

# "ZERO-CROSSTALK" M83513 Micro-D VersaLink™ Connectors



## GVL RPM-BS, Rear Panel Mount, Straight PCB Connectors

MICRO-D VERSALINK CONNECTORS

### MATERIALS AND FINISHES

- Connector shell: aluminum alloy 6061
- Insulator (v): rigid dielectric
- Insulator (m): liquid crystal polymer (LCP) or polyphenylene sulfide (PPS)
- Flange seal: fluorosilicone rubber, blue
- O-ring: conductive elastomer or non-conductive nitrile rubber, blue
- Pin contact: copper alloy, gold over nickel plating
- Socket contact: copper alloy, gold over nickel plating
- Ground pin: copper alloy, gold plating
- Ground spring: stainless steel, gold plating
- Hardware: 300 series stainless steel, passivated
- Encapsulant: epoxy resin Hysol EE4215

### PERFORMANCE SPECIFICATIONS

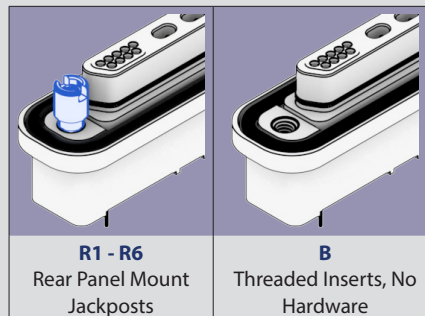
- Current rating: 3 amp (micro-d pins)
- DWV: 600 VAC sea level
- Insulation resistance: 5000 megohms minimum
- Operating temperature: -55°C to 150°C
- Mating force (contact m): (10 ounces) x (# of contacts)
- Mating force (contact v): (5 ounces) x (# of contacts)
- Electrical performance IAW Glenair specification GT-19-230
- Interface dimensions IAW MIL-DTL-83513
- Reference application notes AN0005 for optimal performance

### NOTES

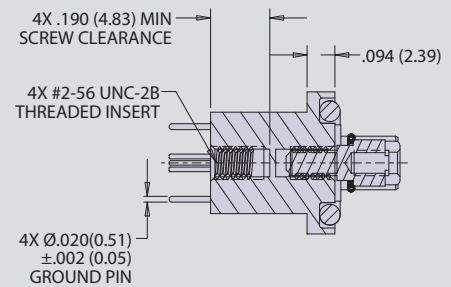
1. Refer to GHS4-M-1000 insert arrangement for insert arrangement details on page 90.
2. Refer to GVL M-1000 for GVL RPM-BS PCB footprints on page 130.
3. Plug connector uses pin Micro-D contacts and socket VersaLink contacts. Receptacle uses socket Micro-D contacts and pin VersaLink contacts.
4. Refer to MIL-DTL-83513 panel cutout details on page 91.
5. Recommended mating dimensions must be maintained when no hardware is used, see page 91.
6. PC tails are solder-dipped in 60/40 tin-lead solder
7. Refer to 500-154 for protective cover on page 161.

PART NUMBER DEVELOPMENT									
Sample Part Number	GVL RPM	2	L-	2-9	P	BS	R3	C	-.110
<b>Series</b>	GVL RPM = VersaLink Micro-D Rear Panel Mount								
<b>Shell Finish</b>	2 = Nickel 5 = Gold								
<b>Insulator Material</b>	L = LCP or PPS								
<b>Contact Layout (V-M)<sup>1</sup></b>	1-0, 1-9, 2-0, 2-9, 2-15, 2-21, 3-9, 4-0, 4-15, 4-31, 8-9, 10-0								
<b>Connector Type<sup>3</sup></b>	P = Plug S = Receptacle								
<b>Connector Style</b>	BS = Straight Board Mount								
<b>Hardware<sup>4</sup></b>	Rear panel mount jackposts (Length in Inches): R1 = .032 panel R2 = .047 panel R3 = .062 panel R4 = .093 panel R5 = .125 panel R6 = .080 panel B = Threaded Inserts, No Hardware								
<b>O-Ring</b>	C = Conductive N = Non-conductive (Nitrile) F = Fluorosilicone								
<b>PC Tail Length<sup>5</sup></b>	-.080, -.110, -.140 (Length in Inches +.020/-0.000)								

### HARDWARE



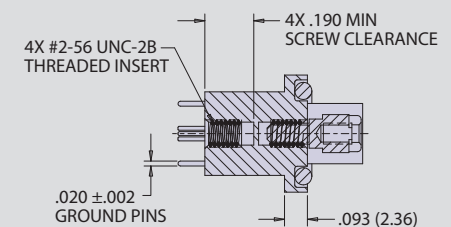
### PLUG CUTAWAY



### INSERT ARRANGEMENTS

Insert Arrangements	No. of Contacts	
	VersaLink (V)	TwistPin Skt (M)
1-0	1	0
2-0	2	0
1-9	1	9
2-9	2	9
4-0	4	0
2-15	2	15
2-21	2	21
3-9	3	9
4-15	4	15
4-31	4	31
8-9	8	9
10-0	10	0

### RECEPTACLE CUTAWAY

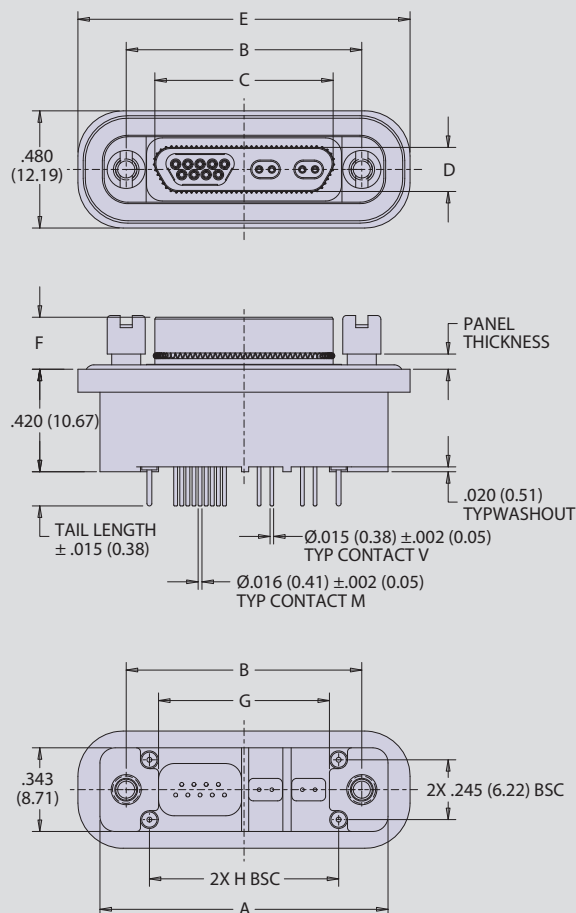


# "ZERO-CROSSTALK" M83513 Micro-D VersaLink™ Connectors

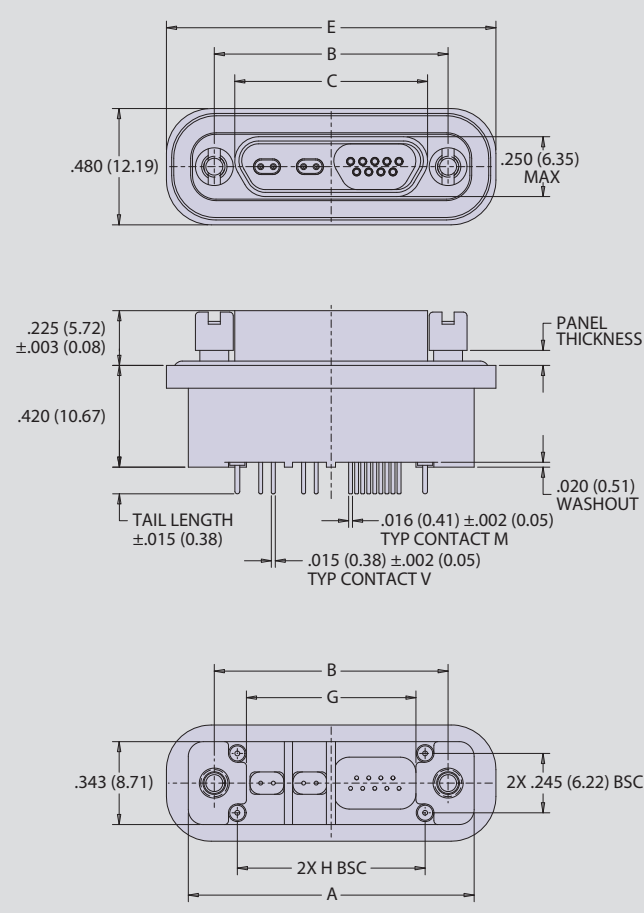


## GVL RPM-BS, Rear Panel Mount, Straight PCB Connectors

### GVL RPM-BS PCB STRAIGHT PLUG CONNECTOR



### GVL RPM-BS PCB STRAIGHT RECEPTACLE CONNECTOR



#### PLUG DIMENSIONS

LAYOUT	A MAX	B±.005	C MAX	D MAX	E MAX	F±.003	G±.005	H ±.005
1-0P	0.785 (19.94)	0.565 (14.35)	0.333 (8.46)	0.184 (4.67)	0.965 (24.51)	0.213 (5.41)	0.300 (7.62)	0.375 (9.53)
2-0P	0.935 (23.75)	0.715 (18.16)	0.483 (12.27)	0.184 (4.67)	1.115 (28.32)	0.213 (5.41)	0.450 (11.43)	0.525 (13.34)
1-9P	1.085 (27.56)	0.865 (21.97)	0.633 (16.08)	0.184 (4.67)	1.265 (32.13)	0.213 (5.41)	0.600 (15.24)	0.675 (17.15)
2-9P	1.185 (30.10)	0.965 (24.51)	0.733 (18.62)	0.184 (4.67)	1.365 (34.67)	0.213 (5.41)	0.700 (17.78)	0.775 (19.69)
4-0P	1.185 (30.10)	0.965 (24.51)	0.733 (18.62)	0.184 (4.67)	1.365 (34.67)	0.213 (5.41)	0.700 (17.78)	0.775 (19.69)
2-15P	1.335 (33.91)	1.115 (28.32)	0.833 (21.16)	0.184 (4.67)	1.515 (38.48)	0.213 (5.41)	0.850 (21.59)	0.925 (23.50)
3-9P	1.485 (37.72)	1.265 (32.13)	1.033 (26.24)	0.184 (4.67)	1.665 (42.29)	0.213 (5.41)	1.000 (25.40)	1.075 (27.31)
4-15P	1.835 (46.61)	1.615 (41.02)	1.384 (35.15)	0.184 (4.67)	2.015 (51.18)	0.213 (5.41)	1.350 (34.29)	1.425 (36.20)
4-31P	2.235 (56.77)	2.015 (51.18)	1.784 (45.31)	0.184 (4.67)	2.415 (61.34)	0.213 (5.41)	1.750 (44.45)	1.825 (46.36)
8-9P	2.235 (56.77)	2.015 (51.18)	1.784 (45.31)	0.184 (4.67)	2.415 (61.34)	0.213 (5.41)	1.750 (44.45)	1.825 (46.36)
10-0P	2.235 (56.77)	2.015 (51.18)	1.784 (45.31)	0.184 (4.67)	2.415 (61.34)	0.213 (5.41)	1.750 (44.45)	1.825 (46.36)

#### RECEPTACLE DIMENSIONS

LAYOUT	A MAX	B±.005	C MAX	E MAX	G±.005	H ±.005
1-0S	0.785 (19.94)	0.565 (14.35)	.400 (10.16)	0.965 (24.51)	0.300 (7.62)	0.375 (9.53)
2-0S	0.935 (23.75)	0.715 (18.16)	.551 (14.00)	1.115 (28.32)	0.450 (11.43)	0.525 (13.34)
1-9S	1.085 (27.56)	0.865 (21.97)	.701 (17.81)	1.265 (32.13)	0.600 (15.24)	0.675 (17.15)
2-9S	1.185 (30.10)	0.965 (24.51)	.801 (20.35)	1.365 (34.67)	0.700 (17.78)	0.775 (19.69)
4-0S	1.185 (30.10)	0.965 (24.51)	.801 (20.35)	1.365 (34.67)	0.700 (17.78)	0.775 (19.69)
2-15S	1.335 (33.91)	1.115 (28.32)	.951 (24.16)	1.515 (38.48)	0.850 (21.59)	0.925 (23.50)
3-9S	1.485 (37.72)	1.265 (32.13)	1.101 (27.97)	1.665 (42.29)	1.000 (25.40)	1.075 (27.31)
4-15S	1.835 (46.61)	1.615 (41.02)	1.450 (36.83)	2.015 (51.18)	1.350 (34.29)	1.425 (36.20)
4-31S	2.235 (56.77)	2.015 (51.18)	1.850 (46.99)	2.415 (61.34)	1.750 (44.45)	1.825 (46.36)
8-9S	2.235 (56.77)	2.015 (51.18)	1.850 (46.99)	2.415 (61.34)	1.750 (44.45)	1.825 (46.36)
10-0S	2.235 (56.77)	2.015 (51.18)	1.850 (46.99)	2.415 (61.34)	1.750 (44.45)	1.825 (46.36)

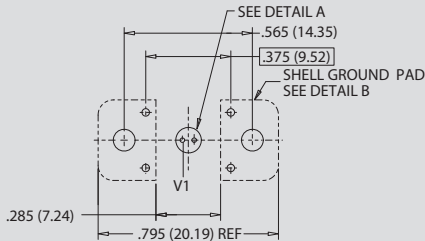
# "ZERO-CROSSTALK" M83513 Micro-D VersaLink™ Connectors



GVLM-1000: GVL RPM-BS, Rear Panel Mount, Straight PCB Connector Footprints

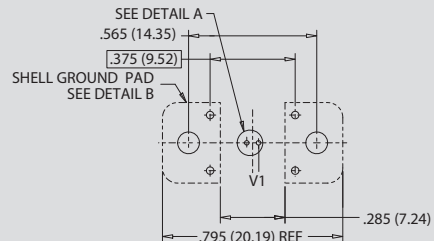
MICRO-D VERSALINK CONNECTORS

**Plug Layout 1-0**



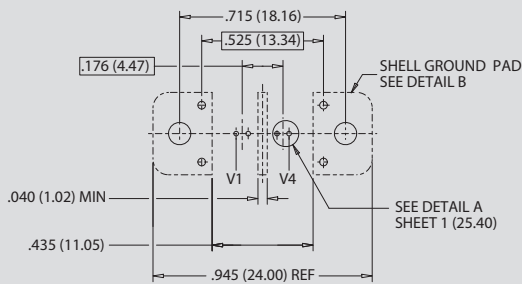
JACKPOST HARDWARE (P and R1 -R6)

**Receptacle Layout 1-0**



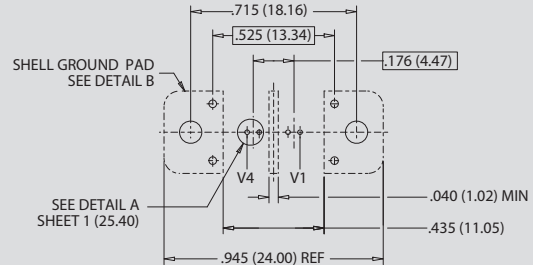
JACKPOST HARDWARE (P and R1 -R6)

**Plug Layout 2-0**



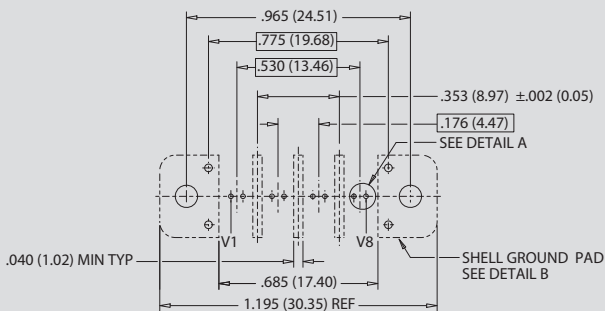
JACKPOST HARDWARE (P AND R1-R6)

**Receptacle Layout 2-0**



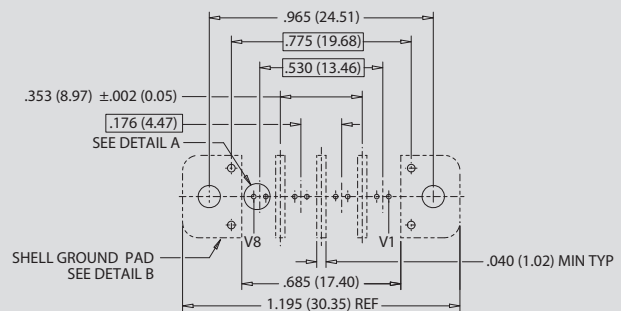
JACKPOST HARDWARE (P AND R1-R6)

**Plug Layout 4-0**



JACKPOST HARDWARE (P)

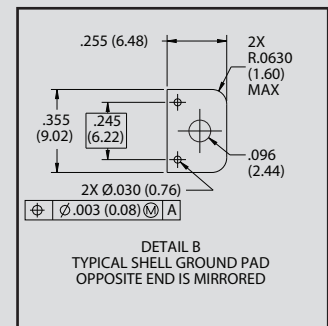
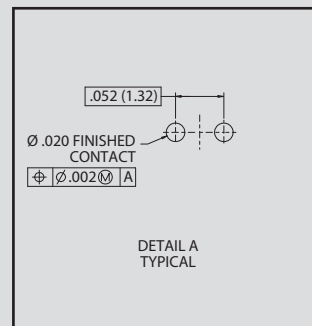
**Receptacle Layout 4-0**



JACKPOST HARDWARE (P)

**NOTES**

1. Patterns shown are for connector mounting side of PC board.
2. Reference GVL RPM-BS for connector details.
3. Reference application notes AN0005 for optimal performance.

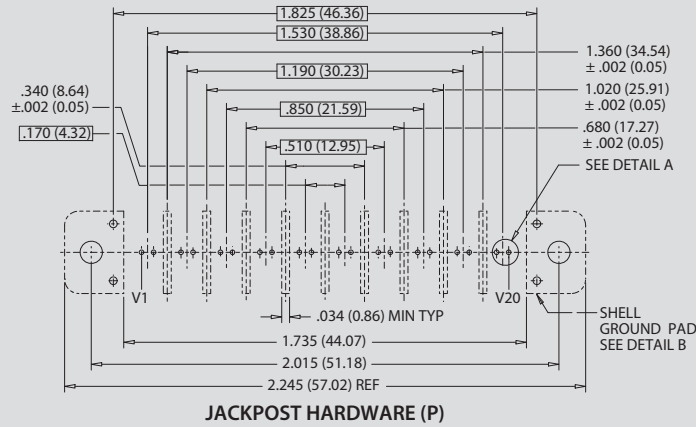


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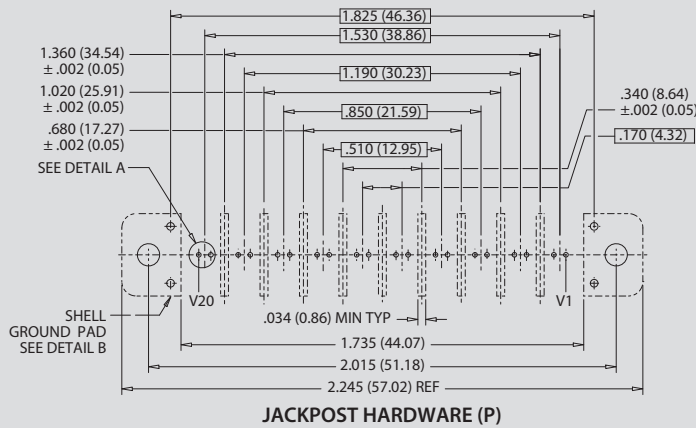


GVLM-1000: GVL RPM-BS, Rear Panel Mount, Straight PCB Connector Footprints

**Plug Layout 10-0**



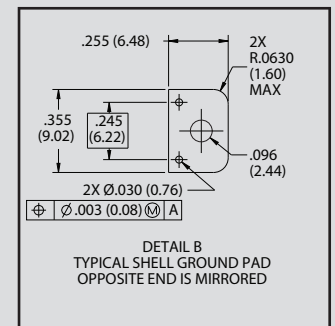
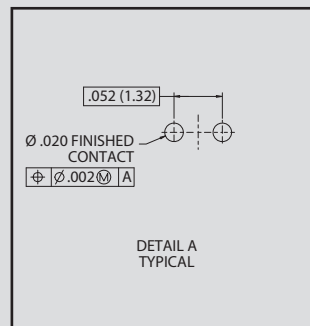
**Receptacle Layout 10-0**



MICRO-D VERSALINK CONNECTORS

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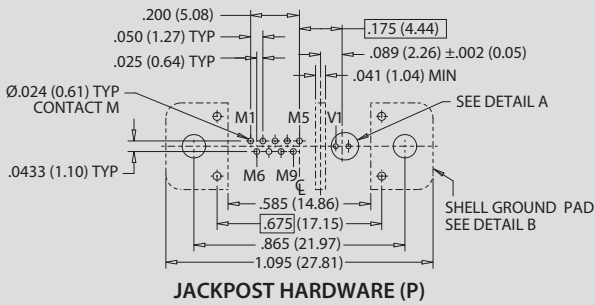
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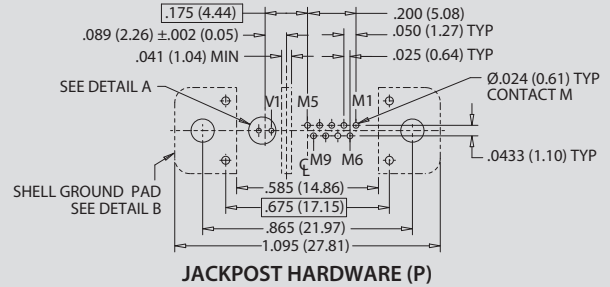
## GVLM-1000: GVL RPM-BS, Rear Panel Mount, Straight PCB Connector Footprints

MICRO-D VERSALINK CONNECTORS

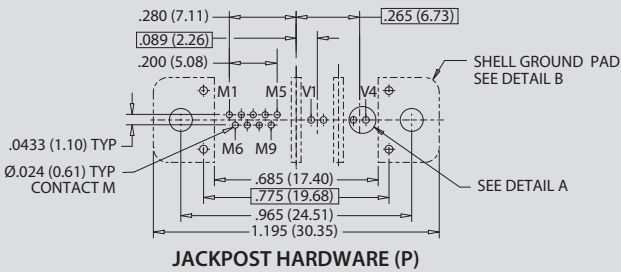
**Plug Layout 1-9**



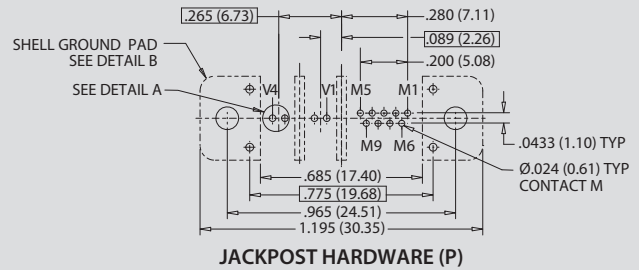
**Receptacle Layout 1-9**



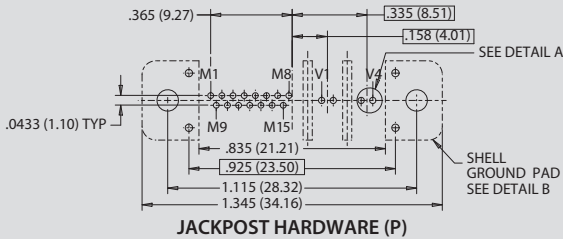
**Receptacle Layout 2-9**



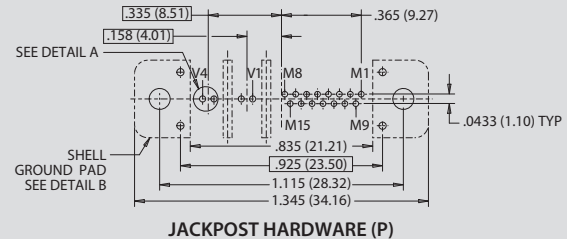
**Receptacle Layout 2-9**



**Plug Layout 2-15**

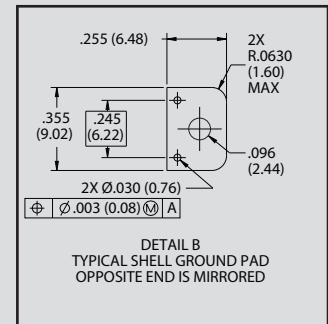
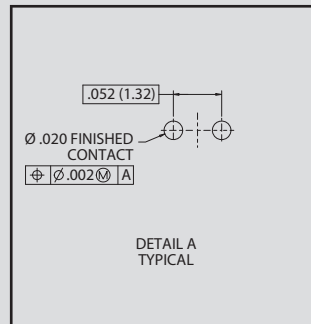


**Receptacle Layout 2-15**



**NOTES**

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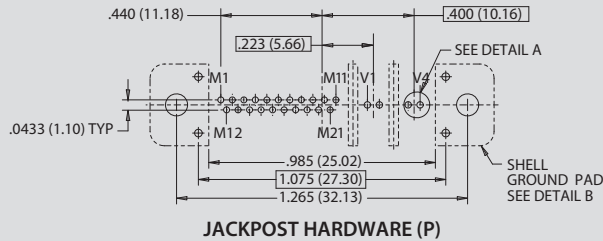


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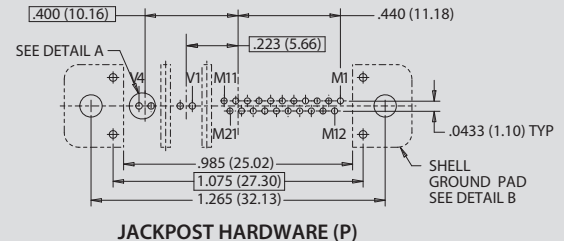
## GVLM-1000: GVL RPM-BS, Rear Panel Mount, Straight PCB Connector Footprints

**Plug Layout 2-21**



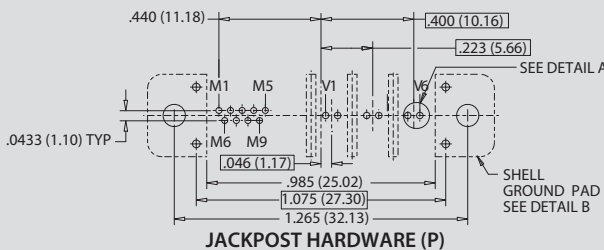
JACKPOST HARDWARE (P)

**Receptacle Layout 2-21**



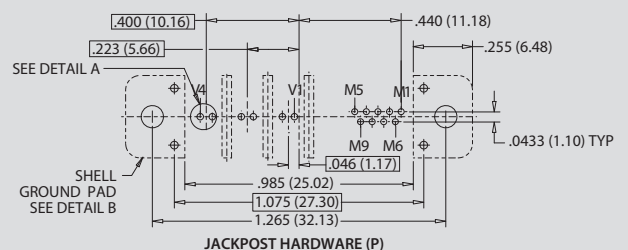
JACKPOST HARDWARE (P)

**Plug Layout 3-9**



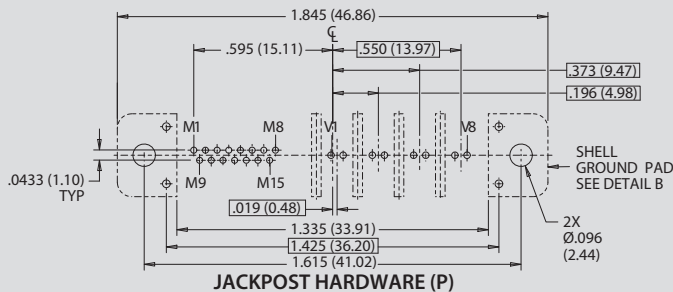
JACKPOST HARDWARE (P)

**Receptacle Layout 3-9**



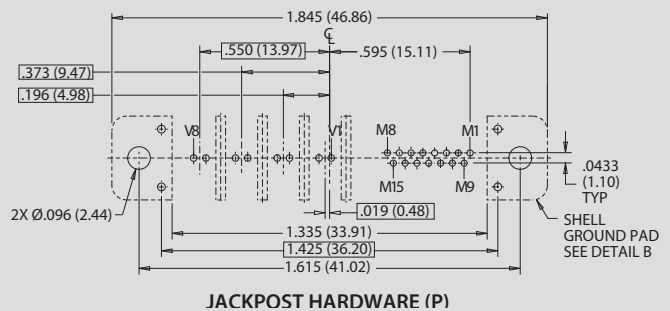
JACKPOST HARDWARE (P)

**Plug Layout 4-15**



JACKPOST HARDWARE (P)

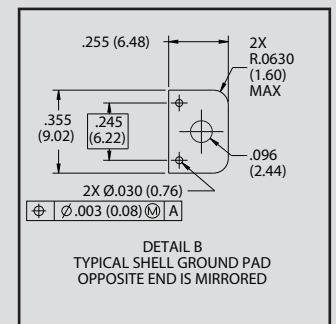
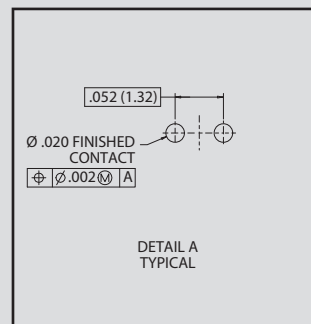
**Receptacle Layout 4-15**



JACKPOST HARDWARE (P)

### NOTES

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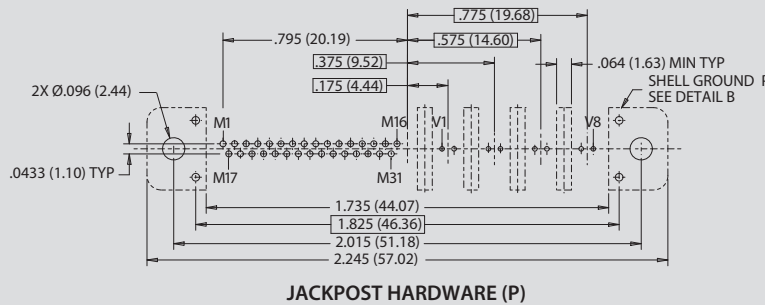
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GVLM-1000: GVL RPM-BS, Rear Panel Mount, Straight PCB Connector Footprints

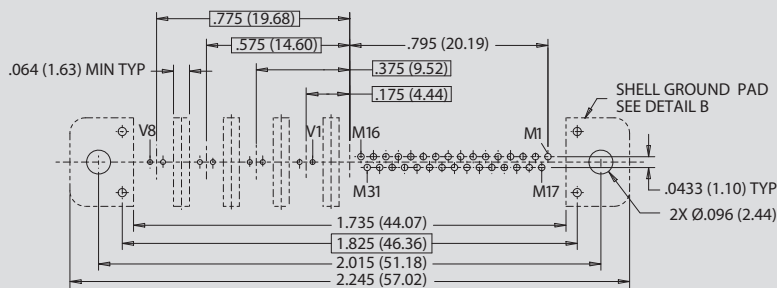
MICRO-D VERSALINK CONNECTORS

**Pin Layout 4-31**



JACKPOST HARDWARE (P)

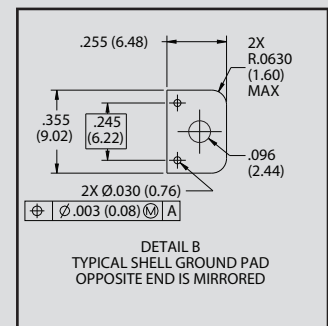
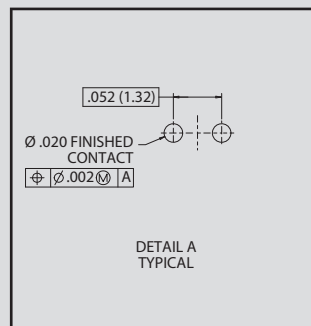
**Receptacle Layout 4-31**



JACKPOST HARDWARE (P)

**NOTES**

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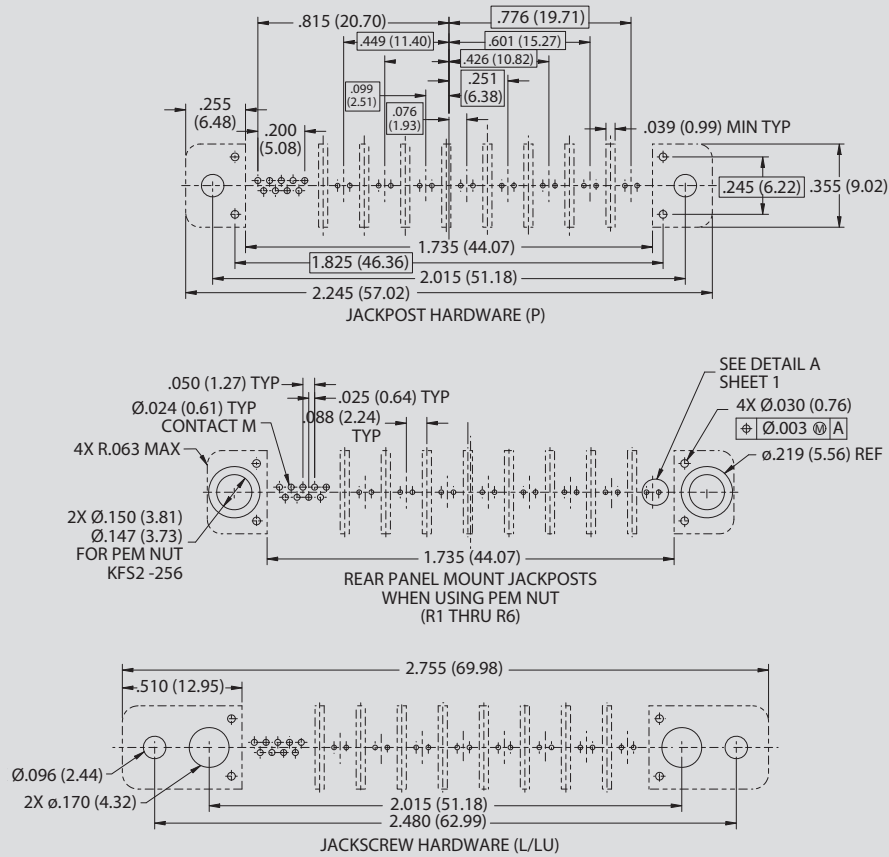


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GVLM-1000: GVL RPM-BS, Rear Panel Mount, Straight PCB Connector Footprints

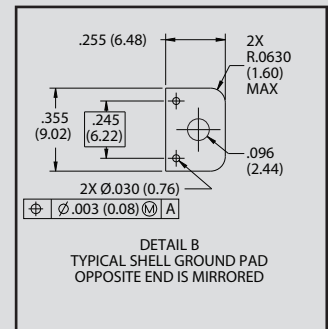
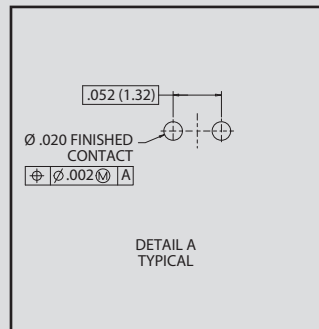
## Plug Layout 8-9



MICRO-D VERSALINK CONNECTORS

### NOTES

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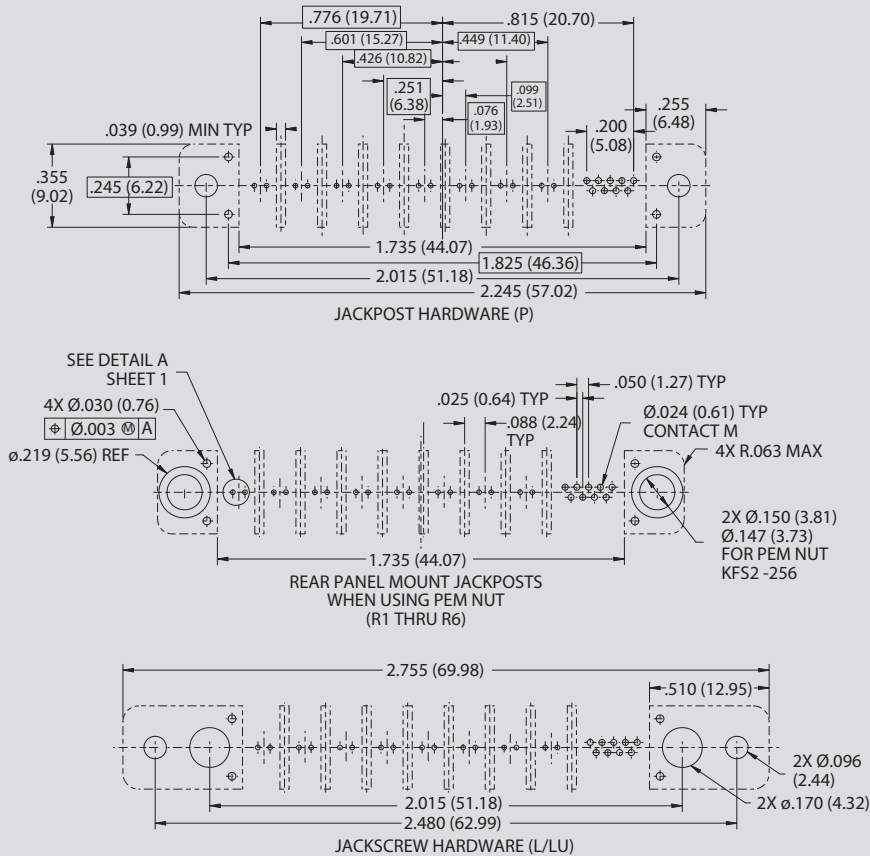
# "ZERO-CROSSTALK" M83513 Micro-D VersaLink™ Connectors



**GVLM-1000: GVL RPM-BS, Rear Panel Mount, Straight PCB Connector Footprints**

MICRO-D VERSALINK CONNECTORS

## Receptacle Layout 8-9



### NOTES

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