### Materials

- 1. Insulator, PBT + 15% glass fiber, black
- 2. Shell, C2700 brass, 2 µm nickel plated
- 3. Spring contact, C5191 phosphor bronze, 2  $\mu m$  nickel plated

### **Electrical requirements**

Dielectric strength: 1 min @ 500 Vac Insulation resistance: 100 M $\Omega$  @ 500 Vdc Contact resistance: 30 m $\Omega$  or less

Rated voltage: 20 Vdc Rated current: 7 A

# **Mechanical requirements**

Insertion force: 0.3-3 kgf Withdrawal force: 0.3-3 kgf

Durability: 5000 mating cycles while maintaining; 0.3-2 kgf insertion force, 0.2-1.5 kgf withdrawal force and a less than  $100 \text{ m}\Omega$  contact resistance.

100 mt2 contact resistance.

# **Environmental requirements**

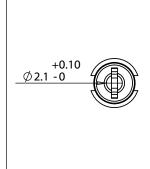
Damp test: 40 °C, RH 90-100% for 96 hrs. Cool to ambient and recover for 2 hours. Maintain dielectric strength of 500 Vac for 1 min, insulation resistance of 50 M $\Omega$  @ 500 Vdc minimum and a contact resistance of 100 m $\Omega$  or less.

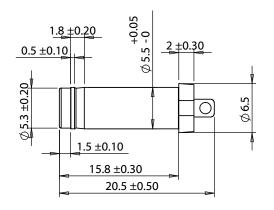
Dry test: 70 °C, RH 70-85% for 96 hrs. Cool to ambient and recover for 2 hours. Maintain insulation resistance of 50 M $\Omega$  @ 500 Vdc minimum and a contact resistance of 100 m $\Omega$  or less.

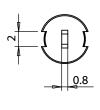
Salt spray test: 35 °C, RH 90-95%, 5% NaCl mist for 24 hrs. Wash parts after test. Maintain mechanical requirements and a contact resistance of less than 80 m $\Omega$ .

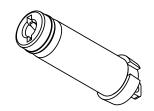
### Operating range

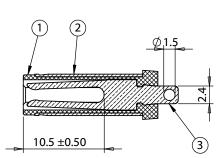
-25 to 70 °C, relative humidity of 85% or less











Revision	Date	Description	Notes RoHS compliant Function test: no open, no short circuit, no INT			20802 Sockeye Place #130 Bend, OR 97701 USA tel 541.323.3228 fax 541.323.4202 800 877.670.7118 www.tensility.com			
Α	11/28/2011	Initial release							
A1	8/17/2012	updated dimensions and materials							
A2	11/9/2012	Added test data							
			DIMENSIONS ARE IN MILLIMETERS  TOLERANCES: X: ± 0.5 mm X.X: ± 0.3 mm X.XX: ± 0.05 mm	DESCRIPTION: Connector, dc plug, 5.5x2.1xL20.5 mm, molding style, spring contacts, for right angle applications	SIZE Part number A 50-00186				
					SCALE	E: 2:1	WEIGHT:	SHEET 1 OF 1	