

**Materials**

1. Insulator: PBT, black
2. Shell: C3604 brass, 2 µm nickel plated
3. Spring contact: C5191 phosphor bronze, 2 µm nickel plated

**Electrical Requirements**

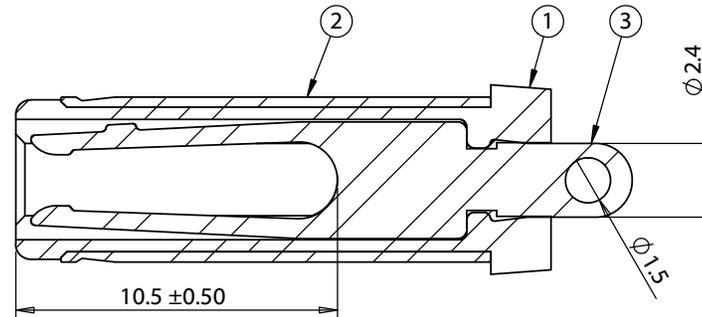
Dielectric strength: 1 min @ 500 Vac  
 Insulation resistance: 100 MΩ @ 500 Vdc  
 Contact resistance: 30 mΩ or less

**Mechanical Requirements**

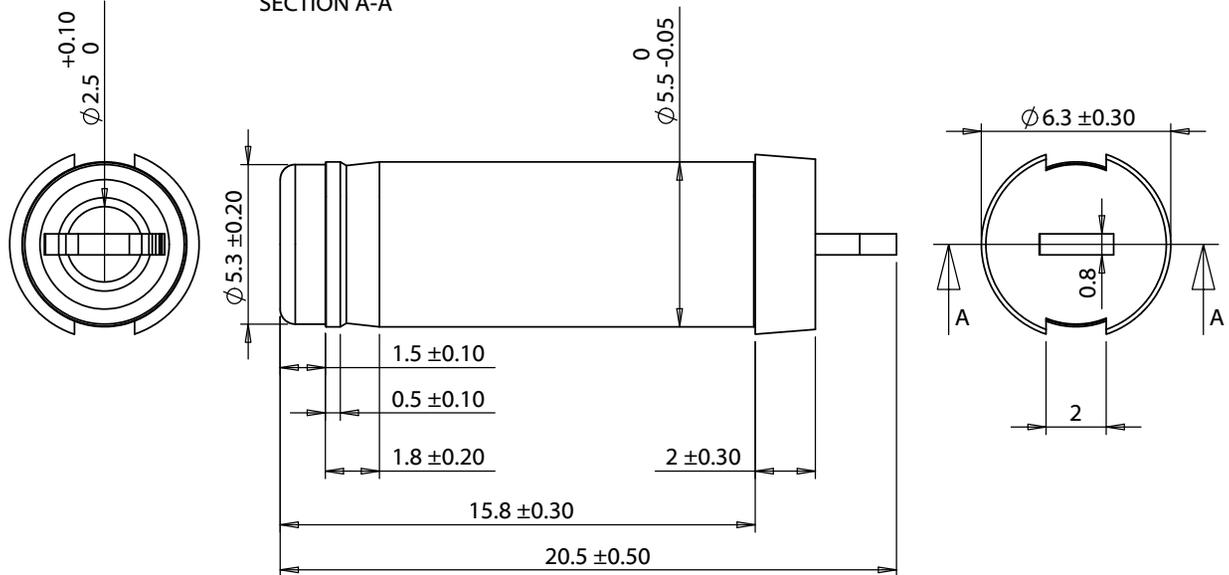
Insertion force: 0.3-3 kgf  
 Withdrawal force: 0.3-3 kgf  
 Life cycle: 5000 mating cycles while maintaining 0.3-2.0 kgf min. insertion force, 0.2-1.5 kgf min. withdrawal force and less than 100 mΩ contact resistance.

**Environmental Requirements**

Heat test: 70 °C, relative humidity 70-85% for 96 hours while maintaining insulation resistance: 50 MΩ @ 500Vdc, without deformation and contact resistance: 100 mΩ or less  
 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, and contact resistance: 100 mΩ or less  
 Salt spray test: 35 °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:	Date:	Description:
A	11/28/2011	Initial release
A1	11/09/2012	Added test data
A2	12/06/2012	Updated item description
A3	06/15/2016	Modified insulator OD

Prepared:
Verified:
Dimensions are in millimeters. Tolerances: X: ± 0.3 mm X.X: ± 0.2 mm X.XX: ± 0.05 mm

Notes: RoHS compliant
Function test: no open, no short circuit, no intermittent
Description: Connector, dc plug, 5.5x2.5xL20.5 mm, molding style, spring contacts

**TENSILITY**

tel 1.541.323.3228 800 877.670.7118  
 fax 1.541.323.4202 web tensility.com

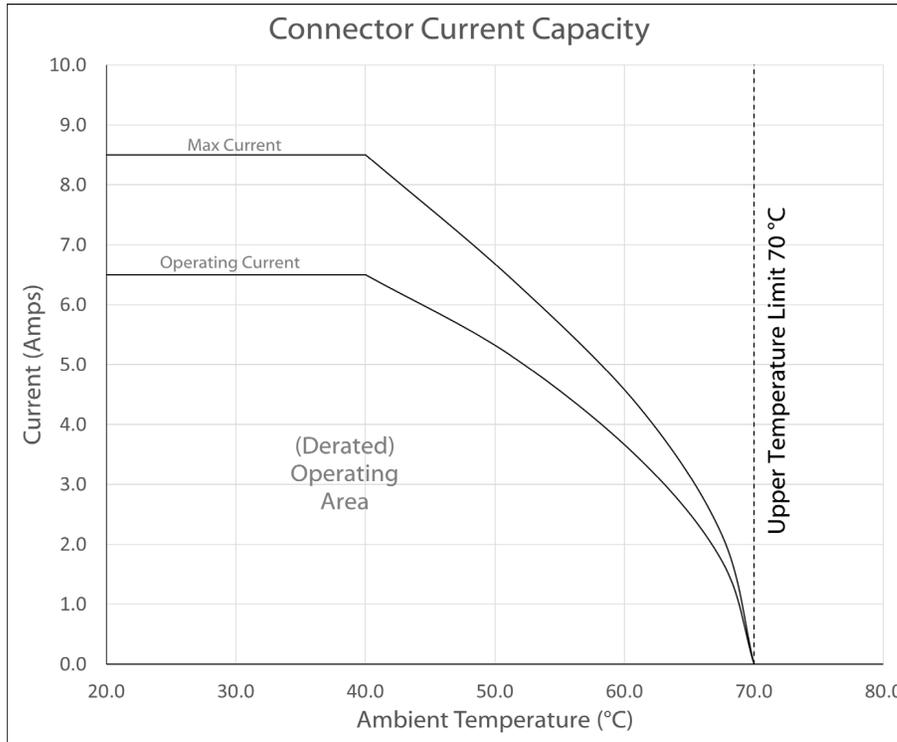
Size: A	Part number: 50-00187
Scale: 4:1	Sheet 1 of 2

**Ratings**

Maximum Operating Voltage: 48 Vdc  
 Maximum Operating Current: 6.5 A

**Operating Temperature Range**

-25° to 70 °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.

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