

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



## GVL RPM-BR, Rear Panel Mount, Right Angle PCB Connectors

MICRO-D VERSALINK CONNECTORS



| PART NUMBER DEVELOPMENT           |                                                                                                                                            |   |    |     |   |    |    |   |   |       |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---|----|-----|---|----|----|---|---|-------|
| Sample Part Number                | GVL RPM                                                                                                                                    | 2 | L- | 2-9 | P | BR | R3 | T | C | -.110 |
| Series                            | GVL RPM = VersaLink RPM Micro-D                                                                                                            |   |    |     |   |    |    |   |   |       |
| Shell Finish                      | 2 = Nickel 5 = Gold                                                                                                                        |   |    |     |   |    |    |   |   |       |
| Insulator Material                | L = LCP or PPS                                                                                                                             |   |    |     |   |    |    |   |   |       |
| Contact Layout (V-M) <sup>1</sup> | 1-0, 1-9, 2-0, 2-9, 2-15, 2-21, 3-9, 4-0, 4-15, 4-31, 8-9, 10-0                                                                            |   |    |     |   |    |    |   |   |       |
| Connector Type <sup>3</sup>       | P = Plug S = Receptacle                                                                                                                    |   |    |     |   |    |    |   |   |       |
| Connector Style                   | BR = Right Angle Board Mount                                                                                                               |   |    |     |   |    |    |   |   |       |
| Hardware <sup>4,5</sup>           | Rear panel mount jackposts (Length in Inches):                                                                                             |   |    |     |   |    |    |   |   |       |
|                                   | R1 = .032 panel R2 = .047 panel<br>R3 = .062 panel R4 = .093 panel<br>R5 = .125 panel R6 = .080 panel<br>B = Threaded inserts, no hardware |   |    |     |   |    |    |   |   |       |
| Threaded Insert Option            | T = Threaded insert in board mount hole; omit for thru-hole                                                                                |   |    |     |   |    |    |   |   |       |
| O-Ring                            | C = Conductive N = Non-conductive (Nitrile)<br>F = Fluorosilicone                                                                          |   |    |     |   |    |    |   |   |       |
| PC Tail Length <sup>6</sup>       | -.080, -.110, -.140 (Length in Inches +.020/-0.000)                                                                                        |   |    |     |   |    |    |   |   |       |

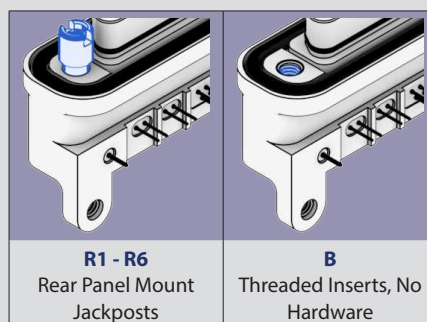
### MATERIALS AND FINISHES

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

### PERFORMANCE SPECIFICATIONS

- Current rating: 3 amp (Micro-D contacts)
- 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

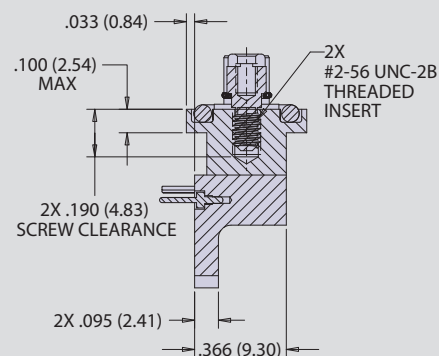
### HARDWARE



### NOTES

- Refer to GHS4-M-1000 for insert arrangement details on page 94.
- Refer to GVLM-1001 for GVL RPM-BR PCB footprints on page 142.
- Plug connector uses pin Micro-D contacts and socket VersaLink contacts. Receptacle uses socket Micro-D contacts and pin VersaLink contacts.
- Hardware always required to ensure connector pair is fully mated when installed.
- Refer to MIL-DTL-83513 panel cutout details on page 95.
- PC tails are solder-dipped in 60/40 tin-lead solder.
- Refer to 500-154 for protective cover on page 164.

### CONNECTOR CUTAWAY



### INSERT ARRANGEMENTS

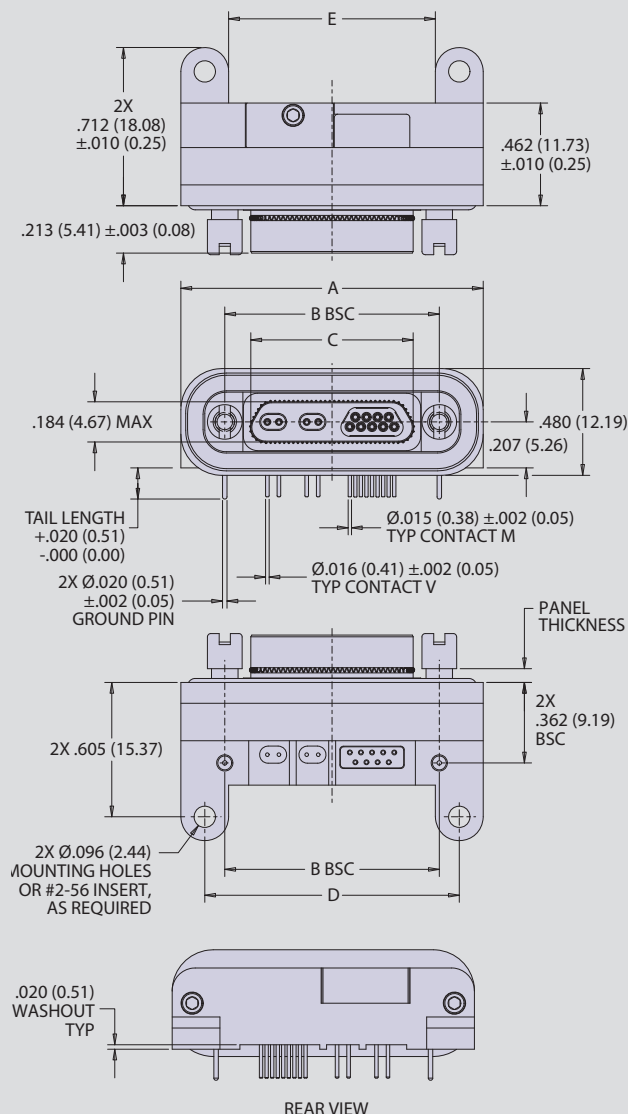
| Insert Arrangements | No. of Contacts |              |
|---------------------|-----------------|--------------|
|                     | VersaLink (V)   | TwistPin (M) |
| 1-0                 | 1               | 0            |
| 2-0                 | 2               | 0            |
| 1-9                 | 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            |
| 10-0P               | 10              | 0            |

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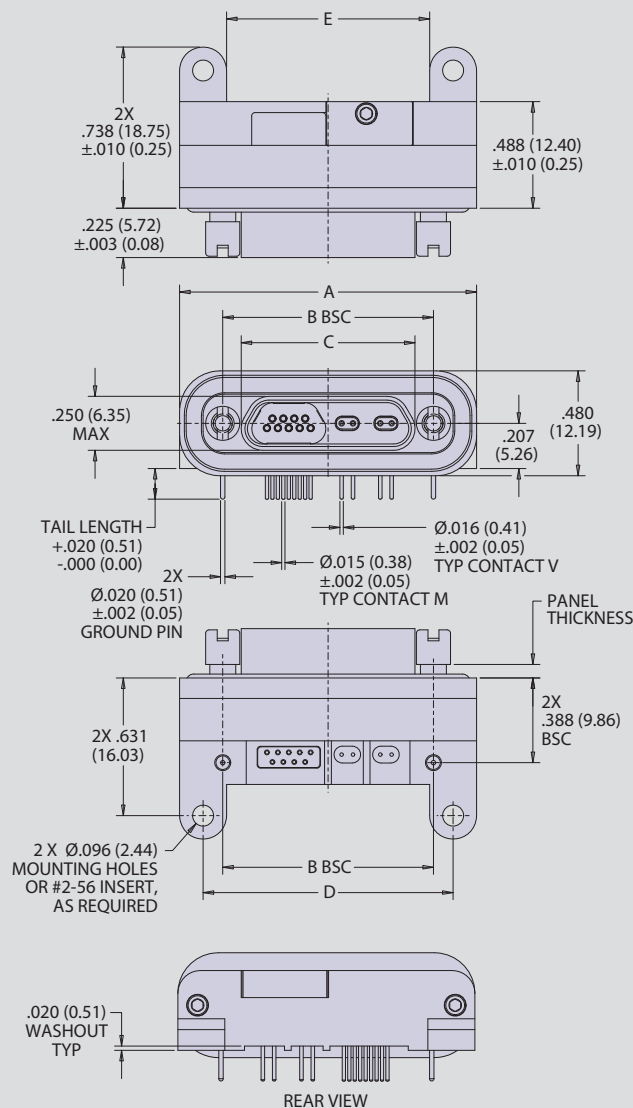


## GVL RPM-BR, Rear Panel Mount, Right Angle PCB Connectors

### GVL M-BR PCB RIGHT ANGLE PLUG CONNECTOR



### GVL M-BR PCB RIGHT ANGLE RECEPTACLE CONNECTOR



MICRO-D VERSALINK CONNECTORS

#### PLUG DIMENSIONS

| LAYOUT | A MAX         | B ± 0.005     | C MAX         | D ± 0.005     | E ± 0.005     |
|--------|---------------|---------------|---------------|---------------|---------------|
| 1-0P   | 0.965 (24.51) | 0.565 (14.35) | 0.333 (8.46)  | 0.745 (18.92) | 0.530 (13.46) |
| 2-0P   | 1.115 (28.32) | 0.715 (18.16) | 0.483 (12.27) | 0.895 (22.73) | 0.680 (17.27) |
| 1-9P   | 1.265 (32.13) | 0.865 (21.97) | 0.633 (16.08) | 1.045 (26.54) | 0.830 (21.08) |
| 2-9P   | 1.365 (34.67) | 0.965 (24.51) | 0.733 (18.62) | 1.145 (29.08) | 0.930 (23.62) |
| 4-0P   | 1.365 (34.67) | 0.965 (24.51) | 0.733 (18.62) | 1.145 (29.08) | 0.930 (23.62) |
| 2-15P  | 1.515 (38.48) | 1.115 (28.32) | 0.833 (21.16) | 1.295 (32.89) | 1.080 (27.43) |
| 3-9P   | 1.665 (42.29) | 1.265 (32.13) | 1.033 (26.24) | 1.445 (36.70) | 1.230 (31.24) |
| 4-15P  | 2.015 (51.18) | 1.615 (41.02) | 1.384 (35.15) | 1.795 (45.59) | 1.580 (40.13) |
| 4-31P  | 2.415 (61.34) | 2.015 (51.18) | 1.784 (45.31) | 2.195 (55.75) | 1.980 (50.29) |
| 8-9P   | 2.415 (61.34) | 2.015 (51.18) | 1.784 (45.31) | 2.195 (55.75) | 1.980 (50.29) |
| 10-0P  | 2.415 (61.34) | 2.015 (51.18) | 1.784 (45.31) | 2.195 (55.75) | 1.980 (50.29) |

#### RECEPTACLE DIMENSIONS

| LAYOUT | A MAX         | B ± 0.005     | C MAX         | D ± 0.005     | E ± 0.005     |
|--------|---------------|---------------|---------------|---------------|---------------|
| 1-0S   | 0.965 (24.51) | 0.565 (14.35) | 0.400 (10.16) | 0.745 (18.92) | 0.530 (13.46) |
| 2-0S   | 1.115 (28.32) | 0.715 (18.16) | 0.551 (14.00) | 0.895 (22.73) | 0.680 (17.27) |
| 1-9S   | 1.265 (32.13) | 0.865 (21.97) | 0.701 (17.81) | 1.045 (26.54) | 0.830 (21.08) |
| 2-9S   | 1.365 (34.67) | 0.965 (24.51) | 0.801 (20.35) | 1.145 (29.08) | 0.930 (23.62) |
| 4-0S   | 1.365 (34.67) | 0.965 (24.51) | 0.801 (20.35) | 1.145 (29.08) | 0.930 (23.62) |
| 2-15S  | 1.515 (38.48) | 1.115 (28.32) | 0.951 (24.16) | 1.295 (32.89) | 1.080 (27.43) |
| 3-9S   | 1.665 (42.29) | 1.265 (32.13) | 1.101 (27.97) | 1.445 (36.70) | 1.230 (31.24) |
| 4-15S  | 2.015 (51.18) | 1.615 (41.02) | 1.450 (36.83) | 1.795 (45.59) | 1.580 (40.13) |
| 4-31S  | 2.415 (61.34) | 2.015 (51.18) | 1.850 (46.99) | 2.195 (55.75) | 1.980 (50.29) |
| 8-9S   | 2.415 (61.34) | 2.015 (51.18) | 1.850 (46.99) | 2.195 (55.75) | 1.980 (50.29) |
| 10-0S  | 2.415 (61.34) | 2.015 (51.18) | 1.850 (46.99) | 2.195 (55.75) | 1.980 (50.29) |