



# CIRCULAR BACKSHELLS

EXTENSIVE RANGE OF TERMINATION  
OPTIONS FOR CIRCULAR CONNECTORS

High performance sealing and strain relief  
backshell solutions



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# CIRCULAR BACKSHELLS

## Termination Options For Circular Connectors



For high-performance sealing and strain relief, the ideal mate for a TE Connectivity (TE) connector or molded part in a wiring application, is a TE backshell.

TE supplies a comprehensive range of circular POLAMCO and Raychem backshells that can assist in providing effective strain relief, environmental sealing and electromagnetic interference (EMI)/radio frequency interference (RFI) shielding, helping you meet today's challenges in demanding environments, across many market sectors.

### Spin-Coupling Adapters

Spin-coupling adapters are two-part components that have a rotatable coupling nut and a grooved body designed to accommodate lipped-type heat-shrinkable boots.

Spin-couplings with a compatible molded part are used to optimize environmental protection and strain relief of unscreened cable terminations. Cable repairs can often be made without removing the boot.

### MULTIPLE CONFIGURATIONS

- Low profile options
- Compatible with many shell sizes and plating finishes
- Wide variety of modification options allow customisation of standard ranges to suit specific requirements

### EASY INSTALLATION

- Tool free ranges available
- Simple and fast termination solutions
- Two-part components allow uncoupling for repairs to help eliminate damage to the boot

### HIGH-RELIABILITY SOLUTIONS

- Backshells can provide strain-relief and cable support to help prevent bending or overflexing
- Offer individual or overall 360° screening against EMI/RFI interference
- Backshells can offer protection towards the effectiveness of the cable, sealing against water and dirt ingress



### Rollback Repair Possible With A Backshell

Many cable repairs are made within 75 mm of the connectors—usually because of a broken pin or wire. By reheating the heat-shrinkable boot and unscrewing the backshell coupling nut, the boot can be “rolled back,” providing access to the rear of the connector for repair. This technique is applicable to spin-coupling backshells utilizing a heatshrink boot.

## TE Components . . . TE Technology . . . TE Know-how . . .

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | DEUTSCH  
SEACON Phoenix | LL ROWE | Phoenix Optix | AFP | SEACON

Empower Engineers to Solve Problems, Moving the World Forward.



## Selecting A Backshell

TE offers an extensive standard range of backshell styles to suit a wide variety of applications and requirements. These ranges can be extensively customized using an array of plating options, materials and modification codes. Use the product finder on pages 12-13 to select the most suitable standard series for your requirement.

### Adapter Code

An alphabetical code is used to identify connectors with similar adapter interfaces. This code is used to determine the backshell family and part number. The table connector interface table on page 9 shows the appropriate code to match a variety of interfaces.

### Backshell Part Number

The part number is the sequence of numbers and letters that describes the adapter family (or series), size, angle, material, finish, and modifications. The part numbering system is explained on page 10 for POLAMCO series backshells and on the individual Raychem product pages.

### Family/Series

TE offers several families (or series) of backshell products. Each part number begins with an numerical or alphanumeric prefix denoting the specific product family.

### Entry Size

Entry size is the diameter of the hole through which the cable enters into the adapter. If unknown, the diameter required can be calculated using the formula shown on page 11.

### Shell Size

This is the size of a connector as specified by the connector manufacturer. It is normally a two-digit number between 08 and 24, although certain



connectors are obtainable in either larger or smaller sizes and some use letter codes.

### Modifications

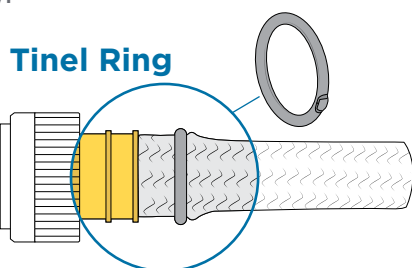
Other options (such as extended length, part marking etc) are available and are defined by standard modification codes - listed on pages 7-8. Alongside the standard ranges shown in this brochure, TE also offer custom solutions to fit more exact requirements. Contact the sales office to find out more.

Please refer to the fold out interface page (attached to the reverse cover of this brochure) for interface specific measurements.

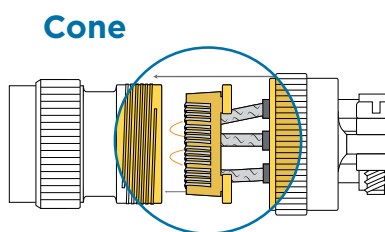


## Termination Styles

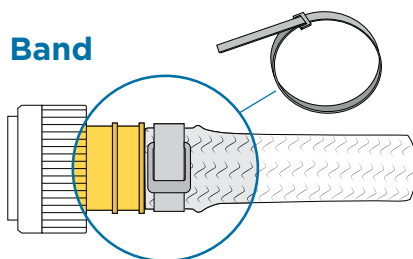
There are a variety of methods for terminating screening braid to backshells, many of which are covered within TE's standard range of backshells shown below.



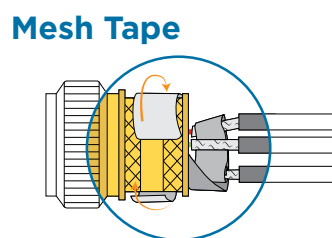
Memory ring shrunk by the application of heat  
Used on: TXR



Braid/Pigtails clamped between cones  
Used on: 64/308/HexaShield Series



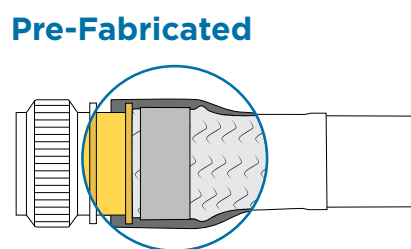
Band clamped with calibrated tool  
Used on: BT/88/AP/DS Series



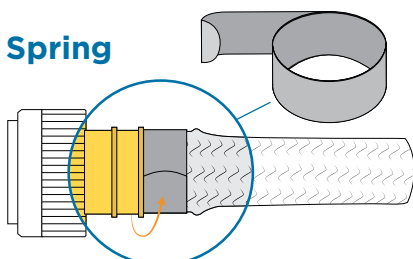
Wraps mesh tape wraps around individual screens to eliminate EMC windows  
Used on: KMA Series



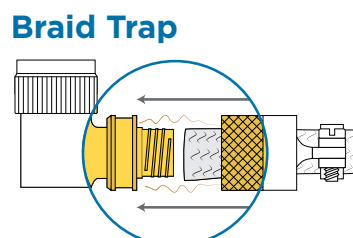
Product supplied with pre-terminated braid tail  
Used on: 70 Series



Backshell with pre-installed braid tail and heatshrink boot. Installed on cable with heat gun.  
Used on: KTKK/TAK



Spring wrapped around braid (without tooling)  
Used on: 91 Series



Braid trapped in loose fitting thread  
Used on: 95/77 Series



## Material & Plating Codes

| Material Description |         |                                                                                                        |
|----------------------|---------|--------------------------------------------------------------------------------------------------------|
| POLAMCO              | Raychem |                                                                                                        |
| 1                    | A       | ALUMINIUM ALLOY 6000 SERIES                                                                            |
| 2                    | B       | NICKEL ALUMINIUM BRONZE DGS 1043 / NES 833 (MARINE APPLICATIONS)                                       |
| 4                    | S/K*    | STAINLESS STEEL 303 S31 / 304                                                                          |
| 46                   | -       | STAINLESS STEEL 316 (MARINE APPLICATIONS)                                                              |
| 6                    | S*      | STAINLESS STEEL NUT / ALUMINIUM BODY                                                                   |
| 74                   | -       | PEI (30% GLASS FILLED HIGH TEMPERATURE COMPOSITE) - CURRENTLY AVAILABLE IN STRAIGHT BTH1 & BTF1 RANGES |

\* HexaShield backshells only. Code B not available for HexaShield backshells

| Plating Description |         |                                                                            |                |                |                          |
|---------------------|---------|----------------------------------------------------------------------------|----------------|----------------|--------------------------|
| POLAMCO             | Raychem |                                                                            | ROHS Compliant | Conductivity   | Environmental Protection |
| B                   | B       | CADMIUM, OLIVE DRAB OVER ELECTROLESS NICKEL                                | NO             | CONDUCTIVE     | 500 HRS                  |
| C                   | C       | ELECTROLESS NICKEL                                                         | YES            | CONDUCTIVE     | 48 HRS                   |
| D                   | G       | BLACK ANODISE                                                              | YES            | NON CONDUCTIVE | 500 HRS                  |
| J                   | J       | PASSIVATE (STAINLESS STEEL ONLY)                                           | YES            | -              | -                        |
| U                   | /       | UNPLATED CLEAN FINISH NOT SHOT BLASTED                                     | YES            | -              | -                        |
| Z                   | W       | SHOT BLAST FOR NON-REFLECTIVE FINISH (NICKEL ALUMINIUM BRONZE ONLY)        | YES            | CONDUCTIVE     | -                        |
| ZB                  | U       | ZINC COBALT OVER ELECTROLESS NICKEL WITH AN OLIVE DRAB CHROMATE CONVERSION | YES            | CONDUCTIVE     | 350 HRS                  |
| ZK                  | -       | ZINC COBALT OVER ELECTROLESS NICKEL WITH A BLACK CHROMATE CONVERSION       | YES            | CONDUCTIVE     | 350 HRS                  |
| ZN                  | Z       | ZINC NICKEL BLACK PASSIVATE OVER ELECTROLESS NICKEL                        | YES            | CONDUCTIVE     | 500 HRS                  |

These lists are not exhaustive - contact TE for further information



## Modification Codes

TE's standard range of backshells can be extensively modified using the codes listed below. Many of these options can be used in combination to create a solution to suit most needs. Consult TE for assistance regarding the use of modification codes.

| Suffix  |         | Meaning                                                                             | Applies to Series                                        | Affects           |
|---------|---------|-------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------|
| POLAMCO | Raychem |                                                                                     |                                                          |                   |
| TE      | F       | Internal blue polytetrafluoroethylene (PTFE) coating                                | All                                                      | Finish            |
| TEG     | -       | Internal green PTFE coating                                                         | All (TE & TEG are mutually exclusive)                    | Finish            |
| TAH     | -       | Internal PTFE coating, anti-decoupling, hex nut (wire retained)                     | Replaces codes TE, AD & HEX                              | Finish            |
| BN      | -       | Nickel aluminium bronze nut, shot blast finish                                      | Aluminium backshells                                     | Material / finish |
| ESC     | -       | ESC style interface                                                                 | A-interface only                                         | Interface         |
| NGP     | -       | No grommet profile                                                                  | Consult engineering for availability                     | Interface         |
| AD      | S       | Anti-decoupling                                                                     | All non-direct coupling                                  | Interface         |
| TD      | -       | Torque-differential anti-decoupling                                                 | All non-direct coupling (AD & TD are mutually exclusive) | Interface         |
| G       | P       | Coupling nut with grub screw                                                        | L and LV interface                                       | Interface         |
| FB      | -       | Wide body                                                                           | All – consult engineering for dimensions                 | Body shape        |
| SE      | -       | Swept elbow (cast centre section)                                                   | All 90° except 96 series *                               | Body shape        |
| AP      | -       | Spanner holes in coupling nut                                                       | All except AP series, where spanner holes are standard   | Nut               |
| FN      | -       | Coupling nut with flats                                                             | All                                                      | Nut               |
| HEX     | -       | Coupling nut hex                                                                    | All (FN & HEX are mutually exclusive)                    | Nut               |
| WN      | -       | Wire-retained nut (hex shape)                                                       | All non-direct coupling (WN & HEX are mutually excl.)    | Nut               |
| TH      | -       | Tooth inspection holes in coupling nut                                              | All interfaces with anti-rotation teeth                  | Nut               |
| W       | -       | Wire-locking holes in coupling nut                                                  | All except A-interface                                   | Nut               |
| NW      | -       | No wire-locking holes in coupling nut                                               | A-interface only                                         | Nut               |
| WL      | -       | Drilled-head screws in cable clamp, tangential hole in adaptor body                 | Backshells with cable clamp                              | Body              |
| WLT     | -       | Safety wire holes at all threaded junctions plus drilled head screws in cable clamp | Backshells with cable clamp                              | Body              |

\* consult TE for availability / available values / dimensions

\*\* xx / xx.x specified in mm



## Modification Codes (cont...)

| Suffix  |         | Meaning                                     | Applies to Series                  | Affects     |
|---------|---------|---------------------------------------------|------------------------------------|-------------|
| POLAMCO | Raychem |                                             |                                    |             |
| BS      | -       | Body strap                                  | All *                              | Body        |
| F       | -       | Wrench flats on follower                    | All *                              | Body        |
| 2F      | -       | Two flats instead of four                   | All *                              | Body        |
| DH      | D       | Drain holes in follower body                | All *                              | Body        |
| PH      | -       | Potting hole                                | All *                              | Body        |
| PH2     | -       | Two potting holes, 180° apart               | All *                              | Body        |
| PHG     | -       | Potting hole + outgassing hole              | All *                              | Body        |
| TB      | -       | With added boot groove                      | Backshells without cable clamp     | Boot groove |
| NG      | -       | No boot groove                              | Backshells that have a boot groove | Boot groove |
| ET      | ET      | Earth tag                                   | BT, 91 & 97 series                 | Termination |
| WS      | -       | Drilled-head screws in cable clamp          | Backshells with cable clamp        | Cable clamp |
| CL      | -       | Clinch nuts in cable clamp                  | Backshells with cable clamp        | Cable clamp |
| S       | -       | Short screw modification                    | Backshells with cable clamp        | Cable clamp |
| TS      | -       | Telescoping screws                          | Backshells with cable clamp        | Cable clamp |
| LP      | -       | Low-profile (non-preferred: use kxx or exx) | 90° *                              | Body shape  |
| RW      | -       | Reduced weight                              | *                                  | Body shape  |
| Lxx     | -       | Non-standard length **                      | All straight *                     | Body shape  |
| Cxx     | -       | Non-standard front length **                | All 45° *                          | Body shape  |
| Dxx     | -       | Non-standard rear length **                 | All 45° *                          | Body shape  |
| Kxx     | -       | Non-standard front length (to entry c/l) ** | All 90° except 96 series *         | Body shape  |
| Exx     | -       | Non-standard can length **                  | All plug-in style 90° *            | Body shape  |
| Fxx     | -       | Non-standard rear length **                 | All 90° except 96 series *         | Body shape  |
| Bxx     | -       | Non-standard coupling nut diameter **       | All *                              | Body shape  |
| Txx.x   | -       | Non-standard throat diameter **             | All *                              | Body shape  |
| CON     | -       | Conductive o-ring                           | All backshells with o-rings        | O-ring      |
| FS      | U       | Fluorosilicone o-rings / seals              | All backshells with o-rings        | O-ring      |
| NIS     | N       | Nitrile o-ring                              | All backshells with o-rings        | O-ring      |
| VS      | V       | Fluoroelastomer o-ring                      | All backshells with o-rings        | O-ring      |
| NS      | -       | No seal                                     | All backshells with o-rings        | O-ring      |

\* consult TE for availability / available values / dimensions

\*\* xx / xx.x specified in mm



## Connector Interface Table

| Backshells designed to be used in conjunction with:    | POLAMCO Backshell Connector Interface Code | Raychem Backshell Connector Interface Code |
|--------------------------------------------------------|--------------------------------------------|--------------------------------------------|
| MIL-DTL-26482 SERIES I                                 | DG, KG, DM, K, DS, UT                      | 21                                         |
| PATT 105 / PATT 603*                                   | D                                          | 76                                         |
| MIL-DTL-26482-SERIES II<br>MIL-DTL-83723 SERIES I & II | A                                          | 54                                         |
| MIL-DTL-38999 SERIES I                                 | F<br>(odd numbered shell sizes)            | 41                                         |
| MIL-DTL-38999 SERIES II                                | F<br>(even numbered shell sizes)           | 41                                         |
| MIL-DTL-38999 SERIES III / EN3645                      | H                                          | 40                                         |
| MIL-DTL-38999 SERIES IV                                | H                                          | 40                                         |
| AS50151                                                | L, LS, LM, LV                              | 18                                         |
| MIL-DTL-5015D CANNON CA-BAYONET                        | LC, LCS                                    | 58                                         |
| MIL-DTL-5015 "ABB M.S"                                 | Q                                          | 78                                         |
| MIL-DTL-5015H                                          | A                                          | 54                                         |
| MIL-DTL-83723 SERIES III (BAYONET)                     | A                                          | 54                                         |
| MIL-DTL 83723 SERIES III (THREADED)                    | A                                          | 54                                         |
| MIL-DTL-28840                                          | Z                                          | 30                                         |
| EN2997<br>(SAME AS 83723 SERIES III (STAINLESS))       | A                                          | 54                                         |
| ESC10                                                  | A                                          | 54                                         |
| ESC11                                                  | A                                          | 54                                         |
| VG96912                                                | SM                                         | 47                                         |
| PAT 608                                                | S                                          | 79                                         |

Solutions for other interfaces may be available - contact TE for further information



## POLAMCO Backshell Part Numbering System



1 - Prefix shell size with F for direct coupling with grommet follower  
(available on interfaces A, D, F, H, K, SM, Q, Z)

2 - Replace dash before entry size with T2 or T3 (straight only) for type 2 assembly  
(available when entry diameter exceeds throat diameter - see p44 for example)

\* exceptions: RM, L, LC, Q interface - refer to connector interface table for correct shell size

Please note that this system does not apply to the TXR and HexaShield backshells -  
refer to individual product pages for the correct method



## Calculating Wire Bundle Diameter

Where it is not possible to physically measure the wire bundle diameter it can be estimated from the individual wire diameters using the following calculation.

When selecting the backshell cable entry size from provided tables, it is a good idea to err on the side of too large, as an undersized cable can always be enlarged with tape or a grommet to fit the cable clamp. When calculating wire bundle diameters, note that the gauge # of the wire describes only the diameter of the metal conductor, and not the overall diameter including insulation and/or braids. Refer to the appropriate wire specification for the actual diameter of the wire for use in the following calculations.

### Steps:

1. Determine each type of wire diameter
2. Choose the multiplication factor from table 1 below
3. Calculate the bundle diameter using the following formula:

$$(\text{Bundle Diameter}) = \text{Factor} \times \sqrt{n_1 \times d_1^2 + n_2 \times d_2^2 + n_3 \times d_3^2 + \dots + n_n \times d_n^2}$$

Where  $d_1 \dots d_n$  are diameters of each type of wire in the bundle (when using wires from different diameters)  
 $n_1 \dots n_n$  the quantity of wires with the same diameter

Factor is chosen in according to the total number of wires in the bundle (TABLE 1)

4. Add thickness of any shielding or jacketing to core wire bundle diameter.

$$(\text{Final OD}) = (\text{Bundle Diameter}) + 2 \times (\text{Shield Thickness}) + 2 \times (\text{Jacket Thickness})$$

Table 1

| MULTIPLICATION FACTORS |   |       |       |       |       |       |            |
|------------------------|---|-------|-------|-------|-------|-------|------------|
| NO OF WIRES            | 1 | 2     | 3     | 4     | 5     | 6     | 7 AND MORE |
| FACTOR                 | 1 | 1.415 | 1.242 | 1.205 | 1.208 | 1.225 | 1.15       |



## Product Finder

|            |                              |                                                                                     | SCREEN TERMINATION |                                 |           |            | STRAIN RELIEF & CABLE SEALING |                            | ADDITIONAL COMPONENTS REQUIRED |      |
|------------|------------------------------|-------------------------------------------------------------------------------------|--------------------|---------------------------------|-----------|------------|-------------------------------|----------------------------|--------------------------------|------|
|            |                              |                                                                                     | Overall Screen     | Individual/<br>Multiple Screens | Tool Free | Reworkable | Cable Clamp                   | Heat Shrink<br>Boot Option | Boot                           | Band |
| BAND       | <b>BT Series</b><br>Page 14  |    | ●                  |                                 |           |            |                               | ●                          | ●                              | ●    |
|            | <b>88 Series</b><br>Page 16  |    | ●                  |                                 |           |            | ●                             |                            |                                | ●    |
|            | <b>AP Series</b><br>Page 18  |    | ●                  |                                 |           |            |                               | ●                          | ●                              | ●    |
|            | <b>DS Series</b><br>Page 20  |  | ●                  | ●                               |           |            |                               | ●                          | ●                              | ●    |
| SPRING     | <b>91 Series</b><br>Page 22  |  | ●                  |                                 | ●         | ●          |                               | ●                          | ●                              |      |
| BRAID TAIL | <b>70 Series</b><br>Page 24  |  | ●                  |                                 | ●         | ●          |                               | ●                          | ●                              |      |
| BRAID TRAP | <b>95 Series</b><br>Page 26  |  | ●                  |                                 | ●         | ●          | ●                             | ●                          |                                |      |
| CONE       | <b>64 Series</b><br>Page 28  |  |                    | ●                               | ●         | ●          | ●                             | ●                          |                                |      |
|            | <b>308 Series</b><br>Page 30 |  | ●                  |                                 | ●         | ●          |                               | ●                          | ●                              |      |



## Product Finder

|                             |                               |                                                                                     | SCREEN TERMINATION |                                 |           |            | STRAIN RELIEF & CABLE SEALING |                            | ADDITIONAL COMPONENTS REQUIRED |      |
|-----------------------------|-------------------------------|-------------------------------------------------------------------------------------|--------------------|---------------------------------|-----------|------------|-------------------------------|----------------------------|--------------------------------|------|
|                             |                               |                                                                                     | Overall Screen     | Individual/<br>Multiple Screens | Tool Free | Reworkable | Cable Clamp                   | Heat Shrink<br>Boot Option | Boot                           | Band |
| STRAIN RELIEF               | <b>77 Series</b><br>Page 32   |    |                    |                                 |           |            | ●                             |                            |                                |      |
|                             | <b>KMA Series</b><br>Page 34  |    | ●                  | ●                               | ●         | ●          |                               | ●                          | ●                              |      |
| MESH TAPE                   | <b>KMCC Series</b><br>Page 36 |    | ●                  | ●                               | ●         | ●          | ●                             |                            |                                |      |
|                             | <b>76 Series</b><br>Page 38   |  |                    |                                 |           |            |                               | ●                          | ●                              |      |
| HEAT SHRINK BOOT            | <b>PG Series</b><br>Page 40   |  |                    |                                 |           |            |                               |                            |                                |      |
|                             | <b>DC Series</b><br>Page 42   |  |                    |                                 |           |            |                               |                            |                                |      |
| THREAD EXTENDERS & ADAPTERS | <b>TXR</b><br>Page 44         |  | ●                  |                                 |           |            |                               | ●                          | ●                              |      |
|                             | <b>HexaShield</b><br>Page 46  |  |                    | ●                               |           | ●          |                               | ●                          |                                |      |



## BT Series

### Band Strap Backshell

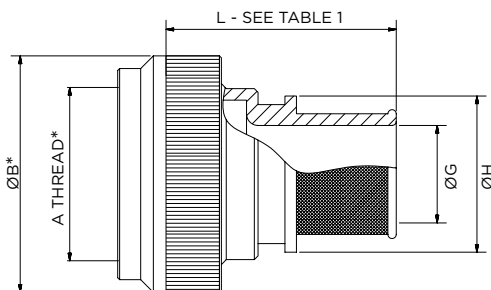


- Screen termination with a stainless steel band
- Sealing and strain relief of backshell by heat shrink boot
- Calibrated application tooling required
- Banding strap available – see page 50

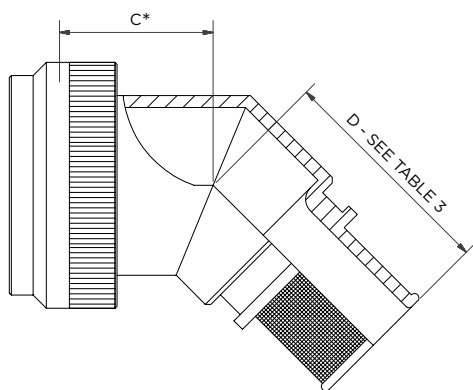
#### SPECIFICATIONS

- **Screen Termination:** Overall Screen
- **Strain Relief & Cable Sealing:** Heat Shrink Boot Option
- **Additional Components Required:** Boot, Band

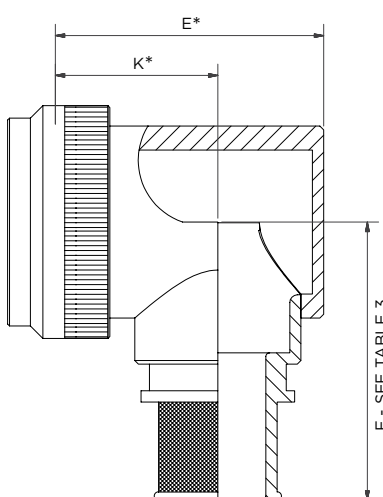
ANGLE 1



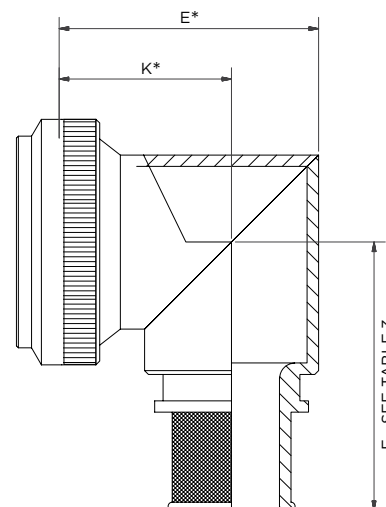
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**BT H 1 - 17 - 10 - 1 - B - SB**

Series

Connector interface\*

Angle

Shell size

Entry size

Material

Finish

Band

SB - supplied with standard band  
see p50 for options - omit for no band

**Table 1 - Length**

| SHELL SIZE | INTERFACE |         |      |      |      |      |      |      |      |      |
|------------|-----------|---------|------|------|------|------|------|------|------|------|
|            | A         | A AD/SS | D    | F    | H    | K    | Q    | S    | SM   | Z    |
| 03         | 28,0      | 32,0    | -    | -    | -    | -    | -    | -    | -    | -    |
| 08/09      | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | -    | 32,0 | 30,0 | -    |
| 10/10SL/11 | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | -    |
| 12/12S/13  | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | -    | 32,0 | 30,0 | 38,2 |
| 14/14S/15  | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 16/16S/17  | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 18/19      | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 20/21      | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 22/23      | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 24/25      | 28,0      | 32,0    | 34,0 | 30,0 | 30,0 | 34,0 | 40,0 | 32,0 | 30,0 | 38,2 |
| 28/29      | 36,0      | 32,0    | -    | -    | -    | -    | 45,0 | -    | -    | 38,2 |
| 32/33      | 40,0      | 40,0    | -    | -    | -    | -    | 50,0 | -    | -    | -    |
| 36         | 45,0      | 45,0    | -    | -    | -    | -    | 50,0 | -    | -    | -    |
| 40         | 50,0      | 50,0    | -    | -    | -    | -    | -    | -    | -    | -    |
| 44         | 60,0      | 60,0    | -    | -    | -    | -    | -    | -    | -    | -    |
| 48         | 60,0      | 60,0    | -    | -    | -    | -    | -    | -    | -    | -    |
| 61         | 28,0      | 32,0    | -    | -    | -    | -    | -    | -    | -    | -    |

**Table 2**

| ENTRY SIZE | ØG MIN | ØH MAX |
|------------|--------|--------|
| 03         | 4,7    | 13,9   |
| 04         | 6,3    | 13,9   |
| 05         | 7,9    | 15,5   |
| 06         | 9,5    | 17,2   |
| 07         | 11,1   | 18,7   |
| 08         | 12,7   | 20,3   |
| 09         | 14,2   | 21,9   |
| 10         | 15,8   | 23,5   |
| 11         | 17,4   | 25,1   |
| 12         | 19,0   | 26,7   |
| 13         | 20,6   | 28,3   |
| 14         | 22,2   | 29,9   |
| 15         | 23,8   | 31,5   |
| 16         | 25,4   | 33,1   |
| 17         | 27,0   | 34,7   |
| 18         | 28,6   | 36,3   |
| 19         | 30,2   | 37,9   |
| 20         | 31,8   | 39,5   |
| 21         | 33,3   | 41,1   |
| 22         | 35,0   | 42,7   |
| 23         | 36,5   | 44,3   |
| 24         | 38,1   | 45,9   |

**Table 3**

| SHELL SIZE | ALL INTERFACES |       |
|------------|----------------|-------|
|            | D MAX          | F MAX |
| 03         | 26,6           | 29,4  |
| 08/09      | 26,4           | 31,5  |
| 10/10SL/11 | 29,4           | 32,7  |
| 12/12S/13  | 27,3           | 33,7  |
| 14/14S/15  | 30,0           | 35,5  |
| 16/16S/17  | 30,5           | 37,4  |
| 18/19      | 30,9           | 39,0  |
| 20/21      | 31,6           | 41,6  |
| 22/23      | 32,3           | 42,1  |
| 24/25      | 32,9           | 45,1  |
| 28/29      | 34,1           | 46,1  |
| 32/33      | 35,4           | 48,6  |
| 36         | 36,3           | 52,3  |
| 40         | 36,2           | 54,8  |
| 44         | 37,8           | 58,0  |
| 48         | 39,0           | 61,1  |
| 61         | 31,4           | 52,1  |

All dimensions in MM unless otherwise stated.



## 88 Series

'Band In A Can' Backshell

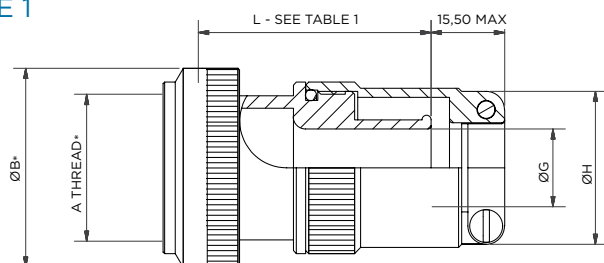


- Screen termination by standard stainless steel band
- Strain relief by screw on cable clamp 'can'
- 'Can' provides protection of screen termination area
- Banding strap available – see page 50

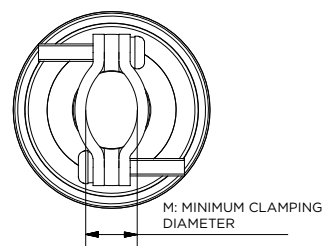
### SPECIFICATIONS

- **Screen Termination:** Overall Screen
- **Strain Relief & Cable Sealing:** Cable Clamp
- **Additional Components Required:** Band

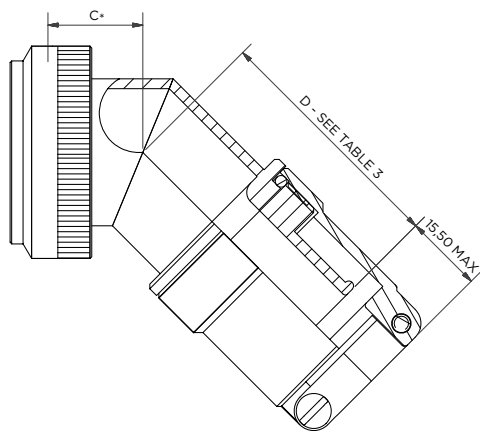
ANGLE 1



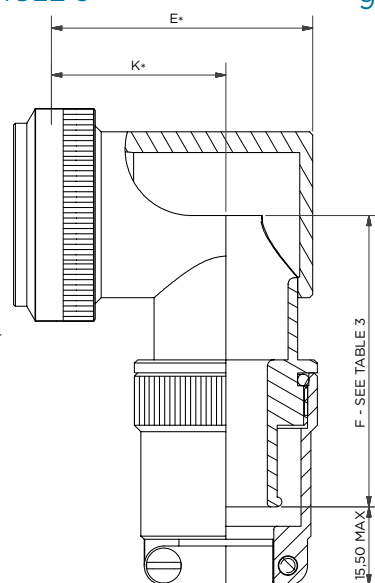
REAR VIEW



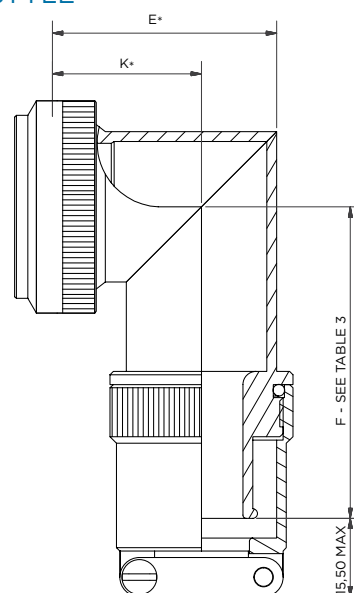
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**88 F 1 - 13 - 06 - 1 - C - SB**

Series

Connector interface\*

Angle

Shell size

Entry size

Material

Finish

Band

SB - supplied with standard band  
see p50 for options - omit for no band

**Table 1 - Length**

| SHELL SIZE | INTERFACE |      |      |      |      |      |      |      |      |      |
|------------|-----------|------|------|------|------|------|------|------|------|------|
|            | A         | D    | F    | H    | K    | LC   | Q    | S    | SM   | Z    |
| 03         | 38,0      | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 08/09      | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | -    | 40,0 | 38,0 | -    |
| 10/10SL/11 | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | -    | 40,0 | 38,0 | 41,0 |
| 12/12S/13  | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 43,0 | 40,0 | 38,0 | 41,0 |
| 14/14S/15  | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 43,0 | 40,0 | 38,0 | 41,0 |
| 16/16S/17  | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 43,0 | 40,0 | 38,0 | 41,0 |
| 18/19      | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 43,0 | 40,0 | 38,0 | 41,0 |
| 20/21      | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 43,0 | 40,0 | 38,0 | -    |
| 22/23      | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 43,0 | 40,0 | 38,0 | 41,0 |
| 24/25      | 38,0      | 38,0 | 38,0 | 38,0 | 38,0 | 38,0 | 43,0 | 40,0 | 38,0 | 41,0 |
| 28/29      | 38,0      | -    | -    | -    | -    | 38,0 | 43,0 | -    | -    | 41,0 |
| 32/33      | 38,0      | -    | -    | -    | -    | 38,0 | 43,0 | -    | -    | 41,0 |
| 36         | 38,0      | -    | -    | -    | -    | 38,0 | 43,0 | -    | -    | -    |
| 40         | 38,0      | -    | -    | -    | -    | 38,0 | -    | -    | -    | -    |
| 44         | 38,0      | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 48         | 38,0      | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 61         | 38,0      | -    | -    | -    | -    | -    | -    | -    | -    | -    |

**Table 2**

| ENTRY SIZE | ØG MIN | ØH MAX | M ±0,5 |
|------------|--------|--------|--------|
| 03         | 4,7    | 17,2   | 6,8    |
| 04         | 6,3    | 18,8   | 6,7    |
| 05         | 7,9    | 20,4   | 7,8    |
| 06         | 9,5    | 22,0   | 7,9    |
| 07         | 11,1   | 23,5   | 8,6    |
| 08         | 12,7   | 25,0   | 9,0    |
| 09         | 14,2   | 26,7   | 10,2   |
| 10         | 15,8   | 28,3   | 10,4   |
| 11         | 17,4   | 30,0   | 12,5   |
| 12         | 19,0   | 31,5   | 12,4   |
| 13         | 20,6   | 33,0   | 15,0   |
| 14         | 22,2   | 34,7   | 15,4   |
| 15         | 23,8   | 36,4   | 16,8   |
| 16         | 25,4   | 37,8   | 17,3   |
| 17         | 27,0   | 39,4   | 18,8   |
| 18         | 28,6   | 41,0   | 19,5   |
| 19         | 30,2   | 42,6   | 23,9   |
| 20         | 31,8   | 44,2   | 22,4   |
| 21         | 33,3   | 45,8   | 23,8   |
| 22         | 35,0   | 47,3   | 24,4   |
| 23         | 36,5   | 50,9   | 26,4   |
| 24         | 38,1   | 50,9   | 26,4   |

**Table 3**

| SHELL SIZE | ALL INTERFACES |       |
|------------|----------------|-------|
|            | D MAX          | F MAX |
| 03         | 38,5           | 39,9  |
| 08/09      | 50,5           | 51,9  |
| 10/10SL/11 | 51,3           | 53,7  |
| 12/12S/13  | 51,5           | 54,5  |
| 14/14S/15  | 52,1           | 56,7  |
| 16/16S/17  | 53,4           | 58,4  |
| 18/19      | 53,7           | 60,0  |
| 20/21      | 54,5           | 61,6  |
| 22/23      | 54,9           | 63,1  |
| 24/25      | 55,3           | 64,6  |
| 28/29      | 55,3           | 67,1  |
| 32/33      | 57,4           | 70,3  |
| 36         | 58,9           | 75,1  |
| 40         | 60,1           | 77,3  |
| 44         | 46,7           | 65,5  |
| 48         | 47,9           | 68,6  |
| 61         | 40,3           | 49,6  |

All dimensions in MM unless otherwise stated.



## AP Series

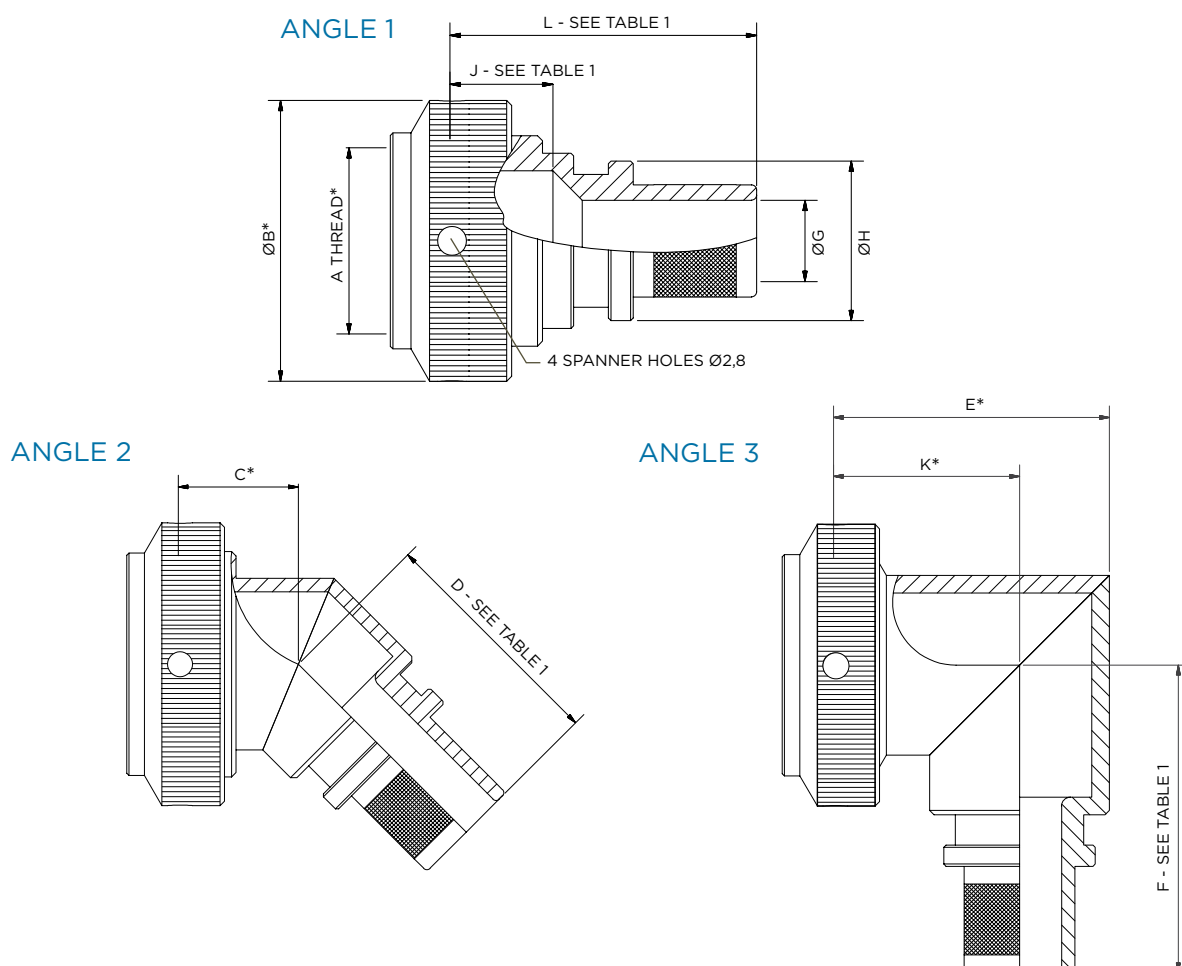
### Band Backshell



- Screen termination by standard stainless steel band
- European preferred style, without band retention lip
- Sealing and strain relief of backshell by heat shrink boot
- Banding strap available – see page 50

#### SPECIFICATIONS

- **Screen Termination:** Overall Screen
- **Strain Relief & Cable Sealing:** Heat Shrink Boot Option
- **Additional Components Required:** Boot, Band



\*REFER TO FOLD PAGE ADD 3,2 TO  $\varnothing B$  [CLICK HERE](#)



Example:

**AP H 1 - 09 - 08 - 10 - 1 - B - SB**

Series

Connector interface\*

Angle

Shell size

Entry size

Chamber length (Straight only - omit for angle 2 & 3)

Material

Finish

Band

SB - supplied with standard band  
see p50 for options - omit for no band

**Table 1 - Length**

| SHELL SIZE | ALL INTERFACES |       |          |      |      |      |      |      |      |      |      |      |
|------------|----------------|-------|----------|------|------|------|------|------|------|------|------|------|
|            | D MAX          | F MAX |          | J=10 | J=15 | J=20 | J=25 | J=30 | J=35 | J=40 | J=45 | J=50 |
| 03         | 26,6           | 29,6  | L<br>MAX | 28,5 | 33,5 | 38,5 | 43,5 | 48,5 | 53,5 | 58,5 | 63,5 | 68,5 |
| 08/09      | 26,4           | 32,2  |          | 29,9 | 34,9 | 39,9 | 44,9 | 49,9 | 54,9 | 59,9 | 64,9 | 69,9 |
| 10/10SL/11 | 26,3           | 33,7  |          | 30,8 | 35,8 | 40,8 | 45,8 | 50,8 | 55,8 | 60,8 | 65,8 | 70,8 |
| 12/13      | 27,2           | 35,2  |          | 31,6 | 36,6 | 41,6 | 46,6 | 51,6 | 56,6 | 61,6 | 66,6 | 71,6 |
| 14/14S/15  | 28,0           | 36,9  |          | 32,5 | 37,5 | 42,5 | 47,5 | 52,5 | 57,5 | 62,5 | 67,5 | 72,5 |
| 16/16S/17  | 28,3           | 38,5  |          | 33,5 | 38,5 | 43,5 | 48,5 | 53,5 | 58,5 | 63,5 | 68,5 | 73,5 |
| 18/19      | 29,1           | 40,1  |          | 34,3 | 39,3 | 44,3 | 49,3 | 54,3 | 59,3 | 64,3 | 69,3 | 74,3 |
| 20/21      | 29,5           | 41,6  |          | 35,2 | 40,2 | 45,2 | 50,2 | 55,2 | 60,2 | 65,2 | 70,2 | 75,2 |
| 22/23      | 30,4           | 43,1  |          | 36,2 | 41,2 | 46,2 | 51,2 | 56,2 | 61,2 | 66,2 | 71,2 | 76,2 |
| 24/25      | 32,1           | 44,6  |          | 37,2 | 42,2 | 47,2 | 52,2 | 57,2 | 62,2 | 67,2 | 72,2 | 77,2 |
| 28/29      | 32,1           | 44,6  |          | 36,5 | 41,5 | 46,5 | 51,5 | 56,5 | 61,5 | 66,5 | 71,5 | 76,5 |
| 32/33      | 33,7           | 47,8  |          | 37,4 | 42,4 | 47,4 | 52,4 | 57,4 | 62,4 | 67,4 | 72,4 | 77,4 |
| 36         | 34,9           | 51,0  |          | 38,3 | 43,3 | 48,3 | 53,3 | 58,3 | 63,3 | 68,3 | 73,3 | 78,3 |
| 40         | 36,2           | 54,2  |          | 39,2 | 44,2 | 49,2 | 54,2 | 59,2 | 64,2 | 69,2 | 74,2 | 79,2 |
| 44         | 37,8           | 57,4  |          | 40,1 | 45,1 | 50,1 | 55,1 | 60,1 | 65,1 | 70,1 | 75,1 | 80,1 |
| 48         | 39,0           | 60,6  |          | 41,0 | 46,0 | 51,0 | 56,0 | 61,0 | 66,0 | 71,0 | 76,0 | 81,0 |
| 61         | 31,4           | 41,4  |          | 36,0 | 41,0 | 46,0 | 51,0 | 56,0 | 61,0 | 66,0 | 71,0 | 76,0 |

**Table 2 - Entry Size**

| ENTRY SIZE | ØG MIN | ØH MAX |
|------------|--------|--------|
| 04         | 3,2    | 12,4   |
| 06         | 4,8    | 12,4   |
| 08         | 6,4    | 14,0   |
| 10         | 7,9    | 15,5   |
| 12         | 9,5    | 17,1   |
| 14         | 11,1   | 18,7   |
| 16         | 12,7   | 20,3   |
| 18         | 14,2   | 21,6   |
| 20         | 15,9   | 23,5   |
| 24         | 19,0   | 26,7   |
| 28         | 22,2   | 29,8   |
| 32         | 25,4   | 33,0   |
| 34         | 27,0   | 34,6   |
| 36         | 28,6   | 36,2   |
| 40         | 31,8   | 39,4   |

All dimensions in MM unless otherwise stated.



## DS Series

### Band Strap Backshell



- Individual and overall screen termination by stainless steel band
- Individual screens terminated inside the backshell, close to the connector in order to minimize cross-talk
- Sealing and strain relief
- Banding strap available – see page 50

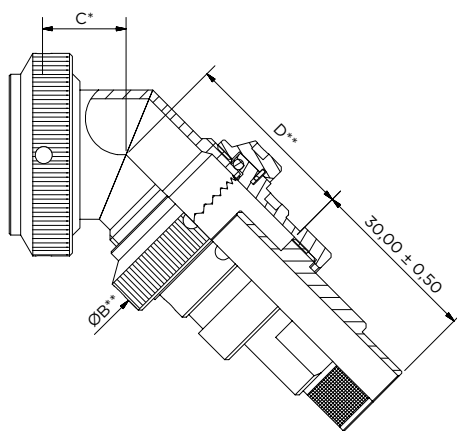
#### SPECIFICATIONS

- **Screen Termination:** Overall Screen, Individual or Multiple Screens
- **Strain Relief & Cable Sealing:** Heat Shrink Boot Option
- **Additional Components Required:** Boot, Band

ANGLE 1



ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*\*SEE NOTE

\*REFER TO INTERFACE PAGE ADD 3,2 TO ØB [CLICK HERE](#)



Example:

**DS H 1 - 13 - 05 - 20 - 1 - C - SB**

Series

Connector interface\*

Angle

Shell size

Straight only: if max entry exceeded  
replace '-' with 'T3' SEE NOTE

Entry size

Chamber length

Straight only (omit for angle 2 & 3)

Material

Finish

Band

SB - supplied with 2 x standard bands  
see p50 for options - omit for no bands



**Table 1**

| J ± 0,2<br>CHAMBER | J' ± 2,0<br>CHAMBER | M<br>MAX | M'<br>MAX |
|--------------------|---------------------|----------|-----------|
| 20                 | -                   | 60,0     | -         |
| 25                 | -                   | 65,0     | -         |
| 30                 | 30                  | 70,0     | 70,0      |
| 35                 | 35                  | 75,0     | 75,0      |
| 40                 | 40                  | 80,0     | 80,0      |
| 45                 | 45                  | 85,0     | 85,0      |
| 50                 | 50                  | 90,0     | 90,0      |

**Table 2**

| SHELL SIZE | ALL INTERFACES |       |            |
|------------|----------------|-------|------------|
|            | D MAX          | F MAX | MAX ENTRY* |
| 08/09      | *              | 38,4  | *          |
| 10/10SL/11 | *              | 39,0  | *          |
| 12/12S/13  | 30,5           | 39,6  | 05         |
| 14/14S/15  | 31,0           | 43,6  | 07         |
| 16/16S/17  | 32,0           | 45,1  | 10         |
| 18/19      | 33,0           | 46,6  | 12         |
| 20/21      | 33,5           | 48,1  | 13         |
| 22/23      | 34,0           | 49,6  | 15         |
| 24/25      | 34,5           | 51,1  | 16         |

**Table 3**

| ENTRY<br>SIZE | ØG   | ØH   | ØB'<br>MAX | D'<br>MAX |
|---------------|------|------|------------|-----------|
| 03            | 4,0  | 6,0  | 27,3       | 30,5      |
| 04            | 5,5  | 7,5  | 27,3       | 30,5      |
| 05            | 7,5  | 9,5  | 27,3       | 30,5      |
| 06            | 9,5  | 11,5 | 31,8       | 31,0      |
| 07            | 10,5 | 12,5 | 31,8       | 31,0      |
| 08            | 12,5 | 14,5 | 35,3       | 32,0      |
| 09            | 14,0 | 16,0 | 35,3       | 32,0      |
| 10            | 15,5 | 17,5 | 35,3       | 32,0      |
| 11            | 17,0 | 19,0 | 38,3       | 33,0      |
| 12            | 18,5 | 20,5 | 38,3       | 33,0      |
| 13            | 20,0 | 22,0 | 39,8       | 33,5      |
| 14            | 21,5 | 23,5 | 44,3       | 34,0      |
| 15            | 23,0 | 25,0 | 44,3       | 34,0      |
| 16            | 25,0 | 27,0 | 47,2       | 34,5      |

**\*\*NOTE**

Max entry applies to straight configuration.  
when max entry is exceeded, straight configuration  
must be ordered as T3 version (see indicator in part  
number breakdown).

Shell sizes 09 and 11 only exist in T3 version.

Exceeding max entry also affects dimension D in 45°  
configuration (see D') and rear nut diameter in 45° and  
90° configurations (ØB becomes ØB').

All dimensions in MM unless otherwise stated.



## 91 Series

### Spring Backshell

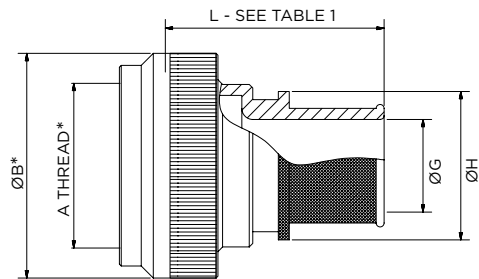


- Tool-free screen termination by stainless steel constant force spring
- Sealing and strain relief of backshell by heat shrink boot
- Standard range - many sizes available from stock

#### SPECIFICATIONS

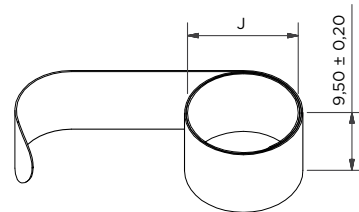
- **Screen Termination:** Overall screen, tool-free, reworkable
- **Strain Relief & Cable Sealing:** Heat shrink boot option
- **Additional Components Required:** Boot

ANGLE 1

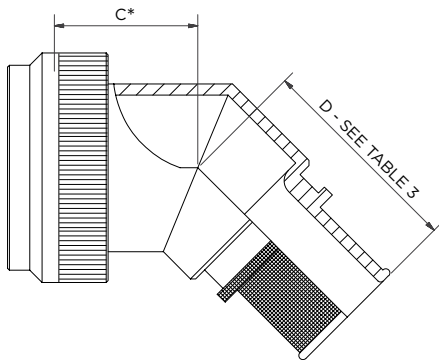


CONSTANT FORCE SPRING

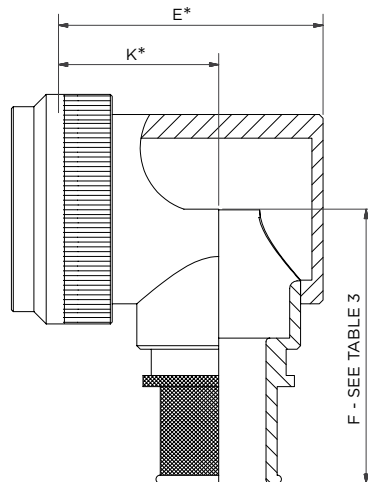
See Table 4



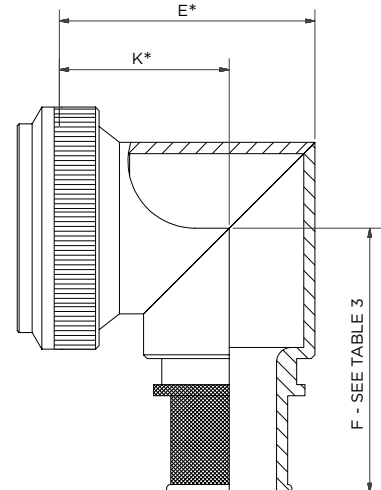
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**91 H 1 - 19 - 08 - 1 - B - HE200**

Series

Connector interface\*

Angle

Shell size

Entry size

Material

Finish

Spring Reference

**Table 1 - Length**

| SHELL SIZE | INTERFACE |            |      |      |      |      |      |      |      |      |
|------------|-----------|------------|------|------|------|------|------|------|------|------|
|            | A         | A<br>AD/SS | D    | F    | H    | K    | Q    | S    | SM   | Z    |
| 03         | 28,0      | 32,0       | -    | -    | -    | -    | -    | -    | -    | -    |
| 08/09      | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | -    | 32,0 | 30,0 | -    |
| 10/10SL/11 | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | -    |
| 12/12S/13  | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | -    | 32,0 | 30,0 | 38,2 |
| 14/14S/15  | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 16/16S/17  | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 18/19      | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 20/21      | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 22/23      | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | 36,0 | 32,0 | 30,0 | 38,2 |
| 24/25      | 28,0      | 32,0       | 34,0 | 30,0 | 30,0 | 34,0 | 40,0 | 32,0 | 30,0 | 38,2 |
| 28/29      | 36,0      | 32,0       | -    | -    | -    | -    | 45,0 | -    | -    | 38,2 |
| 32/33      | 40,0      | 40,0       | -    | -    | -    | -    | 50,0 | -    | -    | -    |
| 36         | 45,0      | 45,0       | -    | -    | -    | -    | 50,0 | -    | -    | -    |
| 40         | 50,0      | 50,0       | -    | -    | -    | -    | -    | -    | -    | -    |
| 44         | 60,0      | 60,0       | -    | -    | -    | -    | -    | -    | -    | -    |
| 48         | 60,0      | 60,0       | -    | -    | -    | -    | -    | -    | -    | -    |
| 61         | 28,0      | 32,0       | -    | -    | -    | -    | -    | -    | -    | -    |

**Table 2**

| ENTRY<br>SIZE | ØG<br>MIN | ØH<br>MAX | SPRING REF |
|---------------|-----------|-----------|------------|
| 03            | 4,7       | 13,9      | HE050      |
| 04            | 6,3       | 13,9      | HE050      |
| 05            | 7,9       | 15,5      | HE100      |
| 06            | 9,5       | 17,2      | HE100      |
| 07            | 11,1      | 18,7      | HE100      |
| 08            | 12,7      | 20,3      | HE200      |
| 09            | 14,2      | 21,9      | HE200      |
| 10            | 15,8      | 23,5      | HE200      |
| 11            | 17,4      | 25,1      | HE200      |
| 12            | 19,0      | 26,7      | HE300      |
| 13            | 20,6      | 28,3      | HE300      |
| 14            | 22,2      | 29,9      | HE300      |
| 15            | 23,8      | 31,5      | HE300      |
| 16            | 25,4      | 33,1      | HE300      |
| 17            | 27,0      | 34,7      | HE400      |
| 18            | 28,6      | 36,3      | HE400      |
| 19            | 30,2      | 37,9      | HE400      |
| 20            | 31,8      | 39,5      | HE400      |
| 21            | 33,3      | 41,1      | HE400      |
| 22            | 35,0      | 42,7      | HE400      |
| 23            | 36,5      | 44,3      | HE400      |
| 24            | 38,1      | 45,9      | HE400      |

**Table 3**

| SHELL SIZE | ALL INTERFACES |       |
|------------|----------------|-------|
|            | D MAX          | F MAX |
| 03         | 26,6           | 29,4  |
| 08/09      | 26,4           | 31,5  |
| 10/10SL/11 | 29,4           | 32,7  |
| 12/12S/13  | 27,3           | 33,7  |
| 14/14S/15  | 30,0           | 35,5  |
| 16/16S/17  | 30,5           | 37,4  |
| 18/19      | 30,9           | 39,0  |
| 20/21      | 31,6           | 41,6  |
| 22/23      | 32,3           | 42,1  |
| 24/25      | 32,9           | 45,1  |
| 28/29      | 34,1           | 46,1  |
| 32/33      | 35,4           | 48,6  |
| 36         | 36,3           | 52,3  |
| 40         | 36,2           | 54,8  |
| 44         | 37,8           | 58,0  |
| 48         | 39,0           | 61,1  |
| 61         | 31,4           | 52,1  |

**Table 4**

| SPRING REF | J MAX<br>(unconstrained) |
|------------|--------------------------|
| HE 050     | 7,5                      |
| HE 100     | 9,1                      |
| HE 200     | 12,8                     |
| HE 300     | 17,9                     |
| HE 400     | 21,8                     |

All dimensions in MM unless otherwise stated.



## 70 Series

### Braid Tail Backshell



- High-reliability low profile magna form ring termination
- Sealing and strain relief of backshell by heat shrink boot
- Pre-terminated screenbraid sock

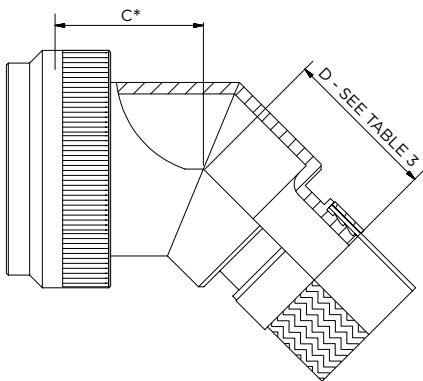
#### SPECIFICATIONS

- **Screen Termination:** Overall Screen, tool free, reworkable
- **Strain Relief & Cable Sealing:** Heat Shrink Boot Option
- **Additional Components Required:** Boot

ANGLE 1



ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

70 H 1 - 17 - 08 - 1 - C

Series

Connector interface\*

Angle

Shell size

Entry size

Material

Finish

Table 1 - Length

| SHELL SIZE | INTERFACE |      |      |      |      |      |      |      |      |
|------------|-----------|------|------|------|------|------|------|------|------|
|            | A         | D    | F    | H    | K    | Q    | S    | SM   | Z    |
| 03         | 25,5      | -    | -    | -    | -    | -    | -    | -    | -    |
| 08/09      | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | -    | 25,9 | 25,5 | -    |
| 10/10SL/11 | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | 36,0 | 25,9 | 25,5 | 30,0 |
| 12/12S/13  | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | -    | 25,9 | 25,5 | 30,0 |
| 14/14S/15  | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | 36,0 | 25,9 | 25,5 | 30,0 |
| 16/16S/17  | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | 36,0 | 25,9 | 25,5 | 30,0 |
| 18/19      | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | 36,0 | 25,9 | 25,5 | 30,0 |
| 20/21      | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | 36,0 | 25,9 | 25,5 | 30,0 |
| 22/23      | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | 36,0 | 25,9 | 25,5 | 30,0 |
| 24/25      | 25,5      | 32,5 | 25,5 | 23,5 | 32,5 | 36,0 | 25,9 | 25,5 | 30,0 |
| 28/29      | 36,0      | -    | -    | -    | -    | 36,0 | -    | -    | 30,0 |
| 32/33      | 40,0      | -    | -    | -    | -    | 36,0 | -    | -    | 30,0 |
| 36         | 45,0      | -    | -    | -    | -    | 36,0 | -    | -    | -    |
| 40         | 50,5      | -    | -    | -    | -    | -    | -    | -    | -    |
| 44         | 50,5      | -    | -    | -    | -    | -    | -    | -    | -    |
| 48         | 50,5      | -    | -    | -    | -    | -    | -    | -    | -    |
| 61         | 28,0      | -    | -    | -    | -    | -    | -    | -    | -    |

Table 2

| ENTRY SIZE | ØG MIN | ØH +/- 0,25 |
|------------|--------|-------------|
| 03         | 4,7    | 13,1        |
| 04         | 6,3    | 13,1        |
| 05         | 7,9    | 13,1        |
| 06         | 9,5    | 17,9        |
| 07         | 11,1   | 17,9        |
| 08         | 12,7   | 17,9        |
| 09         | 14,2   | 17,9        |
| 10         | 15,8   | 24,2        |
| 11         | 17,4   | 24,2        |
| 12         | 19,0   | 24,2        |
| 13         | 20,6   | 24,2        |
| 14         | 22,2   | 30,6        |
| 15         | 23,8   | 30,6        |
| 16         | 25,4   | 30,6        |
| 17         | 27,0   | 33,2        |
| 18         | 28,6   | 33,2        |
| 19         | 30,2   | 36,4        |
| 20         | 31,8   | 42,0        |
| 21         | 33,3   | 42,0        |
| 22         | 35,0   | 42,0        |
| 23         | 36,5   | 42,0        |
| 24         | 38,1   | 42,0        |

Table 3

| SHELL SIZE     | ALL INTERFACES |       |
|----------------|----------------|-------|
|                | D MAX          | F MAX |
| 03             | 26,6           | 29,4  |
| 08/09          | 17,6           | 25,5  |
| 10/11          | 18,7           | 25,7  |
| 10SL/12/12S/13 | 19,7           | 27,2  |
| 14/14S/15      | 20,6           | 28,7  |
| 16/16S/17      | 21,4           | 32,3  |
| 18/19          | 22,1           | 32,4  |
| 20/21          | 22,6           | 33,6  |
| 22/23          | 26,8           | 35,1  |
| 24/25          | 27,3           | 36,6  |
| 28/29          | 27,0           | 39,9  |
| 32/33          | 27,0           | 43,1  |
| 36             | 28,8           | 47,1  |
| 40             | 26,6           | 49,3  |
| 44             | 28,3           | 52,5  |
| 48             | 29,5           | 55,6  |
| 61             | 21,9           | 36,6  |

All dimensions in MM unless otherwise stated.



## 95 Series

### Braid Trap Backshell



- Tool-free 360° screen termination by barrel thread braid trap system
- Sealing and strain relief of backshell by heat shrink boot
- Cable clamp backshell version also available

#### SPECIFICATIONS

- **Screen Termination:** Overall screen, tool-free, reworkable
- **Strain Relief & Cable Sealing:** Cable clamp, heat shrink boot option
- **Additional Components Required:** None

ANGLE 1



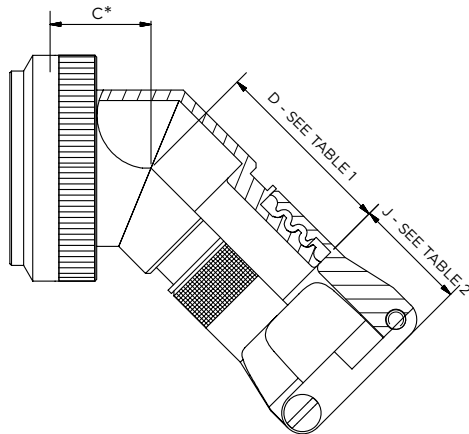
REAR VIEW



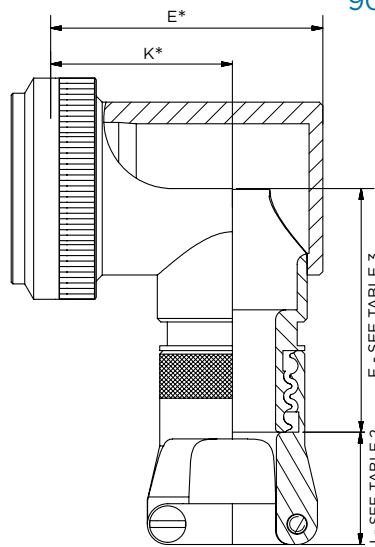
PLAIN NUT OPTION



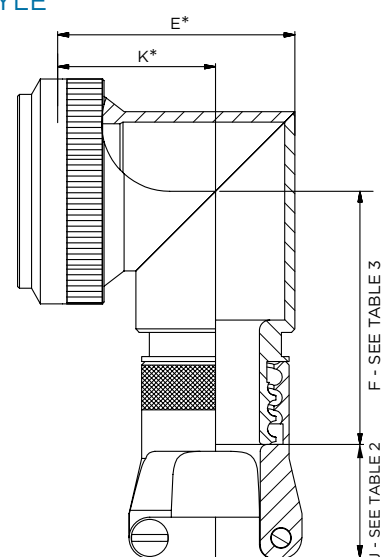
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**95 H 1 - 21 - 12 - 1 - B - CC**

Series

Connector interface\*

Angle

Shell size

Entry size

Material

Finish

Cable clamp option (omit for plain nut)

**Table 1 - Length**

| SHELL SIZE | INTERFACE   |             |             |             |             |             |             |             |             |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|            | A           | D           | F           | H           | K           | Q           | S           | SM          | Z           |
| 03         | 28,0 / 28,0 | -           | -           | -           | -           | -           | -           | -           | -           |
| 08/09      | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | -           | 28,0 / 28,0 | 32,0 / 30,0 | -           |
| 10/10SL/11 | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | -           | 28,0 / 28,0 | 32,0 / 30,0 | 30,0 / 38,0 |
| 12/12S/13  | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | 40,0 / 36,0 | 28,0 / 28,0 | 32,0 / 30,0 | 30,0 / 38,0 |
| 14/14S/15  | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | 40,0 / 36,0 | 28,0 / 28,0 | 32,0 / 30,0 | 30,0 / 38,0 |
| 16/16S/17  | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | 40,0 / 36,0 | 28,0 / 28,0 | 32,0 / 30,0 | 30,0 / 38,0 |
| 18/19      | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | 40,0 / 36,0 | 28,0 / 28,0 | 32,0 / 30,0 | 30,0 / 38,0 |
| 20/21      | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | 40,0 / 36,0 | 28,0 / 28,0 | 32,0 / 30,0 | -           |
| 22/23      | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | 40,0 / 36,0 | 28,0 / 28,0 | 32,0 / 30,0 | 30,0 / 38,0 |
| 24/25      | 28,0 / 28,0 | 39,0 / 34,0 | 32,0 / 28,0 | 32,0 / 28,0 | 38,0 / 34,0 | 40,0 / 36,0 | 28,0 / 28,0 | 32,0 / 30,0 | 30,0 / 38,0 |
| 28/29      | 28,0 / 28,0 | -           | -           | -           | -           | 40,0 / 36,0 | -           | -           | 30,0 / 38,0 |
| 32/33      | 40,0 / 40,0 | -           | -           | -           | -           | 40,0 / 36,0 | -           | -           | 30,0 / 38,0 |
| 36         | 40,0 / 40,0 | -           | -           | -           | -           | 40,0 / 36,0 | -           | -           | -           |
| 40         | 40,0 / 40,0 | -           | -           | -           | -           | -           | -           | -           | -           |
| 44         | 40,0 / 40,0 | -           | -           | -           | -           | -           | -           | -           | -           |
| 48         | 40,0 / 40,0 | -           | -           | -           | -           | -           | -           | -           | -           |
| 61         | 40,0 / 40,0 | -           | -           | -           | -           | -           | -           | -           | -           |

CABLE CLAMP LENGTH / PLAIN NUT LENGTH

**Table 2**

| ENTRY SIZE | ØG MIN | W MAX | ØH MAX | J MAX | M +/- 0,5 |
|------------|--------|-------|--------|-------|-----------|
| 03         | 4,7    | 17,3  | 15,2   | 14,7  | 5,8       |
| 04         | 6,3    | 18,9  | 15,2   | 14,7  | 5,7       |
| 05         | 7,9    | 20,5  | 16,8   | 14,7  | 6,8       |
| 06         | 9,5    | 22,1  | 18,4   | 14,7  | 6,9       |
| 07         | 11,1   | 23,6  | 20,0   | 14,7  | 8,1       |
| 08         | 12,7   | 25,1  | 21,6   | 17,7  | 8,5       |
| 09         | 14,2   | 26,8  | 23,2   | 17,7  | 9,7       |
| 10         | 15,8   | 28,4  | 24,8   | 17,7  | 10,4      |
| 11         | 17,4   | 30,1  | 26,4   | 20,7  | 11,5      |
| 12         | 19,0   | 31,6  | 27,9   | 20,7  | 11,4      |
| 13         | 20,6   | 33,1  | 29,5   | 20,7  | 14,0      |
| 14         | 22,2   | 34,8  | 31,1   | 23,7  | 15,4      |
| 15         | 23,8   | 36,5  | 32,7   | 23,7  | 16,8      |
| 16         | 25,4   | 37,9  | 34,3   | 23,7  | 17,3      |
| 17         | 27,0   | 39,5  | 35,9   | 23,7  | 18,8      |
| 18         | 28,6   | 41,1  | 37,5   | 23,7  | 19,5      |
| 19         | 30,2   | 42,7  | 39,3   | 25,2  | 25,9      |
| 20         | 31,8   | 44,3  | 40,6   | 25,2  | 23,4      |
| 21         | 33,3   | 45,8  | 42,2   | 25,2  | 24,8      |
| 22         | 35,0   | -     | 43,8   | -     | -         |
| 23         | 36,5   | 47,4  | 45,4   | 25,2  | 25,4      |
| 24         | 38,1   | 50,9  | 47,0   | 25,2  | 27,4      |

**Table 3**

| SHELL SIZE     | ALL INTERFACES |       |
|----------------|----------------|-------|
|                | D MAX          | F MAX |
| 03             | 27,6           | 34,4  |
| 08/09          | 27,4           | 33,8  |
| 10/11          | 29,4           | 35,5  |
| 10SL/12/12S/13 | 28,1           | 37,0  |
| 14/14S/15      | 30,0           | 38,6  |
| 16/16S/17      | 30,5           | 40,2  |
| 18/19          | 32,0           | 40,9  |
| 20/21          | 31,6           | 42,5  |
| 22/23          | 33,8           | 44,1  |
| 24/25          | 34,3           | 45,6  |
| 28/29          | 34,1           | 50,3  |
| 32/33          | 35,4           | 53,6  |
| 36             | 36,3           | 56,8  |
| 40             | 37,1           | 59,8  |
| 44             | 38,8           | 63,0  |
| 48             | 40,0           | 66,1  |
| 61             | 32,4           | 47,1  |

All dimensions in MM unless otherwise stated.



## 64 Series

### Cone Backshell

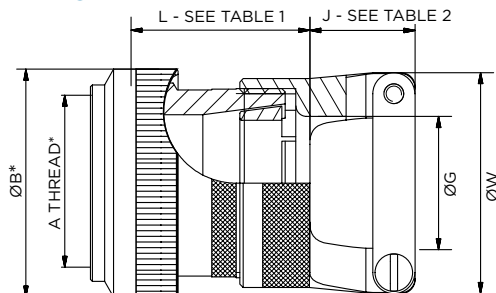


- Individual screen termination using castellated cone
- Sealing and strain relief of backshell by heat shrink boot
- Cable clamp backshell version also available

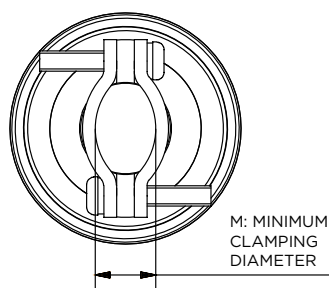
#### SPECIFICATIONS

- **Screen Termination:** Individual or multiple screens, tool-free, reworkable
- **Strain Relief & Cable Sealing:** Cable clamp, heat shrink boot option
- **Additional Components Required:** None

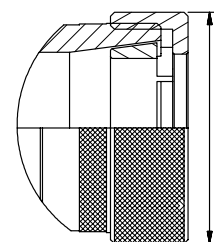
ANGLE 1



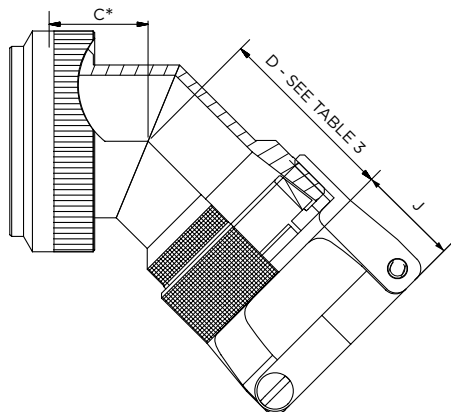
REAR VIEW



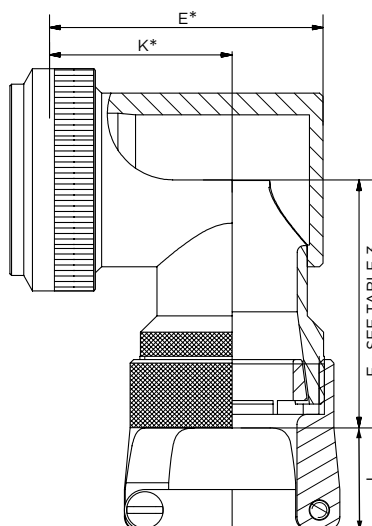
PLAIN NUT  
OPTION



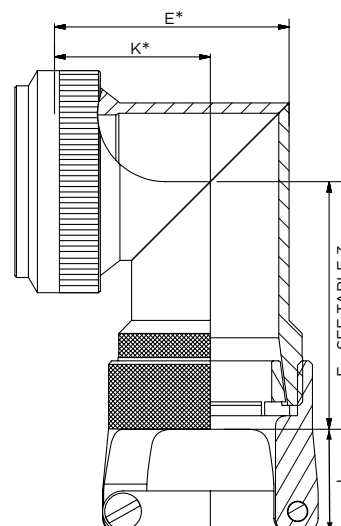
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**64 H 1 - 21 - 13 - 1 - C - CC**

Series \_\_\_\_\_  
 Connector interface\* \_\_\_\_\_  
 Angle \_\_\_\_\_  
 Shell size \_\_\_\_\_  
 Entry size \_\_\_\_\_  
 Material \_\_\_\_\_  
 Finish \_\_\_\_\_  
 Cable clamp option \_\_\_\_\_

**Table 1 - Length**

| SHELL SIZE     | INTERFACE |      |      |      |      |      |      |      |
|----------------|-----------|------|------|------|------|------|------|------|
|                | A         | D    | F    | H    | K    | Q    | S    | SM   |
| 08/09          | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | -    | 32,0 | 33,5 |
| 10/11          | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | -    | 32,0 | 33,5 |
| 10SL/12/12S/13 | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | 35,5 | 32,0 | 33,5 |
| 14/14S/15      | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | 35,5 | 32,0 | 33,5 |
| 16/16S/17      | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | 35,5 | 32,0 | 33,5 |
| 18/19          | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | 35,5 | 32,0 | 33,5 |
| 20/21          | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | 35,5 | 32,0 | 33,5 |
| 22/23          | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | 35,5 | 32,0 | 33,5 |
| 24/25          | 33,5      | 37,5 | 33,5 | 33,5 | 37,5 | 35,5 | 32,0 | 33,5 |
| 28/29          | 44,0      | -    | -    | -    | -    | 35,5 | -    | -    |
| 32/33          | 44,0      | -    | -    | -    | -    | 35,5 | -    | -    |
| 36             | 44,0      | -    | -    | -    | -    | 35,5 | -    | -    |
| 40             | 44,0      | -    | -    | -    | -    | -    | -    | -    |
| 44             | 44,0      | -    | -    | -    | -    | -    | -    | -    |
| 48             | 44,0      | -    | -    | -    | -    | -    | -    | -    |
| 61             | 44,0      | -    | -    | -    | -    | -    | -    | -    |

**Table 2**

| ENTRY SIZE | ØG MIN | ØW MAX | ØH MAX | J MAX | M ±0,5 |
|------------|--------|--------|--------|-------|--------|
| 08/09      | 6,6    | 20,7   | 16,0   | 15,2  | 7,8    |
| 10/11      | 9,3    | 23,8   | 19,0   | 15,2  | 8,6    |
| 12 /13     | 12,6   | 27,0   | 22,0   | 15,2  | 10,2   |
| 14/15      | 14,6   | 28,6   | 26,5   | 15,2  | 10,4   |
| 16/17      | 17,7   | 31,8   | 29,8   | 15,2  | 12,4   |
| 18/19      | 19,8   | 35,0   | 33,0   | 18,2  | 15,4   |
| 20/21      | 23,0   | 38,1   | 35,0   | 18,2  | 17,3   |
| 22/23      | 26,2   | 39,7   | 38,0   | 18,2  | 18,8   |
| 24/25      | 29,1   | 44,5   | 41,0   | 18,2  | 22,4   |

NOTE:  
 Use odd-numbered entry size code when shell size has an odd number

**Table 3**

| SHELL SIZE     | ALL INTERFACES |       |
|----------------|----------------|-------|
|                | D MAX          | F MAX |
| 08/09          | 33,6           | 35,1  |
| 10/11          | 34,4           | 36,9  |
| 10SL/12/12S/13 | 35,3           | 38,4  |
| 14/14S/15      | 35,7           | 39,9  |
| 16/16S/17      | 36,5           | 41,6  |
| 18/19          | 36,8           | 43,2  |
| 20/21          | 37,6           | 44,8  |
| 22/23          | 38,5           | 46,3  |
| 24/25          | 38,9           | 47,8  |
| 28/29          | 34,6           | 44,4  |
| 32/33          | 35,9           | 49,6  |
| 36             | 36,7           | 52,8  |
| 40             | 34,6           | 55,8  |
| 44             | 36,3           | 59,0  |
| 48             | 37,5           | 62,1  |
| 61             | 29,9           | 43,1  |

All dimensions in MM unless otherwise stated.



## 308 Series

### Cone Backshell

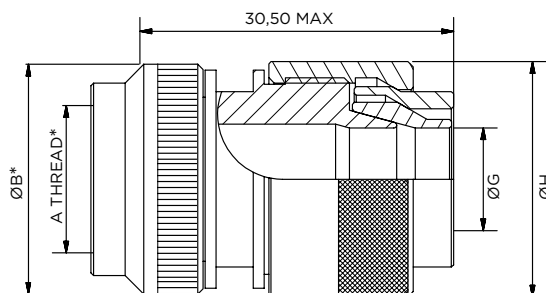


- Screen termination using two overlapping cones
- Sealing and strain relief of backshell by heat shrink boot

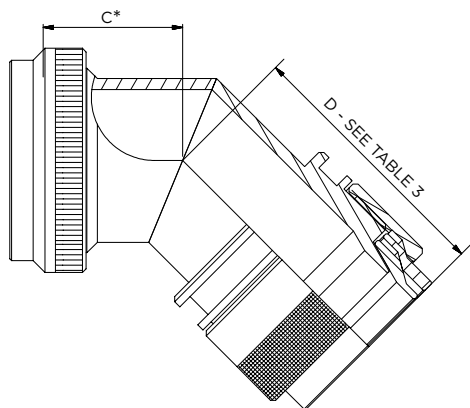
#### SPECIFICATIONS

- **Screen Termination:** Overall Screen, Tool-free, Reworkable
- **Strain Relief & Cable Sealing:** Heat Shrink Boot Option
- **Additional Components Required:** Boot

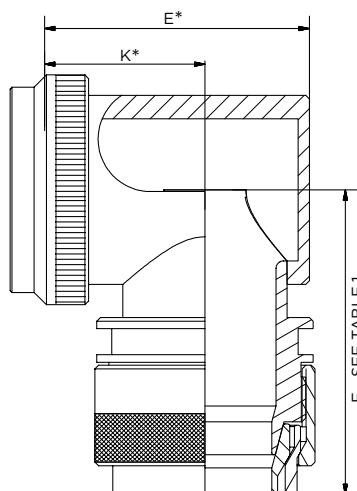
ANGLE 1



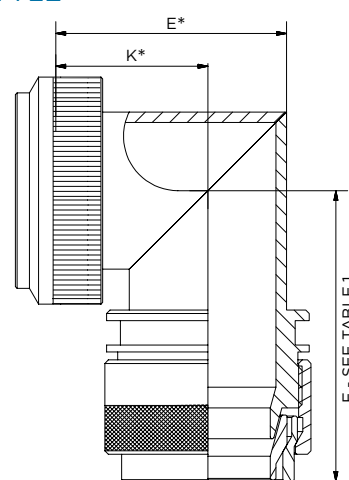
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**308 H 1 - 17 - 1 - C**

Series

Connector interface

Angle

Shell size

Material

Finish

**Table 1**

| SHELL SIZE | ALL INTERFACES |       |        |        |
|------------|----------------|-------|--------|--------|
|            | D MAX          | F MAX | ØG MIN | ØH MAX |
| 08/09      | 33,3           | 35,2  | 6,9    | 18,4   |
| 10/10SL/11 | 34,5           | 37,0  | 9,6    | 22,0   |
| 12/12S/13  | 34,9           | 38,5  | 12,7   | 24,0   |
| 14/14S/15  | 35,8           | 40,0  | 14,8   | 27,0   |
| 16/16S/17  | 36,6           | 41,2  | 17,9   | 29,5   |
| 18/19      | 36,6           | 43,3  | 19,9   | 33,9   |
| 20/21      | 37,7           | 44,9  | 23,1   | 37,0   |
| 22/23      | 38,1           | 46,4  | 26,2   | 40,8   |
| 24/25      | 39,0           | 47,9  | 28,8   | 43,0   |

All dimensions in MM unless otherwise stated.



## 77 Series

### Strain Relief Backshell



- Backshell entry sizes to match cable bundle diameter
- Extended follower offers protection to rear of connector

#### SPECIFICATIONS

- **Screen Termination:** None
- **Strain Relief & Cable Sealing:** Cable clamp
- **Additional Components Required:** None

ANGLE 1



REAR VIEW



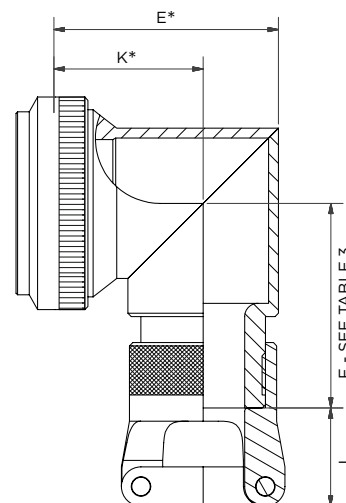
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

77 H 1 - 17 - 08 - 1 - C

Series  
Connector interface\*  
Angle  
Shell size  
Entry size  
Material  
Finish

**Table 1 - Length**

| SHELL SIZE | INTERFACE |      |      |      |      |      |      |      |
|------------|-----------|------|------|------|------|------|------|------|
|            | A         | D    | F    | H    | K    | Q    | S    | Z    |
| 03         | 36,0      | -    | -    | -    | -    | -    | -    | -    |
| 08/09      | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | -    | 36,0 | -    |
| 10/10SL/11 | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | -    | 36,0 | 30,0 |
| 12/12S/13  | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 30,0 |
| 14/14S/15  | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 30,0 |
| 16/16S/17  | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 30,0 |
| 18/19      | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 30,0 |
| 20/21      | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 30,0 |
| 22/23      | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 30,0 |
| 24/25      | 36,0      | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 36,0 | 30,0 |
| 28/29      | 36,0      | -    | -    | -    | -    | 36,0 | -    | 30,0 |
| 32/33      | 40,0      | -    | -    | -    | -    | 36,0 | -    | 30,0 |
| 36         | 45,0      | -    | -    | -    | -    | 36,0 | -    | -    |
| 40         | 50,5      | -    | -    | -    | -    | -    | -    | -    |
| 44         | 50,5      | -    | -    | -    | -    | -    | -    | -    |
| 48         | 50,5      | -    | -    | -    | -    | -    | -    | -    |
| 61         | 28,0      | -    | -    | -    | -    | -    | -    | -    |

**Table 2**

| ENTRY SIZE | ØG MIN | ØH MAX | M ±0,5 | J MAX |
|------------|--------|--------|--------|-------|
| 03         | 4,7    | 17,1   | 6,8    | 15,0  |
| 04         | 6,3    | 19,1   | 6,7    | 15,0  |
| 05         | 7,9    | 20,7   | 7,8    | 15,0  |
| 06         | 9,5    | 22,3   | 7,9    | 15,0  |
| 07         | 11,1   | 23,8   | 8,6    | 15,0  |
| 08         | 12,7   | 25,3   | 9,0    | 15,0  |
| 09         | 14,2   | 27,0   | 10,2   | 15,0  |
| 10         | 15,8   | 28,6   | 10,4   | 15,0  |
| 11         | 17,4   | 30,3   | 11,5   | 15,0  |
| 12         | 19,0   | 31,8   | 12,4   | 15,0  |
| 13         | 20,6   | 33,3   | 15,0   | 15,0  |
| 14         | 22,2   | 35,0   | 15,4   | 18,0  |
| 15         | 23,8   | 36,7   | 16,8   | 18,0  |
| 16         | 25,4   | 38,1   | 17,3   | 18,0  |
| 18         | 28,6   | 39,7   | 18,8   | 18,0  |
| 20         | 31,8   | 44,5   | 22,4   | 18,0  |
| 22         | 35,0   | 47,6   | 24,4   | 18,0  |
| 24         | 38,1   | 51,2   | 26,4   | 18,0  |

**Table 3**

| SHELL SIZE | ALL INTERFACES |       |
|------------|----------------|-------|
|            | D MAX          | F MAX |
| 03         | 25,1           | 26,4  |
| 08/09      | 24,6           | 26,4  |
| 10/10SL/11 | 30,5           | 38,3  |
| 12/12S/13  | 26,2           | 28,3  |
| 14/14S/15  | 31,5           | 29,8  |
| 16/16S/17  | 33,0           | 33,4  |
| 18/19      | 34,0           | 33,5  |
| 20/21      | 35,5           | 34,7  |
| 22/23      | 36,5           | 36,4  |
| 24/25      | 38,0           | 40,9  |
| 28/29      | 39,0           | 40,0  |
| 32/33      | 40,5           | 45,6  |
| 36         | 41,5           | 48,8  |
| 40         | 43,0           | 51,8  |
| 44         | 36,3           | 55,0  |
| 48         | 37,5           | 58,1  |
| 61         | 29,9           | 39,1  |

All dimensions in MM unless otherwise stated.



## KMA Series

### Mesh Tape Backshell



- 360° termination of multiple individual screens
- Mesh tape bundle system creates windowless EMI barrier even without overall screenbraid
- Sealing and strain relief of backshell by heat shrink boot

#### SPECIFICATIONS

- **Screen Termination:** Overall Screen, Individual or Multiple Screens, Tool-free, Reworkable
- **Strain Relief & Cable Sealing:** Heat Shrink Boot Option
- **Additional Components Required:** Boot

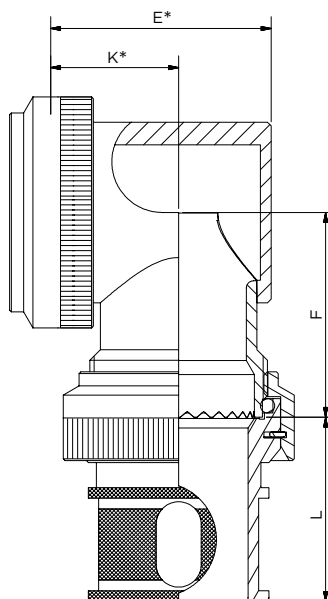
ANGLE 1



ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**KMA H 1 - 11 - 1 - B - S1 - HE**

Series ————  
 Connector interface\* ————  
 Angle ————  
 Shell size ————  
 Material ————  
 Finish ————  
 Slot Option ————  
 Termination option ————

HE - Constant force spring, omit for supplied without spring

**Table 1**

| SLOT OPTION | L<br>±0,5 | M<br>±0,25 | N<br>±0,25 | MESH-TAPE PART NUMBER<br>(ORDERED SEPARATELY- 25 M REEL) |
|-------------|-----------|------------|------------|----------------------------------------------------------|
| S1          | 26,5      | 12,0       | 19,5       | KM (6)                                                   |
| S2          | 34,5      | 20,0       | 27,5       | KM (13)                                                  |

**Table 2**

| SHELL SIZE     | ALL INTERFACES |       |        |        |
|----------------|----------------|-------|--------|--------|
|                | D MAX          | F MAX | ØG MIN | ØH MAX |
| 08/09          | 14,5           | 21,5  | 6,6    | 13,2   |
| 10/11          | 15,0           | 23,0  | 9,3    | 16,7   |
| 10SL/12/12S/13 | 15,5           | 24,5  | 12,8   | 20,0   |
| 14/14S/15      | 16,0           | 28,5  | 14,7   | 22,7   |
| 16/16S/17      | 17,0           | 30,0  | 17,8   | 25,4   |
| 18/19          | 18,0           | 31,5  | 19,5   | 28,3   |
| 20/21          | 18,5           | 33,0  | 21,9   | 31,6   |
| 22/23          | 19,0           | 34,5  | 25,2   | 34,7   |
| 24/25          | 19,5           | 36,0  | 28,3   | 37,9   |

**Table 3**

| INTERFACE   | A   | D    | F   | H   | K    | S    | SM  |
|-------------|-----|------|-----|-----|------|------|-----|
| Q DIMENSION | 8,5 | 11,0 | 7,0 | 7,0 | 11,0 | 11,0 | 7,0 |

All dimensions in MM unless otherwise stated.



## KMCC Series

### Mesh Tape Backshell

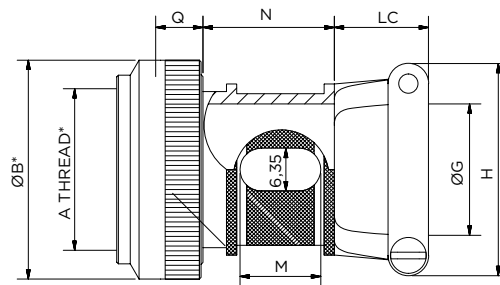


- 360° termination of multiple individual screens
- Mesh tape bundle system creates windowless EMI barrier even without overall screenbraid
- Strain relief by cable clamp allows tool free assembly and re-work

#### SPECIFICATIONS

- **Screen Termination:** Overall Screen, Individual or Multiple Screens, Tool-free, Reworkable
- **Strain Relief & Cable Sealing:** Cable Clamp
- **Additional Components Required:** None

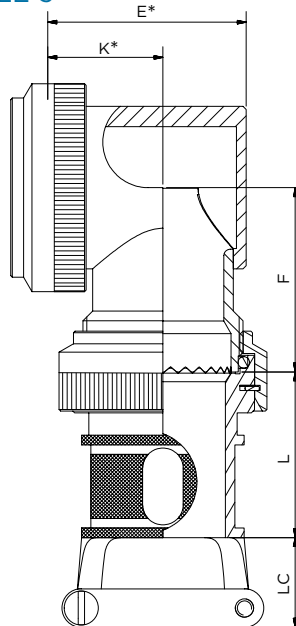
ANGLE 1



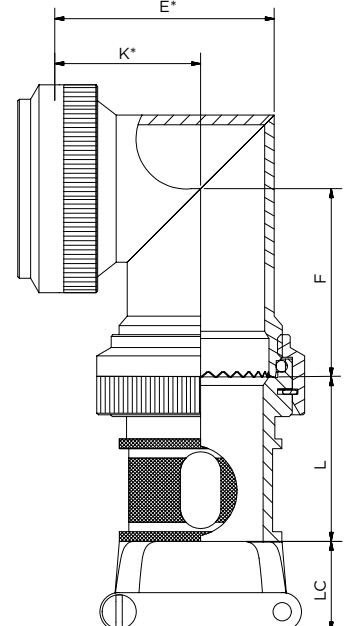
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**KMCC H 1 - 11 - 1 - C - S2 - HE**

Series \_\_\_\_\_  
 Connector interface\* \_\_\_\_\_  
 Angle \_\_\_\_\_  
 Shell size \_\_\_\_\_  
 Material \_\_\_\_\_  
 Finish \_\_\_\_\_  
 Slot Option \_\_\_\_\_  
 Termination option \_\_\_\_\_

HE - Constant force spring, omit for supplied without spring

**Table 1**

| SLOT OPTION | L<br>±0,5 | M<br>±0,25 | N<br>±0,25 | MESH-TAPE PART NUMBER<br>(ORDERED SEPARATELY- 25 M REEL) |
|-------------|-----------|------------|------------|----------------------------------------------------------|
| S1          | 26,5      | 12,0       | 19,5       | KM (6)                                                   |
| S2          | 34,5      | 20,0       | 27,5       | KM (13)                                                  |

**Table 2**

| SHELL SIZE     | ALL INTERFACES |       |        |       |        |
|----------------|----------------|-------|--------|-------|--------|
|                | D MAX          | F MAX | ØG MIN | H MAX | LC MAX |
| 08/09          | 14,5           | 21,5  | 6,6    | 13,2  | 14,0   |
| 10/11          | 15,0           | 23,0  | 9,3    | 16,7  | 14,0   |
| 10SL/12/12S/13 | 15,5           | 24,5  | 12,8   | 20,0  | 14,0   |
| 14/14S/15      | 16,0           | 28,5  | 14,7   | 22,7  | 14,0   |
| 16/16S/17      | 17,0           | 30,0  | 17,8   | 25,4  | 14,0   |
| 18/19          | 18,0           | 31,5  | 19,5   | 28,3  | 17,0   |
| 20/21          | 18,5           | 33,0  | 21,9   | 31,6  | 21,0   |
| 22/23          | 19,0           | 34,5  | 25,2   | 34,7  | 21,0   |
| 24/25          | 19,5           | 36,0  | 28,3   | 37,9  | 21,0   |

**Table 3**

| INTERFACE   | A   | D    | F   | H   | K    | S    | SM  |
|-------------|-----|------|-----|-----|------|------|-----|
| DIMENSION Q | 8,5 | 11,0 | 7,0 | 7,0 | 11,0 | 11,0 | 7,0 |

All dimensions in MM unless otherwise stated.



## 76 Series

### Heat Shrink Boot Backshell



- Low profile backshell for heat shrink boot

#### SPECIFICATIONS

- **Screen Termination:** None
- **Strain Relief & Cable Sealing:** Heat Shrink Boot Option
- **Additional Components Required:** Boot



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example: **76 A 1 - 14 - 1 - ZB**

Series ————  
 Connector interface\* ————  
 Angle ————  
 Shell size ————  
 Material ————  
 Finish ————

**Table 1 - Length**

| SHELL SIZE | INTERFACE |      |      |      |      |      |     |      |
|------------|-----------|------|------|------|------|------|-----|------|
|            | A         | D    | F    | H    | K    | Q    | S   | SM   |
| 03         | 13,7      | -    | -    | -    | -    | -    | -   | -    |
| 08/09      | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | -    | 9,8 | 11,0 |
| 10/10SL/11 | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | -    | 9,8 | 11,0 |
| 12/12S/13  | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | 12,5 | 9,8 | 11,0 |
| 14/14S/15  | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | 12,5 | 9,8 | 11,0 |
| 16/16S/17  | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | 12,5 | 9,8 | 11,0 |
| 18/19      | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | 12,5 | 9,8 | 11,0 |
| 20/21      | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | 12,5 | 9,8 | 11,0 |
| 22/23      | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | 12,5 | 9,8 | 11,0 |
| 24/25      | 13,7      | 17,0 | 11,0 | 12,0 | 16,5 | 12,5 | 9,8 | 11,0 |
| 28/29      | 13,7      | -    | -    | -    | -    | 12,5 | -   | -    |
| 32/33      | 13,7      | -    | -    | -    | -    | 12,5 | -   | -    |
| 36         | 13,7      | -    | -    | -    | -    | 12,5 | -   | -    |
| 40         | 13,7      | -    | -    | -    | -    | 12,5 | -   | -    |
| 44         | 13,7      | -    | -    | -    | -    | -    | -   | -    |
| 48         | 13,7      | -    | -    | -    | -    | -    | -   | -    |
| 61         | 13,7      | -    | -    | -    | -    | -    | -   | -    |

All dimensions in MM unless otherwise stated.



## PG Adaptor

Thread Adaptor

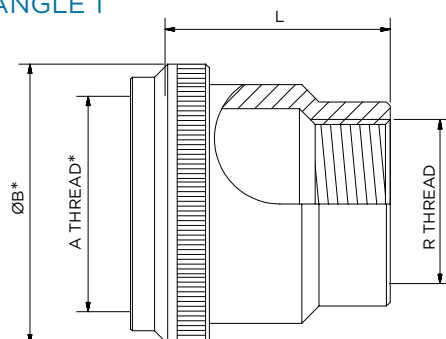


- To convert from military connector to PG threaded accessory

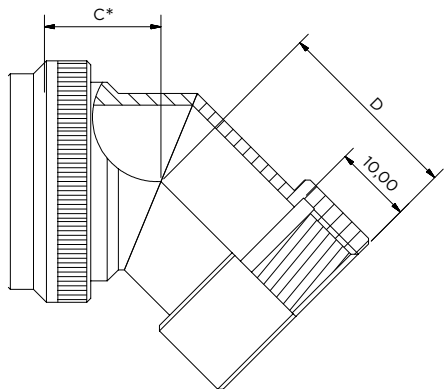
### SPECIFICATIONS

- **Screen Termination:** n/a
- **Strain Relief & Cable Sealing:** n/a
- **Additional Components Required:** n/a

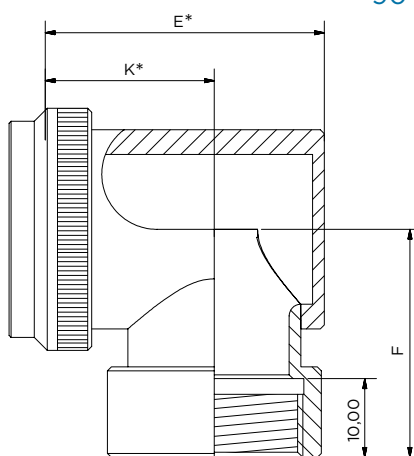
ANGLE 1



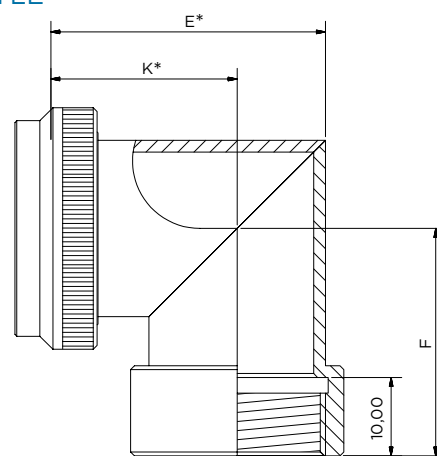
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**PGF H 1 - 17 - 16 - 1 - B - L25**

Series  
Connector interface\*  
Angle  
Shell size  
PG Size  
Material  
Finish  
Length in MM Straight Only  
(5mm Increments, L25 min)

**Table 1**

| PG SIZE | R THREAD |
|---------|----------|
| 7       | PG7      |
| 9       | PG9      |
| 11      | PG11     |
| 13.5    | PG13.5   |
| 16      | PG16     |
| 21      | PG21     |
| 29      | PG29     |
| 36      | PG36     |
| 42      | PG42     |
| 48      | PG48     |

**Table 2**

| SHELL SIZE | ALL INTERFACES |       |                                  |
|------------|----------------|-------|----------------------------------|
|            | D MAX          | F MAX | MAX PG THREAD*<br>(ANGLES 2 & 3) |
| 03         | 22,0           | 21,9  | 9                                |
| 08/09      | 22,5           | 21,9  | 9                                |
| 10/10SL/11 | 23,0           | 23,4  | 9                                |
| 12/12S/13  | 23,5           | 25,4  | 11                               |
| 14/14S/15  | 24,0           | 27,4  | 13,5                             |
| 16/16S/17  | 25,0           | 29,4  | 16                               |
| 18/19      | 26,0           | 30,9  | 21                               |
| 20/21      | 26,5           | 31,4  | 21                               |
| 22/23      | 27,0           | 32,9  | 29                               |
| 24/25      | 27,5           | 34,9  | 29                               |
| 28         | 28,0           | 37,9  | 29                               |
| 32         | 29,0           | 41,4  | 29                               |
| 36         | 30,0           | 44,4  | 36                               |
| 40         | 31,0           | 47,9  | 36                               |
| 44         | 32,0           | 51,4  | 36                               |
| 48         | 33,0           | 54,4  | 42                               |
| 61         | 34,0           | 36,4  | 29                               |

\*NOTE:  
Contact TE for thread sizes outside this range



## DC Series

Backshell Extender

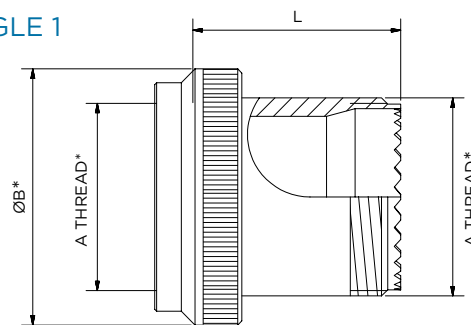


- Extends termination area
- Houses ancillary components such as fuses and service loops

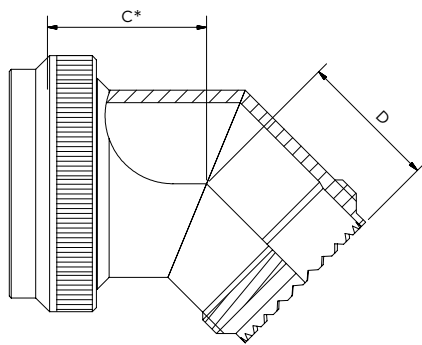
### SPECIFICATIONS

- **Screen Termination:** n/a
- **Strain Relief & Cable Sealing:** n/a
- **Additional Components Required:** n/a

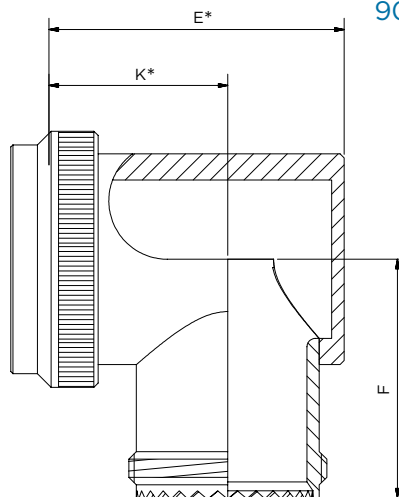
ANGLE 1



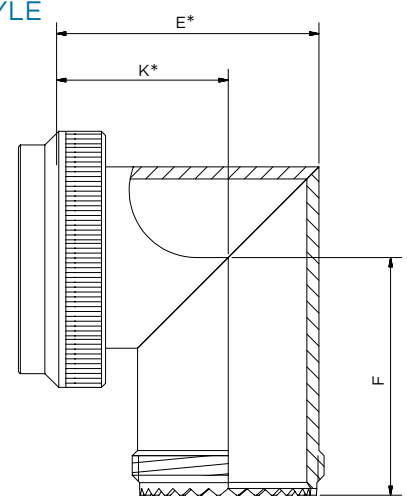
ANGLE 2



ANGLE 3



STAINLESS STEEL/BRONZE  
90° STYLE



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**DC H 1 - 17 - 1 - B - L25**

Series \_\_\_\_\_  
 Connector interface\* \_\_\_\_\_  
 Angle \_\_\_\_\_  
 Shell size \_\_\_\_\_  
 Material \_\_\_\_\_  
 Finish \_\_\_\_\_  
 Length in MM \_\_\_\_\_  
 (5mm Increments, L20min - straight only)

**Table 1 - Length**

| SHELL SIZE | All Interfaces |       |
|------------|----------------|-------|
|            | D MAX          | F MAX |
| 03         | -              | -     |
| 08/09      | 15,3           | 21,5  |
| 10/10SL/11 | 15,8           | 23,0  |
| 12/12S/13  | 16,8           | 24,5  |
| 14/14S/15  | 17,8           | 28,5  |
| 16/16S/17  | 18,3           | 30,0  |
| 18/19      | 18,8           | 31,5  |
| 20/21      | 19,3           | 33,0  |
| 22/23      | 18,8           | 34,5  |
| 24/25      | 20,5           | 36,0  |
| 28/29      | 22,2           | 36,2  |
| 32/33      | 23,9           | 39,6  |
| 36         | 25,6           | 44,1  |
| 40         | 27,3           | 50,0  |
| 44         | 29,0           | 43,0  |
| 48         | 30,7           | 44,7  |
| 61         | 20,8           | 34,8  |

All dimensions in MM unless otherwise stated.



## TXR Backshell

Tinel (Memory) Ring Backshell

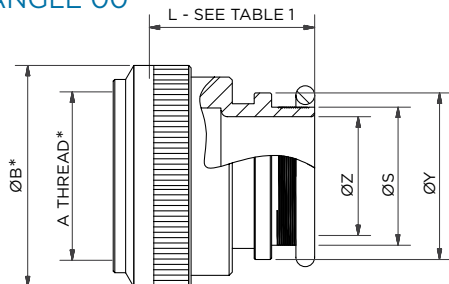


- Low profile 360° screen termination by a heat shrink memory metal ring
- Sealing and strain relief of backshell by heat shrink boot

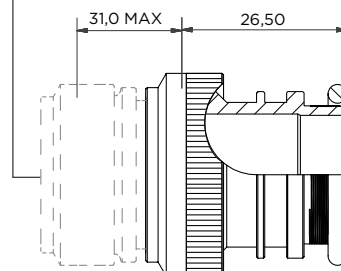
### SPECIFICATIONS

- **Screen Termination:** Overall Screen
- **Strain Relief & Cable Sealing:** Heat Shrink Boot Option
- **Additional Components Required:** Boot

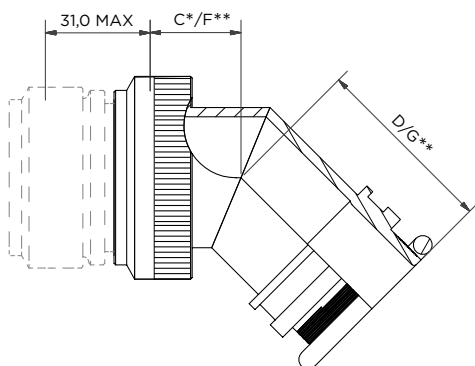
ANGLE 00



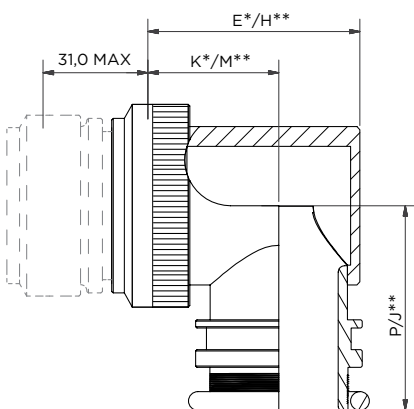
TYPE 2 ADAPTOR SUPPLIED WHEN  
MAX ENTRY IS EXCEEDED



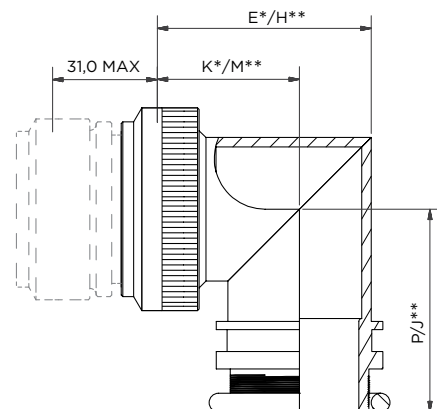
ANGLE 45



ANGLE 90



STAINLESS STEEL/BRONZE  
90° STYLE



\*\* F, G, H, M, & J APPLY WHEN ASSEMBLY IS TYPE 2

\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

Adapter family\*

Material

Finish

Angle (00 = straight; 45 = 45°; 90 = 90°)

Manufacturers prefix (connector code 18 only)

Order number

Entry size

Ring designator

AI - to suit single braid

BI - to suit double braid

**TXR54 A B 00 - 16 10 AI**

**Table 1 - Max Length & Max Entry**

| SHELL SIZE | INTERFACE |           |      |           |      |           |      |           |      |           |      |           |      |           |      |           |
|------------|-----------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|
|            | 40        | MAX ENTRY | 54   | MAX ENTRY | 41   | MAX ENTRY | 21   | MAX ENTRY | 76   | MAX ENTRY | 78   | MAX ENTRY | 79   | MAX ENTRY | 30   | MAX ENTRY |
| 03         | -         | -         | 26,0 | 04        | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |
| 08         | 27,0      | 04        | 26,0 | 04        | 27,3 | 04        | 30,9 | 04        | 36,9 | 04        | -    | -         | 27,3 | 05        | -    | -         |
| 10/11      | 27,0      | 07        | 26,0 | 06        | 27,3 | 07        | 30,9 | 06        | 36,9 | 06        | -    | -         | 27,3 | 07        | 30,5 | 05        |
| 12/13      | 27,0      | 08        | 26,0 | 08        | 27,3 | 08        | 30,9 | 08        | 36,9 | 08        | 32,0 | 05        | 27,3 | 08        | 30,5 | 08        |
| 14/15      | 27,0      | 10        | 26,0 | 08        | 27,3 | 10        | 30,9 | 10        | 36,9 | 10        | 32,0 | 07        | 27,3 | 10        | 30,5 | 10        |
| 16/17      | 27,0      | 12        | 26,0 | 10        | 27,3 | 12        | 30,9 | 12        | 36,9 | 12        | 36,8 | 08        | 27,3 | 12        | 30,5 | 12        |
| 18/19      | 27,0      | 14        | 26,0 | 12        | 27,3 | 14        | 30,9 | 12        | 36,9 | 14        | 36,8 | 10        | 27,3 | 14        | 30,5 | 14        |
| 20         | 27,0      | 16        | 26,0 | 14        | 27,3 | 16        | 30,9 | 14        | 36,9 | 16        | 38,9 | 12        | 27,3 | 16        | -    | -         |
| 22/23      | 27,0      | 18        | 26,0 | 16        | 27,3 | 18        | 30,9 | 16        | 36,9 | 18        | 38,9 | 14        | 27,3 | 18        | 30,5 | 16        |
| 24/25      | 27,0      | 20        | 26,0 | 18        | 27,3 | 20        | 30,9 | 18        | 36,9 | 18        | 41,2 | 16        | 27,3 | 20        | 30,5 | 18        |
| 28/29      | -         | -         | 26,0 | 22        | -    | -         | -    | -         | -    | -         | 41,2 | 18        | -    | -         | 30,5 | 22        |
| 32/33      | -         | -         | 26,0 | 24        | -    | -         | -    | -         | -    | -         | 44,7 | 22        | -    | -         | 30,5 | 24        |
| 36         | -         | -         | 26,0 | 28        | -    | -         | -    | -         | -    | -         | 44,7 | 24        | -    | -         | -    | -         |
| 40         | -         | -         | 26,0 | 28        | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |
| 44         | -         | -         | 26,0 | 28        | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |
| 48         | -         | -         | 26,0 | 28        | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |
| 61         | -         | -         | 26,0 | 18        | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         | -    | -         |

**Table 2**

| ENTRY SIZE | ØZ MIN | ØS    | ØY ± 0,3 | F MAX | G MAX | H MAX | M MAX | J MAX |
|------------|--------|-------|----------|-------|-------|-------|-------|-------|
| 04         | 6,35   | 9,49  | 14,00    | NA    | NA    | NA    | NA    | NA    |
| 05         | 7,92   | 11,06 | 15,50    | 13,0  | 28,0  | 24,8  | 17,7  | 28,7  |
| 06         | 9,53   | 12,66 | 17,10    | 13,0  | 28,0  | 24,8  | 17,7  | 28,7  |
| 07         | 11,10  | 14,21 | 18,70    | 13,0  | 28,0  | 24,8  | 17,7  | 28,7  |
| 08         | 12,70  | 15,81 | 20,30    | 13,6  | 28,5  | 28,8  | 19,9  | 30,2  |
| 10         | 15,88  | 18,96 | 23,50    | 14,0  | 29,5  | 31,6  | 21,5  | 31,7  |
| 12         | 19,05  | 22,14 | 26,70    | 15,0  | 30,2  | 34,7  | 23,3  | 33,4  |
| 14         | 22,23  | 25,30 | 29,80    | 16,0  | 31,0  | 39,0  | 25,8  | 35,0  |
| 16         | 25,40  | 28,48 | 33,00    | 16,6  | 31,4  | 41,2  | 26,6  | 36,6  |
| 18         | 28,58  | 31,65 | 36,20    | 17,0  | 31,6  | 44,2  | 28,1  | 38,1  |
| 20         | 31,75  | 34,83 | 39,40    | 17,5  | 32,6  | 46,9  | 29,6  | 39,6  |
| 22         | 34,93  | 37,98 | 42,50    | 19,0  | 35,8  | 55,0  | 31,5  | 42,5  |
| 24         | 38,10  | 41,15 | 45,70    | 22,4  | 38,6  | 58,5  | 33,5  | 46,5  |

**Table 3**

| ORDER NUMBER |    |    |    |    |    |    |    | D MAX | P MAX |
|--------------|----|----|----|----|----|----|----|-------|-------|
| 54           | 41 | 21 | 76 | 78 | 79 | 40 | 30 |       |       |
| 03           |    |    |    |    |    |    |    | 27,5  | 26,4  |
| 08           | 08 | 08 | 08 |    | 08 | 08 |    | 27,3  | 26,9  |
| 10           | 10 | 10 | 10 | 12 | 10 | 10 | 11 | 28,0  | 38,7  |
| 12           | 12 | 12 | 12 |    | 12 | 12 | 13 | 28,5  | 30,2  |
| 14           | 14 | 14 | 14 | 14 | 14 | 14 | 15 | 29,5  | 31,7  |
| 16           | 16 | 16 | 16 | 16 | 16 | 16 | 17 | 30,2  | 33,4  |
| 18           | 18 | 18 | 18 | 18 | 18 | 18 | 19 | 31,5  | 35,0  |
| 20           | 20 | 20 | 20 | 20 | 20 | 20 |    | 31,4  | 36,6  |
| 22           | 22 | 22 | 22 | 22 | 22 | 22 | 23 | 31,6  | 38,1  |
| 24           | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 32,7  | 39,6  |
| 28           |    |    |    | 28 |    |    | 29 | 35,8  | 45,8  |
| 32           |    |    |    | 32 |    |    | 33 | 38,6  | 48,3  |
| 36           |    |    |    | 36 |    |    |    | 31,2  | 48,9  |
| 40           |    |    |    |    |    |    |    | 32,5  | 51,9  |
| 44           |    |    |    |    |    |    |    | 34,2  | 55,1  |
| 48           |    |    |    |    |    |    |    | 35,4  | 58,2  |
| 61           |    |    |    |    |    |    |    | 27,1  | 39,2  |

All dimensions in MM unless otherwise stated.



## HexaShield Backshell

360° Screening Backshell

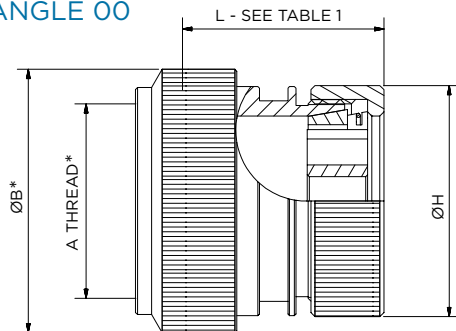


- Strain relief on each individual cable
- Compact size not exceeding outer diameter of connector
- No degradation of shielding performance

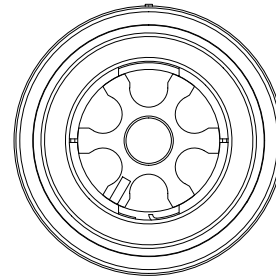
### SPECIFICATIONS

- **Screen Termination:** 360° Screening
- **Strain Relief & Cable Sealing:** n/a
- **Additional Components Required:** See note 4, p47

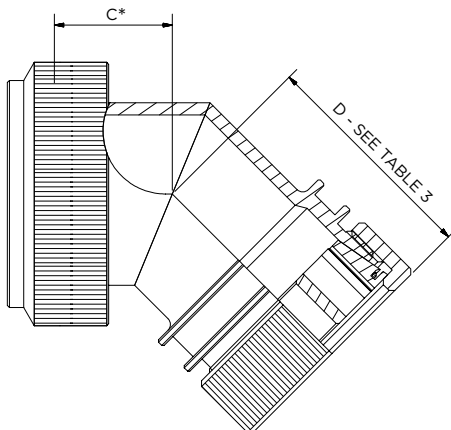
ANGLE 00



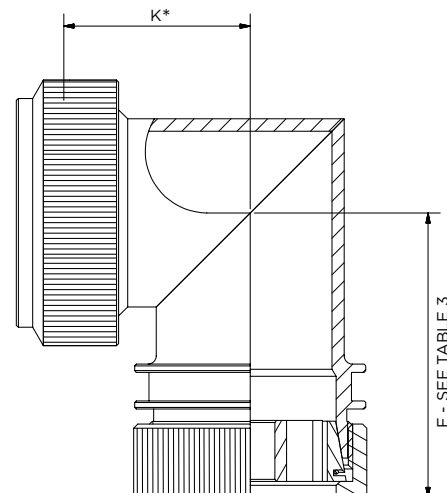
REAR VIEW



ANGLE 45



ANGLE 90



\*REFER TO INTERFACE PAGE [CLICK HERE](#)



Example:

**HEX40 - K - C - 00 - 21 - A9 - 1 - DS**

Connector code number:\*

HEX40 = MIL-C-38999 Series III and IV

Material

Finish

C - Electroless nickel to MIL-C-26074

B - Cadmium olive drab over electroless nickel to QQ-P416

Body Style

(00 = straight; 45 = 45°; 90 = 90°)

Order number

Ferrule quantity code

Back end option

1 = Plain clamping nut

DS = Drilled star (optional, see note 2)

**Table 1 - Length**

| SHELL SIZE | ORDER NUMBER |      |      |      |
|------------|--------------|------|------|------|
|            | 54           | 41   | 40   | 21   |
| 08/09      | 25,0         | 25,0 | 25,0 | 36,0 |
| 10/11      | 25,0         | 25,0 | 25,0 | 36,0 |
| 12/13      | 25,0         | 25,0 | 25,0 | 36,0 |
| 14/15      | 25,0         | 25,0 | 25,0 | 36,0 |
| 16/17      | 25,0         | 25,0 | 25,0 | 36,0 |
| 18/19      | 25,0         | 25,0 | 25,0 | 36,0 |
| 20/21      | 25,0         | 25,0 | 25,0 | 36,0 |
| 22/23      | 25,0         | 25,0 | 25,0 | 36,0 |
| 24/25      | 25,0         | 25,0 | 25,0 | 36,0 |

**Table 2**

| ITEM | DESCRIPTION          | MATERIAL CODE   |                 |                                                 |
|------|----------------------|-----------------|-----------------|-------------------------------------------------|
|      |                      | A               | K               | S                                               |
| 1    | BODY ASSEMBLY        | ALUMINIUM ALLOY | STAINLESS STEEL | NUT - STAINLESS STEEL<br>BODY - ALUMINIUM ALLOY |
| 2    | CLAMPING NUT - PLAIN | ALUMINIUM ALLOY | STAINLESS STEEL | ALUMINIUM ALLOY                                 |
| 3    | CONIC RING           | ALUMINIUM ALLOY | STAINLESS STEEL | ALUMINIUM ALLOY                                 |
| 4    | STAR                 | ALUMINIUM ALLOY | STAINLESS STEEL | ALUMINIUM ALLOY                                 |

**Table 3**

| SHELL SIZE | ORDER NUMBER |    |    |    | ØH<br>MAX | D<br>MAX | F<br>MAX | STANDARD | OPTIONAL |
|------------|--------------|----|----|----|-----------|----------|----------|----------|----------|
|            | 54           | 41 | 40 | 21 |           |          |          |          |          |
| 08/09      | 09           | 09 | 09 | 08 | 17,5      | 25,5     | 29,0     | 1        | -        |
| 10/11      | 11           | 11 | 11 | 10 | 21,5      | 26,0     | 30,5     | 2        | -        |
| 12/13      | 13           | 13 | 13 | 12 | 22,5      | 26,5     | 32,0     | 3        | -        |
| 14/15      | 15           | 15 | 15 | 14 | 25,5      | 27,5     | 33,5     | 5        | -        |
| 16/17      | 17           | 17 | 17 | 16 | 28,5      | 28,0     | 35,0     | 6        | 7        |
| 18/19      | 19           | 19 | 19 | 18 | 31,5      | 28,5     | 36,5     | 7        | -        |
| 20/21      | 21           | 21 | 21 | 20 | 35,0      | 29,0     | 38,5     | 9        | 11       |
| 22/23      | 23           | 23 | 23 | 22 | 38,0      | 30,0     | 40,0     | 10       | 13       |
| 24/25      | 25           | 25 | 25 | 24 | 41,0      | 31,0     | 41,5     | 12       | 17       |

**NOTES:**

1. Star is not supplied with HexaShield order number 09/08
2. The DS option is for a drilled star which is available on sizes 14 to 25 only, this option is to allow unshielded wires to pass through the assembly
3. If optional ferrule quantity is selected then 2 stars will be supplied - an outer "split" star and an inner solid star
4. Use in conjunction with the ferrules HET-A-0xx, which are purchased separately

All dimensions in MM unless otherwise stated.



## Cobra Head

### Backshell Modification



- Low profile backshell form
- Designed for use with heat shrink boot
- Modular design for ease of cable assembly
- Can be used on many standard range backshells (see opposite page for details)



TERMINATION OPTIONS  
SEE NEXT PAGE

| SHELL SIZE | All Interfaces |       |       |           |
|------------|----------------|-------|-------|-----------|
|            | D MAX          | F MAX | R MAX | MAX ENTRY |
| 08/09      | 18,7           | 22,5  | 8,7   | 04        |
| 10/11      | 21,7           | 26,6  | 10,0  | 06        |
| 12/13      | 24,7           | 26,6  | 11,0  | 08        |
| 14/15      | 24,7           | 30,4  | 11,6  | 08        |
| 16/17      | 28,7           | 32,7  | 13,6  | 10        |
| 18/19      | 28,7           | 35,4  | 13,6  | 10        |
| 20/21      | 28,7           | 36,4  | 13,6  | 10        |
| 22/23      | 31,7           | 38,9  | 15,1  | 12        |
| 24/25      | 31,7           | 40,4  | 15,1  | 12        |

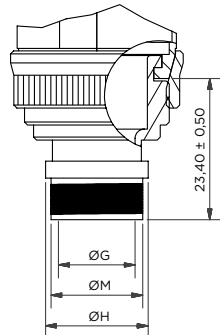
| SHELL SIZE | INTERFACE |      |      |      |
|------------|-----------|------|------|------|
|            | A KC      | D KC | F KC | H KC |
| 08/09      | 10,3      | 7,9  | 8,7  | 8,7  |
| 10/11      | 10,3      | 7,9  | 8,7  | 8,7  |
| 12/13      | 10,3      | 7,9  | 8,7  | 8,7  |
| 14/15      | 11,8      | 9,4  | 10,2 | 10,2 |
| 16/17      | 12,8      | 10,4 | 11,2 | 11,2 |
| 18/19      | 12,8      | 10,4 | 11,2 | 11,2 |
| 20/21      | 12,8      | 10,4 | 11,2 | 11,2 |
| 22/23      | 14,3      | 11,9 | 12,7 | 12,7 |
| 24/25      | 14,3      | 11,9 | 12,7 | 12,7 |

Please consult TE for interfaces that are not listed

\*REFER TO INTERFACE PAGE [CLICK HERE](#)

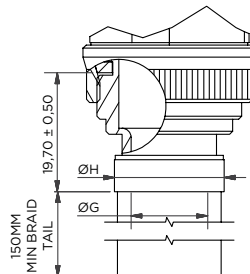


## 60 Series



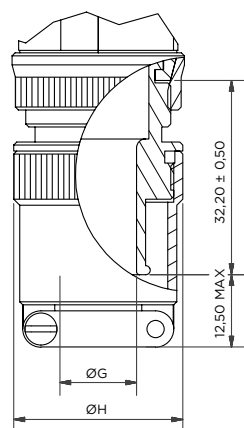
| ENTRY SIZE | ØG MIN | ØM MAX | ØH MAX |
|------------|--------|--------|--------|
| 04         | 6,4    | 9,5    | 14,3   |
| 05         | 7,9    | 11,1   | 15,8   |
| 06         | 9,5    | 12,7   | 17,4   |
| 07         | 11,1   | 14,3   | 19,0   |
| 08         | 12,7   | 15,9   | 20,6   |
| 10         | 15,9   | 19,1   | 23,8   |
| 12         | 19,1   | 22,2   | 27,0   |

## 70 Series



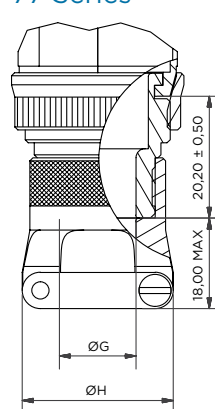
| ENTRY SIZE | ØG MIN | ØH MAX |
|------------|--------|--------|
| 03         | 4,77   | 13,1   |
| 04         | 6,35   | 13,1   |
| 05         | 7,92   | 13,1   |
| 06         | 9,52   | 17,9   |
| 07         | 11,10  | 17,9   |
| 08         | 12,70  | 17,9   |
| 09         | 14,27  | 17,9   |
| 10         | 15,88  | 24,2   |
| 11         | 17,47  | 24,2   |
| 12         | 19,05  | 24,2   |

## 88 Series



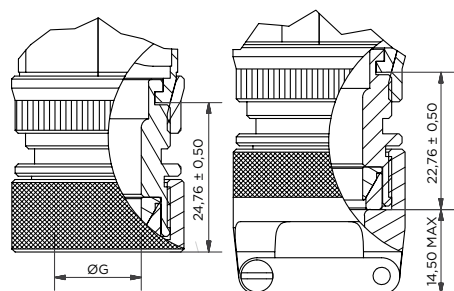
| ENTRY SIZE | ØG MIN | ØH MAX |
|------------|--------|--------|
| 03         | 4,77   | 20,2   |
| 04         | 6,35   | 21,8   |
| 05         | 7,92   | 23,4   |
| 06         | 9,52   | 25,0   |
| 07         | 11,10  | 26,5   |
| 08         | 12,70  | 28,0   |
| 09         | 14,27  | 29,7   |
| 10         | 15,88  | 31,3   |
| 11         | 17,47  | 33,0   |
| 12         | 19,05  | 34,6   |

## 77 Series



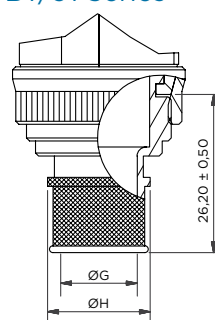
| ENTRY SIZE | ØG MIN | ØH MAX |
|------------|--------|--------|
| 03         | 4,7    | 17,1   |
| 04         | 6,3    | 19,1   |
| 05         | 7,9    | 20,7   |
| 06         | 9,5    | 22,3   |
| 07         | 11,1   | 23,8   |
| 08         | 12,7   | 25,3   |
| 09         | 14,2   | 27,0   |
| 10         | 15,8   | 28,6   |
| 11         | 17,4   | 30,3   |
| 12         | 19,0   | 31,8   |

## 34 Series



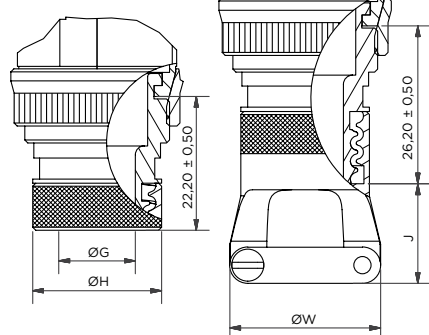
| ENTRY SIZE | ØG MIN |
|------------|--------|
| 03         | 4,77   |
| 04         | 6,35   |
| 05         | 7,92   |
| 06         | 9,52   |
| 07         | 11,10  |
| 08         | 12,70  |
| 09         | 14,27  |
| 10         | 15,88  |
| 11         | 17,47  |
| 12         | 19,05  |

## BT/91 Series



| ENTRY SIZE | ØG MIN | ØH MAX |
|------------|--------|--------|
| 03         | 4,77   | 9,4    |
| 04         | 6,35   | 11,0   |
| 05         | 7,92   | 12,6   |
| 06         | 9,52   | 14,0   |
| 07         | 11,10  | 15,7   |
| 08         | 12,70  | 17,0   |
| 09         | 14,27  | 19,9   |
| 10         | 15,88  | 20,4   |
| 11         | 17,47  | 22,1   |
| 12         | 19,05  | 23,6   |

## 95 Series



| ENTRY SIZE | ØG MIN | ØH MAX | ØW MAX | J    |
|------------|--------|--------|--------|------|
| 03         | 4,77   | 15,2   | 17,3   | 13,7 |
| 04         | 6,35   | 15,2   | 18,9   | 13,7 |
| 05         | 7,92   | 16,8   | 20,5   | 13,7 |
| 06         | 9,52   | 18,4   | 22,1   | 13,7 |
| 07         | 11,10  | 20,0   | 23,6   | 13,7 |
| 08         | 12,70  | 21,6   | 25,1   | 16,7 |
| 09         | 14,27  | 23,2   | 26,8   | 16,7 |
| 10         | 15,88  | 24,8   | 28,4   | 16,7 |
| 11         | 17,47  | 26,4   | 30,1   | 19,7 |
| 12         | 19,05  | 27,9   | 31,6   | 19,7 |

All dimensions in MM unless otherwise stated.



## M85049/128 Band Straps

Backshell Accessory



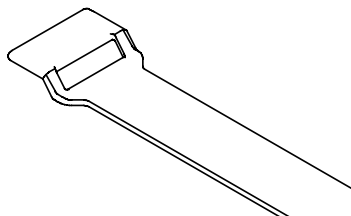
- Meets AS85049 NAVAIR standards
- Self-coupling locking nut provides an improved mechanical protection against loosening under vibration
- Corrosion resistant stainless steel
- Band straps available flat or precoiled

### TWO-STEP BAND



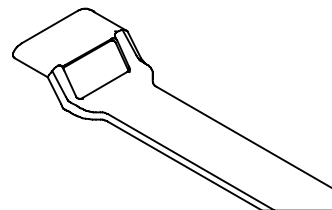
**M85049/128-1** FLAT  
**M85049/128-2** PRE-COILED

### STANDARD BAND



**M85049/128-3** FLAT  
**M85049/128-4** PRE-COILED

### MICROBAND



**M85049/128-7** FLAT  
**M85049/128-8** PRE-COILED

### FLAT BAND - CONFIGURATION 1, 3, 7



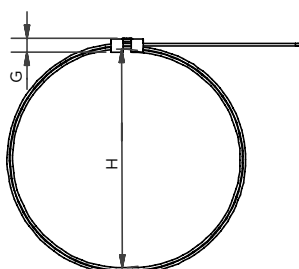
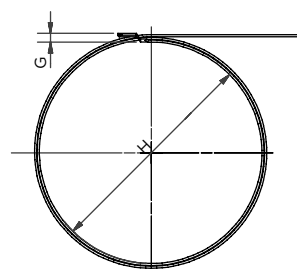


Example:

**M85049/128 - 1**

Series

Configuration

PRE-COILED BAND  
CONFIGURATION 2PRE-COILED BAND  
CONFIGURATION 4, 8

| CONFIGURATION | A<br>± ,06 | B<br>± ,031 | C<br>± ,010 | D<br>± ,003 | E<br>± ,015 | F<br>REF | G<br>MAX | H<br>REF | SUFFIX | TOOL<br>REQUIRED |
|---------------|------------|-------------|-------------|-------------|-------------|----------|----------|----------|--------|------------------|
| 1             | 358,90     | 8,33        | 6,22        | 0,48        | 2,54        | -        | -        | -        | -      | M81036/2-01      |
| 2             | -          | -           | -           | -           | -           | -        | 3,56     | 44,5     | -S2    | M81036/2-01      |
| 3             | 361,95     | 8,89        | 6,22        | 0,48        | 1,88        | 51,59    | -        | -        | -      | M81036/1-01      |
| 4             | -          | -           | -           | -           | -           | -        | 3,81     | 44,5     | -SB    | M81036/1-01      |
| 7             | 206,25     | 4,95        | 2,92        | 0,38        | 1,35        | 51,59    | -        | -        | -      | M81036/1-02      |
| 8             | -          | -           | -           | -           | -           | -        | 1,85     | 21,8     | -MB    | M81036/1-02      |

INTERFACE DIMENSION TABLE ON REVERSE OF THIS PAGE



## Interface Dimension Table

| Interface Code |    |       |    |    |    |    |        |    |    |    |    |    | A<br>THREAD    | ØB<br>MAX | C<br>MAX | K<br>MAX | E<br>MAX |
|----------------|----|-------|----|----|----|----|--------|----|----|----|----|----|----------------|-----------|----------|----------|----------|
| POLAMCO        | A  | F     | -  | K  | D  | SM | Q      | -  | S  | H  | -  | Z  |                |           |          |          |          |
| Raychem        | 54 | -     | 41 | 21 | 76 | 47 | -      | 78 | 79 | -  | 40 | 30 |                |           |          |          |          |
| Shell Size     |    | 08/09 | 08 | 08 | 08 | 08 |        |    | 08 |    |    |    | 7/16-28 UNEF   | 19,3      | 16,9     | 21,8     | 27,5     |
|                |    |       |    |    |    |    |        |    |    | 09 | 08 |    | M12 x 1.0      | 19,0      | 14,6     | 18,5     | 25,7     |
|                | 08 |       |    |    |    |    |        |    |    |    |    |    | 1/2 - 20 UNF   | 16,0      | 17,1     | 18,5     | 24,7     |
|                | 03 | 10/11 | 10 | 10 | 10 | 10 |        |    | 10 |    |    |    | 9/16-24 UNEF   | 22,0      | 17,7     | 24,6     | 31,0     |
|                |    |       |    |    |    |    |        |    |    | 11 | 10 |    | M15 x 1.0      | 22,0      | 15,2     | 19,6     | 26,7     |
|                | 10 |       |    |    |    |    | 10SL   | 12 |    |    |    |    | 5/8-24 UNEF    | 22,0      | 17,0     | 19,3     | 26,7     |
|                |    | 12/13 | 12 | 12 | 12 | 12 |        |    | 12 |    |    |    | 11/16-24 UNEF  | 25,5      | 18,1     | 25,0     | 34,0     |
|                |    |       |    |    |    |    |        |    |    | 13 | 12 |    | M18 x 1.0      | 25,5      | 16,0     | 21,1     | 31,2     |
|                | 12 |       |    |    |    |    | 14S    | 14 |    |    |    | 11 | 3/4 - 20 UNEF  | 26,5      | 20,2     | 22,9     | 31,7     |
|                |    | 14/15 | 14 | 14 | 14 | 14 |        |    | 14 |    |    |    | 13/16-20 UNEF  | 30,5      | 19,0     | 26,5     | 37,0     |
|                |    |       |    |    |    |    |        |    |    | 15 | 14 |    | M22 x 1.0      | 30,5      | 16,2     | 25,0     | 37,2     |
|                | 14 |       |    |    |    |    | 16/16S | 16 |    |    |    | 13 | 7/8-20 UNEF    | 30,0      | 24,4     | 26,0     | 36,2     |
|                |    | 16/17 | 16 | 16 | 16 | 16 |        |    | 16 |    |    |    | 15/16-20 UNEF  | 33,5      | 19,7     | 28,2     | 40,4     |
|                |    |       |    |    |    |    |        |    |    | 17 | 16 |    | M25x1.0        | 33,5      | 17,0     | 27,2     | 40,2     |
|                | 16 |       |    |    |    |    | 18     | 18 |    |    |    | 15 | 1-20 UNEF      | 33,0      | 25,1     | 27,5     | 39,2     |
|                | 18 | 18/19 | 18 | 18 | 18 | 18 |        |    | 18 |    |    |    | 1 1/16-18 UNEF | 37,0      | 20,1     | 29,8     | 43,6     |
|                |    |       |    |    |    |    |        |    |    | 19 | 18 |    | M28 x 1.0      | 37,0      | 17,5     | 27,5     | 44,7     |
|                |    |       |    |    |    |    | 20     | 20 |    |    |    | 17 | 1 1/8-18 UNEF  | 35,5      | 25,6     | 28,5     | 42,2     |
|                | 20 | 20/21 | 20 | 20 | 20 | 20 |        |    | 20 |    |    |    | 1 3/16-18 UNEF | 38,5      | 20,9     | 31,4     | 46,8     |
|                |    |       |    |    |    |    |        |    |    | 21 | 20 |    | M31 x 1.0      | 38,5      | 18,5     | 31,0     | 49,2     |
|                |    |       |    |    |    |    | 22     | 22 |    |    |    | 19 | 1 1/4-18 UNEF  | 38,7      | 26,4     | 30,0     | 45,2     |
|                | 22 | 22/23 | 22 | 22 | 22 | 22 |        |    | 22 |    |    |    | 1 5/16-18 UNEF | 42,0      | 21,3     | 37,1     | 49,8     |
|                |    |       |    |    |    |    |        |    |    | 23 | 22 |    | M34x1.0        | 42,0      | 19,1     | 32,0     | 51,7     |
|                |    |       |    |    |    |    | 24     | 24 |    |    |    |    | 1 3/8-18 UNEF  | 41,3      | 27,6     | 31,5     | 48,2     |
|                | 24 | 24/25 | 24 | 24 | 24 | 24 |        |    | 24 |    |    | 23 | 1 7/16-18 UNEF | 46,5      | 22,6     | 34,4     | 52,8     |
|                |    |       |    |    |    |    |        |    |    | 25 | 24 |    | M37 x 1.0      | 46,5      | 19,3     | 30,5     | 53,2     |
|                | 61 |       |    |    |    |    |        |    |    |    |    |    | 1 1/2-18 UNEF  | 42,0      | 22,3     | 28,5     | 48,0     |
|                |    |       |    |    |    |    |        |    |    |    |    | 25 | 1 9/16- 18UNEF | 47,2      | 23,6     | 32,0     | 51,5     |
|                |    |       |    |    |    |    | 28     | 28 |    |    |    |    | 1 5/8-18 UNEF  | 47,8      | 29,3     | 36,0     | 55,3     |
|                | 28 |       |    |    |    |    |        |    |    |    |    |    | 1 3/4-18 UNS   | 50,0      | 23,5     | 35,7     | 54,4     |
|                |    |       |    |    |    |    | 32     | 32 |    |    |    | 29 | 1 7/8-16 UN    | 55,2      | 30,2     | 37,5     | 60,3     |
|                | 32 |       |    |    |    |    |        |    |    |    |    |    | 2-18 UNS       | 56,3      | 25,2     | 36,9     | 62,5     |
|                |    |       |    |    |    |    | 36     | 36 |    |    |    | 33 | 2 1/16-16 UNS  | 62,2      | 31,7     | 39,5     | 64,2     |
|                | 36 |       |    |    |    |    |        |    |    |    |    |    | 2 1/4-16 UN    | 62,7      | 26,4     | 38,5     | 67,4     |
|                | 40 |       |    |    |    |    |        |    |    |    |    |    | 2 1/2-16 UN    | 69,0      | 28,8     | 41,5     | 73,4     |
|                | 44 |       |    |    |    |    |        |    |    |    |    |    | 2 3/4-16 UN    | 75,4      | 30,3     | 44,6     | 79,7     |
|                | 48 |       |    |    |    |    |        |    |    |    |    |    | 3-16 UN        | 81,7      | 31,5     | 47,7     | 86,0     |

For AD modification add 4,0 to ØB, C, K and E dimensions

All dimensions in MM unless otherwise stated.



## Glossary of Terms

### Anti-decoupling

Anti-decoupling backshells incorporate a ratchet in the nut to help reduce the possibility of the backshell decoupling from the connector due to extreme vibration and shock.

### Arctic grip

A deep square-form grip, alternative to a knurled grip, particularly on protective covers.

### Backshell

Any accessory fitted to the rear thread of a connector, providing strain relief, screen termination and/or cable sealing.

### Blanking Cover

Helps to provide environmental protection and EMC shielding to circuitry or shorting loops at the rear of a connector that is to be used as a stand-alone device.

### Cobra Head

Low profile split 90° adaptor.

### Conduit

Flexible corrugated tubing that provides environmental protection for wiring. Can be used in conjunction with screenbraid and conduit adaptor backshells to provide a fully screened and sealed system.

### Connector

Device for electrically connecting wires to each other or to electrical equipment.

### Direct-coupling

Direct-coupling backshells do not have a distinct nut, i.e. the entire backshell rotates when the backshell is screwed into place.

### Dummy Receptacle

Provides stowage, environmental protection, and EMC shielding for an unmated plug.

### EMC

Electromagnetic Compatibility assures the avoidance of interference effects resulting from the unintentional generation, propagation and reception of electromagnetic energy. This can be achieved by properly grounded shielding (screening) or by electronically filtering signals (Filter Connector).

### Entry size

Two digits describe the diameter of the hole through which the cable enters into the backshell. Check specific series for details – note that some series such as boot adaptors (97 series) and cable clamps (96 series) do not require the entry size to be stated.

### Follower

Refers to the main body of a spin-coupling backshell.

### Heat shrink boot

Molded sleeve that joins the cable jacket to a suitable backshell, for purposes of strain-relief and environmental protection. Heat shrink boots shrink to fit and are installed by use of a specialised hot air gun. Adhesive-lined boots and a variety of materials are available.

### Heat shrink kit

Backshell with pre-installed heat-shrink boot and optional (internal) overall screen. Enables easy installation whereby boot and 360° screen termination are achieved in one operation by use of hot air gun.

### Individual screen

EMC shield (e.g. screenbraid) encompassing an individual wire in a bundle.

### Lacing Tape

Lacing cord used as a binding medium to indicate an EMC classification of an open wiring harness.

### Overall screen

EMC shield (e.g. screenbraid) encompassing entire wire bundle.

### Protective Cover

Provides environmental protection and EMC shielding on the front (mating end) of an unmated connector.

### RoHS

The RoHS Directive bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.

### Screenbraid

Flexible EMC shield in expanding sleeve form for covering cable.

### Shell size

Two numerical digits that state the size of the connector.

### Shield

See EMC

### Spin-coupling

Spin-coupling backshells have a coupling nut that rotates freely on the backshell body.

### Strain relief

Any method of relieving the strain on the individual wires, should the cable be put under tension. Common methods are cable clamps, heatshrink boots, tie posts.

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1-1773922-5 05/17 Original