

38999

III

HD

Dualok

II

I

SJT

Accessories

Aquacon

Herm/Seal

PCB

High Speed  
Fiber Optics  
Contacts

EMI Filter  
Transient

26482  
Matrix 2

83723  
III  
Matrix | Pyle

26500  
Pyle

5015  
Crimp Rear  
Release  
Matrix

22992  
Class L

Back-  
Shells

Options  
Others

#### MATERIALS & FINISHES

Amphenol offers adapters in the following standard finishes. The base material is aluminum alloy.

#### MATERIAL:

Aluminum parts: As per ASTM B 211, 221, 209, 85, 26  
Steel parts: 300 series, as per AMS-QQ-S-763/ASTM A 582  
Elastomers: Fluro Silcon, Silicon  
Other parts: Suitable corrosion resistant material

#### MIL (QPL) QUALIFICATION

Many Amphenol Backshells are qualified to SAE-AS 85049 standard. (Old standard is MIL-C-85049).

TABLE-2 (PLATING FINISHES)

| Amphenol Designation | MIL Designation | Finish                                      | Guiding Specifications/Requirements                                              |
|----------------------|-----------------|---------------------------------------------|----------------------------------------------------------------------------------|
| A                    | A               | Anodize, Black*                             | To meet AS85049 requirements                                                     |
| B                    |                 | Anodize, Hard*                              | AMS-A-8625, Type-III, Class-1                                                    |
| L                    |                 | Nickel, Bright                              | AMS-QQ-290, Class-1, Grade-F                                                     |
| M                    |                 | Electroless Nickel                          | AMS-C-26074, Class-4, Grade-B                                                    |
| N                    | N               | Electroless Nickel                          | To meet AS85049 requirements                                                     |
| T                    |                 | Cadmium, Bright                             | AMS-QQ-P-416, Type-I, Class-2                                                    |
| U                    |                 | Cadmium, Olive drab                         | AMS-QQ-P-416, Type II, Class 3                                                   |
| V                    |                 | Cadmium, Olive drab over Electroless Nickel | AMS-QQ-P-416, Type-II, Class-3 (Cadmium); AMS-C-26074, Class-4, grade-B (Nickel) |
| W                    | W               | Cadmium, Olive drab over Electroless Nickel | To meet AS85049 requirements                                                     |
| Y                    |                 | Zinc-Cobalt, Dark Olive drab                | ASTM-B840                                                                        |
| Z                    |                 | Zinc-Cobalt, Black                          | ASTM-B840                                                                        |

For availability of other finishes, email your special requirements: email: sales@backshellworld.com

\* Non conductive coatings.

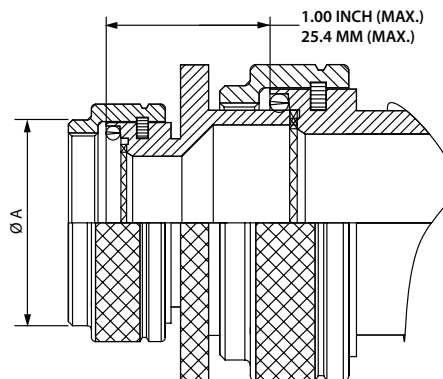
#### ASSEMBLY TORQUE VALUES

Amphenol recommends the following torque values for its adapters while assembling them to the connectors. These values are based on the coupling thread strength specified in SAE-AS85049 standard.

| Connector Shell Size | Torque (Inch-Pounds) |
|----------------------|----------------------|
| 8, 9                 | 40                   |
| 3, 10, 10SL, 11      | 40                   |
| 7, 12, 12S, 13       | 40                   |
| 14, 14S, 15          | 40                   |
| 16, 16S, 17          | 40                   |
| 18, 19, 27           | 40                   |
| 20, 21, 37           | 80                   |
| 22, 23               | 80                   |
| 24, 25, 61           | 80                   |
| 28                   | 100                  |
| 32                   | 100                  |
| 36                   | 100                  |
| 40                   | 120                  |
| 44                   | 120                  |
| 48                   | 120                  |

#### STYLE-2 CONFIGURATION

Some design consideration will require bigger diameter cable to be terminated in the smaller shell size connectors. Cable with heavy/thicker shielding, many wires for different branches/routing are some of the examples. Such cable termination will require a bigger adapter body with cable entry dimensions more than the connector rear side dimensions Amphenol also supports this kind of application. The coupling end of the adapter will be modified to Style-2 design as shown in the figure below in such cases. The overall length of the Style-2 design adapters would be increased by approx. 1 inch (25.mm) as shown. This alternative design is applicable for all the Backshell Families listed in this catalog.



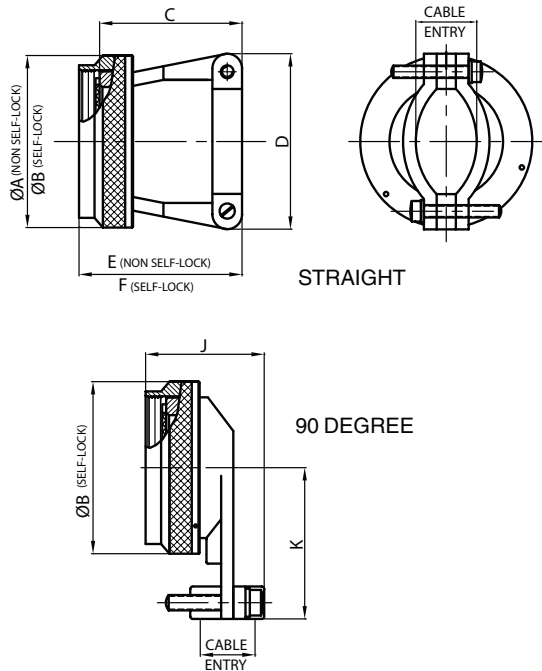
## Strain Relief Clamp

Straight, 90°, Self-Lock/Non Self-Lock

For Connector Family L

### 38999 Series III, IV

Connector Family "L", includes MIL-DTL-38999 Series III and Series IV



### MIL Part Number

**M85049 / 38 - 11 W**

MIL Series

Slash Sheet:

38: Straight

39: 90°

Finish:  
See Table-2  
(pg. 486)

Shell Size:  
See Table-A

Coupling:  
S: Self-Lock  
-: Non Self-Lock

TABLE - A

| MIL PART<br>NUMBER<br>DESIGNATOR | CONNECTOR<br>SHELL SIZE/<br>CODE (REF.) | A DIA.(MAX) |       | B DIA.(MAX) |       | C (MAX) |       | D (MAX) |       | E (MAX) |       | F (MAX) |       |
|----------------------------------|-----------------------------------------|-------------|-------|-------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
|                                  |                                         | INCH        | MM    | INCH        | MM    | INCH    | MM    | INCH    | MM    | INCH    | MM    | INCH    | MM    |
| 09                               | 9 / A                                   | 0.75        | 19.05 | 0.86        | 21.82 | 0.91    | 23.11 | 0.85    | 21.59 | 1.10    | 27.94 | 1.21    | 30.73 |
| 11                               | 11 / B                                  | 0.85        | 21.59 | 0.98        | 24.99 | 0.91    | 23.11 | 0.90    | 22.86 | 1.10    | 27.94 | 1.21    | 30.73 |
| 13                               | 13 / C                                  | 1.00        | 25.40 | 1.16        | 29.36 | 1.01    | 25.65 | 1.10    | 27.94 | 1.20    | 30.48 | 1.31    | 33.27 |
| 15                               | 15 / D                                  | 1.10        | 27.94 | 1.28        | 32.54 | 1.06    | 26.92 | 1.15    | 29.21 | 1.25    | 31.75 | 1.35    | 34.29 |
| 17                               | 17 / E                                  | 1.25        | 31.75 | 1.41        | 35.71 | 1.16    | 29.46 | 1.30    | 33.02 | 1.36    | 34.44 | 1.45    | 36.83 |
| 19                               | 19 / F                                  | 1.40        | 35.56 | 1.52        | 38.51 | 1.41    | 35.81 | 1.50    | 38.10 | 1.60    | 40.64 | 1.71    | 43.43 |
| 21                               | 21 / G                                  | 1.50        | 38.10 | 1.64        | 41.68 | 1.51    | 38.35 | 1.60    | 40.64 | 1.70    | 43.21 | 1.81    | 45.97 |
| 23                               | 23 / H                                  | 1.65        | 41.91 | 1.77        | 44.86 | 1.66    | 42.16 | 1.70    | 43.18 | 1.85    | 46.99 | 1.95    | 49.53 |
| 25                               | 25 / J                                  | 1.75        | 44.45 | 1.89        | 48.03 | 1.76    | 44.70 | 1.80    | 45.72 | 1.95    | 49.56 | 2.05    | 52.07 |

TABLE - A, cont.

| MIL PART<br>NUMBER<br>DESIGNATOR | CONNECTOR<br>SHELL SIZE/<br>CODE (REF.) | J (MAX) |       | K (MAX) |       | CABLE ENTRY |       |      |       |
|----------------------------------|-----------------------------------------|---------|-------|---------|-------|-------------|-------|------|-------|
|                                  |                                         | INCH    | MM    | INCH    | MM    | MIN         |       | MAX  |       |
|                                  |                                         |         |       |         |       | INCH        | MM    | INCH | MM    |
| 9                                | 9 / A                                   | 1.31    | 33.27 | 1.00    | 25.40 | 0.10        | 2.49  | 0.23 | 5.94  |
| 11                               | 11 / B                                  | 1.31    | 33.27 | 1.10    | 27.94 | 0.15        | 3.89  | 0.23 | 5.94  |
| 13                               | 13 / C                                  | 1.51    | 38.35 | 1.10    | 27.94 | 0.19        | 4.83  | 0.33 | 8.33  |
| 15                               | 15 / D                                  | 1.55    | 39.37 | 1.25    | 31.75 | 0.26        | 6.60  | 0.46 | 11.61 |
| 17                               | 17 / E                                  | 1.71    | 43.43 | 1.30    | 33.02 | 0.28        | 7.19  | 0.61 | 15.60 |
| 19                               | 19 / F                                  | 1.81    | 45.97 | 1.35    | 34.29 | 0.33        | 8.26  | 0.63 | 16.10 |
| 21                               | 21 / G                                  | 1.95    | 49.53 | 1.60    | 40.64 | 0.34        | 8.71  | 0.70 | 17.73 |
| 23                               | 23 / H                                  | 2.10    | 53.34 | 1.75    | 44.45 | 0.38        | 9.68  | 0.82 | 20.90 |
| 25                               | 25 / J                                  | 2.21    | 56.13 | 1.85    | 46.99 | 0.42        | 10.62 | 0.85 | 21.67 |

Note: For more cable entry and length options, email: [sales@backshellworld.com](mailto:sales@backshellworld.com)  
All dimensions for reference only.

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