

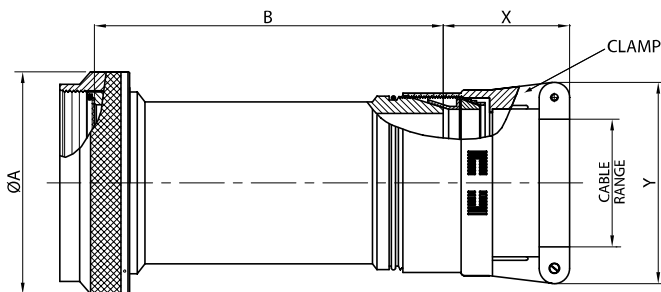
Environmental EM/RFI Backshell

Straight, Spin Coupling

For Connector Family L

38999 Series III, IV

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



MIL Part Number
M85049 / 18 11 W 03 A

MIL Series: M85049 / 18
 Slash Sheet: 18: Straight, Spin Coupling
 Shell Size: 11
 See Table-A

Length: 03
 See Table-A (Omit for "STD")
 Clamp Size: W
 See Table-A
 Finish: A
 See Table-2 (pg. 486)

TABLE - A

MIL PART NUMBER DESIGNATOR			CONNECTOR SHELL SIZE/ CODE (REF.)	CABLE RANGE				A DIA. (MAX)		B (MAX)		X (MAX)		Y (MAX)										
CONNECTOR SHELL SIZE	CLAMP SIZE	LENGTH CODE		MIN		MAX		INCH	MM	INCH	MM	INCH	MM	INCH	MM									
				INCH	MM	INCH	MM																	
9	01	STD.	09 / A	0.06	1.57	0.13	3.18	0.75	19.05	1.53	38.86	1.25	31.75	0.80	20.32									
		A														2.53	64.26							
	02	STD.		0.13	3.18	0.25	6.35			1.53	38.86			2.53	64.26			1.00	25.40					
		A																						
11	01	STD.		11 / B	0.06	1.57	0.13			3.18	0.85	21.59	1.53	38.86	1.25	31.75	0.80	20.32						
		A																	2.53	64.26				
	02	STD.			0.13	3.18	0.25			6.35			1.53	38.86							2.53	64.26	1.00	25.40
		A																						
	03	STD.	0.25		6.35	0.38	9.53	1.53	38.86	2.53			64.26	1.10					27.94					
		A																						
13	02	STD.	13 / C	0.13	3.18	0.25	6.35	1.00	25.40	1.53	38.86	1.25	31.75	1.00	25.40									
		A														2.53	64.26							
	03	STD.		0.25	6.35	0.38	9.53			1.53	38.86							2.53	64.26	1.10	27.94			
		A																						
04	STD.	0.38	9.53	0.50	12.70	1.53	38.86	2.53	64.26	1.20	30.48													
	A																							
15	02	STD.	15 / D	0.13	3.18	0.25	6.35	1.15	29.21	1.53	38.86	1.25	31.75	1.00	25.40									
		A														2.53	64.26							
		B																3.53	89.66					
		STD.																		0.25	6.35	0.38	9.53	1.53
	A	3.53		89.66																				
	B				5.00	12.70																		
	STD.						0.38			9.53	0.50	12.70	1.53	38.86	2.53	64.26	1.20	30.48						
	A																		3.53	89.66				
	B	5.00		12.70																				
	STD.				0.50	12.70															0.63	15.88	1.53	38.86
	A						3.53			89.66														
	B																							
STD.	0.13	3.18	0.25	6.35				1.53	38.86		1.25	31.75	1.00	25.40										
A					2.53	64.26																		
B							3.53			89.66														
STD.															0.25	6.35	0.38	9.53	1.53	38.86	2.53	64.26	1.10	27.94
A	3.53	89.66																						
B			0.38	9.53	0.50	12.70		1.53	38.86		2.53	64.26	1.20	30.48										
A							3.53			89.66														
B															0.50	12.70	0.63	15.88	1.53	38.86	2.53	64.26	1.31	33.27
A	3.53	89.66																						
B			0.63	15.88	0.75	19.05		1.53	38.86		2.53	64.26	1.38	35.05										
A							3.53			89.66														
B																								

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

TABLE CONTINUES ON NEXT PAGE

38999

- III
- HD
- Dualok
- II
- I
- SJT
- Accessories
- Aquacon
- Herm/Seal
- PCB

Fiber Optics

High Speed

Contacts

EMI Filter

Transient

Matrix 2

26482

Matrix I/Pyle

83723

III

Pyle

26500

Crimp Rear Release Matrix

5015

Class I

22992

Backshells

Options Others

For Connector Family L

38999 Series III, IV

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

38999

- III
- HD
- Dualok
- II
- I
- SJT
- Accessories
- Aquacon
- Herm/Seal
- PCB
- High Speed
- Fiber Optics
- Contacts
- EMI Filter Transient
- 26482 Matrix 2
- 83723 III Matrix|Pyle
- 26500 Pyle
- 5015 Crimp Rear Release Matrix
- 22992 Class L
- Back-Shells
- Options Others

TABLE - A, cont.

MIL PART NUMBER DESIGNATOR			CONNECTOR SHELL SIZE/ CODE (REF.)	CABLE RANGE				A DIA. (MAX)		B (MAX)		X (MAX)		Y (MAX)			
CONNECTOR SHELL SIZE	CLAMP SIZE	LENGTH CODE		MIN		MAX		INCH	MM	INCH	MM	INCH	MM	INCH	MM		
				INCH	MM	INCH	MM										
19	03	STD.	19 / F	0.25	6.35	0.38	9.53	1.40	35.56	1.53	38.86	1.25	31.75	1.10	27.94		
		A								2.53	64.26						
		B								3.53	89.66						
	04	STD.		0.38	9.53	0.50	12.70			1.53	38.86	1.25	31.75	1.20	30.48		
		A														2.53	64.26
		B														3.53	89.66
	05	STD.		0.50	12.70	0.63	15.88			1.53	38.86	1.31	33.27	1.25	31.75		
		A														2.53	64.26
		B														3.53	89.66
	06	STD.		0.63	15.88	0.75	19.05			1.53	38.86	1.38	35.05	1.40	35.56		
		A														2.53	64.26
		B														3.53	89.66
07	STD.	0.75	19.05	0.88	22.23	1.53	38.86	1.50	38.10	1.50	38.10						
	A											2.53	64.26				
	B											3.53	89.66				
21	03	STD.	21 / G	0.25	6.35	0.38	9.53	1.55	39.37	1.53	38.86	1.25	31.75	1.10	27.94		
		A								2.53	64.26						
		B								3.53	89.66						
	04	STD.		0.38	9.53	0.50	12.70			1.53	38.86	1.25	31.75	1.20	30.48		
		A														2.53	64.26
		B														3.53	89.66
	05	STD.		0.50	12.70	0.63	15.88			1.53	38.86	1.31	33.27	1.25	31.75		
		A														2.53	64.26
		B														3.53	89.66
	06	STD.		0.63	15.88	0.75	19.05			1.53	38.86	1.38	35.05	1.40	35.56		
		A														2.53	64.26
		B														3.53	89.66
07	STD.	0.75	19.05	0.88	22.23	1.53	38.86	1.50	38.10	1.50	38.10						
	A											2.53	64.26				
	B											3.53	89.66				
08	STD.	0.88	22.23	1.00	25.40	1.53	38.86	1.63	41.40	1.65	41.91						
	A											2.53	64.26				
	B											3.53	89.66				
23	03	STD.	23 / H	0.25	6.35	0.38	9.53	1.65	41.91	1.53	38.86	1.25	31.75	1.10	27.94		
		A								2.53	64.26						
		B								3.53	89.66						
	04	STD.		0.38	9.53	0.50	12.70			1.53	38.86	1.25	31.75	1.20	30.48		
		A														2.53	64.26
		B														3.53	89.66
	05	STD.		0.50	12.70	0.63	15.88			1.53	38.86	1.31	33.27	1.25	31.75		
		A														2.53	64.26
		B														3.53	89.66
	06	STD.		0.63	15.88	0.75	19.05			1.53	38.86	1.38	35.05	1.40	35.56		
		A														2.53	64.26
		B														3.53	89.66
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				
	B											3.53	89.66				
06	C	0.63	15.88	0.75	19.05	1.53	38.86	1.38	35.05	1.40	35.56						
	A											2.53	64.26				

Environmental EM/RFI Backshell

Straight, Spin Coupling, cont.



For Connector Family L

38999 Series III, IV

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

TABLE – A, cont.																			
MIL PART NUMBER DESIGNATOR			CONNECTOR SHELL SIZE/ CODE (REF.)	CABLE RANGE				A DIA. (MAX)		B (MAX)		X (MAX)		Y (MAX)					
CONNECTOR SHELL SIZE	CLAMP SIZE	LENGTH CODE		MIN		MAX		INCH	MM	INCH	MM	INCH	MM	INCH	MM				
				INCH	MM	INCH	MM												
23, cont.	07	STD.	23 / H	0.75	19.05	0.88	22.23	1.65	41.91	1.53	38.86	1.50	38.10	1.50	38.10				
		A								2.53	64.26								
		B								3.53	89.66								
		C								4.53	115.06								
	08	STD.		0.88	22.23	1.00	25.40			1.63	41.40	1.65	42.91	1.53	38.86	1.63	41.40	1.65	42.91
		A												2.53	64.26				
		B												3.53	89.66				
		C												4.53	115.06				
	09	STD.		1.00	25.40	1.13	28.58			1.63	41.40	1.75	44.45	1.53	38.86	1.63	41.40	1.75	44.45
		A												2.53	64.26				
		B												3.53	89.66				
		C												4.53	115.06				
25	04	STD.	25 / J	0.38	9.53	0.50	12.70	1.85	46.99	1.53	38.86	1.25	31.75	1.20	30.48				
		A								2.53	64.26								
		B								3.53	89.66								
		C								4.53	115.06								
	05	STD.		0.50	12.70	0.63	15.88			1.31	33.27	1.25	31.75	1.53	38.86	1.31	33.27	1.25	31.75
		A												2.53	64.26				
		B												3.53	89.66				
		C												4.53	115.06				
	06	STD.		0.63	15.88	0.75	19.05			1.38	35.05	1.40	35.56	1.53	38.86	1.38	35.05	1.40	35.56
		A												2.53	64.26				
		B												3.53	89.66				
		C												4.53	115.06				
	07	STD.		0.75	19.05	0.88	22.23			1.50	38.10	1.50	38.10	1.53	38.86	1.50	38.10	1.50	38.10
		A												2.53	64.26				
		B												3.53	89.66				
		C												4.53	115.06				
	08	STD.		0.88	22.23	1.00	25.40			1.63	41.40	1.65	41.91	1.53	38.86	1.63	41.40	1.65	41.91
		A												2.53	64.26				
		B												3.53	89.66				
		C												4.53	115.06				
	09	STD.		1.00	25.40	1.13	28.58			1.63	41.40	1.75	44.45	1.53	38.86	1.63	41.40	1.75	44.45
		A												2.53	64.26				
		B												3.53	89.66				
		C												4.53	115.06				
10	STD.	1.13	28.58	1.25	31.75	1.63	41.40	1.90	48.26	1.53	38.86	1.63	41.40	1.90	48.26				
	A									2.53	64.26								
	B									3.53	89.66								
	C									4.53	115.06								

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

38999

- III
- HD
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- II
- I
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- Accessories
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- EMI Filter
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- Matrix 2
- 26482

- Matrix I/Pyle
- III
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- Pyle
- 26500

- Crimp Rear Release Matrix
- 5015

- Class I
- 22992

- Back-Shells

- Options
- Others

38999
III
HD
Dualok
II
I
SJT
Accessories
Aquacon
Herm/Seal
PCB

High Speed
Fiber Optics
Contacts

EMI Filter
Transient

26482
Matrix 2

83723
III
Matrix | Pyle

26500
Pyle

5015
Crimp Rear Release
Matrix

22992
Class L

Back-Shells

Options
Others

MATERIALS & FINISHES

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

MATERIAL:

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

MIL (QPL) QUALIFICATION

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

TABLE-2 (PLATING FINISHES)

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

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

* Non conductive coatings.

ASSEMBLY TORQUE VALUES

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

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

STYLE-2 CONFIGURATION

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

