

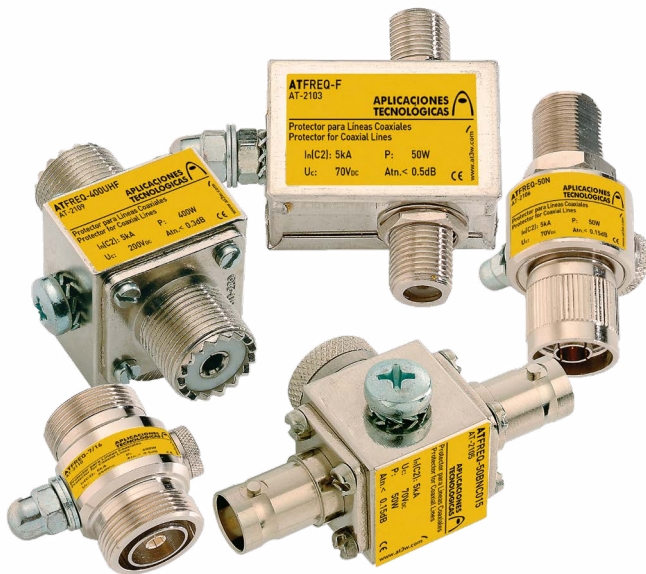


## &gt; PROTECTION FOR DATA AND TELECOMMUNICATION LINES

## &gt; ATFREQ SERIES

## &gt; ATFREQ

Overvoltage protection devices for coaxial cables



- > **AT-2102 ATFREQ-50UHF**: UHF type 50 W protector.
- > **AT-2103 ATFREQ-F**: F type 50 W protector.
- > **AT-2104 ATFREQ-TV**: TV type 50 W protector.
- > **AT-2105 ATFREQ-50BNC015**: BNC type 50 W protector 0.15 dB.
- > **AT-2106 ATFREQ-50N**: N type 50 W protector.
- > **AT-2108 ATFREQ-400BNC015**: BNC type 400 W protector 0.15 dB.
- > **AT-2109 ATFREQ-400UHF**: UHF type 400 W protector.
- > **AT-2110 ATFREQ-7/16**: 7/16 type 900 W protector.
- > **AT-2111 ATFREQ-400N**: N type 400 W protector.
- > **AT-2115 ATFREQ-50BNC**: BNC type 50 W protector.
- > **AT-2117 ATFREQ-50SMA**: SMA type 50 W protector.
- > **AT-2118 ATFREQ-400BNC**: BNC type 400 W protector.
- > **AT-2119 ATFREQ-6G**: N type 6 GHz protector.
- > **AT-2120 ATFREQ-75BNC**: BNC type 75  $\Omega$  protector.
- > **AT-2121 ATFREQ-1200UHF**: UHF type 1200 W protector.
- > **AT-2123 ATFREQ-50TNC**: TNC type 50 W protector.
- > **AT-2126 ATFREQ-6GSMA**: SMA type 6 GHz protector.

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.
- > Do 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 (shown in the table).

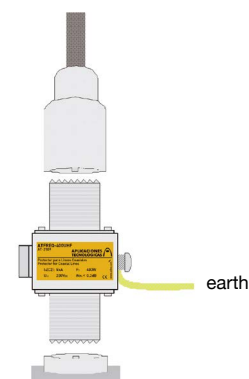
## &gt; INSTALLATION

**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. We supply SPDs with the most widely used coaxial connectors (**BNC, UHF, N, F, TV, 7/16**) and male/female adapters to be directly inserted into any connection.

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.



**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  $\Omega$ . 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 FOR DATA AND TELECOMMUNICATION LINES

### > ATFREQ SERIES

#### > TECHNICAL DATASHEET

Reference	Name (ATFREQ-)	Connector	Frequency range	Attenuation	Impedance	Exchanged power	DC sparkover voltage	M-F Coupling
AT-2104	TV	TV	0 - 1 GHz	< 1.2 dB	75 Ω	50 W	90 V	Included
AT-2103	SAT	F (sat.)	0 - 2 GHz	< 0.5 dB	75 Ω	50 W	90 V	Included
AT-2105	50BNC015	BNC	0 - 1 GHz	< 0.15 dB	50 Ω	50 W	90 V	Included
AT-2115	50BNC	BNC	0 - 1 GHz	< 0.2 dB	50 Ω	50 W	90 V	Included
AT-2120	75BNC	BNC	0 - 1 GHz	< 0.2 dB	75 Ω	50 W	90 V	Included
AT-2108	400BNC015	BNC	0 - 1 GHz	< 0.15 dB	50 Ω	400 W	250 V	Included
AT-2118	400BNC	BNC	0 - 1 GHz	< 0.2 dB	50 Ω	400 W	250 V	Included
AT-2123	50TNC	TNC	0 - 2.6 GHz	< 0.2 dB	50 Ω	50 W	90 V	AT-2770
AT-2106	50N	N	0 - 3 GHz	< 0.15 dB	50 Ω	50 W	90 V	Included
AT-2111	400N	N	0 - 3 GHz	< 0.15 dB	50 Ω	400 W	250 V	Included
AT-2119	6G	N	0 - 5.8 GHz	< 0.2 dB	50 Ω	50 W	90 V	Included
AT-2117	50SMA	SMA	0 - 1 GHz	< 0.2 dB	50 Ω	50 W	90 V	Included
AT-2126	6GSMA	SMA	0 - 5.8 GHz	< 0.2 dB	50 Ω	50 W	90 V	Included
AT-2102	50	UHF	0 - 3 GHz	< 0.3 dB	50 Ω	50 W	90 V	AT-2750
AT-2109	400	UHF	0 - 3 GHz	< 0.3 dB	50 Ω	400 W	250 V	AT-2750
AT-2121	1200	UHF	0 - 3 GHz	< 0.3 dB	50 Ω	1200 W	250 V	AT-2750
AT-2110	900	7/16	0.9 - 2.6 GHz	< 0.3 dB	50 Ω	900 W	600 V	AT-2760

#### > COMMON CHARACTERISTICS

Maximum current:	$I_{max}$	10 kA (8/20 μs)
Working temperature:	$\vartheta$	-55 °C to +85 °C
Response time:	$t_r$	< 100 ns
Enclosure material:		Stainless steel
Enclosure protection:		IP20

Tests certified according to standards: UNE-EN 61643-21

Relevant standards: UNE 21186, NF C 17-102, IEC 62305