Materials
1. Insulator, PBT + 15% glass fiber, UL 94 V-0, black
2. Shell, C2700 brass, 2 µm nickel plated
3. Spring contact, C5191 phosphor bronze, 2 µm nickel plated

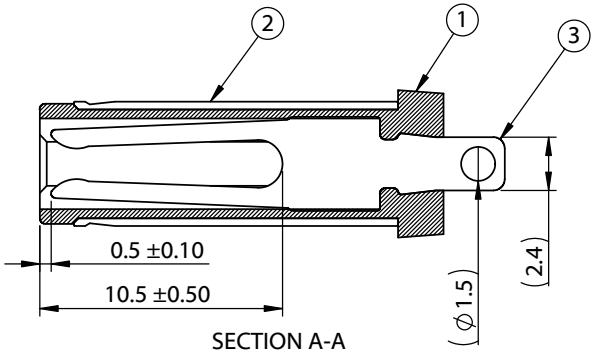
Electrical requirements
Dielectric strength: 1 min @ 500 Vac
Insulation resistance: 100 MΩ @ 500 Vdc
Contact resistance: 30 mΩ or less

Mechanical requirements
Insertion force: 0.3-3 kgf
Withdrawal force: 0.3-3 kgf
Durability: 5000 mating cycles while maintaining; 0.3-2 kgf insertion force, 0.2-1.5 kgf withdrawal force and a 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.

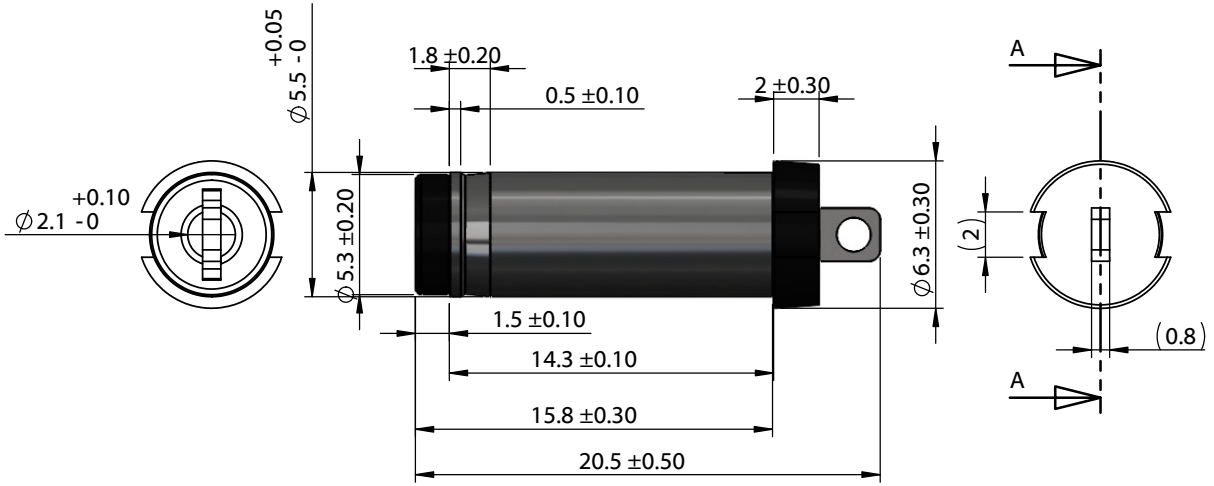
Dry test: 70 °C, RH 70-85% for 96 hrs. Cool to ambient and recover for 2 hours. Maintain insulation resistance of 50 MΩ @ 500 Vdc minimum and a contact resistance of 100 mΩ or less.

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	11/28/2011	Initial release
A1	8/17/2012	Updated dimensions and materials
A2	11/9/2012	Added test data

Prepared: CR Digitally signed by CR Date: 2026.02.17 13:17:19 -08'00'

Verified: KM Digitally signed by KM Date: 2026.02.26 16:02:51 -08'00'

Dimensions are in millimeters.
Tolerances:
X: ± 0.3 mm
X.X: ± 0.1 mm
X.XX: ± 0.05 mm

Notes:
RoHS compliant

Function test: no open, no short circuit, no intermittent

Description:
Connector, dc plug, 5.5x2.1xL20.5 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: 50-00186
Scale: 3:1
Sheet 1 of 2

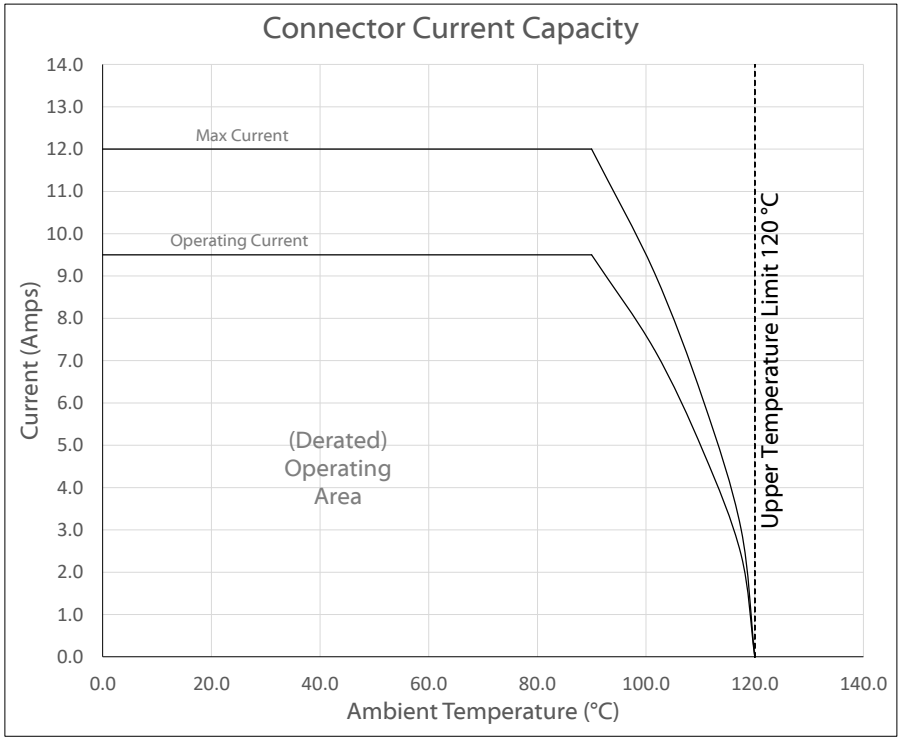
To see a custom version of this cable assembly, call Tensility at 541-323-3228 or email engineering@tensility.com

5 4 3 2 1

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Ratings
Maximum Operating Voltage: 48 Vdc
Maximum Operating Current: 9.5 A

Operating Temperature Range
-25 to 120 °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:
A	11/28/2011	Initial release
A1	8/17/2012	Updated dimensions and materials
A2	11/9/2012	Added test data

Prepared: CR
Digitally signed by CR
Date: 2026.02.17 13:17:36 -08'00'

Verified: KM
Digitally signed by KM
Date: 2026.02.26 16:02:38 -08'00'

Dimensions are in millimeters.
Tolerances:
X: ± 0.3 mm
X.X: ± 0.1 mm
X.XX: ± 0.05 mm

Notes:

RoHS compliant

Function test: no open, no short circuit, no intermittent

Description:

Connector, dc plug, 5.5x2.1xL20.5 mm, molding style, spring contacts

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