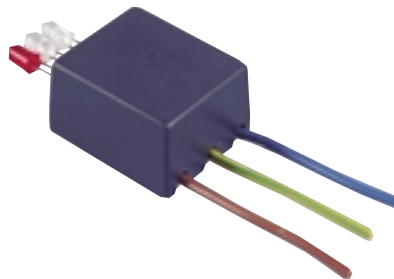


Single-phase AC surge protector boxes

MSB-HF - MSB - MSB103 - KKM-230



- Full line of single phase surge protection boxes
- "Surge protector + Filter" version
- Operating and grounding indicators

These surge protector units are designed to protect a single-phase input and are recommended for mounting on a board or in a utility box.

The line lets you choose a product by housing (metal or plastic), dimensions, performance, connection mode (series or parallel), or type of connection (wires or screw terminal block).

MSB-HF:

Metal box with output by wires, with 3-stage protection:

- Gas discharge tube stage for a high discharge current capacity.
- RFI filtering stage to limit RF interference.
- Clamping stage for a response time under 5ns.

Operation displayed on two check lights:

- Correct functioning of the protection circuit (green light)
- Connection of the surge protector to the installation's grounding network (orange light).

MSB:

Simplified version of the MSB-HF with a 1-stage surge protection, connected to the network in parallel.

MSB103:

Compact plastic housing with a 1-stage surge protection based on thermally protected varistors.

The product has three LEDs to indicate:

- Presence of line voltage (green light)
- Operation of protection circuit (red light)
- Connection of the Parasurge to the installation's grounding network (orange light).

The MSB103 is connected by wires in parallel with the network to be protected.

KKM-230:

Compact plastic housing with "varistor/gas tube" protection. Connection to screw terminal block.

Characteristics

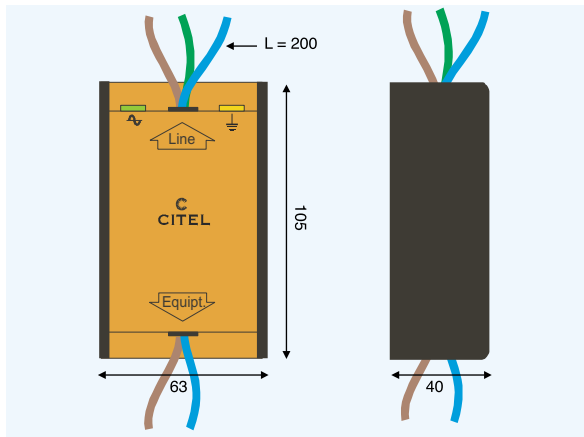
CITEL part number		MSB-230HF	MSB-130HF	MSB-230	MSB-130	MSB103	KKM-230
Nominal voltage	Un	230V	110-130V	230V	110-130V	230V	230V
Maximum voltage	Uc	250V	150V	250V	150V	250V	250V
Maximum line current		16 A	16 A	-	-	-	16 A
Protection level	Up	0,9 kV	0,6 kV	1,5 kV	1 kV	1,5 kV	1,5 kV
Max. discharge current (1 x 8/20µs impulse)	I _{max}	10 kA	10 kA	10 kA	10 kA	5 kA	5 kA
Nominal discharge current (20 x 8/20µs impulses)	I _n	3 kA	3 kA	3 kA	3 kA	2,5 kA	2,5 kA
RFI filtering		0,1-30 MHz	0,1-30 MHz	Without	Without	Without	Without
Attenuation at 0,3 MHz		25 dB	25 dB	-	-	-	-
Attenuation at 1 MHz		30 dB	30 dB	-	-	-	-
Attenuation at 10 MHz		40 dB	40 dB	-	-	-	-
Safety disconnection		disconnection and interruption of power supply	disconnection and interruption of power supply	disconnection and interruption of power supply	disconnection and interruption of power supply	disconnection	disconnection and interruption of power supply
Disconnection indicator		interruption of power supply, green neon off	interruption of power supply, green neon off	green neon off	green neon off	green neon off, red neon on	interruption of power supply
Ground disconnection indicator		orange neon off	none	none	none	orange LED off	none

Single-phase AC surge protector boxes

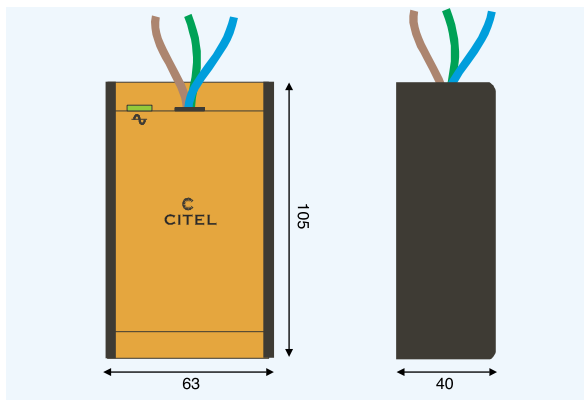
MSB-HF - MSB - MSB103 - KKM-230

Dimensions (in mm)

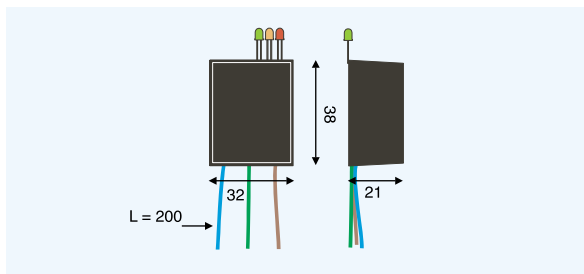
MSB-HF



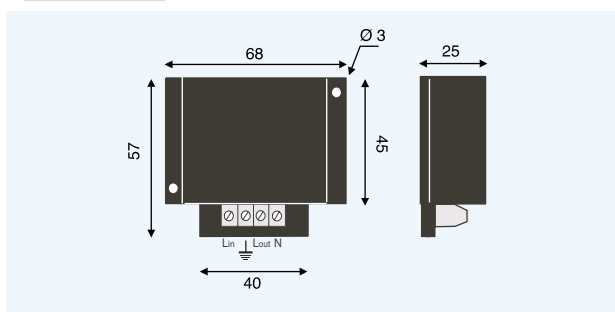
MSB..



MSB103

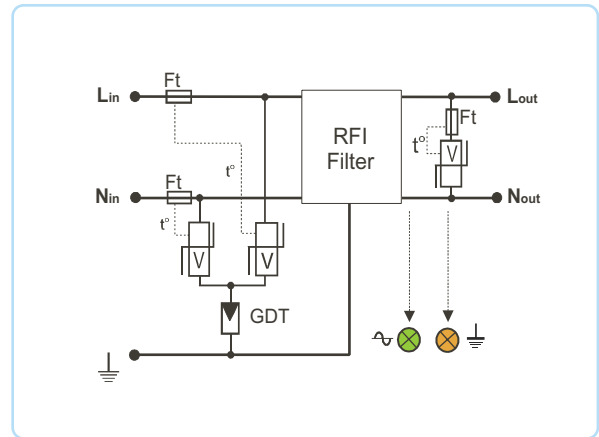


KKM-230

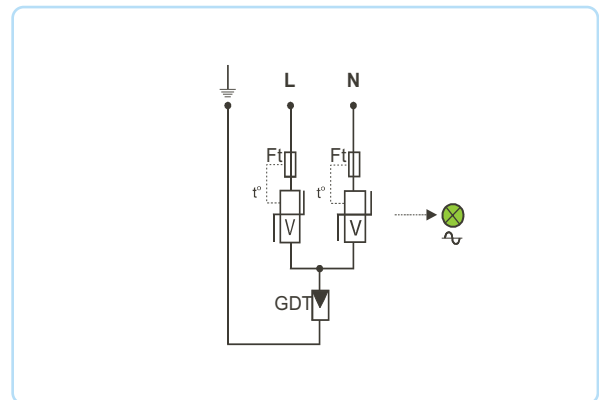


Electrical diagrams

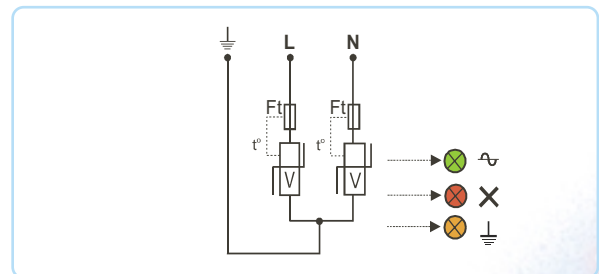
MSB-HF



MSB..



MSB103



KKM-230

