

Operating Temperature Range

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

Materials

1. Insulator: PBT +15%GF, black
2. Center contact: Phosphor bronze C5191, $\geq 2 \mu\text{m}$ nickel plated
3. Shell: Brass C2700, $\geq 2 \mu\text{m}$ nickel plated

Electrical Requirements

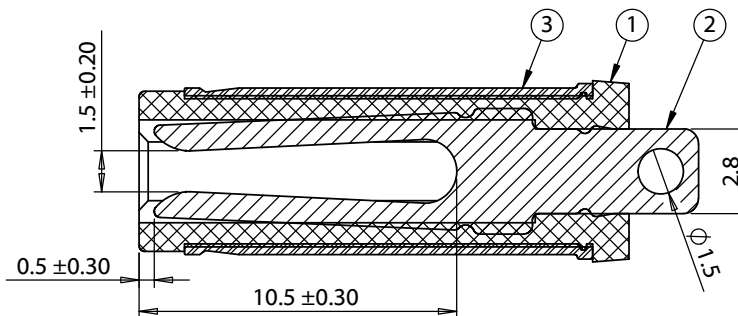
Dielectric strength: 1 min @ 500 Vac
 Insulation resistance: 100 M Ω @ 500 Vdc
 Contact resistance: 30 m Ω or less

Mechanical Requirements

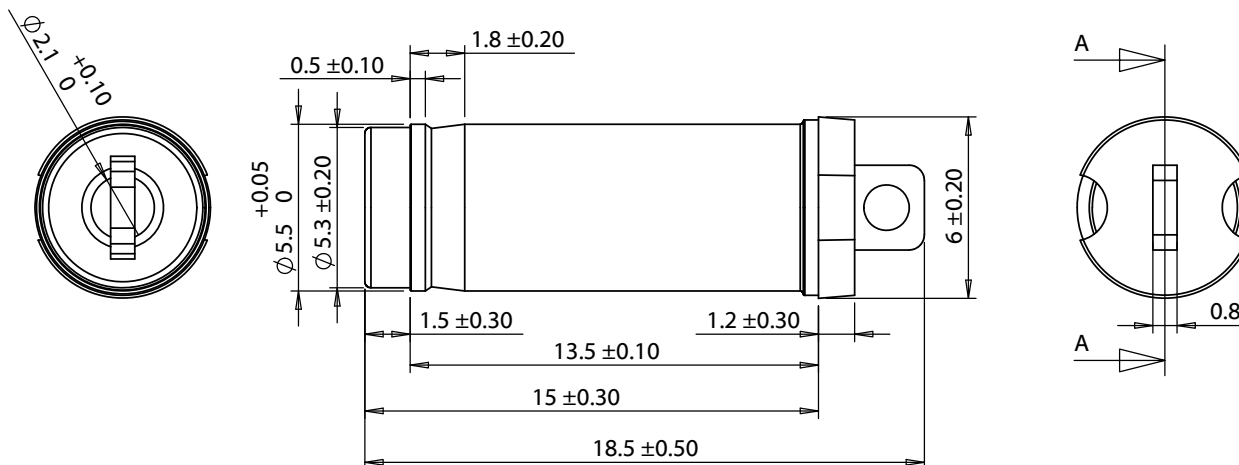
Insertion force: 0.3-3 kgf
 Withdrawal force: 0.3-3 kgf
 Life cycle: 5000 mating cycles while maintaining 0.3-2 kgf min. insertion force, 0.2-1.5 kgf min. withdrawal force and less than 100 m Ω contact resistance.

Environmental Requirements

Heat test: 70 °C, relative humidity 70-85% for 96 hours without deformation while maintaining contact resistance: ≤ 100 mohms and insulation resistance: ≥ 500 Vdc/50 M Ω
 Humidity test: 40 °C, relative humidity 90-100% for 96 hours without deformation while maintaining dielectric strength: 500 Vac/1 minute, insulation resistance: ≥ 500 Vdc/50 M Ω , and contact resistance: ≤ 100 m Ω
 Salt spray test: 35 \pm 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 m Ω .



SECTION A-A



Revision:	Date:	Description:
A	08/22/2018	Initial release

Prepared:
Verified:
Dimensions are in millimeters. Tolerances: X: ± 0.5 mm X.X: ± 0.3 mm X.XX: ± 0.05 mm

Notes: RoHS and REACH compliant
Function test: no open, no short circuit, no intermittent
Description: Connector, dc plug, 5.5x2.1xL18.5 mm, molding style, spring contacts

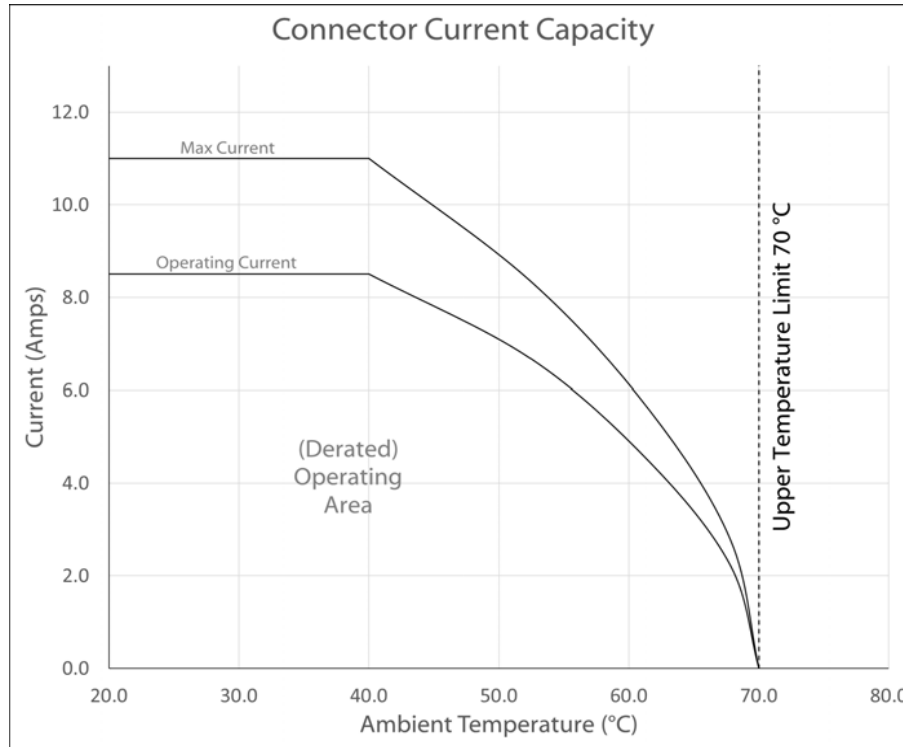
TENSILITY	
tel 1.541.323.3228 800 877.670.7118 fax 1.541.323.4202 web tensility.com	
Size: A	Part number: 50-00133
Scale: 4:1	
Sheet 1 of 2	

Ratings

Maximum operating voltage: 48 Vdc
 Maximum operating current: 8.5 A

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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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