

How to select a suitable Backshell ?

1. Based on the design and application considerations select the backshell type from the “Backshell Family” section in pages: 1-3
2. Go thru the “Angle/profile” and “Coupling Style” sections in pages: 4-5 and make up your mind about the configuration which suites your application.
3. Scan “Connector Group”(Tables: 1A-D) in pages: 7-11 and find out the group code of the connector for which you require the backshell.
4. Go to the respective detailed “Backshell family” section from Page: **I-1** where get in to the respective “Connector group”-“Angle/Profile” sub section and zero-in to the appropriate backshell version.
5. Complete the part number by selecting relevant data from the correct diagram and tables in the same section. Please go to Page-12 for Table-2, which gives many options for “Material & Finish”.

This selection could be done in much easier way from our web link
[Http://www.backshellworld.com/backshelldesigner.asp](http://www.backshellworld.com/backshelldesigner.asp)

Cross reference to other make Backshells.

If you have a Military part number or other manufacturer's part number for which you are looking for equivalent item, we have provided the same too in our web link **<http://www.backshellworld.com/crossreference.aspx>** which you will find very user friendly.

Cross reference to the Military designation is provided in the Appendix - 1 of this catalogue.

Custom built Backshells

Backshells for Military & Aerospace applications are governed by SAE, AS85049 standard and Amphenol Backshells are designed to meet the requirement of this standard. Though this standard covers most popular styles of Backshells, many applications call for additional styles and designs. Here is where the capability of Amphenol will come for your help. We will support you from the concept to product realization and thereby your unique specification need is satisfied. Please visit our web link **<http://www.backshellworld.com/customdesign.asp>** for further help



Connector Group (Table - 1 A, B, C, D)

By Specification (TABLE-1A)

Connector Specification	Series/Class	Connector Group Code
40M38277		K
40M39569		J
BS9520	G0001	K
BS9520	G0002	K
BS9520	G0003	L
BS9522 F0001	Patt 602	J
BS9522 F0012	Patt 615	M
BS9522 F0017	Patt 105	N
BS9522 F0020	Patt 608	N
BS9522 F0029	Patt 616	K
BS9522 F0042		J
BS9522 N0001	Patt 603	N
BS9522 N0003	Patt 614	K
CECC 75201.001		J
CECC 75201.002		L
DEF 5326-3		J
EN 2997		J
EN 3645		L
EN 3646		J
EN3372		M
ESC 10		J
ESC11		J
JN1003		M
LN 29504		J
LN 29728		J
LN29729		M
MIL-C-81703	3	J
MIL-DTL-26482	2	J
MIL-DTL-38999	I	K
MIL-DTL-38999	II	K
MIL-DTL-38999	III	L
MIL-DTL-38999	IV	L
MIL-DTL-5015	MS340	J
MIL-DTL-5015	MS345	J
MIL-DTL-83723	I	J
MIL-DTL-83723	III	J
NAS 1599		J
NFC93422	HE302	J
NFC93422	HE306	M
NFC93422	HE308	K
NFC93422	HE309	K
NFL 54140		J
PAN 6432-1		J
PAN 6432-2		J
PAN 6433-1		K
PAN6433-2		M
VG 96912	2	K
VG 96912	1	M

By Military Part Number prefix (TABLE-1B)

Military part number prefix	Specification	Series/Class	Connector group code
D38999/20	MIL-DTL-38999	III	L
D38999/24	MIL-DTL-38999	III	L
D38999/26	MIL-DTL-38999	III	L
D38999/40	MIL-DTL-38999	IV	L
D38999/42	MIL-DTL-38999	IV	L
D38999/46	MIL-DTL-38999	IV	L
D38999/47	MIL-DTL-38999	IV	L
M83723/01	MIL-DTL-83723	I	J
M83723/02	MIL-DTL-83723	I	J
M83723/03	MIL-DTL-83723	I	J
M83723/04	MIL-DTL-83723	I	J
M83723/05	MIL-DTL-83723	I	J
M83723/06	MIL-DTL-83723	I	J
M83723/07	MIL-DTL-83723	I	J
M83723/08	MIL-DTL-83723	I	J
M83723/13	MIL-DTL-83723	I	J
M83723/14	MIL-DTL-83723	I	J
M83723/36	MIL-DTL-83723	I	J
M83723/37	MIL-DTL-83723	I	J
M83723/38	MIL-DTL-83723	I	J
M83723/39	MIL-DTL-83723	I	J
M83723/40	MIL-DTL-83723	I	J
M83723/41	MIL-DTL-83723	I	J
M83723/42	MIL-DTL-83723	I	J
M83723/43	MIL-DTL-83723	I	J
M83723/48	MIL-DTL-83723	I	J
M83723/49	MIL-DTL-83723	I	J
M83723/65	MIL-DTL-83723	III	J
M83723/66	MIL-DTL-83723	III	J
M83723/67	MIL-DTL-83723	III	J
M83723/68	MIL-DTL-83723	III	J
M83723/69	MIL-DTL-83723	III	J
M83723/71	MIL-DTL-83723	III	J
M83723/72	MIL-DTL-83723	III	J
M83723/73	MIL-DTL-83723	III	J
M83723/74	MIL-DTL-83723	III	J
M83723/75	MIL-DTL-83723	III	J
M83723/76	MIL-DTL-83723	III	J
M83723/77	MIL-DTL-83723	III	J
M83723/78	MIL-DTL-83723	III	J
M83723/82	MIL-DTL-83723	III	J
M83723/83	MIL-DTL-83723	III	J
M83723/84	MIL-DTL-83723	III	J
M83723/85	MIL-DTL-83723	III	J
M83723/86	MIL-DTL-83723	III	J
M83723/87	MIL-DTL-83723	III	J
M83723/91	MIL-DTL-83723	III	J
M83723/92	MIL-DTL-83723	III	J
M83723/95	MIL-DTL-83723	III	J
M83723/96	MIL-DTL-83723	III	J

Table Continued

Connector Group (Table - 1 A, B, C, D)

By Military Part Number prefix (TABLE-1B)

Military part number prefix	Specification	Series/Class	Connector group code
M83723/97	MIL-DTL-83723	III	J
M83723/98	MIL-DTL-83723	III	J
MS27466	MIL-DTL-38999	I	K
MS27467	MIL-DTL-38999	I	K
MS27468	MIL-DTL-38999	I	K
MS27472	MIL-DTL-38999	II	K
MS27473	MIL-DTL-38999	II	K
MS27474	MIL-DTL-38999	II	K
MS27475	MIL-DTL-38999	II	K
MS27479	MIL-DTL-38999	II	K
MS27480	MIL-DTL-38999	II	K
MS27481	MIL-DTL-38999	II	K
MS27482	MIL-DTL-38999	II	K
MS27484	MIL-DTL-38999	II	K
MS27497	MIL-DTL-38999	II	K
MS27498	MIL-DTL-38999	I	K
MS27500	MIL-DTL-38999	II	K
MS27652	MIL-DTL-38999	I	K
MS27653	MIL-DTL-38999	I	K
MS27654	MIL-DTL-38999	I	K
MS27656	MIL-DTL-38999	I	K
MS27665	MIL-DTL-38999	I	K
MS3400	MIL-DTL-5015	MS340/MS345	J
MS3401	MIL-DTL-5015	MS340/MS345	J
MS3404	MIL-DTL-5015	MS340/MS345	J
MS3406	MIL-DTL-5015	MS340/MS345	J
MS3408	MIL-DTL-5015	MS340/MS345	J
MS3409	MIL-DTL-5015	MS340/MS345	J
MS3412	MIL-DTL-5015	MS340/MS345	J
MS3424	MIL-C-81703	3	J
MS3446	MIL-C-81703	3	J
MS3450	MIL-DTL-5015	MS340/MS345	J
MS3451	MIL-DTL-5015	MS340/MS345	J
MS3454	MIL-DTL-5015	MS340/MS345	J
MS3456	MIL-DTL-5015	MS340/MS345	J
MS3459	MIL-DTL-5015	MS340/MS345	J
MS3464	MIL-C-81703	3	J
MS3467	MIL-C-81703	3	J
MS3468	MIL-C-81703	3	J
MS3470	MIL-DTL-26482	2	J
MS3471	MIL-DTL-26482	2	J
MS3472	MIL-DTL-26482	2	J
MS3474	MIL-DTL-26482	2	J
MS3475	MIL-DTL-26482	2	J
MS3476	MIL-DTL-26482	2	J
NAS1599	MIL-C-81703	3	J
NAS1641	MIL-C-81703	3	J
NAS1642	MIL-C-81703	3	J
NAS1643	MIL-C-81703	3	J
NAS1650	MIL-C-81703	3	J
NAS1651	MIL-C-81703	3	J
NAS1652	MIL-C-81703	3	J
NAS1653	MIL-C-81703	3	J
NAS1692	MIL-C-81703	3	J
NAS1693	MIL-C-81703	3	J
NAS1694	MIL-C-81703	3	J

By Military Part Number prefix (TABLE-1B)

Military part number prefix	Specification	Series/Class	Connector group code
NAS1699	MIL-C-81703	3	J
NAS1700	MIL-C-81703	3	J
NAS1701	MIL-C-81703	3	J
NAS1702	MIL-C-81703	3	J
NATC00	SSQ21635		L
NATC06	SSQ21635		L
NATC07	SSQ21635		L
NB4	40M39569		J
NB6	40M39569		J
NB6G	40M39569		J
NB7	40M39569		J
NBO	40M39569		J
NLS6	40M39569		K
NLS6G	40M39569		K
NLS7	40M39569		K
NLSO	40M39569		K

Table Continued

Connector Group (Table - 1 A, B, C, D)

By Manufacturer's Part Number prefix (TABLE-1C)

Manufacturer's part number	Manufacturer	Connector group code
10-475	Amphenol/Bendix/Socapex/Pyle	K
118	Amphenol/Bendix/Socapex/Pyle	J
162GB	Amphenol/Bendix/Socapex/Pyle	N
2PSN	Plessey Connector	N
381	Deutsch	J
418-1	Amphenol/Bendix/Socapex/Pyle	K
418-2	Amphenol/Bendix/Socapex/Pyle	K
418-5	Amphenol/Bendix/Socapex/Pyle	M
486	Amphenol/Bendix/Socapex/Pyle	J
518	Amphenol/Bendix/Socapex/Pyle	J
602GB	Amphenol/Bendix/Socapex/Pyle	J
62GB	Amphenol/Bendix/Socapex/Pyle	N
65	Glenair	L
652	Amphenol/Bendix/Socapex/Pyle	J
66	Glenair	L
711	Amphenol/Bendix/Socapex/Pyle	J
801	Amphenol/Bendix/Socapex/Pyle	J
837	Deutsch	J
83723	Souriau	J
83730	Deutsch	J
851	Souriau	N
8520	Souriau	J
8525	Souriau	J
8526	Souriau	J
853	Souriau	J
8533	Souriau	J
8534	Souriau	J
857	Souriau	J
89	Souriau	J
8D	Souriau	L
8LT	Souriau	K
8ST	Souriau	M
8T	Souriau	K
91-483	Amphenol/Bendix/Socapex/Pyle	J
944	Matrix	J
951	Deutsch	J
951-50	Deutsch	J
981	Matrix	J
983	Deutsch	J
991	Deutsch	J
999.1	Deutsch	K
ABJ	AB Electronics	K
AE22	Aero-Electric	L
AE46	Aero-Electric	K
AE47	Aero-Electric	K
AE48	Aero-Electric	K
AE49	Aero-Electric	K
AE55	Aero-Electric	J
AE77	Aero-Electric	J
AE83	Aero-Electric	J
AFD	Deutsch	J
AFD5	Deutsch	J
AFE	Deutsch	J
B	Amphenol/Bendix/Socapex/Pyle	J
BE	Amphenol/Bendix/Socapex/Pyle	J
BL	Flight Connector	L
BT	Amphenol/Bendix/Socapex/Pyle	J
BY1	Amphenol/Bendix/Socapex/Pyle	J

Table Continued

By Manufacturer's Part Number prefix (TABLE-1C)

Manufacturer's part number	Manufacturer	Connector group code
CGK	ITT Cannon	M
CN0930	TRW	J
CNO	G & H technology	L
CNO930	Labinal/Cinch	J
CT	Burndy	K
CT	Plessey Connector	K
CT-R	AB Electronics	K
CT-R	Plessey Connector	K
CV340	ITT Cannon	J
CV345	ITT Cannon	J
D817	Deutsch	J
DBA	Deutsch	J
DBA7	Deutsch	J
DBAS	Deutsch	J
DFE	Deutsch	J
DIV4	Deutsch	L
DL	Deutsch	J
DL6	Deutsch	J
DTS	Deutsch	L
DVG	Deutsch	J
EA	Amphenol/Bendix/Socapex/Pyle	J
EB	Amphenol/Bendix/Socapex/Pyle	J
EEG	Amphenol/Bendix/Socapex/Pyle	J
ES	Amphenol/Bendix/Socapex/Pyle	J
ET	Amphenol/Bendix/Socapex/Pyle	J
FDBA	Deutsch	J
FF	Deutsch	J
FF	Flight Connector	J
FH	Flight Connector	J
HDJ	Deutsch	M
HTMF	ITT Cannon	J
JT	Amphenol/Bendix/Socapex/Pyle	K
JT 3400	J-Tech	J
JT 3450	J-Tech	J
JT-R	FKI	K
JT-R	Teldix	K
JTVG 95234	J-Tech	J
JVS	Souriau	L
KJ	ITT Cannon	K
KJA	ITT Cannon	L
KJAD/V4	ITT Cannon	L
KJL	ITT Cannon	K
KV-R	ITT Cannon	J
LJT	Amphenol/Bendix/Socapex/Pyle	K
LS	Amphenol/Bendix/Socapex/Pyle	J
LTT	FKI	K
MB1	Matrix	J
MB3	Matrix	J
MB9	Matrix	K
MD	Matrix	J
MF	ITT Cannon	J
MFG	ITT Cannon	J
MK 12	AB Electronics	N
MK 18	AB Electronics	N
MK 8	AB Electronics	N
MK12	Plessey Connector	N
MK25	Plessey Connector	K
MK38	Plessey Connector	K

Table Continued

Connector Group (Table - 1 A, B, C, D)

By Manufacturer's Part Number prefix (TABLE-1C)

Manufacturer's part number	Manufacturer	Connector group code
MK8	Plessey Connector	N
ML94	Matrix	L
MQ3	Matrix	J
MT3	Matrix	J
MT93	Matrix	L
P5	Plessey Connector	N
PL	Deutsch	L
PT	ITT Cannon	N
PT33	FKI	N
PT33SE	FKI	N
PT44	FKI	N
PT44SE	FKI	N
PT55	FKI	N
PT55SE	FKI	N
PT77	FKI	N
PT77SE	FKI	N
PTG55	FKI	N
PTG55SE	FKI	N
PTS-DR	Amphenol/Bendix/Socapex/Pyle	J
PT-SE	ITT Cannon	N
PV7	ITT Cannon	J
PVA	ITT Cannon	J
PV-G	ITT Cannon	J
PVJ	ITT Cannon	J
PV-S	ITT Cannon	J
PVW	ITT Cannon	J
PVX	ITT Cannon	J
RD1	Raychem	J
RR	Deutsch	J
RR20	Deutsch	J
RR50	Deutsch	J
RR70	Deutsch	J
RR70	Deutsch	J
SA	SAE	J
SJT	Amphenol/Bendix/Socapex/Pyle	M
STT	FKI	M
STT	ITT Cannon	M
T3	Amphenol/Bendix/Socapex/Pyle	L
TT	FKI	K
TT / TTPQ	ITT Cannon	K
TT / TTPQ	ITT Cannon	K
TV	Amphenol/Bendix/Socapex/Pyle	L
TVP	FKI /Bendix	L
TVRB	Amphenol/Bendix/Socapex/Pyle	L
TVS	Amphenol/Bendix/Socapex/Pyle	L
VTT	FKI	L



By Manufacturer (TABLE-1D)

Manufacturer's part number prefix	Connector group code
AB Electronics	
ABJ	K
CT-R	K
MK 12	N
MK 18	N
MK 8	N
Aero-Electric	
AE22	L
AE46	K
AE47	K
AE48	K
AE49	K
AE55	J
AE77	J
AE83	J
Amphenol/Bendix/Socapex/Pyle	
10-475	K
118	J
162GB	N
418-1	K
418-2	K
418-5	M
486	J
518	J
602GB	J
62GB	N
652	J
711	J
801	J
91-483	J
B	J
BE	J
BT	J
BY1	J
EA	J
EB	J
EEG	J
ES	J
ET	J
JT	K
LJT	K
LS	J
PTS-DR	J
SJT	M
T3	L
TV	L
TVRB	L
TVS	L

Manufacturer's part number prefix	Connector group code
Burndy	
CT	K
Deutsch	
381	J
837	J
83730	J
RR70	J
RR70	J
FKI	
JT-R	K
LTT	K
PT33	N
PT33SE	N
PT44	N
PT44SE	N
PT55	N
PT55SE	N
PT77	N
PT77SE	N
PTG55	N
PTG55SE	N
STT	M
TT	K
VTT	L
TVP	L
Flight Connector	
BL	L
FF	J
FH	J
G & H technology	
CNO	L
Glenair	
65	L
66	L
ITT Cannon	
CGK	M
CV340	J
CV345	J
HTMF	J
KJ	K
KJA	L
KJAD/V4	L
KJL	K
MB3	J
MB9	K
MD	J
ML94	L
MQ3	J
MT3	J
MT93	L

Manufacturer's part number prefix	Connector group code
Plessey Connector	
2PSN	N
CT	K
CT-R	K
MK12	N
MK25	K
MK38	K
MK8	N
P5	N
Raychem	
RD1	J
Souriau	
83723	J
851	N
8520	J
8525	J
8526	J
853	J
8533	J
8534	J
857	J
89	J
8D	L
8LT	K
8ST	M
8T	K
JVS	L
Teldix	
JT-R	K
TRW/Cinch	
320620	J



FINISH (TABLE-2)

Amphenol offers adaptors in the following standard finishes, which are not exhaustive. For additional finishes specially required if any, please contact factory. The base material is Aluminium alloy.

Table-2 (Plating Finishes)

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

* Non conductive coatings.

MATERIAL:

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

MIL (QPL) Qualification

Many Amphenol Backshells are qualified to SAE-AS 85049 standard. Qualification status of each item shown in this catalogue may change and therefore please check with us or refer "Qualified Product List" to know our exact qualification status at any time. A valid offer for a MIL part Number at any time from Amphenol will only constitute our claim of approval validity.



ASSEMBLY TORQUE VALUE

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

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

GUIDING SPECIFICATION

As per SAE, AS85049 standard (Old standard is MIL-C-85049).



Style-2 Configuration

Some design consideration will require bigger diameter cable to be terminated in the smaller shell size connectors. Cable with heavy/thicker shielding, many wires for different branches/routing are some of the examples. Such cable termination will require a bigger adaptor body with cable entry dimensions more than the connector rear side dimensions. Amphenol support this kind of applications too. The coupling end of the adaptor will be modified to Style-2 design as shown in the figure in such cases. The overall length of the style-2 design adaptors would be increased by approx 1inch (25.4mm) as shown. This alternate design is applicable for all the 'Backshell Families' listed in this catalogue

