

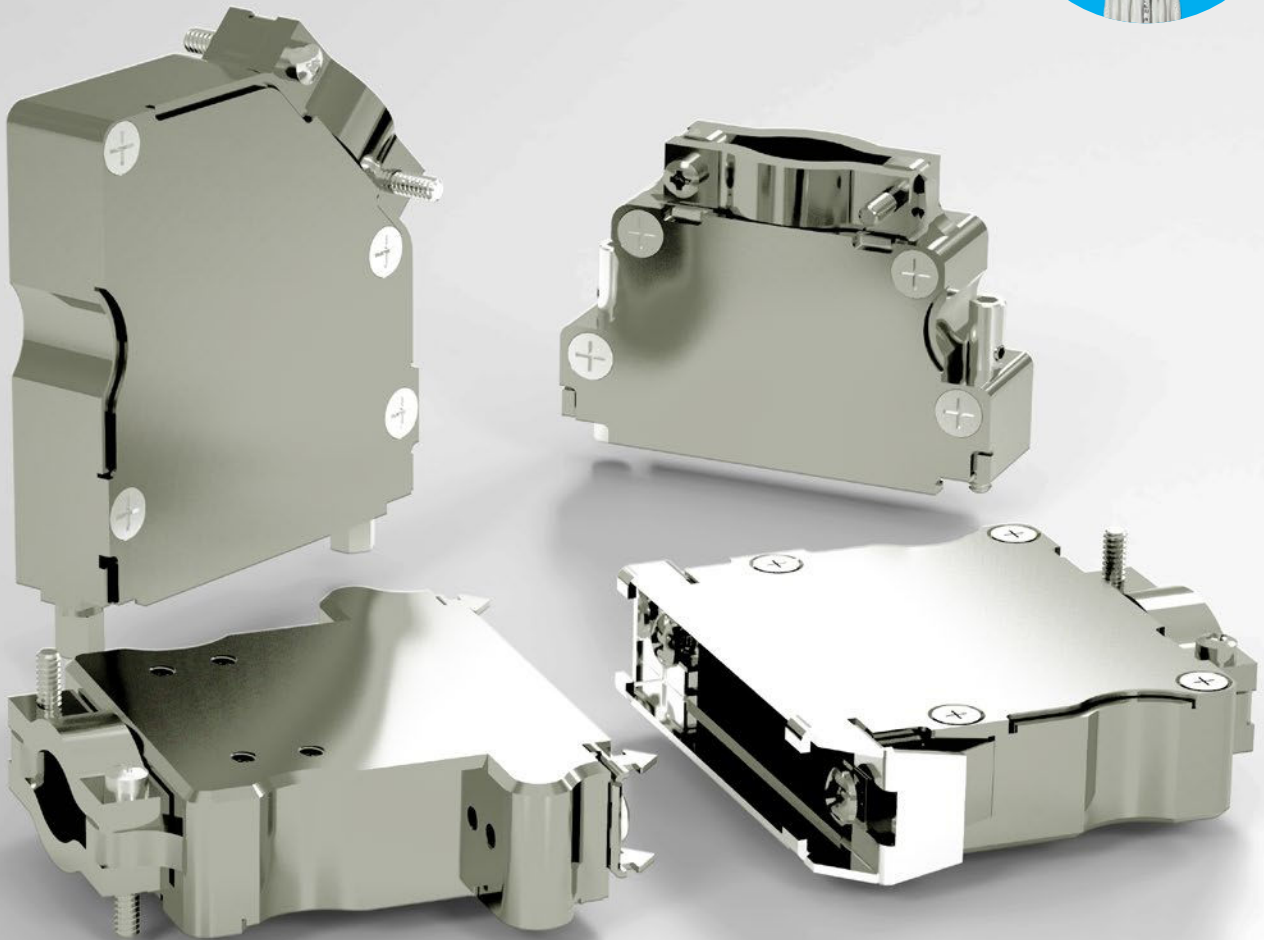
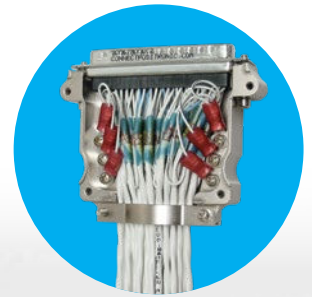
# LIGHTWEIGHT ALUMINUM BACKSHELLS

## FOR USE WITH D-SUB CONNECTORS

Positronic Lightweight Aluminum Backshells ensure high-performance connections and a long life in the field. Built for mission-critical applications, these backshells provide an excellent combination of size, weight, performance and protection. Choose from one of our three standard designs or a custom solution to meet your needs.

Trust **Positronic** to deliver *The Science of Certainty*.

- Internal Grounding
- Wide Aperture
- Quick Disconnect Lock or Jackscrews
- All Shell Sizes



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

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

M019 Rev B1 23/08

## 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

## LOCKING SYSTEM

- Available with jackscrews or quick disconnect locking device

## SPACIOUS INTERIOR

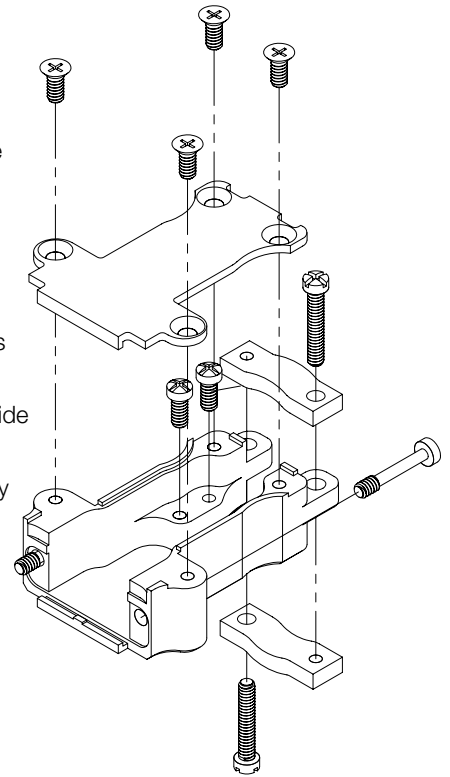
- Shape maximizes internal area which facilitates harness assembly
- No obstruction behind any portion of the connector body allows backshell to be used with Combo-D connectors

## 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 GRIPS

- Grip facilitates installation and removal in tight spaces



## TECH SPECS

### MATERIAL AND FINISHES

Backshell & Cable Clamps	Aluminum; aluminum with electroless nickel plate; aluminum with yellow anodize; aluminum with chemical conversion coating. 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

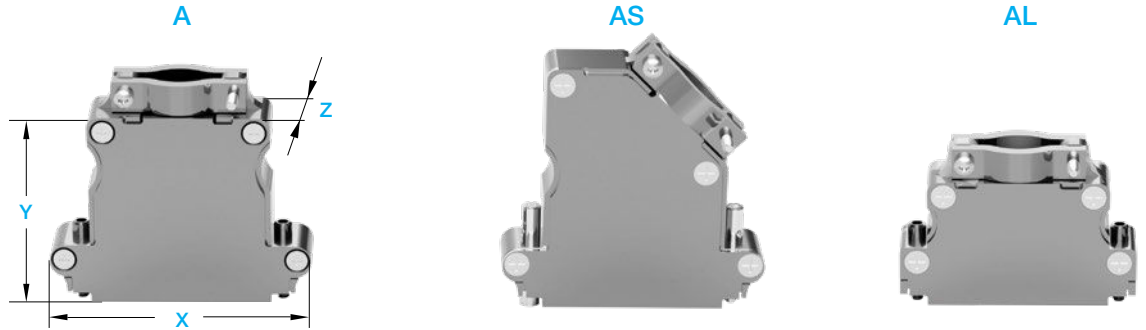
Range of Operation, Calculated Method	2 GHz minimum
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### MECHANICAL

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
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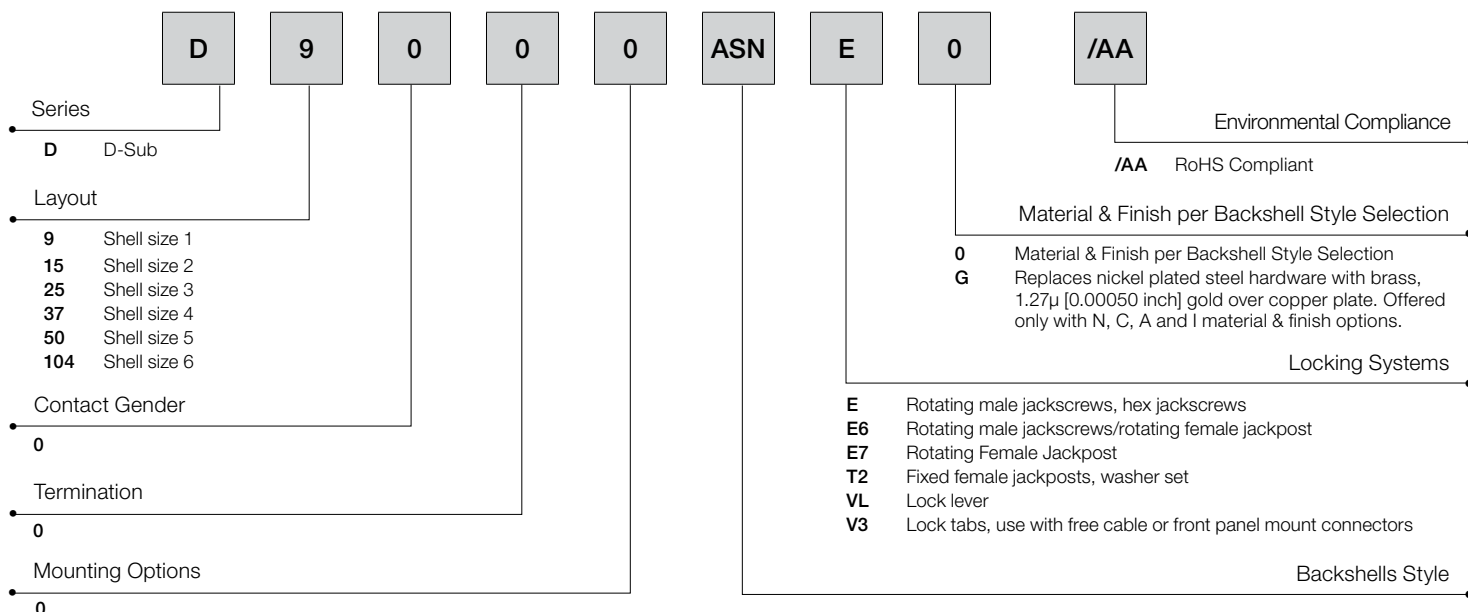
mm [inches]	Shell Size	STRAIGHT EXIT		SIDE EXIT		STRAIGHT EXIT, LOW-PROFILE
		Locking System E, E6, or E7	Locking System T2, VL, or V3	Locking System E, E6, or E7	Locking System T2, VL, or V3	Locking System E, E6, or E7
INTERNAL GROUND SCREWS	1	4	4	1	2	1
	2	4	4	2	3	2
	3	4	4	3	3	2
	4, 5, 6 <sup>o</sup>	6	6	4	4	2
X DIMENSION	1	38.71 [1.524]	30.96 [1.219]	38.72 [1.524]	30.96 [1.219]	32.33 [1.273]
	2	47.04 [1.852]	39.29 [1.547]	47.07 [1.852]	39.29 [1.547]	40.64 [1.600]
	3	60.76 [2.392]	53.19 [2.094]	60.76 [2.392]	53.19 [2.094]	54.61 [2.150]
	4, 6 <sup>o</sup>	77.22 [3.040]	69.49 [2.736]	77.22 [3.040]	69.49 [2.736] <sup>o</sup>	71.12 [2.800]
	5	74.83 [2.946]	67.11 [2.642]	74.83 [2.946]	67.11 [2.642]	68.60 [2.701]
Y DIMENSION	1	53.09 [2.090]	50.08 [2.000]	55.84 [2.198]	50.92 [2.005]	35.05 [1.380]
	2	53.09 [2.090]	50.08 [2.000]	62.91 [2.477]	59.96 [2.361]	37.85 [1.490]
	3	53.09 [2.090]	50.08 [2.000]	62.85 [2.474]	59.96 [2.361]	37.85 [1.490]
	4, 5, 6 <sup>o</sup>	59.44 [2.340]	57.15 [2.250]	74.07 [2.916]	73.17 [2.881]	37.85 [1.490]
Z DIMENSION	1, 2, 3, 4	15.65 [.616]	14.88 [.586]	15.65 [.616]	14.88 [.586]	15.65 [.616]
	5	18.47 [.727]	17.70 [.697]	18.47 [.727]	17.70 [.697]	18.47 [.727]
	6 <sup>o</sup>	20.07 [.790]	19.30 [.760]	20.07 [.790]	19.30 [.760]	20.07 [.790]
MAX CABLE OPENING	1	9.19 [.362] x 12.27 [.483]	9.19 [.362] x 11.51 [.453]	9.19 [.362] x 12.27 [.483]	9.19 [.362] x 11.51 [.453]	8.64 [.340] x 11.98 [.471]
	2	17.53 [.690] x 12.27 [.483]	17.53 [.690] x 11.51 [.453]	17.53 [.690] x 12.27 [.483]	17.53 [.690] x 11.51 [.453]	10.21 [.402] x 12.27 [.483]
	3	17.53 [.690] x 12.27 [.483]	17.53 [.690] x 11.51 [.453]	17.53 [.690] x 12.27 [.483]	17.53 [.690] x 11.51 [.453]	18.42 [.725] x 12.27 [.483]
	4	31.55 [1.242] x 12.27 [.483]	31.55 [1.242] x 11.51 [.453]	31.52 [1.241] x 12.27 [.483]	31.52 [1.241] x 11.51 [.453]	31.52 [1.241] x 12.27 [.483]
	5	31.55 [1.242] x 15.09 [.594]	31.55 [1.242] x 14.33 [.564]	31.52 [1.241] x 15.09 [.594]	31.52 [1.241] x 14.33 [.564]	31.44 [1.238] x 15.09 [.594]
	6 <sup>o</sup>	31.55 [1.242] x 16.69 [.657]	31.55 [1.242] x 15.93 [.627]	31.52 [1.241] x 16.69 [.657]	31.52 [1.241] x 15.93 [.627]	31.52 [1.241] x 16.69 [.657]
WEIGHT (grams) [ounces]	1	30.54 [1.08] <sup>*1</sup>	40.50 [1.43] <sup>*2</sup>	28.03 [0.99] <sup>*1</sup>	39.11 [1.38] <sup>*2</sup>	20.55 [0.72] <sup>*1</sup>
	2	37.44 [1.32] <sup>*1</sup>	45.24 [1.60] <sup>*2</sup>	37.47 [1.32] <sup>*1</sup>	50.39 [1.78] <sup>*2</sup>	27.71 [0.98] <sup>*1</sup>
	3	45.92 [1.62] <sup>*1</sup>	55.22 [1.95] <sup>*2</sup>	50.81 [1.79] <sup>*1</sup>	63.19 [2.23] <sup>*2</sup>	33.19 [1.17] <sup>*1</sup>
	4	62.06 [2.19] <sup>*1</sup>	71.60 [2.53] <sup>*2</sup>	71.24 [2.51] <sup>*1</sup>	87.81 [3.10] <sup>*2</sup>	40.64 [1.43] <sup>*1</sup>
	5	63.94 [2.26] <sup>*1</sup>	74.00 [2.61] <sup>*2</sup>	73.56 [2.59] <sup>*1</sup>	91.80 [3.24] <sup>*2</sup>	41.11 [1.45] <sup>*1</sup>
	6 <sup>o</sup>	68.44 [2.41] <sup>*1</sup>	69.34 [2.44] <sup>*3</sup>	78.88 [2.78] <sup>*1</sup>	91.11 [3.21] <sup>*3</sup>	44.75 [1.58] <sup>*1</sup>
CONTACT ARRANGEMENT COMPATIBILITY	1	Std-D:9, 5W1,2WK2; High-D:15,8W2		Std-D:9, 5W1,2WK2; High-D:15,8W2		Std-D: 9; High-D: 15
	2	Std-D:15, 3W3,3WK3,7W2,11W1; High-D:26, 19W1		Std-D:15, 3W3,3WK3,7W2,11W1; High-D:26, 19W1		Std-D: 15; High-D: 26
	3	Std-D:25, 5W5,9W4,13W3,17W2,21W1; High-D:44, 15W4		Std-D:25, 5W5,9W4,13W3,17W2,21W1; High-D:44, 15W4		Std-D: 25; High-D: 44
	4	Std-D:37, 8W8,13W6,17W5,21WA4,25W3,27W2; High-D:62, 45W2		Std-D:37, 8W8,13W6,17W5,21WA4,25W3,27W2; High-D:62, 45W2		Std-D: 37; High-D: 62
	5	Std-D:50, 24W7,36W4,43W2,47W1; High-D:78		Std-D:50, 24W7,36W4,43W2,47W1; High-D:78		Std-D: 50; High-D: 78
	6 <sup>o</sup>	Std-D:46W4; High-D:104		Std-D:46W4; High-D:104		High-D: 104

<sup>o</sup>=VL/V3 option does not apply for Shell size 6. | <sup>\*1</sup>=Weight for 'E' Jackscrew configuration, contact technical sales for 'E6' and 'E7' | <sup>\*2</sup>=Weight for 'VL' lock lever, contact technical sales for 'T2' and 'V3' | <sup>\*3</sup>=Weight for 'T2' jackscrew

# Positronic Lightweight Aluminum Backshells

## CREATE A PART

For additional information on accessories listed in Mounting Options, Backshell Style and Locking Systems, see our D-sub Accessories Catalog  
Contact Technical Sales to include a Lightweight Aluminum Backshell as part of your Positronic connector kit part number.



### BACKSHELL TYPE 1.1

- A Straight Exit
- AS Side Exit
- AL Low Profile

### MATERIAL & FINISH OPTIONS 1.2

Backshell & Cable Clamp Finish		Hardware Material & Finish
<i>Standard Platings</i>		
N	Nickel	Steel with nickel plate
C	No finish	Steel with nickel plate
<i>Optional Platings</i>		
A	Anodize	Steel with nickel plate
B <sup>*1</sup>	Anodize	Brass with zinc plate and chromate seal
D <sup>*1</sup>	No finish	Brass with zinc plate and chromate seal
I	Chemical conversion coating	Steel with nickel plate
J <sup>*1</sup>	chemical conversion coating	Brass with zinc plate and chromate seal

<sup>\*1</sup> Offered only with T2, E, E6, and E7 locking system options

All dimensional tolerances are ± 0.38 [0.015], unless otherwise specified: ±0.03 mm [0.001 inches] for male contact mating diameters; ±0.08 mm [0.003 inches] for contact termination diameters; ±0.13 mm [0.005 inches] for all other diameters; ±0.38 mm [0.015 inches] for all other dimensions. Dimensions are in millimeter [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  
Positronic Asia Pte Ltd: QB952

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