



**THE DATASHEET OF  
BEL1SSL22022CN**



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# Amphenol Pcd

Connecting People & Technology

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AlumaLight



## Backshells

Within Amphenol's wide range of interconnect products is a full range of backshell hardware. Customers can take advantage of Amphenol's global synergy for connectors, backshells and cable harnessing in one place for all their interconnect needs. Plus, coming to Amphenol for a custom design of a backshell means that customers benefit from the vast amount of experience this global company has in designing interconnect solutions.

# Amphenol Pcd

Connecting People & Technology

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## An unmatched combination of weight, performance, and price

- Exceeds performance & functionality of MIL-standards
- More durable than composites
- Competitive pricing to composites
- Almost 50% weight savings from standard designs
- Equals composite in weight
- Far superior EMI performance than composite
- High shear strength - no breakage of coupling nuts

## Three Product Line Families

- Environmental
- Band Lock EMI/RFI
- Strain Relief EMI/RFI



Environmental

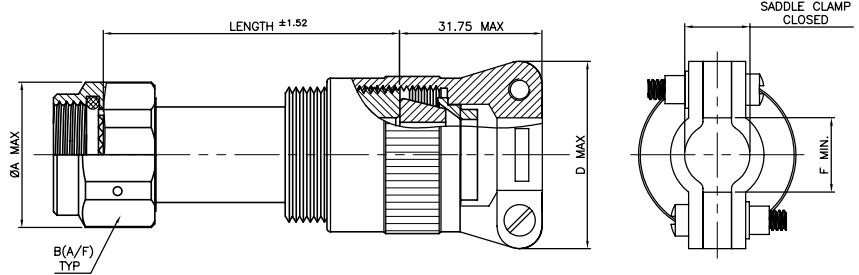


Band Lock EMI/RFI



Strain Relief EMI/RFI

	Metal	Composites	AlumaLight
Mil-Standards & Performance	X	X	X
Strength & Durability	X		X
Reliability	X		X
Lightweight		X	X
EMI Shielding	X		X
Environmental	X		X
Strain Relief	X	X	X

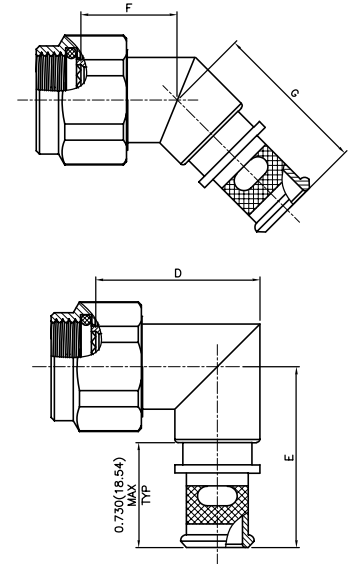
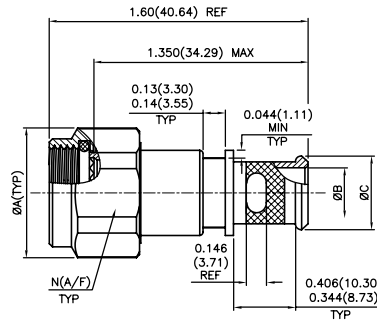


Amphenol Part Number								
BEL1	S	S	L	10	03	3	C	W
Basic Part #	Angle	Coupling	Connector Group	Shell Size (Table I)	Entry Size (Table I)	Standard Length & Figure	C: Clamp N: Nut	Material & Finish (Table III)
	S: Straight	S: Self Lock	K: MIL-DTL-38999 Series I & II L: MIL-DTL-38999 Series III & IV					

Shell Size	Length Code	ØA MAX.	B HEX	MAX. Entry Size
8	1	20.40	16.99/17.42	02
	2			
10	1	21.79	18.69/19.05	03
	2			
12	1	24.99	21.84/22.23	04
	2			
14	1	29.39	24.89/25.40	05
	2			
	3			
16	1	32.51	28.58/27.94	06
	2			
	3			
18	1	35.71	31.09/31.75	07
	2			
	3			
20	1	38.51	34.24/34.93	07
	2			
	3			
22	1	41.51	37.31/38.20	08
	2			
	3			
24	1	44.91	40.16/41.28	10
	2			
	3			

Entry Size	Cable Range		Saddle Clamp Closed ± 0.78	D MAX.	F MIN.
	Inch	mm			
02	3.18	6.35	6.70	23.90	6.90
03	6.35	9.53	8.70	28.40	9.53
04	7.92	12.70	11.70	30.20	12.70
05	11.1	15.88	15.70	39.60	15.88
06	14.27	19.05	17.70	42.90	19.05
07	17.45	22.23	19.80	44.50	22.23
08	20.62	25.40	21.60	47.80	25.40
09	23.80	28.58	25.30	63.50	28.58
10	26.97	31.75	31.00	68.10	31.75

Finish Code	Material & Finish
W	Aluminum Alloy, Cadmium Olive Drab
N	Aluminum Alloy/ Electroless Nickel
For More Finish Refer PSTDBS256	



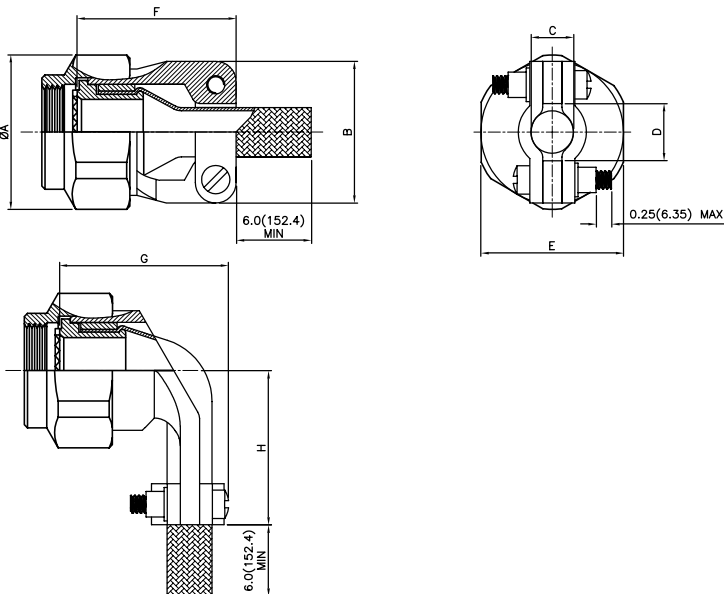
Amphenol Part Number										
BLL1	S	S	L		10	03	9	X	W	S
Basic Part #	Angle	Coupling	Connector Group		Shell Size (Table I)	Entry Size (Table I)	Standard Length & Figure	B:W/ Band X: W/O Band	Material & Finish Code (Table II)	Slot (Omit for none)
	S: Straight A: 90 B: 45	S: Self Lock	K: MIL-DTL-38999 Series I & II L: MIL-DTL-38999 Series III & IV							

Shell Size	ØA MAX.		N HEX		B				C REF.				D MAX.	
	Inch	mm	Inch	mm	02		03		02		03		Inch	mm
					Inch	mm	Inch	mm	Inch	mm	Inch	mm		
8	0.803	20.40	0.668/ 0/686	16.99/17.42	-	-	0.250	6.40	--	--	0.395	10.0	1.375	34.93
10	0.858	21.79	0.736/ 0.750	18.69/ 19.05	-	-	0.312	7.90	--	--	0.457	11.60	1.437	36.50
12	0.984	24.99	0.860/ 0.875	21.84/ 22.23	0.312	7.90	0.438	11.10	0.457	11.60	0.583	14.80	1.562	39.67
14	1.157	29.39	0.980/ 1.000	24.89/ 25.40	0.438	11.10	0.562	14.30	0.583	14.80	0.707	18.00	1.687	42.85
16	1.280	32.51	1.100/ 1.125	25.58/ 27.94	0.500	12.70	0.625	15.90	0.645	16.40	0.770	19.60	1.750	44.45
18	1.406	35.71	1.224/ 1.250	31.09/ 31.75	0.625	15.90	0.750	19.10	0.770	19.60	0.895	22.70	1.875	47.63
20	1.516	38.51	1.348/ 1.375	34.24/ 34.93	0.625	15.90	0.812	20.60	0.770	19.60	0.957	24.30	1.938	49.23
22	1.642	41.51	1.469/ 1.500	37.31/ 38.10	0.688	17.50	0.938	23.80	0.829	21.10	1.083	27.50	2.062	52.37
24	1.768	44.91	1.581/ 1.625	40.16/ 41.28	0.750	19.10	1.000	25.40	0.895	22.70	1.145	29.10	2.125	53.98

E MAX.		F MAX.		G MAX.		S (No of Slots)	
Inch	mm	Inch	mm	Inch	mm	Inch	mm
1.417	35.90	1.01	25.07	1.16	29.50	0.170	4.31
1.480	37.59	1.03	26.20	1.19	30.20	0.170	4.31
1.553	39.45	1.06	26.90	1.21	30.70	0.170	4.31
1.614	41.00	1.08	27.40	1.24	31.50	0.250	6.35
1.678	42.62	1.11	28.20	1.26	32.00	0.250	6.35
1.773	45.03	1.12	28.40	1.27	32.30	0.500	12.70
1.796	45.62	1.15	29.20	1.30	33.00	0.500	12.70
1.859	47.22	1.17	29.70	1.33	33.80	0.500	12.70
1.919	48.74	1.20	30.50	1.35	34.30	0.500	12.70

Finish Code	Material & Finish
W	Aluminum Alloy, Cadmium Olive Drab
N	Aluminum Alloy/ Electroless Nickel
For More Finish Refer PSTDBS256	

# STRAIN RELIEF EMI/RFI



Amphenol Part Number					
BML1	S	S	K	10	W
Basic Part #	Angle	Coupling	Connector Group	Shell Size (Table I)	Material & Finish (Table II)
	S: Straight A: 90	S: Self Lock	K: MIL-DTL-38999 Series I & II L: MIL-DTL-38999 Series III & IV		

Table I

Size Number	ØA MAX.		B MAX.		C		D MIN.		E HEX		F		G MAX.		H MAX.	
	Inch	mm	Inch	mm	0.031	0.78	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
					Inch	mm										
8	0.858	21.79	0.880	22.40	0.219	5.60	0.220	5.60	0.750/0.736	19.05/18.69	0.780/0.939	19.81/23.85	1.128	28.65	0.940	23.88
10	0.984	24.99	0.940	23.90	0.264	6.70	0.270	6.90	0.875/0.860	22.23/21.84	0.860/1.059	21.84/26.90	1.168	29.67	1.000	25.40
12	1.157	29.39	1.120	28.40	0.344	8.70	0.350	8.90	1.000/0.980	25.40/24.89	0.950/1.199	24.10/30.45	1.248	31.70	1.120	27.69
14	1.280	32.51	1.190	30.20	0.435	11.05	0.470	11.90	1.125/1.100	28.58/27.94	0.950/1.199	24.13/30.45	1.368	34.75	1.190	30.23
16	1.406	35.71	1.440	36.60	0.540	13.72	0.550	14.00	1.250/1.224	31.75/31.09	1.080/1.329	27.43/33.75	1.448	36.78	1.370	34.89
18	1.516	38.51	1.560	39.60	0.620	15.75	0.620	15.70	1.438/1.407	36.52/35.73	1.140/1.509	28.90/38.33	1.528	38.61	1.440	36.58
20	1.642	41.51	1.690	42.90	0.695	17.65	0.700	17.80	1.500/1.469	38.10/37.31	1.200/1.609	30.50/40.87	1.648	41.86	1.560	39.67
22	1.768	44.91	1.750	44.50	0.770	19.56	0.780	19.80	1.625/1.581	41.28/40.16	1.330/1.759	33.80/44.68	1.688	42.88	1.690	42.85
24	1.890	48.01	1.880	47.80	0.820	20.83	0.850	21.60	1.750/1.690	44.45/42.93	1.450/1.859	36.80/47.22	1.758	44.65	1.810	46.02

Finish Code	Material & Finish
W	Aluminum Alloy, Cadmium Olive Drab
N	Aluminum Alloy/ Electroless Nickel

For More Finish Refer PSTDBS256

# VIBRATION TEST GRAPHS

DUT: Backshell

Serial Number: BML1SSK10W (3nos) OX Axis

Project File Name: Random vibration 43.92grms.prj

Profile Name: Default

Test Type: Random

Run Folder: \RunFolder Apr 01, 2015 13-43-56

Level: 100 %

Control RMS: 44.258648 gn

Full Level Elapsed Time: 08:00:00

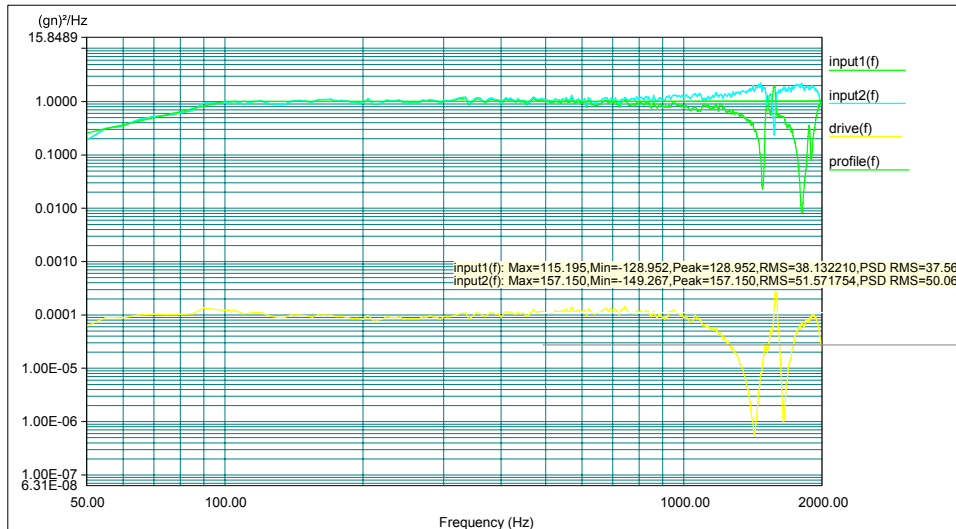
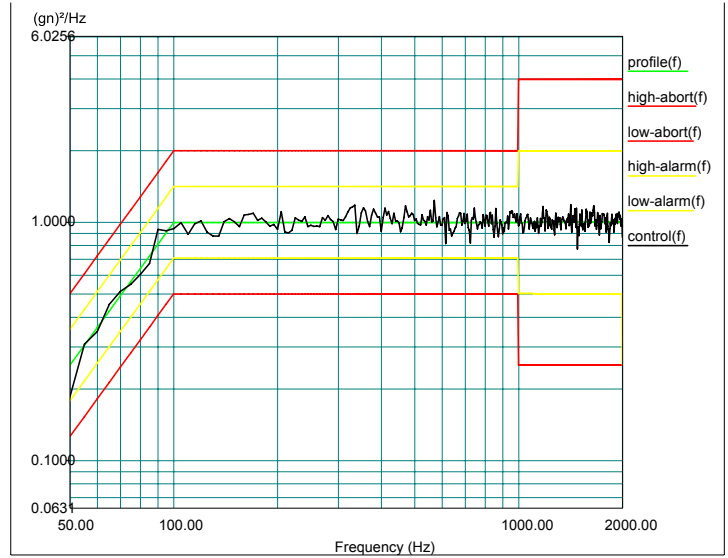
Lines: 400 Frame Time: 0.200000 Seconds

Demand RMS: 43.941341 gn

Remaining Time:00:00:00

DOF: 154 dF:5.000000 Hz

Data saved at 09:54:53 PM, Wednesday, April 01, 2015 Report created at 09:54:54 PM Wednesday, April 1, 2015



Screenshot of the Shaker Control software interface. The main window displays a composite PSD graph with multiple curves. A control panel on the right shows parameters such as Level (100%), Demand RMS (43.941341 gn), and Total RMS (44.258648 gn). A 'RANDOM' button is visible. A smaller window at the bottom shows 'Channel Status' with a table of channel data:

Chan#	Clipped	Units	Min	Max
1	No	gn	0.103	0.1
2	No	gn	0.123	0.1

# VIBRATION TEST GRAPHS

DUT: Backshell

Serial Number: BML1SSK10W (3nos) OY Axis

Project File Name: Random vibration 43.92gms.prj

Profile Name: Default Test Type: \RunFolder Apr 02, 2015 09-29-13

Level: 100 %

Control RMS: 44.156834 gn

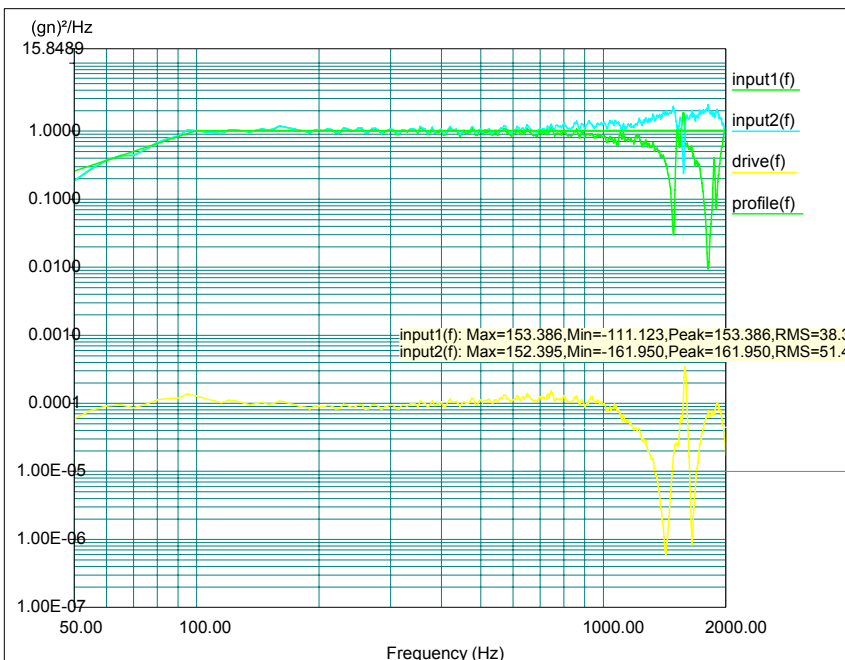
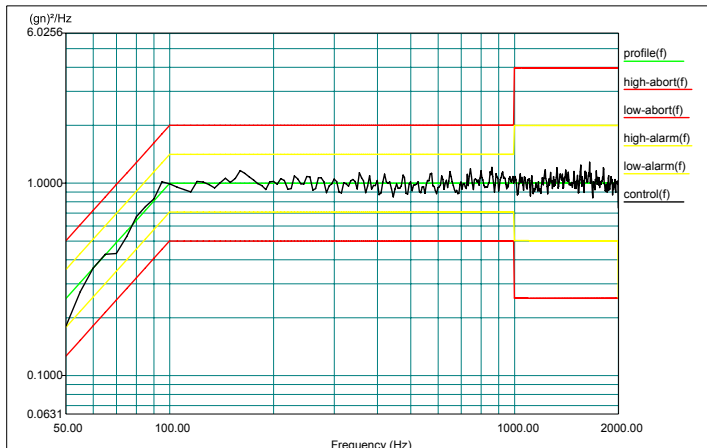
Full Level Elapsed Time: 08:00:00 Lines: 400 Frame Time: 0.200000 Seconds

Demand RMS: 43.941341 gn

Remaining Time:00:00:00

DOF: 154 dF:5.000000 Hz

Data saved at 06:57:43 PM, Thursday, April 02, 2015 Report created at 06:57:44 PM, Thursday, April 2, 2015



The screenshot shows the 'Shaker Control - Random Random vibration 43.92gms.prj' software interface. The main window displays a composite graph of the test profile and control signals. On the right, there are control panels for 'Level' (set to 100%), 'Drive' (set to 100%), and 'RANDOM' mode. A 'Start' button is visible. Below the graph, there is a table for 'Freeze the status display when system alerts':

Chan	Closed	Clipped	#	Units	Min	Max	Peak	RMS	PSD	RMS
1	No	No	0	gn	0.194	0.122	0.122	0.034	0.255	
2	No	No	0	gn	0.196	0.165	0.166	0.044	0.340	

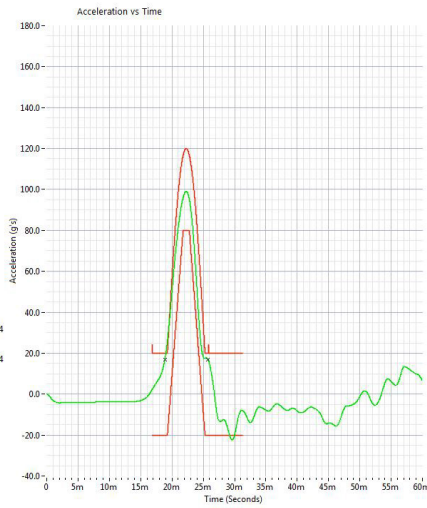
# SHOCK TEST REPORTS



VST Shock Tool Data File  
 Sat 04-04-15 @ 09:55:13  
 Sample rate(Hz): 100000  
 plot scale assign  
 Sensor Sensitivities (mV/LUNIT)  
 0.9640  
 Data (Volts)  
 Duration (ms) 6.0

Notes  
 Current Time 09:56:40  
 04/04/2015  
 BML1 SSK 10W Backshell 100g 6ms -X axis No of shocks 3 Nos

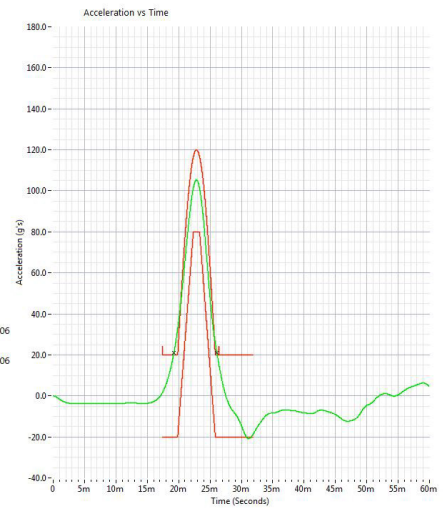
Selected Plot 1  
 Peak (g) 99.083  
 Delta T (ms) 6.906  
 Delta V (In/s) 157.4  
 1/2Delta T (Hz) 72.4  
 LP Filter (Hz) 320.0



VST Shock Tool Data File  
 Sat 04-04-15 @ 10:13:41  
 Sample rate(Hz): 100000  
 plot scale assign  
 Sensor Sensitivities (mV/LUNIT)  
 0.9640  
 Data (Volts)  
 Duration (ms) 6.0

Notes  
 Current Time 10:13:57  
 04/04/2015  
 BML1 SSK 10W Backshell 100g 6ms -Y axis No of shocks 3 Nos

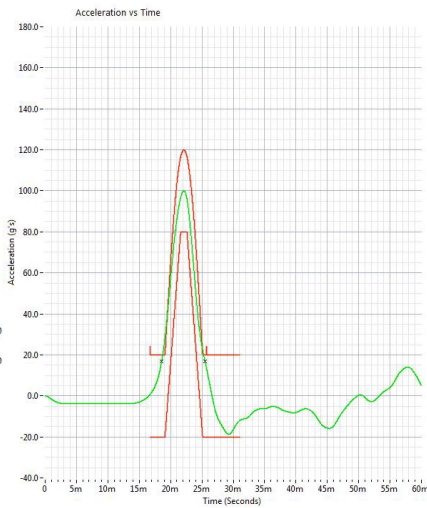
Selected Plot 1  
 Peak (g) 105.316  
 Delta T (ms) 6.829  
 Delta V (In/s) 175.1  
 1/2Delta T (Hz) 73.2  
 LP Filter (Hz) 210.0



VST Shock Tool Data File  
 Sat 04-04-15 @ 09:59:11  
 Sample rate(Hz): 100000  
 plot scale assign  
 Sensor Sensitivities (mV/LUNIT)  
 0.9640  
 Data (Volts)  
 Duration (ms) 6.0

Notes  
 Current Time 09:59:30  
 04/04/2015  
 BML1 SSK 10W Backshell 100g 6ms -X axis No of shocks 3 Nos

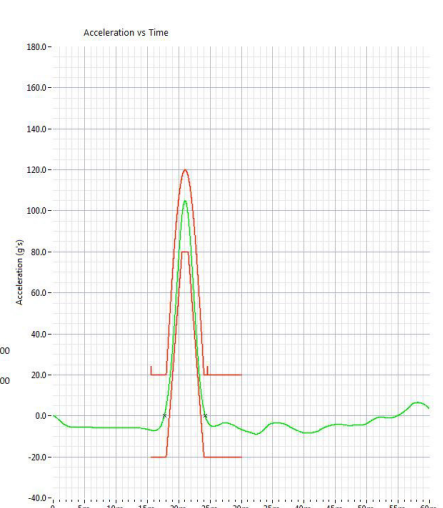
Selected Plot 1  
 Peak (g) 100.001  
 Delta T (ms) 6.887  
 Delta V (In/s) 165.0  
 1/2Delta T (Hz) 72.6  
 LP Filter (Hz) 210.0



VST Shock Tool Data File  
 Sat 04-04-15 @ 10:49:29  
 Sample rate(Hz): 100000  
 plot scale assign  
 Sensor Sensitivities (mV/LUNIT)  
 0.9640  
 Data (Volts)  
 Duration (ms) 6.0

Notes  
 Current Time 10:50:00  
 04/04/2015  
 BML1 SSK 10W Backshell 100g 6ms -Z axis No of shocks 3 Nos

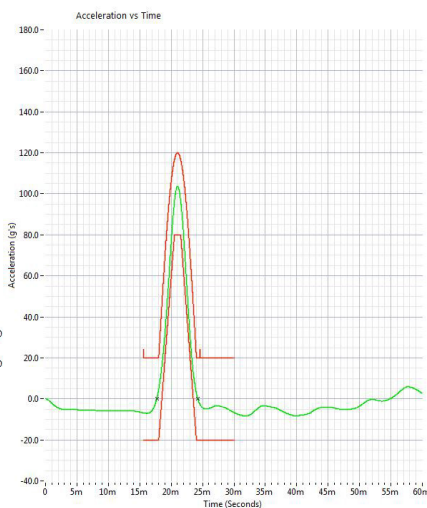
Selected Plot 1  
 Peak (g) 104.914  
 Delta T (ms) 6.536  
 Delta V (In/s) 128.1  
 1/2Delta T (Hz) 76.5  
 LP Filter (Hz) 200.0



VST Shock Tool Data File  
 Sat 04-04-15 @ 10:51:10  
 Sample rate(Hz): 100000  
 plot scale assign  
 Sensor Sensitivities (mV/LUNIT)  
 0.9640  
 Data (Volts)  
 Duration (ms) 6.0

Notes  
 Current Time 10:51:21  
 04/04/2015  
 BML1 SSK 10W Backshell 100g 6ms -Y axis No of shocks 3 Nos

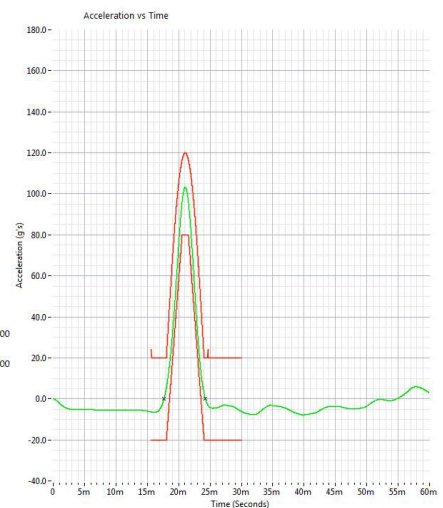
Selected Plot 1  
 Peak (g) 103.701  
 Delta T (ms) 6.539  
 Delta V (In/s) 126.9  
 1/2Delta T (Hz) 76.5  
 LP Filter (Hz) 200.0



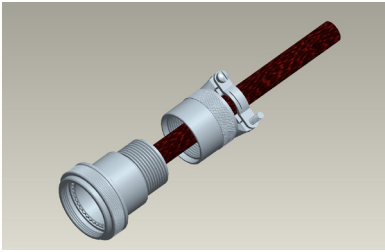
VST Shock Tool Data File  
 Sat 04-04-15 @ 10:52:11  
 Sample rate(Hz): 100000  
 plot scale assign  
 Sensor Sensitivities (mV/LUNIT)  
 0.9640  
 Data (Volts)  
 Duration (ms) 6.0

Notes  
 Current Time 10:52:33  
 04/04/2015  
 BML1 SSK 10W Backshell 100g 6ms -Z axis No of shocks 3 Nos

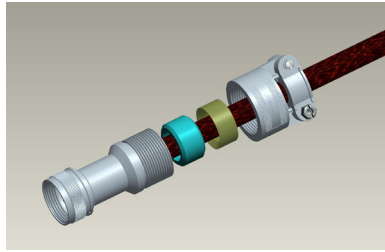
Selected Plot 1  
 Peak (g) 103.273  
 Delta T (ms) 6.587  
 Delta V (In/s) 127.4  
 1/2Delta T (Hz) 75.9  
 LP Filter (Hz) 200.0



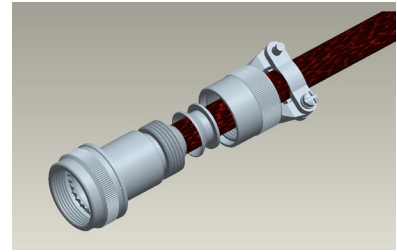
# BACKSHELL FAMILIES



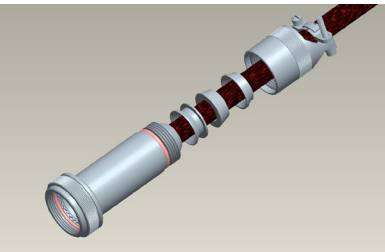
Non-Environmental Backshell



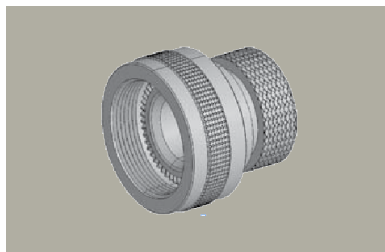
Environmental Backshell



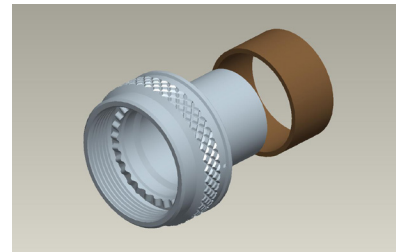
Non-Environmental EMI/RFI Backshell



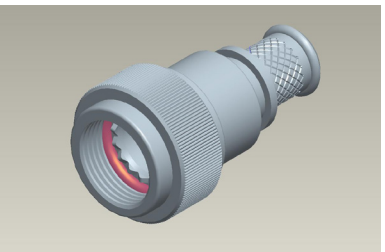
Environmental EMI/RFI Backshell



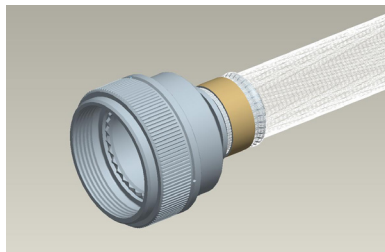
Shrink Boot Adapter



Crimp Ring Adapter



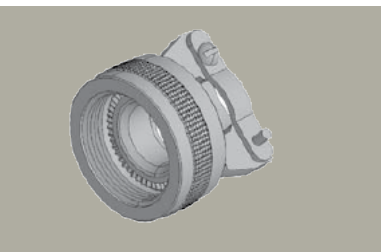
Band Lock Adapter



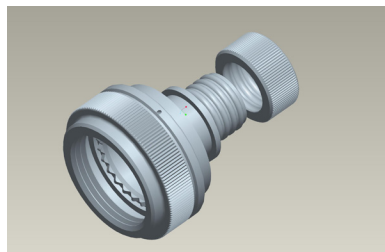
Pre-Shield Adapter



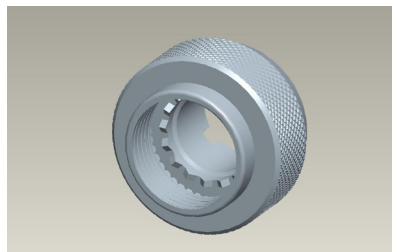
SQ Adapter



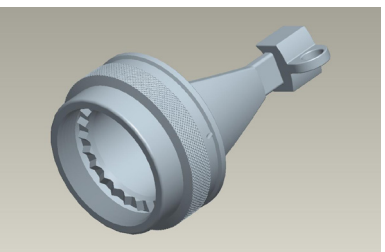
Strain Relief Clamps



Lamp Thread Adapter



Grommet Nut



Quick Clamp

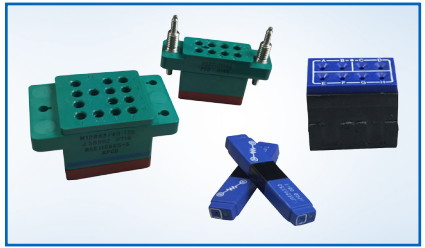
# AMPHENOL PCD PRODUCTS



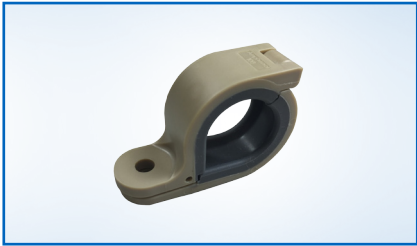
Backshells



Cable Solutions & Cable Adapters  
NEW



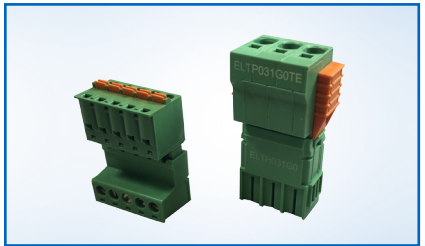
Relay Sockets & Junction Modules



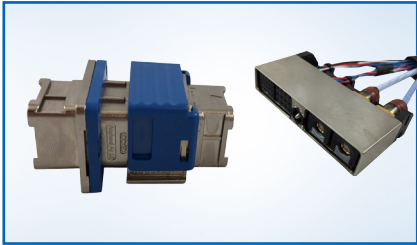
System Attachments



Luminus Series, & Pegasus Series



Terminal Blocks



SIM



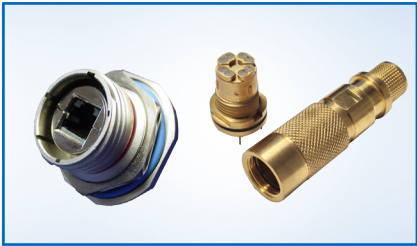
Rectangular



Circular



Waterproof Solutions



Rugged Ethernet & USB



Military Audio /Power

## **Amphenol Pcd**

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