

**Materials**

1. Shell, C3604 brass, 2 μm nickel plated
2. Spring contact, BeCu, 2 μm nickel plated
3. Pin, C3604 brass, 2 μm nickel plated
4. Insulator, PBT + 15% GF, black

**Electrical requirements**

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

**Mechanical requirements**

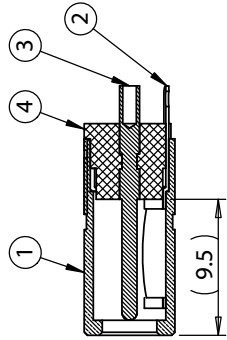
Insertion force: 0.3-2.5 kgf  
 Withdrawal force: 0.3-2.5 kgf  
 Durability: 5000 mating cycles while maintaining; min 0.3 kgf insertion force, min 0.2 kgf withdrawal force and less than 100 mΩ contact resistance.

**Environmental requirements**

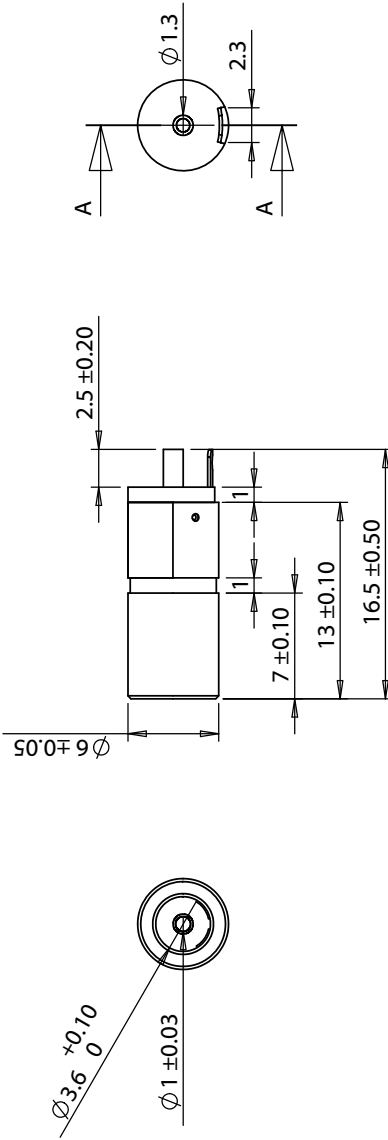
Damp test: 40 °C, RH 90-100% for 96 hrs. Cool to ambient and recover for 2 hours. Maintain dielectric strength of 500 Vac for 1 min, insulation resistance of 50 MΩ @ 500 Vdc minimum and a contact resistance of 100 mΩ or less.

Dry test: 70 °C, RH 70-85% for 96 hrs. Cool to ambient and recover for 2 hours. Maintain insulation resistance of 50 MΩ @ 500 Vdc minimum and a contact resistance of 100 mΩ or less.

Salt spray test: 35 °C, RH 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: | Date:      | Description:               |
|-----------|------------|----------------------------|
| A         | 10/19/2009 | Initial release            |
| A1        | 12/08/2011 | Updated measurements       |
| A2        | 03/14/2013 | Updated spec format        |
| A3        | 01/23/2018 | Changed insulator material |

Prepared:  
 Verified:  
 Dimensions are in millimeters.  
 X: ± 0.5 mm  
 XX: ± 0.3 mm  
 XXX: ± 0.05 mm

Notes:  
 RoHS compliant  
 Function test: no open, no short circuit, no intermittent  
 Description:  
 Connector, dc jack, 3.5x1.1xL16.5 mm, molding style

**TENSILITY**  
 tel 1.541.323.3228 800 877.670.7118  
 fax 1.541.323.4202 web tensility.com

Size: Part number:  
 A 50-00045

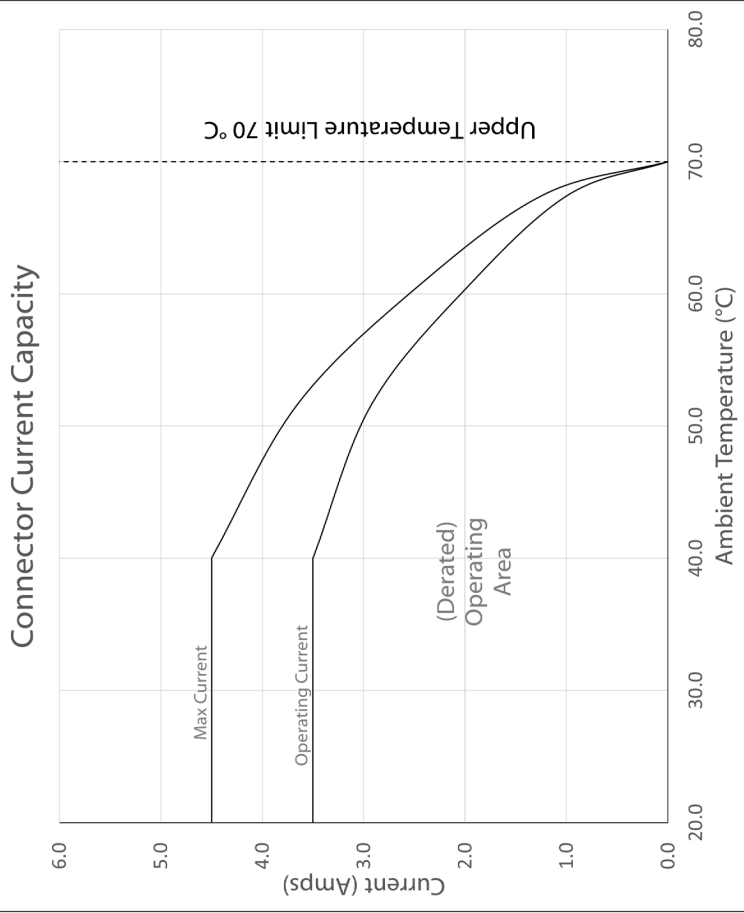
Scale: 2:1

**Ratings**

Maximum Operating Voltage: 48 Vdc  
 Maximum Operating Current: 3.5 A

**Operating Temperature Range**

-25° to 70°, 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.

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|                                |                                                           |
|--------------------------------|-----------------------------------------------------------|
| Prepared:                      | Notes:                                                    |
| Verified:                      | RoHS compliant                                            |
| Dimensions are in millimeters. | Function test: no open, no short circuit, no intermittent |
| Tolerances:                    | Description:                                              |
| X: ± 0.3 mm                    | Connector, dc jack, 3.5x1.1xL16.5 mm, molding style       |
| XX: ± 0.1 mm                   |                                                           |
| XXX: ± 0.05 mm                 |                                                           |

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