

INSTALLATION AND USE INSTRUCTIONS

MODEL	APPLICATION
1035-20	24 VDC nom (max 30 VDC, 25 VAC)
1045-20	48 VDC nom (max 60 VDC, 45 VAC)
1035-31	24 VDC nom (max 30 VDC, 25 VAC)
1045-30	48 VDC nom (max 60 VDC, 45 VAC)



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General While the primary use for these protectors is on dc systems, they can be used on low voltage ac applications as well; the maximum ac voltage is shown above. In ac, the terminal designations Pos and Neg are meaningless; either terminal may be connected to either line of the ac system.

When a 1035-31 or 1045-30 is connected either on an ungrounded system or at a distance from the ground bond on a grounded system, the protector will be ineffectual against common mode lightning surges, instead providing protection against differential/transverse surges only. In such cases, use 1035-20 or 1045-20 to provide both common mode and differential mode protection.

Installation The protector should be installed within an enclosure to ensure personnel cannot come in contact with the live terminals and to provide a degree of protection in case of module damage during passage of a surge exceeding its rating.

When shunt connecting the module, use AWG #14 - 10 cables (2 - 6 mm²) to connect to the service mains. The terminals are identified as Pos, Neg, and Gnd for dc applications and should be connected accordingly (1035-31 and 1045-30 only have Pos and Neg terminals). For ac installations, the Pos and Neg terminals should be connected to the ac lines with Neg connected to the neutral/grounded conductor if one exists. The module may be connected directly to taps on the mains or behind a 30 amp (minimum) fuse or breaker. The metal mounting flange on the module is electrically isolated from the protector Ground terminal. For low current systems where the line cables are not too large/unwieldy, the protector can be series connected as shown; this type of connection improves the protection levels by eliminating the Ldi/dt effects of the shunt cabling during a surge.

Monitoring The monitor wire(s) are connected between the protector's internal fusing and its MOV elements. When the fuse is intact, the MOV is functional and line voltage will be present on the wires. The single mode 1035-31 and 1045-30 have a single Red wire that provides Pos line voltage with respect to the Neg terminal. The 1035-20 and 1045-20 have both a Red and Black wire that connect, respectively, to internal fusing in the Pos and Neg section of the module.

A monitoring circuit, such as a relay or light, can be connected between the red wire and the Neg terminal on the 1035-31 and 1045-30, and between the red and black wires on the 1035-20 and 1045-20. The max monitoring load current should be 50 mA.

For bench testing, to determine if the protector is functional, there must be continuity between the Pos terminal and the red wire, and continuity between the Neg terminal and the black wire.

