

**Materials**

1. Insulator: Nylon (UL94V-0), black
2. Center terminal: C3604 brass, 1 μm min nickel plated
3. Shell: C3604 brass, 1 μm min nickel plated
4. Spring terminal: C5191 phosphor bronze, 1 μm min nickel plated

**Electrical Requirements**

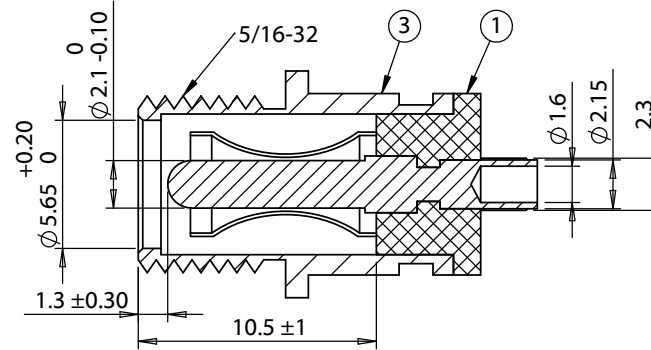
- Dielectric strength: 1 min @ 500 Vac
- Insulation resistance: 100 MΩ @ 500 Vdc
- Contact resistance: 30 mΩ or less

**Mechanical Requirements**

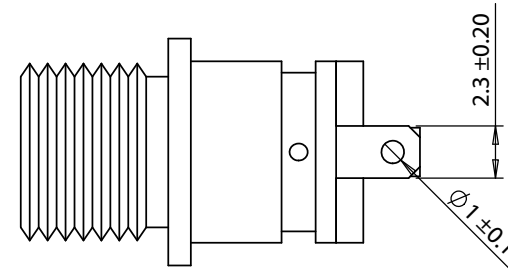
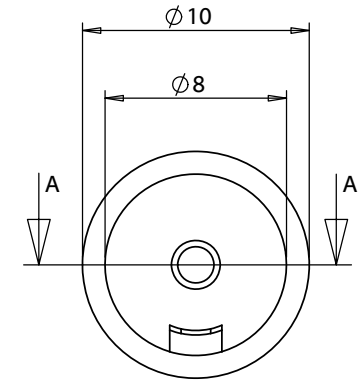
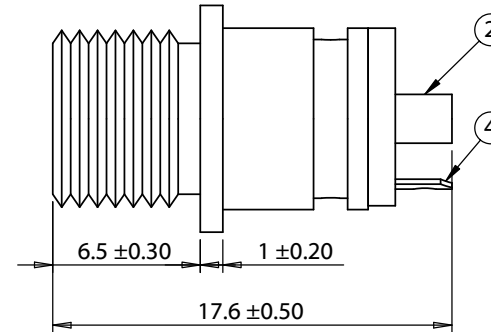
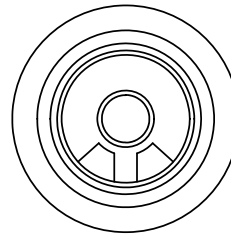
- Insertion force: 0.3-3 kgf
- Withdrawal force: 0.3-3 kgf
- Life cycle: 5000 mating cycles while maintaining 0.3-2.0 kgf min. insertion force, 0.2-1.5 kgf min. withdrawal force and less than 100 mΩ contact resistance.

**Environmental Requirements**

- 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: 40 °C, relative humidity 90-100% for 96 hours while maintaining dielectric strength: 1 min @ 500 Vac, insulation resistance: 50 MΩ @ 500 Vdc, contact resistance: 100 mΩ or less, without deformation
- Salt spray test: 35±2 °C, relative humidity 90-95%, 5% NaCl mist for 24 hrs. Wash parts after test. Maintain mechanical requirements and a contact resistance of less than 80 mΩ.



SECTION A-A



|             |                 |                              |
|-------------|-----------------|------------------------------|
| Revision: A | Date: 5/17/2019 | Description: Initial release |
|             |                 |                              |
|             |                 |                              |
|             |                 |                              |
|             |                 |                              |

|   |   |
|---|---|
| Prepared:   | Notes: RoHS compliant   |
| Verified:   | Function test: no open, no short circuit, no intermittent   |
| Dimensions are in millimeters.<br>Tolerances:<br>X: ± 0.3 mm<br>X.X: ± 0.2 mm<br>X.XX: ± 0.2 mm | Description: Connector, dc jack, 5.5x2.1x17.6mm, brass, nickel plated, molding type, threaded 5/16-32 |

**TENSILITY**

tel 1.541.323.3228 800 877.670.7118  
fax 1.541.323.4202 web tensility.com

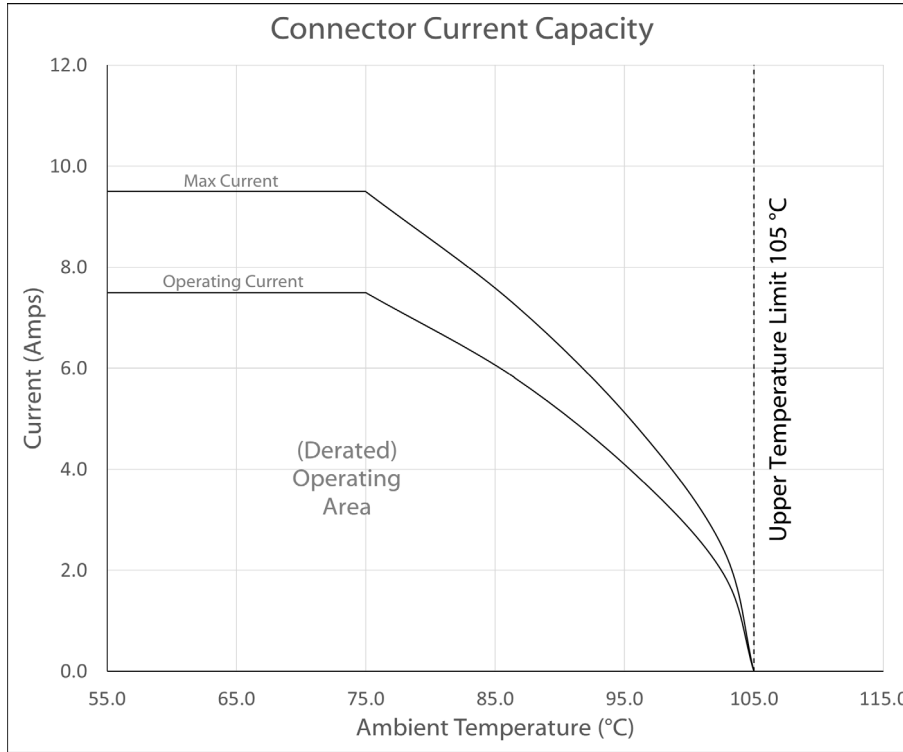
|            |                       |
|------------|-----------------------|
| Size: A    | Part number: 50-00616 |
| Scale: 3:1 | Sheet 1 of 2          |

**Ratings**

Maximum Operating Voltage: 48 Vdc  
 Maximum Operating Current: 7.5 A

**Operating Temperature Range**

-25° to 105 °C, relative humidity of 85% or less



Testing based on IEC 60512-5-2. Max current curve generated with isolated test article under controlled environmental conditions, and does not take into account external factors such as housings, mating cables, or other circuitry. Operating current curve (derated by 20% of maximum values) accounts for external factors, and manufacturing variation.

|           |           |                 |  |  |   |
|-----------|-----------|-----------------|--|--|---|
| Revision: | Date:     | Description:    | Prepared:  | Notes:   | <h1>TENSILITY</h1> <p>tel 1.541.323.3228 800 877.670.7118<br/>                 fax 1.541.323.4202 web tensility.com</p> |
| A         | 5/17/2019 | Initial release | Verified:  | RoHS compliant<br>Function test: no open, no short circuit, no intermittent                              |   |
|           |           |                 | Dimensions are in millimeters.<br>Tolerances:<br>X: ± 0.3 mm<br>X.X: ± 0.1 mm<br>X.XX: ± 0.05 mm | Description:<br>Connector, dc jack, 5.5x2.1x17.6mm, brass, nickel plated, molding type, threaded 5/16-32 | Size: A<br>Part number: 50-00616  |
|           |           |                 |  |  | Scale: 3:1  |

