

**Materials**

1. Insulator: PBT + 15% GF, black
2. Shell: C3604 brass, 2 µm nickel plated
3. Pin: C2680 brass, 2 µm nickel plated
- 4 Nut: C3604 brass, 2 µm nickel plated

**Electrical Requirements**

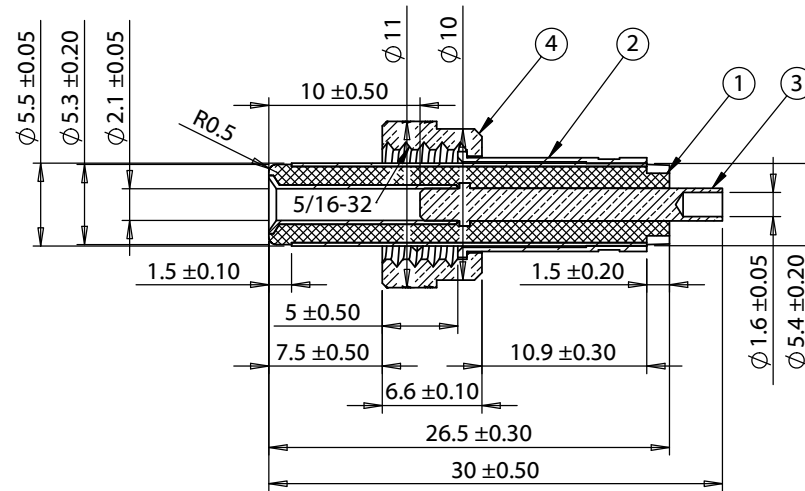
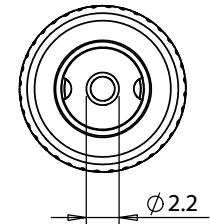
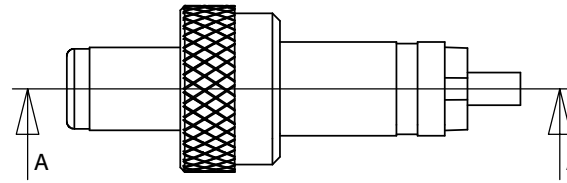
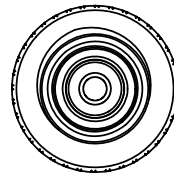
Dielectric strength: 1 min @ 500 Vac  
 Insulation resistance: 100 MΩ @ 500 Vdc  
 Contact resistance: 30 mΩ or less

**Mechanical Requirements**

Insertion force: 0.3-3 kgf  
 Withdrawal force: 0.3-3 kgf  
 Life cycle: 5000 mating cycles while maintaining 0.3-2 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 without deformation while maintaining contact resistance after test 100 mohms or less, and insulation resistance 50 Mohms/500 Vdc minimum  
 Humidity test: 40 °C, relative humidity 90-100% for 96 hours without deformation while maintaining dielectric strength 500 Vac/1 minute, insulation resistance 50 Mohms/500 Vdc minimum, and contact resistance 100 mohms or less  
 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

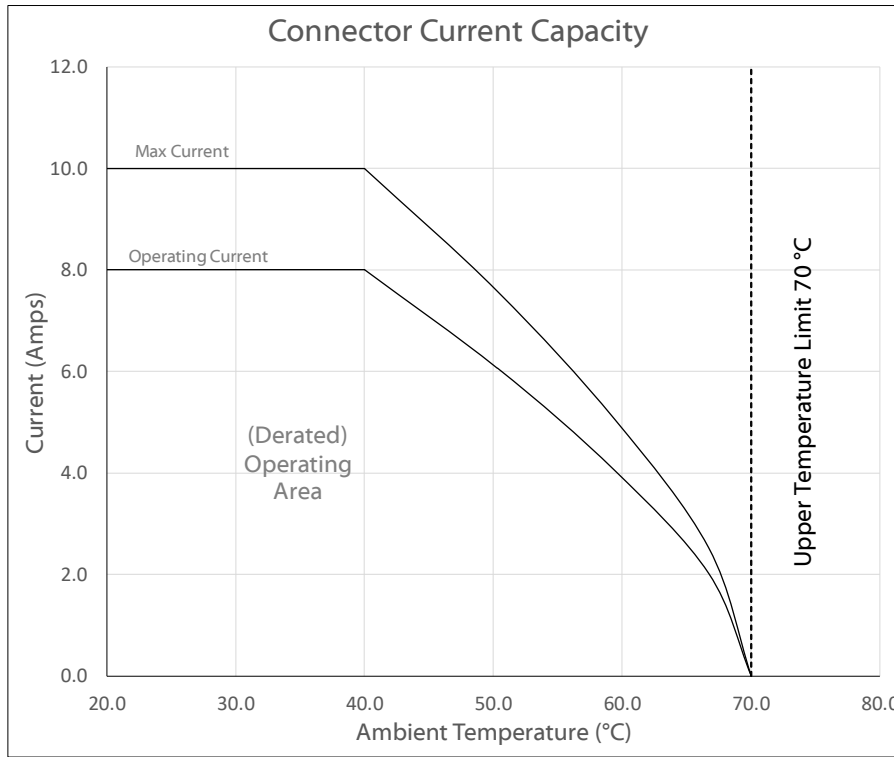
Revision:	Date:	Description:	Prepared:	Notes:	<h1>TENSILITY</h1> <p>tel 1.541.323.3228 800 877.670.7118                  fax 1.541.323.4202 web tensility.com</p>
A	5/19/2009	Initial release	AG <small>Digitally signed by AG Date: 2020.03.20 11:35:10 -07'00'</small>	RoHS compliant	
A1	11/11/2015	Modified insulator material	Verified: AW <small>Digitally signed by AW Date: 2020.09.21 11:44:16 -07'00'</small>	Function test: no open, no short circuit, no intermittent	Size: Part number:
A2	11/20/2017	Updated specifications	Dimensions are in millimeters. Tolerances: X: ± 0.5 mm X.X: ± 0.3 mm X.XX: ± 0.05 mm	Description: Connector, dc plug, 5.5x2.1xBL7.5xL30 locking style, brass nickel plated, threaded nut 5/16-32	A 50-00010
					Scale: 2:1
					Sheet 1 of 2

**Ratings**

Maximum Operating Voltage: 48 V  
 Maximum Operating Current: 8.0 A

**Operating Temperature Range**

-25~70 °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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A	05/19/2009	Initial release	AG <small>Digitally signed by AG Date: 2020.03.20 11:35:39 -07'00'</small>	RoHS compliant	
A1	11/11/2015	Modified insulator material	Verified: AW <small>Digitally signed by AW Date: 2020.09.21 11:44:27 -07'00'</small>	Function test: no open, no short circuit, no intermittent	
A2	11/20/2017	Updated specifications	Dimensions are in millimeters. Tolerances: X: ± 0.3 mm X.X: ± 0.1 mm X.XX: ± 0.05 mm	Description: Connector, dc plug, 5.5x2.1xBL7.5xL30 locking style, brass nickel plated, threaded nut 5/16-32	
					Size: A Part number: 50-00010 Scale: 2:1

