### Materials

- 1. Insulator: Nylon PA46, black
- 2. Insulator plug: POM
- 3. Center terminal: C5191 phosphor bronze, 2 µm nickel plated
- 4. Shell: C3604 brass, 2 µm nickel plated
- 5. Ground terminal: C2680 brass, 2 µm nickel plated

# **Electrical Requirements**

Dielectric strength: 1 min @ 500 Vac Insulation resistance: 100 M $\Omega$  @ 500 Vdc Contact resistance: 30 m $\Omega$  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 kgf min. insertion force, 0.2 kgf min. withdrawal force and less than  $100 \text{ m}\Omega$  contact resistance.

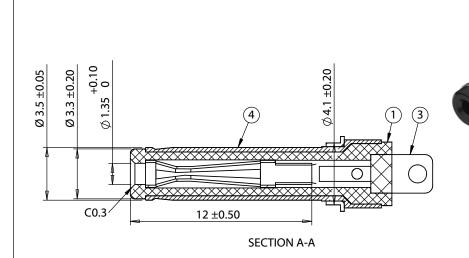
## **Environmental Requirements**

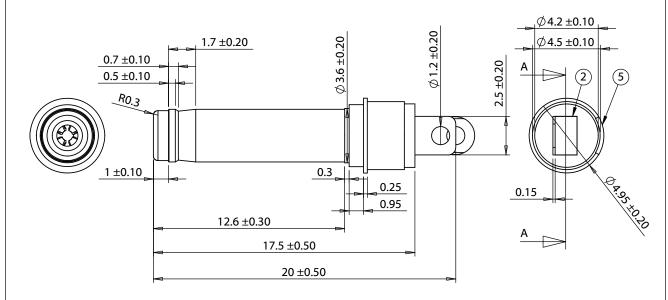
Heat test: 70 °C, relative humidity 70-85% for 96 hours while maintaining contact resistance: 100 m $\Omega$  or less, insulation resistance: 50 M $\Omega$  @ 500 Vdc, without looseness or deformation

Humidity test: 40 °C, relative humidity 90-100% for 96 hours while maintainng dielectric strength: 1 min @ 500 Vac, insulation resistance: 50 M $\Omega$  @ 500 Vdc, contact resistance: 100 m $\Omega$  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 m $\Omega$ .

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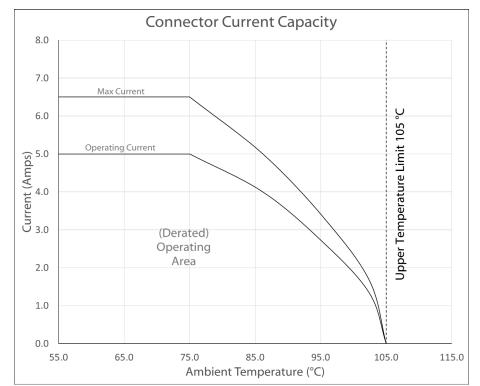
Revision:	Date:	Description:	Prepared:	Notes:				
Α	4/17/2019	Initial release		RoHS compliant		$\vdash$ $\vdash$	JSII	ITY
			Verified:  Dimensions are in millimeters. Tolerances: X: ± 0.3 mm X.X: ± 0.1 mm X.XX: ± 0.1 mm	Function test: no open, no short circuit, no intermittent	tel 1.541.323.3228 800 877.670.7118 fax 1.541.323.4202 web tensility.com			
				Description: Connector, dc plug, 3.5x1.35x20 mm, dual solder tabs, spring contacts, nickel plated, 105 °C	Size: Part number: A 50-00620			
					Scale:	4:1		Sheet 1 of 2

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# Ratings

Maximum Operating Voltage: 48 Vdc Maximum Operating Current: 5.0 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:				
Α	4/17/2019	Initial release		RoHS compliant		ENSILITY		
			Verified:	Function test: no open, no short circuit, no intermittent	tel 1.541.323.3228 800 877.670.7118 fax 1.541.323.4202 web tensility.com  Size: Part number:			
			Dimensions are in millimeters. Tolerances: X: ± 0.3 mm X.X: ± 0.1 mm X.XX: ± 0.05 mm	Description:				
				Connector, dc plug, 3.5x1.35x20 mm, dual solder tabs, spring contacts, nickel plated, 105 °C	Α	A 50-00620		
					Scale:	: 4:1 Sheet 2 of 2		

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