

## DATASHEET

CATEGORY: ATFREQ  
 NAME: **ATFREQ-400N**  
 REFERENCE: **AT-2111**

### PRODUCT DESCRIPTION

ATFREQ-400N - Surge protector for coaxial cables. N connector. Frequency range - 0-3 GHz. Attenuation < 0,15dB. Exchanged Power = 400W. I<sub>max</sub>(8/20) = 10kA. DC Sparkover voltage = 250V.



Due to their location, aerials are one of the most exposed elements to lightning discharges. Even when an external lightning protection system exists, the discharge secondary effects can affect the television and radiofrequency signals.

ATFREQ surge protection devices protect the signal cable, channelling the induced and conducted surges to ground, thus preventing damage to the communication and TV equipment and the connected devices (DVD, video, decoders, home cinemas etc.)

Effective protection against transitory overvoltages by means of gas discharge tubes able to withstand up to 10 kA.

- Optimum coupling with imperceptible losses. Small attenuation in the signal even for very high frequencies.

- Short response time.

- Does not produce deflagration.

- Small size.

- Specific connectors for each application.

ATFREQ protectors have been tested in official and independent laboratories, obtaining their characteristics according to relevant standards.

## DATASHEET

Reference	AT-2111
Length	34.00 mm
Width	42.00 mm
Height	64.00 mm
Connector	N
Frequency range	0 - 3 GHz
Attenuation	< 0.15 dB

Impedance	50 Ω
Exchanged power	400 W
DC sparkover voltage	250 V
M-F Coupling	Included
Maximum current (Imax)	10 kA (8/20 μs)
Working temperature	-55 °C to +85 °C
Response time (tr)	< 100 ns
Enclosure material	Stainless steel
Enclosure protection	IP20

> TESTS AND CERTIFICATIONS

Tests certified according to standards: UNE-EN IEC 61643-21  
 Relevant standards: UNE 21186, NF C 17-102, IEC 62305  
 Products compliant with EC requirements.

## INSTRUCTIONS

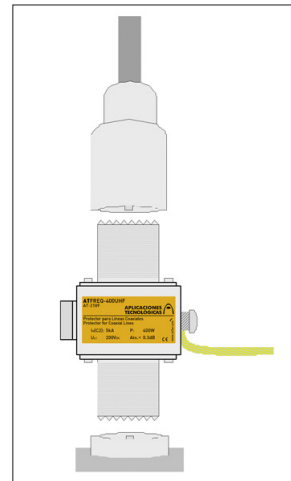
> INSTALLATION

ATFREQ SPDs are designed to be placed in series with the aerial signal cable. It should be installed as close as possible to the equipment to be protected.

Each protector has two coaxial connectors and one earthing terminal.

It is important to point out that ATFREQ protects the signal coaxial cable coming from the aerial, not the power supply. Power supply should be protected using specific SPDs such as ATSUB, ATCOVER, ATSHOCK, ATSHIELD or ATVOLT.

Connection to earth is carried out using a M5 screw placed to one side of the SPD. The earth connection must be as direct as possible, using a proper terminal and cable.



> SAFETY AND MAINTENANCE

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.

## OTHER INFORMATION

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### > OTHER REFERENCES

**AT-2102:** ATFREQ-50UHF

**AT-2104:** ATFREQ-TV

**AT-2106:** ATFREQ-50N

**AT-2109:** ATFREQ-400UHF

**AT-2110:** ATFREQ-7/16

**AT-2115:** ATFREQ-50BNC

**AT-2117:** ATFREQ-50SMA

**AT-2118:** ATFREQ-400BNC

**AT-2119:** ATFREQ-6G

**AT-2120:** ATFREQ-75BNC