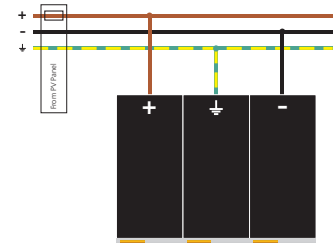




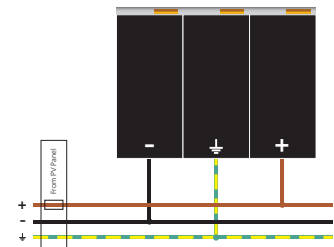
### Wiring diagrams

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



### 1000 V DC

MMP B1200APV installation



### 1000 V DC

MMP B1200APV/U installation



### Specification

- Type 1+2 (Class I+II / Class B+C) protector
- $I_{imp} = 12.5 \text{ kA } 10/350 \mu\text{s}$
- $I_{max} = 60 \text{ kA } 8/20 \mu\text{s}$

### Application

Use on photovoltaic systems up to 1000 V DC 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.

For convenience in installations where the protector will be inverted within the distribution board, select the protector with terminals at the base ('/U' option).

Note: a separate mains surge protector should also be installed on the AC side of the DC-AC inverter.

### Features and benefits

- Hybrid design eliminates high follow current ( $I_f$ )
- Common and differential mode protection
- No leakage current
- Red indicators show when the protector requires replacement
- 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 (normally-open) contact version

## Electrical specification

### MMP B1200APV

Nominal voltage	1000 Vdc
Maximum continuous operating voltage ( $U_c$ )	1200 Vdc
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: <ol style="list-style-type: none"> <li>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.</li> <li>multiply the open circuit voltage of the PV array by a factor of 1.2 and ensure that the selected fuse has a higher voltage withstand than the calculated figure.</li> </ol>
Signal contact ratings	250 Vdc / 0.1 A (for /S option)

## Transient specification

### MMP B1200APV

SPD classification <sup>1</sup> EN IEC E DIN VDE 0675	1+2 I+II B+C
Surge current rating Nominal discharge current $I_n$ (8/20 $\mu$ s) Maximum discharge current $I_{max}$ (8/20 $\mu$ s) Impulse discharge current $I_{imp}$ (10/350 $\mu$ s)	20 kA 60 kA 12.5 kA
Let-through voltage ( $U_p$ ) <sup>2</sup> $I_n$ (20 kA 8/20 $\mu$ s) 5 kA (8/20 $\mu$ s)	3.5 kV 2.5 kV

<sup>1</sup> Tested to BS EN/IEC-61643

<sup>2</sup> Values stated are per pole

## Mechanical specification

### MMP B1200APV

Temperature range	-40 to +80 °C
Connection type for power for signal (remote contact)	35 mm <sup>2</sup> solid conductor, 25 mm <sup>2</sup> stranded conductor 1.5 mm <sup>2</sup> conductor (/S option)
Mounting	Indoor, 35 mm top hat DIN rail to EN 50022
Degree of protection	IP20
Case material	Thermoplastic, UL 94 V-0
Dimensions	to DIN 43880 90 mm x 66 mm x 108 mm (6TE)

