

## AT83 Series

# SINGLE-POLE PROTECTION FOR POWER SUPPLY LINES



## ATSHOCK

- AT-8350 ATSHOCK L: line-ground protection.  $U_c = 255V$
- AT-8351 ATSHOCK L-130: line-ground protection.  $U_c = 145V$
- AT-8352 ATSHOCK L-400: line-ground protection.  $U_c = 440V$
- AT-8399 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, **50kA**, 10/350 $\mu$ s wave.

### Installation

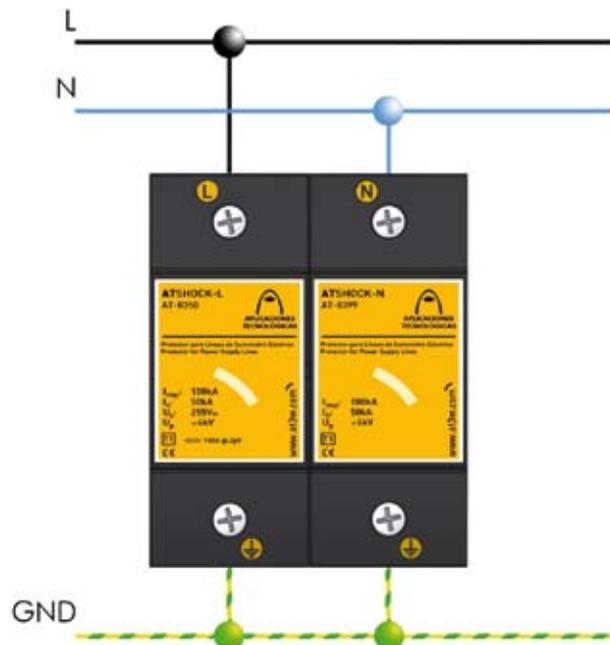
ATSHOCK Surge Protective Devices are to be installed in parallel with the Low Voltage supply line, connected to Phase and Ground (ATSHOCK L) or to Neutral and Ground (ATSHOCK N). One ATSHOCK L is needed for each line. The **power should be disconnected** during the installation of the SPD. ATSHOCK can 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.

**Coarse** protection according to scaled protection recommended in Low Voltage Regulation (REBT).

**Type 1** Protector according to EN 61643-11 and GUIDE-BT-23 of REBT. For equipment of **categories III and IV** according to REBT.

- 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 (10/350 $\mu$ s wave), over 50kA.
- Fork connection with fork terminal included for 16mm<sup>2</sup> cable.
- High energy diverting capability.
- Limits supply following currents.

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



**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 10 $\Omega$ . 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.

## AT83 Series

### Technical Datasheet

Reference	ATSHOCK L AT-8350	ATSHOCK L-130 AT-8351	ATSHOCK L-400 AT-8352	ATSHOCK N AT-8399
Protection categories according to REBT:	III and IV			
Type of tests according to EN 61643-11:	Type 1			
Maximum continuous operating voltage:	$U_c$	255V <sub>AC</sub>	145V <sub>AC</sub>	440V <sub>AC</sub>
Nominal frequency:	50 - 60Hz			
Impulse current (10/350μs wave):	$I_{imp}$	50kA		100kA
Specific energy:	W/R	625kJ/Ω		2,5MJ/Ω
Nominal discharge current (8/20μs wave):	$I_n$	50kA		
Protection level for 1,2/50μs wave:	$U_p$	< 4 kV		
Follow current extinguishing capability:	$I_f$	50 kA <sub>eff</sub>		100 A <sub>eff</sub>
Response time:	$t_r$	< 100ns		-
Backup fuse <sup>(1)</sup> :	160A gL/gG			
Maximum short-circuit current:	50kA (for maximum fuse)			
Working temperature:	$\vartheta$	-40°C to +70°C		
SPD location:	Indoor			
Type of connection:	Parallel (one port)			
Dimensions:	36 x 90 x 80mm (2 mod. DIN43880)			
Fixing:	DIN Rail			
Enclosure material:	Polyamide			
Enclosure protection:	IP20			
Autoextinguish enclosure:	V-0 Type according to UNE-EN 60707 (UL94)			
Connections L/N/G:	Section 16mm <sup>2</sup>			
Certificated tests according to: IEC 61643-1, EN 61643-11				
Complies with requirements of: UL 1449				
Relevant standards: UNE 21186, NFC 17102, IEC 62305				

(1) Needed in cases where there is higher nominal current installed "upstream" from the protector.

### Dimensions

