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Specifications

- Connectors according to: MIL C24308-NFC93425 - HE507

| Materials and plating | Electrical Data |
| :---: | :---: |
| Shells $\quad$ Steel-Tin plating | Current rating Signal contacts |
| Insulators High temperature black thermoplastic | Signal contacts $\quad 7.5$ A. with 10 A. peak |
| Signal contacts Female: machined bronze | Power contacts |
| Material Male: machined brass | PCB terminations $\quad 10$ to 40 A . |
| Plating finish $\quad 15 \mu$ " Au over $79 \mu$ " Ni min. | Solder cup terminations $\quad 10$ to 40 A . |
| Or $\quad 30 \mu$ " Au over $79 \mu$ " Ni min. | Crimp terminations $\quad 10$ to 40 A . |
| Shielded contacts Female: machined bronze | Shielded contacts 0.5A. |
| Material Male: machined brass | Voltage rating |
| Plating | Signal and power contacts 300 V.R.M.S. at 50 Hz |
| Inner conductor $\quad 15 \mu$ " Au or $30 \mu$ " Au over $79 \mu$ " Ni |  |
| Outer ring Flash Au over 79 ${ }^{\prime \prime}$ " Ni | Shielded contacts |
| Terminations Tinned | Frequency range $0-1 \mathrm{GHz}$ <br> Attenuation 0.2 dB |
| Except solder cup and crimp terminations gold flash | Attenuation V. S. W. R. |
| Power contacts $\quad$ Female: machined bronze | Characteristic impedance $\quad 500 \mathrm{hms}$ |
| Material Male: machined brass | Dielectric withstanding |
|  | voltage $\quad \geq 1000$ V.R.M.S. at 50 Hz |
| Contacts $15 \mu \mu^{\prime \prime} \mathrm{Au}$ or $30 \mu " A u$ over $79 \mu " \mathrm{Ni}$ <br> Terminations Tinned | Insulation resistance $\geq 5000 \mathrm{M}$ Ohms at 500 VDC |
| Except solder cup and crimp terminations gold flash | Contact resistance $\leq 5 \mathrm{~m}$ Ohms |
| Brackets Steel-Tin plating | Shell resistance $\leq 1 \mathrm{~m}$ Ohm |
| Front jackscrews Bras-Tin plating | (electrical grounding) |
| Rear clinch nuts Brass-Tin plating |  |
| Boardlocks Bronze-Tin plating |  |
| Stand-off Brass-Tin plating |  |

Mechanical data


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

 ar rangements
## compatibl e with

## reflow process

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

$\because \therefore \therefore \cdot$
Amphenol

CLASS II
$0.4 \mu \mathrm{~m}\left(15 \mu^{*}\right)$ Au contacts gold plating 200 mating cycles

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

CLASS I
$0.76 \mu \mathrm{~m}\left(30 \mu^{\prime \prime}\right) \mathrm{Au}$ contacts gold plating 500 mating cycles

| Types | Shells and plating |
| :--- | :--- |
| 177 TW | Tin plated shell <br> ${ }^{*}$ Male and female |
| 777 TW | Tin plated shell with dimples <br> Male only |

## Housing arrangements

## Male front view

| Arrangement Shell size |  |  |  |
| :---: | :---: | :---: | :---: |
| Arrangement Shell size |  |  |  |
| Arrangement $\qquad$ Shell size $\qquad$ |  |  |  |
| Arrangement Shell size |  |  |  |
| Arrangement $\qquad$ Shell size $\qquad$ | 21W4 <br> C | 8W8 |  |
| Arrangement $\qquad$ Shell size $\qquad$ |  |  |  |

Additional arrangements

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| Arrangement Shell Size. | $\begin{gathered} 2 W 2 \\ E \end{gathered}$ | P2W2 <br> E (polarized) | P3W3 <br> A (polarized) |



| Shell size | Contact s : Socke | $\underset{\substack{ \pm 0.25 \\( \pm .010)}}{ }$ | $\underset{\substack{0-0.20 \\(0)-008)}}{\mathrm{B}_{1}}$ |  | $\underset{\substack{0.10 \\( \pm .004)}}{\mathrm{C}}$ | $\begin{array}{\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|} \hline(0)-010) \end{array}$ | $\begin{array}{\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|c\|} \hline \\ (+.0100) \end{array}$ | $\underset{\substack{ \pm 0.20 \\( \pm .008)}}{\mathrm{E}}$ |  |  | $\underset{\substack{0+100-20.20 \\ 1 \\ 1.0041-008)}}{\mathrm{G}}$ |  |  | $\underset{\substack{0.0 .50 \\(00.020)}}{J}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E | P | $\left.\begin{array}{r} 30.7 \\ \left(1.209^{\prime \prime}\right) \end{array}\right)$ |  | $\begin{gathered} 16.8 \\ \left(.661^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 25.0 \\ \left(.984^{\prime \prime}\right) \end{gathered}$ |  | $\begin{gathered} 8.2 \\ \left(.323^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 12.4 \\ \left(.488^{\prime \prime}\right) \end{gathered}$ |  | $\begin{gathered} 10.9 \\ \left(.429^{\prime \prime}\right. \end{gathered}$ |  | $\begin{gathered} 5.9 \\ \left(.232^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 19.4 \\ \left(.764^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 11.0 \\ \left(.433^{\prime \prime}\right) \end{gathered}$ |
|  | S |  | $\begin{gathered} 16.4 \\ \left(.646^{\prime \prime}\right) \end{gathered}$ |  |  | $\begin{array}{\|c\|} \hline 8.0 \\ \left(.315^{\prime \prime}\right) \end{array}$ |  |  | $\begin{gathered} \hline 11.1 \\ (.437) \\ \hline \end{gathered}$ |  | $\begin{gathered} 6.2 \\ \left(.244^{\prime \prime}\right) \end{gathered}$ |  |  |  |
| A | P | $\begin{gathered} 39.0 \\ \left(1.535^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{\|c\|} \hline 25.1 \\ \left(.988^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 33.3 \\ \left(1.311^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{\|c} \hline 8.2 \\ \left(.323^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 12.4 \\ \left(.488^{\prime \prime}\right) \end{gathered}$ |  | $\begin{gathered} 10.9 \\ \left(.429^{\prime \prime}\right) \end{gathered}$ |  | $\begin{gathered} 5.9 \\ \left(.232^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 27.7 \\ \left(1.091^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 11.0 \\ \left(.433^{\prime \prime}\right) \end{gathered}$ |
|  | S |  | $\begin{gathered} 24.8 \\ \left(.976^{\prime \prime}\right) \\ \hline \end{gathered}$ |  |  | $\begin{array}{\|c\|} \hline 8.0 \\ \left(.315^{\prime \prime}\right) \\ \hline \end{array}$ |  |  | $\begin{gathered} \hline 11.1 \\ (.437) \\ \hline \end{gathered}$ |  | $\begin{gathered} 6.2 \\ \left(.244^{\prime \prime}\right) \end{gathered}$ |  |  |  |
| B | P | $=\begin{gathered} 52.9 \\ \left(2.083^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{\|c\|} \hline 38.8 \\ \left(1.528^{\prime \prime}\right) \end{array}$ | $-\begin{gathered} 47.0 \\ \left(1.850^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{\|c} \hline 8.2 \\ \left(.323^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 12.4 \\ \left(.488^{\prime \prime}\right) \end{gathered}$ |  | $\begin{gathered} \hline 11.0 \\ \left(.433^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{c\|} \hline 5.8 \\ \left(.228^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 41.4 \\ \mid\left(1.630^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 11.0 \\ \left(.433^{\prime \prime}\right) \end{gathered}$ |
|  | S |  | $\begin{array}{\|c\|c\|} \hline 38.5 \\ \left(1.513^{\prime \prime}\right) \end{array}$ |  |  | $\begin{array}{\|c\|} \hline 8.0 \\ \left(.315^{\prime \prime}\right) \end{array}$ |  |  | $\begin{array}{\|c\|} \hline 11.1 \\ (.437) \end{array}$ |  | $\begin{gathered} 6.2 \\ \left(.244^{\prime \prime}\right) \end{gathered}$ |  |  |  |
| C | P | $\left(\begin{array}{c} 69.2 \\ \left(2.724^{\prime \prime}\right) \end{array}\right.$ |  | $\begin{array}{\|c\|} \hline 55.3 \\ \left(2.177^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 63.5 \\ \left(2.500^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{\|c\|} \hline 8.2 \\ \left(.323^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 12.4 \\ \left(.488^{\prime \prime}\right) \end{gathered}$ |  | $\begin{gathered} 11.0 \\ \left(.433^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{r} 5.8 \\ \left(.228^{\prime \prime}\right) \end{array}$ | $\left\lvert\, \begin{gathered} 57.9 \\ \left(2.280^{\prime \prime}\right) \end{gathered}\right.$ | $\begin{gathered} 11.0 \\ \left(.433^{\prime \prime}\right) \end{gathered}$ |
|  | S |  | $\begin{array}{\|c\|} \hline 54.9 \\ \left(2.161^{\prime \prime}\right) \end{array}$ |  |  | $\begin{gathered} 8.0 \\ \left(.315^{\prime \prime}\right) \end{gathered}$ |  |  | $\begin{gathered} 11.1 \\ (.437) \end{gathered}$ |  | $\begin{gathered} 6.2 \\ \left(.244^{\prime \prime}\right) \end{gathered}$ |  |  |  |
| D | P | $-\begin{gathered} 66.8 \\ \left(2.630^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{\|c\|} \hline 52.7 \\ \left(2.075^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 61.1 \\ \left(2.406^{\prime \prime}\right) \end{gathered}$ |  | $\begin{gathered} \hline 11.0 \\ \left(.433^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 15.2 \\ \left(.598^{\prime \prime}\right) \end{gathered}$ |  | $\begin{gathered} \hline 11.0 \\ \left(.433^{\prime \prime}\right) \end{gathered}$ |  | $\begin{array}{c\|} \hline 5.8 \\ \left(.228^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 55.5 \\ \mid\left(2.185^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 13.8 \\ \left(.543^{\prime \prime}\right) \end{gathered}$ |
|  | S |  | $\begin{array}{\|c\|} \hline 52.5 \\ \left(2.067^{7}\right) \end{array}$ |  |  | $\begin{gathered} \hline 10.9 \\ \left(.429^{\prime \prime}\right) \\ \hline \end{gathered}$ |  |  | $\begin{aligned} & \hline 11.1 \\ & (.437) \end{aligned}$ |  | $\begin{gathered} 6.2 \\ \left(.244^{\prime \prime}\right) \end{gathered}$ |  |  |  |

## Panel cutouts

## Optimal cutout for rear mounting



Standard cutout


| Shell size | Mounting method | $\underset{\substack{ \pm 0.20 \\ \pm \\( \pm .088)}}{ }$ | $\begin{gathered} \hline \mathrm{B} \\ \pm 0.20 \\ ( \pm .008) \end{gathered}$ | $\underset{\substack{ \pm 0.20 \\( \pm .008)}}{\mathrm{C}}$ | $\underset{\substack{ \pm 0.20 \\( \pm .008)}}{\overline{\mathrm{L}}}$ | $\underset{\substack{ \pm 0.20 \\( \pm .008)}}{E_{i}}$ |  | $\underset{\substack{ \pm 0.20 \\( \pm .008)}}{\mathrm{G}}$ | $\underset{\substack{ \pm 0.200 \\( \pm .008)}}{\mathrm{H}}$ | $\underset{\substack{ \pm 0.20 \\ \pm( \pm .08)}}{J}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E | Front | $\begin{gathered} 22.2 \\ \left(.874^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 11.1 \\ & \left(.437^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 25.0 \\ \left(.984^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 12.5 \\ \left(.492^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 13.0 \\ & \left(.512^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 6.5 \\ \left(.256^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 3.0 \\ & \left(.18^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 1.5 \\ \left(.059^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 2.1 \\ \left(.083^{\prime \prime}\right) \end{gathered}$ |
|  | Rear | $\begin{aligned} & \frac{1.0 .5}{20.5} \\ & \left(.807^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & 10.2 \\ & \left(.402^{\prime \prime}\right) \end{aligned}$ |  |  | $\begin{aligned} & \frac{11.4}{11.4} \\ & \left(.449^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & \frac{1.20}{5.7} \\ & \left(.224^{\prime \prime}\right) \end{aligned}$ |  |  | $\begin{gathered} 3.4 \\ \left(.0134^{\prime \prime}\right) \end{gathered}$ |
| A | Front | $\begin{gathered} 30.5 \\ \left(1.201^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 15.3 \\ \left(.602^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 33.3 \\ \left(1.311^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 16.7 \\ \left(.657^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 13.0 \\ \left(.512^{\prime \prime}\right) \end{gathered}$ | $\begin{array}{r} 6.5 \\ \left(.256^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 3.0 \\ \left(.118^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 1.5 \\ \left(.059^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 2.1 \\ \left(.083^{\prime \prime}\right) \end{gathered}$ |
|  | Rear | $\begin{array}{r} 28.8 \\ \left(1.134^{\prime \prime}\right) \end{array}$ | $\begin{aligned} & 14.4 \\ & \left(.567^{\prime \prime}\right) \end{aligned}$ |  |  | $\begin{gathered} 11.4 \\ \left(.449^{\prime \prime}\right) \\ \hline \end{gathered}$ | $\begin{gathered} 5.7 \\ \left(.224^{\prime \prime}\right) \\ \hline \end{gathered}$ |  |  | $\begin{gathered} 3.4 \\ \left(.0134^{\prime \prime}\right) \\ \hline \end{gathered}$ |
| B | Front | $\begin{gathered} 44.3 \\ \left(1.744^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 22.1 \\ & \left(.870^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 47.0 \\ \left(1.850^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 23.5 \\ \left(.925^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 13.0 \\ & \left(.512^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 6.5 \\ \left(.256^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 3.0 \\ \left(.18^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 1.5 \\ \left(.059^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 2.1 \\ \left(.083^{\prime \prime}\right) \end{gathered}$ |
|  | Rear | $\begin{gathered} 42.5 \\ \left(1.673^{\prime \prime}\right) \\ \hline \end{gathered}$ | $\begin{aligned} & 21.3 \\ & \left(.839^{\prime \prime}\right) \end{aligned}$ |  |  | $\begin{aligned} & 11.4 \\ & \left(.449^{\prime \prime}\right) \\ & \hline \end{aligned}$ | $\begin{gathered} 5.7 \\ \left(.224^{\prime \prime}\right) \\ \hline \end{gathered}$ |  |  | $\begin{gathered} 3.4 \\ \left(.0134^{\prime \prime}\right) \\ \hline \end{gathered}$ |
| C | Front | $\begin{gathered} 60.7 \\ \left(2.390^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 30.4 \\ \left(1.1977^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 63.5 \\ \left(2.500^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 31.7 \\ \left(1.248^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 13.0 \\ & \left(.512^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 6.5 \\ \left(.256^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 3.0 \\ \left(.18^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 1.5 \\ \left(.059^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 2.1 \\ \left(.083^{\prime \prime}\right) \end{gathered}$ |
|  | Rear | $\begin{array}{r} 59.1 \\ \left(2.327^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 29.5 \\ \left(1.161^{\prime \prime}\right) \end{gathered}$ |  |  | $\begin{aligned} & 11.4 \\ & \left(.449^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 5.7 \\ \left(.224^{\prime \prime}\right) \end{gathered}$ |  |  | $\begin{gathered} 3.4 \\ \left(.0134^{\prime \prime}\right) \end{gathered}$ |
| D | Front | $\begin{gathered} 58.3 \\ \left(2.2955^{\prime \prime}\right. \end{gathered}$ | $\begin{gathered} 29.2 \\ \left(1.150^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 61.1 \\ \left(2.406^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 30.6 \\ \left(1.205^{\prime \prime}\right) \end{gathered}$ | $\begin{array}{r} 15.8 \\ \left(.622^{\prime \prime}\right) \\ \hline \end{array}$ | $\begin{gathered} 7.9 \\ \left(.311^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 3.0 \\ & \left(.18^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 1.5 \\ \left(.059^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 2.1 \\ \left(.083^{\prime \prime}\right) \\ \hline \end{gathered}$ |
|  | Rear | $\begin{array}{r} 56.3 \\ \left(2.217^{\prime \prime}\right) \\ \hline \end{array}$ | $\begin{gathered} 28.2 \\ \left(1.110^{\prime \prime}\right) \\ \hline \end{gathered}$ |  |  | $\begin{gathered} 14.1 \\ \left(.555^{\prime \prime}\right) \\ \hline \end{gathered}$ | $\begin{gathered} 7.1 \\ \left(.280^{\prime \prime}\right) \\ \hline \end{gathered}$ |  |  | $\begin{gathered} 3.4 \\ \left(.0134^{\prime \prime}\right) \\ \hline \end{gathered}$ |



Signal tail 0.6 mm Dia. (.024")
1.6 mm (.063")PCB

For other PCB thickness: consult factory.

| Description | Dimensions |  |  |
| :--- | :--- | :---: | :---: |
|  |  | a | b |
| Power $3.2 \mathrm{~mm}\left(.126^{\prime \prime}\right)$ tail dia | 1 | 4.80 mm <br> $\left(.189^{\prime \prime}\right)$ | 7.2 mm <br> $\left(.283^{\prime \prime}\right)$ |
| Power 2.0mm(.078") tail dia | 1 | 4.80 mm <br> $\left(.189^{\prime \prime}\right)$ | 7.2 mm <br> $\left(.283^{\prime \prime}\right)$ |
| Shielded | 3 | 4.00 mm <br> $\left(.157^{\prime \prime}\right)$ | 7.2 mm <br> $\left(.283^{\prime \prime}\right)$ |
| Signal | 2 | 5.30 mm <br> $\left(.209^{\prime \prime}\right)$ | 11.50 mm <br> $\left(.453^{\prime \prime}\right)$ |

## Straight contact combinations

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

| See above dimensions | Size 8 and 20 Contacts |
| :--- | :--- |
|  |  |
| P 3SY | Power 3.2 mm DIA. (.126") <br> (20 to 40 A) and signal |
| P 2SY | Power 2 mm DIA. (.078") <br> (10 to 20 A) and signal |
| CSY | Shielded and signal |
| 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") <br> 1.6 mm (.063") PCB <br> For other PCB thickness: consult factory |  | Europe |  |  | Mix |  |  | MIL |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | HE 5 pattern = <br> - Euro height <br> - Euro footprint <br> pitch between <br> 2 rows: . 100" |  |  | Mixed pattern = <br> - MIL height <br> - Euro 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 | - | - | - | $\begin{gathered} 10.30 \mathrm{~mm} \\ \left(.406^{\prime \prime}\right) \\ \hline \end{gathered}$ | $\begin{aligned} & 6.30 \mathrm{~mm} \\ & \left(.248^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 10.00 \mathrm{~mm} \\ \left(.394^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 10.30 \mathrm{~mm} \\ \left(.406^{\prime \prime}\right) \\ \hline \end{gathered}$ | $\begin{aligned} & 6.30 \mathrm{~mm} \\ & \left(.248^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 10.00 \mathrm{~mm} \\ \left(.394^{\prime \prime}\right) \end{gathered}$ |
| Signal | 2 | $\begin{array}{\|c} 10.30 \mathrm{~mm} \\ \left(.406^{\prime \prime}\right) \end{array}$ | $\begin{aligned} & 7.20 \mathrm{~mm} \\ & \left(.283^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 11.20 \mathrm{~mm} \\ \left(.441^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 10.30 \mathrm{~mm} \\ \left(.406^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 6.30 \mathrm{~mm} \\ & \left(.248^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & 9.50 \mathrm{~mm} \\ & \left(.374^{\prime \prime}\right) \end{aligned}$ | $\begin{array}{\|l\|} \hline 8.10 \mathrm{~mm} \\ \left(.319^{\prime \prime}\right) \end{array}$ | $\begin{aligned} & 6.30 \mathrm{~mm} \\ & \left(.248^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & 9.50 \mathrm{~mm} \\ & \left(.374^{\prime \prime}\right) \end{aligned}$ |
| Power 2.0mm(.078") tail dia |  | $\begin{array}{\|c} 11.57 \mathrm{~mm} \\ \left(.456^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 7.20 \mathrm{~mm} \\ \left(.283^{\prime \prime}\right) \end{gathered}$ | $\begin{array}{\|c} 10.50 \mathrm{~mm} \\ \left(.413^{\prime \prime}\right) \end{array}$ | $\begin{gathered} 11.57 \mathrm{~mm} \\ \left(.456^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 6.30 \mathrm{~mm} \\ & \left(.248^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & 9.50 \mathrm{~mm} \\ & \left(.374^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & 9.52 \mathrm{~mm} \\ & \left(.375^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & 6.30 \mathrm{~mm} \\ & \left(.248^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & 9.50 \mathrm{~mm} \\ & \left(.374^{\prime \prime}\right) \end{aligned}$ |
| Power 3.2mm(.126") tail dia |  | $\begin{array}{\|c} 21.46 \mathrm{~mm} \\ \left(.845^{\prime \prime}\right) \end{array}$ | $\begin{aligned} & 7.20 \mathrm{~mm} \\ & \left(.283^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 10.50 \mathrm{~mm} \\ \left(.413^{\prime \prime}\right) \end{gathered}$ | $\begin{gathered} 21.46 \mathrm{~mm} \\ \left(.845^{\prime \prime}\right) \end{gathered}$ | $\begin{aligned} & 6.30 \mathrm{~mm} \\ & \left(.248^{\prime \prime}\right) \end{aligned}$ | $\begin{gathered} 9.50 \mathrm{~mm} \\ \left(.374^{\prime \prime}\right) \end{gathered}$ | $\begin{array}{\|c} 21.46 \mathrm{~mm} \\ \left(.845^{\prime \prime}\right) \end{array}$ | $\begin{aligned} & 6.30 \mathrm{~mm} \\ & \left(.248^{\prime \prime}\right) \end{aligned}$ | $\begin{aligned} & 9.50 \mathrm{~mm} \\ & \left(.374^{\prime \prime}\right) \end{aligned}$ |

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 |  |  |  | Arrangement without signal contacts2W2-3W3-5W5-8W8 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| European footprint | Mixed footprint | MIL (U.S.) footprint | Size 8 and 20 Contacts | European footprint | Mixed footprint | MIL (U.S.) footprint | Size 8 contacts only |
| $\downarrow$ 】 |  |  |  | $\downarrow$ リ $\downarrow$ |  |  |  |
| EP3SV | HP3SV | MP3SV | Power 3.2 mm DIA. (. $126^{\prime \prime}$ ) ( 20 to 40 A ) and signal | EP3V | HP3V | MP3V | $\begin{array}{\|c\|} \hline \text { Power only } \\ 3.2 \mathrm{~mm} \text { DIA. ( } 126^{\prime \prime} \text { ) } \\ (20 \text { to } 40 \mathrm{~A}) \\ \hline \end{array}$ |
| EP2SV | HP2SV | MP2SV | Power 2 mm DIA. (.078") (10 to 20 A ) and signal | EP2V | HP2V | MP2V | $\begin{array}{\|c} \text { Power only } \\ \left.2.0 \mathrm{~mm} \text { DIA. (. } 078^{\prime \prime}\right) \\ (10 \text { to } 20 \mathrm{~A}) \\ \hline \end{array}$ |
| - | HCSV | MCSV | Shielded and signal |  | HCV | MCV | Shielded only |
| ESV | HSV | MSV | Signal 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

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

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Plug $\mathbf{P / N}$ |  | 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


Trim dimensions: 7.5 mm (.295")

Crimping tool for all sizes L17D479SP


Extraction tool for sizes 8 cts
Exraction 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") | $180 \mathrm{~B} / \mathrm{U}$ | 9.5 (.374) | 7.9 (.311") | 2 (.078") |
| plug | L17DM 53740-5 | 21.5 (846") | 23.6 (.929") | 3.2 (.126") | $58 \mathrm{C} / \mathrm{U}$ | 5 (.37 | 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 | 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") | $58 \mathrm{C} / \mathrm{U}$ | 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 | L1 | 17.0 (669") | 21.8 (.858") | 1.0 (.039") | 178 B/U | 7.9 (.311") | ") | $2(.078)$ |
| 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") | $2\left(.078{ }^{\prime \prime}\right)$ |
| plug | L17DM 53740-5002 | 21.5 (846") | 26.3 (1.035") | 2.8 | 180 B/U | ") | ") | $2(.078$ |
| plug | L17DM 53740-500 | 21.5 (846") | 26.3 (1.035") | 3.2 | $58 \mathrm{C} / \mathrm{U}$ | ") | ") | ) |
| pl | L17DM 53740-5008 | 18.8 (740") | 23.6 (.929") | 1.0 (.039") | 78 B/U | 7.9 (.311") | 6.3 (.248") | $2(.078)$ |
| short socke | L17DM 53742-5000 | 17.0 (669") | 21.8 (.858") | 1.0 (.039") | 178 B/U | 7.9 (.311") | 6.3 (.248") | $2\left(.078{ }^{\prime \prime}\right)$ |
| 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") | $2\left(.078{ }^{\prime \prime}\right)$ |
| socket | L17DM 53742-5002 | 21.5 (846") | 26.3 (1.035") | 2.8 (.110 | 180 B/U | 9.5 (.374") | 7.9 (.311") | $2\left(.078{ }^{\prime \prime}\right)$ |
| socket | L17DM 53742-500 | 21.5 (846") | 26.3 (1.035") | 3.2 (.126") | $58 \mathrm{C} / \mathrm{U}$ | 9.5 (.374") | 7.9 (.311") | $2\left(.078{ }^{\prime \prime}\right)$ |
| socket | L17DM 53742-500 | 18 | 23.6 (.929") | 1.0 (.039) | 178 B/U | 7.9 | 6.3 (.248") |  |

## 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 |
| 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 |
| plug | L17DM 5374 | 13 | 18.6 (.732") | 3.2 | $58 \mathrm{C} / \mathrm{U}$ | ") | 7.9 (.311") | 2.4 |
| 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 | 9.5 (.374") | 5.9 (.232") | 1.6 (.062") |
| socket | L17DM 53743-5 | 13.5 (.531") | 18.6 (.732") | 2.8 (.110") | $180 \mathrm{~B} / \mathrm{U}$ | 10.7 (.421") | 7.9 (.311") | 2.4 (.094") |
| socket | L17DM 53743-6 | 13.5 (.531") | 18.6 (.732") | 3.2 (.126") | $58 \mathrm{C} / \mathrm{U}$ | 10.7 (.421") | 7.9 (.311") | 2.4 (.09 |

## Ferrule and inner solder


$\rightarrow \varnothing \square$



| 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") | $180 \mathrm{~B} / \mathrm{U}$ | 10.7 (.421") | 7.9 (.311") | 2.4 (.094") |
| plug | L17DM 53741-5004 | 13.5 (.531") | 18.6 (.732") | 3.2 (.126") | $58 \mathrm{C} / \mathrm{U}$ | 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") | $180 \mathrm{~B} / \mathrm{U}$ | 10.7 (.421") | 7.9 (.311") | 2.4 (.094") |
| socket | L17DM 53743-5004 | 13.5 (.531") | 18.6 (.732") | 3.2 (.126") | $58 \mathrm{C} / \mathrm{U}$ | 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 $22520 / 5-05$ | $2271221-05$ | 5.41 | - |
| RG 178 B/U | M $22520 / 5-03$ | $2271221-03$ | - | 2.67 |
| RG 179 B/U | M $22520 / 5-03$ | $2271221-03$ | 3.25 | - |
| RG 180 B/U | M $22520 / 5-05$ | $2271221-05$ | - | 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.


