



> PROTECTION OF SPECIAL EQUIPMENT POWER SUPPLY

> ATPV SERIES

> ATPV

Protection for photovoltaic installations

> **AT-8901 ATPV:** for overvoltages induced by photovoltaic installations

Effective protection of the photovoltaic installations and every element that could be integrated in the installation, such as the voltage inverter.

Tested and certified as a **type 2** protector according to the standard EN 61643-11 and GUÍA-BT-23 from the REBT.

- > Made up of zinc oxide varistors adjusted to the specific voltage of the electrical installation to be protected. They are able to **protect inverters with an open input voltage of 1000 V_{DC}**.
- > Short response time.
- > Do not produce deflagration.
- > Protection with removable modules.
- > They do not cause any interruption to the power supply.
- > Thermodynamic control device, mechanical warning and remote alarm. When the warning light is yellow, the cartridge is in good condition. If not, replace.

They are installed **in parallel** with the line, without affecting its operation in normal conditions.

The **ATPV series** includes removable modules that can be replaced in the event of a breakdown or fault without needing to disconnect the wiring.

ATPV series protectors have been tested in **official and independent laboratories**, obtaining their characteristics according to relevant standards (shown in the table).



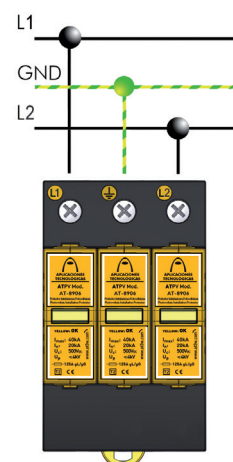
Connection to earth is a must. Earthing in the whole installation must be bonded either directly or by a spark gap and resistance should be lower than 10 Ω . If the indications on this datasheet are not fulfilled during use or installation of the protectors, the protection provided by this device could be compromised.

Installations based on **photovoltaic panels** are more prone to suffering the effects of overvoltages due to being installed outdoors.

> INSTALLATION

They must be installed **in parallel** with the direct current (DC) line, connected to positive and negative line/s and the ground.

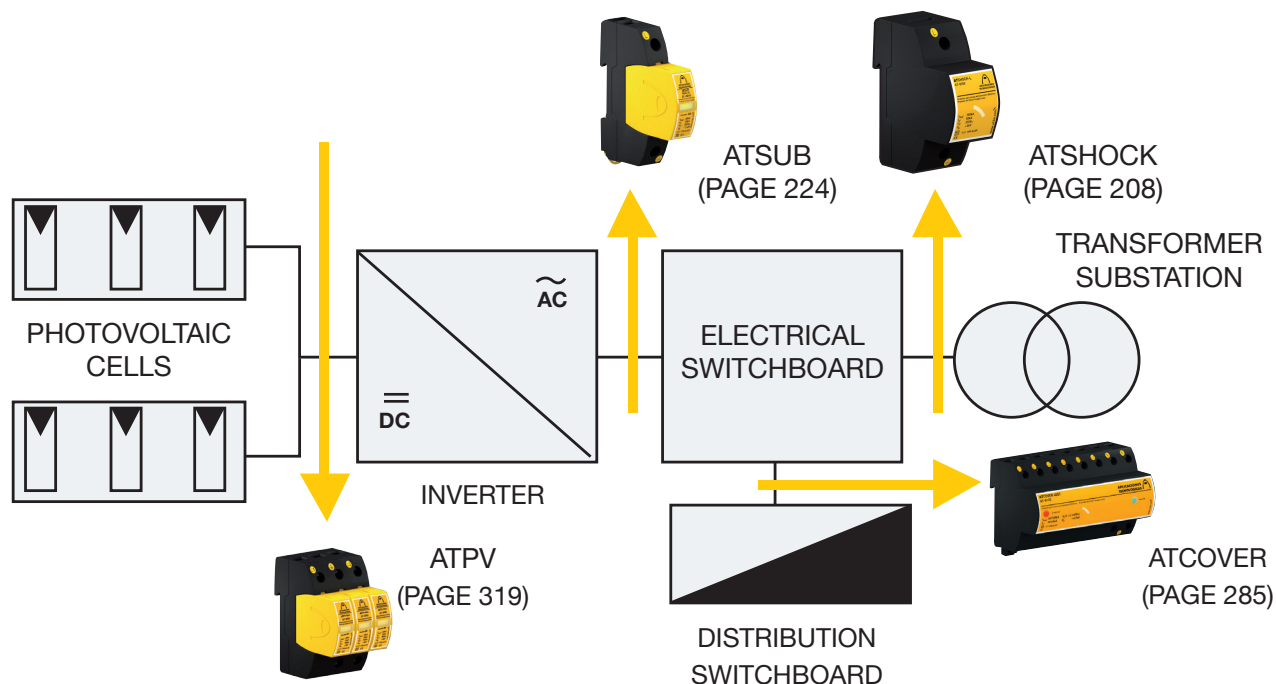
A fuses or circuit breaker must be present upstream. They will be disconnected during installation for safety purposes. Installation should be carried out **without power running through the line**.





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The electrical installation should be protected as follows:

- > An ATPV protector should be installed on the continuous part of the inverter.
- > A medium protection based in the ATSUB series must be placed in order to protect the main switchboards from the installation process.
- > If generated power is used for local needs, an ATCOVER series protector must be placed in the distribution board in order to prevent high residual voltages.
- > If generated power is to export to the electrical network through a transformer substation, ATSHOCK should be used in order to prevent transient overvoltages in the line.





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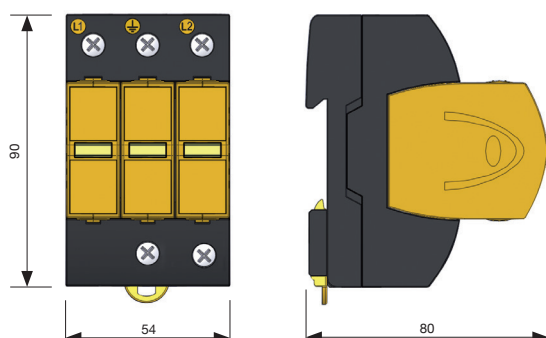
> TECHNICAL DATASHEET

Reference:		AT-8901
Type of tests according to EN 61643-11:		Type 2
Maximum continuous operating voltage:	U_c	1000 V _{DC}
Nominal discharge current (8/20 μ s wave):	I_n	20 kA
Maximum discharge current per pole (8/20 μ s wave):	I_{max}	40 kA
Protection level, 8/20 μ s wave at I_n :	$U_p(I_n)$	4 kV
Protection level 5 kA; 8/20 μ s wave:		3.5 kV
Response time:	t_r	< 25 ns
Backup fuse ⁽¹⁾ :		125 A gL/gG
Maximum short-circuit current:		25 kA (for maximum fuse)
Working temperature:	θ	-40 °C to +70 °C
Protector location:		Indoor
Type of connection:		Parallel (one port)
Number of poles:		3
Dimensions:		54 x 90 x 80 mm (3 modules DIN 43880)
Fixing:		DIN Rail
Enclosure material:		Polyamide
Enclosure protection:		IP20
Insulation resistance:		> 10 ¹⁴ Ω
Self-extinguishing enclosure:		V-0 Type according to UNE-EN 60707 (UL94)
Connections L/N/G:		Min/Max multi-stranded section: 4 / 35 mm ² Min/Max single-stranded section: 1 / 35 mm ²

Certificated tests according to: UNE-EN 61643-11
Complies with requirements of: UL 1449
Relevant standards: UNE 21186, NF C 17-102, IEC 62305

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

> DIMENSIONS (MM)



> ACCESSORIES



> AT-8906 ATPV Mod.: I_{max} 40 kA / U_c 500 V_{DC}



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> ATPV SERIES

> ATPV3

> TECHNICAL DATASHEET

Reference:		AT-8905
Maximum continuous operating voltage:	U_c	950 V _{DC}
Nominal discharge current (8/20 μ s wave):	I_n	20 kA
Maximum current (8/20 μ s wave):	I_{max}	40 kA
Protection level:	U_p	2600 V
Response time:	t_r	< 25 ns
Backup fuse ⁽¹⁾ :		125 A gL/gG
Maximum short-circuit current:		25 kA (for maximum fuse)
Working temperature:	ϑ	-40 °C to +70 °C
Protector location:		Indoor
Type of connection:		Parallel (one port)
Dimensions:		18 x 90 x 80 mm (1 module DIN 43880)
Fixing:		DIN Rail
Enclosure material:		Polyamide
Enclosure protection:		IP20
Insulation resistance:		> 10 ¹⁴ Ω
Self-extinguishing enclosure:		V-0 Type according to UNE-EN 60707 (UL94)
L/N/T connections:		Min/Max multi-stranded section: 4 / 35 mm ² Min/Max single-stranded section: 1 / 35 mm ²

Tests certified according to standards: UNE-EN 61643-11

Complies with requirements of: UL 1449

Relevant standards: UNE 21186, NF C 17-102, IEC 62305

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



> INSTALLATION



> DIMENSIONS (MM)

