

DATASHEET

Mains power protection

MMP CPV Series

Type 2 (Class II / Class C) protector

$I_{max} = 40 \text{ kA } 8/20 \mu\text{s}$



Features & benefits

- The varistor based design eliminates the high follow current (I_f) associated with spark gap based surge protection
- The CPV Series utilises replaceable protection modules
- A red indicator shows when the protector requires replacement (replacement module part no. MMP CXXX where XXX is the system voltage - 100, 550, 1000)
- This indication can also trigger a remote signal contact to interface with a building management system. Please use '/S' after the part no. to order the remote indication (change-over) contact version

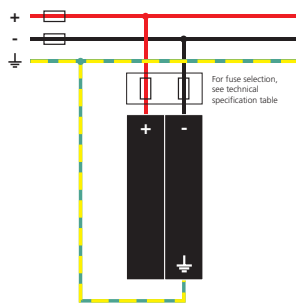
Application

Use on single phase mains supplies and power distribution systems for protection against partial direct or indirect lightning strikes.

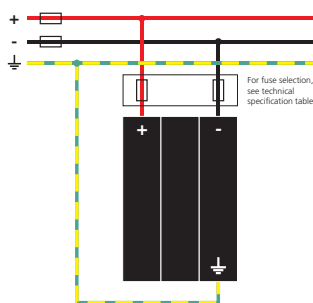
Installation

Should be installed on the DC side of the DC-AC inverter, as close as possible (within 10 m) to the equipment to be protected. The protector's base is suitable for attachment to a 35 mm top hat DIN rail. Note: a separate mains surge protector should also be installed on the AC side of the DC-AC inverter.

The diagrams below illustrate how to wire the appropriate MMP protector to the PV electrical system.



100 V DC, 550 V DC



1000 V DC

MMP CPV Series - Technical specification

| Electrical specification | MMP C100PV | MMP C550PV | MMP C1000PV |
|--|--|-----------------------------|-----------------------------|
| Maximum continuous operating voltage (U_c) | 100 Vdc | 550 Vdc | 1000 Vdc |
| Signal contact ratings | 250 VRMS / 0.5 A | 250 VRMS / 0.5 A | 250 VRMS / 0.5 A |
| Back up fuse | Fuses specifically designed for use on PV systems are recommended. Determine the most appropriate back up fuse from assessment of the nominal current of the PV module, and the open circuit voltage of the PV array: 1. multiply the nominal current of the photovoltaic module by a factor of 1.4 and select the closest, higher value fuse to the calculated figure. 2. multiply the open circuit voltage of the PV array by a factor of 1.2 and ensure that the the selected fuse has a higher voltage withstand than the calculated figure. | | |
| Part numbers | | | |
| SPD part no. | MMP C100PV | MMP C550PV | MMP C1000PV |
| SPD part no. with signal contact | MMP C100PV/S | MMP C550PV/S | MMP C1000PV/S |
| Transient specification | MMP C100PV | MMP C550PV | MMP C1000PV |
| Arrestor classification ¹ | | | |
| EN | 2 | 2 | 2 |
| IEC | II | II | II |
| E DIN VDE 0675 | C | C | C |
| Let-through voltage (U_p) ² at I_n (8/20 μ s) | < 700 V | < 1.9 kV | < 3.65 kV |
| Nominal discharge current at I_n (8/20 μ s) | 20 kA | 20 kA | 20 kA |
| Maximum discharge current I_{max} (8/20 μ s) | 40 kA | 40 kA | 40 kA |
| Mechanical specification | MMP C100PV | MMP C550PV | MMP C1000PV |
| Temperature range | -40 to +80 °C | | |
| Connection type | | | |
| for power | 35 mm ² solid conductor, 25 mm ² stranded conductor - maximum torque 4.5 Nm | | |
| for signal (remote contact) | 1.5 mm ² conductor (/S option) - maximum torque 0.25 Nm | | |
| Mounting | Indoor, 35 mm top hat DIN rail | | |
| Degree of protection | IP20 | | |
| Case material | Thermoplastic, UL 94 V-0 | | |
| Weight ³ | 445 g | 485 g | 595 g |
| Dimensions to DIN 43880 | 90 mm x 68 mm x 36 mm (2TE) | 90 mm x 68 mm x 36 mm (2TE) | 90 mm x 68 mm x 54 mm (3TE) |
| Units with the remote signal contact terminals (removable) are 100 mm high | | | |

¹ Tested to BS EN/IEC-61643² Values stated are per pole³ Remote signal contact adds 5 g to weight