



> PROTECTION OF POWER SUPPLY LINES

> ATSUB SERIES

> ATSUB-3P-NR

Compact protection for two-phase power supply lines with neutral for american voltages



- > **AT-8037 ATSUB-3P-NR 15-120**: peak current 15 kA. U_n 120 V
- > **AT-8038 ATSUB-3P-NR 40-120**: peak current 40 kA. U_n 120 V
- > **AT-8039 ATSUB-3P-NR 65-120**: peak current 65 kA. U_n 120 V

Effective protection against transient overvoltages for electrical two-phase power supply lines with neutral, using metal oxide varistors and gas discharge tubes. Medium protection according to the cascade protection recommended in the Spanish Low Voltage Regulations (REBT ITC23).

Surge protective devices ready for two-phase power supply lines with neutral seldom used in America. Moreover, they are tropicalised for these voltages.

It includes removable modules for replacement in the event of a breakdown or fault, without needing to disconnect the wiring. Tested and certified as **type 1, 2 and 3** protectors according to the standard EN 61643-11 and GUÍA-BT-23 from the REBT. Suitable for Categories I, II, III and IV equipment according to ITC-BT-23.

- > Can be coordinated with other ATSHOCK, ATSHIELD and ATCOVER series protectors.
- > Made up of zinc oxide varistors and gas discharge tubes able to withstand very high currents.
- > Short response time.
- > Do not produce deflagration.
- > Compact protection with removable modules for quick replacement in case of breakage.
- > Their activation causes no interruption in 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.

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



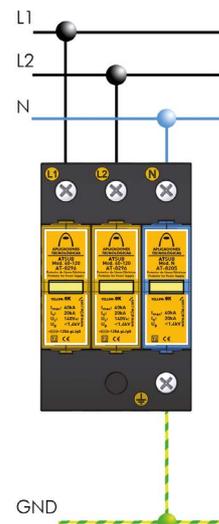
Connection to earth is a must. Earthing in the whole installation must be bonded either directly or by a spark gap and resistance should be lower than 10 Ω . If the indications on this datasheet are not fulfilled during use or installation of the protectors, the protection provided by this device could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

> INSTALLATION

They are installed **in parallel** with the low voltage line, with connections to the phases to be protected, neutral and ground. Installation should be carried out **without power running through the line**.

When ATSUB protectors are installed as medium protection, they must be separated from the coarse and/or tight protectors by at least 10 metres of cable or, if this is not possible, by an ATLINK decoupling inductor, in order to achieve **correct coordination between them**.

Installation is recommended in places where large overvoltages can occur and where lines are connected to very sensitive equipment that cannot withstand large overvoltages.





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> TECHNICAL DATASHEET

Reference:		ATSUB-3P-NR 15-120 AT-8037	ATSUB-3P-NR 40-120 AT-8038	ATSUB-3P-NR 65-120 AT-8039
Protection categories according to the REBT:			I, II, III, IV	II, III, IV
Type of tests according to EN 61643-11:		Type 2 + 3	Type 2	Type 1 + 2
Nominal voltage:	U_n		230 V _{AC} (L-L) / 120 V _{AC} (L-N, L-GND)	
Maximum continuous operating voltage:	U_c		275 V _{AC} (L-L) / 150 V _{AC} (L-N, L-GND)	
Nominal frequency:			50 - 60 Hz	
Nominal discharge current per pole (8/20 μs wave):	I_n	5 kA	20 kA	30 kA
Maximum discharge current per pole (8/20 μs wave):	I_{max}	15 kA	40 kA	65 kA
Protection level at I_n (8/20 μs wave):	$U_p(I_n)$	1200 V	1400 V	1600 V
Level protection for 1.2/50 μs wave:	U_p	700 V	700 V	900 V
Level protection for 5 kA; 8/20 μs wave:		900 V	1000 V	1100 V
Impulse current per pole (10/350 μs):	I_{imp}		-	15 kA
Combined wave voltage:	$U_{o.c.}$	6 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)	
No. 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	

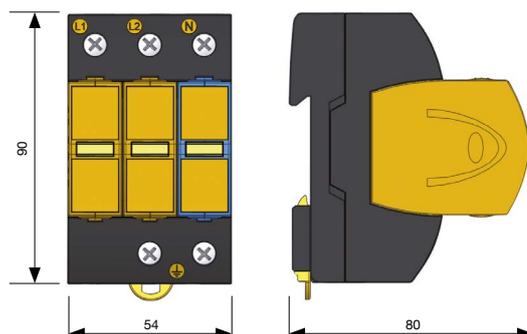
Certificated tests according to: UNE-EN 61643-11

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-8296 ATSUB Mod. 40-120: I_{max} 40 kA / U_n 120 V
- > AT-8297 ATSUB Mod. 15-120: I_{max} 15 kA / U_n 120 V
- > AT-8298 ATSUB Mod. 65-120: I_{max} 65 kA / U_n 120 V
- > AT-8205 ATSUB Mod. N: neutral-ground