TE Connectivity (TE)'s Modular Fuse Holders – MFH range

Customer presentation 2024-07









MODULAR FUSE HOLDERS Introduction

The modular fuse holders are designed to accommodate 10 mm x 38 mm, class CC and photovoltaic fuses with options for

1, 2, or 3 poles, including **neutral** configurations.

Whether with or without a blown fuse indicator, TE's fuse holders prioritize safety and convenience. Equipped with screw clamp technology, they provide secure connections for reliable short-circuit and overload protection of industrial devices.



MODULAR FUSE HOLDERS

Family scope

Modular fuse holders for 10 mm x 38 mm fuses







1 pole +N



With fusion indicator

Feature:

- For 10x38 mm fuses according to IEC 60269,UL 4248-1, CSA C22-2
- Screw-clamp technology
- 1, 2, 3 poles and neutral modular closed design
- 1 pole + neutral version in only 18 mm spacing
- Stackable thanks to the assembly kit
- Compact design for space-saving, easy access to the fuse, finger safe...
- Flame retardant body as per UL 94 V0
- IP 20 and sealable in the closed position
- Blown fuse indicator (1) (110 V to 725 V AC-DC), available on 1,2 or 3 poles versions

Application: mainly European market

- Electrical cabinet builder in industry & Automation control
- Battery energy storage systems (BESS)
- Electrical vehicle infrastructures (EVI)
- Outdoor lighting
- Motion & Drives
- **HVAC & Machinery**

Modular fuse holders for photovoltaic applications



Without & with Fusion Indicator



10 x 85 mm fuse holder

Feature:

- High voltage rating:
 - 1000VDC for 10x38 mm photovoltaic fuses according to IEC 60269,UL 4248-1, CSA C22-2
 - 1500VDC for 10x85mm photovoltaic fuses according to IEC 60629-1 and 2
- Screw-clamp technology
- 1 pole with or without fusion indicator
- 10x38 mm model are stackable thanks to the assembly kit
- Compact design for space-saving, easy access to the fuse, finger safe...
- Flame retardant body as per UL 94 V0
- IP 20 and sealable in the closed position
- Blown fuse indicator 1 for 10x38 mm version (400 V to 1000 V DC)

Application:

- Solar inverter panels
- Solar combiner boxes

Modular fuse holders for Class CC fuses







1 to 3 pôles, with or without fusion indicator

Feature:

- For Class CC fuses according to UL 4248-4 and CSA C22-2
- Screw-clamp technology
- 1, 2, 3 poles
- Stackable thanks to the assembly kit
- Compact design for space-saving, easy access to the fuse, finger safe...
- Flame retardant body as per UL 94 V0
- IP 20 and sealable in the closed position
- Blown fuse indicator 1 (110 V to 600 V AC-DC), available on 1,2 or 3 poles versions

Application: mainly North American market

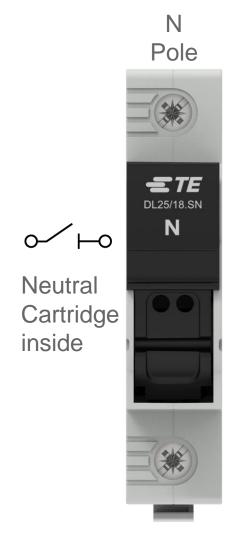
- Electrical cabinet builder in industry & automation control
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MODULAR FUSE HOLDERS Models



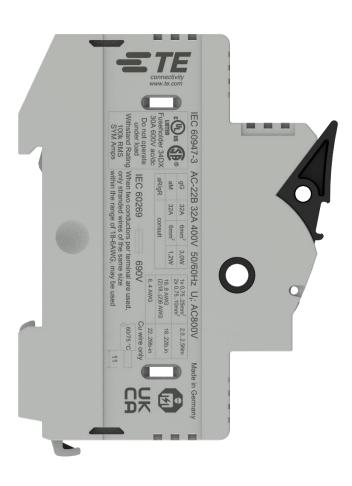








MODULAR FUSE HOLDERS Design







Bipolar



Tripolar





MODULAR FUSE HOLDERS Value propositions

SPACE EFFICIENT



Modular design:

- Modular closed design meet the standards of the industry
- Suitable for installation in boxes

Single to multiple poles:

- Pre-configured multipole versions

Compact design:

- One of the highest cross section of the market (25 mm²) in only 18 mm spacing.
- Up to 32 A circuit protection in only 18 mm spacing and reduced height.
- 1 PH+N version in only 18 mm space
- Easily stackable side by side, virtually no space loss.

EASY TO INSTALL



Easy mounting & handling:

- Fuse changing with the flick of a finger
- DIN rail mounting.
- Multi-pole assembly kit available for field assembling.

Easy maintenance:

- Optional blown fuse indicator allows quick identification of faulty circuits.
- Technical specifications available on the side of the products.

OPERATOR SAFETY



Finger safe:

- IP20 protection degree.
- Modular and closed design.

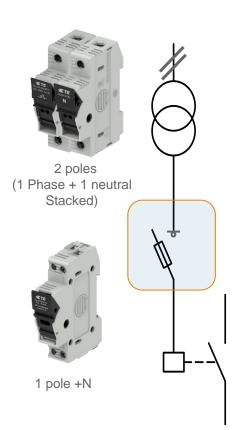
Installation safety:

- Sealable in closed position.
- Flame retardant plastic.



MODULAR FUSE HOLDERS

Application Example: 10x38 mm fuse switch disconnector

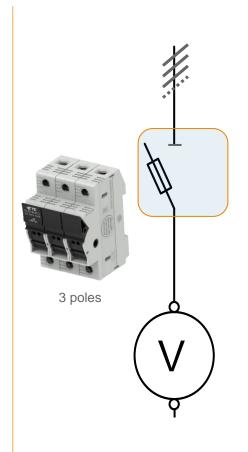


Application example

One pole + one neutral

This family is designed to fulfill OEMs and panel builders tough requirements. They find application in **industrial automation switchboards and cabinets** to protect sub-circuits, transformers, primary and secondary circuits, motors and other resistive or inductive loads. Thanks **to IEC 60947-3 AC-22B** utilization category, the fuse disconnector is a convenient, simple and reliable device for load **switching and protection**.

Here is shown a typical application in OEM segment. According to IEC 60364-1, secondary winding of command transformer shall be **protected against short circuit and overload**. Transformer provides 230V a.c. dedicated power supply to a **battery of contactors**.



Application example

Three poles

This family is designed for fine protection of electric devices in single phase and three phase networks with neutral. They find application in distribution switchboards, cabinets and consumer units to protect

lighting circuits

electric devices and appliances

protection and monitoring devices

measuring instruments

signalling devices and socket outlets

Here is shown a typical application in a secondary distribution board. Following the manufacturer's instructions, the voltmeter inputs of the multifunction meter – three phases plus neutral – shall be protected by fuses.

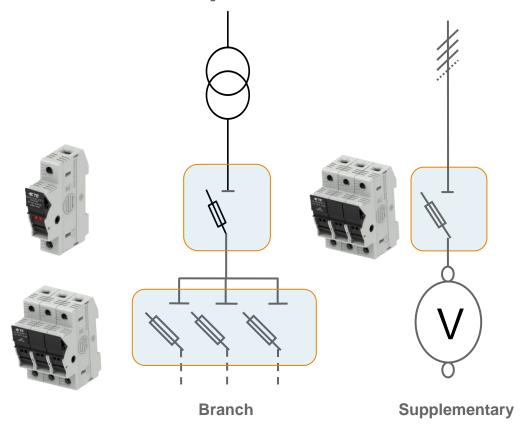
Application with the IEC/FR STANDARD - UL/CSA STANDARD

Product for industry in the power distribution and motor control Industrial control panel builder in the protection of electric street lighting with fuse located in the post



MODULAR FUSE HOLDERS

Application example: CC fuseholders



Application example;

One, two or three poles

UL 4248-1 distinguishes two kinds of protection:

Branch protection: protection of circuits, cables and devices. It can be done by high limiting devices installed upstream on the circuit to be protected

Supplementary protection: further protection of the instrumentation inside the switchboard

- Measurement devices
- Signaling devices
- · Surge protection devices, time switches

Applications:

Lighting feeders and control circuits

Small motor and transformers

Wires and cables

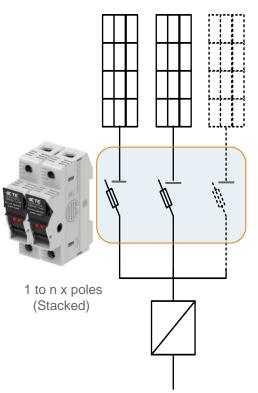
Application with the CC STANDARD for NAM Region

Product for industry in the power distribution and motor control Industrial control panel builder in the protection of electric circuits

= TE

MODULAR FUSE HOLDERS

Application Example: PV fuse disconnectors



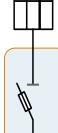
Application example

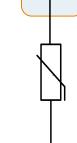
One or two poles

Help prevent damage to the PV DC lines and provide **isolation** for maintenance purposes, the fuse disconnectors are installed downstream on every single string. Fuse shall be selected according to rated current of the line, up to 32A.







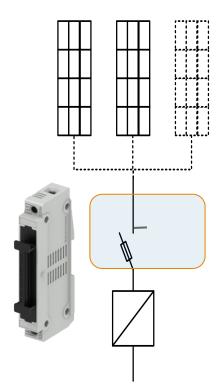


Application example

One or two poles

When the Isc (solar cell short circuit current) in the point of installation is higher than 25A DC, **The** SPDs (Surge protection device) require back-up protection with specific gR fuse.

The modular fuse holder allow protection of all range of PV surge protection devices, up to 1.500 V DC with a reduced overall dimension.



Application example

One or two poles

In small photovoltaic plants, the PV fuse disconnectors can be used to protect DC side of inverter up to 1.500 V. Fuse link rated current shall be chosen according to inverted rated current.

Application with the UL/CSA STANDARD

Product for solar in the combiner box at string and array level, residential et building application until 1500VDC

Version 10x38mm for 1000VDC application

Version 10x85mm for 1500VDC application



MODULAR FUSE HOLDERS Stack function



Multi-Pole Assembly Kit for:

- 2 poles (VR-DL-2)
- 3 poles (VR-DL-3)
- 10 kits per packing











MODULAR FUSE HOLDERS Spacer function: allow to obtain popular 22.5 mm pitch

Needed when products are used for replacement in existing installation with a former product having a 22.5 mm spacing. (wide spread pitch).



4.5 mm spacer (CR-DL-4.5)

- 50 kits per packing

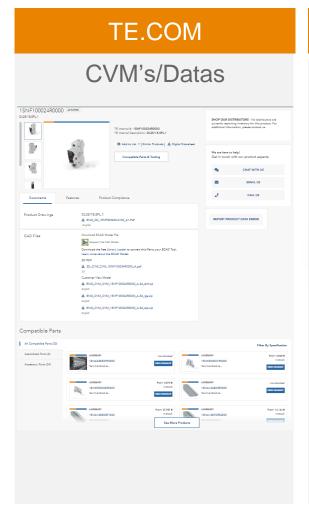








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ANY CONNECTION CAN CHANGE THE WORLD

