

SURGE PROTECTOR PROVIDED WITH A FILTER AGAINST HIGH FREQUENCY DISTURBANCES

ATFILTER

- AT-9402 ATFILTER 16: I_L lines 16A
- AT-9403 ATFILTER 32: I_L lines 32A
- AT-9401 ATFILTER 50: I_L lines 50A



Installation

ATFILTER devices are to be installed in series with the power supply line, that is, cutting the line and connecting the obtained cable ends to the input and output connectors. Please pay attention to these connections since if terminals are wrongly wired, a short circuit may happen.

On the other hand, it's of capital importance a right wiring of input/output terminals. If not, protector components won't act properly.

Linking the earth terminal to ground is a must.

The power should be disconnected during the installation of the SPD. The protector is ready to be fitted on the DIN rail of the distribution board, the closest to the equipment to be protected against overvoltages and screened against electromagnetic noise.

ATFILTER device has been conceived with the purpose of providing a highly efficient protection to electronic equipments against overvoltages and high frequency disturbances.

This is achieved by mean of placing **gas discharge tubes** and **suppressor diodes beside a high quality low-pass frequency filter**, what implies a full protection against pulses of high amplitude and/or frequency.

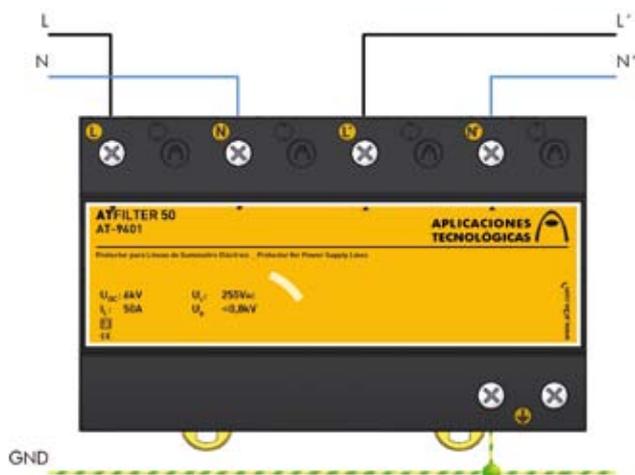
Every electric disturbance above 100Hz will be attenuated.

Tight protection according to scaled protection recommended in Low Voltage Regulation (REBT ITC23).

Type 2 and 3 protector according EN 61643-11 and GUIDE BT-23 from REBT standards. Suitable for **Categories I, II, III and IV** equipment according to ITC-BT-23 from REBT.

There are several models depending on the nominal current of the line to be protected (I_L).

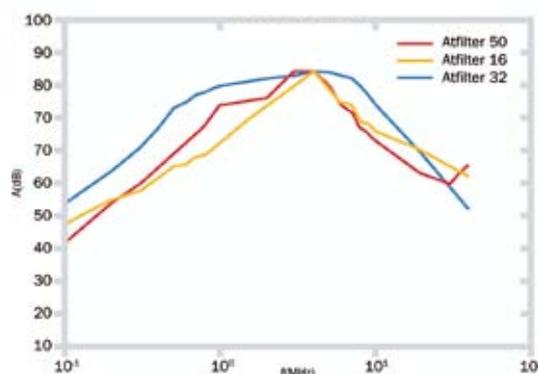
The proper working of the ATFILTER equipments has been certified by **official independent laboratories**, verifying the proper coordination between SPDs.



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.

Bode diagram of electromagnetic noise

Asymmetric attenuation



AT94 Series

Technical Datasheet

| Reference | | ATFILTER 16 AT-9402 | ATFILTER 32 AT-9403 | ATFILTER 50 AT-9401 |
|---|-------------|------------------------|---|------------------------|
| Protection categories according to REBT: | | | I, II, III, IV | |
| Type of tests according to EN 61643-11: | | | Type 2 + 3 | |
| Maximum working current: | I_L | 16A | 32A | 50A |
| Nominal voltage: | U_n | | 230V _{AC} | |
| Maximum working voltage: | U_c | | 255V _{AC} | |
| Nominal frequency: | | | 50 - 60Hz | |
| Nominal discharge current (wave 8/20 μ s): | I_n | | 5kA | |
| Maximum discharge current (8/20 μ s wave): | I_{max} | | 10kA | |
| Combined wave tension: | $U_{o.c.}$ | | 6kV | |
| Inductance: | L | | < 2mH | |
| Attenuation between 0.15 and 30MHz: | | | Min. 80dB a 4MHz Min.40dB with the range from 0.15 to 30 MHz | |
| Protection level at I_n (8/20 μ s wave): | $U_p(I_n)$ | | 800V | |
| Residual voltage with combination wave 6kV/3kA: | | | 600V | |
| Response time: | t_r | | <25ns | |
| Working temperature: | ϑ | | -40°C to +70°C | |
| SPD location: | | | Indoor | |
| Type of connection: | | | Series (two ports) | |
| Number of poles: | | | 2 | |
| Dimensions: | | | 144 x 90 x 80mm (8 mod. DIN43880) | |
| Fixing: | | | DIN rail | |
| Enclosure material: | | | Polyamide | |
| Enclosure protection: | | | IP20 | |
| Insulation resistance: | | | > 10 ¹⁴ Ω | |
| Autoextinguish enclosure: | | | V-0 Type according to UNE-EN 60707 (UL94) | |
| Connections L/N/GND: | | | Min/Max section multi-stranded: 4 / 35 mm ² (11/2 AWG) Min/Max section single-stranded: 1 / 35 mm ² (17/2 AWG) | |
| Certificated tests according to: IEC 61643-1, EN 61643-11 | | | | |
| Complies with requirements of: UL 1449 | | | | |
| Relevant standards: UNE 21186, NFC 17102, IEC 62305 | | | | |

Dimensions

