

# CUBEFuse™ and Fuseholder

## Finger-Safe Dual-Element Time-Delay Fuses Indicating – 600 Volts or Less

# TCF & TCFH

## 1-100 Amps



Catalog Symbol: TCF (Fuse) & TCFH (Holder)  
 Dual-Element, Time-Delay Fuse: 10 Seconds  
 Minimum Operating Time at 500% Rated Current  
 Ampere Rating: 1 to 100A  
 Voltage Rating: 600Vac (or less)  
 Interrupting Rating: 300,000A RMS Symmetrical (UL)  
 200,000A RMS Symmetrical (CSA)

**Agency Information:**

UL Listed Special Purpose Fuse: Guide JFHR,  
 File E56412

CSA Certified Fuse: Class 1422- 02, File 53787

UL Listed Fuseholder: Guide IZND,  
 File E214079

CSA Certified Fuseholder: Class 6225-01, File 47235

**Other Electrical Certifications:**

CE compliance for the European Union Low Voltage  
 Directive (50-1000Vac, 75-1500Vdc)

DC Voltage Rating: 300Vdc (or less), 100,000AIR

**Catalog Numbers**

|       |           |       |       |
|-------|-----------|-------|-------|
| TCF1  | TCF3      | TCF6  | TCF10 |
| TCF15 | TCF17-1/2 | TCF20 | TCF25 |
| TCF30 | TCF35     | TCF40 | TCF45 |
| TCF50 | TCF60     | TCF70 | TCF80 |
| TCF90 | TCF100    |       |       |

**CUBEFuse™ Fuseholder Catalog Data**

| Amps | Poles | Wire *             | Dual Wire *        | Part Number |
|------|-------|--------------------|--------------------|-------------|
| 30   | 1     | 14 AWG to 8 AWG CU | 14 AWG CU          | TCFH30      |
| 60   | 1     | 14 AWG to 4 AWG CU | 10 AWG to 6 AWG CU | TCFH60      |
| 100  | 1     | 10 AWG to 1 AWG CU | 6 AWG CU           | TCFH100     |

\* 75°C (MIN) CU Wire Only

- The world's first finger safe industrial fuse system.
- 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.
- Meets UL Class J Time-Delay electrical performance requirements.
- High interruption rating to safely interrupt faults up to 300,000A.
- Faster response to damaging faults reduces destructive thermal and magnetic forces.
- Permanent open fuse indication.
- Designed to be an internationally accepted and specified world class product.
- Smallest footprint of any power class fuse including Class J, CC, T and RK.
- Meets requirements of IEC 60529 for IP-20 finger safe rating.
- 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.
- Low watt loss reduces power consumption and lowers operating temperature.
- Conventional Class J fuse case sizes and ampere ratings.
- Dovetail fuseholder design for ganging multiple fuse poles.
- 30, 60 and 100A fuseholders can be ganged together.
- 30A fuses can be plugged into the 60 and 100A holder without a reducer.
- 60A fuses can be plugged into the 100A holder without a reducer.
- 35mm DIN rail and chassis mounting features.
- Fuseholder wire ports rated for dual wires.

**Carton Quantity and Weight**

| Ampere Rating | Carton Qty | Weight Per Carton |      |
|---------------|------------|-------------------|------|
|               |            | Lbs.              | Kg.  |
| TCF1-30       | 12         | 1.39              | .518 |
| TCFH30        | 12         | 2.42              | .902 |
| TCF35-60      | 12         | 1.42              | .530 |
| TCFH60        | 12         | 2.57              | .958 |
| TCF70-100     | 6          | 1.74              | .791 |
| TCFH100       | 6          | 1.38              | .626 |

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Dimensional Data For TCF and TCFH



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| Dimension | 30A in [mm]  | 60A in [mm]  | 100A in [mm] |
|-----------|--------------|--------------|--------------|
| A         | 1.88 [47.75] | 2.13 [54.10] | 3.01 [76.45] |
| B         | .75 [19.05]  | 1.00 [25.40] | 1.00 [25.40] |
| C         | 1.00 [25.40] | 1.13 [28.58] | 1.26 [32.00] |
| D         | .31 [7.94]   | .44 [11.11]  | .57 [14.48]  |
| E         | .04 [1.02]   | .04 [1.02]   | .06 [1.60]   |
| F         | .63 [15.88]  | .63 [15.88]  | .63 [15.88]  |
| G         | .27 [6.86]   | .38 [9.65]   | .39 [9.93]   |
| H         | 2.30 [58.42] | 2.60 [66.04] | 2.91 [73.91] |
| I         | .76 [19.30]  | 1.03 [26.16] | 1.05 [26.75] |
| J         | 1.27 [32.18] | 1.53 [38.86] | 2.01 [51.05] |
| K         | .15 [3.81]   | .17 [4.32]   | .160 [4.06]  |
| L         | N/A          | N/A          | .80 [20.32]  |
| M         | N/A          | N/A          | 2.51 [63.75] |

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TCF & TCFH  
1-100 Amps

Time-Current Characteristic Curves-Average Melt



### Current Limitation Curves



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### Indicating – 600 Volts or Less

# TCF & TCFH

## 1-100 Amps

#### ELECTRICAL SPECIFICATIONS

Maximum operating voltage: 600Vac (300Vdc)  
 Maximum interruption current:  
 300K A maximum @ 600Vac  
 100K A maximum @ 300Vdc  
 Watts Loss at rated current:  
 TCF30: 3.99W  
 TCF60: 6.23W  
 TCF100: 9.51W

#### THERMAL SPECIFICATIONS

Operating temperature range: -10°C to 65°C

#### MECHANICAL SPECIFICATIONS

Tested continuous harmonic vibration: 0.03" amplitude, 10Hz-60Hz-10Hz 4min excursion, repeated for 4hr, repeated for 3 mutually perpendicular planes (fuse in holder)

Tested impact acceleration: 20g in 3 mutually perpendicular planes

#### FUSE MODULE MATERIAL SPECIFICATIONS

Fuse case: 20% glass filled PES (Polyethersulfone)  
 Fuse terminals: 110 Copper  
 Fuse terminal plating: Electroless Tin  
 Fusible element: Copper Alloys  
 Filler: Pure quartz silica  
 Fill plug: Nylon  
 Indicator lens: PES (Polyethersulfone)  
 Indicator: Energetic chemical

#### FUSEHOLDER MATERIAL SPECIFICATIONS

Holder case: 15% glass filled PBT (polybutylene terephthalate)  
 Interface Clips: High Performance Copper Alloy  
 Interface Clip plating: Electroless Tin (*No plating on TCFH100*)  
 Contact Lubricant: Fluoroether Grease  
 30A Box Lug: Copper  
 60A Box Lug: Copper  
 100A Box Lug: Aluminum  
 DIN Rail Spring: Stainless Steel

#### HANDLING & STORAGE SPECIFICATIONS

Storage Temperature: -10°C to 65°C



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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