A                             | B               | C               | D               |
| 9                 | 30.81<br>(1.21)               | 16.92<br>(0.67) | 24.99<br>(0.98) | 14.90<br>(0.59) |
| 15                | 39.14<br>(1.54)               | 25.25<br>(0.99) | 33.32<br>(1.31) | 23.00<br>(0.91) |
| 25                | 53.04<br>(2.09)               | 38.96<br>(1.53) | 47.04<br>(1.85) | 36.90<br>(1.45) |
| 37                | 69.32<br>(2.73)               | 55.42<br>(2.18) | 63.50<br>(2.50) | 59.30<br>(2.33) |

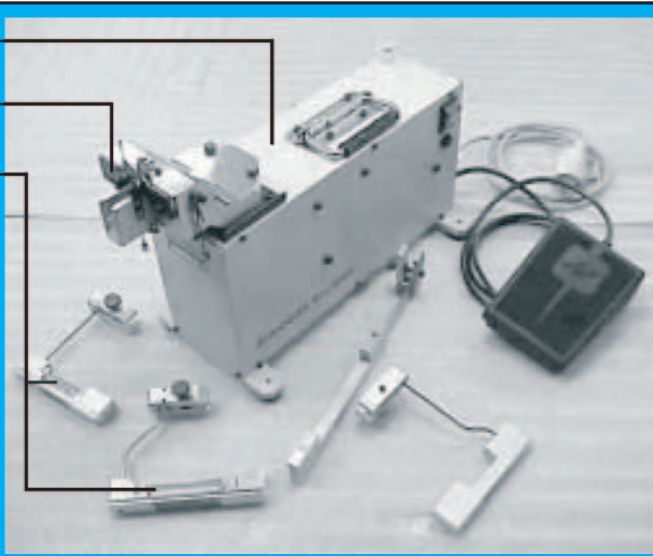


## Socket version

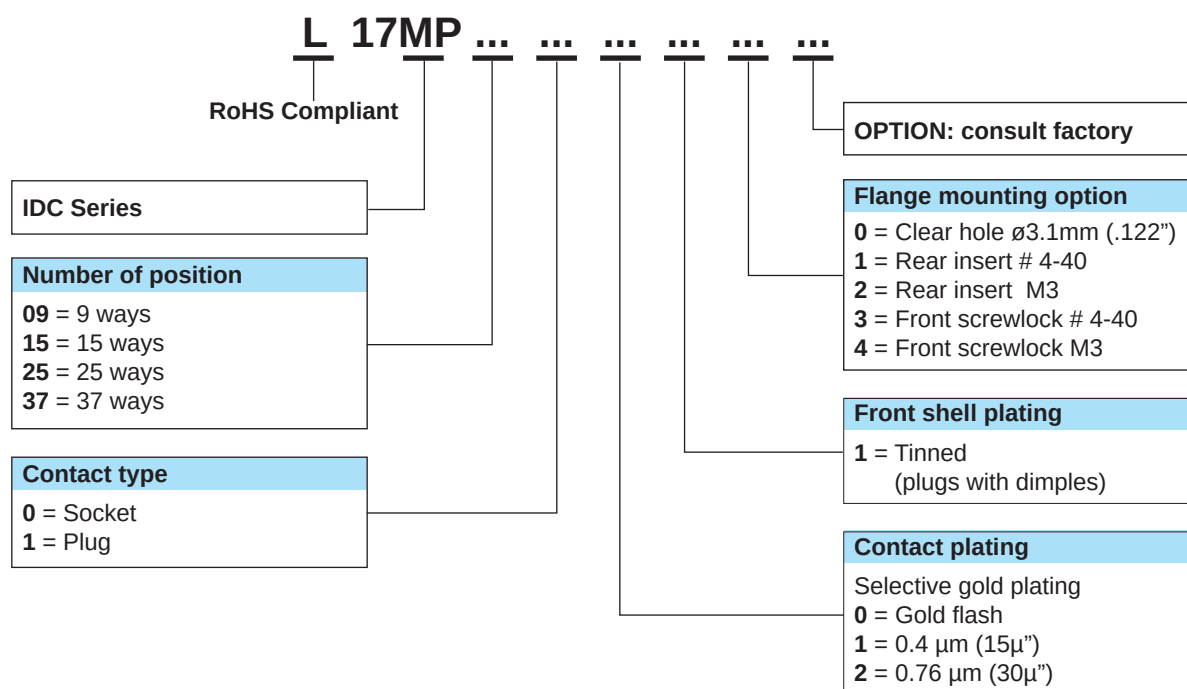


| Nb OF CONTACTS | DIMENSIONS mm (inch) |                 |                 |                 |
|----------------|----------------------|-----------------|-----------------|-----------------|
|                | A                    | B               | C               | D               |
| 9              | 30.81<br>(1.21)      | 16.24<br>(0.64) | 24.99<br>(0.98) | 14.90<br>(0.59) |
| 15             | 39.14<br>(1.54)      | 24.56<br>(0.97) | 33.32<br>(1.31) | 23.00<br>(0.91) |
| 25             | 53.04<br>(2.09)      | 38.38<br>(1.51) | 47.04<br>(1.85) | 36.90<br>(1.45) |
| 37             | 69.32<br>(2.73)      | 54.76<br>(2.16) | 63.50<br>(2.50) | 59.30<br>(2.33) |

## Tooling for IDC connectors

|                                                           |             |               |                                                                                    |
|-----------------------------------------------------------|-------------|---------------|------------------------------------------------------------------------------------|
| <b>Terminating frame</b> Ref: <b>21046</b>                |             |               |  |
| <b>Terminating head</b> Ref: <b>976 MC</b>                |             |               |                                                                                    |
| <b>Connector holders references</b>                       |             |               |                                                                                    |
| <b>Number of Contacts</b>                                 | <b>Plug</b> | <b>Socket</b> |                                                                                    |
| 09                                                        | 991 MC      | 992 MC        |                                                                                    |
| 15                                                        | 993 MC      | 994 MC        |                                                                                    |
| 25                                                        | 995 MC      | 996 MC        |                                                                                    |
| 37                                                        | 997 MC      | 998 MC        |                                                                                    |
| <b>Hand tool</b> Ref: <b>989 MC</b> Single insertion tool |             |               |                                                                                    |

## How to order



Do not hesitate to contact us for further information

# Amphenol

### Amphenol IT & Communication Products

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Industrial Headquarters, Dong Keng Road  
Gong Ming Town, Shen Zhen China  
Fax: +86(0)755 2754 9955

#### Technical Support

Tel: +86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>



For Sea, Air or Land, these connectors are SEALED! Amphenol's SD308 Sealed D-Subminiature Connectors are available in the full range of standard density and hi-density insert arrangements, pin and socket contacts. These connectors are supplied with fixed screw machine contacts and are available in Solder Cup, Straight PCB, and Right Angle PCB terminations.

- Ruggedized Computers and Peripheral Equipment
- Industrial Controllers
- 21st Century Soldier
- Ideal For Retrofit Applications Or Late Design-In

## SPECIFICATIONS:

### PRODUCT FEATURES

- One piece machined Aluminum Shell
- Gold Plated Screw Machine Contacts
- Hi Grade Thermoplastic Inserts -67°F to +257°F (-55°C to +125°C)
- Integrated Blind Panel Mounts
- Supplied with Conductive Panel Seal Gasket

### MATERIALS AND PLATINGS

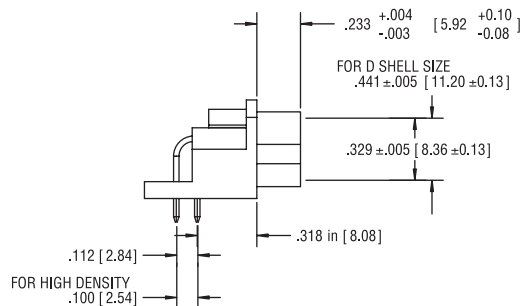
|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| <b>Shells</b>   | Machined aluminum alloy, tin plated                         |
| <b>Inserts</b>  | High temperature resistant polyethersulfone per mil-p-46185 |
| <b>Contacts</b> | Copper alloy, 20µ" (0.51µm) gold plated over nickel.        |
| <b>Seal</b>     | Silicone elastomer with nickel plated graphite flake        |

### ELECTRICAL DATA

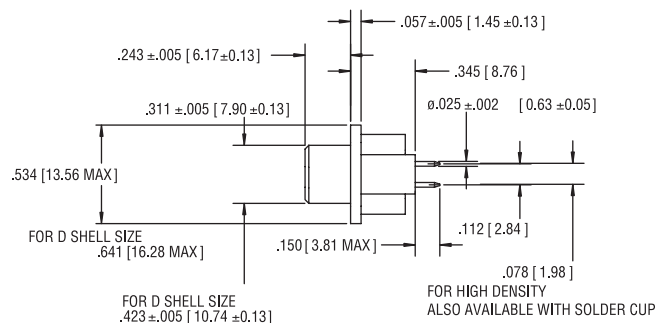
|                              |                                     |
|------------------------------|-------------------------------------|
| <b>Current Rating</b>        | 5A                                  |
| <b>Insulation Resistance</b> | 5 GIGOHM @ 500 VDC                  |
| <b>Working Voltage</b>       | 120 VAC                             |
| <b>D.W.V.</b>                | 1,000 VAC pin to pin & pin to shell |

### CLIMATIC DATA

|                              |                                   |
|------------------------------|-----------------------------------|
| <b>Operating Temperature</b> | -67°F to +257°F (-55°C to +125°C) |
|------------------------------|-----------------------------------|



PLUG - SIDE VIEW



RECEPTACLE - SIDE VIEW

## SD308 - E09 - S - A - 1 - 000

### Series Designation

### Shell Size & Number Of Contacts

STD Density E09, A15, B25, C37, D50  
HIGH Density E15, A26, B44, C62, D78, 6106

### Contact Type

S=Socket Contact P=Pin Contact

000 = Standard part

other deviations as required

### Mounting Type

1 = 4-40 Blind Nut  
2 = 4-40 Blind Nut with R/A Mounting Bracket

### Termination Style

A = Right Angle pcb B = Vertical pcb  
C = Solder Cup

### SPECIFICATIONS:

#### DESCRIPTION

- Hi reliability filtering in multi row arrangements
- Stamped and Formed shells
- Screw Machine Contacts and Hi Reliability inserts
- Available in all Hi-Density insert patterns

#### MATERIALS AND PLATINGS

|           |                                                              |
|-----------|--------------------------------------------------------------|
| Shells    | Stamped steel shell, tin plated                              |
| Inserts   | High temperature resistant polyethersulfone per MIL-P-46185  |
| Contacts  | Machined copper alloy, 20µ" (0.51µm) gold plated over nickel |
| Capacitor | Barium titanate ceramic array                                |

#### ELECTRICAL DATA

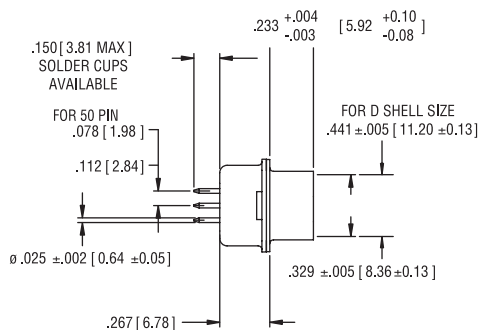
|                       |                                   |
|-----------------------|-----------------------------------|
| Current Rating        | 5 A                               |
| Insulation Resistance | 5 GIGOHM @ 500 VDC                |
| Working Voltage       | 200 VDC                           |
| D.W.V.                | 500 VDC pin to pin & pin to shell |
| Capacitance           | +/- 20% ( see P/N description )   |

#### CLIMATIC DATA

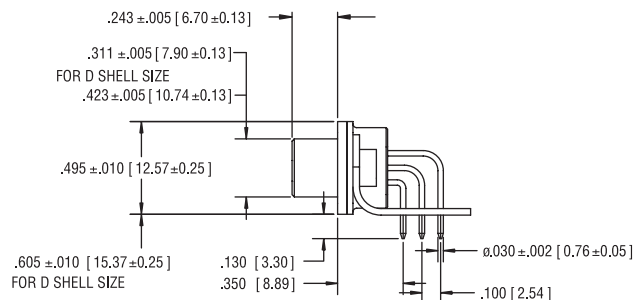
|                       |                                   |
|-----------------------|-----------------------------------|
| Operating Temperature | -67°F to +257°F (-55°C to +125°C) |
|-----------------------|-----------------------------------|

For 50 position and all high density versions. Amphenol's FD308 Filtered D-Subminiature connectors are available in the full range of hi-density insert arrangements, pin and socket contacts, plus the 50 position standard density. These connectors are supplied with fixed screw machine contacts and are available in Straight and Right Angle PCB terminations and Solder Cup.

- Computers and Peripheral Equipment
- Avionics Systems Ideal For Retrofit Applications Or Late Design-In



PLUG - SIDE VIEW



RECEPTACLE - SIDE VIEW

### FD308 - B44 - S - A - 1 - A2 - 000

#### Series Designation

#### Size & Number Of Contacts

STD Density E09, A15, B25, C37, D50  
High Density E15, A26, B44, C62, D78, 6104

#### Contact Type

S = Socket Contact P = Pin Contact

#### Termination Style

A = Right Angle pcb  
B = Vertical pcb  
C = Solder Cup

000 = Standard part  
other deviations as required

#### Capacitance Code

A2 = 200 PF      02 = 2000 PF  
A4 = 400 PF      05 = 5000 PF  
01 = 1000 PF

#### Mounting Type

1 = 4-40 Clinch Nut  
2 = Ø.120 (3.05) Hole  
3 = R/A Mounting Bracket  
4 = 4-40 Clinch Nut  
with R/A Mounting Bracket

## ORDERING INFORMATION - IDC

FCC17 - E09 - S - W - 4 - 8 - 0 - G

## Series Designation

## Size and Configuration

15 &amp; 25 Size Consult Factory.

## Connector Type

S: Socket P: Pin Consult Factory.

## Termination Type

W: IDC \*

## Mounting

2: .120 (3.05) Diameter Through Hole  
4: 4-40 Threaded Inserts  
6: M3 Threaded Inserts

## Special

G: 50 Micro Inches Gold

## Modifier

0: Standard Product  
x: Special or Custom Versions

## Capacitance Value

D: 50 pF 5: 1,000 pF  
0: 180 pF E: 2,200 pF  
F: 330 pF 9: 5,600 pF  
1: 470 pF 8: 47,000 pF  
4: 820 pFOther Capacitance values available.  
Consult Factory.

## ORDERING INFORMATION - FILTERED PRESS FIT

FCC17 - B25 - S - R - 4 - 8 - 0 - G

## Series Designation

## Size and Configuration \*

## Connector Type

S: Socket P: Pin Consult Factory.

## Termination Type

R: Press Fit

## Mounting

2: .120 (3.05) Diameter Through Hole  
3: 4-40 Self Locking Threaded Insert  
4: 4-40 Threaded Inserts  
5: 4-40 Threaded Standoff  
6: M3 Threaded Inserts  
E: Code 4 with 4-40 Hex Jack Socket

## Special

G: 50 Micro Inches Gold

## Modifier

0: Standard Product  
x: Special or Custom Versions

## Capacitance Value

D: 50 pF 5: 1,000 pF  
0: 180 pF E: 2,200 pF  
F: 330 pF 9: 5,600 pF  
1: 470 pF 8: 47,000 pF  
4: 820 pFOther Capacitance values available.  
Consult Factory.

## ORDERING INFORMATION - STACKED D-SUB

FCC17 - 2 - BP - BS - 4 - 5 - 5 - X

## Series Designation

## Vertical Mounting Dimension Between Connectors

1 = .625 (15.88)  
2 = .750 (19.05)

## Upper Connector Configuration (Size and Style)

EP: 9 pin BP: 25 pin  
ES: 9 socket BS: 25 socket  
AP: 15 pin CP: 37 pin  
AS: 15 socket CS: 37 socket

## Lower Connector Configuration

(Size and Style) same as Upper Connector Configuration

## Mounting

2: .120 (3.05) Diameter Through Hole on Flanges  
4: 4-40 Threaded Inserts on Flanges  
E: 4-40 Hex Jack Sockets (supplied loose)

## Modifier

0: Standard Product  
x: Special or Custom VersionsLower Connector Filter Capacitance  
same as Upper Connector Filter  
Capacitance Designation

## Upper Connector Filter Capacitance

D: 50 pF 5: 1,000 pF  
0: 180 pF E: 2,200 pF  
F: 330 pF 7: 1,200 pF  
1: 470 pF 9: 5,600 pF  
4: 820 pF 8: 47,000 pF\* For Additional Mounting Options and  
Filter Capacitance - Consult Factory



### ORDERING INFORMATION - D-SUB

**FCC17 - B25 - S - C - 4 - 4 - 0 - G**

**Series Designation** \_\_\_\_\_

**Size** \_\_\_\_\_  
E09, A15, B25, C37

**Connector type** \_\_\_\_\_  
A - Adapter P - Pin S - Socket

**Termination Type** \_\_\_\_\_  
A - Right Angle PC Tail, .318 (8.08) Footprint  
B - Right Angle PC Tail, .405 (10.29) Footprint  
C - Right Angle PC Tail, .590 (14.99) Footprint  
D - Pin/Socket Adapter  
E - Vertical Mount PC Tail  
M - Solder Cup  
N - Vertical Mount PC Tail - Long Body

**Mounting options\***  
A: 4-40 Threaded PC Tail Standoffs with Boardlock, Vertical Mount Only  
E: 4-40 Hex Jack Sockets (supplied loose)  
F: 4-40 Round Fixed Jack Sockets  
2: .120 (3.05) diameter Through hole  
3: Self-Locking 4-40 Threaded Inserts  
4: 4-40 Threaded Inserts (Standard)  
5: 4-40 Threaded Stand-Offs, Vertical Mount  
6: M3 Threaded inserts

**Specials**  
No Digit: Standard 15µ" (0.38µm) gold  
G: 50µ" (1.27µm) gold  
K: 30µ" (0.76µm) gold  
L: Standard Connector with added ferrite block

**Modifier**  
0 = Standard Product (Boardlocks on Right Angle D-Subs)  
B = Metal Mounting Brackets, for Right Angle D-Subs  
D = .315 (8.00) to Boardlock for .590 (14.99) footprint  
E = Plastic Bracket - No Boardlock  
F = No Boardlock, No plastic or metal Bracket - Alignment Strip Only  
X = Specials or Custom Versions

**Filter Capacitance (pF)\***  
D: 50 pF 5: 1,000 pF  
B: 100 pF 7: 1,200 pF  
0: 180 pF E: 2,200 pF  
F: 330 pF 9: 5,600 pF  
1: 470 pF 8: 47,000 pF  
4: 820 pF

\* For Additional Mounting Options and Filter Capacitance - Consult Factory

### ORDERING INFORMATION - COMBO D-SUB

**FCC17 - A - 3W3 - P - M - 4 - 5 - 0 - G**

**Series Designation** \_\_\_\_\_

**Shell Size** \_\_\_\_\_  
A, B, C, D, E

**Arrangement** \_\_\_\_\_

**Connector type** \_\_\_\_\_  
A = Adapter, P = Pin, S = Socket

**Termination type** \_\_\_\_\_  
D = Pin/Socket Adapter  
E = Power PC Tail - 40A - .126 (3.20) Dia., .175 (4.44) Lg.  
K = Power Solder Cup - 10A - Wire Size 16  
L = Power Solder Cup - 20A - Wire Size 12  
M = Power Solder Cup - 40A - Wire Size 8  
R = Power Press Fit - 20A - .145 (3.68) Lg. - .126 (3.20) Dia. Hole

**Plating Option**  
Blank = Standard 30µ" (0.76µm) gold  
G = 50µ" (1.27µm) gold

**Modifier**  
0 = Standard  
X = Specials or Custom versions (Consult Factory)

**Filter Capacitance (pF)**  
D: 50 pF 5: 1000 pF  
B: 100 pF 7: 1200 pF  
o: 180 pF E: 2200 pF  
f: 330 pF 9: 5600 pF  
l: 470 pF 8: 47000 pF  
4: 820 pF

**Mounting Options**  
2 = .120 (3.05) dia. mounting holes  
3 = 4-40 Threads Self locking  
4 = 4-40 Threads  
5 = 4-40 Standoffs - PC tail only  
6 = M3 Threads  
E = 4-40 Hex Jack Sockets (supplied loose)

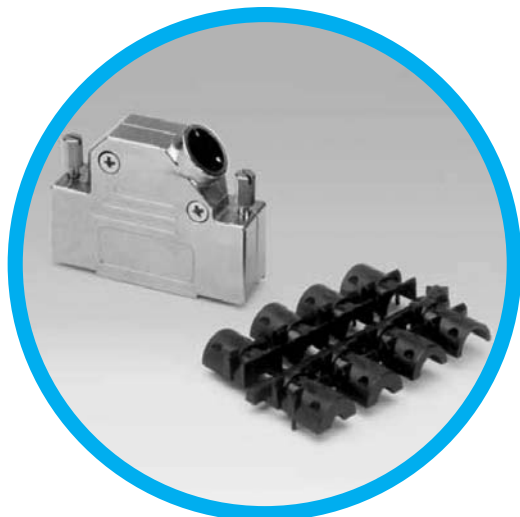
\* For Additional Mounting Options and Filter Capacitance - Consult Factory

# D'Sub Metallic Hoods

DTZK & DVZK series

## MAIN CHARACTERISTICS

- **Material and plating:**  
Zinc die-cast, nickel plated
- **Cable strainrelief:**  
Steel fiber reinforced Polycarbonate UL94V-O
- **Temperature range:**  
-40°C to 120°C
- **Cable diameter:**  
3 to 13mm
- **Attenuation factor:**  
> 40 dB between 30 MHz and 1 GHz
- **Approvals:**  
VDE 0871 - FCC 20780 - 89 / 336 / EU



## DESCRIPTION

Amphenol metallic hood series for D'Sub connectors offers protection from magnetic and radio interference to cable assemblies.

Easily assembled these hoods are suitable for all industrial and telecom applications.

*Shield  
Your cable  
assemblies!*

## APPLICATIONS

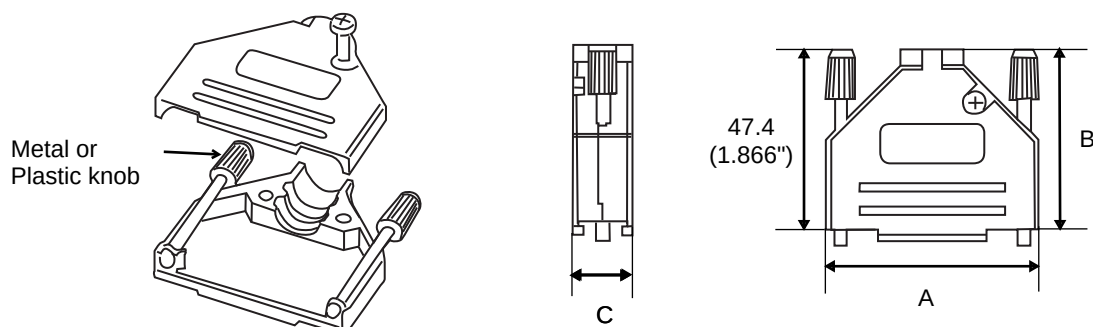
- Industrial
- Military
- Telecom
- Any application requiring EMI/RFI protection



**Amphenol**

**D'SUB ACCESSORIES / E23**

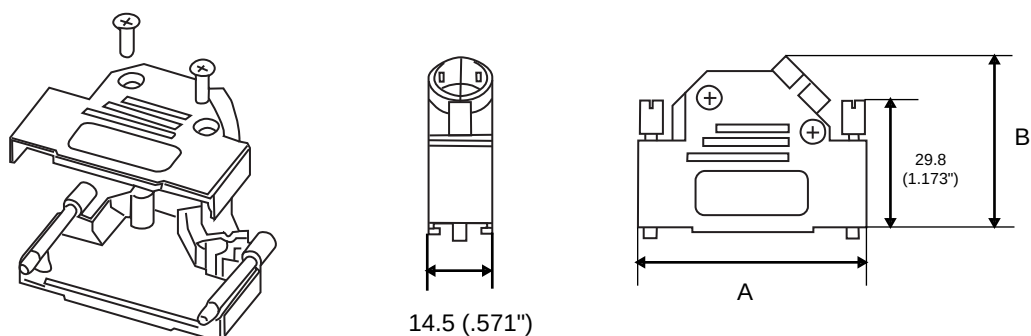
## DTZK Series



| Part number         | A                 | B                 |
|---------------------|-------------------|-------------------|
| <b>L17DTZK9Kxx</b>  | 21<br>(.827'')    | 38.3<br>(1.508'') |
| <b>L17DTZK15Kxx</b> | 39.5<br>(1.555'') | 40.5<br>(1.594'') |
| <b>L17DTZK25Kxx</b> | 54.4<br>(2.144'') | 47.3<br>(1.862'') |
| <b>L17DTZK37Kxx</b> | 70.9<br>(2.791'') | 52.2<br>(2.055'') |

xx = Blank for plastic knob and FM for metal knob

## DVZK Series



| Part number         | A                 | B                 |
|---------------------|-------------------|-------------------|
| <b>L17DVZK9Kxx</b>  | 31<br>(1.220'')   | 36,2<br>(1.425'') |
| <b>L17DVZK15Kxx</b> | 39,5<br>(1.555'') | 40,2<br>(1.583'') |
| <b>L17DVZK25Kxx</b> | 53,2<br>(2.094'') | 40,2<br>(1.583'') |
| <b>L17DVZK37Kxx</b> | 69,7<br>(2.744'') | 40,2<br>(1.583'') |

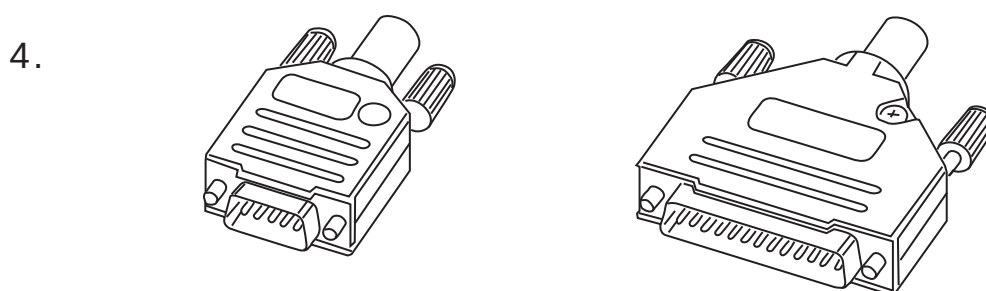
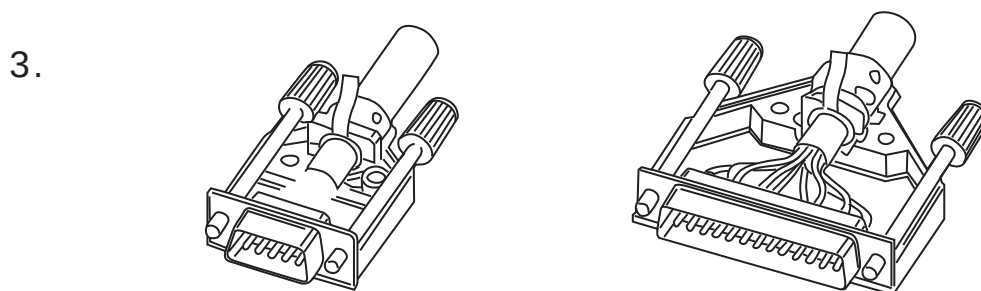
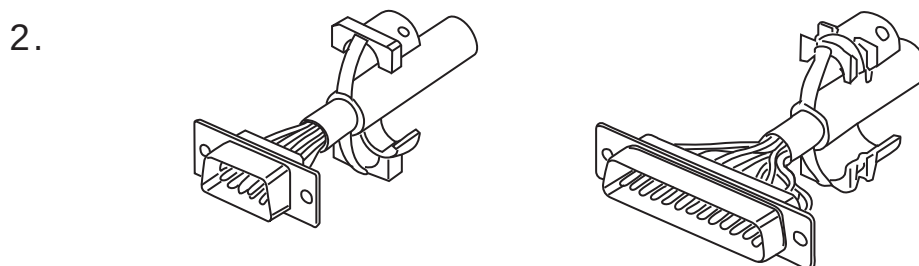
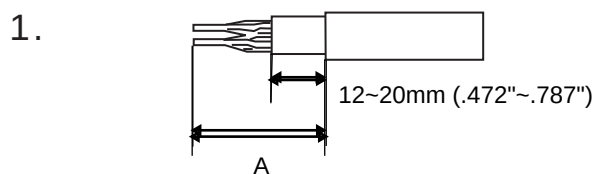
xx = Blank for plastic knob and FM for metal knob



9 Size equipped with only one screw

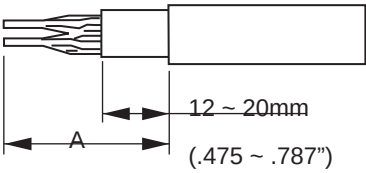
## Assembly Instructions DTZK Series

| Type         | A        |
|--------------|----------|
| L17DTZK9Kxx  | 30       |
| L17DTZK15Kxx | (1.181") |
| L17DTZK25Kxx | 40       |
| L17DTZK37Kxx | (1.575") |

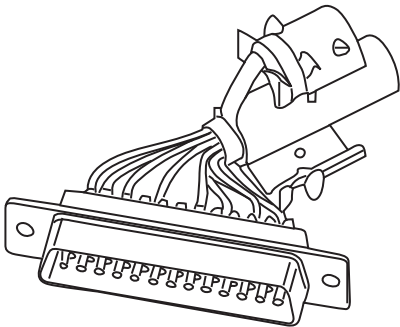


A *Assembly Instructions DVZK Series*

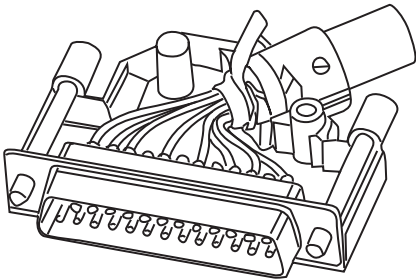
1.



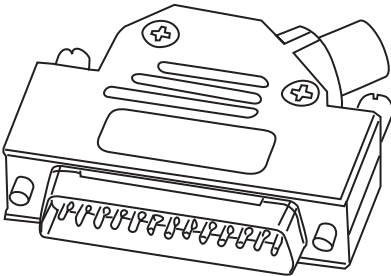
2.



3.

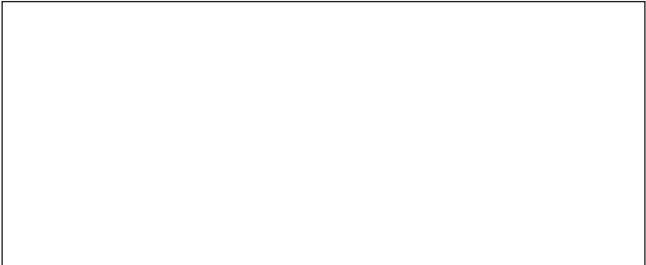


4.



| Type         | A        |
|--------------|----------|
| L17DVZK9Kxx  | 30       |
| L17DVZK15Kxx | (1.181") |
| L17DVZK25Kxx | 45       |
| L17DVZK37Kxx | (1.772") |

Do not hesitate to contact us for further information



**Amphenol**

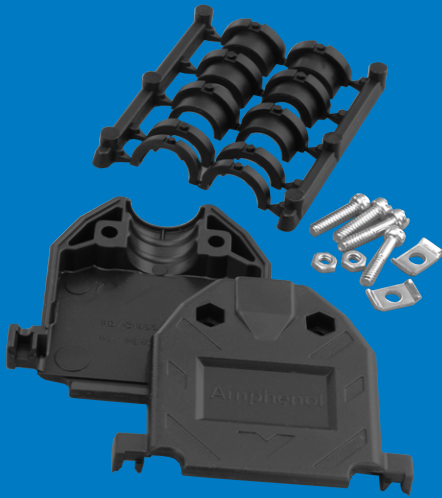
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Block A3/A4, The 4th Industrial District of  
Industrial Headquarters, Dong Keng Road  
Gong Ming Town, Shen Zhen China  
Fax: +86(0)755 2754 9955

**Technical Support**

Tel: +86(0)755 2717 7945  
Info-dsub@amphenol.com.cn  
<http://www.dsubconnector.com>

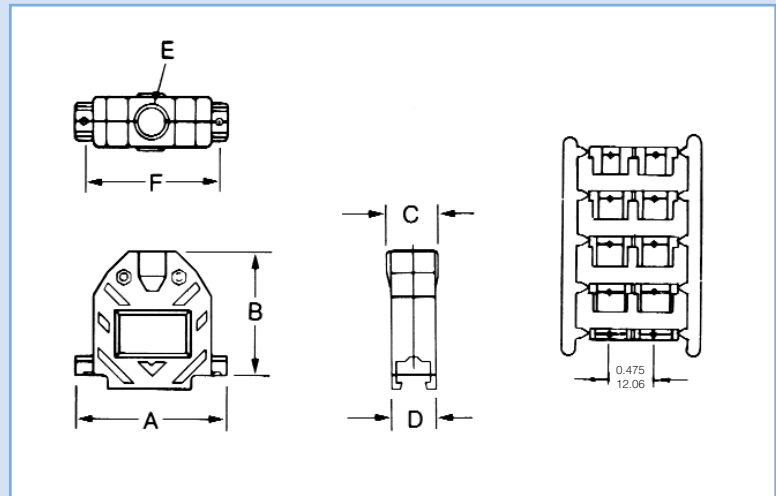




Amphenol's black plastic backshell accommodates most standard and high-density D-Subminiature connectors and is appropriate for most cable assemblies. This version is economical and highly durable. The split-grommet insert provides cable strain relief while making it easy to assemble.

**SPECIFICATIONS:**

**Housing Material:** Styrene (UL 94 VO)  
**Grommet Material:** Polypropylene  
**Mounting Hardware:** Steel, clear zinc finish \*RoHS Compliant

**DIMENSIONS AND ORDERING INFORMATION**

| Shell Size | Standard # of Contacts | Hi-Density # of Contacts | Part #     | Dimensions       |                  |                  |                  |                  |                  | Cable Diameter Range |                  |
|------------|------------------------|--------------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|------------------|
|            |                        |                          |            | A                | B                | C                | D                | E                | F                | Minimum              | Maximum          |
| E          | 9                      | 15                       | 17E-1724-1 | 1.217<br>(30.91) | 1.547<br>(39.29) | 0.640<br>(16.26) | 0.640<br>(16.26) | 0.400<br>(10.16) | 0.984<br>(24.99) | 0.210<br>(5.33)      | 0.350<br>(8.89)  |
| A          | 15                     | 26                       | 17E-1725-1 | 1.545<br>(39.24) | 1.505<br>(38.23) | 0.640<br>(16.26) | 0.640<br>(16.26) | 0.400<br>(10.16) | 1.312<br>(33.32) | 0.210<br>(5.33)      | 0.350<br>(8.89)  |
| B          | 25                     | 44                       | 17E-1726-1 | 2.090<br>(53.08) | 1.655<br>(42.04) | 0.710<br>(18.03) | 0.640<br>(16.26) | 0.522<br>(13.26) | 1.857<br>(47.17) | 0.230<br>(5.84)      | 0.450<br>(11.43) |
| C          | 37                     | 62                       | 17E-1727-1 | 2.734<br>(69.44) | 1.830<br>(46.48) | 0.906<br>(23.01) | 0.640<br>(16.26) | 0.726<br>(18.44) | 2.500<br>(63.50) | 0.350<br>(8.89)      | 0.640<br>(16.26) |
| D          | 50                     | 78                       | 17E-1728-1 | 2.645<br>(67.18) | 1.855<br>(47.12) | 0.940<br>(23.88) | 0.770<br>(19.56) | 0.726<br>(18.44) | 2.406<br>(61.11) | 0.350<br>(8.89)      | 0.640<br>(16.26) |

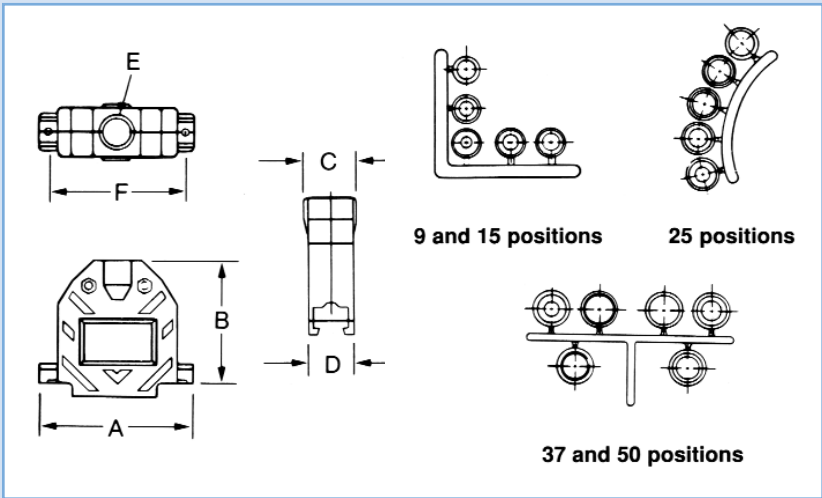
## Plated Plastic Backshell

### SPECIFICATIONS:

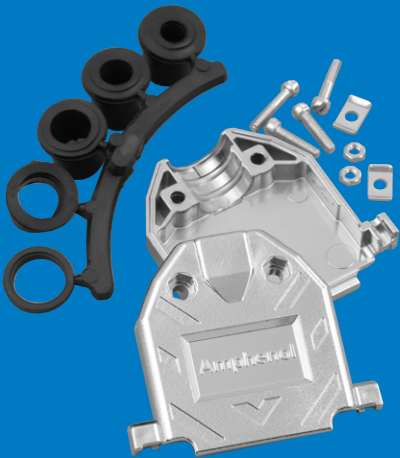
|                           |                                          |
|---------------------------|------------------------------------------|
| <b>Housing Material:</b>  | ABS Polymer                              |
| <b>Plating:</b>           | Nickel over copper                       |
| <b>Grommet Material:</b>  | PVC (UL 94 VO)                           |
| <b>Mounting Hardware:</b> | Steel, clear zinc finish *RoHS Compliant |

### ASSEMBLY INSTRUCTIONS

1. Select the tightest insert that will fit over the cable and thread the cable through it, placing the end with the smaller O.D. (the end without the washer) towards the connector.
2. Cut the jacket, fold the shielding back over the outside of the insert and cut it just short of the washer.
3. Install jackscrews and connector.
4. Place the washer in the outermost depression in the exit area of the hood and screw the cover closed.



## ACCESSORIES



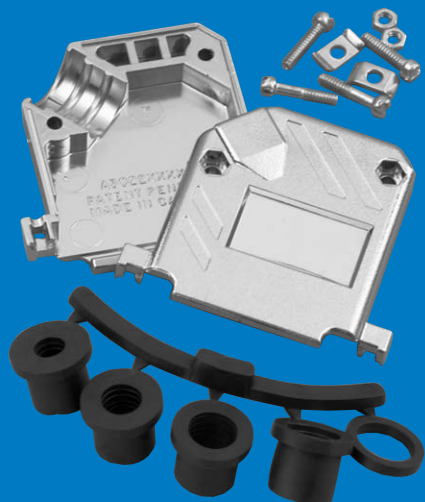
Amphenol's plated plastic backshell accommodates most standard and high-density D-Subminiature connectors and is appropriate for cable assemblies requiring compliance to FCC 20780. This version is highly durable and provides EMI/RFI protection. The rubber grommet compression insert forces the cable's shielding against the inside of the cable exit area, assuring shielding.

### DIMENSIONS AND ORDERING INFORMATION

| Shell Size | Standard # of Contacts | Hi-Density # of Contacts | Part #     | Dimensions       |                  |                  |                  |                  |                  | Cable Diameter Range |                  |
|------------|------------------------|--------------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|------------------|
|            |                        |                          |            | A                | B                | C                | D                | E                | F                | Minimum              | Maximum          |
| E          | 9                      | 15                       | 17E-1724-2 | 1.217<br>(30.91) | 1.547<br>(39.29) | 0.640<br>(16.26) | 0.640<br>(16.26) | 0.400<br>(10.16) | 0.984<br>(24.99) | 0.210<br>(5.33)      | 0.320<br>(8.13)  |
| A          | 15                     | 26                       | 17E-1725-2 | 1.545<br>(39.24) | 1.505<br>(38.23) | 0.640<br>(16.26) | 0.640<br>(16.26) | 0.400<br>(10.16) | 1.312<br>(33.32) | 0.210<br>(5.33)      | 0.320<br>(8.13)  |
| B          | 25                     | 44                       | 17E-1726-2 | 2.000<br>(50.8)  | 1.655<br>(42.04) | 0.710<br>(18.03) | 0.640<br>(16.26) | 0.522<br>(13.26) | 1.857<br>(47.17) | 0.230<br>(5.84)      | 0.450<br>(11.43) |
| C          | 37                     | 62                       | 17E-1727-2 | 2.730<br>(69.34) | 1.830<br>(46.48) | 0.906<br>(23.01) | 0.640<br>(16.26) | 0.726<br>(18.44) | 2.500<br>(63.50) | 0.350<br>(8.89)      | 0.650<br>(16.51) |
| D          | 50                     | 78                       | 17E-1728-2 | 2.645<br>(67.18) | 1.855<br>(47.12) | 0.940<br>(23.88) | 0.440<br>(11.18) | 0.726<br>(18.44) | 2.406<br>(61.11) | 0.350<br>(8.89)      | 0.650<br>(16.51) |

INCHES (MM)

## ACCESSORIES



Amphenol's plated plastic backshell accommodates most standard and high-density D-Subminiature connectors and is appropriate for cable assemblies requiring compliance to FCC 20780. This version is highly durable and provides EMI/RFI protection. The rubber grommet compression insert forces the cable's shielding against the inside of the cable exit area, assuring shielding. The 45° cable exit helps save space behind equipment.

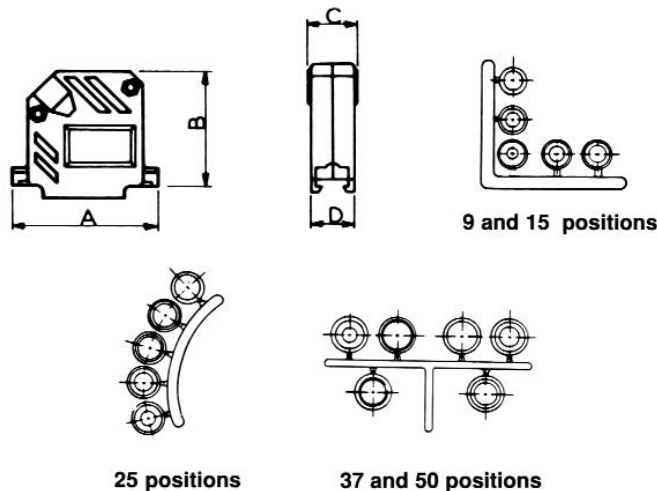
## 45° Plated Plastic Backshell

### SPECIFICATIONS:

|                           |                                          |
|---------------------------|------------------------------------------|
| <b>Housing Material:</b>  | ABS Polymer                              |
| <b>Plating:</b>           | Nickel over copper                       |
| <b>Grommet Material:</b>  | PVC (UL 94 VO)                           |
| <b>Mounting Hardware:</b> | Steel, clear zinc finish *RoHS Compliant |

### ASSEMBLY INSTRUCTIONS

1. Select the tightest insert that will fit over the cable and thread the cable through it, placing the end with the smaller O.D. (the end without the washer) towards the connector.
2. Cut the jacket, fold the shielding back over the outside of the insert and cut it just short of the washer.
3. Install jackscrews and connector.
4. Place the washer in the outermost depression in the exit area of the hood and screw the cover closed.



### DIMENSIONS AND ORDERING INFORMATION

| Shell Size | Standard # of Contacts | Hi-Density # of Contacts | Part #     | Dimensions       |                  |                  |                  |                  |                  | Cable Diameter Range |                  |
|------------|------------------------|--------------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|------------------|
|            |                        |                          |            | A                | B                | C                | D                | E                | F                | Minimum              | Maximum          |
| E          | 9                      | 15                       | 17E-1824-2 | 1.217<br>(30.91) | 1.430<br>(36.32) | 0.640<br>(16.26) | 0.640<br>(16.26) | 0.400<br>(10.16) | 0.984<br>(24.99) | 0.210<br>(5.33)      | 0.320<br>(8.13)  |
| A          | 15                     | 26                       | 17E-1825-2 | 1.545<br>(39.24) | 1.568<br>(39.83) | 0.640<br>(16.26) | 0.640<br>(16.26) | 0.400<br>(10.16) | 1.312<br>(33.32) | 0.210<br>(5.33)      | 0.320<br>(8.13)  |
| B          | 25                     | 44                       | 17E-1826-2 | 2.090<br>(53.09) | 1.735<br>(44.07) | 0.710<br>(18.03) | 0.640<br>(16.26) | 0.522<br>(13.26) | 1.857<br>(47.17) | 0.230<br>(5.84)      | 0.450<br>(11.43) |
| C          | 37                     | 62                       | 17E-1827-2 | 2.734<br>(69.44) | 1.976<br>(50.19) | 0.906<br>(23.01) | 0.640<br>(16.26) | 0.726<br>(18.44) | 2.500<br>(63.5)  | 0.350<br>(8.89)      | 0.650<br>(16.51) |

## Two-Piece Die Cast Shielded Backshells

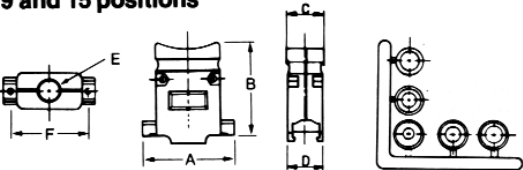
### SPECIFICATIONS:

|                    |                                             |
|--------------------|---------------------------------------------|
| Housing Material:  | Die cast zinc                               |
| Grommet Material:  | PVC (UL 94 VO)                              |
| Mounting Hardware: | Steel, clear zinc finish    *RoHS Compliant |

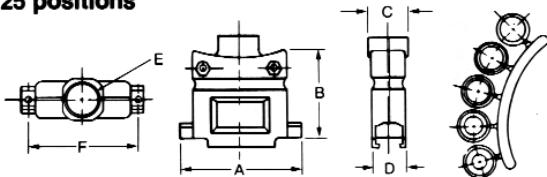
### ASSEMBLY INSTRUCTIONS

1. Select the tightest insert that will fit over the cable and thread the cable through it, placing the end with the smaller O.D. (the end without the washer) towards the connector.
2. Cut the jacket, fold the shielding back over the outside of the insert and cut it just short of the washer.
3. Install jackscrews and connector.
4. Place the washer in the outermost depression in the exit area of the hood and screw the cover closed.

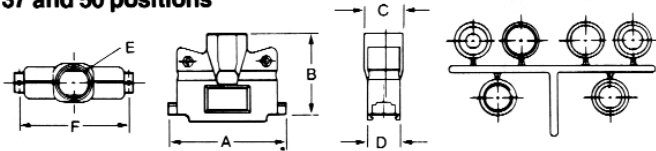
#### 9 and 15 positions



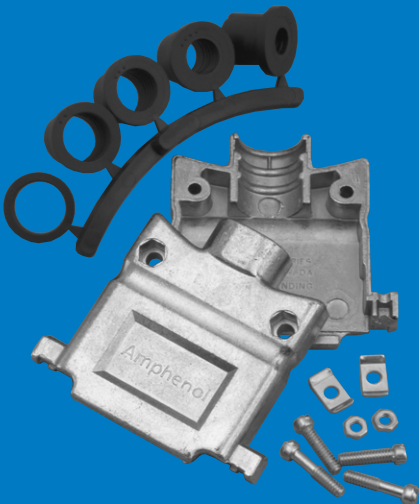
#### 25 positions



#### 37 and 50 positions



## ACCESSORIES



Amphenol's metal backshell accommodates most standard and high-density D-Subminiature connectors and is appropriate for cable assemblies requiring compliance to FCC 20780. This version is highly durable and provides EMI/RFI protection. The rubber grommet compression insert forces the cable's shielding against the inside of the cable exit area, assuring shielding.

### DIMENSIONS AND ORDERING INFORMATION

| Shell Size | Standard # of Contacts | Hi-Density # of Contacts | Part #      | Dimensions       |                  |                  |                  |                  |                  | Cable Diameter Range |                  |
|------------|------------------------|--------------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|------------------|
|            |                        |                          |             | A                | B                | C                | D                | E                | F                | Minimum              | Maximum          |
| E          | 9                      | 15                       | 17E-1657-09 | 1.217<br>(30.91) | 1.430<br>(36.32) | 0.640<br>(16.26) | 0.640<br>(16.26) | 0.400<br>(10.16) | 0.984<br>(24.99) | 0.210<br>(5.33)      | 0.320<br>(8.13)  |
| A          | 15                     | 26                       | 17E-1657-15 | 1.545<br>(39.24) | 1.568<br>(39.83) | 0.640<br>(16.26) | 0.640<br>(16.26) | 0.400<br>(10.16) | 1.312<br>(33.32) | 0.210<br>(5.33)      | 0.320<br>(8.13)  |
| B          | 25                     | 44                       | 17E-1657-25 | 2.090<br>(53.09) | 1.735<br>(44.07) | 0.710<br>(18.03) | 0.640<br>(16.26) | 0.522<br>(13.26) | 1.857<br>(47.17) | 0.230<br>(5.84)      | 0.450<br>(11.43) |
| C          | 37                     | 62                       | 17E-1657-37 | 2.734<br>(69.44) | 1.976<br>(50.19) | 0.906<br>(23.01) | 0.640<br>(16.26) | 0.726<br>(18.44) | 2.500<br>(63.5)  | 0.350<br>(8.89)      | 0.640<br>(16.26) |

INCHES (MM)

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