



AT86 Series - ATSHIELD

ATSHIELD

Combined technology against direct lightning strikes

AT86 SERIES - ATSHIELD

AT8601 ATSHIELD L:

line-ground protection

AT8602 ATSHIELD N:

neutral-ground protection



Efficient and modular protection against transient overvoltages, using an internal combination of spark gaps and metal oxide varistors.

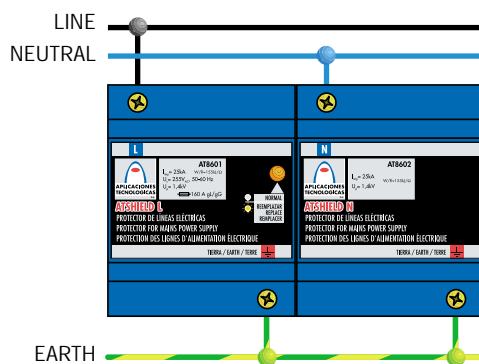
This combination is connected in such a way that no element in series with the line is needed for the correct coordination of the protection.

This protector combines the best characteristics of both technologies: the **passing residual voltage of the varistors together with the capacity of lightning current absorption of the spark gaps.**

Tested and certified as **Class I** and **II** according to regulations IEC61643-1, EN61643-11. Suitable for **Categories I, II, III** and **IV** equipment according to RBT2002.

- Coordinable with other SPDs such as ATSHOCK, ATSUB and ATCOVER series.
- Short response time.
- Don't produce deflagration.
- Single-pole protection.
- Their activation causes no interruption in power supply.
- Thermodynamic control device and light alarm for each line.

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



INSTALLATION

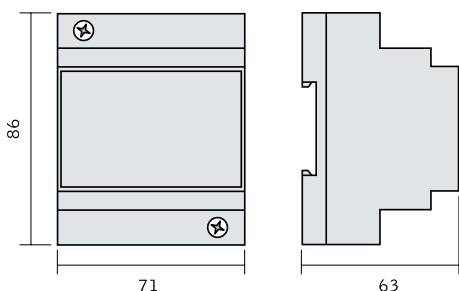
ATSHIELD Surge Protective Devices are to be installed **in parallel** with the Low Voltage supply line, connected to Line and Ground (ATSHIELD L) or to Neutral and Ground (ATSHIELD N). One ATSHIELD L is needed for each line.

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

Their installation is recommended in main switchboards, where the line enters the building or where big overvoltages can take place.

Their installation is recommended in places where important overvoltages can occur and when lines are connected to very sensitive equipment that can not withstand big overvoltages.

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.





AT8601 ATSHIELD L: line-ground protection
AT8602 ATSHIELD N: neutral-ground protection

		ATSHIELD L	ATSHIELD N
		AT8601	AT8602
Reference			
Protection categories according to RBT2002:		I, II, III, IV	
Type of tests according to IEC61643-1, EN61643-11:		Class I and II	
Nominal voltage:	U_n	230V _{AC}	–
Maximum continuous operating voltage:	U_c	255V _{AC}	–
Nominal frequency:		50/60Hz	
Impulse current (10/350µs):	I_{imp}	30kA	
Specific energy:	W/R	224kJ/Ω	
Nominal discharge current (8/20µs):	I_n	40kA	
Protection level for 1,2/50µs wave:	U_p	< 1500V	
Follow current extinguishing capability:	I_r	50 kA _{eff}	100 A _{eff}
Response time:	t_r	< 100ns	
Backup fuse ⁽¹⁾ :		125A gL/gG	–
Maximum short circuit current:		25kA (for maximum fuse)	
SPD location:		Indoor	
Type of connection:		Parallel (one port)	
Mounting method:		Fixed	
Working temperature:	ϑ	-55°C to +85°C	
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.