

**Ratings**

Voltage: 48 Vdc  
 Current: 20 A, (not mated under load)  
 Connector current ratings based on individual contact temperature rise (<30 °C)

**Materials**

- ① Insulator: LCP, UL94 V-0, black
- ② Outer Shell: C3604 Brass, Nickel plated
- ③ Pin: C14500 Tellurium copper, Gold flashing
- ④ Inner Shell: C3604 Brass, Nickel plated

**Electrical Requirements**

Dielectric strength: 1 min @ 500 Vac  
 Insulation resistance: 100 MΩ @ 500 Vdc  
 Contact resistance: 10 mΩ or less

**Mechanical Requirements**

Insertion force: 3 kgf max  
 Withdrawal force: 0.3 ~ 3 kgf  
 Life cycle: 5000 mating cycles

**Environmental Requirements**

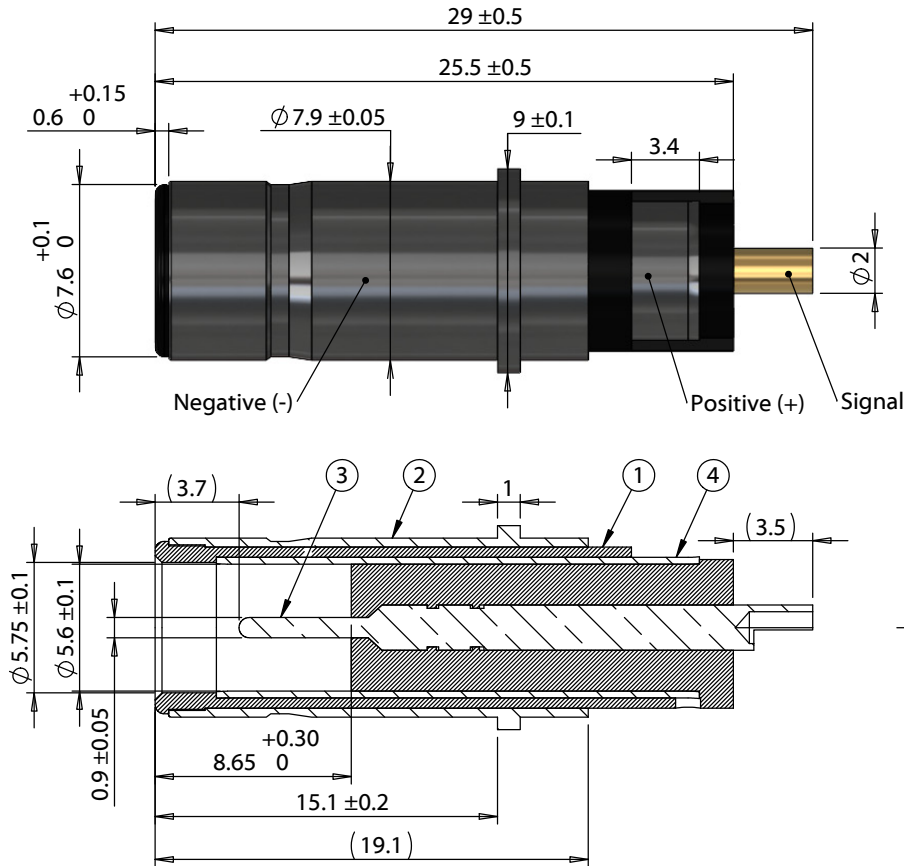
Cold test: -25 ± 3 °C for 48 hours without deformation  
 Heat test: 70 °C, relative humidity 70 - 85% for 96 hours while maintaining contact resistance: 100 mΩ or less, insulation resistance: 50 MΩ @ 500 Vdc, without looseness or deformation  
 Humidity test: 30 °C, relative humidity 60% for 168 hours without deformation  
 Salt spray test: 35 °C, relative humidity 90 - 95%, 5% NaCl mist for 48 hrs. Wash parts after test. Maintain mechanical requirements and a contact resistance of less than 80 mΩ.

**Operating Temperature Range**

-40°C ~ 150 °C, relative humidity of 85% or less

**Mates with connector**

54-00431



Revision:	Date:	Description:	Prepared:	Notes:	<h1>TENSILITY</h1> <p>tel 1.541.323.3228 800 877.670.7118                  fax 1.541.323.4202 web tensility.com</p>
A	11/07/2025	Initial release	Verified:	RoHS compliant Halogen free	
			Dimensions are in millimeters. Tolerances: X: ± 0.50 mm X.X: ± 0.30 mm X.XX: ± 0.20 mm	Description: Connector, dc plug, 7.9x5.6xL29 mm, brass nickel plated, black, molding style	Size: A Part number: 50-01042
					Scale: 3:1