

## AT86 Series

### COMBINED TECHNOLOGY AGAINST DIRECT LIGHTNING STRIKES



## ATSHIELD S

### AT-8618 ATSHIELD S 230M:

protection of both line and neutral to ground for 230V<sub>ac</sub> single phase lines

### AT-8619 ATSHIELD S 130M:

protection of both line and neutral to ground for 130V<sub>ac</sub> single phase lines

Efficient and compact protection against transient overvoltages for power supplies systems, using an internal combination of spark gaps electronically activated.

This element is internally 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 qualities of the actual overvoltages protection technologies: the **passing residual voltage of the varistors together with the capacity of lightning current absorption of the spark gaps**.

Tested and certified as **Type 1 and 2** according to regulations EN 61643-11 and the GUIDE-BT-23 of REBT. Suitable for **Categories I, II, III and IV** equipment according to REBT.

- Coordinable with other SPDs such as ATSUB and ATCOVER series.
- Double connection in order to facilitate wiring.
- Short response time.
- Don't produce deflagration.
- Bipolar protection.
- Their activation causes no interruption in power supply.
- Compact protection.
- Thermodynamic control device and light alarm for each phase.

AT86 Series SPDs have been tested in **official and 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 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.

### Installation

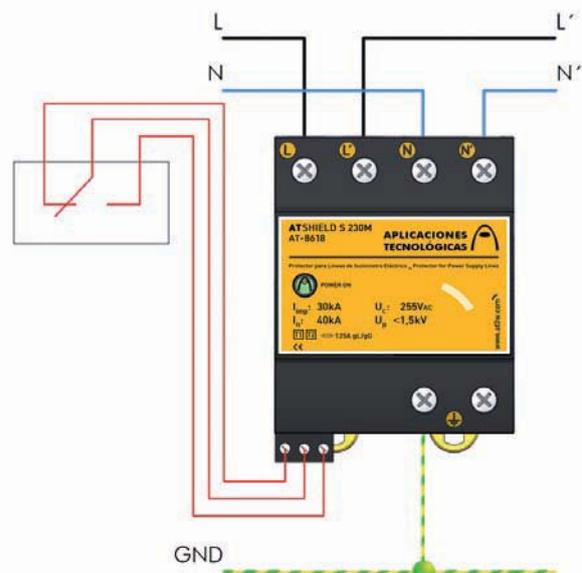
**ATSHIELD S** Surge Protective Devices must be installed in parallel with the Low Voltage single-phase power supply line provided with a neutral.

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

They can be installed as single protection or in combination with other protectors that leave less residual tension voltage, in which case is necessary that they are 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 switchboards, where the line enters the building or where big overvoltages can take place.

Their installation is recommended in places where direct lightning strikes can occur after the main board and when lines are connected to very sensitive equipment that cannot withstand big overvoltages.



## AT86 Series

### Technical Datasheet

Reference		ATSHIELD S 230M AT-8618	ATSHIELD S 130M AT-8619
Protection categories according to REBT:		I, II, III, IV	
Type of tests according to EN 61643-11:		Type 1 + 2	
Nominal Voltage:	$U_n$	230V <sub>AC</sub>	130V <sub>AC</sub>
Maximum continuous operating voltage:	$U_c$	255V <sub>AC</sub>	145V <sub>AC</sub>
Nominal frequency:		50 - 60Hz	
Impulse current (10/350μs wave):	$I_{imp}$	30kA	
Specific energy:	W/R	224kJ/	
Nominal discharge current (8/20μs wave):	$I_n$	40kA	
Maximum discharge current (8/20μs wave):	$I_{max}$	65kA	
Protection level:	$U_p$	< 1500V	
Follow current extinguishing capability:	$I_f$	50 kA <sub>eff</sub>	
Response time:	$t_r$	< 100ns	
Backup fuse <sup>(1)</sup> :		125A gL/gG	
Maximum short-circuit current:		25kA (for maximum fuse)	
Working temperature:	ϑ	-40°C to +70°C	
SPD location:		Indoor	
Type of connection:		Parallel (one port)	
Number of poles:		2	
Dimensions:		72 x 90 x 80mm (4 mod. DIN43880)	
Fixing:		DIN Rail	
Enclosure material:		Polyamide	
Enclosure protection:		IP20	
Insulation resistance:		> 10 <sup>14</sup> Ω	
Autoextinguish enclosure:		V-0 Type according to UNE-EN 60707 (UL94)	
Connections L/N/GND:		Min/Max section multi-stranded: 4 / 35 mm <sup>2</sup> (11/2 AWG) Min/Max section single-stranded: 1 / 35 mm <sup>2</sup> (17/2 AWG)	
<b>Voltage-free contact for the remote control</b>			
Connection:		Maximum section single-stranded / multi-stranded: 1,5mm <sup>2</sup>	
Contact output:		Commutated	
Working voltage:		250V <sub>AC</sub> (Maximum working voltage of the alarm supply)	
Maximum current:		2A (Maximum current of the alarm supply)	
Complies with requirements of: UNE-EN 61643-11			
Relevant standards: UL 1449			
Relevant standards: UNE21186, UNE-EN 62305			

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

### Dimensions

