Materials
1. Shell, C3604 brass, 2 µm nickel plated
2. Spring contact, BeCu, 2 µm nickel plated
3. Pin, C3604 brass, 2 µm nickel plated
4. Insulator, PBT + 15% GF, 94 UL HB, black

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

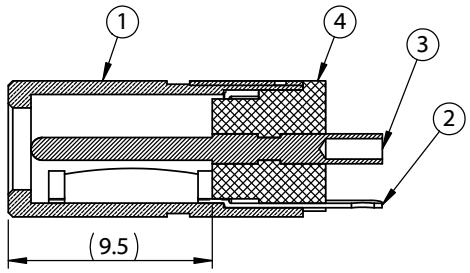
Mechanical requirements
Insertion force: 0.3-2.5 kgf
Withdrawal force: 0.3-2.5 kgf
Durability: 5000 mating cycles while maintaining; min 0.3 kgf insertion force, min 0.2 kgf withdrawal force and less than 100 mΩ contact resistance.

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.

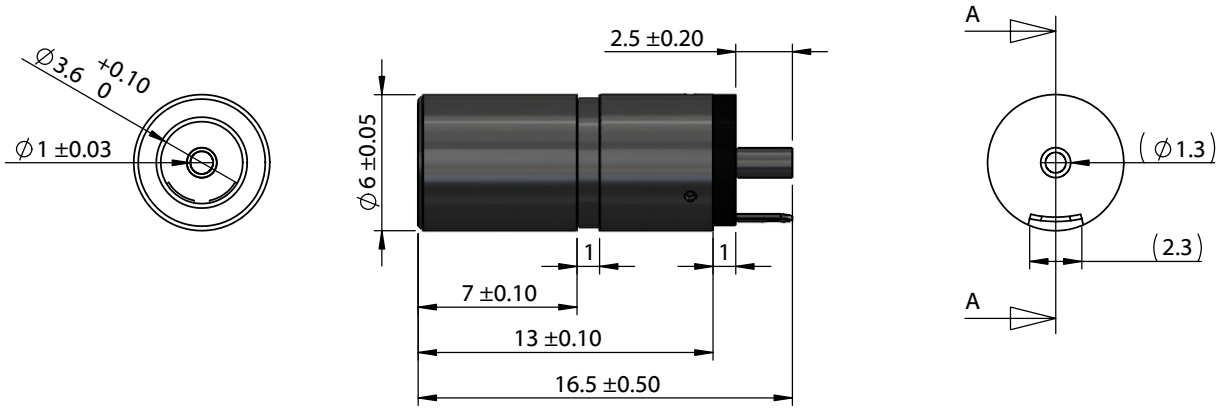
Dry test: 70 °C, RH 70-85% for 96 hrs. Cool to ambient and recover for 2 hours. Maintain insulation resistance of 50 MΩ @ 500 Vdc minimum and a contact resistance of 100 mΩ or less.

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
SCALE 3 : 1



Revision:	Date:	Description:
A	10/19/2009	Initial release
A1	12/08/2011	Updated measurements
A2	03/14/2013	Updated spec format
A3	01/23/2018	Changed insulator material

Prepared: CR Digitally signed by CR Date: 2026.02.13 16:09:26 -08'00'

Verified: KM Digitally signed by KM Date: 2026.02.24 15:28:24 -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 jack, 3.5x1.1xL16.5 mm, molding style

TENSILITY
tel 1.541.323.3228 800 877.670.7118
fax 1.541.323.4202 web tensility.com

Size: A
Part number: 50-00045
Scale: 3:1
Sheet 1 of 2

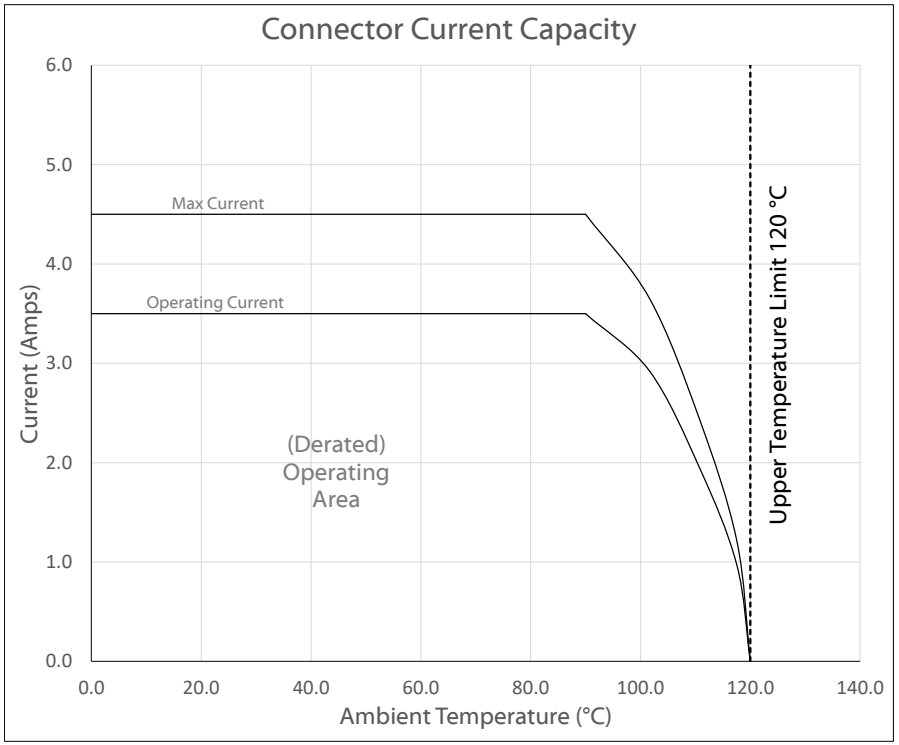
To see a custom version of this cable assembly, call Tensility at 541-323-3228 or email engineering@tensility.com

5 4 3 2 1

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Ratings
Maximum Operating Voltage: 48 Vdc
Maximum Operating Current: 3.5 A

Operating Temperature Range
-25° to 120 °, 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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