

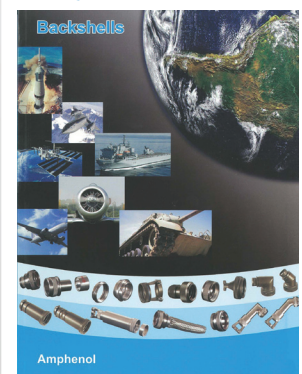
Backshells by Amphenol Socapex

For LJT, RNJ, RNJ LP, JT, TV-CTV, SC39 and SJT Connectors
For MIL-DTL-38999 Series I, II, III, EN3645 and VG96912 Connectors

Amphenol



For **AS85049 Backshells**,
please consult our complete
catalog "Amphenol Backshell"



Connecting people + technology

www.amphenol-socapex.com

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GENERAL CHARACTERISTICS

MAIN FEATURES

- **Shell material**
 - Aluminium alloy
 - Marine bronze
 - For composite, please consult us
- **Finish**
 - Olive drab cadmium plating
 - Electroless nickel plating
 - Green zinc cobalt plating
 - Black zinc nickel plating
 - For others, please consult us
- **9 shell sizes per model**
- **Straight or right angled versions**
- **Working temperature**
 - From – 65°C to + 175°C with olive drab cadmium plating, green zinc cobalt plating and black zinc nickel plating
 - From – 65°C to + 200°C with electroless nickel plating

For specific backshells for marine applications and 217 backshells, please consult us.

DESCRIPTION

You will find hereafter Amphenol Socapex backshells for LJT (MIL-DTL-38999 Series I / HE308), RNJ (HE308), RNJ LP, TV-CTV (MIL-DTL-38999 Series III), SC39 and SJT (VG96912) connectors, as well as specific light weight backshells for JT (MIL-DTL-38999 Series II) connectors. These rear accessories enhance the performance capabilities of the connectors for both general duty and severe environment applications.

Different technologies are used in order to ensure the following functions:

- **EMI shielding**
- **cable retention**
- **sealing**

This large choice of rear accessories provides you with the right solution for your connector/backshell interconnection.

APPLICATIONS

Military and aeronautic applications: battlefields, ground vehicles, aircrafts.

Advanced industrial applications with specific climatic, mechanical or electrical requirements.



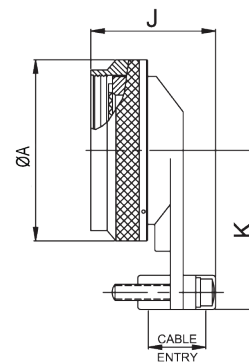
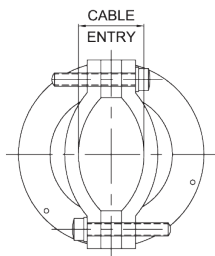
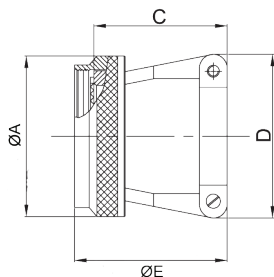
STRAIN RELIEFS

These backshells ensure a mechanical retention of the cable.

LJT/TV STRAIN RELIEFS

M85049/49-2 strain relief and M85049/47 (90° angled versions) suitable for LJT (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors.

M85049/38 strain relief and M85049/39 (90° angled versions) suitable for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors.



Size	LJT	TV	Ø A max mm (in)	C max mm (in)	D max mm (in)	E max mm (in)	Cable Entry		J mm (in)		K mm (in)
	Thread for M85049/49-2 UNEF-2B	Thread for M85049/38 Metric					mm (in)		for M85049/47	for M85049/39	
							min	max			
09	.4375-28	M12 x 1.0 - 6H	19.05 (0.75)	23.11 (0.91)	21.59 (0.85)	27.94 (1.10)	2.49 (0.10)	5.94 (0.23)	35,05 (1.38)	33,27 (1.31)	25,40 (1.00)
11	.5625-24	M15 x 1.0 - 6H	21.59 (0.85)	23.11 (0.91)	22.86 (0.90)	27.94 (1.10)	3.89 (0.15)	5.94 (0.23)	35,05 (1.38)	33,27 (1.31)	27,94 (1.10)
13	.6875-24	M18 x 1.0 - 6H	25.40 (1.00)	25.65 (1.01)	27.94 (1.10)	30.48 (1.20)	4.83 (0.19)	8.33 (0.33)	37,08 (1.46)	38,35 (1.51)	27,94 (1.10)
15	.8125-20	M22 x 1.0 - 6H	27.94 (1.10)	26.92 (1.06)	29.21 (1.15)	31.75 (1.25)	6.60 (0.26)	11.61 (0.46)	41,4 (1.63)	39,37 (1.55)	31,75 (1.25)
17	.9375-20	M25 x 1.0 - 6H	31.75 (1.25)	29.46 (1.16)	33.02 (1.30)	34.44 (1.36)	7.19 (0.28)	15.60 (0.61)	45,72 (1.80)	43,43 (1.71)	33,02 (1.30)
19	1.0625-18	M28 x 1.0 - 6H	35.56 (1.40)	35.81 (1.41)	38.10 (1.50)	40.64 (1.60)	8.26 (0.33)	16.10 (0.63)	46,23 (1.82)	45,97 (1.81)	34,29 (1.35)
21	1.1875-18	M31 x 1.0 - 6H	38.10 (1.50)	38.35 (1.51)	40.64 (1.60)	43.21 (1.70)	8.71 (0.34)	17.73 (0.70)	48,26 (1.90)	49,53 (1.95)	40,64 (1.60)
23	1.3125-18	M34 x 1.0 - 6H	41.91 (1.65)	42.16 (1.66)	43.18 (1.70)	46.99 (1.85)	9.68 (0.38)	20.90 (0.82)	51,82 (2.04)	53,34 (2.10)	44,45 (1.75)
25	1.4375-18	M37 x 1.0 - 6H	44.45 (1.75)	44.70 (1.76)	45.72 (1.80)	49.56 (1.95)	10.62 (0.42)	21.67 (0.85)	54,61 (2.15)	56,13 (2.21)	46,99 (1.85)

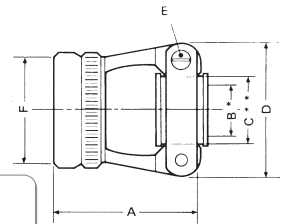
HOW TO ORDER

SAE-85049 designation - Backshells for LJT (MIL-DTL-38999 Series I/HE308) and TV/CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors

Series	M85049/	49-2	12	W
Type of strain relief				
49-2: for LJT (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors				
47: 90° right angled for LJT (MIL-DTL-38999 Series I / HE308) connectors				
38: for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors				
39: 90° right angled for TV (MIL-DTL-38999 Series III) connectors				
Size of backshell				
08-10-12-14-16-18-20-22-24 for LJT (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors: remove 1 to your connector size				
09-11-13-15-17-19-21-23-25 (same as connector size) for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors				
Finish				
W: olive-drab cadmium plating				
N: electroless nickel plating				

JT STRAIN RELIEFS

JT strain reliefs suitable for JT (MIL-DTL-38999 Series II) connectors.



Size	A max mm (in)	Ø B* mm (in)	Ø C* mm (in)	D ^{+0.3} mm (in)	F Thread UNEF-28
08	23.88 (0.940)	3.18 (0.125)	6.35 (0.250)	19.05 (0.750)	.4375-28
10	23.88 (0.940)	4.78 (0.188)	7.92 (0.312)	20.62 (0.812)	.5625-24
12	23.88 (0.940)	7.92 (0.312)	11.13 (0.438)	23.83 (0.938)	.6875-24
14	30.23 (1.190)	9.53 (0.375)	14.27 (0.562)	26.97 (1.062)	.8125-20
16	30.23 (1.190)	12.70 (0.500)	15.88 (0.625)	28.58 (1.125)	.9375-20
18	30.23 (1.190)	15.88 (0.625)	19.05 (0.750)	34.93 (1.375)	1.0625-18
20	30.23 (1.190)	15.88 (0.625)	19.05 (0.750)	34.93 (1.375)	1.1875-18
22	33.40 (1.315)	19.05 (0.750)	23.83 (0.938)	39.67 (1.562)	1.3125-18
24	33.40 (1.315)	20.32 (0.800)	25.40 (1.000)	42.06 (1.656)	1.4375-18

*B: seal inner diameter
**C: clamp inner diameter

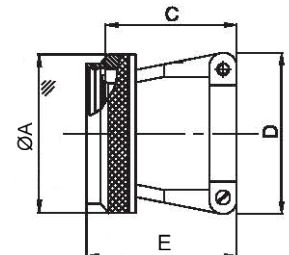
HOW TO ORDER

Amphenol designation – Backshells for JT (MIL-DTL-38999 Series II) connectors

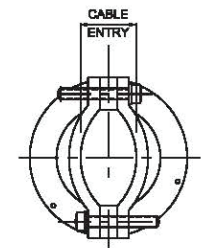
Series	JT	SRD	12	014
Type of backshell				
SRD: straight cable clamp				
Size of backshell 08-10-12-14-16-18-20-22-24 (same as connector size)				
Finish				
014: olive-drab cadmium plating				
023: electroless nickel plating				

SJT STRAIN RELIEFS

SJT strain reliefs suitable for SJT (VG 96912) connectors.



Size	ØA max mm (in)	C max mm (in)	D max mm (in)	E max mm (in)	Cable entry mm (in)	
					min	max
08	19.05 (0.750)	23.11 (0.910)	21.59 (0.850)	27.94 (1.100)	2.49 (0.098)	5.94 (0.234)
10	21.59 (0.850)	23.11 (0.910)	22.86 (0.900)	27.94 (1.100)	3.89 (0.153)	5.94 (0.234)
12	25.40 (1.000)	25.65 (1.010)	27.94 (1.100)	30.48 (1.200)	4.83 (0.190)	8.33 (0.328)
14	27.94 (1.100)	26.92 (1.060)	29.21 (1.150)	31.75 (1.250)	6.60 (0.260)	11.61 (0.457)
16	31.75 (1.250)	29.46 (1.160)	33.02 (1.300)	34.44 (1.356)	7.19 (0.283)	15.60 (0.614)
18	35.56 (1.400)	35.81 (1.410)	38.10 (1.500)	40.64 (1.600)	8.26 (0.325)	16.10 (0.634)
20	38.10 (1.500)	38.35 (1.510)	40.64 (1.600)	43.21 (1.701)	8.71 (0.343)	17.73 (0.698)
22	41.91 (1.650)	42.16 (1.660)	43.18 (1.700)	46.99 (1.850)	9.68 (0.381)	20.90 (0.823)
24	44.45 (1.750)	44.70 (1.760)	45.72 (1.800)	49.56 (1.951)	10.62 (0.418)	21.67 (0.853)



HOW TO ORDER

Amphenol designation - Backshells for SJT (VG96912)

Series	BS1	SR	M	12	99	9	X	W
Type of backshell								
SR: straight cable clamp with spin coupling								
Connector group								
M: SJT								
Size of backshell 08-10-12-14-16-18-20-22-24 (same as connector size)								
Entry size								
99: standard								
Lenght								
9: standard								
Constant								
X								
Finish								
W: olive-drab cadmium plating								
N: electroless nickel plating								

BACKSHELLS FOR SHIELDING

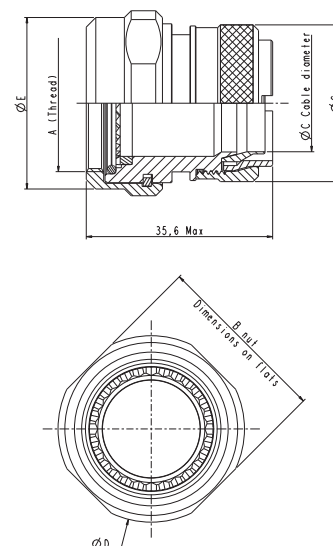
NSA and SA backsells ensure the shielding by clamping the braid with a screwing system. The free inner ring avoids twisting of the braid during screwing.

LJT NSA & TV NSA

LJT NSA (HE308-13) suitable for LJT (MIL-DTL-38999 Series I / HE308), RNJ (HE308) and SJT (VG96912) connectors.

TV NSA suitable for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors.

Size	LJT	TV	B max mm (in)	Ø C max mm (in)	Ø D max mm (in)	Ø E max mm (in)	Ø G max mm (in)
	A Thread UNEF-2B	A Thread Metric					
09	.4375-28	M12 x 1.0 - 6H	17 (0.669)	6.9 (0.272)	19.1 (0.752)	15.2 (0.598)	16.5 (0.650)
11	.5625-24	M15 x 1.0 - 6H	21 (0.827)	9.6 (0.378)	23.1 (0.909)	18.2 (0.717)	19.4 (0.764)
13	.6875-24	M18 x 1.0 - 6H	26 (1.024)	12.7 (0.500)	28.1 (1.106)	21.2 (0.835)	22.6 (0.890)
15	.8125-20	M22 x 1.0 - 6H	29 (1.142)	14.8 (0.583)	31.1 (1.224)	25.1 (0.988)	25.8 (1.016)
17	.9375-20	M25 x 1.0 - 6H	32 (1.260)	17.9 (0.705)	34.1 (1.343)	28.1 (1.106)	29.0 (1.142)
19	1.0625-18	M28 x 1.0 - 6H	36 (1.417)	19.9 (0.784)	38.1 (1.500)	31.1 (1.224)	32.0 (1.260)
21	1.1875-18	M31 x 1.0 - 6H	39 (1.535)	23.1 (0.909)	41.1 (1.618)	34.1 (1.343)	35.2 (1.386)
23	1.3125-18	M34 x 1.0 - 6H	42 (1.654)	26.2 (1.032)	44.1 (1.736)	36.9 (1.453)	38.4 (1.512)
25	1.4375-18	M37 x 1.0 - 6H	45 (1.772)	28.8 (1.134)	49.1 (1.933)	39.9 (1.571)	41.5 (1.634)



HOW TO ORDER

Amphenol designation - Backshells for LJT (MIL-DTL-38999 Series I / HE308), RNJ (HE308) and SJT (VG96912) connectors

Series	LJT	NSA	11	014	-
Type of backshell					
NSA: screened clamping braid backshell accepting heat shrink moulded piece					
Size of backshell 09-11-13-15-17-19-21-23-25					
for LJT connectors: same as connector size					
for SJT (G)06 and 00 connectors: add 1 on your connector size					
for SJT07 sizes 8 to 22 connectors: add 3 on your connector size					
Consult us for SJT07 size 24 connector					
Finish					
014: olive-drab cadmium plating					
023: electroless nickel plating					
024: green zinc cobalt plating					
033K: black zinc nickel plating					
Deviation					
F428: backshells for SJT connectors only					

HE 308 military designation - Backshells for HE308 (LJT / MIL-DTL-38999 Series I / RNJ) connectors

Series	HE308	13	15	7	M
Type of backshell					
13: screened clamping braid backshell heat shrink moulded piece					
Size of backshell 09-11-13-15-17-19-21-23-25					
(same as connector size)					
Finish					
07: olive-drab cadmium plating					
06: electroless nickel plating					
Military standard					

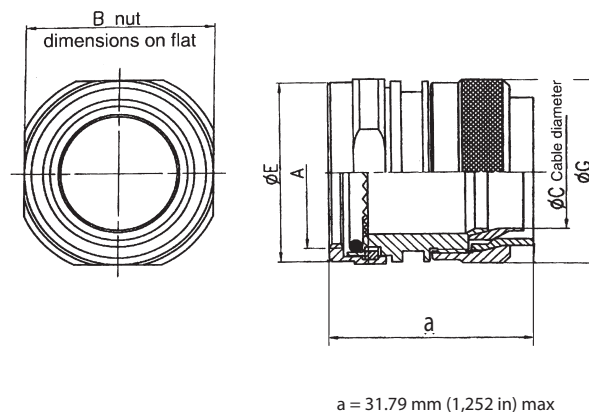
Amphenol designation - Backshells for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors

Series	TV	NSA	11	014
Type of backshell				
NSA: screened clamping braid backshell accepting heat shrink moulded piece				
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)				
Finish				
014: olive-drab cadmium plating				
023: electroless nickel plating				
024: green zinc cobalt plating				
033K: black zinc nickel plating				

JT SA

JT SA suitable for JT (MIL-DTL-38999 Series II) connectors.

Size	A Thread UNEF-2B	B max mm (in)	Ø C max mm (in)	Ø E max mm (in)	Ø G max mm (in)
08	.4375-28	16.70 (0.658)	6.90 (0.272)	15.20 (0.598)	16.40 (0.646)
10	.5625-24	20.70 (0.815)	9.60 (0.378)	18.40 (0.724)	19.53 (0.769)
12	.6875-24	22.70 (0.894)	12.70 (0.500)	21.60 (0.850)	22.60 (0.890)
14	.8125-20	25.70 (1.012)	14.80 (0.583)	24.80 (0.976)	25.80 (1.016)
16	.9375-20	28.70 (1.130)	17.90 (0.705)	28.00 (1.102)	28.80 (1.134)
18	1.0625-18	31.70 (1.248)	19.90 (0.784)	31.00 (1.221)	31.80 (1.252)
20	1.1875-18	35.70 (1.406)	23.10 (0.909)	34.20 (1.347)	33.87 (1.334)
22	1.3125-18	38.70 (1.524)	26.20 (1.032)	37.40 (1.472)	36.90 (1.453)
24	1.4375-18	41.70 (1.642)	28.80 (1.134)	40.60 (1.598)	41.52 (1.635)



HOW TO ORDER

Amphenol designation – Backshells for JT (MIL-DTL-38999 Series II) connectors

Series	JT	SA	12	014
Type of backshell				
SA: screened clamping braid backshell accepting heat shrink moulded piece				
Size of backshell 08-10-12-14-16-18-20-22-24 (same as connector size)				
Finish				
014: olive-drab cadmium plating				
023: electroless nickel plating				

ASSEMBLY INSTRUCTIONS FOR NSA AND SA BACKSHELLS

1. Prepare the cable for termination process and slide onto the cable the items in the order shown on figure 1.
2. Screw the backshell at the rear of the connector.
3. Fold back the braid on the outer jacket and fix it (figure 2)
4. Install the braid as shown on figures 3 and 4: Release the braid and cover the backshell (a) and the connector's shell. Slide the first ring (b) over the braid. Fold back the braid on the ring (b) and slide the second ring (c) over the braid and the first ring (b). Screw the last ring (d) at the rear of the backshell. If necessary, fix the extra braid on the outer jacket of the cable. If this installation (double folding of the braid) is not possible, refer to figure 5: Slide the first ring (b). Release the braid and cover the backshell (a) and the connector's shell. Cut the braid as shown. Slide the second ring (c) over the braid and the first ring (b). Screw the last ring at the rear of the backshell.
5. Install the heat-shrink moulded piece.

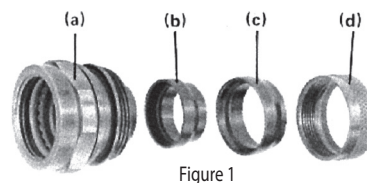


Figure 1

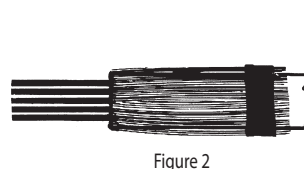


Figure 2

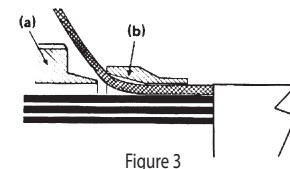


Figure 3

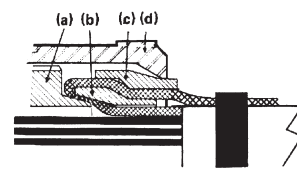


Figure 4

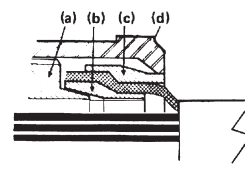


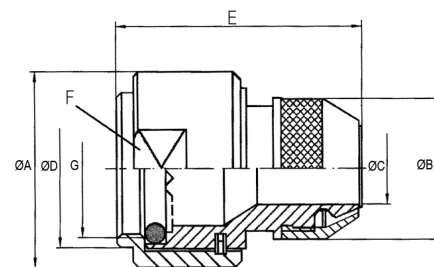
Figure 5

OTHER BACKSHELLS FOR SHIELDING

LJT SQ

LJT SQ suitable for SJT (VG96912) connectors.

SQ backshells ensure the shielding by clamping the braid with a screwing system. For straight or right angled heat shrink moulded pieces, please refer to page 22. Possibility to order under **VG96912LXX** designation (only olive-drab cadmium version).



Size	Ø A ± 0.2 mm (in)	Ø B $+0.3$ 0 mm (in)	Ø C $+0.2$ 0 mm (in)	Ø D max mm (in)	E max mm (in)	F ± 0.2 mm (in)	G Thread UNEF-2B
08	19.00 (0.748)	14.00 (0.551)	6.20 (0.244)	16.00 (0.630)	30.00 (1.181)	17.00 (0.670)	7/16-28
10	22.00 (0.867)	16.00 (0.630)	7.00 (0.276)	19.00 (0.748)	30.00 (1.181)	20.00 (0.787)	9/16-24
12	25.00 (0.984)	18.00 (0.709)	9.50 (0.374)	22.00 (0.867)	30.00 (1.181)	23.00 (0.906)	11/16-24
14	28.00 (1.102)	22.00 (0.867)	12.50 (0.492)	25.10 (0.988)	33.00 (1.300)	26.00 (1.024)	13/16-20
16	30.00 (1.181)	25.00 (0.984)	15.50 (0.610)	28.30 (1.114)	33.00 (1.300)	28.00 (1.102)	15/16-20
18	34.00 (1.339)	28.00 (1.102)	18.50 (0.728)	31.30 (1.232)	34.00 (1.339)	32.00 (1.260)	11/16-18
20	38.00 (1.496)	32.00 (1.260)	21.50 (0.846)	34.50 (1.358)	36.00 (1.417)	36.00 (1.417)	13/16-18
22	43.00 (1.693)	34.00 (1.339)	23.50 (0.925)	37.70 (1.484)	36.00 (1.417)	41.00 (1.614)	15/16-18
24	45.00 (1.772)	38.00 (1.496)	27.5 (1.083)	40.80 (1.606)	36.00 (1.417)	43.00 (1.693)	17/16-18

ASSEMBLY INSTRUCTIONS FOR SQ BACKSHELLS

1. Prepare the cable for termination process.
2. Screw the backshell at the rear of the connector.
3. Install the braid as shown on figure 1: Release the braid and cover the backshell conus. Maintain the braid on the conus with a small diameter wire in the groove. Fold back the braid on itself and cut it as shown. Screw the ring over the braid without twisting it.
4. Install the heat-shrink moulded piece.

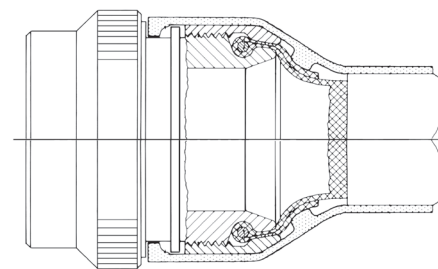


Figure 1

HOW TO ORDER

Amphenol designation - Backshells for SJT (VG96912) connectors

Series	LJT	SQ	11	014	-
Type of backshell					
SQ: simple screened clamping braid backshell accepting heat shrink moulded piece					
Size of backshell 09-11-13-15-17-19-21-23-25					
for LJT connectors: same as connector size					
for SJT (G)06 and 00 connectors: add 1 on your connector size					
for SJT07 sizes 8 to 22 connectors: add 3 on your connector size					
Consult us for SJT07 size 24 connector					
Finish					
014: olive-drab cadmium plating					
023: electroless nickel plating					
Deviation					
F428: backshells for SJT connectors only					

LJT NSB

LJT NSB suitable for LJT (MIL-DTL-38999 Series I / HE308), RNJ (HE308) connectors.

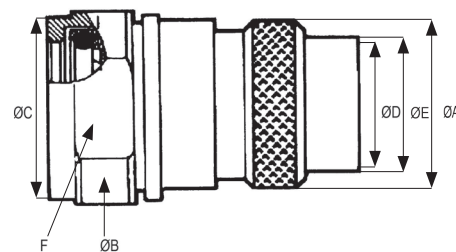
NSB backshells ensure the shielding by a tinned rear part to allow soldering of the braid. For straight or right angled heat shrink moulded pieces, please refer to page 22.



Size	Ø A mm (in)	Ø B ±0.2 mm (in)	Ø C max mm (in)	Ø D* min mm (in)	Ø E max mm (in)	F** max mm (in)
9	12.60 (0.496)	20.00 (0.787)	16.00 (0.630)	7.80 (0.307)	9.50 (0.374)	16.80 (0.661)
11	16.40 (0.646)	23.00 (0.906)	19.00 (0.748)	10.80 (0.425)	12.50 (0.492)	20.80 (0.819)
13	20.00 (0.787)	26.00 (1.024)	22.00 (0.866)	13.10 (0.516)	15.50 (0.610)	22.80 (0.898)
15	22.00 (0.866)	29.00 (1.142)	25.10 (0.988)	16.30 (0.642)	18.50 (0.728)	25.80 (1.016)
17	24.60 (0.969)	32.00 (1.260)	28.30 (1.114)	19.00 (0.748)	21.50 (0.847)	28.80 (1.134)
19	27.50 (1.083)	35.00 (1.378)	31.30 (1.232)	21.70 (0.854)	24.00 (0.945)	31.80 (1.252)
21	31.90 (1.256)	39.00 (1.536)	34.50 (1.358)	24.90 (0.980)	27.00 (1.063)	35.80 (1.409)
23	35.00 (1.378)	42.00 (1.654)	37.70 (1.484)	28.10 (1.106)	30.50 (1.201)	38.80 (1.528)
25	38.80 (1.528)	45.00 (1.772)	40.80 (1.606)	31.20 (1.228)	33.50 (1.319)	41.80 (1.646)

* max permissible cable outside diameter

** dimension over the flats (4 flats)



ASSEMBLY INSTRUCTIONS FOR NSB BACKSHELLS

1. Prepare the cable for termination process.
2. Screw the backshell at the rear of the connector.
3. Fold back the braid on the outer jacket and fix it. (figure 1)
4. Install the braid as shown of figure 2: if possible, protect the conductors with an insulating tube or tape (e) inserted between them and the backshell. Free the braid and fit it over the tinned collar (f) on the back end and cut it to length. Bind the braid (g). Solder the braid.
5. Install the heat-shrink moulded piece.



Figure 1

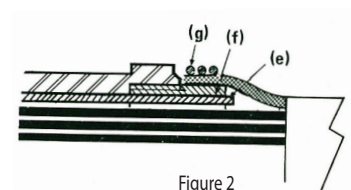


Figure 2

HOW TO ORDER

Amphenol designation - Backshells for LJT (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors

Series	LJT	NSB	11	014
Type of backshell				
NSB: screened soldering braid backshell accepting heat shrink moulded piece				
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)				
Finish				
014: olive-drab cadmium plating				
023: electroless nickel plating				

BAND BACKSHELLS FOR SHIELDING

These band backsells provide a full 360° shield termination. They are available with different cabling chamber lengths and exit diameters. The use of replaceable bands facilitates future maintenance or reparability. Sealing is ensured by straight or right angled heat shrink moulded piece at the rear of backshell.

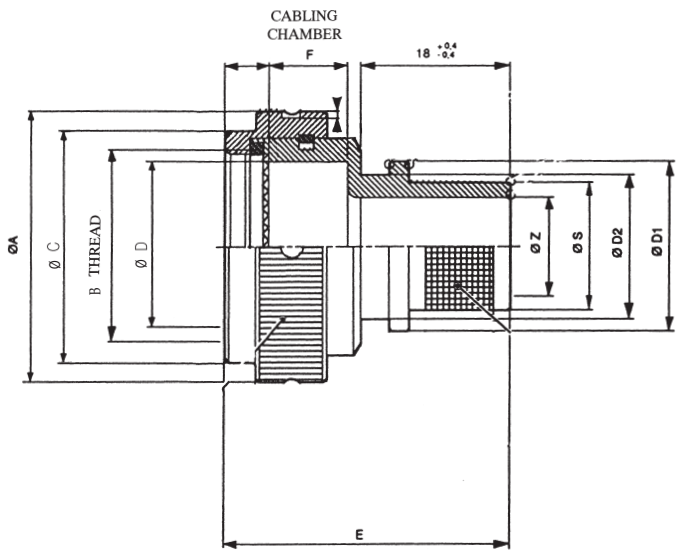
HE308-35 AND TV35 BACKSHELLS

HE308-35 suitable for LJT (MIL-DTL-38999 Series I / HE308), RNJ (HE308) connectors.

TV35 suitable for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors.

TVB35 suitable for TV bronze connectors.

These straight band backsells provide a full 360° shield termination with a quick, easy and cost effective cabling process. For straight or right angled heat shrink moulded pieces, please refer to page 22.



Size	HE308-35				TV35/TVB35			
	Ø A max mm (in)	B Thread UNEF-2B	Ø C mm (in)	Ø D mm (in)	Ø A max mm (in)	B Thread Metric	Ø C mm (in)	Ø D mm (in)
09	21.40 (0.843)	0.4375-28	15.20 (0.598)	7.80 (0.307)	24.30 (0.957)	M12 x 1.0-6H	18.00 (0.709)	7.80 (0.307)
11	24.30 (0.957)	0.5625-24	18.40 (0.724)	10.80 (0.425)	27.40 (1.079)	M15 x 1.0-6H	21.00 (0.827)	10.99 (0.433)
13	27.40 (1.079)	0.6875-24	21.60 (0.850)	13.10 (0.516)	31.80 (1.252)	M18 x 1.0-6H	25.00 (0.984)	13.80 (0.543)
15	31.80 (1.252)	0.8125-20	24.80 (0.976)	16.30 (0.642)	35.00 (1.378)	M22 x 1.0-6H	28.00 (1.102)	16.30 (0.642)
17	35.00 (1.378)	0.9375-20	28.00 (1.102)	19.50 (0.768)	38.10 (1.500)	M25 x 1.0-6H	30.80 (1.213)	20.10 (0.791)
19	38.10 (1.500)	1.0625-18	31.00 (1.220)	21.70 (0.854)	41.20 (1.622)	M28 x 1.0-6H	34.10 (1.343)	22.93 (0.903)
21	41.20 (1.622)	1.1875-18	34.20 (1.347)	24.90 (0.980)	44.30 (1.744)	M31 x 1.0-6H	36.90 (1.453)	26.00 (1.024)
23	44.30 (1.744)	1.3125-18	37.40 (1.472)	28.10 (1.106)	47.20 (1.858)	M34 x 1.0-6H	39.80 (1.567)	29.28 (1.153)
25	47.20 (1.858)	1.4375-18	40.60 (1.599)	31.20 (1.228)	50.00 (1.969)	M37 x 1.0-6H	43.00 (1.693)	32.45 (1.278)

Size	E max mm	Cabling chamber length F ^{±0.1} mm	Z rear side diameter coding										
			06	08	10	12	14	16	20	24	28	32	36
09	36	10		o	x	o	x	x					
11	36	10		x	x	o	o	x	x				
	41	15	x	x	x	x							
	46	20				x							
	56	30						x	x				
13	36	10		x	x	o	x	o	x				
	56	30				△		o					
15	36	10		x	x	o	o	x	o	x			
	41	15		x	x	x	x	x					
	56	30							o				
17	36	10				o	o	o	x	o			
	41	20					x	x					
	51	25				o	x						
	56	30						x		o			
19	36	10		x				o		o	x		
	56	30						x		o			
21	36	10					x	x	o	x	o	x	
	46	20					x		△	x			
	51	25					x						
	56	30							△		o		
23	36	10						x		o	x	o	
	56	30								o		o	
25	36	10						x			o		o
	56	30									o		o

x
HE308-35

o
HE308-35 &
TV35/TVB35

△
TV35/TVB35

Z rear side diameter	06	08	10	12	14	16	20	24	28	32	36
Ø Z	4.8 (0.189)	6.30 (0.248)	7.80 (0.307)	9.40 (0.370)	11.00 (0.433)	12.60 (0.496)	15.80 (0.622)	19.00 (0.748)	22.10 (0.870)	25.30 (0.996)	28.60 (1.126)
Ø S min/max	7.80/7.9 (0.307/0.311)	9.40/9.50 (0.370/0.374)	11.1/11.2 (0.437/0.440)	12.60/12.70 (0.496/0.500)	14.10/14.30 (0.555/0.563)	15.70/15.90 (0.618/0.626)	18.90/19.10 (0.744/0.752)	22.00/22.20 (0.866/0.874)	25.20/25.40 (0.992/1)	28.40/28.60 (1.118/1.126)	31.50/31.80 (1.240/1.252)
Ø D1 ^{±0.1}	12.40 (0.488)	14.00 (0.551)	15.50 (0.610)	17.10 (0.673)	18.70 (0.736)	20.30 (0.799)	23.50 (0.925)	26.70 (1.051)	29.80 (1.173)	33.00 (1.299)	36.20 (1.425)
Ø D2 ^{±0.1}	9.80 (0.386)	11.40 (0.449)	12.90 (0.508)	14.50 (0.571)	16.10 (0.634)	17.70 (0.697)	20.90 (0.823)	23.10 (0.909)	26.20 (1.032)	29.40 (1.158)	32.60 (1.284)

HOW TO ORDER

HE 308 military designation - Backshells for HE 308 (LJT/ MIL-DTL-38999 Series I / RNJ) connectors

Series	HE308	-35	-11	-10	-12	-7	M
Type of backshell							
35: band backshell accepting heat shrink moulded piece							
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)							
Cabling chamber length 10-15-20-25-30-40							
Refer above - dimension F							
Rear side diameter 06-08-10-12-14-16-20-24-28-32-36							
Refer above - dimension Z							
Finish							
7: olive-drab cadmium plating							
6: electroless nickel plating							
033K: black zinc nickel plating							
Military standard (only for olive-drab cadmium and electroless nickel versions)							

Amphenol designation – Backshells for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors

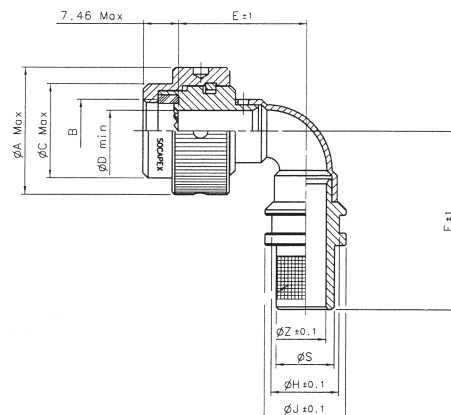
Series	TV	35	11	10	12	014
Type of backshell						
35: aluminium straight band backshell accepting heat shrink moulded piece						
B35: bronze straight band backshell accepting heat shrink moulded piece						
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)						
Cabling chamber length 10-20-25-30						
Refer above - dimension F						
Rear side diameter 06-08-10-12-14-16-20-24-28-32-36						
Refer above - dimension Z						
Finish						
014: olive-drab cadmium plating						
023: electroless nickel plating						
024: green zinc cobalt plating						
033K: black zinc nickel plating						
Blank for bronze version						

SBC BACKSHELLS

LJT SBC suitable for LJT (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors.

TV SBC suitable for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors.

These right angled band backshells provide a full 360° shield termination with a quick, easy and cost effective cabling process. For right angled heat shrink moulded pieces, please refer to page 22.



Size	LJT SBC only				TV SBC only			
	Ø A max mm (in)	B Thread UNEF-2B	Ø C mm (in)	Ø D mm (in)	Ø A max mm (in)	B Thread Metric	Ø C mm (in)	Ø D mm (in)
09	21.40 (0.843)	0.4375-28	15.20 (0.598)	7.80 (0.307)	24.30 (0.957)	M12 x 1.0-6H	18.00 (0.709)	7.80 (0.307)
11	24.30 (0.957)	0.5625-24	18.40 (0.724)	10.80 (0.425)	27.40 (1.079)	M15 x 1.0-6H	21.00 (0.827)	10.99 (0.433)
13	27.40 (1.079)	0.6875-24	21.60 (0.850)	13.10 (0.516)	31.80 (1.252)	M18 x 1.0-6H	25.00 (0.984)	13.80 (0.543)
15	31.80 (1.252)	0.8125-20	24.80 (0.976)	16.30 (0.642)	35.00 (1.378)	M22 x 1.0-6H	28.00 (1.102)	16.30 (0.642)
17	35.00 (1.378)	0.9375-20	28.00 (1.102)	19.50 (0.768)	38.10 (1.500)	M25 x 1.0-6H	30.80 (1.213)	20.10 (0.791)
19	38.10 (1.500)	1.0625-18	31.00 (1.220)	21.70 (0.854)	41.20 (1.622)	M28 x 1.0-6H	34.10 (1.343)	22.93 (0.903)
21	41.20 (1.622)	1.1875-18	34.20 (1.347)	24.90 (0.980)	44.30 (1.744)	M31 x 1.0-6H	36.90 (1.453)	26.00 (1.024)
23	44.30 (1.744)	1.3125-18	37.40 (1.472)	28.10 (1.106)	47.20 (1.858)	M34 x 1.0-6H	39.80 (1.567)	29.28 (1.153)
25	47.20 (1.858)	1.4375-18	40.60 (1.599)	31.20 (1.228)	50.00 (1.969)	M37 x 1.0-6H	43.00 (1.693)	32.45 (1.278)

Size	E mm (in)	Z rear side diameter		F mm (in)	Ø S mm (in)	Ø H mm (in)	Ø J mm (in)
		Coding 1/32 of Inch	Dimension mm (in)				
09	24.50 (0.965)	10	7.90 (0.311)	34.00 (1.339)	11.10 (0.437)	12.90 (0.508)	15.50 (0.610)
11	28.00 (1.102)	14	11.10 (0.437)	36.50 (1.437)	14.10 (0.555)	16.10 (0.634)	18.10 (0.713)
13	28.00 (1.102)	16	12.60 (0.496)	37.00 (1.457)	15.70 (0.618)	17.70 (0.697)	20.30 (0.799)
15	29.50 (1.161)	20	15.80 (0.622)	39.00 (1.535)	18.90 (0.744)	20.90 (0.823)	23.50 (0.925)
17	31.50 (1.240)	24	19.00 (0.748)	41.00 (1.614)	22.00 (0.866)	23.10 (0.909)	26.70 (1.051)
19	33.00 (1.299)	24	19.00 (0.748)	42.50 (1.673)	22.00 (0.866)	23.10 (0.909)	26.70 (1.051)
21	35.50 (1.398)	28	22.10 (0.870)	45.00 (1.772)	25.20 (0.992)	26.20 (1.032)	29.80 (1.173)
23	44.50 (1.752)	32	25.30 (0.996)	54.00 (2.126)	28.40 (1.118)	29.40 (1.158)	33.00 (1.299)
25	50.50 (1.988)	36	28.60 (1.126)	58.50 (2.303)	31.50 (1.240)	32.60 (1.284)	36.20 (1.425)

HOW TO ORDER

Amphenol designation – Backshells for LJT (LJT/ MIL-DTL-38999 Series I / HE308/ RNJ) connectors

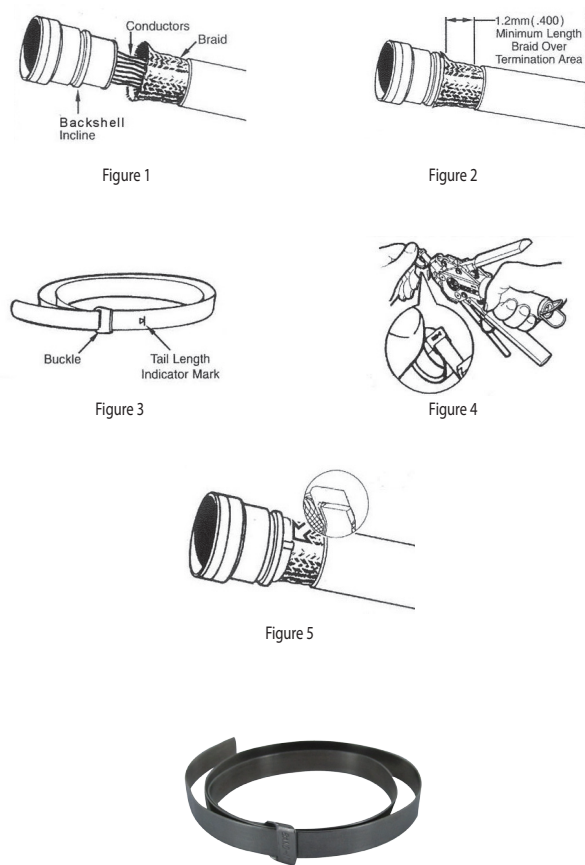
Series	LJT	SBC	11	14	014
Type of backshell					
SBC: aluminium right angled band backshell accepting heat shrink moulded piece					
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)					
Rear side diameter 10-14-16-20-24-28-32-36					
Refer above - dimension Z					
Finish					
014: olive-drab cadmium plating					
023: electroless nickel plating					

Amphenol designation – Backshells for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors

Series	TV	SBC	11	14	014
Type of backshell					
SBC: aluminium right angled band backshell accepting heat shrink moulded piece					
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)					
Rear side diameter 10-14-16-20-24-28-32-36					
Refer p12 - dimension Z					
Finish					
014: olive-drab cadmium plating					
023: electroless nickel plating					

ASSEMBLY INSTRUCTIONS FOR HE308-35, TV35 AND SBC BACKSHELLS

1. Prepare the cable for termination process (figure 1).
2. Screw the backshell at the rear of the connector.
3. Push the braid over the backshell to the incline point. Milk the braid as required to remove the slack and insure a snug fit around the shield termination area (figure 2).
4. Prepare the band: Roll the band through the buckle slot twice (the band must be double-coiled). Pull on the band until the mark is within approximately 6.4 mm (.250 in) of the buckle slot (figure 3). The band may be tightened further if desired.
5. Squeeze the gripper release lever of the banding tool and insert the band into the front end opening of the tool as shown on figure 4 (the circular portion of looped band must always face downward).
6. Aligning the band and the tool with the shield termination area, squeeze the black pull-up handle repeatedly using short strokes until it locks against the tool body (this indicates the band is compressed to the tool precalibrated tension).
7. Complete the clamping process by squeezing the grey cut-off handle.
8. Remove the excess band from the tool.
9. Inspect shield termination (figure 5). If the alignment of the band and the shield is unsatisfactory, tension on the band can be relaxed by pushing on the slotted release lever on the top of the tool. Make adjustments as necessary and squeeze again the black pull-up handle.



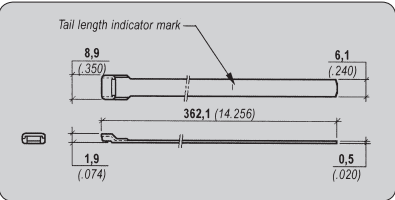
TOOLING AND ACCESSORIES

Coupling tool

Coupling wrench for HE308-35 and TV(B) 35 backshells: **116.50** (Facom p/n)

Clamping bands

Standard band: **072952**

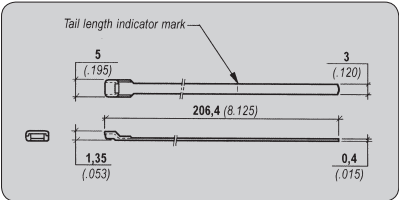


Hand banding tools

Banding tool for standard band: **809952**

Caution: Tools and bands should never be lubricated

Micro band (precoiled): **895693**



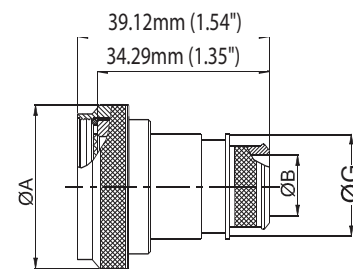
Banding tool for micro band: **809985**

M85049 BAND BACKSHELLS

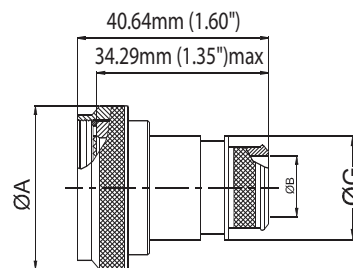
M85049/85 and M85049/87 suitable for LJT (MIL-DTL-38999 Series I / HE308), RNJ (HE308) connectors.

M85049/88 and M85049/90 suitable for TV/CTV (MIL-DTL-38999 Series III), SC39 and RNJLP connectors.

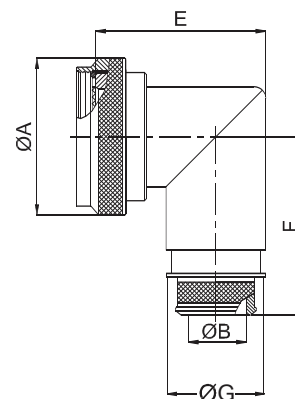
These straight band backsells provide a full 360° shield termination with a quick, easy and cost effective cabling process. For straight or right angled heat shrink moulded pieces, please refer to page 22.



M85049/85



M85049/88



M85049/87 & M85049/90

Size	Entry Size		Ø B mm (in) -0.5	Ø A max mm (in)	E max mm (in)	F max mm (in)		Ø G max mm (in)
	Coding					LJT	TV	
	for /85 only	for /88/87/90						
09	01	02	N/A	21.82 (0.859)	34.93 (1.375)	35.99 (1.417)	35.99 (1.417)	N/A
	02	03	6.60 (0.260)					14.22 (0.560)
11	01	02	N/A	25.04 (0.986)	36.50 (1.437)	37.59 (1.480)	37.59 (1.480)	N/A
	02	03	8.13 (0.320)					16.00 (0.630)
13	01	02	8.13 (0.320)	29.36 (1.156)	39.67 (1.562)	39.45 (1.553)	39.45 (1.553)	16.00 (0.630)
	02	03	11.43 (0.450)					19.05 (0.750)
15	01	02	11.43 (0.450)	32.54 (1.281)	42.85 (1.687)	41.00 (1.614)	41.00 (1.614)	19.05 (0.750)
	02	03	14.48 (0.570)					22.61 (0.890)
17	01	02	12.95 (0.510)	35.71 (1.406)	44.45 (1.750)	42.62 (1.678)	42.62 (1.678)	20.83 (0.820)
	02	03	16.26 (0.640)					24.13 (0.950)
19	01	02	16.26 (0.640)	38.51 (1.516)	47.63 (1.875)	44.02 (1.733)	45.03 (1.773)	24.13 (0.950)
	02	03	19.30 (0.760)					27.18 (1.070)
21	01	02	16.26 (0.640)	41.68 (1.641)	49.23 (1.938)	45.62 (1.796)	45.62 (1.796)	24.13 (0.950)
	02	03	20.83 (0.820)					28.07 (1.105)
23	01	02	17.78 (0.700)	44.86 (1.766)	52.37 (2.062)	47.22 (1.859)	47.22 (1.859)	25.99 (1.023)
	02	03	24.13 (0.950)					32.00 (1.260)
25	01	02	19.30 (0.760)	48.03 (1.891)	53.98 (2.125)	48.74 (1.919)	48.74 (1.919)	27.18 (1.070)
	02	03	25.65 (1.010)					33.53 (1.320)

HOW TO ORDER

SAE-85049 designation - Backshell for LJT (MIL-DTL-38999 Series I / HE308) or TV/CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors

Series	M85049/	85	09	W	02
Type of backshell <u>LJT/HE308:</u> 85: straight 87: 90° right angle <u>TV:</u> 88: straight 90: 90° right angle					
Size of backshell 08-10-12-14-16-18-20-22-24 for LJT (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors: remove 1 to your connector size 09-11-13-15-17-19-21-23-25 (same as connector size) for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors					
Finish W: olive-drab cadmium plating N: electroless nickel plating					
Entry size 01-02-03					

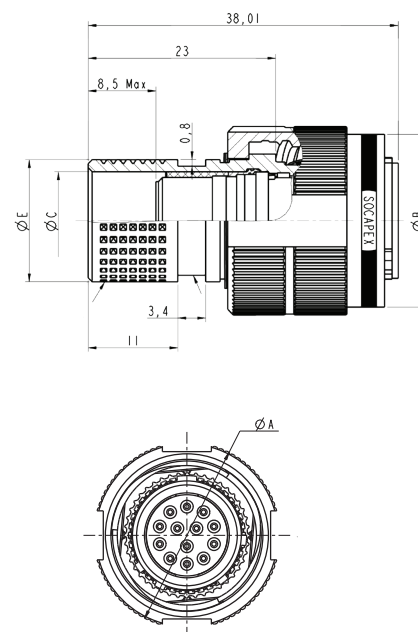
CONNECTORS WITH INTEGRATED BACKSHELLS

Available on plugs and receptacles, these 2 in 1 connectors/band backsells provide a high EMI protection with a quick, easy and cost effective cabling process. They are low profile, with enhance sealing level and allow the use of macro and micro bands, as well as straight or right angled heat shrink moulded pieces. The design of the shells make them compatible with over moulding process.

INTEGRATED BACKSHELLS FOR TV

Suitable for TV (MIL-DTL-38999 Series III) connectors.

Size	Ø A max mm (in)	Ø B max ^{+0.2 0} mm (in)	Ø C mm (in)	Ø E max ^{0 -0.2} mm (in)
09	21.8 (0.858)	18.4 (0.724)	8.74 (0.344)	12 (0.472)
11	25.0 (0.984)	21.1 (0.831)	11.99 (0.472)	15 (0.591)
13	29.4 (1.157)	25.4 (1.000)	14.88 (0.586)	18 (0.709)
15	32.5 (1.280)	28.7 (1.130)	18.06 (0.711)	22 (0.866)
17	35.7 (1.406)	32.2 (1.268)	21.23 (0.836)	25 (0.984)
19	38.5 (1.516)	34.9 (1.374)	23.93 (0.942)	28 (1.102)
21	41.7 (1.642)	38.1 (1.500)	27.10 (1.067)	31 (1.220)
23	44.9 (1.768)	41.1 (1.618)	30.28 (1.192)	34 (1.339)
25	48.0 (1.890)	44.3 (1.744)	33.45 (1.317)	37 (1.457)



HOW TO ORDER

Amphenol designation - Integrated backshell for TV (MIL-DTL-38999 Series III)

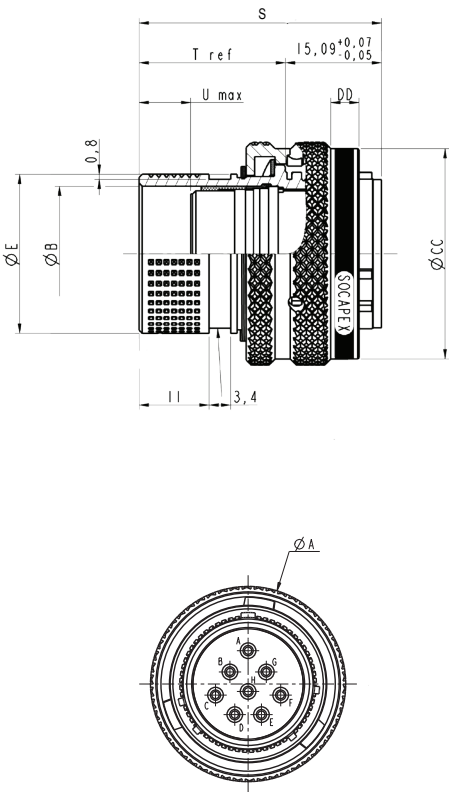
Series	TV	06	RW	11-35	P	A	F472
Shell type straight plug: 175°C: 06 straight plug: 200°C: S06 Shell material and finish <u>Aluminium</u> RW: olive drab cadmium plated 175°C RF: electroless nickel plated 200°C ZN: black zinc nickel plated 175°C RZ: green zinc cobalt plated 175°C <i>Please consult for bronze and stainless steel versions</i> Shell size and contact arrangement See MIL-DTL 38999 Series III catalogue pages 8 to 11 Contact type P: pin S: socket Polarisation blank for normal or A, B, C, D, E Deviation F472: connectors with integrated backshell							

Please consult us for receptacles with integrated backshell

INTEGRATED BACKSHELLS FOR LJT

Suitable for LJT (MIL-DTL-38999 Series I / HE308).

Size	Ø A max mm (in)	Ø B mm (in)	Ø CC ^{+0.28 0} mm (in)	DD ^{+1.14 -0.91} mm (in)	Ø E ^{0 -0.2} mm (in)	S mm (in)	T ref mm (in)	U max mm (in)
09	21.82 (0.859)	8.74 (0.344)	19.81 (0.780)	4.06 (0.160)	12 (0.472)	38.09 (1.500)	23 (0.906)	8.5 (0.335)
11	24.99 (0.984)	11.99 (0.472)	22.99 (0.905)		15 (0.591)			
13	29.36 (1.156)	14.88 (0.586)	26.95 (1.061)		18 (0.709)			
15	32.54 (1.281)	18.06 (0.711)	30.12 (1.186)		22 (0.866)			
17	35.71 (1.406)	21.23 (0.836)	33.05 (1.301)		25 (0.984)			
19	38.51 (1.516)	23.93 (0.942)	36.12 (1.422)		26.95 (1.061)			
21	41.68 (1.651)	27.10 (1.067)	39.22 (1.544)		30.12 (1.186)			
23	43.86 (1.727)	30.28 (1.192)	42.34 (1.667)		33.30 (1.311)			
25	48.03 (1.891)	33.45 (1.317)	45.54 (1.793)		36.47 (1.436)	40.09 (1.578)	25 (0.984)	10.50 (0.413)



HOW TO ORDER

Amphenol designation - Integrated backshell for LJT (MIL-DTL-38999 Series I/HE308)

Series	LJT	06	RT	11-35	P	A	014	F472
Shell type								
06: straight plug								
Service class and contact style								
RT: envrionmental, crimp contacts								
Shell size and contact arrangement								
see MIL-DTL 38999 Series I catalogue pages 7 to 9								
Contact type								
P: pin								
S: socket								
Polarisation								
blank for normal or A, B, C, D								
Shell finish								
014: olive drab cadmium plating								
023: electroless nickel plating								
033K: black zinc nickel plating								
Deviation								
F472: connectors with integrated backshell								

Please consult for receptacles with integrated backshell

ADAPTERS FOR HEAT SHRINK MOULDED PIECES

NSD BACKSHELLS

LJT NSD (HE308-14) suitable for LJ (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors.

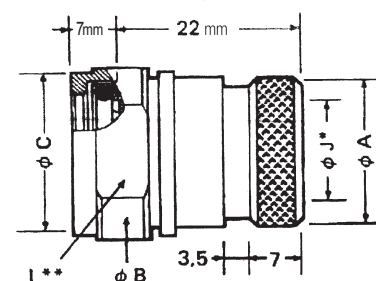
TV NSD suitable for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors. These backshells ensure the sealing and the mechanical retention of the cable. For straight and right angled heat shrink moulded pieces, please refer to page 22.



Size	Ø A mm (in)	Ø B ±0.2 mm (in)	Ø C max mm (in)	Ø J* min mm (in)	L** max mm (in)
9	12.60 (0.496)	20.00 (0.787)	16.00 (0.630)	7.80 (0.307)	16.80 (0.661)
11	16.40 (0.646)	23.00 (0.906)	19.00 (0.748)	10.80 (0.425)	20.80 (0.819)
13	20.00 (0.787)	26.00 (1.024)	22.00 (0.866)	13.10 (0.516)	22.80 (0.898)
15	22.00 (0.866)	29.00 (1.142)	25.10 (0.988)	16.30 (0.642)	25.80 (1.016)
17	24.60 (0.969)	32.00 (1.260)	28.30 (1.114)	19.00 (0.748)	28.80 (1.134)
19	27.50 (1.083)	35.00 (1.378)	31.30 (1.232)	21.70 (0.854)	31.80 (1.252)
21	31.90 (1.256)	39.00 (1.536)	34.50 (1.358)	24.90 (0.980)	35.80 (1.409)
23	35.00 (1.378)	42.00 (1.654)	37.70 (1.484)	28.10 (1.106)	38.80 (1.528)
25	38.80 (1.528)	45.00 (1.772)	40.80 (1.606)	31.20 (1.228)	41.80 (1.646)

* max permissible cable outside diameter

** dimension over the flats (4 flats)



HOW TO ORDER

Amphenol designation - Backshell for LJ (MIL-DTL-38999 Series I/HE308), RNJ (HE308) connectors

HE 308 military designation - Backshells for HE308 (LJT / MIL-DTL-38999 Series I / RNJ) connectors

Series	LJT	NSD	11	014
Type of backshell	NSD: backshell for heat shrink moulded piece			
Size of backshell	09-11-13-15-17-19-21-23-25 (same as connector size)			
Finish	014: olive-drab cadmium plating 023: electroless nickel plating 033K: black zinc nickel plating			

Series	HE308	14	15	7	M
Type of backshell	NSD: backshell for heat shrink moulded piece				
Size of backshell	09-11-13-15-17-19-21-23-25 (same as connector size)				
Finish	07: olive-drab cadmium plating 06: electroless nickel plating				
Military standard					

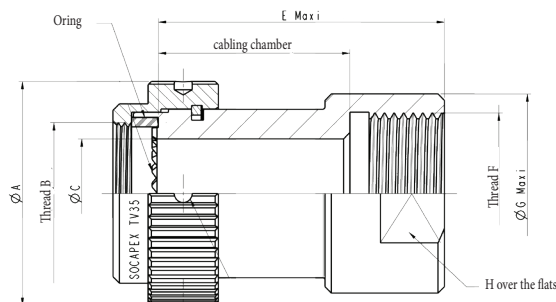
Amphenol designation - Backshell for TV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors

Series	TV	NSD	11	014
Type of backshell	NSD: backshell for heat shrink moulded piece			
Size of backshell	09-11-13-15-17-19-21-23-25 (same as connector size)			
Finish	014: olive-drab cadmium plating 023: electroless nickel plating 033K: black zinc nickel plating			

ADAPTERS FOR SEALING GLAND

METRIC SEALING GLAND STRAIGHT VERSION

TV35M suitable for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors.
These backshells ensure the adaptation on metric sealing gland.



Rear side	M16	M20	M25	M32	M40	M50
F Thread metric	M16x1.5	M20x1.5	M25x1.5	M32x1.5	M40x1.5	M50x1.5
Ø G mm (in)	19.6 (0.772)	25.3 (0.996)	31.1 (1.224)	39.1 (1.539)	49.5 (1.949)	63.3 (2.492)
H mm (in)	18 (0.709)	22 (0.866)	27 (1.063)	34 (1.339)	43 (1.693)	55 (2.165)

				Cabling chamber										
				30	40	50	60	80	Rear side (Thread)					
Size	Ø A mm (in)	B Thread metric	Ø C mm (in)	E mm (in)					M16	M20	M25	M32	M40	M50
09	24.3 (0.957)	M12x1	7.71 (0.304)	45 (1.772)	55 (2.165)	45 (1.772)	75 (2.953)	95 (3.740)						
11	27.4 (1.079)	M15x1	10.96 (0.431)											
13	31.8 (1.252)	M18x1	13.85 (0.545)											
15	35 (1.378)	M22x1	17.03 (0.670)											
17	38.1 (1.500)	M25x1	20.20 (0.795)											
19	41.2 (1.622)	M28x1	22.90 (0.902)											
21	44.3 (1.744)	M31x1	26.07 (1.026)											
23	47.2 (1.858)	M34x1	29.25 (1.152)											
25	50 (1.969)	M37x1	32.42 (1.276)											

For other configurations, please consult us

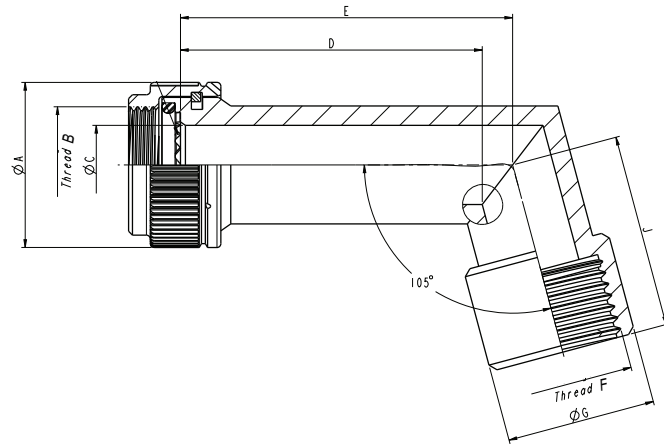
HOW TO ORDER

Amphenol designation - Backshell for TV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors

Series	TV	35	15	30	M20	023
35: aluminum B35: bronze						
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)						
Cabling chamber 30-40-50-60-80 Refer above						
Rear side M16-M20-M25-M32-M40-M50 Refer above						
Finish 014: olive-drab cadmium plating 023: electroless nickel plating 033K: black zinc nickel plating Blank for bronze version						

METRIC SEALING GLAND 105° ANGLED VERSION

TV105M suitable for TV-CTV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors. These backshells ensure the adaptation on metric sealing gland.



Rear side	M16	M20	M25	M32	M40	M50	M63
F Thread metric	M16x1.5-6H	M20x1.5-6H	M25x1.5-6H	M32x1.5-6H	M40x1.5-6H	M50x1.5-6H	M63x1.5-6H
Ø G mm (in)	20 (0.787)	24 (0.945)	29 (1.142)	36 (1.417)	44 (1.732)	54 (2.126)	67 (2.638)

							Rear side (Thread)						
Size	Ø A max mm (in)	B Thread metric	Ø C min mm (in)	Cabling chamber D mm (in)	E max mm (in)	J max mm (in)	M16	M20	M25	M32	M40	M50	M63
11	25.04 (0.986)	M15x1-6H	9.90 (0.390)	35	42.5 (1.673)	35 (1.378)							
13	29.36 (1.156)	M18x1-6H	12.80 (0.504)	40	48.25 (1.900)	35 (1.378)							
15	32.54 (1.281)	M22x1-6H	16.00 (0.630)	50	60.50 (2.382)	35 (1.378)							
17	35.71 (1.406)	M25x1-6H	19.20 (0.756)	55	66.60 (2.622)	36.50 (1.437)							
19	38.51 (1.516)	M28x1-6H	21.40 (0.843)	55	67.80 (2.669)	37 (1.457)							
21	41.68 (1.641)	M31x1-6H	24.60 (0.969)	40	54 (2.126)	38.50 (1.516)							
				60	74 (2.913)								
23	44.86 (1.766)	M34x1-6H	27.70 (1.091)	60	74.75 (2.943)	40 (1.575)							
25	48.03 (1.891)	M37x1-6H	30.90 (1.217)	75	91.50 (3.602)	40 (1.575)							

For other configurations, please consult us

HOW TO ORDER

Amphenol designation - Backshell for TV (MIL-DTL-38999 Series III), SC39 and RNJ LP connectors.

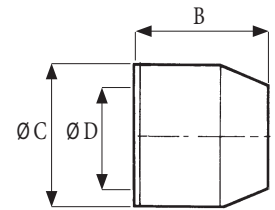
Series	TV	105	15	50	M20	023
105: aluminum						
B105: bronze						
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)						
Cabling chamber 35-40-50-55-60-75 Refer above - dimension D						
Rear side M16-M20-M25-M32-M40-M50-M63 Refer above						
Finish						
014: olive-drab cadmium plating						
023: electroless nickel plating						
033K: black zinc nickel plating						
Blank for bronze version						

BACKSHELLS FOR POTTING

These backshells ensure the sealing.

LJT RPD

LJT RPD (HE308-15) suitable for LJ (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors.



Size	A Thread UNEF-2B	B max mm (in)	Ø C mm (in)	Ø D mm (in)
09	.4375-28	20.06 (0.790)	14.80 (0.583)	8.30 (0.327)
11	.5625-24	20.06 (0.790)	18.00 (0.709)	11.30 (0.445)
13	.6875-24	20.06 (0.790)	21.10 (0.831)	14.20 (0.559)
15	.8125-20	20.06 (0.790)	24.30 (0.957)	17.30 (0.681)
17	.9375-20	20.06 (0.790)	27.50 (1.083)	20.50 (0.807)
19	1.0625-18	20.06 (0.790)	30.70 (1.209)	23.10 (0.909)
21	1.1875-18	21.56 (0.849)	33.90 (1.335)	26.30 (1.035)
23	1.3125-18	21.56 (0.849)	37.00 (1.457)	29.40 (1.158)
25	1.4375-18	20.86 (0.821)	40.20 (1.583)	32.60 (1.284)

HOW TO ORDER

Amphenol designation - Backshells for LJ (MIL-DTL-38999 Series I / HE308) and RNJ (HE308) connectors

Series	LJT	RPD	11	014
Type of backshell				
RPD: straight backshell for potting				
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)				
Finish				
014: olive-drab cadmium plating				
023: electroless nickel plating				

HE 308 military designation - Backshells for HE308 (LJT / MIL-DTL-38999 Series I / RNJ) connectors

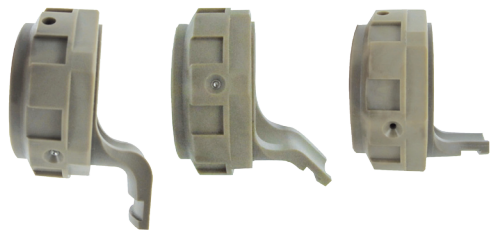
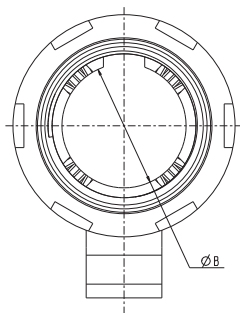
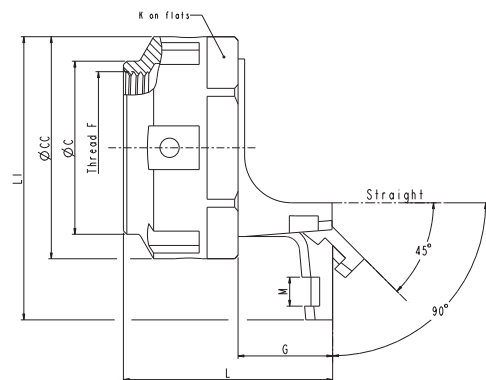
Series	HE308	15	15	7	M
Type of backshell					
15: straight backshell for potting					
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)					
Finish					
07: olive-drab cadmium plating					
06: electroless nickel plating					
Military standard					

COMPOSITE BACKSHELLS

CTV35/ABS2216

CTV35/ABS2216 suitable for TV/CTV (MIL-DTL-38999 Series III/EN3645) connectors:

- Light weight solution
- Quick and easy installation
- Handling temperature from -65°C to 200°C
- Anti-decoupling system to withstand shocks and vibrations in harsh environment



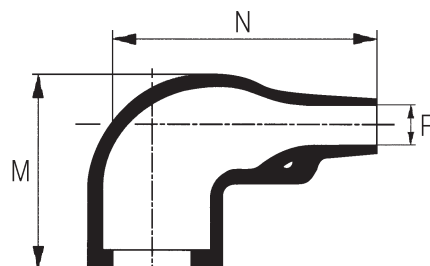
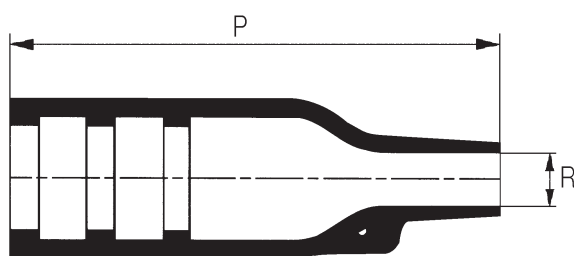
Size	ØB ⁰ _{-0.1} mm (in)	ØC Max mm (in)	ØCC max mm (in)	Thread F	G max mm (in)			K ⁰ _{-0.2} mm (in)	L max mm (in)			L1 Max mm (in)			M ^{+0.2} ₀ mm (in)
					droit	45°	90°		droit	45°	90°	droit	45°	90°	
09	8.47 (0.333)	15.24 (0.600)	21.79 (0.858)	M12x1.0-6H R0.100	16 (0.630)	21 (0.827)	17 (0.669)	19.05 (0.750)	40 (1.575)	37 (1.457)	32.5 (1.280)	21.76 (0.858)	26 (1.024)	/	3.2 (0.126)
11	12.07 (0.475)	18.21 (0.717)	24.99 (0.984)	M15x1.0-6H R0.100			15 (0.591)	22.23 (0.875)				24.99 (0.984)	30 (1.181)	40 (1.575)	3.2 (0.126)
13	14.96 (0.714)	21.18 (0.834)	29.39 (1.157)	M18x1.0-6H R0.100			15 (0.591)	25.4 (1.000)				29.39 (1.157)	33 (1.299)	40 (1.575)	4.2 (0.165)
15	18.14 (0.714)	25.14 (0.990)	32.46 (1.279)	M22x1.0-6H R0.100			15 (0.591)	28.58 (1.125)				32.49 (1.279)	36 (1.417)	50 (1.969)	4.2 (0.165)
17	21.21 (0.835)	28.12 (1.107)	35.71 (1.406)	M25x1.0-6H R0.100			15 (0.591)	31.75 (1.250)				35.71 (1.406)	39 (1.535)	50 (1.969)	4.2 (0.165)
19	24 (0.945)	31.09 (1.224)	38.5 (1.516)	M28x1.0-6H R0.100			15 (0.591)	34.93 (1.375)				38.5 (1.516)	42 (1.654)	50 (1.969)	4.2 (0.165)
21	27.08 (1.066)	34.06 (1.341)	41.7 (1.642)	M31x1.0-6H R0.100			15 (0.591)	38.1 (1.500)				41.7 (1.642)	45 (1.772)	60 (2.362)	4.2 (0.165)
23	30.35 (1.195)	36.9 (1.453)	44.91 (1.768)	M34x1.0-6H R0.100			15 (0.591)	41.28 (1.625)				44.91 (1.768)	48 (1.890)	60 (2.362)	5.4 (0.213)

HOW TO ORDER

Amphenol and ABS designation - Backshells for TV/CTV (MIL-DTL-38999 Series III / EN3645) connectors

Series	ABS2216 or CTV35	A	11	W
Type of backshell				
A: straight backshell				
B: 45° backshell				
C: 90° backshell				
Size of backshell 09-11-13-15-17-19-21-23-25 (same as connector size)				
EMI protection				
W: EMI shielding backshell (delivered with 200 mm metallic braid)				
P: non-EMI shielding backshell				

HEAT-SHRINK MOULDED PIECES



Heat-shrink moulded piece p/n		M max mm (in)	N ±10% mm (in)	P ±10% mm (in)	Ø R mm (in)	
Straight	Right angled	After total heating			Before heating (max)	After heating (min cable Ø)
804221	804231	25.40 (1.000)	25.00 (0.984)	38.40 (1.512)	24.00 (0.945)	6.00 (0.236)
804222	804232	27.20 (1.071)	32.00 (1.260)	54.90 (2.161)	30.00 (1.181)	6.00 (0.236)
804223	804233	30.50 (1.201)	39.40 (1.551)	66.80 (2.630)	31.00 (1.220)	7.10 (0.280)
804225	804235	38.00 (1.496)	46.00 (1.811)	80.00 (3.150)	36.00 (1.417)	8.50 (0.335)
804227	804237	45.00 (1.772)	55.00 (2.165)	99.10 (3.902)	43.00 (1.693)	10.00 (0.394)
804229	804239	54.00 (2.126)	80.00 (3.150)	130.00 (5.118)	60.00 (2.362)	16.00 (0.630)

Standard heat-shrink moulded pieces (semi-rigid polyolefin – without any adhesive)

Size	Backshell type	Rear size coding	Straight			Right angled		
			Amphenol Socapex p/n	Raychem p/n	Hellerman p/n	Amphenol Socapex p/n	Raychem p/n	Hellerman p/n
9	NSA, NSB, NSD	-	804221	202K121-3	152-42-G	804231	222K121-3	1152-4-G
	HE308-35, TV35, TVB35, SBC	08	804221	202K121-3	152-42-G	804231	222K121-3	1152-4-G
11	NSA, NSB, NSD	-	804222	202K132-3	154-42-G	804232	222K132-3	1154-4-G
	HE308-35, TV35, TVB35, SBC	12	804222	202K132-3	154-42-G	804232	222K132-3	1154-4-G
13	NSA, NSB, NSD	-	804223	202K142-3	155-42-G	804233	222K142-3	1155-4-G
	HE308-35, TV35, TVB35, SBC	12	804222	202K132-3	154-42-G	804232	222K132-3	1154-4-G
15	NSA, NSB, NSD	-	804223	202K142-3	155-42-G	804233	222K142-3	1155-4-G
	HE308-35, TV35, TVB35, SBC	16	804223	202K142-3	155-42-G	804233	222K142-3	1155-4-G
17	NSA, NSB, NSD	-	804225	202K153-3	156-42-G	804235	222K152-3	1156-4-G
	HE308-35, TV35, TVB35, SBC	14	804223	202K142-3	155-42-G	804233	222K142-3	1155-4-G
19	NSA, NSB, NSD	-	804222	202K132-3	154-42-G	804232	222K132-3	1154-4-G
	HE308-35, TV35, TVB35, SBC	20	804225	202K153-3	156-42-G	804235	222K152-3	1156-4-G
21	NSA, NSB, NSD	-	804227	202K163-3	157-43-G	804237	222K163-3	1157-4-G
	HE308-35, TV35, TVB35, SBC	12	804225	202K153-3	156-42-G	804235	222K152-3	1156-4-G
23	NSA, NSB, NSD	-	804222	202K132-3	154-42-G	804232	222K132-3	1154-4-G
	HE308-35, TV35, TVB35, SBC	16	804223	202K142-3	155-42-G	804233	222K142-3	1155-4-G
25	NSA, NSB, NSD	-	804225	202K153-3	156-42-G	804235	222K152-3	1156-4-G
	HE308-35, TV35, TVB35, SBC	24	804225	202K153-3	156-42-G	804235	222K152-3	1156-4-G
27	NSA, NSB, NSD	-	804227	202K163-3	157-43-G	804237	222K163-3	1157-4-G
	HE308-35, TV35, TVB35, SBC	28	804227	202K163-3	157-43-G	804237	222K163-3	1157-4-G
29	NSA, NSB, NSD	-	804229	202K174-3	158-43-G	804239	222K174-3	1158-4-G
	HE308-35, TV35, TVB35, SBC	32	804225	202K153-3	156-42-G	804235	222K152-3	1156-4-G
31	NSA, NSB, NSD	-	804227	202K163-3	157-43-G	804237	222K163-3	1157-4-G
	HE308-35, TV35, TVB35, SBC	36	804229	202K174-3	158-43-G	804239	222K174-3	1158-4-G

TORQUES VALUES FOR REAR ACCESSORIES

According to the SAE-85049 standard

For LJT / RNJ / HE308 / MIL-DTL-38999 I connectors		For JT / MIL-DTL-38999 II connectors		For TV-CTV / MIL-DTL-38999 III / EN3645 connectors			For SJT / VG96912 connectors	
Shell size	Torque value (N.m) ± 0.5	Shell size	Torque value (N.m) ± 0.5	Shell size	Metal torque value (N.m) ± 0.5	Composite torque value (N.m) ± 0.5	Shell size	Torque value (N.m) ± 0.5
09	4.5	08	4.5	09	6.8	4.5	08	4.5
11	4.5	10	4.5	11	9.0	4.5	10	4.5
13	4.5	12	4.5	13	12.6	4.5	12	4.5
15	4.5	14	4.5	15	13.6	4.5	14	4.5
17	4.5	16	4.5	17	13.6	4.5	16	4.5
19	4.5	18	4.5	19	13.6	4.5	18	4.5
21	9.0	20	9.0	21	15.8	9.0	20	9.0
23	9.0	22	9.0	23	15.8	9.0	22	9.0
25	9.0	24	9.0	25	15.8	9.0	24	9.0

According to the ABS2216 standard

For TV-CTV / MIL-DTL-38999 III / EN3645 connectors	
Shell size	Torque value (N.m)
09	2.75 (± 0.25)
11	2.75 (± 0.25)
13	3 (± 0.5)
15	5 (± 0.5)
17	5 (± 0.5)
19	5 (± 0.5)
21	7 (± 0.5)
23	7 (± 0.5)
25	7 (± 0.5)

CROSS REFERENCES

The cross references below are given as information only. The designs of the backshells are not strictly equivalent

Amphenol P/N	NFC UTE 93422 / HE308 P/N	SAE-85049 P/N	VG96912 P/N
LJT NSA xx 014	HE308 13 xx 7M		
LJT NSA xx 023	HE308 13 xx 6M		
LJT NSD xx 014	HE308 14 xx 7M	M85049/62-xx W	
LJT NSD xx 023	HE308 14 xx 6M	M85049/62-XX N	
LJT RPD xx 014	HE308 15 xx 7M	M85049/58-xx + M85049/75-xx-1	
LJT RPD xx 023	HE308 15 xx 6M		
LJTSBC xx xx 014		M85049/87-xx W xx	
LJTSBC xx xx 023		M85049/87-xx N xx	
LJT SQ xx 014 F428			VG96912 L xx
HE308-35-xx-xx-xx-7M	HE308-35-xx-xx-xx-7M	M85049/85-xx W xx	
HE308-35-xx-xx-xx-6M	HE308-35-xx-xx-xx-6M	M85049/85-xx N xx	
JT SRD xx 014		M85049/49-2-xx W	
JT SRD xx 023		M85049/49-2-xx N	
TV 35 xx xx xx 014		M85049/88-xx W xx	
TV 35 xx xx xx 023		M85049/88-xx N xx	
TVSBC xx xx 014		M85049/90-xx W xx	
TVSBC xx xx 023		M85049/90-xx N xx	

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July 2014

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