INTRODUCTION

Circular Backshells

For all your wire and cable screen connection requirements, we have the solutions through our partners, offering an extensive range of circular connector backshells, available in various materials and plating specifications.

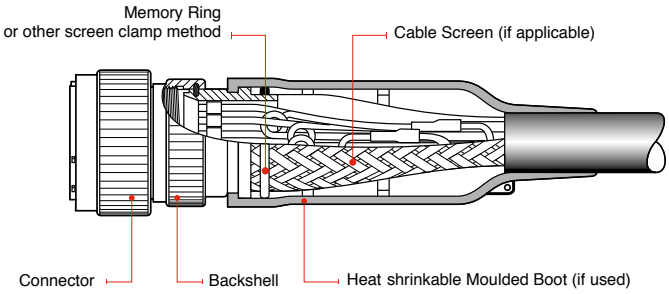
Backshells, or connector adaptors if you prefer, offer high performance sealing and strain relief in demanding applications. We offer a wide range for applications in many industries including Aerospace, Defence, Marine and Mass Transit.

These backshells are available in many configurations to match applications, are easy to install and offer high reliability.

Let us Help you

For your connector adaptors or backshell assemblies, please contact us with the following information where applicable.

- Backshell type.
- Connector part number or specification.
- Connector required or the manufacturer.
- Connector shell size.
- Connector material and plating (this may be in the part number).
- Wire bundle diameter and cable jacket diameter.
- Entry size.
- Angle of backshell, or range required.
- Type of cable screen (e.g. size and number of strands, single or double layer).



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CONTENTS

Selecting Material and Plating

For a backshell or connector design to perform in different demanding environments and applications, the material and plating selected are critical to the optimum performance in any given environment.

To ensure optimum compatibility, select the adaptor material and finish to match those of the connector and or environment, using the 'Material' and 'Plating' tables on these pages.

Of late recent high performance circular connectors and backshells are often manufactured from aluminium with a black zinc nickel Cadmium free plating which are RoHS compliant.

Material Codes

Standard Material Options	Material Part Code		
	Group 1	Group 2	Group 3
Aluminium alloy 6262 / 6082	19	A	1
Nickel Aluminium Bronze DGS 1043 / NES 833 (Marine)	01	B	2
Stainless Steel 303 S31 / 304	62	S	4
Non-Standard Materials	**Group 1**	**Group 2**	**Group 3**
Brass CZ 121	-	-	3
Stainless Steel 316 (Marine)	-	-	46
HDHC Copper CA 104	-	-	5
Black Acetal (cost effective plastic)	-	-	7
PEEK GL30 (30% glass filled) high temperature composite	-	-	73
ULTEM 2300 (30% glass filled) standard composite	-	-	74

Please contact sales office for materials not listed above

Materials

ALUMINIUM (A) - Effective for most applications, as satisfies the majority of environmental and interconnect requirements. Aluminium is strong, lightweight, corrosion resistant and cost effective, with a variety of surface finishes.

NICKEL ALUMINIUM BRONZE (B) - Ideal for marine applications where traditional plating finishes can quickly be eroded revealing weaker base materials, Nickel Aluminium Bronze will remain robust in the harshest of environments.

STAINLESS STEEL (S, 46) - Corrosion resistant steel (CRES) available in 303, 304 and 316 grades, offers excellent corrosion and chemical resistance, plus it is stronger than aluminium and needs no additional plating.

BRASS (3) - Inherently corrosion resistant and being relatively soft, machines easily. It has the added advantage of being non-sparking and does not require additional surface treatment, but it is often nickel and chrome plated for increased hardness, wear resistance .

COMPOSITE (7, 73, 74) - Key advantages include light weight, corrosion resistance and can be lower cost when manufactured in high volumes. Can also be plated for increased surface hardness and conductivity.

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Plating Codes

Standard Plating Options	Colour	RoHS	Plating Part Code	
			Group A	Group B
Cadmium, per SAE AMS-QQ-P-416, Type II, Class 3. Over electroless nickel	Olive Drab	No	B	B
Electroless nickel, per SAE AMS-C-26074, Class 4, Grade B.	Silver	Yes	C	C
Anodised hard per MIL-A-8625, Type III, Class 2	Black	Yes	G	D
Anodised, sulphuric, MIL-A-8625, Type II, Class 2	Black	Yes	-	G
Passivated, per SAE AMS-QQ-P-35 or MIL-S-5002 (stainless steel only).	-	Yes	J	J
Zinc Cobalt over Electroless Nickel	Olive Drab	Yes	U	ZB
Unplated Shot Blast (glass bead), for non reflective finish	-	Yes	W	Z
Zinc Nickel passivate over electroless Nickel, ASTM B841 class 1	Black	Yes	Z	ZN
Non-Standard Plating Material	**Colour**	**RoHS**	**Group A**	**Group B**
Anodise Blue to DEF 03-25	Blue	Yes	-	AB
Anodise Red to DEF 03-25	Red	Yes	-	AR
Electroless Nickel, high Phosphor, BS EN ISO 4527:2003	Silver	Yes	-	CHP
Bright electroless Nickel to MIL-C-26047D, class 4, grade C	Silver	Yes	-	F
Hard anodise Grey	Grey	Yes	-	HA
Iridite conversion of Alocrom 1200, clear/iridescent (aluminium only)	-	Yes	-	
Nickel/PTFE	Black	Yes	-	TN
Unplated clean finish not shot blasted	-	Yes	-	U
Silver plate 5 microns to DEF 03-9	-	Yes	-	V

Plating

CADMIUM (B) - The historical standard finish for military and industrial connectors and backshells, offering excellent salt spray corrosion resistance.

ELECTROLESS NICKEL (C) - Commonly used on industrial and high temperature applications, where a non-reflective finish and high corrosion resistance is not essential.

HARD ANODISED (G) - Used where the need for surface hardness and abrasion resistance is the main criteria. The build up for hard coat anodising is much thicker than your standard anodising.

PASSIVATED (J) - Removes surface contaminants and produces a surface condition which is resistant to corrosive action. Provides a higher degree of corrosion resistance with finished parts retaining the dimension they had prior to treatment.

ZINC COBALT (U) - Offers enhanced corrosion resistance compared to traditional zinc plating of the same thickness. By electroplating zinc and cobalt to the particular metal, the end result is a uniform ductility.

SHOT BLAST (W) - For a non reflective finish.

BLACK ZINC NICKEL (Z) - The latest RoHS compliant solution to environmental plating of connectors and backshells, offering high levels of compatibility with other plating materials.

Determine Entry Size

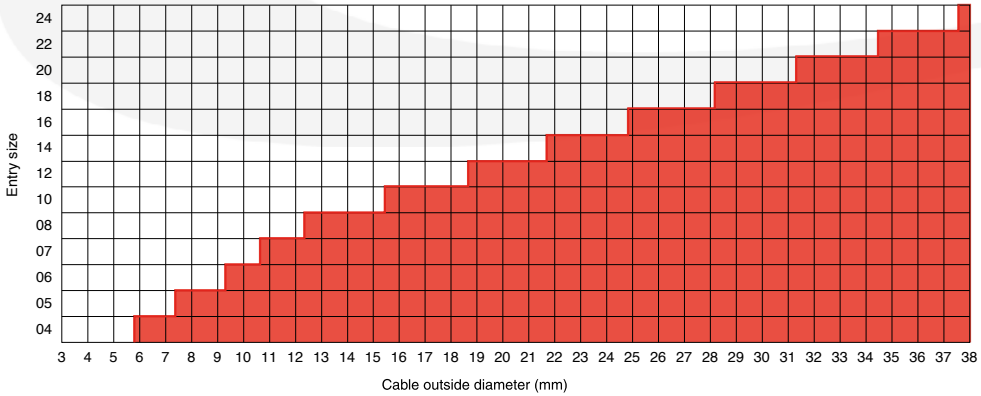
Determining the Entry Size
Once you have the wire bundle size, use the chart below to select entry size. Chart shows the minimum entry sizes for cables from 3 to 38 mm in diameter. In other words, the white spaces on the chart represent all of the cable outside diameters each entry size will fit.

Follow these steps:

- Find the cable diameter on the chart.
- Please note the lowest entry size that will fit the cable diameter.

If the adaptor is shielded or has a Tinel-Lock ring, there are additional considerations, which are noted below.

For further information or assistance on selecting the correct entry size or constructing your required adaptor part number, please contact us.



Braided Tail Backshells
The extreme flexibility of the braid on these backshells accommodates a large range of cable diameters. It is therefore recommended that the standard entry size for any given adaptor part number be specified as indicated on the relevant data sheet. Non standard entry sizes are available to special order. Use the selection chart above to ensure that the standard entry size will pass over the jacketed cable diameter.

Memory Ring Backshells
The cable braid must be opened up to fit onto the outside diameter of the adaptor entry. For optimum performance, select the smallest entry size that will pass over the jacketed cable diameter. Repair of the connector will be easier using the boot and shield rollback if a slightly larger than minimum entry size is used.

The selection chart above shows the minimum entry sizes for cable diameters in the range of 3 mm to 38 mm. This will ensure that the jacketed cable passes through the adaptor. Ensure the braid will open sufficiently to fit the entry size selected and to ensure that the braid and boot can be rolled back.

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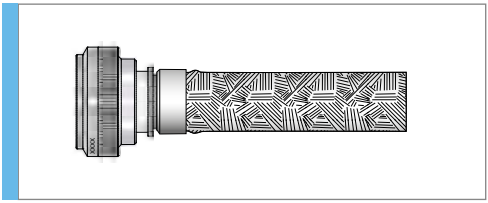
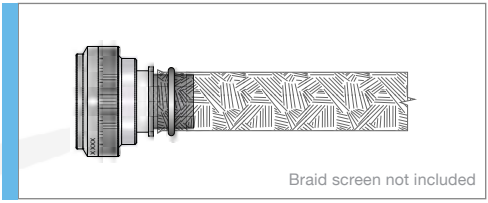
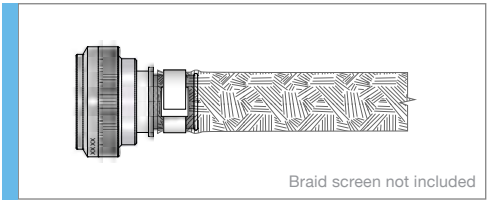
Screened Backshell Types



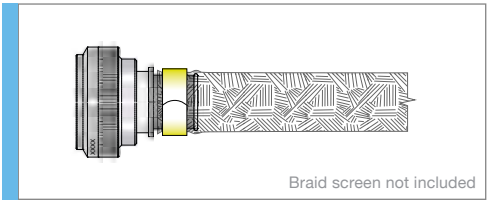
BRAIDED TAIL
Supplied complete with a braided tail that has been secured by a magna-form crimp ring. Braid shield accommodates a range of cable diameters. This allows a standard entry size to be used with most cable sizes and can be terminated using a SolderSleeve® device.



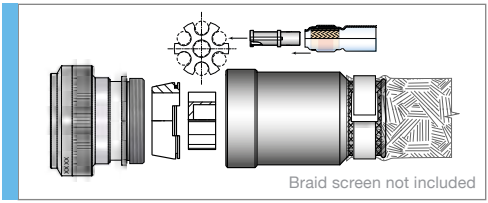
MEMORY RING
Special shape memory metal ring that shrinks uniformly when heated, offering very secure 360° clamp of the screening braid onto the backshell. Withstands shock, vibration and temperature cycling.
Requires specialist tooling.



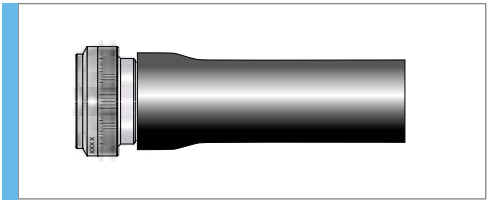
BAND CLAMP
Where the cable screening braid is clamped to the backshell via a mechanical metal strap.
Hand tool required.



CONSTANT FORCE SPRING (CFS)
Cable screening braid is secured to the backshell via constant force spring wrapped around the braid.
Does not need any tooling.



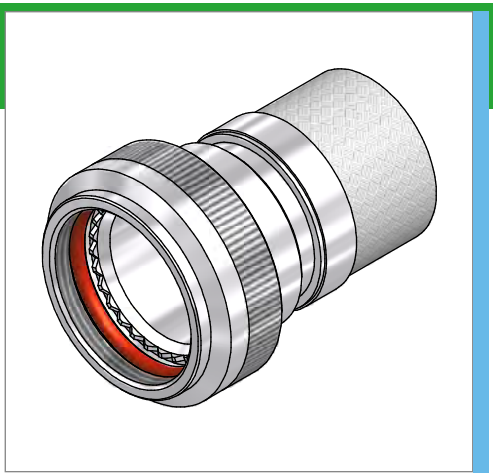
INDIVIDUAL SCREEN
This system offers the greatest EMI/EMC integrity, providing 360° shielding in the termination area of each individual wire/cable plus collective screen cable versions (shown). System offers a significant improvement over pigtail termination methods.



BOOT ASSEMBLY
Supplied as a complete assembly utilising Rayatan® heat shrink screened boot technology that includes an internal lining that offers shielding levels better than 80 dB at 100 MHz. Avoiding the requirement for a separate metal screening braid.

Braided Tail

Pre-terminated Screening Braid Tail Screened Backshells



Shielded spin adaptors include tubular braid attached to the rear of the adaptor, that accommodates a range of cable diameters. This allows a standard entry size to be used with most cable sizes and can be terminated to the cable braid using a SolderSleeve® device.

Standard braid length is 150mm, longer lengths available please ask for details.

Using the part numbering elements on these pages construct your part number, or contact us for details.

208M7 16 - 19 Z 10

Part Numbering example

ENTRY SIZE
See table on opposite page

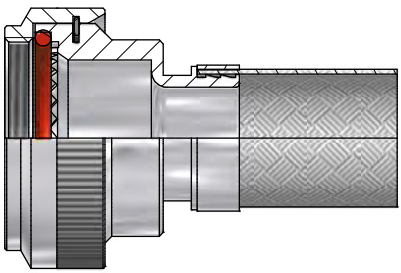
PLATING CODE
See plating code selection table, Group A see page 365

MATERIAL CODE
See material code selection table, Group 1 see page 364

SHELL SIZE
See table on opposite page

FAMILY TYPE DESIGNATION + Angle
See table on opposite page

The above backshell family designations are for the most common applications, for others not listed here please contact us.



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Shell Size Selection Table

Part No.	Ind. Ref.	Mil. Ref.	Max Entry Size
08	9	A	04
10	11	B	07
12	13	C	09
14	15	D	10
16	17	E	12
18	19	F	14
20	21	G	16
22	23	H	18
24	25	J	20

Family Type Designation

MIL-C-5015 (MS3100)
218M7 Straight backshell family
218M8 45° backshell family
218M9 90° backshell family

MIL-C-26482 Series I
206M0 Straight backshell family
206M1 45° backshell family
206M2 90° backshell family

MIL-C-38999 Series III & IV.
208M7 Straight backshell family
208M8 45° backshell family
208M9 90° backshell family

MIL-C-38999 Series I & II.
204M0 Straight backshell family
204M1 45° backshell family
204M2 90° backshell family

MIL-C-26482 Series II and
MIL-C-5015 (MS3400)
203M0 Straight backshell family
203M1 45° backshell family
203M2 90° backshell family

208M* - Entry Size Dimensions Table

Entry Size	Internal Dia
03	4.77 mm
04	6.35 mm
05	7.92 mm
06	9.52 mm
07	11.12 mm
08	12.70 mm
09	14.27 mm
10	15.87 mm
11	17.47 mm
12	19.05 mm
13	20.62 mm
14	22.23 mm
15	23.82 mm
16	25.40 mm
17	26.98 mm
18	28.60 mm
20	31.80 mm
21	33.34 mm
22	35.00 mm
24	38.10 mm
28	44.45 mm

Selection tables shown here are for general indicative purposes only, as they represent the MIL-C-38999 Series III & IV family of 'Braided tail' backshells only. For other family type backshells dimensions and characteristics please contact us for details.

The entry size range shown above indicates the most common combinations only, for further options please contact us.

Tinel-Lock® Series

Memory Ring
Screened Backshells

The Tinel-Lock® ring is made from a special shape memory metal that shrinks uniformly when heated and terminates copper braid directly onto the rear of a backshell.

- Withstands severe shock, vibration and temperature cycling
- Low profile, buckle free termination.
- One piece construction
- Operating Range, -65°C to 200°C

Using the part numbering elements below construct your part number, or contact us for details.

TXR40 A Z 00 - 16 10 AI

Part Numbering example

RING DESIGNATION REF
AI, BI or CI See selection table opposite.
Omit if no ring required

ENTRY SIZE
See table on opposite page

SHELL SIZE
See table on opposite page

ANGLE CONFIGURATION

00	Straight
45	45° angle
90	Right angle

PLATING CODE
See plating code selection table, Group A or B see page 365

MATERIAL CODE
See material code selection table, Group 2 see page 364

FAMILY TYPE

TXR18	MIL-DTL-5015D
TXR21	MIL-DTL-26482 Series I
TXR40	MIL-DTL-38999 Series III & IV
TXR41	MIL-DTL-38999 Series I & II
TXR54	MIL-DTL-26482 Series II and MIL-DTL-5015G (MS3400)

The above backshell family designations are for the most common applications, for others not listed here please contact us.

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TXR40 - Shell Size Selection Table

Part No.	Ind. Ref.	Mil. Ref.	Max Entry Size
08	9	A	04
10	11	B	07
12	13	C	08
14	15	D	10
16	17	E	12
18	19	F	14
20	21	G	16
22	23	H	18
24	25	J	20

Ring Designator Selection Table

Description	Part Ref.
Single Layer	
36 AWG braid	**AI**
34 AWG braid	**AI**
32 AWG braid	**BI**
30 AWG braid	**BI**
Double Layer	
36 AWG braid	**BI**
34 AWG braid	**BI**
32 AWG braid	**CI**

The outside surface of the ring is marked with a dot of thermo-chromic paint which changes colour when appropriate installation temperature is reached.

'AI' Rings are identified by the absence of coloured a dot, whilst 'BI' rings are marked with a **RED** dot and 'CI' rings are marked with a **BLUE** dot.

TXR40 - Entry Size Dimensions Table

Entry Size	Internal Dia
04	6.35 mm
05	7.92 mm
06	9.53 mm
07	11.10 mm
08	12.70 mm
10	15.88 mm
12	19.05 mm
14	22.23 mm
16	25.40 mm
18	28.58 mm
20	31.75 mm
22	34.93 mm
24	38.10 mm

Selection tables shown here are for general indicative purposes only, as they represent the TXR40 MIL-C-38999 Series III & IV family of backshells only. For other family type backshells dimensions and characteristics please contact us for details.

The entry size range shown above indicates the most common combinations only, for further options please contact us for details.

Both Backshells and Tinel-Lock® rings are available separately, please contact us for details.

Band Strap Series

Band Clamp
Screened Backshells

Band Strap adaptors feature a corrosion-resistant steel band to terminate the cable screen. The resulting 360° overall termination creates an effective electrical connection, providing screen continuity between braid and adaptor.

The terminated cable can then be protected and sealed using a heat-shrinkable moulded part, providing strain relief to the cable.

Using the part numbering elements below construct your part number, or contact us for details.

BND40 A Z 00 - 16 12 V

Part Numbering example

BAND CODE
V One step standard band (straight)
U Two step band, contact us for more info

ENTRY SIZE
See table on opposite page

SHELL SIZE
See table on opposite page

ANGLE CONFIGURATION
00 Straight
45 45° angle
90° Right angle

PLATING CODE
See plating code selection table, Group A or B see page 365

MATERIAL CODE
See material code selection table, Group 2 see page 364

FAMILY TYPE
BND18 MIL-DTL-5015 (MS3100)
BND21 MIL-DTL-26482 Series I
BND40 MIL-DTL-38999 Series III & IV
BND41 MIL-DTL-38999 Series I & II
BND54 MIL-DTL-26482 Series II and MIL-DTL-5015 (MS3400)

The above backshell family designations are for the most common applications, for others not listed here please contact us.

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BND40 - Shell Size Selection Table

Part No.	Ind. Ref.	Mil. Ref.	Max Entry Size
08	9	A	04
10	11	B	07
12	13	C	09
14	15	D	10
16	17	E	12
18	19	F	14
20	21	G	16
22	23	H	18
24	25	J	20

Selection tables shown here are for general indicative purposes only, as they represent the BND40 MIL-C-38999 Series III & IV family of backshells only. For other family type backshells dimensions and characteristics please contact the sales department.

The entry size range shown above indicates the most common combinations only, for further options please contact us.

Both Backshells and Band Strap are available separately, please contact us for details.

BND40 - Entry Size Dimensions Table

Entry Size	Nominal Internal Dia
03	4.7 mm
04	6.3 mm
05	7.9 mm
06	9.5 mm
07	11.1 mm
08	12.7 mm
09	14.2 mm
10	15.8 mm
11	17.4 mm
12	19.0 mm
13	20.6 mm
14	22.2 mm
15	23.8 mm
16	25.4 mm
18	28.6 mm
20	31.8 mm
22	35.0 mm
24	38.1 mm

Band straps are constructed from 300 series passivated corrosion resisting steel and offer:

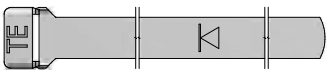
- Low profile design
- Light weight construction
- Space reduction
- Ease of installation

Standard one step band straps ‘V’ have a band slot width of 6.35mm, with a choice of two tools available TIE-DEX-II-TOOL and M81306/1-01

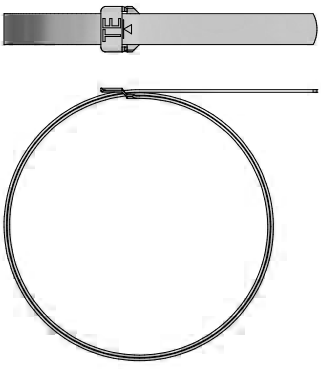
The optional two step band strap has a slot width of 6.65mm, with combination tooling kit TF1700 available.

Please contact us for more information.

Note: The standard 6.35mm slot width band strap was previously denoted by ‘B’ suffix.



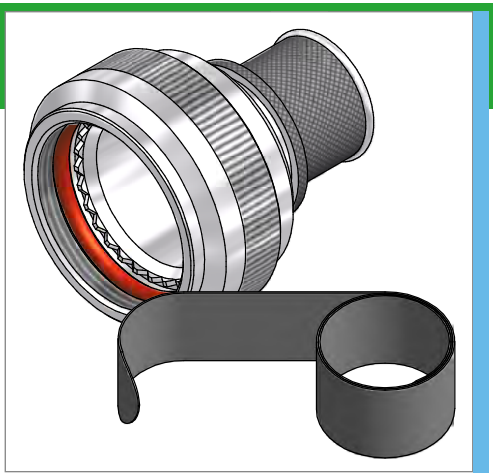
One step band strap - Straight



One step band strap - Pre-coiled

CFS Spring Series

Constant Force Spring
Screened Backshells



Constant Force Spring adaptors feature a fatigue and corrosion-resistant spring steel band to terminate the cable screen. The resulting 360º termination creates an effective electrical connection, providing screen continuity between braid and adaptor.

The terminated cable can then be protected and sealed using a heat-shrinkable moulded part, providing strain relief to the cable.

Using the part numbering elements below construct your part number, or contact us for details.

91H1-17-08-1-C-HE300

Part Numbering example

SPRING REF
HE050 7.5mm unconstrained
HE100 8.0mm unconstrained
HE200 12.8mm unconstrained
HE300 17.9mm unconstrained
HE400 21.8mm unconstrained
Omit if not required

PLATING CODE
See plating code table, Group B on page 365

MATERIAL CODE
See material code table, Group 3 on page 364

ENTRY SIZE
See table 'X' on opposite page

SHELL SIZE
See table 'Y' on opposite page

ANGLE CONFIGURATION
1 Straight
2 45º angle
3 Right angle

INTERFACE
H MIL-DTL-38999 Series III & IV
F MIL-DTL-38999 Series I & II

SERIES TYPE
91 Spring termination series

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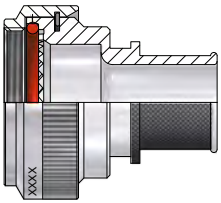
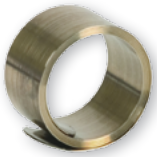
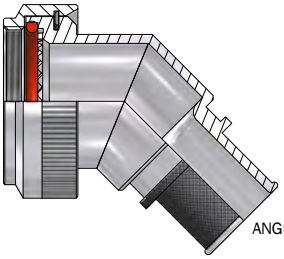
91H - Shell Size Selection Table 'Y'

Part No.	Ind. Ref.	Mil. Ref.	Max Entry Size
09	9	A	04
11	11	B	06
13	13	C	08
15	15	D	10
17	17	E	12
19	19	F	14
21	21	G	16
23	23	H	18
25	25	J	20

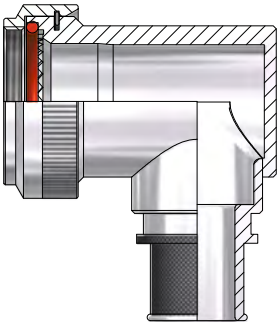
ANGLE 1







ANGLE 2



ANGLE 3

91H - Entry Size Dimensions Table 'X'

Entry Size	Internal Dia	Spring Ref
03	4.7 mm	HE050
04	6.3 mm	HE050
05	7.9 mm	HE100
06	9.5 mm	HE100
07	11.1 mm	HE100
08	12.7 mm	HE200
09	14.2 mm	HE200
10	15.8 mm	HE200
11	17.4 mm	HE200
12	19.0 mm	HE300
13	20.6 mm	HE300
14	22.2 mm	HE300
15	23.8 mm	HE300
16	25.4 mm	HE300
17	27.0 mm	HE400
18	28.6 mm	HE400
19	30.2 mm	HE400
20	31.8 mm	HE400
21	33.3 mm	HE400
22	35.0 mm	HE400
23	36.5 mm	HE400
24	38.1 mm	HE400

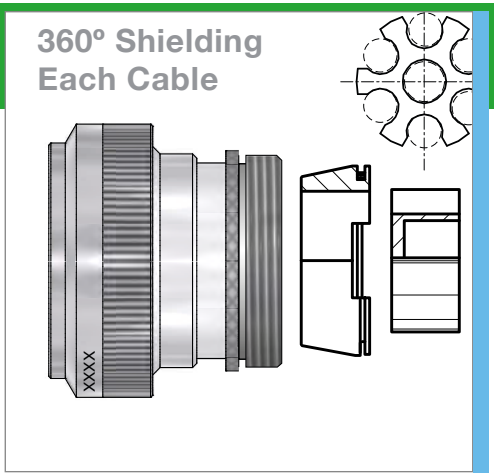
Selection tables shown here are for general indicative purposes only, as they represent the 91H MIL-C-38999 Series III & IV family of backshells only. For other family type backshells dimensions and characteristics please contact the sales department.

The entry size range shown above indicates the most common combinations only, for further options please contact us.

Both Backshells and constant force springs are available separately, please contact us for details.

Hexashield® Series

Individual Screens
Screened Backshells



Superior EMC/EMI Shielding Performance
Hexashield is designed to provide optimum EMC protection solutions for both commercial and military applications, representing a significant improvement over pigtail termination methods. Providing 360° EMC shielding on the termination area of each individual cable, Hexashield backshells provide outstanding shielding effectiveness.

Using the part numbering elements below, construct your part number, or contact us for details.

HEX40 - A C 00 - 17 - A6 - 3

Part Numbering example

BACK NUT TYPE
See illustration opposite

FERRULES
Number of ferrules to be fitted. These need to be ordered separately, see info opposite

SHELL SIZE
See table on opposite page

ANGLE CONFIGURATION

00	Straight
45	45° angle
90°	Right angle

PLATING CODE

B	Cadmium plated
C	Electroless Nickel

MATERIAL CODE

A	Aluminium alloy

FAMILY TYPE

HEX18	MIL-DTL-5015 (MS3100)
HEX21	MIL-DTL-26482 Series I
HEX40	MIL-DTL-38999 Series III & IV
HEX41	MIL-DTL-38999 Series I & II
HEX54	MIL-DTL-26482 Series II and MIL-DTL-5015 (MS3400)

The above backshell family designations are for the most common applications, for others not listed here please contact us.

Additional Options Available
The options below are additional references in the part number, for details please contact us.

- Long body (item 4)
- Swept body (items 6 and 8)

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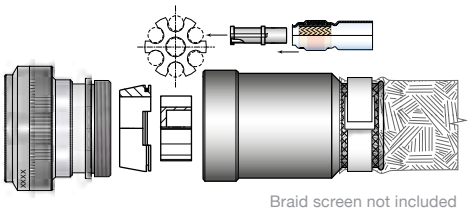


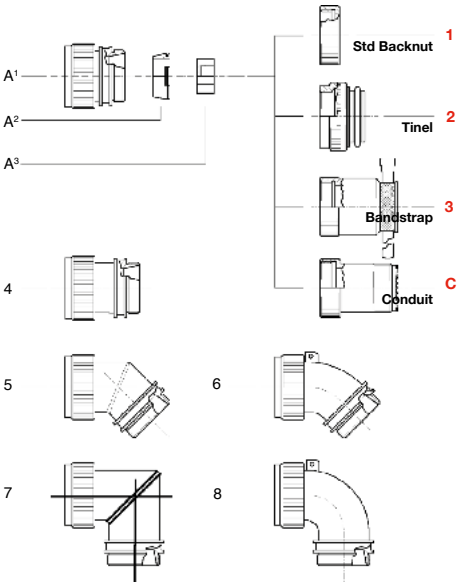
Braid screen not included

Features and benefits

- Simplified maintenance repair
- Excellent mechanical and environmental resistance
- Efficient strain relief
- Flexibility
- Versatility

EMC Performance

- Withstands 10-kA peak current lightning transients of SAE AE4L-87-3.
- Outperforms traditional pigtail termination, especially in HIRF performance.



Ferrule Quantity by Shell Size

Shell Size		Ferrule Quantity	
Ref.	Mil.	Std.	Opt.
09	A	1	-
11	B	2	-
13	C	3	-
15	D	5	-
17	E	6	7
19	F	7	-
21	G	9	11
23	H	10	13
25	J	12	17

Table shown is for indicative purposes only, as represents the MIL-C-38999 Series III & IV family of 'HEX' backshells only. For additional variations please contact us.

Ferrule Kit - Part Numbers

HET-A-02X Shielded cables - for small size cables with heat shrinkable SolderShield terminator.

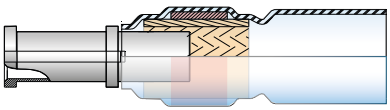
HET-A-03X Unshielded cables - for small size cable with heat shrinkable sealing sleeve.

HET-A-04X Shielded cables - for larger shield diameter cables with heat shrinkable SolderShield terminator.

Type of plating
B = Cadmium plated
C = Electroless nickel

HET07-AX Ferrule - solid blank for use when a HET-A is not needed.

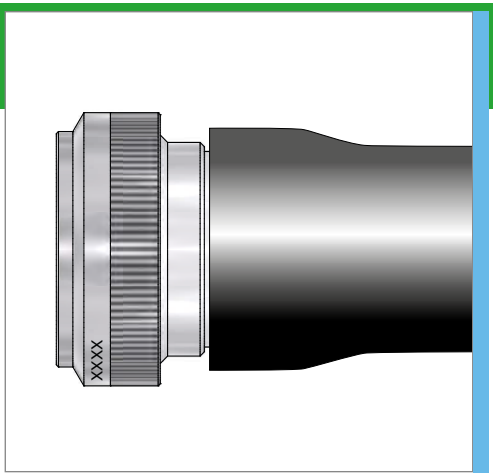
For assistance when ordering this product please contact us for more information.



Ferrule with solder sleeve assembled, before shrinking

KTKK Series

One Piece Heat Shrink Boot Assembly
Heat Shrink Screened Backshells



KTKK boot assemblies are one-part assemblies for screened cables. Constructed from heat-shrinkable screened moulded parts and connector adaptors, the assembly consists of parts already well proven in harsh military environments.

Installation is effected by coupling the adaptor to the connector and shrinking the rear of the moulded part onto the cable with a hot air gun. The moulded part has a hot-melt adhesive pre-installed to provide a bond between the cable jacket and the moulded part.

When used in conjunction with shielded (screened) cables, the assembly provides electrical continuity between the cable shield and the connector with Rayaten® moulded parts. Rayaten moulded parts are shielded, heat shrinkable parts providing shielding levels better than 80 dB at 100 MHz.

The following part number tables are for our most popular ranges that offer screened system 100, low fire hazard, with S1275 conductive adhesive. This selection represents a small selection of what is available in relation to materials and connector types.

Pre-Coated Screening Adhesive Options

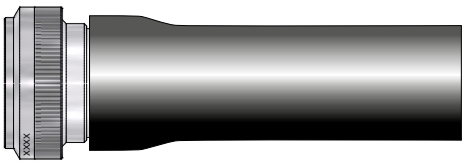
Material	Coatings, shielded
Screened System 25, fluid-resistant modified elastomer	S1030 low fire hazard hot melt adhesive
Screened System 100, low fire hazard material	S1275 conductive adhesive for use with Rayaten moulded parts

Other common variants include...

MIL-DTL-38999 Series III and IV - Aluminium with Cadmium Plate.

MIL-DTL-38999 Series I and II - Aluminium with Cadmium Plate.

Pattern 602 - Aluminium with Cadmium Plate.



For more information please contact us.

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KTKK Series

One Piece Heat Shrink Boot Assembly
Heat Shrink Screened Backshells

MIL-DTL-38999 Series III & IV Connectors - Nickel Aluminium Bronze

RoHS compliant

Shell Size	Straight Assemblies		45° Assemblies		90° Assemblies	
	Part Number	Cable Range	Part Number	Cable Range	Part Number	Cable Range
08	KTKK 2610	5.0 - 7.0	KTKK 3130	5.0 - 7.0	-	-
10	KTKK 2611	6.0 - 9.0	KTKK 3131	6.0 - 9.0	KTKK 2621	6.0 - 9.0
12	KTKK 2612	7.2 - 11.0	KTKK 3132	7.2 - 11.0	KTKK 2622	7.2 - 11.0
14	KTKK 2613	7.2 - 11.0	KTKK 3133	7.2 - 11.0	KTKK 2623	7.2 - 11.0
16	KTKK 2614	8.5 - 17.0	KTKK 3134	8.5 - 17.0	KTKK 2624	8.5 - 17.0
18	KTKK 2615	8.5 - 17.0	KTKK 3135	8.5 - 17.0	KTKK 2625	8.5 - 17.0
20	KTKK 2616	10.0 - 21.0	KTKK 3136	10.0 - 21.0	KTKK 2626	10.0 - 21.0
22	KTKK 2617	10.0 - 21.0	KTKK 3137	10.0 - 21.0	KTKK 2627	10.0 - 21.0
24	KTKK 2618	15.8 - 29.0	KTKK 3138	15.8 - 29.0	KTKK 2628	15.8 - 29.0

Pattern 105 Connectors - Aluminium with Cadmium Plate

Shell Size	Straight Assemblies		45° Assemblies		90° Assemblies	
	Part Number	Cable Range	Part Number	Cable Range	Part Number	Cable Range
08	KTKK 0465	5.0 - 7.0	KTKK 0603	5.0 - 7.0	-	-
10	KTKK 0466	6.0 - 9.0	KTKK 0604	6.0 - 9.0	KTKK 1251	6.0 - 9.0
12	KTKK 0467	7.2 - 11.0	KTKK 0605	7.2 - 11.0	KTKK 1252	7.2 - 11.0
14	KTKK 0468	7.2 - 11.0	KTKK 0606	7.2 - 11.0	KTKK 1253	7.2 - 11.0
16	KTKK 0469	8.5 - 17.0	KTKK 0607	8.5 - 17.0	KTKK 1254	8.5 - 17.0
18	KTKK 0470	8.5 - 17.0	KTKK 0608	8.5 - 17.0	KTKK 1255	8.5 - 17.0
20	KTKK 0471	10.0 - 21.0	KTKK 0609	10.0 - 21.0	KTKK 1256	10.0 - 21.0
22	KTKK 0472	10.0 - 21.0	KTKK 0610	10.0 - 21.0	KTKK 1257	10.0 - 21.0
24	KTKK 0473	15.8 - 29.0	KTKK 0611	15.8 - 29.0	KTKK 1258	15.8 - 29.0

Pattern 608 Connectors - Nickel Aluminium Bronze

RoHS compliant

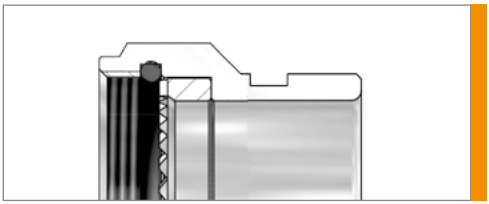
Shell Size	Straight Assemblies		45° Assemblies		90° Assemblies	
	Part Number	Cable Range	Part Number	Cable Range	Part Number	Cable Range
08	KTKK 0444	5.0 - 7.0	KTKK 0580	5.0 - 7.0	-	-
10	KTKK 0445	6.0 - 9.0	KTKK 0581	6.0 - 9.0	KTKK 1021	6.0 - 9.0
12	KTKK 0446	7.2 - 11.0	KTKK 0582	7.2 - 11.0	KTKK 1022	7.2 - 11.0
14	KTKK 0447	7.2 - 11.0	KTKK 0583	7.2 - 11.0	KTKK 1023	7.2 - 11.0
16	KTKK 0448	8.5 - 17.0	KTKK 0584	8.5 - 17.0	KTKK 1024	8.5 - 17.0
18	KTKK 0449	8.5 - 17.0	KTKK 0585	8.5 - 17.0	KTKK 1025	8.5 - 17.0
20	KTKK 0450	10.0 - 21.0	KTKK 0586	10.0 - 21.0	KTKK 1026	10.0 - 21.0
22	KTKK 0451	10.0 - 21.0	KTKK 0587	10.0 - 21.0	KTKK 1027	10.0 - 21.0
24	KTKK 0452	15.8 - 29.0	KTKK 0588	15.8 - 29.0	KTKK 1028	15.8 - 29.0

Non-Screened Backshell Types

Suitable for Heat Shrink Boots

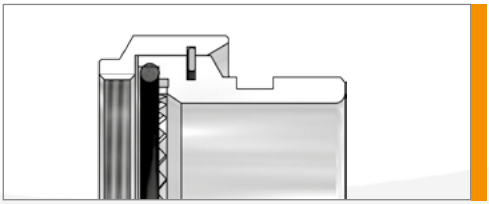
SOLID

Solid adaptors are designed for use where no access is required, for example when potting is necessary or a lower space profile is needed. These adaptors have a groove to accommodate heat-shrinkable moulded parts.



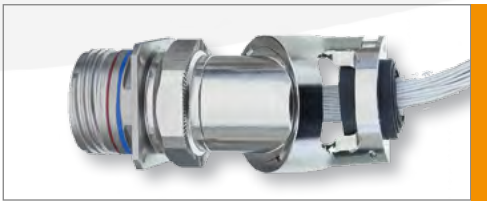
SPIN-COUPLING

Have a rotatable coupling nut and a grooved body to accommodate lipped heat-shrinkable moulded parts. Spin-coupling adaptors combined with heat-shrinkable moulded parts provide environmental protection and strain relief for unscreened cable terminations.



SPIN LOCK

A variable angle backshell that enables straight, 45° and right angle 90 cable terminations with the same part. The connector backshell swivelling body rotates around the axis of the cable bundle and locks in position, minimising stress on the wire bundle.



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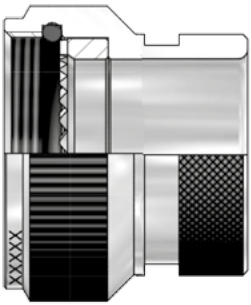
Solid Backshells

2xxMx Series
Non-Screened Backshells



Solid or direct coupling backshells suitable for use with a lipped heat shrinkable boot. The list below represents the family designations for the most common applications, for others not listed here please contact us.

Family Type Designation

MIL-C-5015 (MS3100)
218M5 Straight backshell family

MIL-C-26482 Series I
203M6 Straight backshell family

MIL-C-38999 Series III & IV.
209M3 Straight backshell family

MIL-C-38999 Series I & II.
201M1 Straight backshell family

MIL-C-26482 Series II and
MIL-C-5015 (MS3400)
201M9 Straight backshell family

Patt 603 and BS9522 N0001
225M6 Straight backshell family

Shell Size Selection Table

Part No.	Ind. Ref.	Mil. Ref.	Entry Ø mm
08	9	A	6.35
10	11	B	9.32
12	13	C	12.70
14	15	D	15.88
16	17	E	19.05
18	19	F	20.62
20	21	G	23.80
22	23	H	26.97
24	25	J	30.18

209M3 16 - 19 B

Part Numbering example

PLATING CODE
See plating code selection table, Group A on page 365

MATERIAL CODE
See material code selection table, Group 1 on page 364

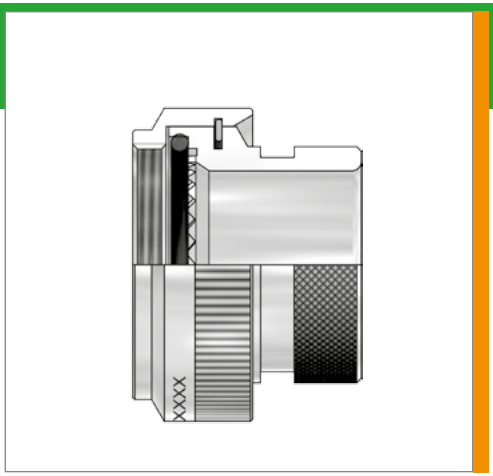
SHELL SIZE
See table above

FAMILY TYPE
See text above

The backshell family designations are for the most common applications, for others not listed here please contact us.

Spin-Coupling Backshells

2xxMx Series
Non-Screened Backshells



Spin-coupling backshells suitable for use with a lipped heat shrinkable boot. The list below represents the family designations for the most common applications, for others not listed here please contact us.

Family Type Designation

MIL-C-5015 (MS3100)
218M6 Straight backshell family

MIL-C-26482 Series I
203M9 Straight backshell family

MIL-C-38999 Series III & IV.
209M4 Straight backshell family

MIL-C-38999 Series I & II.
202M2 Straight backshell family

MIL-C-26482 Series II and
MIL-C-5015 (MS3400)
201M1 Straight backshell family

Patt 603 and BS9522 N0001
225M5 Straight backshell family

Shell Size Selection Table

Part No.	Ind. Ref.	Mil. Ref.	Entry Ø mm
08	9	A	6.35
10	11	B	9.52
12	13	C	12.70
14	15	D	15.75
16	17	E	18.92
18	19	F	20.62
20	21	G	23.80
22	23	H	26.97
24	25	J	29.85

209M4 16 - 19 B

Part Numbering example

PLATING CODE
See plating code selection table, Group A on page 365

MATERIAL CODE
See material code selection table, Group 1 on page 364

SHELL SIZE
See table above

FAMILY TYPE
See text above

The backshell family designations are for the most common applications, for others not listed here please contact us.

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Spin-Lock Backshells

SLC and SLM Variable Angle Non-Screened Backshells

The Spin Lock variable angle backshell enables straight, 45° and right angle 90° cable terminations with the same part.

The connector backshell swivelling body rotates around the axis of the cable bundle and locks in position, minimising stress on the wire bundle.

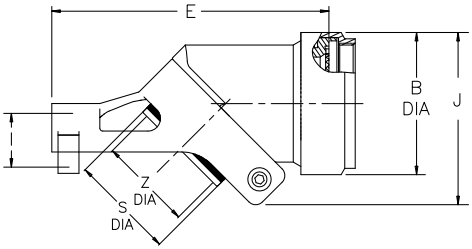
There are many combinations and variants that are possible with numerous part number formats, so for additional information please contact us.

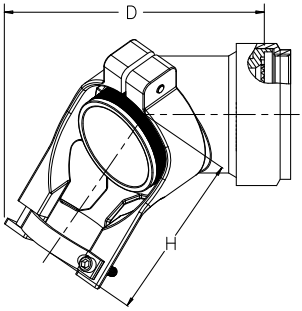
Meets or exceeds SAE-AMS-85049

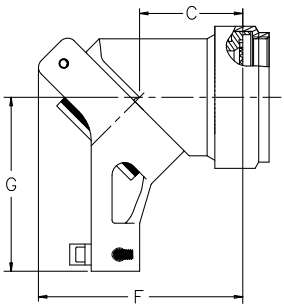
Dimensions - MIL-C-38999 Series III & IV

Shell	D	E	F	G	H	K	J
08	47.8	48.3	34.8	42.2	45.7	5.94	27.7
10	50.8	52.1	37.3	46.5	47.2	5.94	30.5
12	51.8	55.4	39.1	49.5	49.3	8.45	32.0
14	58.4	60.5	45.5	52.6	53.6	11.6	36.3
16	62.0	64.3	49.0	56.9	57.9	15.6	40.1
18	65.8	70.1	56.1	62.7	64.8	16.1	44.5
20	68.6	71.4	55.4	65.0	67.8	17.7	48.0
22	73.4	80.0	58.2	73.7	75.2	20.9	50.5
24	75.2	82.6	60.7	75.2	77.2	21.7	53.3

Measurements are in millimetres and nominal







The dimensional information above is for our most popular backshell application family, others are available upon request. For further details, including entry size options, materials, platings and options please contact us.

Saddle Clamp Version (as shown)

SLC-40-AB-1610 part No. example

- Entry Size
- Shell Size
- Plating
- Material
- Connector family

MATERIALS

- Base: Aluminum or stainless steel
- Plating: Electroless nickel, cadmium, zinc nickel, or passivated

Connector Accessories
MIL-DTL-38999 III
Protective Caps

Outlined on these two pages are protection caps for MIL-DTL-38999 Series III connectors which represents our most popular dust caps.

100P160 Series
Receptacle protection cap

100P237 Series
Plug protection cap

This represents a small proportion of what is available in the complete range, for these variants please contact us for details.

Omit for no attachment

100P160-17-1-B-TC5-17

Part Numbering example

Attachment
See illustrations above for code

LANYARD LENGTH
In inches, with tolerance +1”/-0”

LANYARD TYPE
TC Teflon covered (clear) stainless steel wire rope, available as standard.
For further lanyard options please contact us.

PLATING CODE
See plating code table, Group B on page 365.

MATERIAL CODE
See material code table, Group 3 on page 364.

SHELL SIZE
Range of sizes include
09, 11, 13, 15, 17, 19, 21, 23 and 25

SERIES
100P160 Series receptacle protection cap
100P237 Series plug protection cap
100P757 Series arctic grip receptacle cover
100P756 Series arctic grip plug cover

Other series are available for other connector series, please contact us for details.

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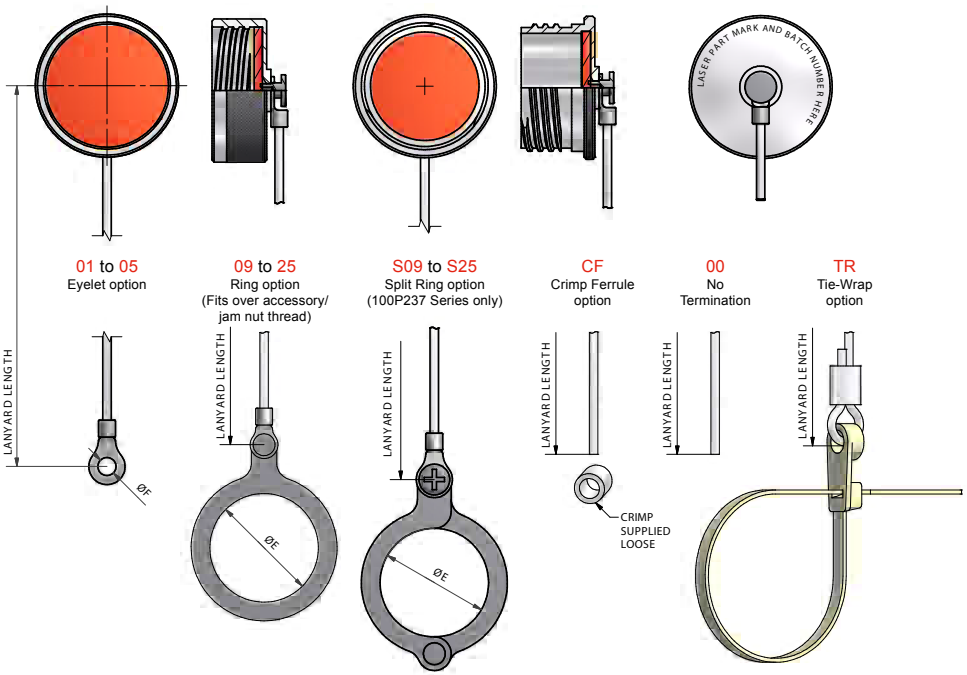
Lanyard Attachments

100P160 Series

100P237 Series



Eyelet

REF.	ØF
01	3.2
02	3.7
03	4.3
04	5.3
05	6.4

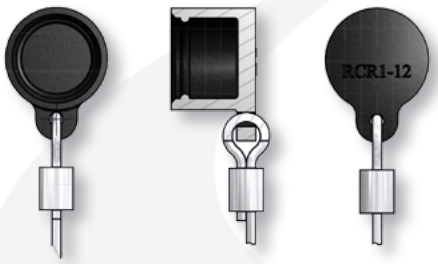
Ring Ref - 160 Series

REF.	ØE
09	18.0
11	21.4
13	25.8
15	28.8
17	32.0
19	35.0
21	38.3
23	41.7
25	44.6

Ring Ref - 237 Series

REF.	SPLIT RING REF	ØE
09	S09	15.1
11	S11	18.0
13	S13	19.4
15	S15	22.6
17	S17	25.8
19	S19	28.8
21	S21	32.0
23	S23	34.1
25	S25	40.1

Elastomer Dust Caps

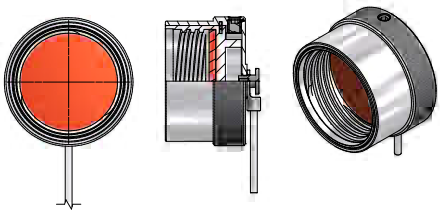


Our caps provide a reliable and durable solution to the protection of connectors whilst in transit or being handled in a wide range of environments. Flexible enough to fit a variety of different sized connectors, they can also be colour coded to greatly increase the ease of identifying corresponding connectors/ connection points.

- Eliminate the potential for damaging other equipment while the cap is not attached to the connector
- Fit to a variety of different connector specifications
- Provide reliable protection while connectors are being transported and handled
- Flexible enough fit different size connectors
- Can be colour coded to identify different connectors and connection points
- Available in Fluorosilicone, Silicone and Neoprene, dependent on application environment, temperature and fluid resistance requirements.

Universal - 100P3188
MIL-DTL-5015 - RCR1
MIL-DTL-26482 - RCR8
VG95234 - RCRQ

Anti Tamper Dust Caps

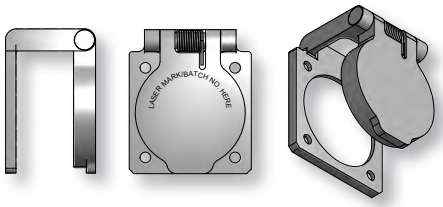


Used on data ports of equipment containing sensitive and confidential data. The design allows the outer shell of the cap to spin without uncoupling until it is locked in position with a small key, allowing it to be removed.

MIL-DTL-38999 Series III - PRC433TL

Other shell sizes and connector series available.

Self Closing Dust Caps



Ensures the protective cap is not removed or lost from equipment, with strong machined construction.

38999 Series III derived square flange receptacle. Other shell sizes and connector series available.

MIL-DTL-38999 Series III - PC4SCC

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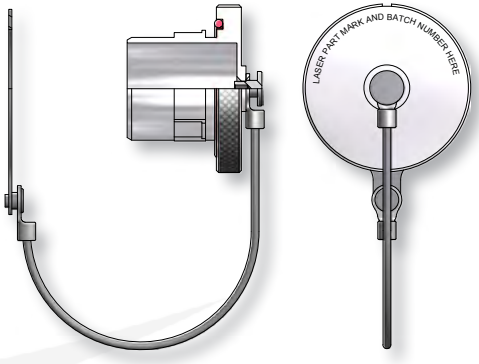

As part of our commitment to offering complete harnessing component solutions we can also supply a vast range of accessories such as those illustrated here. Components are sourced from leading edge companies with industry approvals.

- Many parts machined from solid material for reliable strength and performance
- Compatible with Mil-Spec dimensions and performance
- Wide choice of lanyard options available
- Gasket material options available

Please contact us for more information.

MIL-DTL-26482 Series II
PRC3181 series standard receptacle cover
PPC3180 series standard plug cover

MIL-DTL-38999 Series I
PRC27502 series standard receptacle cover
PPC27501 series standard plug cover

MIL-DTL-38999 Seres II
PRC27511 series standard receptacle cover
PPC27510 series standard plug cover

MIL-DTL-38999 Seres III
See pages 384-385

MIL-DTL-38999 Series IV
100P608 series standard receptacle cover
100P609 series standard plug cover

MIL-DTL-5015H
100P1240 series standard receptacle cover
100P1167 series standard plug cover

MIL-DTL-5015D
100P820S series standard receptacle cover
100P1136S series arctic grip receptacle cover
100P738 series standard plug cover

MIL-DTL-83723 Series III
P83723/60 series standard receptacle cover
P83723/59 series standard plug cover

VG96912
PRC96912 series standard receptacle cover
PPC96912 series standard plug cover

MIL-PRF-39012 BNC/TNC RF Coax
PJCBNC series standard receptacle cover
PJCTNC series standard receptacle cover
PPCBNC series standard plug cover
PPCTNC series standard plug cover