

Meritec's Hercules Cable Plug Termination with the optional LSZH cable and its receptacle embedded in the mating rugged circular MIL-38999 shell provides both a durable and high-bandwidth interconnect scheme suitable for Military, Aerospace and ruggedized commercial high-bandwidth applications not previously accommodated by industry standard interconnects.

Features & Benefits

- Rugged light-weight aluminum MIL-38999 Series III size 9, 13, 17 and 23 threaded-coupling circular shells.
- Keying: "N" (standard) "A", "B", "C", "D"
- Available as Plug-Cable Assemblies and Jam-Nut or Flange-Mount Receptacles for Solder Tail, Press Fit or Pigtail
- Jacket types available: LSZH, PVC, FEP and Halar Expando
- Cable types available in 24, 26, 28, 30 AWG, high bandwidth
- Supports data rates in excess of 10 Gb/s and differential-pair signaling with low-skew pairs and shielding for EMI/RFI protection
- Meets the following standards: SAS, InfiniBand, USB, PCIeexpress, Serial I/O, Ethernet, and SATA
- Matched impedance design of 100 ohm
- Fully electrically tested
- Custom lengths built to order. Please consult Meritec

Meritec's Hercules 38999 is now approved as a VITA 76 (High-Performance Cable) Standard

Specifications

Electrical

(mated connector pair, less cable)

- Impedance: 100 ± 10 ohms differential at 100ps rise time
- Crosstalk (NEXT): < -30 dB up to 5 GHz from multiple aggressors
- Insertion loss: < 1 dB up to 5 GHz
- Power per contact: 3 amp at 10 °C temperature rise
- Low-level contact resistance: < 20 m Ω , (EIA-364-23)
- Insulation resistance: > 300 M Ω for 1 min at 300 VDC, (EIA-364-21)
- DWV: No defect for 1 min at 300 VDC, (EIA-364-20)

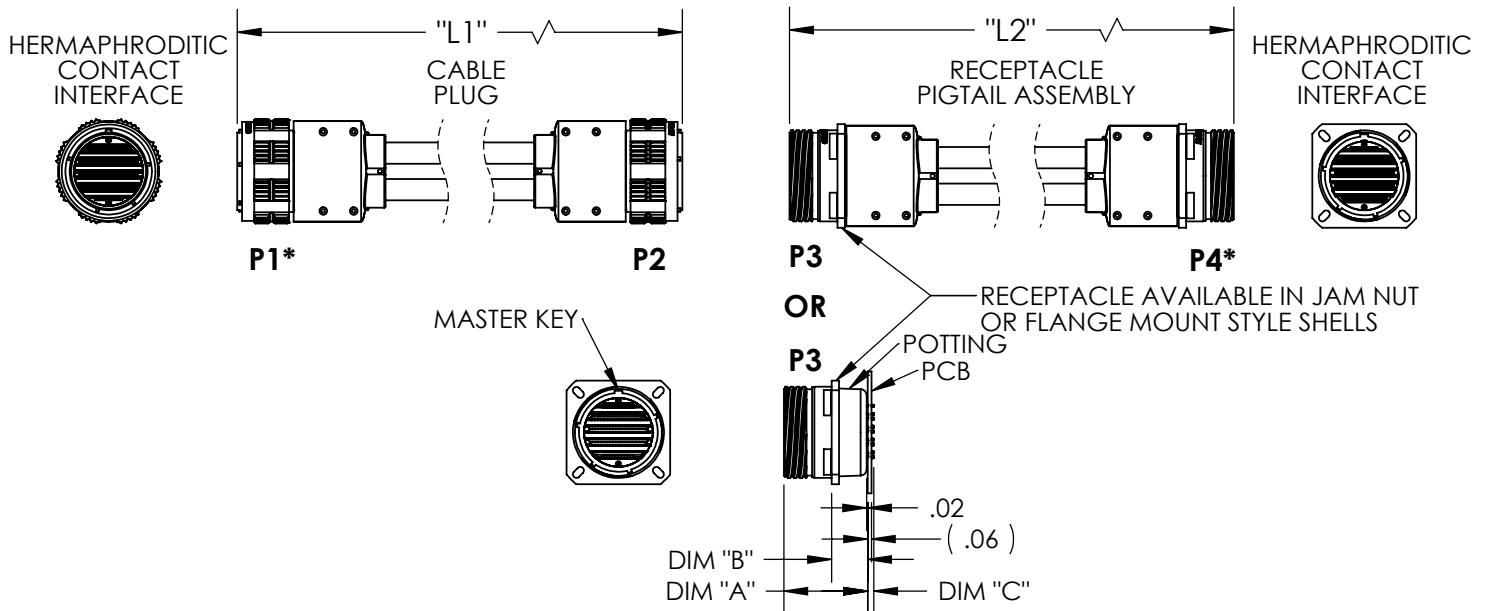
Mechanical

- Contact material: Copper Alloy
- Standard contact finish: 100 μ inch min Au over 100 μ inch min Ni
- Aluminum shell with plating options
- Durability: 500 cycles

Environmental

- -40 °C to $+175$ °C
- VITA 46 Shock and Vibration

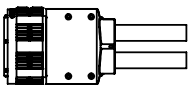


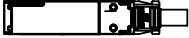





PIN STYLE	*DIM "A"	*DIM "B"	DIM "C"
SOLDER TAIL	.96 [24.4]	.18 [4.6]	.10 [2.5]
SOLDER TAIL	1.38 [35.1]	.59 [15.0]	.10 [2.5]
SOLDER TAIL	1.38 [35.1]	.59 [15.0]	.15 [3.8]
SOLDER TAIL	1.38 [35.1]	.59 [15.0]	.20 [5.1]
SOLDER TAIL	1.38 [35.1]	.59 [15.0]	.25 [6.4]
PRESS FIT	1.38 [35.1]	.59 [15.0]	.10 [2.5]
PRESS FIT	.96 [24.4]	.18 [4.6]	.10 [2.5]

* DENOTES SIZE 23 FLANGE MOUNT ASSEMBLY DIMENSIONS

*OPTIONS (P1, P4)

- | | | | |
|--|------------------------------------|--|----------|
| A.  | HERCULES™ MIL-38999 HERMAPHRODITIC | D.  | MINI-SAS |
| B.  | 4X IB STRAIGHT THUMBSCREW | E.  | QSFP |
| C.  | SFP+ | F. OTHER (RJ-45, USB, IPASS (PCIE)) | |

Shell Size	No. of Differential Pairs	Protocol(s)	No. of Contacts
9	2	USB 2.0, 10GE	8
13	6+6 Spares	USB 2.0, USB 3.0 10G E, 100G E, Micro-SATA, Mini-SAS, Display Port	28
17	18+6 Spares	USB 2.0, USB 3.0 10G E, 100G E, SATA, eSATA, Micro-SATA, Mini-SAS, PCIe, 4X IB, Serial I/O, DVI, Display Port	66
23	44+4 Spares	USB 2.0, USB 3.0 10G E, 100G E, SATA, eSATA, Micro-SATA, Mini-SAS, PCIe, 4X IB, 12X IB, Serial I/O, DVI, Display Port	145

ADDITIONAL PROTOCOLS ACCOMMODATED ARE TBD

