



## ATCOMBO Series

ATCOMBO

# Protection box provided with sockets

### ATCOMBO SERIES

#### AT8113 ATCOMBO 220:

220V<sub>AC</sub> lines

#### AT8115 ATCOMBO 130:

130V<sub>AC</sub> lines

#### AT9320 ATCOMBO 12:

12V<sub>DC</sub> lines

#### AT9325 ATCOMBO 24:

24V<sub>DC</sub> lines

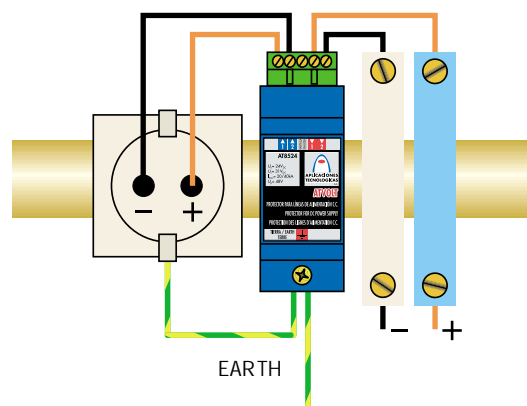
#### AT9326 ATCOMBO 48:

48V<sub>DC</sub> lines

ATCOMBO series are power supply protection boxes with specific Schucko sockets to facilitate equipment connection.

- Containing the SPDs with a lower residual voltage (ATCOVER, ATVOLT).
- Able to divert tens of kiloamperes.
- Compact box, fully wired and easy to install. Fire resistant, robust, sealable.
- None of the contained elements produce external flash.

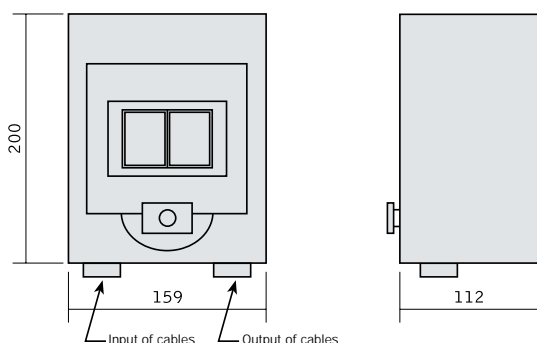
The SPDs contained in ATCOMBO and their coordination have been tested in **official, independent laboratories**, obtaining their characteristics according to relevant standards (related in the table).



### INSTALLATION

ATCOMBO boxes are to be installed **in parallel** with the Low Voltage line, connected to line/s, neutral and ground. **Fuses or circuit breakers must be present upstream.** They will be disconnected during the installation for working security. If this protection does not exist, fuses must be installed in series with the box.

Their installation is recommended where direct lightning currents could penetrate and very sensitive equipment is connected, without distance enough for SPDs coordination. Special care should be taken when there is an ATVOLT enclosed, since the proper polarity must always be kept.



**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.





- AT8113 ATCOMBO 220:** 220V<sub>AC</sub> lines
- AT8115 ATCOMBO 130:** 130V<sub>AC</sub> lines
- AT9320 ATCOMBO 12:** 12V<sub>DC</sub> lines
- AT9325 ATCOMBO 24:** 24V<sub>DC</sub> lines
- AT9326 ATCOMBO 48:** 48V<sub>DC</sub> lines

		ATCOMBO220	ATCOMBO130	ATCOMBO12	ATCOMBO24	ATCOMBO48
		AT8113	AT8115	AT9320	AT9325	AT9326
Reference						
Protection categories according to RBT2002:		I, II, III, IV	I, II, III, IV	–	–	–
Nominal voltage:	U <sub>n</sub>	220V <sub>AC</sub> (50Hz)	130V <sub>AC</sub> (50Hz)	12V <sub>DC</sub>	24V <sub>DC</sub>	48V <sub>DC</sub>
Maximum continuous operating voltage:	U <sub>c</sub>	255V <sub>AC</sub> (50Hz)	145V <sub>AC</sub> (50Hz)	15V <sub>AC,DC</sub>	31V <sub>AC,DC</sub>	65V <sub>AC,DC</sub>
Nominal discharge current (8/20μs wave):	I <sub>n</sub>	10kA / 20kA				
Maximum discharge current (8/20μs wave):	I <sub>max</sub>	30kA / 60kA		20kA / 40kA		
Impulse current (10/350μs wave):	I <sub>imp</sub>	6kA / 12kA		4kA / 8kA		
Protection level (1,2/50μs):	U <sub>p</sub>	600V	500V	18V	35V	70V
Protection level at I <sub>n</sub> (8/20μs):	U <sub>p</sub> (I <sub>n</sub> )	900V	700V	25V	40V	75V
Residual voltage with combination wave 6kV/3kA (L-N, L-G):	U <sub>p</sub> (I <sub>n</sub> )	800V	470V	–	–	–
Resistance (series):	R <sub>s</sub>	–		15Ω		
Response time:	t <sub>r</sub>	< 25ns			< 1ns	
Dimensions:		200 x 267 x 112mm		200 x 159 x 112mm		
Backup fuse <sup>(1)</sup> :		125A gL/gG			–	
Maximum short-circuit current:		25kA (for maximum fuse)			–	
Working temperature:	ϑ	-55°C to +85°C				
Fixing:		Wall or vertical support				
Enclosure material:		Autoextinguishing, isolating				
Fire resistance:		650°C according to IEC 695-2-1				
Enclosure protection:		IP65 according to IEC 60.529				
Impact protection:		IK09 according to EN 50.102				
Connections to line:		Maximum section 25mm <sup>2</sup>				
Connections to ground:		Max/Min section multi-stranded: 16 / 45mm <sup>2</sup> (5/1 AWG) Max/Min section single-stranded: 4 / 45mm <sup>2</sup> (11/1 AWG)				

**Certificated tests according to: IEC 61643-1 / BS 6651 / EN 61000-4-5 / NFC 61-0740 / UL 1449 / EN 61643-11 / IEC 61312-3**

Complies with requirements of: UL 1449

Relevant standards: UNE21186 / NFC 17102 / IEC61024-1 / IEC61312-3

(1) Needed in cases where there is no equal or less nominal current installed "upstream" from the protector