

# Bussmann TCP70 Series

## 70Vdc Telecom fuses



### Product description

Designed to UL 248 and UL 248-14, the Bussmann TCP70 Series of telecommunication fuses withstand the wide variations in application environments while delivering reliable circuit protection.

The fuses have breaking characteristics similar to a circuit breaker while providing a much more economical solution.

- Halogen free, lead free, RoHS compliant
- Special design telecom circuit protection devices
- High inrush current withstanding capability reduces nuisance openings
- Fuseclip assembly method
- Rugged ceramic construction
- Excellent environmental integrity
- One time positive disconnect

### Agency information

- cURus Recognized Guide JDXY2, JDXY8, File E19180

### Part number system/ordering

**BK1/ TCP70- 5 -R**

- BK1/ = 1000 fuses packed in a cardboard carton
- TCP70- = Fuse series
- 5 = Amp rating
- -R = RoHS compliant

### Applications

- Telecommunication DC voltage circuits

**Bussmann**  
by **EAT•N**



The Bussmann brand of circuit protection products (formerly of the Bussmann Division of Cooper Industries) is now part of Eaton's Electrical Group, Electronics Division.

**Bussmann is now part of Eaton**  
**Same great products plus even more.**

## Product specifications

Part Number	Voltage Rating (Vdc)	Current Rating (Amps)	Interrupting Rating (Amps) <sup>1</sup>	Typical Cold Resistance (mΩ) <sup>2</sup>	Typical Voltage Drop (mV)	Typical Pre-Arcing I <sup>2</sup> t (A <sup>2</sup> s) <sup>3</sup>	Fuse Marking Color (text)
TCP70-5-R	70	5	2500	34.5	235	50	Red
TCP70-6-R	70	6	2500	20.1	165	48	Purple
TCP70-10-R	70	10	2500	10.5	148	165	Green
TCP70-15-R	70	15	2500	6.3	138	460	Blue
TCP70-30-R	70	30	2500	2.05	84	4400	Black

1. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source).

2. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 20°C.

3. Typical Pre-arcing I<sup>2</sup>t (A<sup>2</sup>s) are measured at 10I<sub>n</sub> and rated current.

## Electrical characteristics

% of Amp Rating	Opening Time
100%	4 hours minimum
150%	<60 min
200%	<2 min

## Environmental Data

- Operating temperature range: -55°C to +125°C (see derating curve)
- Altitude: <2000m above sea level
- Humidity: 90% at 20°C, 50% at 40°C non-condensing

## Reliability

- Thermal shock test — MIL-STD-202G Method 107G air-to-air, 100 cycles
- Temperature cycling — JESD22 Method A104, Condition B, 100 cycles
- Mechanical shock test — MIL-STD-002 Method 213B, 50g
- Mechanical vibration test — MIL-STD-202, Method 204D, condition D, 20g, 10-500Hz.

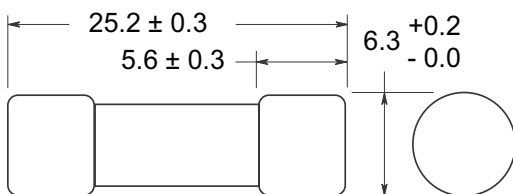
## Packaging

- 1000 fuses packed into a cardboard carton. Order with part number prefix BK1/. E.g., BK1/TCP70-5-R

## Recommended PCB fuseclips

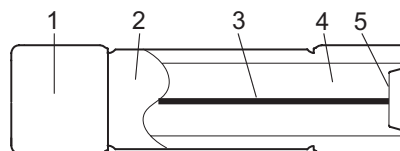
- 1Axxxx Series for 6.3mm (1/4") fuses - see data sheet # 2131.

## Dimensions - mm



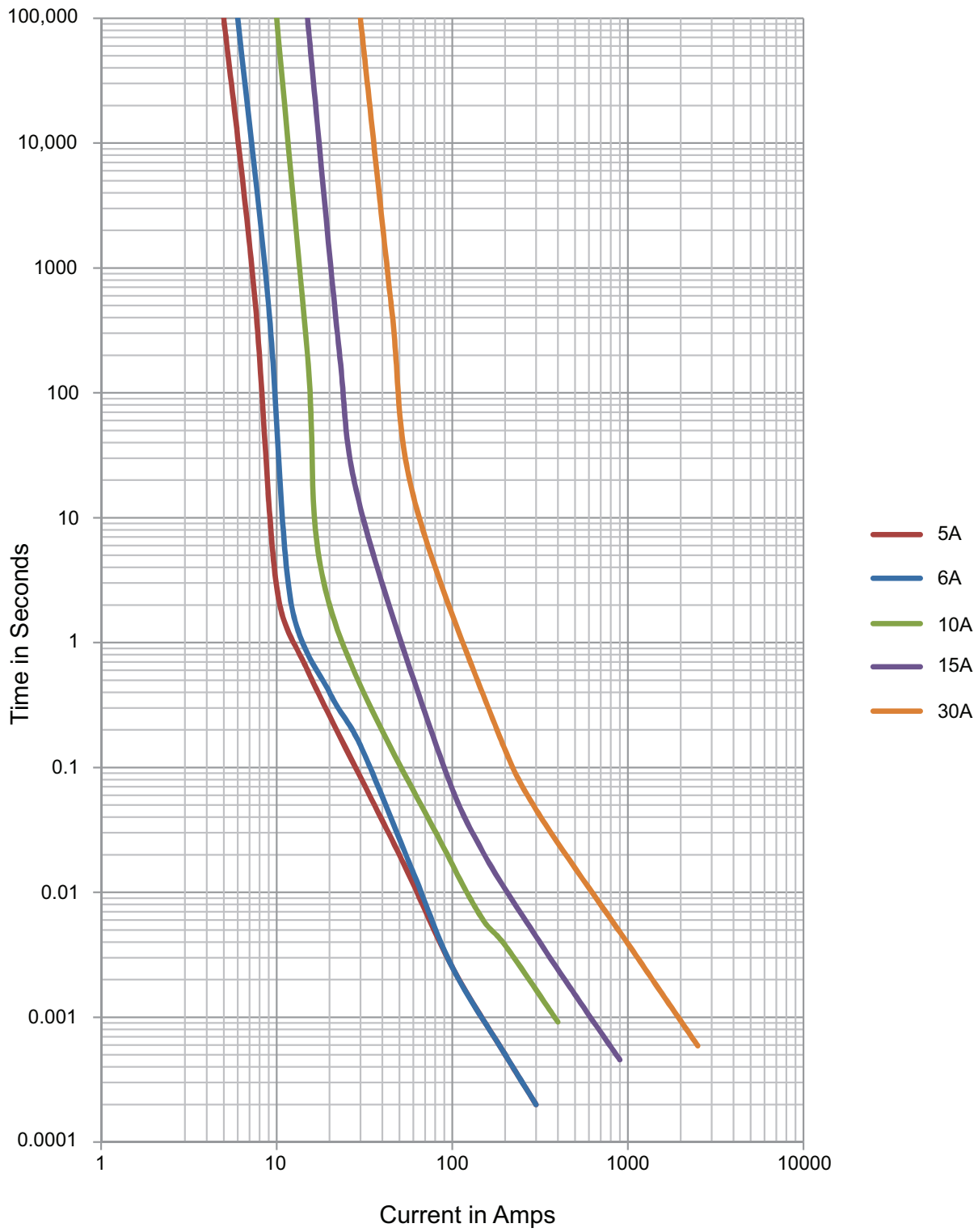
## Construction

Not to scale

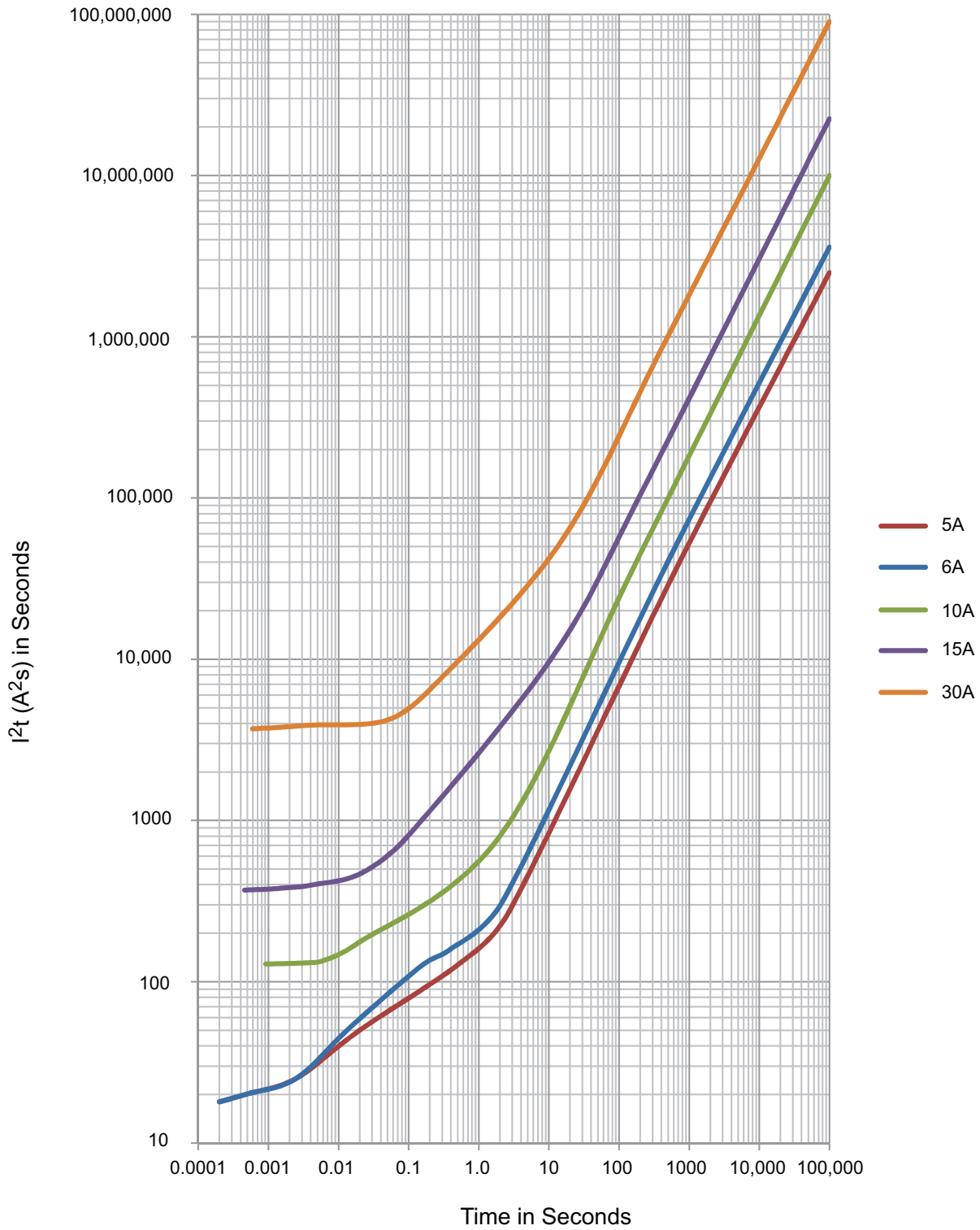


1. Tin-plated copper cap
2. Ceramic tube
3. Fuse element wire
4. Filler
5. Eyelet

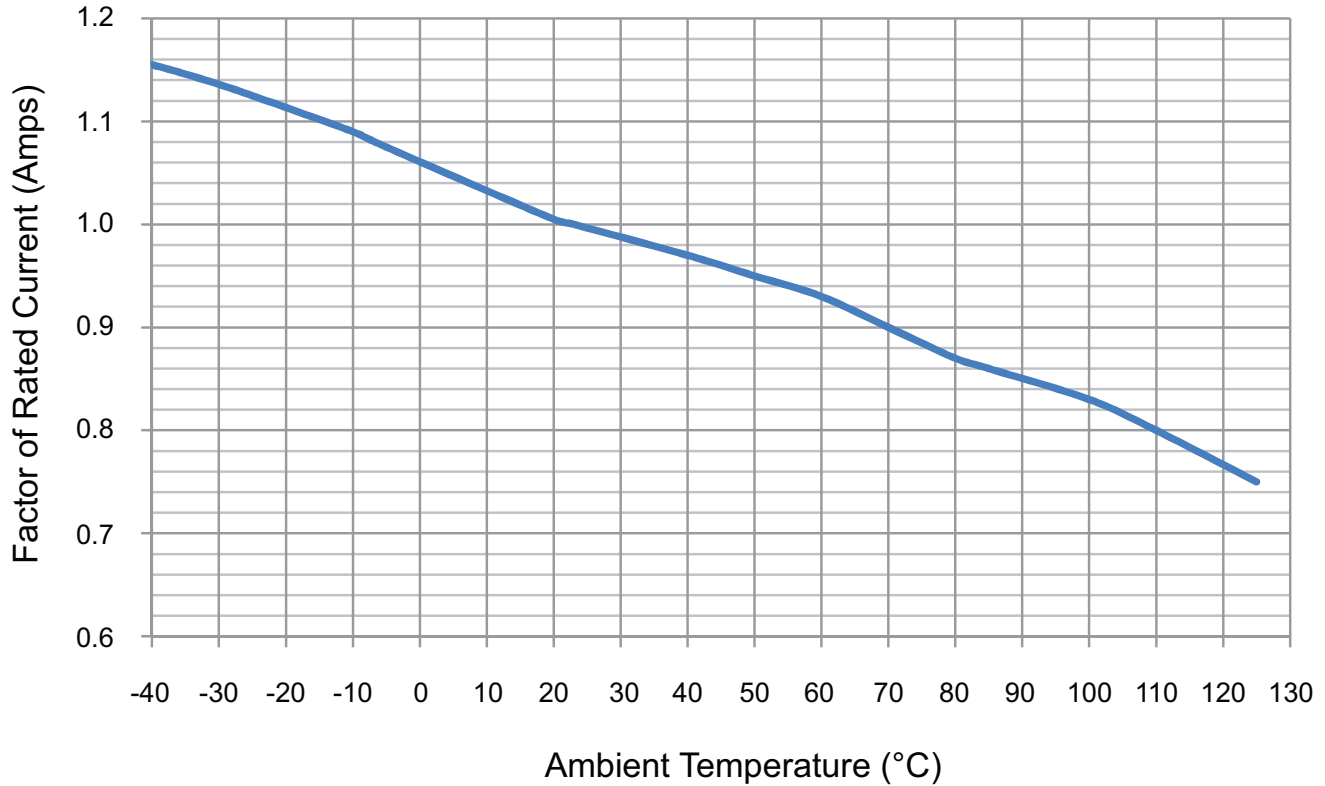
Time-current curves



I<sup>2</sup>t (A<sup>2</sup>s) Curves



**Thermal derating curve**



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