

# Low-Peak CUBEFuse

Finger-Safe, Dual-Element, Time-Delay Class CF Fuse, 1-100A, 600Vac/300Vdc



**Catalog Symbols:** TCF\_ Indicating fuse (6-100A)

TCF\_RN Non-indicating fuse (1-100A)

**Dual-Element, Time-Delay Fuse:** 10 Seconds Minimum Operating Time at 500% Rated Current

## Ratings:

**Volts** –600Vac/300Vdc

**Amps** –1 to 100A

- IR –300kA RMS Sym. (UL)
- 200kA RMS Sym. (CSA)
- 100kA DC (UL & CSA)

## Agency Information:

- UL Listed Fuse: Guide JFHR, File E4273
- CSA Certified Fuse: Class 1422- 02, File 53787
- CE compliance for the European Union low voltage directive
- RoHS Compliant

## Other Ratings/Specifications:

**Watts Loss at rated current:** TCF30: 3.99W

TCF60: 6.23W

TCF100: 9.51W

**Operating and Storage Temperature Range:** -40 to 80°C

## Material Specifications:

- Case: Glass filled PES (Polyethersulfone)
- Terminals: Copper alloy
- Terminal plating: Electroless tin
- Indicator lens: PES (Polyethersulfone) (indicating version only)
- Indicator: Energetic chemical

## Catalog Numbers (amp rating)

| Indicating CUBEFuse     |         |         |         |         |           |
|-------------------------|---------|---------|---------|---------|-----------|
| TCF6                    | TCF10   | TCF15   | TCF17-½ | TCF20   | TCF25     |
| TCF30                   | TCF35   | TCF40   | TCF45   | TCF50   | TCF60     |
| TCF70                   | TCF80   | TCF90   | TCF100  |         |           |
| Non-Indicating CUBEFuse |         |         |         |         |           |
| TCF1RN                  | TCF3RN  | TCF6RN  | TCF10RN | TCF15RN | TCF17-½RN |
| TCF20RN                 | TCF25RN | TCF30RN | TCF35RN | TCF40RN | TCF45RN   |
| TCF50RN                 | TCF60RN | TCF70RN | TCF80RN | TCF90RN | TCF100RN  |

## Carton Quantity and Weight

| Amp Rating | Carton Qty. | Weight Per Carton |      |
|------------|-------------|-------------------|------|
|            |             | lbs               | kg   |
| TCF1-30A   | 12          | 1.39              | 0.63 |
| TCF35-60A  | 12          | 1.42              | 0.65 |
| TCF70-100A | 6           | 1.74              | 0.79 |

## Features and Product Benefits

- The world's first finger-safe power fuse system.
- Smallest footprint of any class fuse including Class J, CC, T and RK.
- Meets Class CF and Class J time-delay electrical performance requirements.
- Available with and without open fuse indication.
- The indicating version features *easyID™* open fuse technology for faster troubleshooting and reduced downtime.
- Faster response to damaging faults to help reduce destructive thermal and magnetic forces.
- True dual-element fuse construction with a minimum of 10 seconds time-delay at 500% of rating.
- Long time-delay minimizes nuisance circuit openings due to temporary overloads and transient surges.
- High interrupting rating to safely interrupt faults up to 300kA.
- No venting of arc or molten metal and gases during opening.
- Robust cycling and inrush current withstand.
- Low let-through currents under fault conditions.
- Provides Type 2 “No Damage” protection for IEC motors starters when properly sized.
- Easy selective coordination with any other Cooper Bussmann Low-Peak Class CC, L, J and RK1 fuse with simple 2:1 amp ration between upstream and downstream fuses.

## CUBEFuse Holders, Disconnects and Panelboards

The CUBEfuse is used in the following Cooper Bussmann products.



At 100, 60 & 30A CUBEFuse holders can be dovetail together for the smallest footprint possible of any Class J fuse solution. See CUBEFuse holder Data Sheet 9007

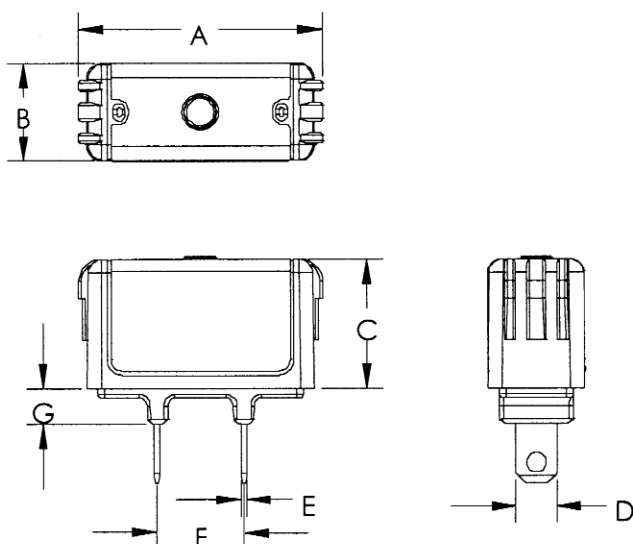


The DIN-Rail mounted 1-, 2- and 3-Pole CCP\_CF comes in 30, 60 and 100A versions. See Data Sheet 1157



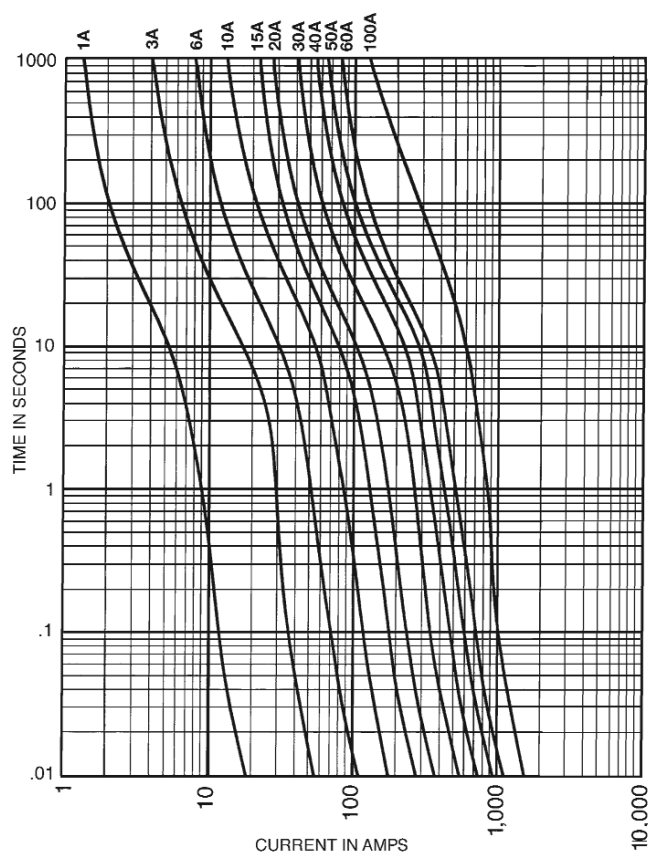
1-, 2- & 3-pole CCPB is an ampacity rejecting branch disconnect for the Quik-Spec™ Coordination Panelboard that uses the CUBEFuse up to 100A. See Data Sheet 1160

## TCF\_ and TCF\_RN Dimensions – in (mm)

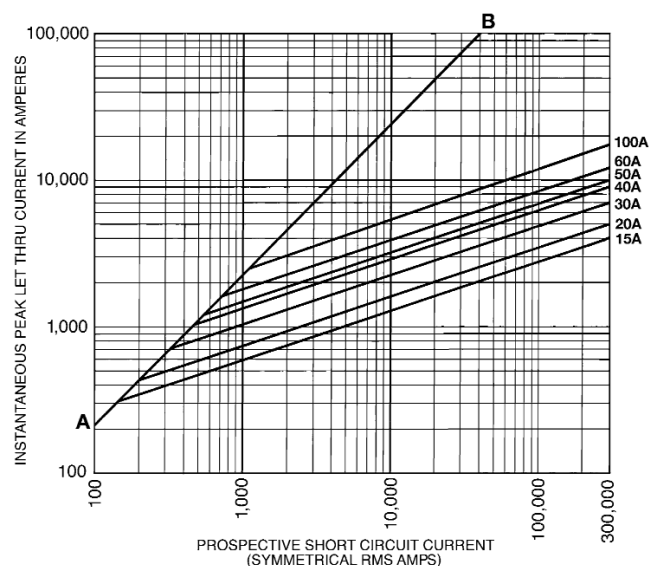


| Fuse<br>Amps | Dimensions - in (mm) |                 |                 |                 |                |                 |                |
|--------------|----------------------|-----------------|-----------------|-----------------|----------------|-----------------|----------------|
|              | A                    | B               | C               | D               | E              | F               | G              |
| 1-15         | 1.88<br>(47.75)      | 0.75<br>(19.05) | 1.00<br>(25.40) | 0.23<br>(5.84)  | 0.04<br>(1.02) | 0.63<br>(15.93) | 0.28<br>(7.11) |
| 17 ½         | 1.88<br>(47.75)      | 0.75<br>(19.05) | 1.00<br>(25.40) | 0.31<br>(7.87)  | 0.04<br>(1.02) | 0.63<br>(15.93) | 0.28<br>(7.11) |
| 20           | 1.88<br>(47.75)      | 0.75<br>(19.05) | 1.00<br>(25.40) | 0.31<br>(7.87)  | 0.04<br>(1.02) | 0.63<br>(15.93) | 0.28<br>(7.11) |
| 25-30        | 1.88<br>(47.75)      | 0.75<br>(19.05) | 1.00<br>(25.40) | 0.31<br>(7.87)  | 0.04<br>(1.02) | 0.63<br>(15.93) | 0.28<br>(7.11) |
| 35-40        | 2.13<br>(54.10)      | 1.00<br>(25.40) | 1.13<br>(28.58) | 0.36<br>(9.10)  | 0.04<br>(1.02) | 0.63<br>(15.93) | 0.38<br>(9.65) |
| 45-50        | 2.13<br>(54.10)      | 1.00<br>(25.40) | 1.13<br>(28.58) | 0.44<br>(11.13) | 0.04<br>(1.02) | 0.63<br>(15.93) | 0.38<br>(9.65) |
| 60           | 2.13<br>(54.10)      | 1.00<br>(25.40) | 1.13<br>(28.58) | 0.44<br>(11.13) | 0.04<br>(1.02) | 0.63<br>(15.93) | 0.38<br>(9.65) |
| 70           | 3.01<br>(76.45)      | 1.00<br>(25.40) | 1.26<br>(32.00) | 0.49<br>(12.45) | 0.06<br>(1.60) | 0.58<br>(14.78) | 0.38<br>(9.65) |
| 80-90        | 3.01<br>(76.45)      | 1.00<br>(25.40) | 1.26<br>(32.00) | 0.49<br>(12.45) | 0.06<br>(1.60) | 0.58<br>(14.78) | 0.38<br>(9.65) |
| 100          | 3.01<br>(76.45)      | 1.00<br>(25.40) | 1.26<br>(32.00) | 0.57<br>(14.48) | 0.06<br>(1.60) | 0.58<br>(14.78) | 0.38<br>(9.65) |

## Time-Current Characteristic Curves—Average Melt



## Current Limitation Curves



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