

# Gecko-MT Connectors Specifications

## Materials

Housings:	Glass-filled High Temperature Thermoplastic UL94V-0
Female contacts:	Beryllium Copper
Male contacts	
Signal PCB Connector:	Phosphor Bronze
Signal Crimp:	Brass
Power (all):	Beryllium Copper
Finish	
Signal Contacts:	0.2 - 0.3 $\mu$ m (8 - 12 $\mu$ "") Gold, over 1.5 - 2.0 $\mu$ m (60 - 80 $\mu$ "") Nickel
Power Contacts:	0.8 - 1.0 $\mu$ m (30 - 40 $\mu$ "") Gold, over 1.5 - 2.5 $\mu$ m (60 - 100 $\mu$ "") Nickel
Screw-Loks:	Stainless Steel

## Electrical

Current	
Signal contacts in isolation:	2.8A max (at 25°C)
Signal contacts simultaneous:	2.0A max (at 25°C)
Power contacts simultaneous:	10A max
Working voltage	
At sea level 1006 mbar:	450V DC or AC peak
At altitude 44 mbar:	250V DC or AC peak
Voltage proof	
At sea level 1013 mbar:	600V DC or AC peak
At altitude 44 mbar:	350V DC or AC peak
Contact resistance	
Initial:	20m $\Omega$ max
After conditioning:	25m $\Omega$ max
Insulation resistance	
Initial:	10G $\Omega$ min at 500V DC
After conditioning:	>1G $\Omega$ min at 500V DC

## Mechanical

Contact durability:	1000 operations
Mating forces (per contact pair)	
Insertion force (signal):	2.8N max
Insertion force (power):	7.0N max
Withdrawal force:	0.2N min
Contact retention in housing:	6.0N max

## Environmental

Environmental classification:	65/150/56 days at 93% RH
Operating temperature:	-65°C to +150°C
*Vibration sensitivity:	10Hz to 2000Hz, 1.5mm, 198m/s <sup>2</sup> (20G) duration 6 hours
*Bump severity:	390m/s <sup>2</sup> (40G), 4000 $\pm$ 10 bumps
*Shock severity:	981m/s <sup>2</sup> (100G) for 6ms in Z axis 490m/s <sup>2</sup> (50G) for 11ms in X & Y axes
*Acceleration severity:	490m/s <sup>2</sup> (50G)

\* Tested with latched connectors.