



AT86M Series - ATSHIELD Single-Phase

ATSHIELD M

Combined technology against direct lightning strikes

AT86M SERIES - ATSHIELD Single-Phase

AT8607 ATSHIELD 220M:
both line and neutral protection to ground for 220V_{AC} single phase lines

AT8608 ATSHIELD 130M:
both line and neutral protection to ground for 130V_{AC} single phase lines

Efficient and compact protection against transient overvoltages for single phase power supplies, 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.

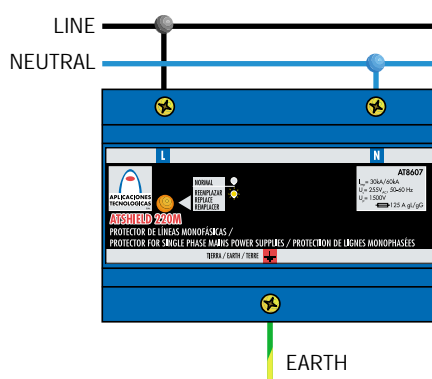
This protector combines the best characteristics of both technologies: the **passing of residual voltage of the varistors together with the capacity of lightning current absorption of the spark gaps.**

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.
- Two-pole protection.
- Their activation causes no interruption in power supply.
- Compact protection.
- Thermodynamic control device and light alarm for each phase.

AT86M Series SPDs have been tested in **official and independent laboratories**, obtaining their characteristics according to relevant standards (shown in the table).



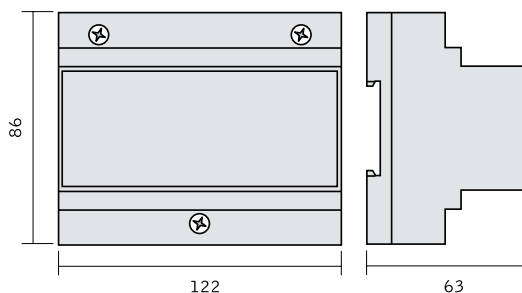
INSTALLATION

Single-phase ATSHIELD SPDs are installed **in parallel** with the Low Voltage single-phase line.

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

Their installation is recommended in distribution boards, 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.





AT8607 ATSHIELD 220M: both line and neutral protection to ground for 220V_{AC} single phase lines

AT8608 ATSHIELD 130M: both line and neutral protection to ground for 130V_{AC} single phase lines

	ATSHIELD 220M		ATSHIELD 130M	
	AT8607		AT8608	
Reference				
Protection categories according to RBT2002:	I, II, III, IV			
Type of test according to IEC61643-1, EN61643-11:	Class I and II			
Nominal voltage: U_n	220V _{AC} (L-G)		130V _{AC} (L-G)	
Tension maximale de fonctionnement: U_c	255V _{AC} (L-G)		145V _{AC} (L-G)	
Nominal frequency:	50/60Hz			
Impulse current (10/350 μ s): I_{imp}	30/60kA			
Specific energy: W/R	224kJ/ Ω			
Nominal discharge current (8/20 μ s wave): I_n	40/80kA			
Level of protection: U_p	< 1500V			
Follow current extinguishing capability: I_r	50 kA _{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:	122 x 86 x 63mm (7 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.