



AT83 Series - ATSHOCK

ATSHOCK

Single-pole protection for power supply lines

AT83 SERIES - ATSHOCK

AT8350 ATSHOCK L:

line-ground protection

AT8399 ATSHOCK N:

neutral-ground protection



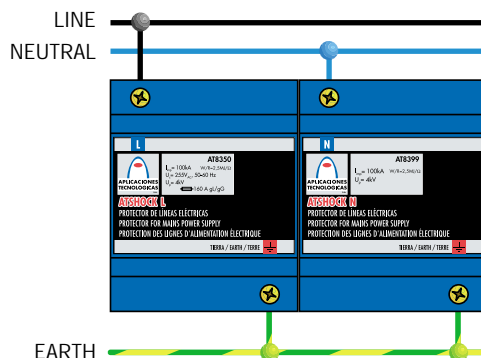
The highest protection against transient overvoltages for power supply lines at the point they enter the building. ATSHOCK series provide protection even against direct lightning strikes. Tested and certified with lightning impulse current, 100kA, 10/350µs wave.

Coarse protection according to scaled protection recommended in Low Voltage Regulation (RBT2002 ITC23).

Class I Protector according to IEC61643-1 and EN61643-11. For equipment of categories III and IV according to RBT2002.

- Encapsulated, non-exhausting creepage discharge spark gap.
- Suitable for TT, TN-C and TN-S systems.
- Coordinable with other SPDs such as ATSUB and ATCOVER.
- Optimum protection level.
- Quick response.
- Robust connectors, suitable for all type of connection.
- Single-pole protection. Withstands direct lightning strike current (10/350µs wave), over 100kA.
- High energy diverting capability.
- Limits supply following currents.

AT83 Series SPDs have been tested in **official and independent laboratories**, obtaining their characteristics according to relevant standards (shown in the table).



INSTALLATION

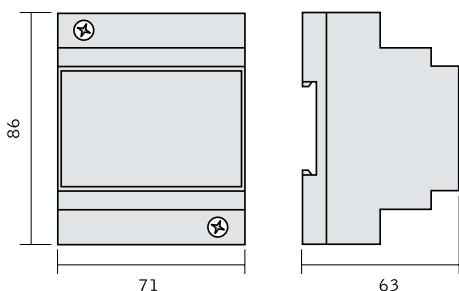
ATSHOCK Surge Protective Devices are to be installed **in parallel** with the Low Voltage supply line, connected to Phase and Ground (ATSHOCK L) or to Neutral and Ground (ATSHOCK N). One ATSHOCK L is needed for each line.

The **power should be disconnected** during the installation of the SPD.

ATSHOCK can be installed in combination with ATSUB or ATCOVER. In either case, both must be separated by at least 10 meter cable or, if this is not possible, by a decoupling inductor ATLINK, in order to achieve a correct coordination between them.

Their installation is recommended in main switchgears, where the line enters the building and where direct lightning currents could penetrate.

Earth connection is a must. Earthing in all the installation must be bonded either directly or by a spark gap and resistance should be lower than 10Ω. If the indications of this datasheet are not fulfilled during the use or installation of the SPDs, the protection assured by this device could be endangered.





AT8350 ATSHOCK L: line-ground protection
AT8399 ATSHOCK N: neutral-ground protection

| | ATSHOCK L | | ATSHOCK N | |
|--|---|--|----------------------|--|
| | AT8350 | | AT8399 | |
| Reference | | | | |
| Protection categories according to RBT2002: | III and IV | | | |
| Type of tests according to IEC61643-1, EN61643-11: | Class I | | | |
| Maximum continuous operating voltage: U_c | 255V _{AC} | | - | |
| Nominal frequency: | 50/60Hz | | | |
| Impulse current (10/350 μ s wave): I_{imp} | 100kA | | | |
| Specific energy: W/R | 2,5 MJ/ Ω | | | |
| Nominal discharge current (8/20 μ s wave): I_n | 50kA | | | |
| Protection level for 1,2/50 μ s wave: U_p | < 4 kV | | | |
| Follow current extinguishing capability: I_f | 3 kA _{eff} | | 100 A _{eff} | |
| Response time: t_r | < 100ns | | | |
| Backup fuse ⁽¹⁾ : | 160A gL/gG | | - | |
| Maximum short-circuit current: | 50kA (for maximum fuse) | | | |
| Working temperature: ϑ | -55°C to +85°C | | | |
| SPD location: | Indoor | | | |
| Type of connection: | Parallel (one port) | | | |
| Mounting method: | Fixed | | | |
| Dimensions: | 71 x 86 x 63mm (4 mod. DIN43880) | | | |
| Fixing: | DIN Rail | | | |
| Enclosure material: | Polycarbonate | | | |
| Enclosure protection: | IP20 | | | |
| Insulation Resistance: | > 10 ¹⁴ Ω | | | |
| Autoextinguish enclosure: | V-0 Type according to UNE-EN 60707 (UL94) | | | |
| Connections L/N/G: | Max/Min section multi-stranded: 16 / 45mm ² (5/1 AWG) Max/Min section single-stranded: 10 / 45mm ² (7/1 AWG) | | | |

Certificated tests according to: IEC 61643-1 / EN 61643-11 / IEC 61312-3

Complies with requirements of: UL 1449

Relevant standards: UNE21186 / NFC 17102 / UNE21185 / IEC61024-1 / IEC61312-3

(1) Needed in cases where there is no equal or less nominal current installed "upstream" from the protector.