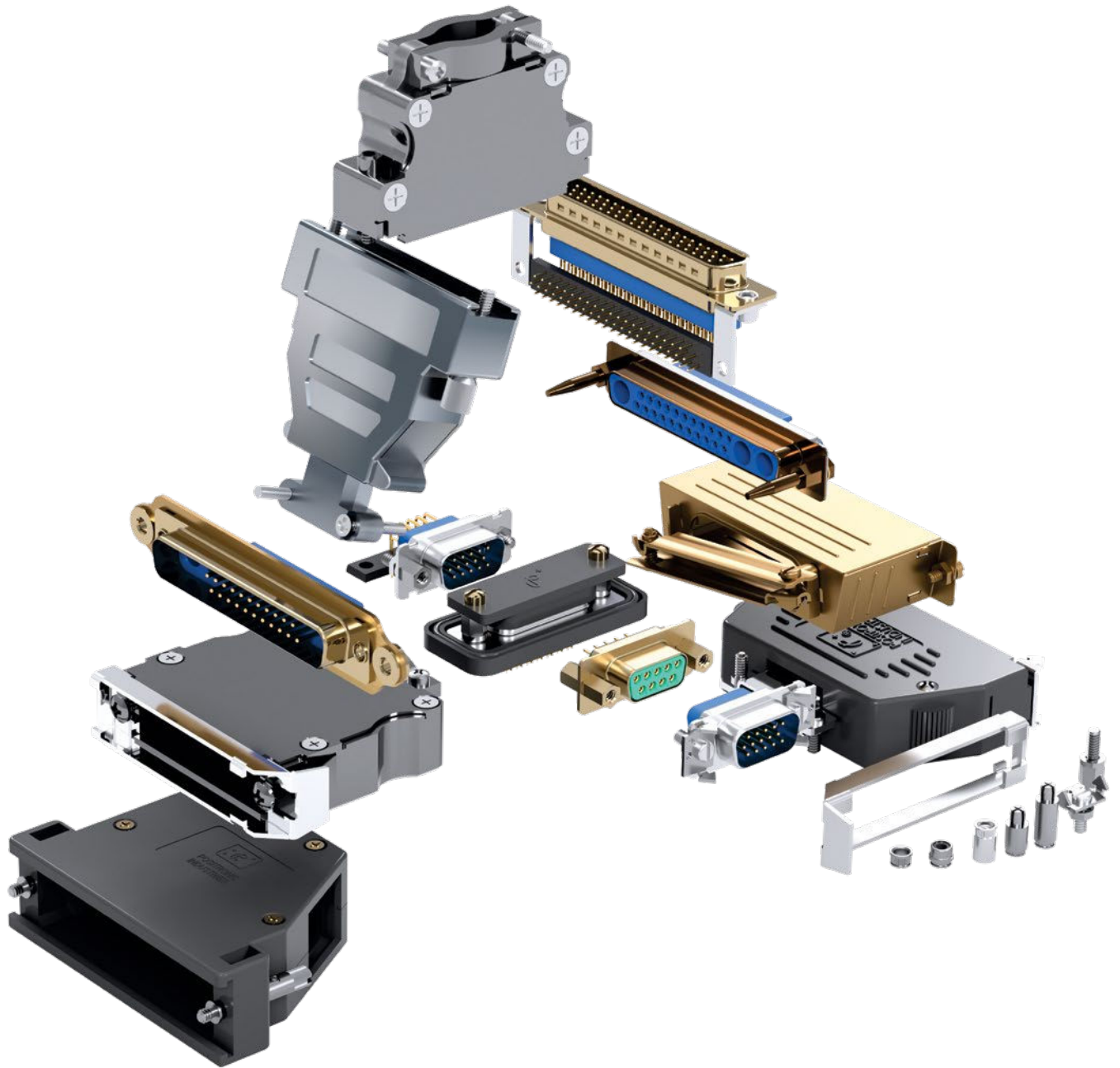


# ACCESSORIES

FOR USE WITH D-SUB CONNECTORS



**Positronic**<sup>®</sup>  
an Amphenol company

THE SCIENCE OF **CERTAINTY**<sup>®</sup>

M016 Rev B 21/11



**Positronic**<sup>®</sup>

an Amphenol company

Positronic builds premium power and signal connectors for a variety of industries. But every product delivers a single outcome: *Certainty*.

Driven by the mission-critical needs of our customers, we've gone to school on the subject for over 50 years. We approach it with scientific discipline – honing the fusion of raw material, engineering ingenuity, and precision manufacturing to push the next limits of reliability.

And with every new project, our curiosity is reignited. How will certainty be achieved in your system, with its own unique demands? The answers have graced the most formidable missions of our time, from the fires of super-sonic flight to the merciless scapes of Mars.

#### WHAT CAN YOU BE CERTAIN ABOUT?

- Rock-solid reliability
- Maximum design flexibility
- High efficiency, low heat performance
- Responsive, knowledgeable support

THE SCIENCE  
OF **CERTAINTY**<sup>®</sup>

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## BACKSHELLS QUICK REFERENCE



### TECHNICAL CHARACTERISTICS

Backshell Code	Material	Finish	Cable Clamp (Material, finish)	Hardware (Material, finish)	Unique Attributes	Page
AN*	aluminum	nickel	aluminum, nickel	steel with nickel plate	top opening, light weight, EMI	4-5
ALN*	aluminum	nickel	aluminum, nickel	steel with nickel plate	top opening, light weight, EMI, low profile	8
ASN*	aluminum	nickel	aluminum, nickel	steel with nickel plate	side opening, light weight, EMI	6-7
G	zinc, die cast		zinc, die cast		modular opening, EMI/RFI metal	10-13
H	steel	zinc plate with chromate seal	steel, zinc plate with chromate seal		similar to SAE AS85049/48	14
J	glass-filled polyester, UL94 V-0		steel, nickel plate		top opening, for vibration applications	16
L	glass-filled polyester, UL94 V-0		steel, nickel plate		side opening, for vibration applications	16
Y	composite polyester, UL94 V-0		steel, nickel plate for size 50 backshell only.	steel with zinc plate and chromate seal or tin plate; stainless steel, passivated.	EMI/RFI composite. Attenuation: 40+ decibels. Sizes 50 & 104 only	18
Z	composite polyester, UL94 V-0			steel with zinc plate and chromate seal or tin plate; stainless steel, passivated.	modular opening, EMI/RFI composite. Attenuation: 40+ decibels.	17

\* See 'Material & Finish Options' chart on page 2 for additional options

## LIGHTWEIGHT ALUMINUM BACKSHELL, QUICK REFERENCE



\* See chart below for 'Material & Finish Options'

MATERIAL & FINISH OPTIONS								
Code	Backshell & Cable Clamp Finish	Hardware Type						Hardware Material & Finish
		T2	E	E6	E7	VL	V3	
N	Nickel	✓	✓	✓	✓	✓	✓	Steel with nickel plate

OPTIONAL MATERIAL & FINISHES								
A	Anodize	✓	✓	✓	✓	✓	✓	Steel with nickel plate
B	Anodize	✓	✓	✓	✓			Brass with zinc plate and chromate seal
C	No finish	✓	✓	✓	✓	✓	✓	Steel with nickel plate
D	No finish	✓	✓	✓	✓			Brass with zinc plate and chromate seal
I	Yellow chromate conversion	✓	✓	✓	✓	✓	✓	Steel with nickel plate
J	Yellow Chromate conversion	✓	✓	✓	✓			Brass with zinc plate and chromate seal

**Custom Machined Aluminum Backshells Available!**

Contact Technical Sales for details.

## LIGHTWEIGHT ALUMINUM BACKSHELLS

This product has been designed for use in applications as a lightweight, EMI backshell for D-subminiature connectors. The features of the product are outlined below. Please contact technical sales for pricing and additional options.

### GROUND SCREWS

- Sized and spaced for use with 6.35mm [.250 inch] diameter ring terminals
- Ground shelf height and ground screw length allow for stacking of ring terminals
- Holes are pre-tapped for ease of installation
- Ground screws are located outside the exiting wire path to facilitate wire routing
- Ground holes are tapped through to the outside which provide for optional external grounding

### SPACIOUS INTERIOR

- Shape maximizes internal area which facilitates harness assembly
- No obstructions behind any portion of the connector body allows backshell to be used with Combo-D connectors

### APERTURE / STRAIN RELIEF

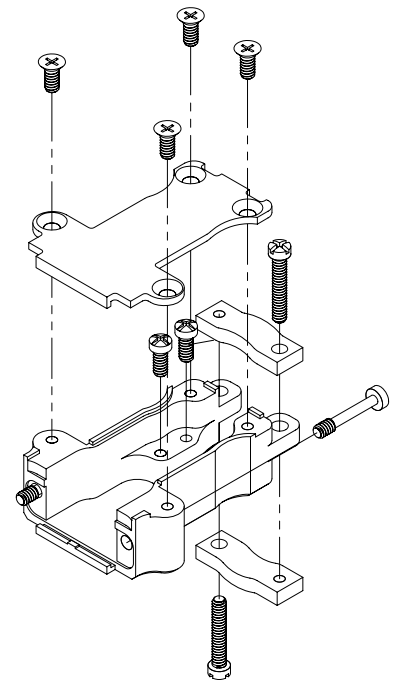
- Appropriate for high density wire bundles using twisted, shielded pairs
- Cable clamps can be "spooned" to provide strain relief for small wire bundle
- Wide form factor allows the user to easily meet bend radius requirements

### THUMB GRIP

- Grip facilitates installation and removal in tight spaces

### LOCKING SYSTEM

- Available with jackscrews or quick disconnect locking device



## TECH SPECS

### MATERIAL AND FINISHES

**Backshell & Cable Clamps** Aluminum; aluminum with electroless nickel plate; aluminum with yellow anodize; aluminum with yellow chromate conversion. Zinc content is 1% maximum.

**Jackscrews & Screws** Steel with nickel plate; brass with zinc plate and chromate seal; brass, with 1.27µm min Au over Cu. Stainless steel options available, contact Technical Sales.

**Actuation Lock System** Steel with nickel plate

### ELECTRICAL

**Range of Operation, Calculated Method** 2 GHz minimum.

### MECHANICAL

**Ground Screws** Can accept up to 6.35mm [.250 inch] diameter ring terminal.

**Locking System** Jackscrews or quick disconnect locking device

### ENVIRONMENTAL

**Operating Temperature** -55 to 125°C

### WEIGHT CHART <sup>\*1</sup>

Backshell Size	D <sup>2</sup> 000ANVL Ounces [grams]	D <sup>2</sup> 000ANE Ounces [grams]
9	1.43 [40.50]	1.08 [30.54]
15	1.60 [45.24]	1.32 [37.44]
25	1.95 [55.22]	1.62 [45.92]
37	2.53 [71.60]	2.19 [62.06]
50	2.61 [74.00]	2.26 [63.94]
104	n/a	2.41 [68.44]

<sup>\*1</sup> Contact Technical Sales for weights on T2, E6, E7 and V3 hardware options.

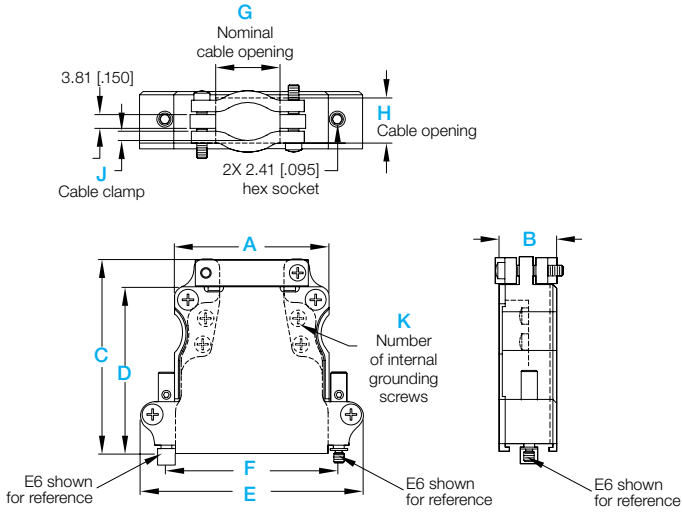
<sup>\*2</sup> Designates backshell size in part number. All hardware in a backshell assembly including cable clamps, screws, etc.

## LIGHTWEIGHT ALUMINUM BACKSHELLS

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

For use with code E, E6 or E7

**A**  
Backshell, aluminum, top opening\*



A backshell shown with E option



A backshell shown with E6 option



A backshell shown with E7 option

PART NUMBER	Connector / Contact Arrangement Compatibility		Shell Size	A	B	C	D	E	F	G	H		J	K
											(Min)	(Max)		
D9000AN*1E0*2 D9000AN*1E60*2 D9000AN*1E70*2	Std-D: 9 High-D: 15	Combo-D: 5W1, 2WK2 Combo-D High-D: 8W2	1	23.06 [.908]	15.65 [.616]	53.09 [2.090]	45.47 [1.790]	38.71 [1.524]	24.99 [.984]	9.19 [.362]	6.10 [.240]*3	12.27 [.483]	1.27 [.050]	4
D15000AN*1E0*2 D15000AN*1E60*2 D15000AN*1E70*2	Std-D: 15 High-D: 26	Combo-D: 3W3, 3WK3, 7W2, 11W1 Combo-D High-D: 19W1	2	31.39 [1.236]	15.65 [.616]	53.09 [2.090]	45.47 [1.790]	47.04 [1.852]	33.32 [1.312]	17.53 [.690]	8.89 [.350]*3	12.27 [.483]	2.54 [.100]	4
D25000AN*1E0*2 D25000AN*1E60*2 D25000AN*1E70*2	Std-D: 25 High-D: 44	Combo-D: 5W5, 9W4, 13W3, 17W2, 21W1 Combo-D High-D: 15W4	3	42.06 [1.656]	15.65 [.616]	53.09 [2.090]	45.47 [1.790]	60.76 [2.392]	47.04 [1.852]	17.53 [.690]	8.89 [.350]*3	12.27 [.483]	2.54 [.100]	4
D37000AN*1E0*2 D37000AN*1E60*2 D37000AN*1E70*2	Std-D: 37 High-D: 62	Combo-D: 8W8, 13W6, 17W5, 21WA4, 25W3, 27W2 Combo-D High-D: 45W2	4	58.52 [2.304]	15.65 [.616]	59.44 [2.340]	51.82 [2.040]	77.22 [3.040]	63.50 [2.500]	31.55 [1.242]	10.41 [.410]*3	12.27 [.483]	3.30 [.130]	6
D50000AN*1E0*2 D50000AN*1E60*2 D50000AN*1E70*2	Std-D: 50 High-D: 78	Combo-D: 24W7, 36W4, 43W2, 47W1 Combo-D High-D: n/a	5	56.13 [2.210]	18.47 [.727]	59.44 [2.340]	51.82 [2.040]	74.83 [2.946]	61.11 [2.406]	31.55 [1.242]	10.41 [.410]*3	15.09 [.594]	3.30 [.130]	6
D104000AN*1E0*2 D104000AN*1E60*2 D104000AN*1E70*2	Std-D: n/a High-D: 104	Combo-D: 46W4 Combo-D High-D: n/a	6	58.52 [2.304]	20.07 [.790]	59.44 [2.340]	51.82 [2.040]	77.22 [3.040]	63.50 [2.500]	31.55 [1.242]	10.41 [.410]*3	16.69 [.657]	3.30 [.130]	6

\*1 For additional 'Material & Finish Options', replace 'N' with desired 'Code' from chart on page 2.

\*2 For 1.27µm min Au over Cu, replace the last '0' with 'G' in part number and \*1 note must remain as 'N' (e.g. D90000ANT2G)

\*3 Smaller cable openings may be achieved by inverting one or both cable clamps.



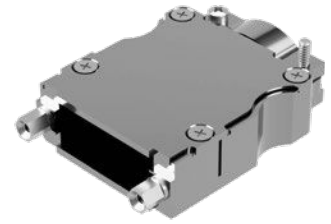
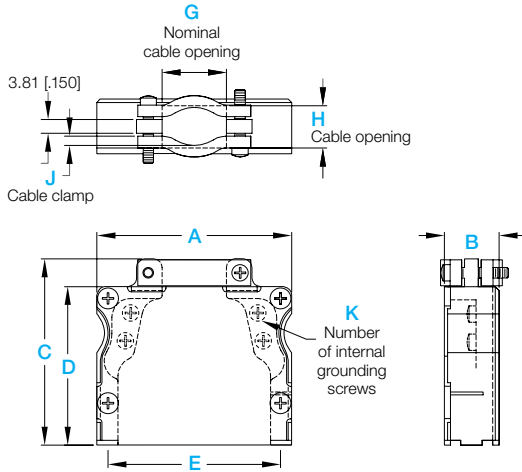
## LIGHTWEIGHT ALUMINUM BACKSHELLS

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

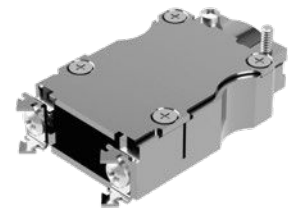
For use with code T2, VL or V3

### A

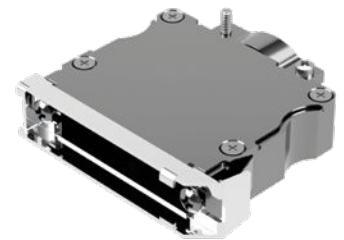
Backshell, aluminum, top opening\*



A backshell shown with **T2\*** option  
\*also available with polarized fixed jackposts, contact Technical Sales for more information.



A backshell shown with **V3\*** option  
\*see page 20 for code 'V3' information.



A backshell shown with **VL\*** option  
\*see page 20 for code 'VL' information

PART NUMBER	Connector / Contact Arrangement Compatibility		Shell Size	A	B	C	D	E	G	H		J	K
										(Min)	(Max)		
D9000AN* <sup>1</sup> T20* <sup>2</sup> D9000AN* <sup>1</sup> V30 D9000AN* <sup>1</sup> VL0	Std-D: 9 High-D: 15	Combo-D: 5W1, 2WK2 Combo-D High-D: 8W2	1	30.96 [1.219]	14.88 [.586]	50.08 [2.000]	43.18 [1.700]	24.99 [.984]	9.19 [.362]	6.10 [.240] <sup>3</sup>	11.51 [.453]	1.14 [.045]	4
D15000AN* <sup>1</sup> T20* <sup>2</sup> D15000AN* <sup>1</sup> V30 D15000AN* <sup>1</sup> VL0	Std-D: 15 High-D: 26	Combo-D: 3W3, 3WK3, 7W2, 11W1 Combo-D High-D: 19W1	2	39.29 [1.547]	14.88 [.586]	50.08 [2.000]	43.18 [1.700]	33.32 [1.312]	17.53 [.690]	8.89 [.350] <sup>3</sup>	11.51 [.453]	2.54 [.100]	4
D25000AN* <sup>1</sup> T20* <sup>2</sup> D25000AN* <sup>1</sup> V30 D25000AN* <sup>1</sup> VL0	Std-D: 25 High-D: 44	Combo-D: 5W5, 9W4, 13W3, 17W2, 21W1 Combo-D High-D: 15W4	3	53.19 [2.094]	14.88 [.586]	50.08 [2.000]	43.18 [1.700]	47.04 [1.852]	17.53 [.690]	8.89 [.350] <sup>3</sup>	11.51 [.453]	2.54 [.100]	4
D37000AN* <sup>1</sup> T20* <sup>2</sup> D37000AN* <sup>1</sup> V30 D37000AN* <sup>1</sup> VL0	Std-D: 37 High-D: 62	Combo-D: 8W8, 13W6, 17W5, 21WA4, 25W3, 27W2 Combo-D High-D: 45W2	4	69.49 [2.736]	14.88 [.586]	57.15 [2.250]	49.53 [1.950]	63.50 [2.500]	31.55 [1.242]	10.41 [.410] <sup>3</sup>	11.51 [.453]	3.30 [.130]	6
D50000AN* <sup>1</sup> T20* <sup>2</sup> D50000AN* <sup>1</sup> V30 D50000AN* <sup>1</sup> VL0	Std-D: 50 High-D: 78	Combo-D: 24W7, 36W4, 43W2, 47W1 Combo-D High-D: n/a	5	67.11 [2.642]	17.70 [.697]	57.15 [2.250]	49.53 [1.950]	61.11 [2.406]	31.55 [1.242]	10.41 [.410] <sup>3</sup>	14.33 [.564]	3.30 [.130]	6
D104000AN* <sup>1</sup> T20* <sup>2</sup>	Std-D: n/a High-D: 104	Combo-D: 46W4 Combo-D High-D: n/a	6	69.49 [2.736]	19.30 [.760]	57.15 [2.250]	49.53 [1.950]	63.50 [2.500]	31.55 [1.242]	10.41 [.410] <sup>3</sup>	15.93 [.627]	3.30 [.130]	6

\*1 For additional 'Material & Finish Options', replace 'N' with desired 'Code' from chart on page 2.

\*2 For 1.27µm min Au over Cu, replace the last '0' with 'G' in part number and \*1 note must remain as 'N' (e.g. D90000ANT2G)

\*3 Smaller cable openings may be achieved by inverting one or both cable clamps.

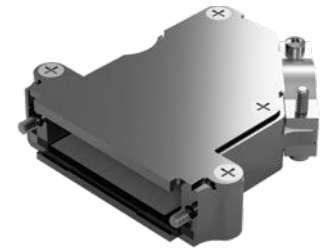
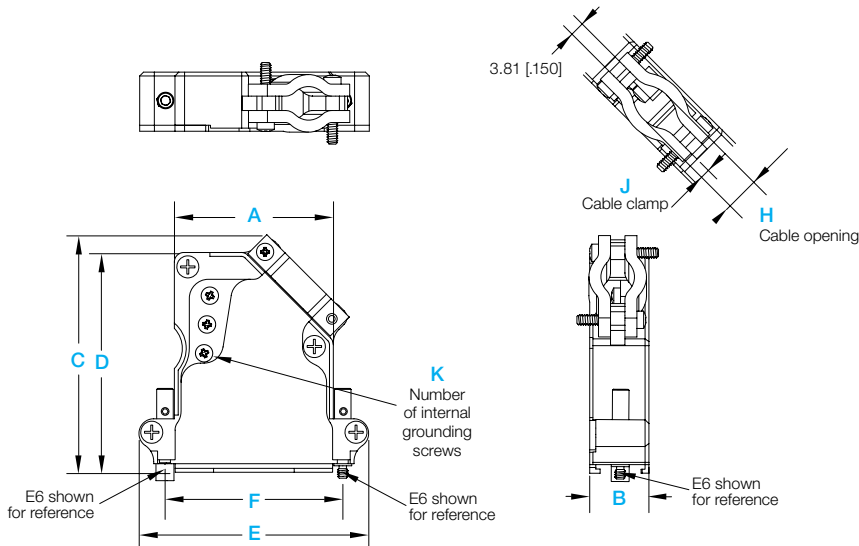
## LIGHTWEIGHT ALUMINUM BACKSHELLS

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

For use with code E, E6 or E7

### AS

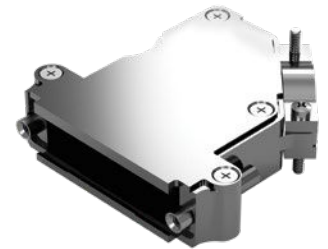
Backshell, aluminum, side opening<sup>1</sup>



AS backshell shown with E option



AS backshell shown with E6 option



AS backshell shown with E7 option

PART NUMBER	Connector / Contact Arrangement Compatibility		Shell Size	A	B	C	D	E	F	G	H		J	K
											(Min)	(Max)		
D9000ASN*1E0*2 D9000ASN*1E60*2 D9000ASN*1E70*2	Std-D: 9 High-D: 15	Combo-D: 5W1, 2WK2 Combo-D High-D: 8W2	1	20.01 [.788]	15.65 [.616]	55.84 [2.198]	50.30 [1.980]	38.72 [1.524]	24.99 [.984]	8.64 [.340]	6.10 [.240] <sup>*3</sup>	12.27 [.483]	1.14 [.045]	1
D15000ASN*1E0*2 D15000ASN*1E60*2 D15000ASN*1E70*2	Std-D: 15 High-D: 26	Combo-D: 3W3, 3WK3, 7W2, 11W1 Combo-D High-D: 19W1	2	28.24 [1.112]	15.65 [.616]	62.91 [2.477]	56.90 [2.240]	47.07 [1.852]	33.32 [1.312]	10.21 [.402]	8.89 [.350] <sup>*3</sup>	12.27 [.483]	2.54 [.100]	2
D25000ASN*1E0*2 D25000ASN*1E60*2 D25000ASN*1E70*2	Std-D: 25 High-D: 44	Combo-D: 5W5, 9W4, 13W3, 17W2, 21W1 Combo-D High-D: 15W4	3	42.06 [1.656]	15.65 [.616]	62.85 [2.474]	58.17 [2.290]	60.76 [2.392]	47.04 [1.852]	10.21 [.402]	8.89 [.350] <sup>*3</sup>	12.27 [.483]	2.54 [.100]	3
D37000ASN*1E0*2 D37000ASN*1E60*2 D37000ASN*1E70*2	Std-D: 37 High-D: 62	Combo-D: 8W8, 13W6, 17W5, 21WA4, 25W3, 27W2 Combo-D High-D: 45W2	4	58.52 [2.304]	15.65 [.616]	74.07 [2.916]	68.08 [2.680]	77.22 [3.040]	63.50 [2.500]	31.52 [1.241]	10.41 [.410] <sup>*3</sup>	12.27 [.483]	3.30 [.130]	4
D50000ASN*1E0*2 D50000ASN*1E60*2 D50000ASN*1E70*2	Std-D: 50 High-D: 78	Combo-D: 24W7, 36W4, 43W2, 47W1 Combo-D High-D: n/a	5	56.13 [2.210]	18.47 [.727]	74.07 [2.916]	68.08 [2.680]	74.83 [2.946]	61.11 [2.406]	31.52 [1.241]	10.41 [.410] <sup>*3</sup>	15.09 [.594]	3.30 [.130]	4
D104000ASN*1E0*2 D104000ASN*1E60*2 D104000ASN*1E70*2	Std-D: n/a High-D: 104	Combo-D: 46W4 Combo-D High-D: n/a	6	58.52 [2.304]	20.07 [.790]	74.07 [2.916]	68.08 [2.680]	77.22 [3.040]	63.50 [2.500]	31.52 [1.241]	10.41 [.410] <sup>*3</sup>	16.69 [.657]	3.30 [.130]	4

\*1 For additional 'Material & Finish Options', replace 'N' with desired 'Code' from chart on page 2.

\*2 For 1.27µm min Au over Cu, replace the last '0' with 'G' in part number and \*1 note must remain as 'N' (e.g. D90000ANT2G)

\*3 Smaller cable openings may be achieved by inverting one or both cable clamps.



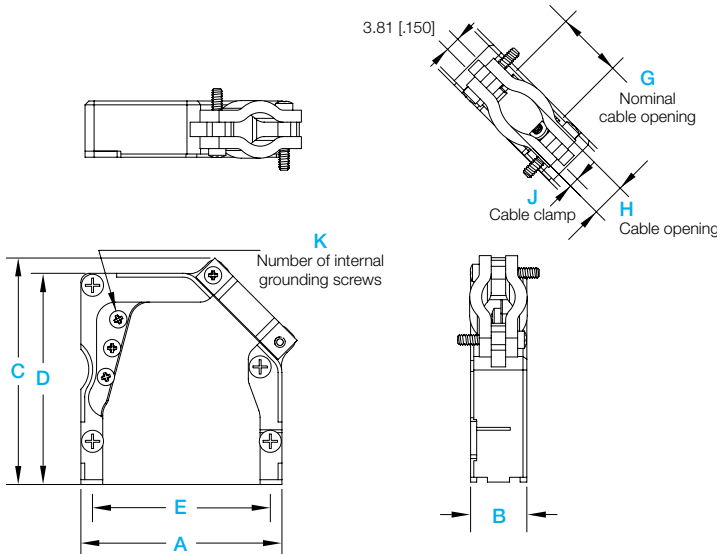
## LIGHTWEIGHT ALUMINUM BACKSHELLS

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

For use with code T2, VL or V3

### AS

Backshell, aluminum, side opening<sup>\*1</sup>



AS backshell shown with T2 option



AS backshell shown with V3\* option

<sup>\*</sup>see page 20 for code 'V3' information



AS backshell shown with VL\* option

<sup>\*</sup>see page 20 for code 'VL' information

PART NUMBER	Connector / Contact Arrangement Compatibility		Shell Size	A	B	C ±0.64 [.025]	D	E	G	H		J	K
										(Min)	(Max)		
D9000ASN <sup>*1</sup> T20 <sup>*2</sup> D9000ASN <sup>*1</sup> V30 D9000ASN <sup>*1</sup> VL0	Std-D: 9 High-D: 15	Combo-D: 5W1, 2WK2 Combo-D High-D: 8W2	1	30.96 [1.219]	14.88 [.586]	50.92 [2.005]	48.26 [1.900]	24.99 [.984]	8.64 [.340]	6.10 [.240] <sup>*3</sup>	11.51 [0.453]	1.14 [.045]	2
D15000ASN <sup>*1</sup> T20 <sup>*2</sup> D15000ASN <sup>*1</sup> V30 D15000ASN <sup>*1</sup> VL0	Std-D: 15 High-D: 26	Combo-D: 3W3, 3WK3, 7W2, 11W1 Combo-D High-D: 19W1	2	39.29 [1.547]	14.88 [.586]	59.96 [2.361]	55.88 [2.200]	33.32 [1.312]	10.21 [.402]	8.89 [.350] <sup>*3</sup>	11.51 [0.453]	2.54 [.100]	3
D25000ASN <sup>*1</sup> T20 <sup>*2</sup> D25000ASN <sup>*1</sup> V30 D25000ASN <sup>*1</sup> VL0	Std-D: 25 High-D: 44	Combo-D: 5W5, 9W4, 13W3, 17W2, 21W1 Combo-D High-D: 15W4	3	53.19 [2.094]	14.88 [.586]	59.96 [2.361]	55.88 [2.200]	47.04 [1.852]	10.21 [.402]	8.89 [.350] <sup>*3</sup>	11.51 [0.453]	2.54 [.100]	3
D37000ASN <sup>*1</sup> T20 <sup>*2</sup> D37000ASN <sup>*1</sup> V30 D37000ASN <sup>*1</sup> VL0	Std-D: 37 High-D: 62	Combo-D: 8W8, 13W6, 17W5, 21WA4, 25W3, 27W2 Combo-D High-D: 45W2	4	69.49 [2.736]	14.88 [.586]	73.17 [2.881]	69.85 [2.750]	63.50 [2.500]	31.52 [1.241]	10.41 [.410] <sup>*3</sup>	11.51 [0.453]	3.30 [.130]	4
D50000ASN <sup>*1</sup> T20 <sup>*2</sup> D50000ASN <sup>*1</sup> V30 D50000ASN <sup>*1</sup> VL0	Std-D: 50 High-D: 78	Combo-D: 24W7, 36W4, 43W2, 47W1 Combo-D High-D: n/a	5	67.11 [2.642]	17.70 [.697]	73.17 [2.881]	69.85 [2.750]	61.11 [2.406]	31.52 [1.241]	10.41 [.410] <sup>*3</sup>	14.33 [.564]	3.30 [.130]	4
D104000ASN <sup>*1</sup> T20 <sup>*2</sup>	Std-D: n/a High-D: 104	Combo-D: 46W4 Combo-D High-D: n/a	6	69.49 [2.736]	19.30 [.760]	73.17 [2.881]	69.85 [2.750]	63.50 [2.500]	31.52 [1.241]	10.41 [.410] <sup>*3</sup>	15.93 [.627]	3.30 [.130]	4

<sup>\*1</sup> For additional 'Material & Finish Options', replace 'N' with desired 'Code' from chart on page 2.

<sup>\*2</sup> For 1.27µm min Au over Cu, replace the last '0' with 'G' in part number and <sup>\*1</sup> note must remain as 'N' (e.g. D90000ANT2G)

<sup>\*3</sup> Smaller cable openings may be achieved by inverting one or both cable clamps.

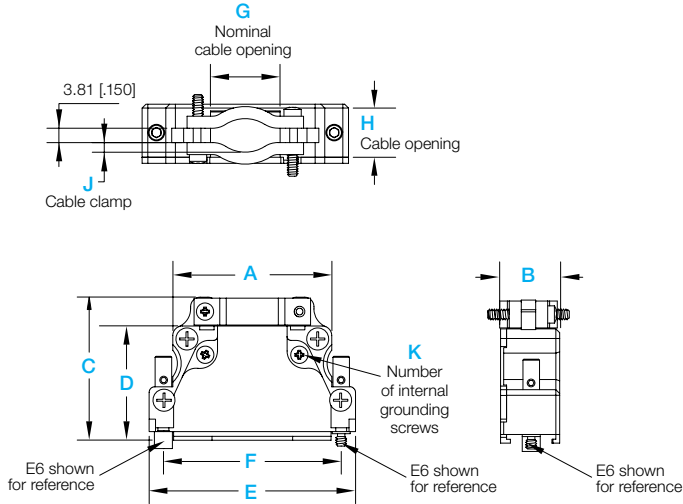
## LIGHTWEIGHT ALUMINUM BACKSHELLS

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

For use with code E, E6 or E7

### AL

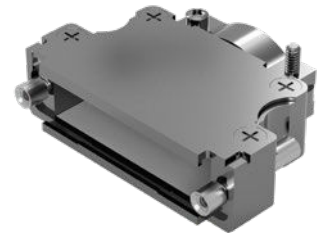
Backshell, aluminum, top opening<sup>1</sup>, low profile



AL backshell shown with E option



AL backshell shown with E6 option



AL backshell shown with E7 option

PART NUMBER	Connector / Contact Arrangement Compatibility	Shell Size	A	B	C	D	E	F	G	H		J	K
										(Min)	(Max)		
D9000ALN* <sup>1</sup> E0* <sup>2</sup> D9000ALN* <sup>1</sup> E60* <sup>2</sup> D9000ALN* <sup>1</sup> E70* <sup>2</sup>	Std-D: 9 High-D: 15	1	20.32 [.800]	15.65 [.616]	35.05 [1.380]	27.69 [1.090]	32.33 [1.273]	24.99 [.984]	8.64 [.340]	5.81 [.229] <sup>3</sup>	11.98 [0.471]	1.140 [.045]	1
D15000ALN* <sup>1</sup> E0* <sup>2</sup> D15000ALN* <sup>1</sup> E60* <sup>2</sup> D15000ALN* <sup>1</sup> E70* <sup>2</sup>	Std-D: 15 High-D: 26	2	28.45 [1.120]	15.65 [.616]	37.85 [1.490]	30.23 [1.190]	40.64 [1.600]	33.32 [1.312]	10.21 [.402]	6.10 [.240] <sup>3</sup>	12.27 [.483]	1.140 [.045]	2
D25000ALN* <sup>1</sup> E0* <sup>2</sup> D25000ALN* <sup>1</sup> E60* <sup>2</sup> D25000ALN* <sup>1</sup> E70* <sup>2</sup>	Std-D: 25 High-D: 44	3	42.06 [1.656]	15.65 [.616]	37.85 [1.490]	30.23 [1.190]	54.61 [2.150]	47.04 [1.852]	18.42 [.725]	8.89 [.350] <sup>3</sup>	12.27 [.483]	2.54 [.100]	2
D37000ALN* <sup>1</sup> E0* <sup>2</sup> D37000ALN* <sup>1</sup> E60* <sup>2</sup> D37000ALN* <sup>1</sup> E70* <sup>2</sup>	Std-D: 37 High-D: 62	4	58.52 [2.304]	15.65 [.616]	37.85 [1.490]	30.23 [1.190]	71.12 [2.800]	63.50 [2.500]	31.52 [1.241]	10.41 [.410] <sup>3</sup>	12.27 [.483]	3.30 [.130]	2
D50000ALN* <sup>1</sup> E0* <sup>2</sup> D50000ALN* <sup>1</sup> E60* <sup>2</sup> D50000ALN* <sup>1</sup> E70* <sup>2</sup>	Std-D: 50 High-D: 78	5	56.13 [2.210]	18.47 [.727]	37.85 [1.490]	30.23 [1.190]	68.60 [2.701]	61.11 [2.406]	31.44 [1.238]	10.41 [.410] <sup>3</sup>	15.09 [.594]	3.30 [.130]	2
D104000ALN* <sup>1</sup> E0* <sup>2</sup> D104000ALN* <sup>1</sup> E60* <sup>2</sup> D104000ALN* <sup>1</sup> E70* <sup>2</sup>	Std-D: n/a High-D: 104	6	58.52 [2.304]	20.07 [.790]	37.85 [1.490]	30.23 [1.190]	71.12 [2.800]	63.50 [2.500]	31.52 [1.241]	10.41 [.410] <sup>3</sup>	16.69 [.657]	3.30 [.130]	2

\*1 For additional 'Material & Finish Options', replace 'N' with desired 'Code' from chart on page 2.

\*2 For 1.27µm min Au over Cu, replace the last '0' with 'G' in part number and \*1 note must remain as 'N' (e.g. D90000ANT2G)

\*3 Smaller cable openings may be achieved by inverting one or both cable clamps.

## DIECAST / METAL BACKSHELL, QUICK REFERENCE



### HARDWARE QUICK REFERENCE OPTIONS

Backshell	No Hardware	Rotating Jackscrews	Fixed Jackscrews	Quick Disconnect Locking System	Low Profile	Extended Height	Adapter	Cable Opening	EMI / RFI	Page
G	✓	✓	✓	✓	✓	✓	✓	Modular	EMI/RFI	10-13
H	✓	✓	✓	✓	✓			Top		14

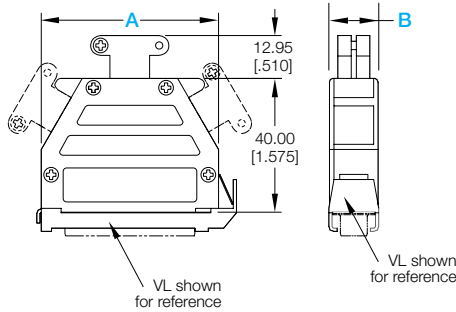
## ZINC, DIECAST BACKSHELLS\*1

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

For use with code VL

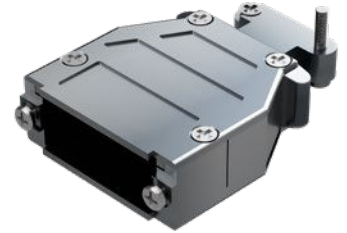
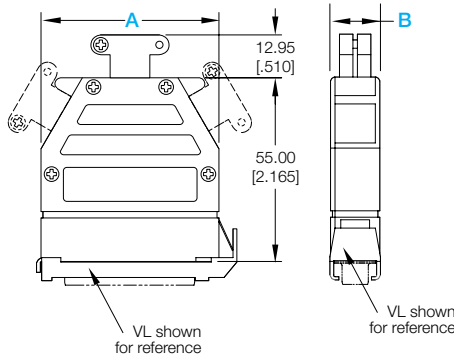
### G (Low Profile)

Backshell, modular opening, zinc, die cast, EMI/RFI, low profile

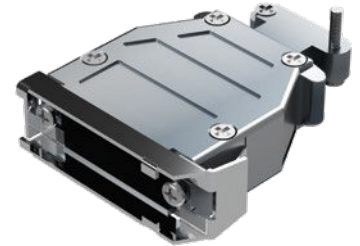


### G (Extended)

Backshell, extended height, modular opening, zinc, die cast, EMI/RFI



G backshell 'low profile' shown



G backshell 'low profile' shown with VL\* option  
 \*see page 20 for code 'VL' information

## FEATURES

- Automatic rapid locking system keeps connection secure and is easy to unlock using the slide latch when needed.
- Gripping shoulders enable trouble-free extraction of the connector assembly, even with tightly packed aligned cable adapters.
- Cable adapters are designed with multiple entries and can permit the looping through of cables. Cable entries not used are sealed to maintain EMI/RFI shielding.
- Two height options are available, low-profile or an increased height option.

PART NUMBER	Shell Size	Backshell Height		A	B	Cable Exit Option	Cable Opening	
		Low Profile	Extended				(Min)	(Max)
D9000G00 D9000GVLO	1	Low Profile		32.00 [1.260]	14.60 [.575]	2 Side*2	3.00 [.118]	11.99 [.472]
D9000G00-1023.2 D9000GVLO-1023.0			Extended					
D15000G00 D15000GVLO	2	Low Profile		39.30 [1.547]	14.60 [.575]	1 Top, 2 Side*3	3.00 [.118]	11.99 [.472]
D15000G00-1023.2 D15000GVLO-1023.0			Extended					
D25000G00 D25000GVLO	3	Low Profile		53.20 [2.094]	14.60 [.575]	1 Top, 2 Side*3	3.00 [.118]	11.99 [.472]
D25000G00-1023.2 D25000GVLO-1023.0			Extended					
D37000G00 D37000GVLO	4	Low Profile		69.50 [2.736]	14.60 [.575]	1 Top, 2 Side*3	3.00 [.118]	11.99 [.472]
D37000G00-1023.2 D37000GVLO-1023.0			Extended					
D50000G00 D50000GVLO	5	Low Profile		67.00 [2.638]	17.90 [.705]	1 Top, 2 Side*3	5.00 [.197]	14.00 [.551]
D50000G00-1023.2 D50000GVLO-1023.0			Extended					



G backshell shown with -1023.2 extended option



G backshell shown with -1023.0 extended and VL\* options  
 \*see page 20 for code 'VL' information

\*1 To prevent stripping of the backshell assembly screws, we recommend using pozidriv screwdriver bits available from stock using part number 9535-2-2-0, contact Technical Sales. For the mounting screws, we recommend using a standard phillips head screwdriver bit.

\*2 These backshells are supplied with one (1) cable clamp set and one (1) opening plug. See page 13 for optional crimp Ferrule system.

\*3 These backshells are supplied with one (1) cable clamp set and two (2) opening plugs. See page 13 for optional crimp Ferrule system.

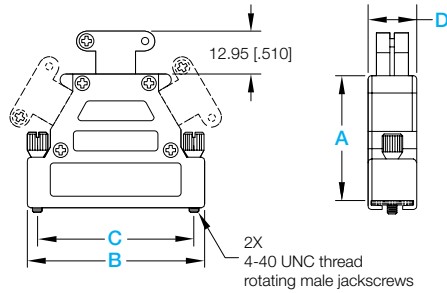
## ZINC, DIE CAST BACKSHELLS\*1

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

For use with code E

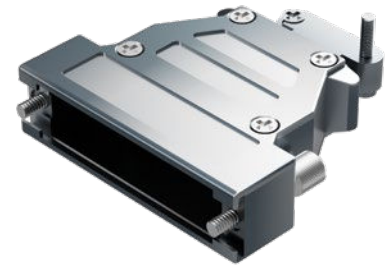
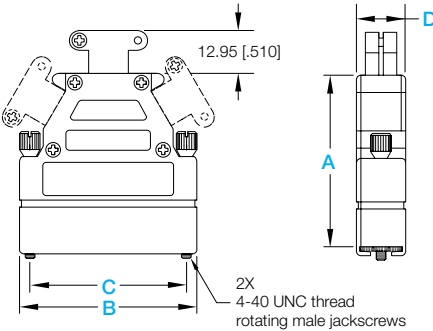
### G (Low Profile)

Backshell, modular opening, zinc, die cast, EMI/RFI, low profile

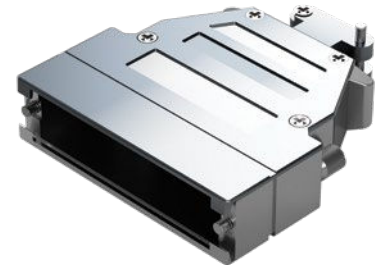


### G (Extended)

Backshell, extended height, modular opening, zinc, die cast, EMI/RFI



G backshell 'low profile' shown with E option



G backshell shown with -1023.5 extended and internal hex jackpost options

## FEATURES

- Gripping shoulders enable trouble-free extraction of the connector assembly even with tightly packed aligned backshells.
- Rotating jackscrews offer the most secure mechanical locking of the connector system.
- Standard height backshells for use with connector shell sizes 1 and 2 are available with a top or side cable exit option. Contact Technical Sales for details.
- For use with connector shell sizes 3 - 5 are designed with three (3) cable entries and can permit the looping through of cables. Cable entries not used are sealed with supplied metal plugs to maintain EMI/RFI shielding qualities.
- Two (2) height options are available, one being a low profile option. An extended height option is offered for use with power conductors and coaxial cable, such as might be used with the Positronic CBD/CBM series connectors.
- Grounding to the backshells may be accomplished by fastening wires inside backshell with an M2.5 threaded Posidriv head screw.

PART NUMBER	Shell Size	Backshell Height		A	B	C	D	Cable Exit Option	Cable Opening	
		Low Profile	Extended*2						(Min)	(Max)
D9000GE0	1	Low Profile		35.50 [1.398]	31.00 [1.220]	25.00 [.984]	14.80 [.582]	1 Top	3.00 [.118]	11.99 [.472]
D9000GE0-1023.50			Extended*2	50.50 [1.988]				1 Side		
D9000GE0-1023.5	2	Low Profile		40.00 [1.575]	39.40 [1.551]	33.30 [1.311]	14.80 [.582]	1 Top, 1 Side*3	3.00 [.118]	11.99 [.472]
D15000GE0			Extended*2	55.00 [2.165]				1 Side*3		
D15000GE0-1023.5	3	Low Profile		40.00 [1.575]	53.20 [2.094]	47.00 [1.850]	14.80 [.582]	1 Top, 2 Side*4	3.00 [.118]	11.99 [.472]
D25000GE0			Extended*2	55.00 [2.165]						
D25000GE0-1023.5	4	Low Profile		40.00 [1.575]	69.50 [2.736]	63.50 [2.500]	14.80 [.582]	1 Top, 2 Side*4	3.00 [.118]	11.99 [.472]
D37000GE0			Extended*2	55.00 [2.165]						
D37000GE0-1023.5	5	Low Profile		42.00 [1.654]	67.00 [2.638]	61.10 [2.406]	17.60 [.692]	1 Top, 2 Side*4	5.00 [.197]	14.00 [.551]
D50000GE0			Extended*2	57.00 [2.244]						
D50000GE0-1023.5	6	Low Profile		39.62 [1.560]	72.01 [2.835]	63.50 [2.500]	19.40 [.764]	1 Top, 2 side*4	5.00 [.197]	14.00 [.551]
D104000GE0										

\*1 To prevent stripping of the backshell assembly screws, we recommend using Pozidriv screwdriver bits available from stock using part number 9535-2-2-0, contact Technical Sales. Standard height GE backshell use the Pozidriv style jackscrews.

\*2 The extended height backshells use an internal hex jackscrew. Internal hex jackscrews are available for the standard height, but require an MOS.

\*3 These backshells are supplied with one (1) cable clamp set and one (1) opening plug. See page 13 for optional crimp Ferrule system.

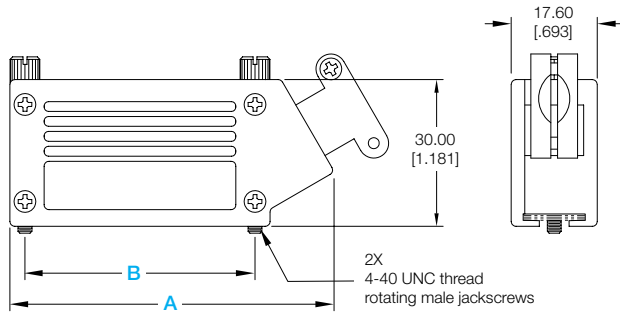
\*4 These backshells are supplied with one (1) cable clamp set and two (2) opening plugs. See page 13 for optional crimp Ferrule system.

## ZINC, DIE CAST ADAPTERS

For use with code G backshell

### GA (Adapter)

Backshell adapter, side opening, zinc, die cast, EMI/RFI



GA adapter shown

## FEATURES

- Can be used as a gender changer which provides EMI/RFI protection.
- Allows for internal placement of a printed circuit board between the connectors.
- Can be used to adapt connectors of one interface standard to another.
- Used in applications where tapping into the electrical line path between connectors is necessary. A cable exit is provided for this application.
- If no connector is inserted into the rear side of the adapter backshell, the opening can be closed with a optional cover plate which can be adapted for use with LED's, mini-switches, and coaxial connectors. (Optional cover plate to be ordered separately)
- Jackscrew locking system is supplied as a standard for secure mechanical coupling.
- Grounding to the backshell may be accomplished by fastening wires inside backshell with an M2.5 threaded Pozidrive head screw.

PART NUMBER	Shell Size	A	B	Cable Opening		Optional Cover Plate	Optional Cable Opening Plug <sup>*2</sup>
				(Min)	(Max)		
D9000GA0	1	44.00 [1.733]	25.00 [0.984]	3.00 [.118]	11.99 [.472]	A4589-9-0-0 <sup>*3</sup>	A4596-1-0-0 <sup>*3</sup>
D15000GA0	2	52.30 [2.059]	33.30 [1.311]	3.00 [.118]	11.99 [.472]	A4589-15-0-0 <sup>*3</sup>	A4596-1-0-0 <sup>*3</sup>
D25000GA0	3	66.00 [2.598]	47.00 [1.850]	3.00 [.118]	11.99 [.472]	A4589-25-0-0 <sup>*3</sup>	A4596-1-0-0 <sup>*3</sup>
D37000GA0	4	82.50 [3.248]	63.50 [2.500]	3.00 [.118]	11.99 [.472]	A4589-37-0-0 <sup>*3</sup>	A4596-1-0-0 <sup>*3</sup>

\*1 To prevent stripping of the backshell assembly screws, we recommend using Pozidriv screwdriver bits available from stock using part number 9535-2-2-0, contact Technical Sales.

\*2 See page 13 for optional Crimp Ferrule System.

\*3 Must be purchased separately.



## CRIMP FERRULE SYSTEMS

For use with code G backshell

The crimp ferrule system can be used with all Positronic code “G” backshells and is recommended when maximizing EMI/RFI protection is desired.

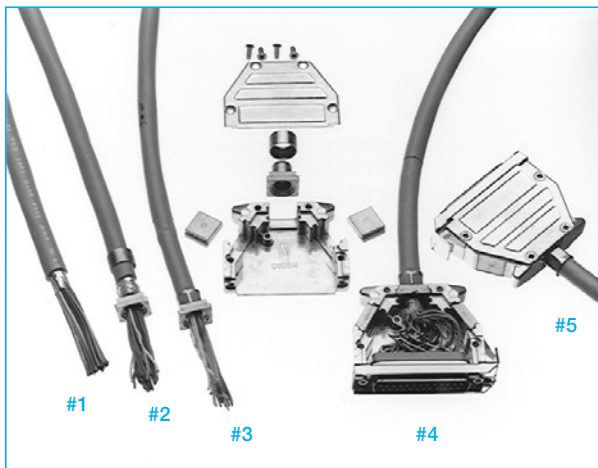
The crimp ferrule system optimizes the transition of the cable shield into the cable adapter in three ways.

- It provides a low impedance connection of the cable shield to the cable adapter which remains constant over time.
- The system provides an EMI/RFI tight cable exit point.
- The system provides for high mechanical retention of the cable in the cable adapter.



Crimp ferrule (top left) and crimp flange (bottom right)

## APPLICATION INSTRUCTIONS



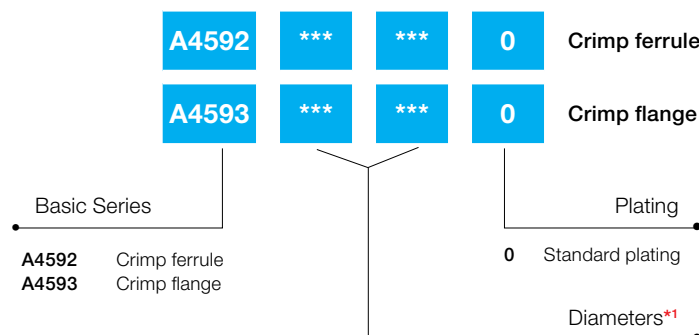
Application of the crimp ferrule system is quite simple.

- #1 once the cable insulation and shield are cut to the correct dimensions
- #2 the crimp ferrule is placed over the cable and the crimp flange is inserted between the shield and the conductors
- #3 the crimp ferrule is now slid over the cable insulation into position over the crimp flange and the crimp is made using Positronic-supplied hand press and die sets
- #4 this assembly is then terminated to the connector and placed into the cable adapter
- #5 finally, the cover is placed on the cable adapter and secured using four (4) screws

To order the Positronic supplied hand press, request part number 9520-0-0-0 or for hand crimp tool, request part number 9521-3-0-0.

To order Positronic-supplied die sets, contact Technical Sales for ordering information, since die sets are customized based on the specific crimp flanges, crimp ferrules and cables used.

## CRIMP FERRULE / FLANGE CREAT A PART



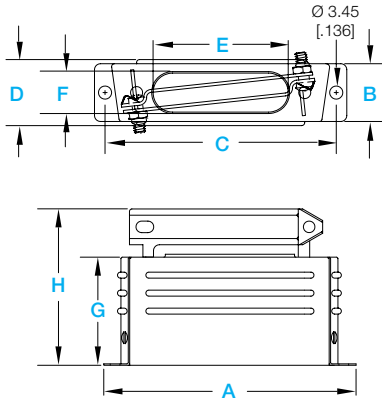
\*1 Contact Technical Sales for part number completion which is determined by customer-required cable diameters and type.

## METAL BACKSHELLS

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

### H

Backshell, metal, top opening



H backshell shown

PART NUMBER	Shell Size	A	B	C	D (Max)	E	F	G	H (Max)
D15000H00	2	38.89 [1.531]	12.47 [0.491]	33.32 [1.312]	14.68 [.578]	18.11 [.713]	7.92 [.312]	19.05 [.750]	30.96 [1.219]
D25000H00	3	52.78 [2.078]	12.47 [0.491]	47.04 [1.852]	14.68 [.578]	25.40 [1.000]	7.92 [.312]	25.40 [1.000]	38.91 [1.532]
D37000H00	4	69.03 [2.718]	12.47 [0.491]	63.50 [2.500]	14.68 [.578]	34.93 [1.375]	7.92 [.312]	25.40 [1.000]	38.91 [1.532]
D50000H00	5	66.68 [2.625]	15.27 [.601]	61.11 [2.406]	17.45 [.687]	35.69 [1.405]	10.31 [.406]	28.58 [1.125]	42.09 [1.657]

## PLASTIC / COMPOSITE BACKSHELL, QUICK REFERENCE



HARDWARE QUICK REFERENCE OPTIONS

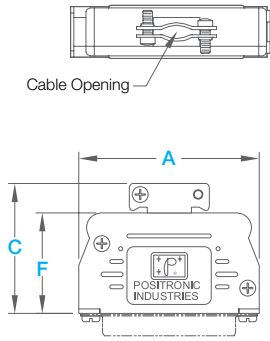
Backshell	No Hardware	Rotating Jackscrews	Fixed Jackscrews	Quick Disconnect Locking System	Low Profile	Extended Height	Adapter	Cable Opening	EMI / RFI	Page
J	✓		✓	✓				Top		16
L	✓		✓	✓				Side		16
Y		✓						Top	EMI/RFI	18
Z		✓	✓					Modular	EMI/RFI	17

## PLASTIC BACKSHELLS

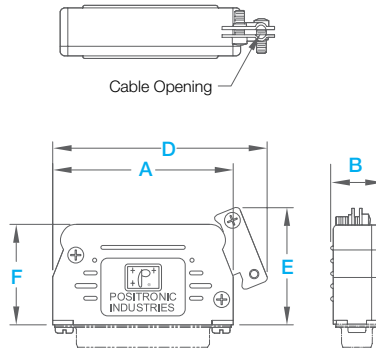
For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

For use with code VL, V3 and V5

**J**  
Backshell, plastic, top opening



**L**  
Backshell, plastic, side opening



J backshell shown



J backshell shown with V3\* option  
\*see page 20 for code 'V3' information



J backshell shown with V5 option  
\*see page 20 for code 'V5' information



J backshell shown with VL option  
\*see page 20 for code 'VL' information



L backshell shown

PART NUMBER	Shell Size	A	B	C	D	E	F	Cable Opening	
								(Min)	(Max)
D9000J0*10 D9000L0*10	1	32.05 [1.262]	15.06 [.593]	29.11 [1.146]	38.61 [1.520]	26.16 [1.030]	21.95 [.864]	Ø3.43 [.145]	Ø7.11 [.280]
D15000J0*10 D15000L0*10	2	39.40 [1.551]	15.77 [.621]	34.44 [1.356]	48.26 [1.900]	31.50 [1.240]	25.96 [1.022]	Ø4.06 [.160]	Ø6.99 [.275]
D25000J0*10 D25000L0*10	3	54.08 [2.129]	15.77 [.621]	39.70 [1.563]	63.30 [2.492]	35.05 [1.380]	30.12 [1.186]	Ø2.79 [.110]	Ø6.99 [.275]
D37000J0*10 D37000L0*10	4	70.66 [2.782]	15.77 [.621]	49.94 [1.848]	79.20 [3.188]	42.93 [1.690]	38.25 [1.506]	5.84 X 16.00 [.230] X [.630]	8.89 X 16.00 [.350] X [.630]
D50000J0*10 D50000L0*10	5	68.28 [2.688]	18.62 [.733]	49.94 [1.848]	76.58 [3.015]	42.93 [1.690]	38.25 [1.506]	5.84 X 16.00 [.230] X [.630]	10.92 X 16.00 [.430] X [.630]

\*1 Replace '0' with desired code 'V3, V5 or VL' to obtain desired hardware for backshell (e.g. D9000JV30)

## COMPOSITE BACKSHELLS

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

### Z<sup>\*1</sup>

Backshell, composite, modular opening, rotating male jackscrews

### Z6<sup>\*1</sup>

Backshell, composite, modular opening, rotating polarized jackscrews

### Z4<sup>\*1</sup>

Backshell, composite, modular opening, fixed female jackposts

### Z7<sup>\*1</sup>

Backshell, composite, modular opening, rotating female jackposts



Z backshell shown with rotating male jackscrews



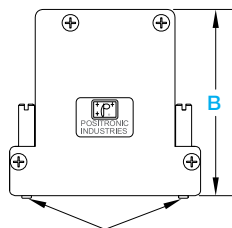
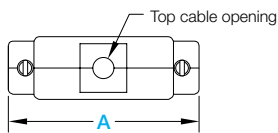
Z4 backshell shown with fixed female jackposts



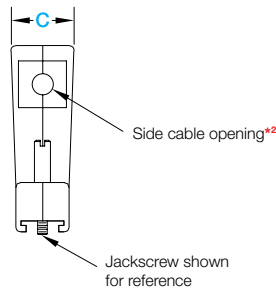
Z6 backshell shown with male and female rotating jackscrews



Z7 backshell shown with female rotating jackscrews



Jackscrews shown for reference



#### Notes

\*1 Illustration is shown for Z backshell. The only difference for Z4, Z6 and Z7 backshells will be jackscrew system.

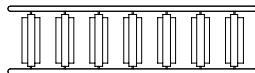
\*2 Side opening is not available on shell size 5.

#### TYPICAL INSERTS

Various inserts are provided to accommodate different cable sizes. (for shell size 1 through 4)



#### INSERT TREE ASSEMBLY



PART NUMBER	Shell Size	A	B	C	Cable Opening	
					(Min)	(Max)
D9000Z00 D9000Z400 D9000Z600 D9000Z700	1	35.23 [1.387]	49.15 [1.935]	18.80 [.740]	2.54 [.100]	10.16 X 14.48 [.400] X [.570]
D15000Z00 D15000Z400 D15000Z600 D15000Z700	2	43.56 [1.715]	49.15 [1.935]	18.74 [.738]	2.54 [.100]	10.16 X 14.48 [.400] X [.570]
D25000Z00 D25000Z400 D25000Z600 D25000Z700	3	57.25 [2.254]	55.88 [2.200]	18.74 [.738]	2.54 [.100]	13.97 X 14.48 [.550] X [.570]
D37000Z00 D37000Z400 D37000Z600 D37000Z700	4	73.74 [2.903]	55.88 [2.200]	18.62 [.733]	2.54 [.100]	13.97 X 14.48 [.550] X [.570]
D50000Z00 D50000Z400 D50000Z600 D50000Z700	5	71.35 [2.809]	68.58 [2.700]	22.74 [.895]	2.54 [.100]	Ø16.00 [.630]

## COMPOSITE BACKSHELLS

For the sake of brevity, only basic dimensions are shown here. Full dimensional detail is available in the respective product drawings.

### Y (size 50)\*1

Backshell, composite, size 50, top opening, rotating male jackscrews

### Y6 (size 50)\*1

Backshell, composite, size 50, top opening, rotating polarized jackscrews

### Y (size 104)\*1

Backshell, composite, size 104, top/side opening, rotating male jackscrews

### Y6 (size 104)\*1

Backshell, composite, size 104, top/side opening, rotating polarized jackscrews



Y for size 50



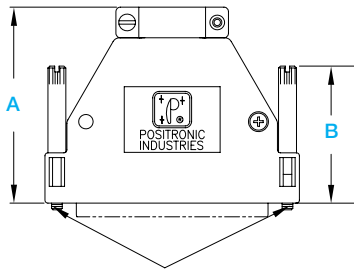
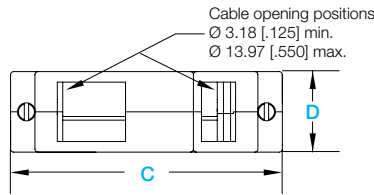
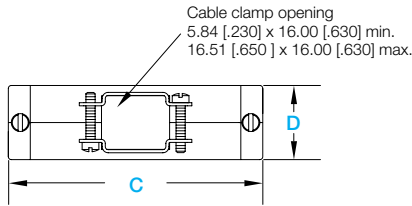
Y for size 104



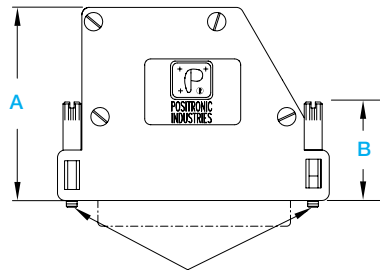
Y6 for size 50



Y6 for size 104

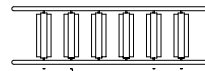


Jackscrews shown for reference



Jackscrews shown for reference

**Note** \*1 Illustrations shown for Y backshell. The only difference for Y6 backshell will be jackscrew system and 'B' dimension.



Cable opening insert tree for size 104 backshell

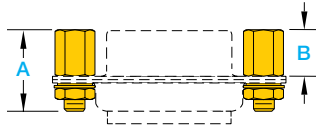
Contact Technical Sales for availability of other size backshells

PART NUMBER	Shell Size	A	B	C	D
D50000Y00	5	51.94 [2.045]	38.02 [1.497]	67.44 [2.655]	19.66 [.774]
D50000Y600			30.08 [1.200] max.		
D104000Y00	6	51.08 [2.011]	26.04 [1.025]	71.88 [2.830]	21.29 [.838]
D104000Y600			25.04 [.986]		



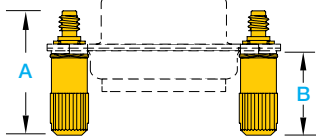
## JACKSCREW SYSTEM

### T, T2, T3 or T7



CODE	Description	A	B
T <sup>*3</sup>	Fixed female jackscrews, 4-40 UNC threads <sup>*1</sup>	11.10 [.437]	6.35 [.250]
T2 <sup>*3</sup>	Fixed female jackscrews, 4-40 UNC threads <sup>*1</sup> , washer set	12.70 [.500]	5.03 [.198]
T3 <sup>*3</sup>	Fixed female jackscrews, 4-40 UNC threads <sup>*1</sup> , washer set	20.65 [.813]	5.03 [.198]
T7 <sup>*2 *3</sup>	Fixed female jackscrews, 4-40 UNC threads	10.92 [.430]	4.57 [.180]

### E or E3



CODE	Description	A	B
E <sup>*3</sup>	Rotating male jackscrews, 4-40 UNC threads, slotted thumbscrews	16.43 [.647]	11.10 [.437]
E3 <sup>*3</sup>	Rotating male jackscrews, 4-40 UNC threads, internal hex, low profile	16.43 [.647]	11.10 [.437]

### E2



CODE	Description	A
E2 <sup>*3</sup>	Rotating male jackscrews, 4-40 UNC threads, slotted, low profile	6.10 [.240]

\*1 Internal thread length of T, T2 or T3 jackscrews is 3.05 [.120] nominal. Jackscrew supplied on connectors in combination with other accessories may differ dimensionally, contact Technical Sales for more information.

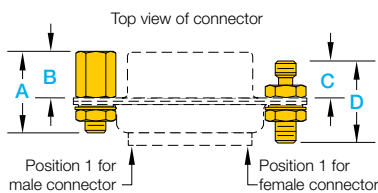
\*2 T7 jackscrews supplied on connectors in combination with other accessories may differ dimensionally, contact Technical Sales for more information.

\*3 T, T2, T3, T7, E, E2 or E3 passivated stainless steel jackscrews available. Contact Technical Sales for ordering information.

## JACKSCREW SYSTEM - CODING DEVICE (KEYING)

### T6<sup>\*2</sup>

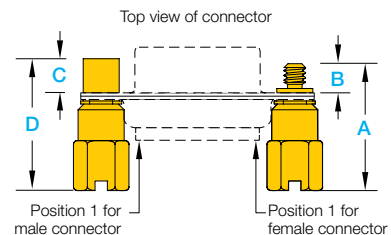
Fixed female jackpost, fixed male jackscrew, 4-40 UNC threads



A	B	C	D
11.30 [.445]	5.59 [.220]	4.93 [.194]	11.07 [.436]

### E6<sup>\*2</sup>

Rotating male jackscrews, rotating female jackpost, 4-40 UNC threads<sup>\*1</sup>



A	B	C	D
16.94 [.667]	3.84 [.151]	4.50 [.177]	17.60 [.693]

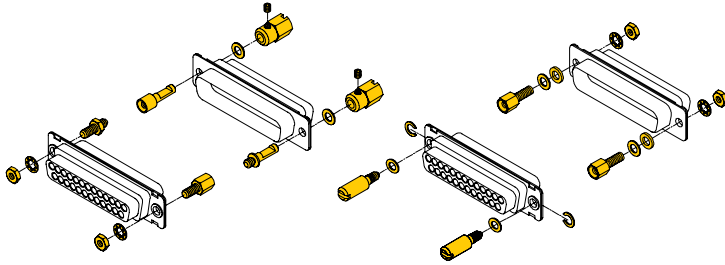
\*1 For customer installations of knobs onto jackscrews, recommend set screw torque value of 16 in.-oz. Recommend application of thread lock to set screw.

\*2 T6 or E6 passivated stainless steel options available. Contact Technical Sales for ordering information.

## JACKSCREW SYSTEM - CODING DEVICE (KEYING) OPTIONS

### UP TO EIGHT CODING DEVICE OPTIONS!

Jackscrews can be supplied in configurations to allow for up to four coding device options, as shown in the table. An additional four coding device options can be achieved by reversing the connector genders.



Option	Male Connector	Code (MOS)	Female Connector	Code (MOS)
1	2 male rotating	E *2	2 female fixed	T *2
2	2 female rotating	E6 *2 (-833.7*3)	2 male fixed	T6 *2 (-866.1*3)
3	1 female rotating*1 1 male rotating*1	E6 *2	1 male fixed*1 1 female fixed*1	T6 *2
4*4	1 male rotating*1 1 female rotating*1	E6 *2 (-1827.1*3)	1 female fixed*1 1 male fixed*1	T6 *2 (-1827.0*3)

\*1 Additional options are achieved by switching male and female genders.

\*2 For dimensional information see page 19.

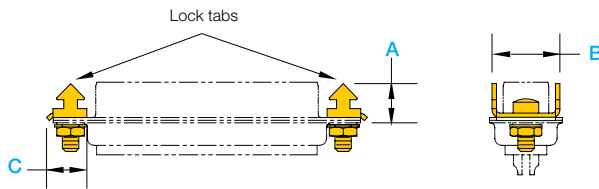
\*3 To achieve keying option required, add MOS suffix '-833.7', '-866.1', '-1827.1' or '-1827.0' to end of final part number.

\*4 Reverse polarized connector.

## QUICK DISCONNECT LOCKING SYSTEMS

### V3

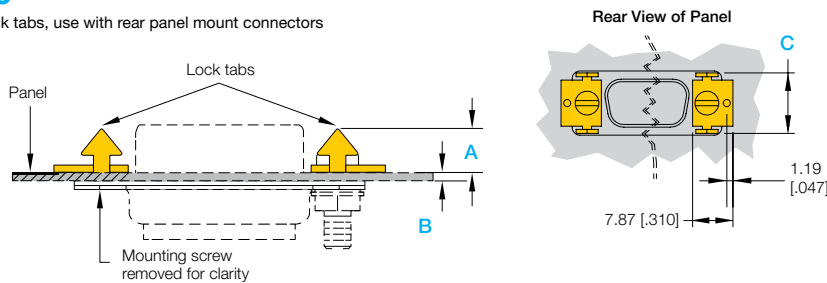
Lock tabs, use with free cable or front panel mount connectors



PART NUMBER	Shell Size	A	B	C
D9/37000V30	1	6.86 [.270]	11.68 [.460]	6.91 [.272]
D9/37000V30	2	6.86 [.270]	11.68 [.460]	6.91 [.272]
D9/37000V30	3	6.86 [.270]	11.68 [.460]	6.91 [.272]
D9/37000V30	4	6.86 [.270]	11.68 [.460]	6.91 [.272]
D50000V30	5	6.86 [.270]	14.73 [.580]	6.91 [.272]

### V5

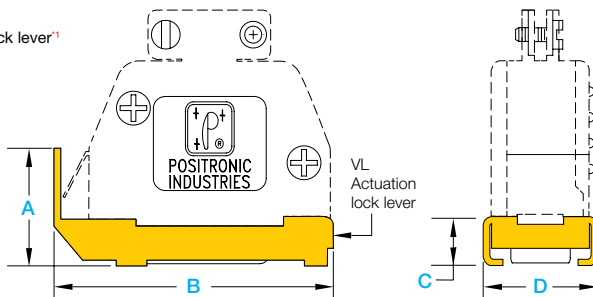
Lock tabs, use with rear panel mount connectors



PART NUMBER	Shell Size	A	B (Max)	C
D9/37000V50	1	4.32 [.170]	1.57 [.062]	11.81 [.465]
D9/37000V50	2	4.32 [.170]	1.57 [.062]	11.81 [.465]
D9/37000V50	3	4.32 [.170]	1.57 [.062]	11.81 [.465]
D9/37000V50	4	4.32 [.170]	1.57 [.062]	11.81 [.465]
D50000V50	5	4.32 [.170]	1.57 [.062]	14.86 [.585]

### VL

Actuation lock lever\*1



\*1 May be used with front or back mounted locking tabs, see V3 and V5.

PART NUMBER	Shell Size	A	B	C	D (Max)
D90000VL0	1	14.73 [.580]	37.08 [1.460]	6.53 [.257]	15.04 [.592]
D150000VL0	2	14.73 [.580]	44.96 [1.770]	6.53 [.257]	15.04 [.592]
D250000VL0	3	14.73 [.580]	59.94 [2.360]	6.53 [.257]	15.04 [.592]
D370000VL0	4	14.73 [.580]	76.58 [3.015]	6.53 [.257]	15.04 [.592]
D500000VL0	5	16.13 [.635]	73.66 [2.900]	6.78 [.267]	17.91 [.705]

## CLEARANCE HOLE / FLOAT MOUNTS

**0**  
Clearance hole,  $\text{Ø}3.05 \pm 0.13$  [.120 $\pm$ .005]  
For non-stainless steel connector housing (shells)

Clearance holes, two places

**0**  
Clearance hole,  $\text{Ø}3.05 \pm 0.13$  [.120 $\pm$ .005]  
For stainless steel connector housing (shells)

Clearance holes, two places

**02**  
Clearance hole,  $\text{Ø}3.91$  [.154]

Clearance holes, two places

**F**  
Float mounts

$\text{Ø}3.05 \pm 0.25$  [.120 $\pm$ .010]  
0.81 [.032] Total diametral float  
 $\text{Ø} 2.18 + 0.13 / - 0.00$  [.086 +.005 / -.000] clearance holes, two places

## SWAGED SPACERS

**C5**  
Standoffs, swaged, boardlock, cul-de-sac style, 4-40 threaded hole, 8.89 [.350]

4-40 UNC threads

8.89 [.350]

Cul-de-sac style swaged spacer

**C7**  
Inside wall mount, angle brackets, boardlocks, alignment bar

4-40 UNC threads

9.91 [.390]

Cul-de-sac style swaged spacer

**P**  
Standoffs, removable, brass

A

**S**  
Standoffs, swaged, 4-40

Printed board

$\text{Ø}4.75$  [.187]

A

Internal View of Standoff

0.38 [.015]

4-40 UNC threads\*

\*1 Non-removable threaded hardware is built and inspected to 0.56 Nm [5in/lbs] or 80 in/oz torque.

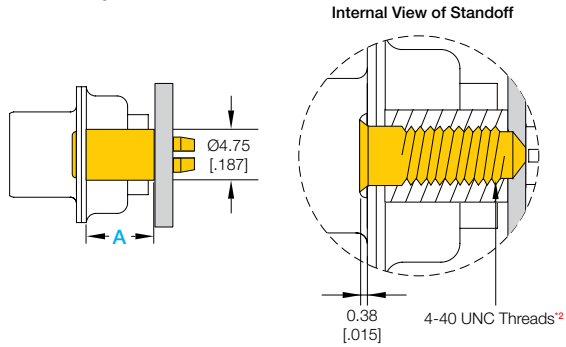
SERIES	Termination Code	A
MD, MDX, HDC	all	
ODD	21, 3, 32, 4, 5	5.72 [.225]
SND	2, 3, 32, 36, 42, 5	
CBD, CBM, CBDD	2, 21, 3, 35, 36, 37, 4, 5, 55, 57, 7, 75, 77, 65, 85	6.35 [.250]
SCBM	0, 2, 3, 35, 36, 37, 5, 55, 57, 65, 7, 75, 77, 85	6.35 [.250]
SCBDD	21, 3, 35, 36, 37, 4, 45, 47, 65, 84	
CBD, CBM, CBDD	93	6.73 [.265]
PCD, PCDD	98	
RD, ORD, DD, CBC, CBCD	all	
ODD	0, 1, 2	
SND	0, 1, 12	9.53 [.375]
SDD	all	
SCBC, SCBCD	all	
SD	all	11.10 [.437]

SERIES	Termination Code	A
MD, MDX, ED, HDC	all	5.72 [.225]
ODD	21, 3, 32, 4, 5	
CBD, CBDD, CBM	all	6.35 [.250]
RD, ORD, DD, CBC, CBCD	all	9.53 [.375]
ODD	0, 1, 2	
SD	all	11.10 [.437]

## SWAGED SPACER WITH BOARDLOCK

### S6\*1

Standoffs, swaged, 4-40, boardlocks



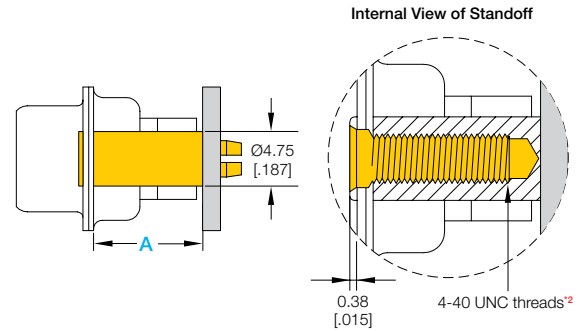
SERIES	Termination Code	A
MD, MDX, HDC	3, 32, 33, 36	5.72 [.225]
ODD	3, 32	
SND	3, 32, 36	6.35 [.250]
CBD, CBM, CBDD	3, 35, 36, 37, 65	
SCBM	3, 35, 36, 37, 65	
SCBDD	3, 35, 36, 37, 65	9.53 [.375]
DD	3, 32	
SDD	3, 32	11.10 [.437]
SD	3, 32	

\*1 Printed board mounting hole to be  $\text{Ø}3.12 \pm 0.08$  [.123 ± .003] for use with boardlocks.

\*2 Non-removable threaded hardware is built and inspected to 5in/lbs or 80 in/oz torque.

### S7\*1

Standoffs, swaged, 4-40, boardlocks, for use with F ferrite inductor

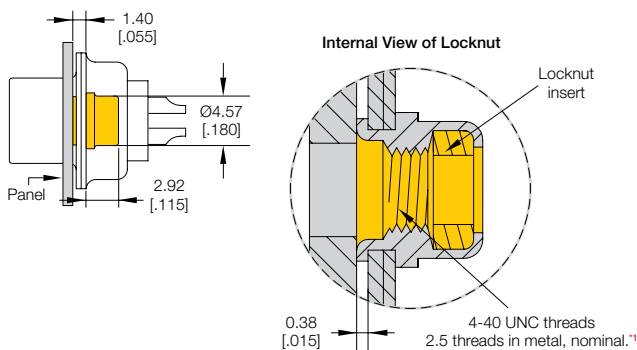


Connector Series	Termination Code	A
MD, MDX, HDC, ODD	32, 33	9.53 [.375]
ED, HDC	36	
DD	32, 33	13.08 [.515]

## SWAGED LOCKNUT

### S5

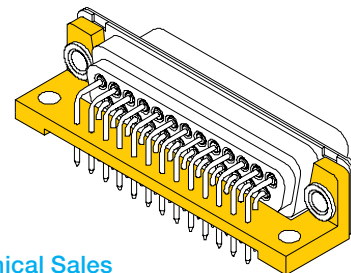
Locknut, swaged, 4-40



\*1 Non-removable threaded hardware is built and inspected to 5in/lbs or 80 in/oz torque.

## SWAGED PLASTIC MOUNTING BRACKETS WITH ALIGNMENT BAR

Non-conductive mounting brackets are necessary in many applications.

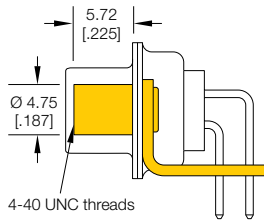


Contact Technical Sales for more information

## ANGLE BRACKET\*1

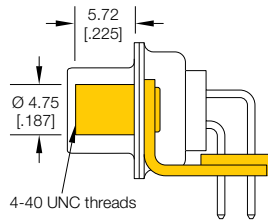
### R

Angle brackets, swaged, metal with fixed female jackposts



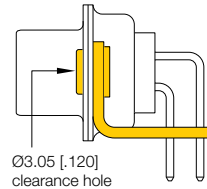
### R2\*1

Angle brackets, swaged, metal, alignment bar with fixed female jackposts



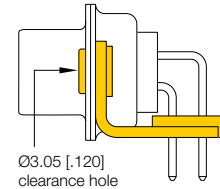
### R3

Angle brackets, swaged, metal, clearance hole, Ø3.05 [.120]



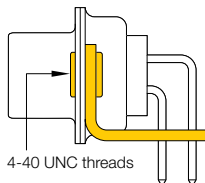
### R6\*1

Angle brackets, swaged, metal, clearance hole, Ø3.05 [.120], alignment bar



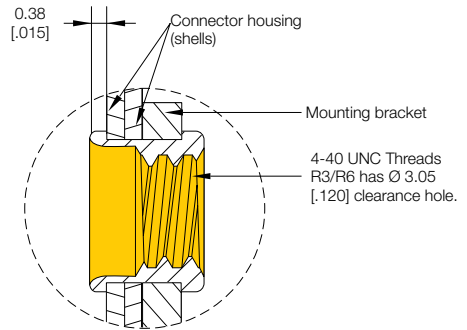
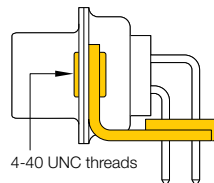
### R4

Angle brackets, swaged, metal, 4-40 threaded hole



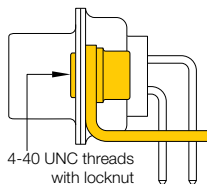
### R7\*1

Angle brackets, swaged, metal, 4-40 threaded hole, alignment bar



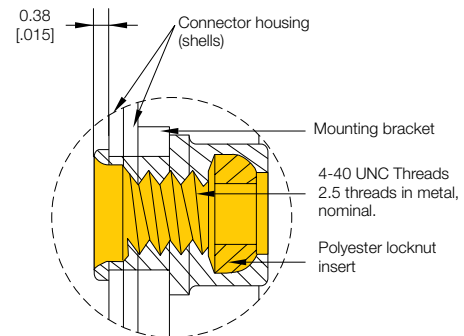
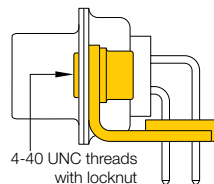
### R5

Angle brackets, swaged, metal, 4-40 locknut



### R8\*1

Angle brackets, swaged, metal, 4-40 locknut, alignment bar



\*1 Contact alignment bar is supplied with R2, R6, R7 and R8 options only.

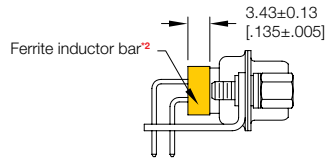
## FERRITE INDUCTOR BAR / BEADS

### F

Ferrite inductor<sup>1</sup>

### Q

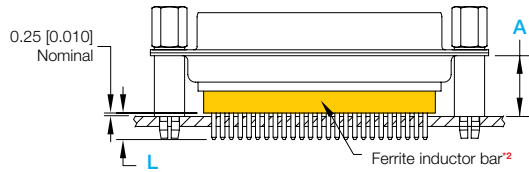
Ferrite inductor<sup>1</sup>,  
 for use with boardlocks and  
 right angle mounting brackets



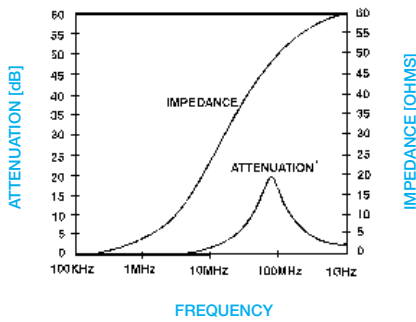
#### Notes

\*1 This bar option is available for connector layout options 9, 15, 25, and 37. Ferrite beads are used for the other sizes. Contact Technical Sales for ferrite inductor ordering information on those connectors.

\*2 Specify Code F or Q when ordering. F is for ferrite inductor and Q is for ferrite inductor with boardlocks and right angle brackets.



#### FILTERING CHARACTERISTICS



#### FERRITE INDUCTOR AVAILABILITY

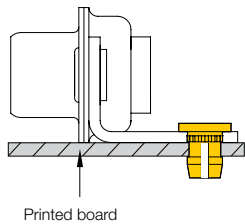
Termination Code	Series	A	L
32	MD, MDX, HDC	9.53 [.375]	6.10 [.240]
	ODD	9.53 [.375]	4.19 [.165]
	DD	13.08 [.515]	4.19 [.165]
33	MD, MDX, HDC	9.53 [.375]	9.27 [.365]
36	ED, HDC	9.53 [.375]	2.57 [.101]
4	MD, MDX	-	-
5	ODD	-	-
59	MD	-	-
6	MD, HDC	9.53 [.375]	9.14 [.360]

## BOARDLOCKS

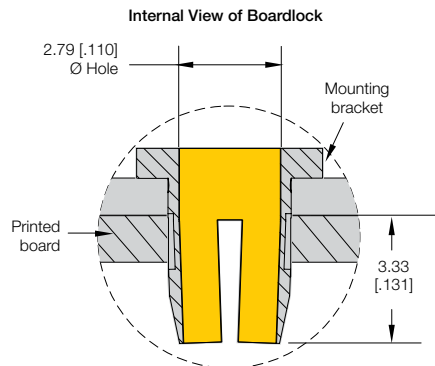
For use with code R,R2,R3,R4,R5,R6,R7,and R8

### N

Boardlocks, for use with angle brackets



Printed board mounting hole to be  
 $\varnothing 3.120 \pm 0.08$  [.123 ± .003] for use  
 with boardlock.



#### Typical Performance Evaluation Data

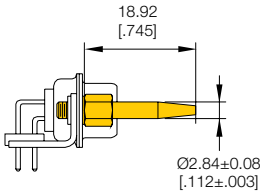
Printed Board Hole Ø	Insertion force		Retention force	
	Newton	Lbs.	Newton	Lbs.
3.05 [.120]	32.25	7-1/4	25.58	5-3/4
3.12 [.123]	25.58	5-3/4	24.47	5-1/2
3.18 [.125]	12.23	2-3/4	11.12	2-1/2
3.25 [.128]	7.78	1-3/4	10.01	2-1/4
3.20 [.126] Plated	7.78	1-3/4	10.01	2-1/4



## BLIND MATE SYSTEM

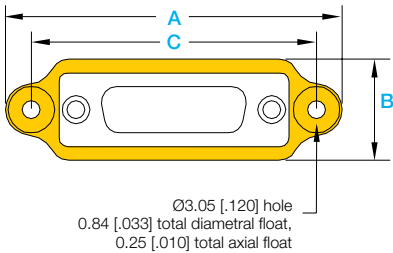
### Blind mating guide pins (MOS -759.0)

To obtain blind mating guide pins, add the suffix '-759.0' to the end of the part number.



### Float mounting plate (MOS -759.1)

To obtain float mounting plate, add the suffix '-759.1' to the end of the part number.



Contact Technical Sales for additional ordering information

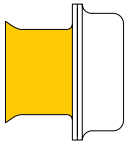
Shell Size	A (nominal)	B	C
1	49.02 [1.93]	17.20 [0.677]	40.28 [1.586]
2	57.35 [2.258]	17.20 [0.677]	48.62 [1.914]
3	71.25 [2.805]	17.20 [0.677]	62.51 [2.461]
4	87.53 [3.446]	17.20 [0.677]	78.79 [3.102]
5	85.14 [3.352]	20.04 [0.789]	76.40 [3.008]
6	87.53 [3.446]	21.59 [0.850]	78.79 [3.102]

The use of blind mating hardware on D-Sub connectors can create functional challenges within the application and therefore requires additional mechanical design rigor. Be aware that system tolerances must be exact and mating force allowances may need to be higher than expected. Customers should qualify the use of this option in their particular application.

## FLARED CONNECTOR HOUSING (SHELL)

### Flared MOS-1503.33

Flared connector housing



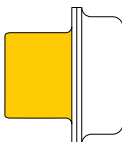
Flared connector housings provide a more **generous misalignment** characteristics than standard D-subminiature connector housings.



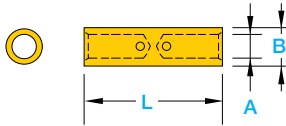
Contact Technical Sales for part numbers and detail information.

### Standard

Connector housing for reference



## IN-LINE CRIMP SPLICE



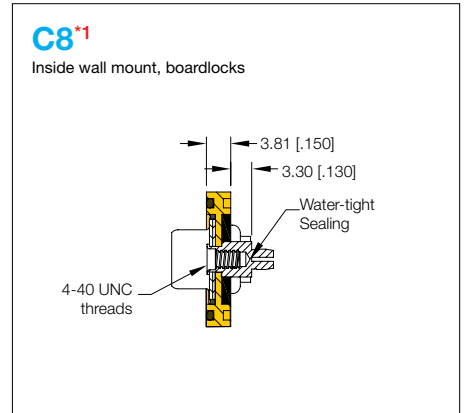
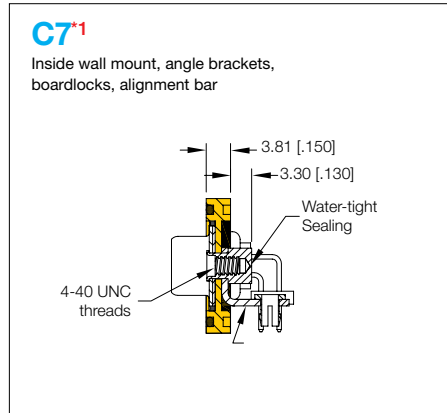
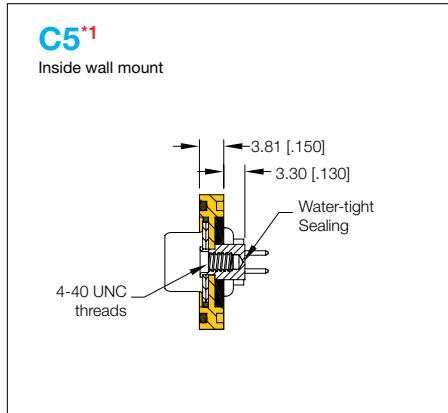
Contact Technical Sales for crimp tool part number

PART NUMBER	WIRE SIZE AWG / [mm <sup>2</sup> ]	L	A	B
PSK43636- <sup>*1</sup>	20-26 [0.5/0.12]	12.70 [0.500]	1.14 [0.045]	1.93 [0.076]
PSK43637- <sup>*1</sup>	16-20 [1.5/0.5]	14.61 [0.575]	1.68 [0.066]	2.57 [0.101]
PSK43638- <sup>*1</sup>	12-18 [4.0-1.0]	14.66 [0.577]	2.46 [0.097]	3.81 [0.150]

<sup>\*1</sup> To order crimp splice with insulating sleeve, add '-W' suffix to part number. To order without sleeve, add '-N' suffix.

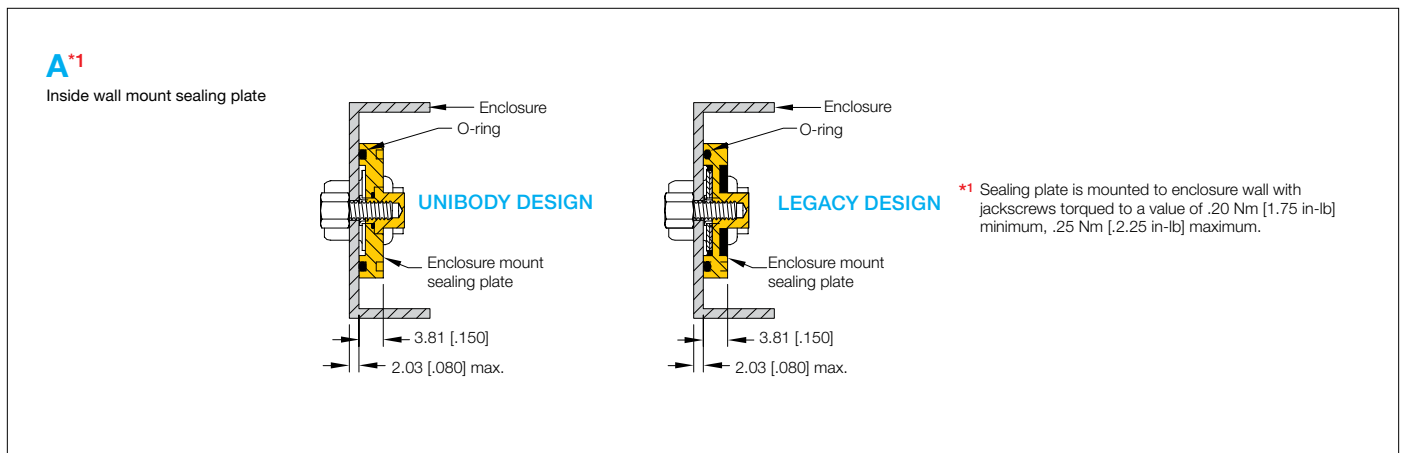
## CUL-DE-SAC STYLE INSIDE WALL MOUNT

For use with code WD and WDD



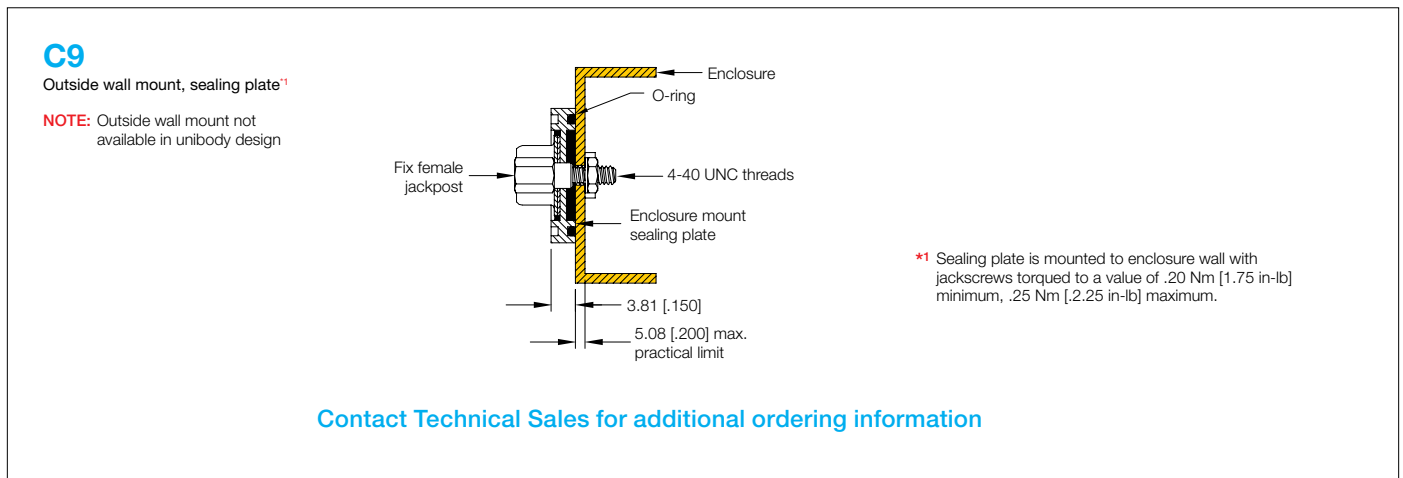
## ENCLOSURE WALL MOUNT SEALING PLATE

For use with code WD and WDD



## OUTSIDE WALL ENCLOSURE MOUNT

For use sealed D-sub connectors requiring to be mounted to outside of the enclosure



## INTERFACIAL SEAL

Available for male connectors only. Furnished with all male WD and WDD series connectors

**Size 25** interfacial seal shown for reference only

Shell Size	Gender	A	B
1	Male	17.17 [.676]	8.59 [.338]
2	Male	25.40 [1.000]	8.59 [.338]
3	Male	39.37 [1.550]	8.59 [.338]
4	Male	55.57 [2.188]	8.59 [.338]
5	Male	52.78 [2.078]	11.18 [.440]
6	Male	56.17 [2.212]	12.85 [.506]

Contact Technical Sales for additional ordering information

## INTERFACIAL SEAL / REAR GROMMETS

For use with EVD series

Interfacial seal      Rear grommet

0.94 [.037]

10.41 [.410]

2.29 [.090]

INTERFACIAL SEAL & REAR GROMMET			
Layout	Seal Type	A	B
9	Interfacial	16.51 [.650]	8.08 [.318]
	Grommet	18.421 [.725]	9.53 [.375]
15	Interfacial	24.84 [.978]	8.08 [.318]
	Grommet	26.70 [1.051]	9.53 [.375]
25	Interfacial	38.43 [1.513]	8.08 [.318]
	Grommet	40.51 [1.595]	9.53 [.375]
37	Interfacial	54.76 [2.156]	8.08 [.318]
	Grommet	57.07 [2.247]	9.53 [.375]
50	Interfacial	52.27 [2.058]	10.80 [.425]
	Grommet	54.53 [2.147]	12.45 [.490]

## SEALING PLUGS

For use with EVD series, Order separately, part number A4737-37-0-0

3.48 [.137]

14.16 [.557]

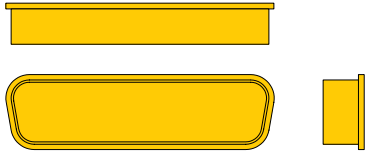
1.40 [0.055]

2.36 [0.093]

## PROTECTIVE COVER

### Cover Without Ears

For connectors without fixed female jackscrews



### Cover With Ears

For connectors with fixed female jackscrews

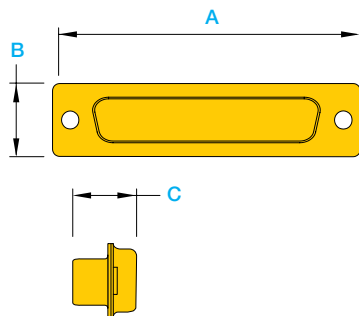


Shell Size	Gender	REPLACEMENT PART NUMBERS		
		Conductive Without Ears	Static Dissipative Without Ears	With Ears
1	Male	A4931-9-0-0	A4931-9-1-0	A4931-9-100-0
	Female	A4932-9-0-0	A4932-9-1-0	A4932-9-100-0
2	Male	A4931-15-0-0	A4931-15-1-0	A4931-15-100-0
	Female	A4932-15-0-0	A4932-15-1-0	A4932-15-100-0
3	Male	A4931-25-0-0	A4931-25-1-0	A4931-25-100-0
	Female	A4932-25-0-0	A4932-25-1-0	A4932-25-100-0
4	Male	A4931-37-0-0	A4931-37-1-0	A4931-37-100-0
	Female	A4932-37-0-0	A4932-37-1-0	A4932-37-100-0
5	Male	A4931-50-0-0	A4931-50-1-0	A4931-50-100-0
	Female	A4932-50-0-0	A4932-50-1-0	A4932-50-100-0
6	Male	---	---	A4931-16-100-0
	Female	---	---	A4932-16-100-0

## EMI/RFI PROTECTIVE COVER

For use with code SAD, SADD, SACBM, SND, SDD, SCBM, SCBC, SCBDD and SCBCD

### EMI/RFI Cover

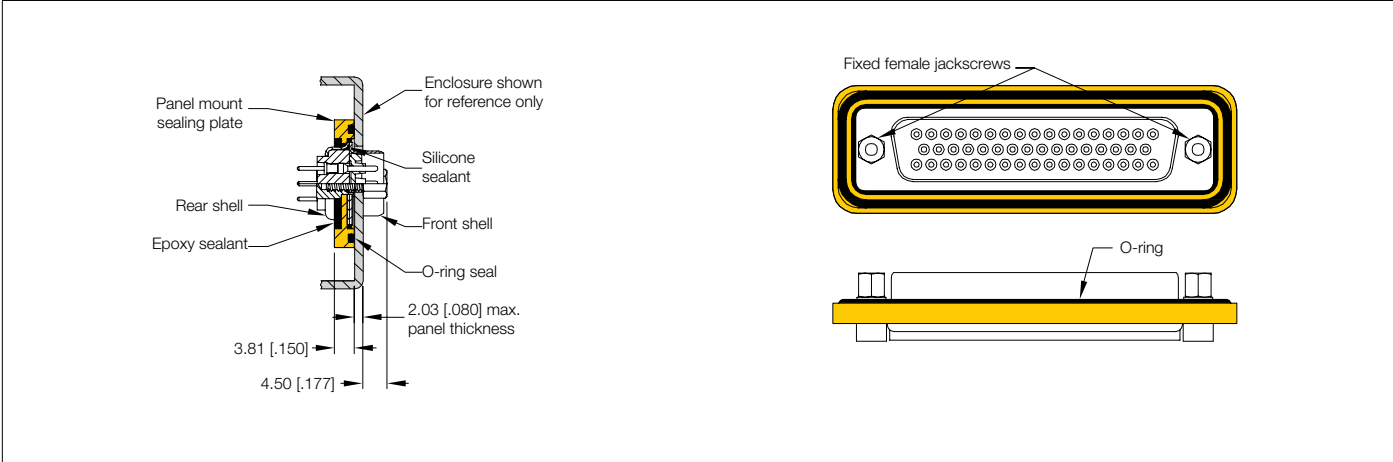


Shell Size	PART NUMBER	Mates To Gender	A ±0.38 [.015]	B ±0.38 [.015]	C ±0.25 [.010]
1	PSK633-9MG <sup>*1</sup>	Female	30.81 [1.213]	12.55 [.494]	10.72 [.422]
	PSK633-9FG <sup>*1</sup>	Male			10.90 [.429]
2	PSK633-15MG <sup>*1</sup>	Female	39.14 [1.541]	12.55 [.494]	10.72 [.422]
	PSK633-15FG <sup>*1</sup>	Male			10.90 [.429]
3	PSK633-25MG <sup>*1</sup>	Female	53.04 [2.088]	12.55 [.494]	10.82 [.426]
	PSK633-25FG <sup>*1</sup>	Male			10.90 [.429]
4	PSK633-37MG <sup>*1</sup>	Female	69.32 [2.729]	12.55 [.494]	10.82 [.426]
	PSK633-37FG <sup>*1</sup>	Male			10.90 [.429]
5	PSK633-50MG <sup>*1</sup>	Female	66.93 [2.635]	15.37 [.605]	10.82 [.426]
	PSK633-50FG <sup>*1</sup>	Male			10.90 [.429]
6	PSK633-104MG <sup>*1</sup>	Female	69.32 [2.729]	16.97 [.668]	10.82 [.426]
	PSK633-104FG <sup>*1</sup>	Male			10.90 [.429]

<sup>\*1</sup> To order protective cover with code 'E2' rotating male screw locks, insert "N" into the last digit of part number. Omit this digit if thread locks are not required.

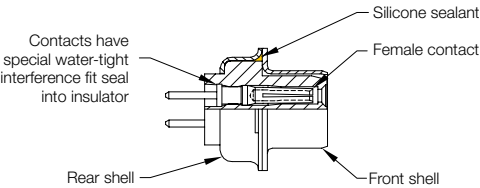
# MACHINED ALUMINUM MOUNTING PLATE

With conductive o-ring

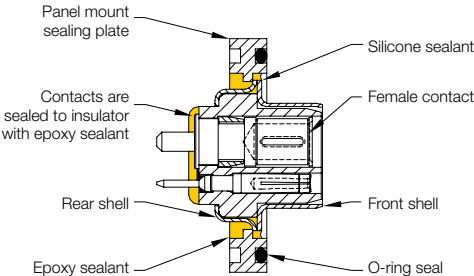


# OTHER SEALED D-SUBMINIATURE CONNECTOR OPTIONS

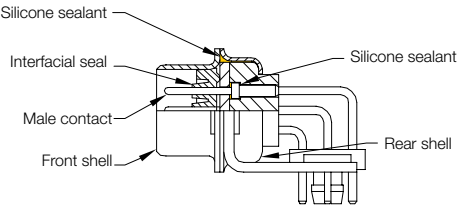
## MD Style Connector



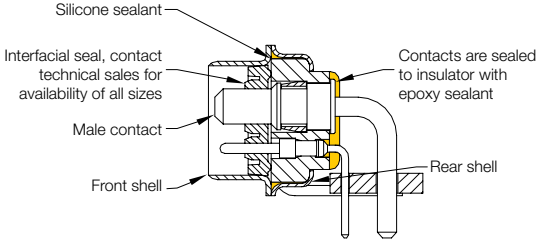
## COMBO-D Style Connector



## ODD Style Connector



## COMBO-D Style Connector







**SEALED STANDARD OR HIGH DENSITY D-SUBMINIATURE**

- Available in both standard density and high density connector variants.
- Standard MD or ODD series connectors can be sealed between the connector shell and the connector insert.
- Contact technical sales for more information.

**SEALED COMBINATION D-SUBMINIATURE**

- Could be supplied with mounting plate or without.
- Contact technical sales for more information or additional contact configurations.

See [connectpositronic.com](http://connectpositronic.com)  
for all other Dsub-related  
information including:

- ✓ **Footprints** 
- ✓ **Tooling** 
- ✓ **Product updates** 
- ✓ **Detailed dimensions** 
- ✓ **2D/3D drawings** 

All dimensional tolerances are  $\pm 0.38$  [0.015], unless otherwise specified. Dimensions are in millimeters [inches]. All dimensions are subject to change. Product pictures may not be identical in appearance to actual production parts.

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Products described within this catalog may be protected by one or more of the following US patents:

#4,900,261 #5,255,580 #5,329,697 #6,260,268  
#6,835,079 #7,115,002 #8,944,697 #9,304,263

Patented in Canada, 1992 Other patents pending

**Federal Supply Code for Manufacturers**

Positronic Industries: 28198  
Positronic Industries SAS: FA7Y0  
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