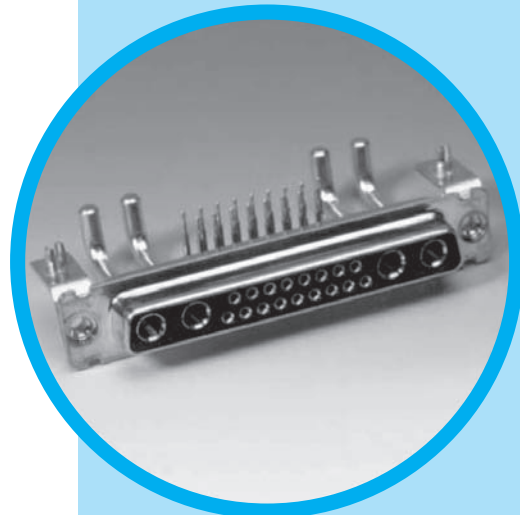




# TW

## Hybrid D'Sub series



CONTENT

### Specifications

- Connectors according to: MIL C24308 - NFC93425 - HE507

| Materials and plating                    |                                      | Electrical Data                         |                          |
|------------------------------------------|--------------------------------------|-----------------------------------------|--------------------------|
| Shells                                   | Steel-Tin plating                    | Current rating                          |                          |
| Insulators                               | High temperature black thermoplastic | Signal contacts                         | 7.5 A. with 10 A. peak   |
| Signal contacts                          | Female: machined bronze              | Power contacts                          |                          |
| Material                                 | Male: machined brass                 | PCB terminations                        | 10 to 40 A.              |
| Plating finish                           | 15μ" 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                          | 15μ" Au or 30μ" Au over 79μ" Ni      | Shielded contacts                       | 150 V.R.M.S. at 50 Hz    |
| Outer ring                               | Flash 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                                 | 15μ" 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 (with peak 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 |
|                       |                                 | Without dimples                                | E size = 30 N<br>A size = 50 N<br>B size = 80 N<br>C size = 120 N<br>D size = 160 N  |
|                       |                                 | Compatible with process                        |                                                                                      |
|                       |                                 | IR - Air convectioned                          | 260° for 20 s.                                                                       |
|                       |                                 | Resistance to solder iron heat                 | 260°C for 30 s.                                                                      |
|                       |                                 | Mating cycles                                  | ≥ 200 (class II) or 500 (class I)                                                    |



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 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 fixed in the insulator.

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

## A full series 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 (15µ") 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

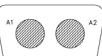
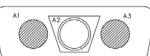
| Types  | Shells and plating                                |
|--------|---------------------------------------------------|
| 177 TW | Tin plated shell<br><i>*Male and female</i>       |
| 777 TW | Tin plated shell with dimples<br><i>Male only</i> |

## Housing arrangements

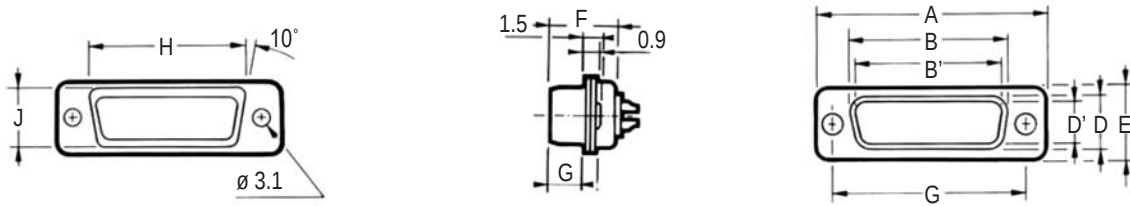
### Male front view

|                                       |                                                                                                  |                                                                                                  |                                                                                                    |
|---------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 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 |

### Additional arrangements

|                                     |                                                                                                 |                                                                                                              |                                                                                                                |
|-------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Arrangement.....<br>Shell Size..... | <br>2W2<br>E | <br>P2W2<br>E (polarized) | <br>P3W3<br>A (polarized) |
|-------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|

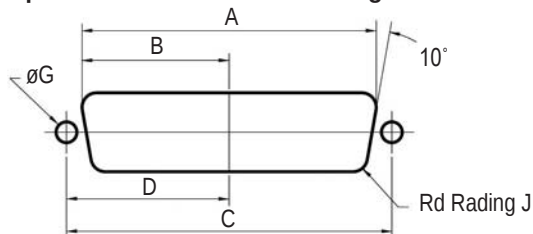
## Shell size dimensions



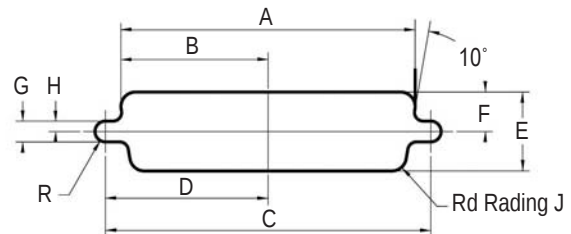
| Shell size | Contact<br>P: Pin<br>S: Socket | A<br>±0.25<br>(±.010) | B<br>0/-0.20<br>(0/- .008) | B'<br>+0.20/0<br>(+.008/0) | C<br>±0.10<br>(±.004) | D<br>0/-0.25<br>(0/- .010) | D'<br>+0.25/0<br>(+.010/0) | E<br>±0.20<br>(±.008) | F<br>+0.05/-0.20<br>(+.002/- .008) | F'<br>+0.10/-0.20<br>(+.004/- .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

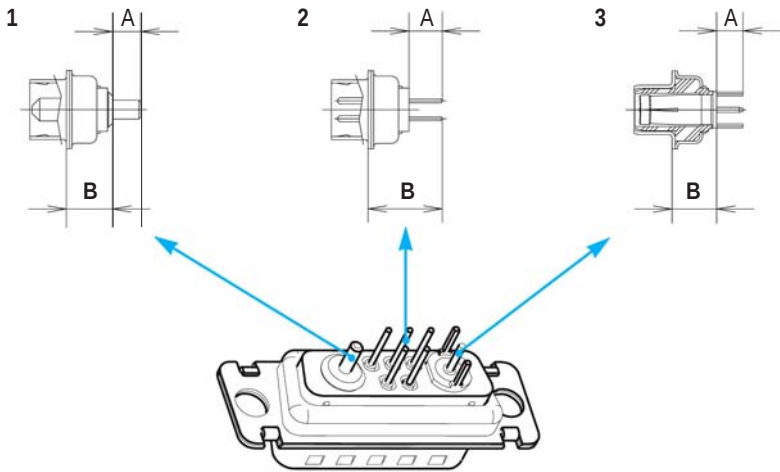


Standard cutout



| 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



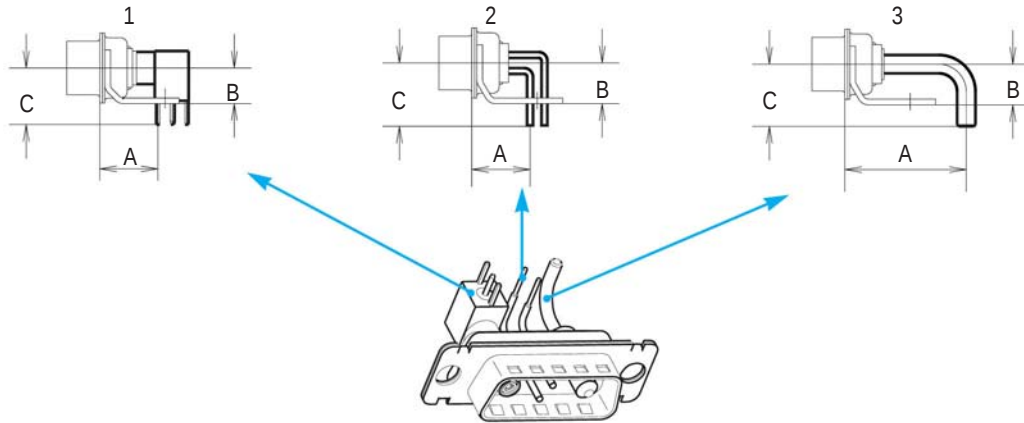
Signal tail 0.6 mm Dia. (.024")  
1.6 mm (.063")PCB  
For other PCB thickness: consult factory.

| Description                 |   | Dimensions         |                     |
|-----------------------------|---|--------------------|---------------------|
|                             |   | a                  | b                   |
| Power 3.2mm(.126") tail dia | 1 | 4.80 mm<br>(.189") | 7.2 mm<br>(.283")   |
| Power 2.0mm(.078") tail dia | 1 | 4.80 mm<br>(.189") | 7.2 mm<br>(.283")   |
| Shielded                    | 3 | 4.00 mm<br>(.157") | 7.2 mm<br>(.283")   |
| Signal                      | 2 | 5.30 mm<br>(.209") | 11.50 mm<br>(.453") |

Straight contact combinations

| Arrangement with signal contacts |                                                                                     | Arrangement without signal contacts<br>2W2 - 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. (.078")<br>(10 to 20 A) and signal                                  | P 2Y                                                         | Power only<br>2 mm DIA. (.078")<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.

| Description                 |   | Europe             |                   |                    | Mix                |                   |                    | MIL                |                   |                    |
|-----------------------------|---|--------------------|-------------------|--------------------|--------------------|-------------------|--------------------|--------------------|-------------------|--------------------|
|                             |   | 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 2.0mm(.078") 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 3.2mm(.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. (.078") (10 to 20 A) and signal   |
| -                  | HCSV            | MCSV                 | Shielded and signal                               |
| ESV                | HSV             | MSV                  | Signal only                                       |

### Arrangement without signal contacts 2W2 - 3W3 - 5W5 - 8W8

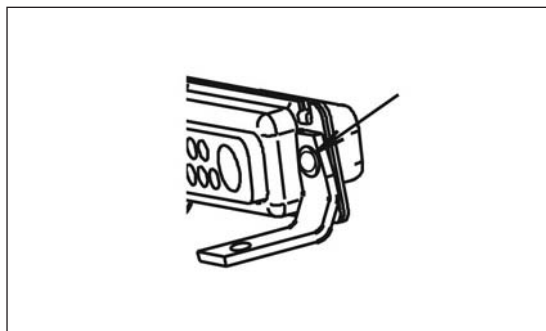
| European footprint | Mixed footprint | MIL (U.S.) footprint | Size 8 contacts only                        |
|--------------------|-----------------|----------------------|---------------------------------------------|
| EP3V               | HP3V            | MP3V                 | Power only 3.2 mm DIA. (.126") (20 to 40 A) |
| EP2V               | HP2V            | MP2V                 | Power only 2.0 mm DIA. (.078") (10 to 20 A) |
| -                  | HCV             | MCV                  | Shielded only                               |

## Mounting options

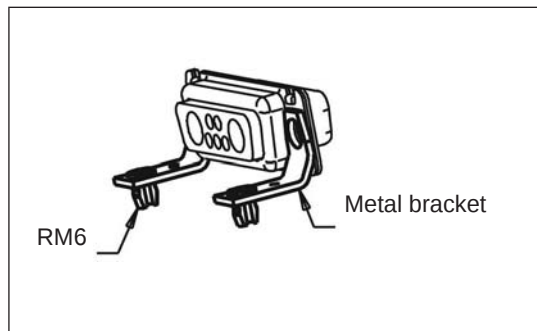
### Right angle version

Connectors come equipped with metal brackets

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

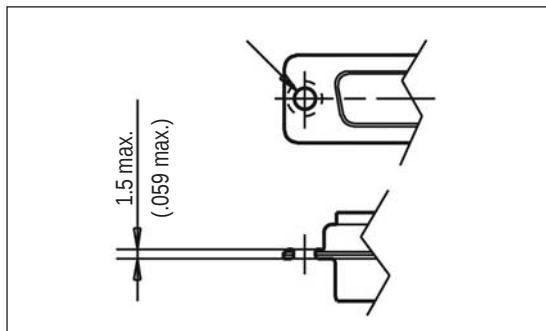


RM6: metal brackets + boardlock



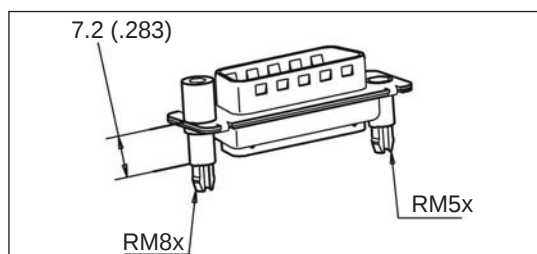
### Straight version

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



RM54: 4-40 threaded

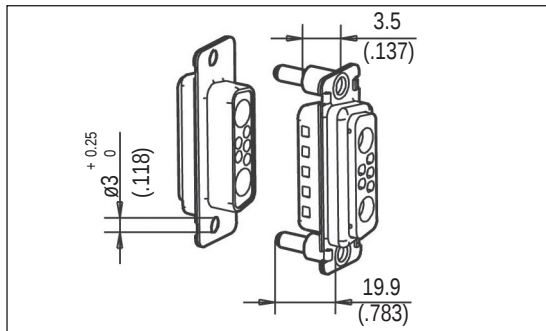
RM53: M3 threaded



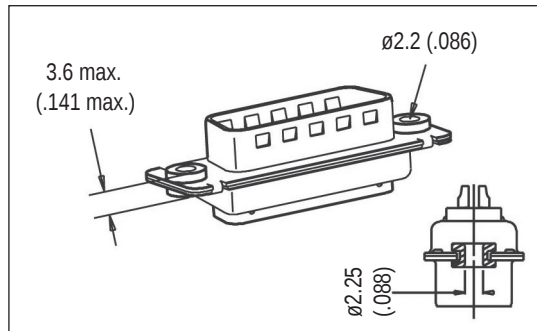
RM84: 4-40 threaded

RM83: M3 threaded

A514: blind mating system



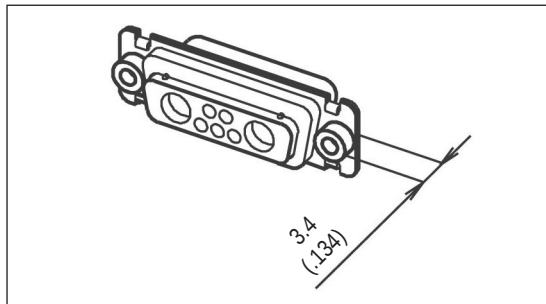
FM: float mounting system



### Straight and right angle version

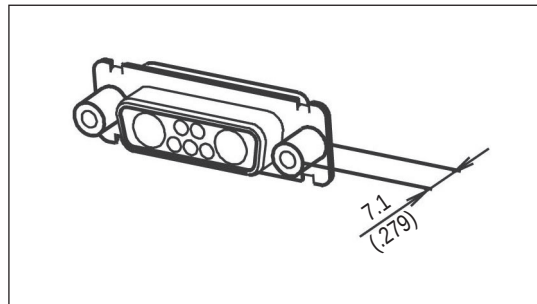
4R: 4-40 rear nut

3R: M3 rear nut

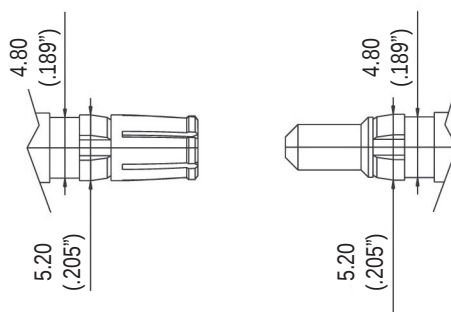


4F: 4-40 front female screwlock

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

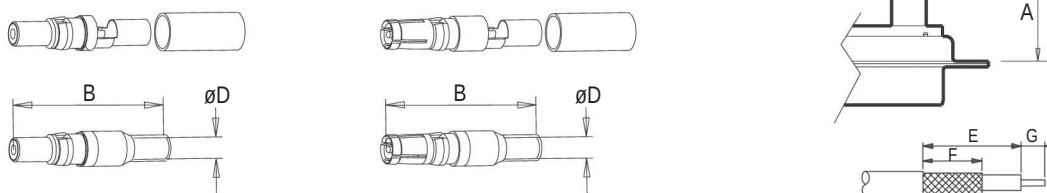


Extraction tool for sizes 8 cts



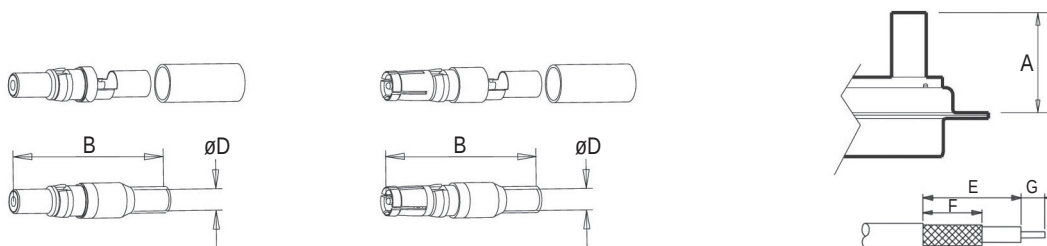
## Straight shielded contacts

### Crimp ferrule and inner solder



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

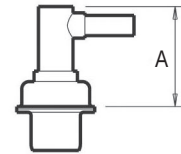
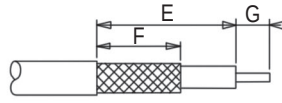
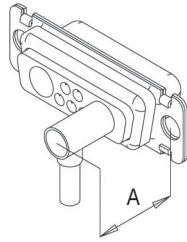
### Solder ferrule and inner solder



| Type         | P/N                     | Dimensions (inch) |               |             | Cable - RG             | Trim dimensions (inch) |             |           |
|--------------|-------------------------|-------------------|---------------|-------------|------------------------|------------------------|-------------|-----------|
|              |                         | A Max             | B             | D           |                        | E                      | F           | G         |
| short plug   | <b>L17DM 53740-5000</b> | 17.0 (669")       | 21.8 (.858")  | 1.0 (.039") | <b>178 B/U</b>         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| plug         | <b>L17DM 53740-5001</b> | 18.8 (740")       | 23.6 (.929")  | 1.7 (.066") | <b>179 B/U 316 B/U</b> | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| plug         | <b>L17DM 53740-5002</b> | 21.5 (846")       | 26.3 (1.035") | 2.8 (.110") | <b>180 B/U</b>         | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| plug         | <b>L17DM 53740-5005</b> | 21.5 (846")       | 26.3 (1.035") | 3.2 (.126") | <b>58 C/U</b>          | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| plug         | <b>L17DM 53740-5008</b> | 18.8 (740")       | 23.6 (.929")  | 1.0 (.039") | <b>178 B/U</b>         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| short socket | <b>L17DM 53742-5000</b> | 17.0 (669")       | 21.8 (.858")  | 1.0 (.039") | <b>178 B/U</b>         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| socket       | <b>L17DM 53742-5001</b> | 18.8 (740")       | 23.6 (.929")  | 1.7 (.066") | <b>179 B/U 316 B/U</b> | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |
| socket       | <b>L17DM 53742-5002</b> | 21.5 (846")       | 26.3 (1.035") | 2.8 (.110") | <b>180 B/U</b>         | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| socket       | <b>L17DM 53742-5004</b> | 21.5 (846")       | 26.3 (1.035") | 3.2 (.126") | <b>58 C/U</b>          | 9.5 (.374")            | 7.9 (.311") | 2 (.078") |
| socket       | <b>L17DM 53742-5006</b> | 18.8 (740")       | 23.6 (.929")  | 1.0 (.039") | <b>178 B/U</b>         | 7.9 (.311")            | 6.3 (.248") | 2 (.078") |

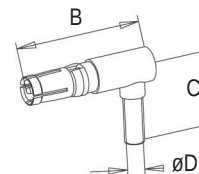
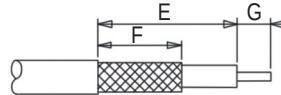
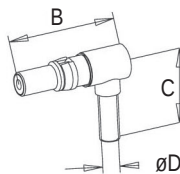
## Right angled shielded contact

### 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

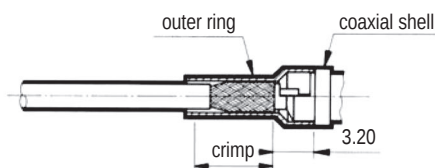
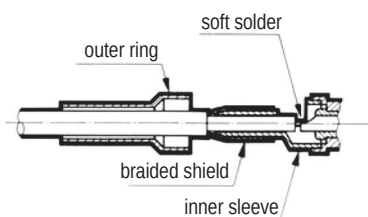
L17D429SP



## Cabling instructions for shielded contacts

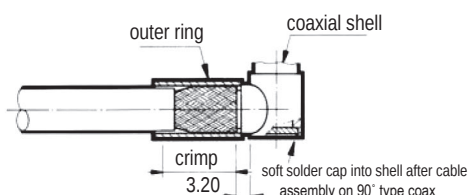
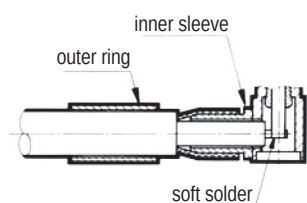
### Straight crimp shielded contacts:

*inner solder contact  
outer crimp contact*



### Right angle crimp shielded contacts:

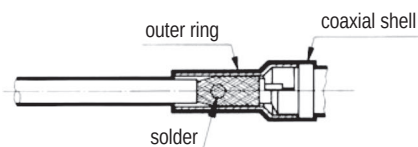
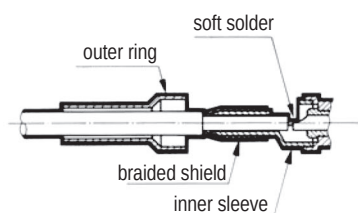
*inner solder contact  
outer crimp contact*



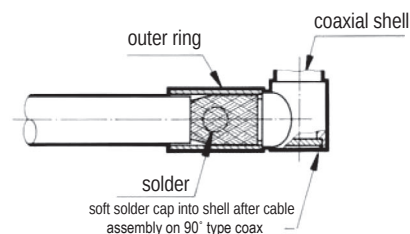
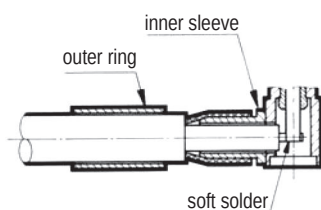
### Assembly method

- 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

RoHS Compliant

Shell & Contact Plating Options

| Shell  |                             | Contact Plating |
|--------|-----------------------------|-----------------|
| Tinned | Tinned & Indents; Plug only |                 |
| 77     | 717                         | 0.4μm(15μ") Au  |
| 177    | 777                         | 0.76μm(30μ") Au |

Shell Size and Configuration:

E2W2, \*P2W2, E5W1, A3W3, \*P3W3, A7W2, A11W1, B5W5, B9W4, B13W3, B17W2, B21W1, C8W8, C13W6, C17W5, C21WA4, C25W3, C27W2, D24W7, D36W4, D43W2

Gender:

P: Pin  
S: Socket

Terminations:

For Straight PCB and Solder-Cup

**BLANK:** Solder-cup signal contacts only  
**P3SY:** 20-40 Amp power & signal mix  
**P2SY:** 10-20 Amp power & signal mix  
**CSY:** Coax & signal mix  
**SY:** Signal only  
**P3Y:** 20-40 Amp power only (2W2, 3W3, 5W5, 8W8)  
**P2Y:** 10-20 Amp power only (2W2, 3W3, 5W5, 8W8)  
**CY:** Coax only (2W2, 3W3, 5W5, 8W8)

For Right Angle PCB

**MP3SV:** US Footprint, 20-40 Amp power & signal mix  
**MP2SV:** US Footprint, 10-20 Amp power & signal mix  
**MCSV:** US Footprint, coax & signal mix  
**MSV:** US Footprint, signal only  
**MP3V:** US Footprint, 20-40 Amp power only (2W2, 3W3, 5W5, 8W8)  
**MP2V:** US Footprint, 10-20 Amp power only (2W2, 3W3, 5W5, 8W8)  
**MCV:** US Footprint, coax only (2W2, 3W3, 5W5, 8W8)  
**EP3SV:** European Footprint, 20-40 Amp power & signal mix  
**EP2SV:** European Footprint, 10-20 Amp power & signal mix  
**ESV:** European Footprint, signal only  
**EP3V:** European Footprint, 20-40 Amp power only (2W2, 3W3, 5W5, 8W8)  
**EP2V:** European Footprint, 10-20 Amp power only (2W2, 3W3, 5W5, 8W8)  
**HP3SV:** Mixed Footprint, 20-40 Amp power & signal mix  
**HP2SV:** Mixed Footprint, 10-20 Amp power & signal mix  
**HCSV:** Mixed Footprint, coax & signal mix  
**HSV:** Mixed Footprint, signal only  
**HP3V:** Mixed Footprint, 20-40 Amp power only (2W2, 3W3, 5W5, 8W8)  
**HP2V:** Mixed Footprint, 10-20 Amp power only (2W2, 3W3, 5W5, 8W8)  
**HCV:** Mixed Footprint, coax only (2W2, 3W3, 5W5, 8W8)

Special Deviations

Consult Factory

Board Mounting Options:

For Straight

**Blank:** 3.05mm (.120") clear hole  
**RM53:** M3 Threaded (panel side) standoff with boardlock  
**RM54:** 4-40 Threaded (panel side) standoff with boardlock  
**RM83:** Non-Removable M3 screwlock, with standoff and boardlock  
**RM84:** Non-Removable 4-40 screwlock, with standoff and boardlock

For Right Angle

**Blank:** 3.05mm (.120") clear hole  
**RM6:** Metal bracket with boardlock

Panel Mounting Options:

**Blank:** 3.05mm (.120") clear hole  
**3F:** M3 Front screwlock  
**3R:** M3 Rear threaded insert  
**4F:** 4-40 Front screwlock  
**4R:** 4-40 Threaded rear insert  
**FM:** Float-mount system  
**A514:** Blind mate guide pin

Example: L717 TW B9W4 S MP3V 4F RM6

\* indicates polarized inserts

## Memo

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>