



> PROTECTION OF POWER SUPPLY LINES

> ATSUB SERIES

> ATSUB-4P TT

Compact protection for TT three-phase power supply lines



- > AT-8282 ATSUB-4P 15 TT: peak current 15 kA. U_n 230 V
- > AT-8285 ATSUB-4P 40 TT: peak current 40 kA. U_n 230 V
- > AT-8287 ATSUB-4P 65 TT: peak current 65 kA. U_n 230 V
- > AT-8283 ATSUB-4P 15-120 TT: peak current 15 kA. U_n 120 V
- > AT-8286 ATSUB-4P 40-120 TT: peak current 40 kA. U_n 120 V
- > AT-8289 ATSUB-4P 65-120 TT: peak current 65 kA. U_n 120 V
- > AT-8206 ATSUB-4P 15-300 TT: peak current 15 kA. U_n 300 V
- > AT-8207 ATSUB-4P 40-300 TT: peak current 40 kA. U_n 300 V
- > AT-8239 ATSUB-4P 65-300 TT: peak current 65 kA. U_n 300 V
- > AT-8281 ATSUB-4P 15-400 TT: peak current 15 kA. U_n 400 V
- > AT-8284 ATSUB-4P 40-400 TT: peak current 40 kA. U_n 400 V

Effective protection against transient overvoltages for electrical supply lines with type TT 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).

> NOMENCLATURE

ATSUB 4P - 40 - 400 TT
Max. discharge voltage in kA Line - ground nominal voltage

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 protectors such as ATSHOCK, ATSHIELD and ATCOVER series.
- > Containing zinc oxide varistors, which are able to withstand very high currents.
- > Short response time.
- > Does not produce deflagration.
- > Compact protection with removable modules enabling quick replacement in the event of breakage.
- > Does not, at any moment, cause any interruption to the supply lines.
- > Thermodynamic control device, mechanical warning and remote alarm. When the warning light is yellow, the cartridge is in good condition. If not, replace.

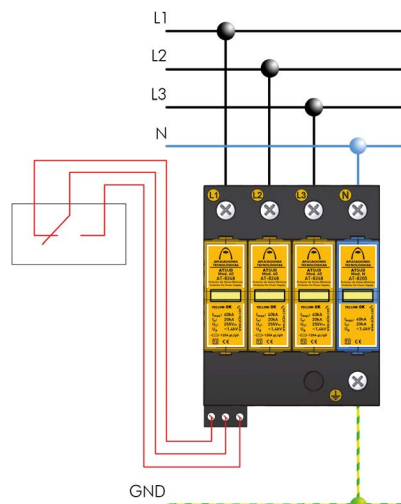
ATSUB series protectors have been tested in **official, independent laboratories**, obtaining their characteristics according to relevant standards (listed in the table). It is possible to select a protector for the alternating voltage suitable for each particular case. For example, the technical datasheets of the optimal protectors for American voltages are also included (voltage line 230 V and Voltage line - neutral 120 V), voltages greater than 230 V (voltage line 520 V and voltage line - neutral 300 V), and wind generator voltages (voltage line 690 V and voltage line - ground 400 V).

> 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**.

They are recommended for installations where large overvoltages can occur after the main switchboard but which do not supply sensitive equipment.



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.



> PROTECTION OF POWER SUPPLY LINES

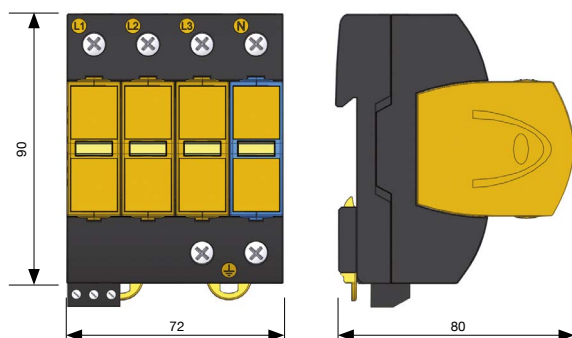
> ATSUB SERIES

> TECHNICAL DATASHEET

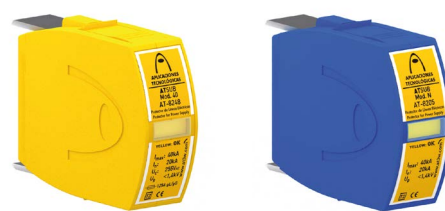
Reference:		ATSUB-4P 15 TT AT-8282	ATSUB-4P 40 TT AT-8285	ATSUB-4P 65 TT AT-8287
Protection categories according to the REBT:		I, II, III, IV		II, III, IV
Type of tests according to EN 61643-11:		Type 2 + 3	Type 2	Type 1 + 2
Nominal voltage:	U _n	400 V _{AC} (L-L) / 230 V _{AC} (L-N, L-GND)		
Maximum continuous operating voltage:	U _c	460 V _{AC} (L-L) / 275 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:		4		
Dimensions:		72 x 90 x 80 mm (4 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		
Voltage-free contact for the remote control				
Connection:		Max. single-stranded/multi-stranded section: 1.5 mm ²		
Contact output:		Switch		
Operating voltage:		250 V _{AC} (Maximum operating voltage of the alarm power supply)		
Maximum current:		2 A (Maximum current of the alarm power supply)		
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-8248 ATSUB Mod. 40: I_{max} 40 kA
- > AT-8228 ATSUB Mod. 15: I_{max} 15 kA
- > AT-8268 ATSUB Mod. 65: I_{max} 65 kA
- > AT-8205 ATSUB Mod. N: neutral-ground



> PROTECTION OF POWER SUPPLY LINES

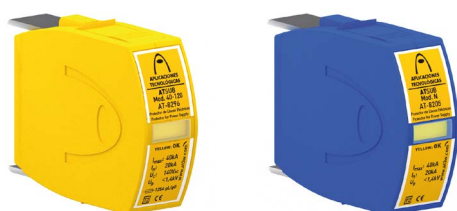
> ATSUB SERIES

> TECHNICAL DATASHEET

Reference:		ATSUB-4P 15-120 TT AT-8283	ATSUB-4P 40-120 TT AT-8286	ATSUB-4P 65-120 TT AT-8289
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 for I _n (8/20 μs wave):	U _p (I _n)	1200 V	1400 V	1600 V
Protection level for 1.2/50 μs wave:	U _p	700 V	700 V	900 V
Protection level 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 k 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)		
No. of poles:		4		
Dimensions:		72 x 90 x 80 mm (4 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		
Voltage-free contact for the remote control				
Connection:		Max. single-stranded/multi-stranded section: 1.5 mm ²		
Contact output:		Switch		
Operating voltage:		250 V _{AC} (Maximum operating voltage of the alarm power supply)		
Maximum current:		2 A (Maximum current of the alarm power supply)		
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

> 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

For other voltages, get in touch with Aplicaciones Tecnológicas, S.A. Technical Department.



> PROTECTION OF POWER SUPPLY LINES

> ATSUB SERIES

> TECHNICAL DATASHEET

Reference:		ATSUB-4P 15-300 TT AT-8206	ATSUB-4P 40-300 TT AT-8207	ATSUB-4P 65-300 TT AT-8239
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	520 V _{AC} (L-L) / 300 V _{AC} (L-N, L-GND)		
Maximum continuous operating voltage:	U _c	555 V _{AC} (L-L) / 320 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 for I _n (8/20 μs wave):	U _p (I _n)	1400 V	1500 V	1800 V
Protection level for 1.2/50 μs wave:	U _p	900 V	900 V	1100 V
Protection level for 5 kA; 8/20 μs wave:		1100 V	1200 V	1300 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:		4		
Dimensions:		72 x 90 x 80 mm (4 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		
Voltage-free contact for the remote control				
Connection:		Max. single-stranded/multi-stranded section: 1.5 mm ²		
Contact output:		Switch		
Operating voltage:		250 V _{AC} (Maximum operating voltage of the alarm power supply)		
Maximum current:		2 A (Maximum current of the alarm power supply)		
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

> ACCESSORIES



- > AT-8043 ATSUB Mod. 40-300: I_{max} 40 kA / U_n 300 V
- > AT-8044 ATSUB Mod. 15-300: I_{max} 15 kA / U_n 300 V
- > AT-8045 ATSUB Mod. 65-300: I_{max} 65 kA / U_n 300 V
- > AT-8205 ATSUB Mod. N: neutral-ground

For other voltages, get in touch with Aplicaciones Tecnológicas, S.A. Technical Department.



> PROTECTION OF POWER SUPPLY LINES

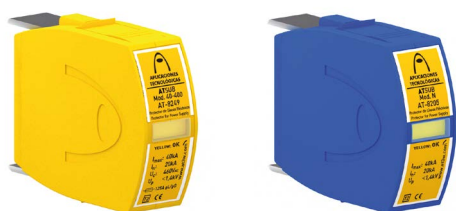
> ATSUB SERIES

> TECHNICAL DATASHEET

Reference:		ATSUB-4P 15-400 TT AT-8281	ATSUB-4P 40-400 TT AT-8284
Protection categories according to the REBT:		I, II, III, IV	
Type of tests according to EN 61643-11:		Type 2 + 3	Type 2
Nominal voltage:	U _n	690 V _{AC} (L-L) / 400 V _{AC} (L-N, L-GND)	
Maximum continuous operating voltage:	U _c	800 V _{AC} (L-L) / 460 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
Maximum discharge current per pole (8/20 μs wave):	I _{max}	15 kA	40 kA
Protection level for I _n (8/20 μs wave):	U _p (I _n)	2100 V	2300 V
Protection level for 1.2/50 μs wave:	U _p	1800 V	1800 V
Protection level for 5 kA; 8/20 μs wave:		1900 V	2000 V
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:		4	
Dimensions:		72 x 90 x 80 mm (4 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	
Voltage-free contact for the remote control			
Connection:		Max. single-stranded/multi-stranded section: 1.5 mm ²	
Contact output:		Switch	
Operating voltage:		250 V _{AC} (Maximum operating voltage of the alarm power supply)	
Maximum current:		2 A (Maximum current of the alarm power supply)	
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

> ACCESSORIES



- > AT-8249 ATSUB Mod. 40-400: I_{max} 40 kA / U_n 400 V
- > AT-8229 ATSUB Mod. 15-400: I_{max} 15 kA / U_n 400 V
- > AT-8205 ATSUB Mod. N: neutral-ground

For other voltages, get in touch with Aplicaciones Tecnológicas, S.A. Technical Department.