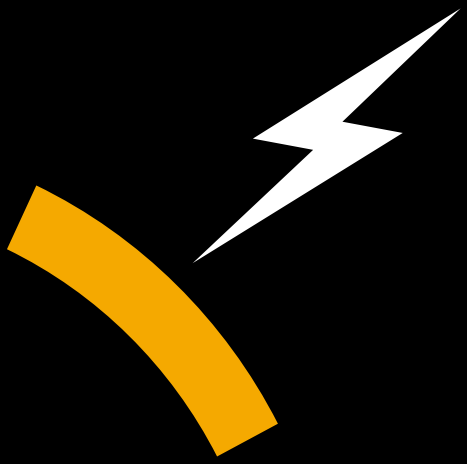
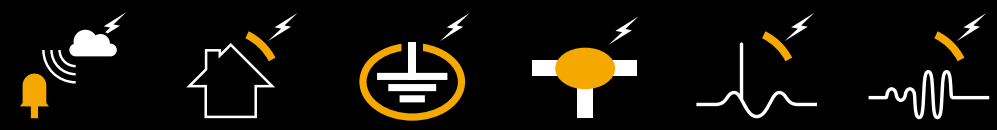
30 ANNIVERSARY



APLICACIONES TECNOLÓGICAS

TECHNOLOGIES FOR LIGHTNING PROTECTION



LOCAL STORM DETECTION

AIR TERMINALS AND ACCESSORIES

EARTHING

EXOTHERMIC WELDING

TRANSIENT OVERVOLTAGES

PERMANENT OVERVOLTAGES

> OUR COMPANY

We offer technologically advanced solutions in the area of lightning protection.

We provide the most complete range of products and solutions, given that we are a technological leader in this field.

We operate through our network of highly qualified local distributors, adapting to the needs and requirements of the area.

> HISTORY

With 30 years in the market APLICACIONES TECNOLÓGICAS S.A. has an abundance of achievements, awards and innovations to show for it.

1986:
Foundation of APLICACIONES TECNOLÓGICAS

1993:
R+D award granted by the Generalitat Valenciana

1994:
Start of export

1995:
Start of transient overvoltages line

1996:
Transfer to Valencia Technology Park

1998:
First ISO 9001 certification

2000:
Clients in more than 25 countries

2001:
Start of exothermic welding line

+ MORE THAN 30 YEARS DEVELOPING LIGHTNING PROTECTION PROJECTS

+ MORE THAN 100,000 INSTALLATIONS ALL OVER THE WORLD

Aplicaciones Tecnológicas Head Office, Paterna (Valencia), Spain

2004: Distributors in more than 50 countries

2005: Start of thunderstorm detectors line

2008: ISO 14001 Certification

2009: Start of permanent overvoltages line

Offices in the Caribbeans and China

2010: Offices in Portugal

2011: 25th anniversary

2012: Distributors in more than 75 countries

2013: Launch of Apliweld Secure+

2016: 30th anniversary

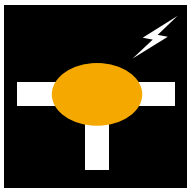
> WE ARE MANUFACTURERS

Our 6 specialization lines include the investigation and development, production and commercialisation of:

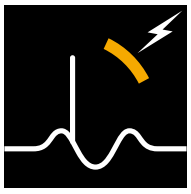
LOCAL THUNDERSTORM DETECTION

AIR TERMINALS AND ACCESSORIES

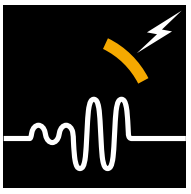
EARTHING



EXOTHERMIC WELDING



TRANSIENT OVERVOLTAGES



PERMANENT OVERVOLTAGES

> OUR VALUES

CUSTOMER SATISFACTION

We care about understanding our customers' needs and providing a solution to their problems, taking into account respect, kindness, quality, opportunity and excellence.

R+D: EFFORT & INVESTMENT

We have invested heavily in this area. Our R+D department is composed of a multidisciplinary team of engineers, physicists and chemists.

ENVIRONMENT: COMMITMENT AND RESPONSIBILITY

Company registered by AENOR (Spanish Association of Regulation and Certification). Environmental Management System certification according to standard UNE-EN ISO 14001: 2004 for all of our products and services.

QUALITY: SOLUTIONS AND PRODUCTS BEYOND THE REGULATORY REQUIREMENTS

Company registered by AENOR (Spanish Association of Regulation and Certification). Quality assurance system in accordance with standard UNE-EN ISO 9001: 2008 for all of our products and services.

STANDARDIZATION: PARTICIPATION AND DEDICATION

We promote the evolution of the standard regulations in our field. We actively participate in both national and international standardization committees.

AENOR CENELEC IEC ILPA AFME AFBEL

> ACTIVE PROTECTION WITH EARLY STREAMER EMISSION AIR TERMINALS

NEW PRODUCT

> DAT CONTROLER® PLUS + AT-REMOTE TESTER

AENOR PRODUCT CERTIFICATION Nr. 058/000005:

- AENOR is the Spanish Association for Standardization.
- Certified endurance to extreme environmental conditions (Salt mist and humid sulphurous atmosphere tests).
- Certified withstood current 100 kA (10/350 µs).
- Certified advance time ΔT (Annex C, NF C 17-102:2011).

WITHSTAND CURRENT CERTIFICATE FOR 20 IMPACTS OF 100 kA (10/350 µs)

Direct application of 20 current impulses (10/350 µs) with a peak current higher than 100 kA and specific energy over 2,5 MJ/Ω. Tests according to IEC 60060-1 and IEC 61083-1.

CERTIFICATE OF PERFORMANCE UNDER RAIN

- Insulation superior to 95%, according to IEC 60060-1.

DAT CONTROLER® PLUS + AT-REMOTE TESTER has the same features as **DAT CONTROLER® PLUS**, being besides provided with an **emitter** that continuously checks the state of the air terminal and emits a signal with the result. This verification will be done by authorized personnel using a specific analysis device.

- Range up to 100 m.
- Communication by radiofrequency (RF).
- Fully autonomous system thanks to solar panels.
- Endurance to extreme environmental conditions (salt mist and humid sulphurous atmosphere tests).
- Certified withstood current 100 kA (10/350 µs).

> TESTS AND NORMATIVE

- ✓ Tests made in official and independent laboratories.
- ✓ Complies with the second edition of the standard NF C 17-102, UNE 21186 and NP 4426.
- ✓ Product certified by AENOR.
- ✓ Withstand current certificate for 20 impacts of 100 kA.
- ✓ Insulation superior to 95% under rain.
- ✓ Air terminal testable in the factory and in field; also remotely, up to 100 m. (**DAT CONTROLER® + AT-REMOTE TESTER**).

+ REMOTE CHECKING OF THE STATE OF THE AIR TERMINAL

Certified advance time (ΔT)

DAT CONTROLER® PLUS:

Ref.	Model	ΔT
AT-1515	DAT CONTROLER® PLUS 15	15 µs
AT-1530	DAT CONTROLER® PLUS 30	30 µs
AT-1545	DAT CONTROLER® PLUS 45	45 µs
AT-1560	DAT CONTROLER® PLUS 60	60 µs

DAT CONTROLER® PLUS + AT-REMOTE TESTER:

Ref.	Model	ΔT
AT-2515	DAT CONTROLER® PLUS 15 + AT-REMOTE TESTER	15 µs
AT-2530	DAT CONTROLER® PLUS 30 + AT-REMOTE TESTER	30 µs
AT-2545	DAT CONTROLER® PLUS 45 + AT-REMOTE TESTER	45 µs
AT-2560	DAT CONTROLER® PLUS 60 + AT-REMOTE TESTER	60 µs

NEW PRODUCT

> ATLOGGER

- Smart lightning event counter that records the passage of lightning current, amplitude, polarity, date and time of the discharge.
- The information can be collected with a specific device with USB connection.
- Storages up to 40 events.
- Easy and friendly data management software.
- Easy installation: no need to disconnect the down-conductor.

> PROTECTION RADIUS IN METERS (RP) DAT CONTROLER® PLUS AND DAT CONTROLER® PLUS + AT-REMOTE TESTER

Calculated according to the standards NF C 17-102:2011, UNE 21186:2011 and NP 4426:2013 for each protection level.

		PROTECTION LEVEL I (D = 20 m)				PROTECTION LEVEL II (D = 30 m)				PROTECTION LEVEL III (D = 45 m)				PROTECTION LEVEL IV (D = 60 m)			
Ref. →		AT-1515 AT-2515	AT-1530 AT-2530	AT-1545 AT-2545	AT-1560 AT-2560	AT-1515 AT-2515	AT-1530 AT-2530	AT-1545 AT-2545	AT-1560 AT-2560	AT-1515 AT-2515	AT-1530 AT-2530	AT-1545 AT-2545	AT-1560 AT-2560	AT-1515 AT-2515	AT-1530 AT-2530	AT-1545 AT-2545	AT-1560 AT-2560
h (m)	2	13	19	25	31	15	22	28	35	18	25	32	39	20	28	36	43
	4	25	38	51	63	30	44	57	69	36	51	64	78	41	57	72	85
	6	32	48	63	79	38	55	71	87	46	64	81	97	52	72	90	107
	8	33	49	64	79	39	56	72	87	47	65	82	98	54	73	91	108
	10	34	49	64	79	40	57	72	88	49	66	83	99	56	75	92	109
	20	35	50	65	80	44	59	74	89	55	71	86	102	63	81	97	113
	60	35	50	65	80	45	60	75	90	60	75	90	105	75	90	105	120

h (m): Height of the air terminal over the surface to be protected (in meters).
D: Rolling sphere radius.

> CHOOSE CERTIFIED PRODUCTS

AENOR
Producto Certificado
058-000005

Products that are granted with the **AENOR mark** are submitted to several evaluations and controls for assuring their conformity with the relevant standards.

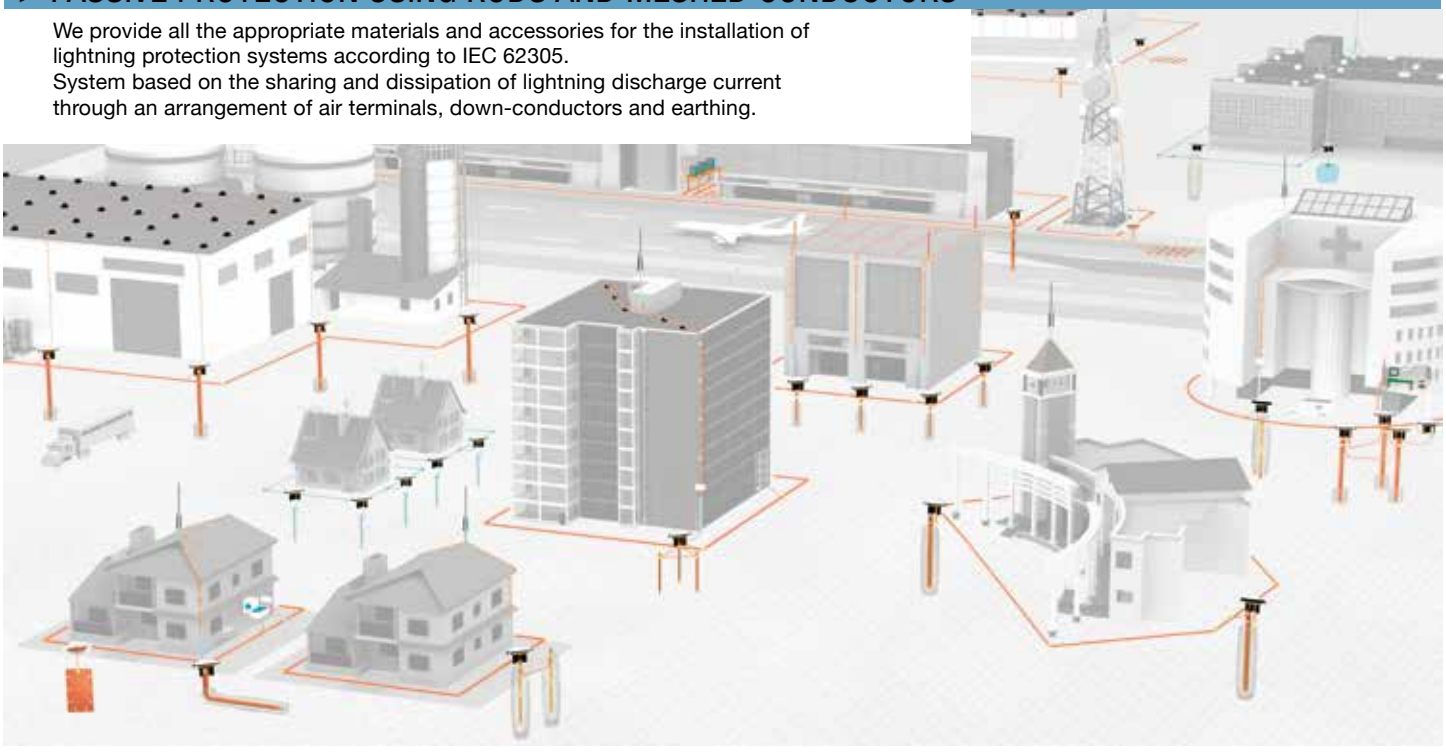
- Tests made in independent laboratories to random samples selected in the factory by **AENOR** technicians.
- Annual visit to the manufacturing centre in which compliance with the specific requirements in the production of air terminals is checked.
- Annual periodic monitoring, wherein the maintenance of conditions are verified.

The second edition of the standard **NF C 17-102**, **UNE 21186** and **NP 4426** requires to make, **consecutively** and **on the same sample**, the following tests:

1. **Environmental tests**
   (salty and sulphurous atmosphere).
2. **Current test**
   (3 impulses with 100 kA, 10/350 µs wave).
3. **Advance time test**.

> PASSIVE PROTECTION USING RODS AND MESHED CONDUCTORS

We provide all the appropriate materials and accessories for the installation of lightning protection systems according to IEC 62305.
System based on the sharing and dissipation of lightning discharge current through an arrangement of air terminals, down-conductors and earthing.



> PROTECTION OF POWER SUPPLY LINES

> COMBINED PROTECTION AGAINST PERMANENT AND TRANSIENT OVERVOLTAGES

> ATCONTROL/R COMPACT SERIES

- Combined protection against permanent and transient overvoltages
- Self-reclosing
- Self-configurable
- For single-phase lines
- Activates with undervoltages
- Tested according to EN 50550
- According to UNE-EN 61643
- Compact (includes main protective device)

+ COMPACT, SELF-RECLOSING AND SELF-CONFIGURABLE DESIGN

> IGA TEST COMPACT SERIES POP EN 50550

- Combined protection against permanent and transient overvoltages
- Circuit breaker included (6-63 A)
- Compact (smaller)
- Pre-wired (easy installation)
- For single-phase and three-phase lines
- According to EN 50550
- According to UNE-EN 61643

> ATCONTROL/B SERIES

- Combined protection against permanent and transient overvoltages
- Triggers any shunt release
- For single-phase and three-phase lines
- Tested according to EN 50550
- According to UNE-EN 61643

> KIT ATCONTROL/B SERIES POP EN 50550

- Combined protection against permanent and transient overvoltages
- Circuit breaker included (6-63 A)
- For single-phase and three-phase lines
- According to EN 50550
- According to UNE-EN 61643

> ATCONTROL/B PLUS SERIES

- Combined protection against permanent and transient overvoltages
- Protection against undervoltages
- Triggers any shunt release
- For single-phase and three-phase lines
- Tested according to EN 50550
- According to UNE-EN 61643

> KIT ATCONTROL/B PLUS SERIES POP EN 50550

- Combined protection against permanent and transient overvoltages
- Protection against undervoltages
- Circuit breaker included (25-63 A)
- For single-phase and three-phase lines
- According to EN 50550
- According to UNE-EN 61643

> ATCONTROL/R SERIES

- Combined protection against permanent and transient overvoltages
- Self-reclosing
- Triggers any contactor
- For single-phase and three-phase lines
- Tested according to EN 50550
- According to UNE-EN 61643

> KIT ATCONTROL/R SERIES

- Combined protection against permanent and transient overvoltages
- Self-reclosing
- Contactor included (20-63 A)
- For single-phase and three-phase lines
- Tested according to EN 50550
- According to UNE-EN 61643

> PROTECTION AGAINST PERMANENT OVERVOLTAGES

> IGA TEST SERIES POP EN 50550

- Protection against permanent overvoltages
- Circuit breaker included (6-63 A)
- For single-phase and three-phase lines
- According to EN 50550

> IGA TEST PLUS SERIES POP EN 50550

- Protection against permanent overvoltages
- Protection against undervoltages
- Circuit breaker included (25-63 A)
- For single-phase and three-phase lines
- According to EN 50550

> IGA TEST D SERIES POP EN 50550

- Protection against permanent overvoltages
- Circuit breaker with D curve included (63-125 A)
- For three-phase lines
- According to EN 50550

> PROTECTION OF POWER SUPPLY LINES

> PROTECTION AGAINST TRANSIENT OVERVOLTAGES

> ATSHOCK SERIES

Type 1

- Able to derive lightning type currents (10/350 µs)
- For main boards in installations with a high risk of direct lightning strike
- According to UNE-EN 61643

> ATSHIELD SERIES

Type 1+2

- Able to derive lightning type currents (10/350 µs)
- Low residual voltage
- According to UNE-EN 61643

> ATSUB SERIES

Type 2

- Able to derive induced overvoltages (8/20 µs)
- For boards downstream of a type 1 protection or for main boards with risk of indirect lightning strike
- According to UNE-EN 61643

> ATCOVER SERIES

Type 2+3

- Able to derive induced overvoltages (8/20 µs), providing besides tight protection for sensitive equipment
- Very low residual voltage
- According to UNE-EN 61643

> ATVOLT SERIES

Type 3

- Protection for DC lines
- Coordinated or parallel protection
- Verifiable with RF SPD Tester (depending on model)
- According to UNE-EN 61643

+ MORE THAN 500 SOLUTIONS FOR PROTECTING AGAINST OVERVOLTAGES

> ATPV SERIES

Type 2

- Protection for photovoltaic installations
- According to UNE-EN 61643

> ATPLUG + ATSOCKET SERIES

Type 3

- Tight protection
- Connection to the power supply or inside the cable gutters that feed the sockets
- According to UNE-EN 61643

> ATLINK SERIES

- Inductance for coordinating different protection steps
- Tested according to UNE-EN 61643

> ATCOMPACT SERIES

- Cabinet for multipolar protection. Includes fuses
- Different combinations of protectors, wired at the factory and ready for installation
- According to UNE-EN 61643

> ATBARRIER SERIES

- Coordinated protection cabinet
- Different combinations of protectors, wired at the factory and ready for installation
- According to UNE-EN 61643

> PROTECTION OF TELECOMMUNICATION AND DATA LINES

> PROTECTION AGAINST TRANSIENT OVERVOLTAGES

> ATFREQ SERIES

SPD for coaxial lines

- TV and Satellite
- Radiofrequency
- Surveillance cameras (CCTV)
- Connectors: TV, F, BNC, N, TNC, SMA, UHF and 7/16”
- According to UNE-EN 61643

> ATFONO SERIES

SPD for telephone lines

- Analogical
- ADSL
- ISDN
- RJ11, RJ45
- Krone
- Reichle & De-Massari
- According to UNE-EN 61643
- Verifiable with RF SPD Tester (depending on model)

> ATLINE SERIES and ATDB9 SERIES

SPD for data lines and communication buses

- Data line (wide range of voltages)
- Communication buses with connector type DB9
- RS-232, RS-485, TTL, Profibus, CAN, I2C and SPI
- According to UNE-EN 61643
- Verifiable with RF SPD Tester (depending on model)

> ATLAN SERIES

SPD for Ethernet and LAN (RJ45)

- Cat 5E
- Cat 6
- POE
- 100 Mb/s or 1000 Mb/s
- According to UNE-EN 61643

> ELECTRODES AND ACCESSORIES FOR ALL TYPE OF SOILS

> CONDUCTORS

- Round and tape conductors with different sections
- Materials: copper, tinned copper, galvanized steel, copperbond and stainless steel

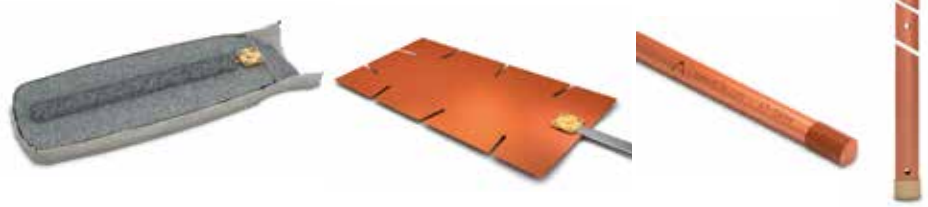
+ ELECTRODES AND ACCESSORIES FOR ALL TYPE OF SOILS

> INSPECTION PITS

- Polypropylene
- Iron cast
- Concrete

> SOIL CONDUCTIVITY IMPROVERS

- CONDUCTIVER PLUS
- APLIFILL
- APLICEM: conductive concrete
- Graphite powder
- Bentonite



> EARTH ELECTRODES

- Copperbond steel (254 µm) and galvanized steel
- APLIROD®: dynamic electrode
- Graphite electrode
- Earthing plates and meshes

> EQUIPOTENCIALIZATION

- Isolating spark gaps
- Equipotential bonding bars
- Test joints for inspection pits
- Earth bars

> BONDING CLAMPS

- Multiple clamps
- Cable to earth rod clamps
- T and L shaped clamps
- Disconnecting clamps

> APLIWELD® SECURE+ EXOTHERMIC WELDING SYSTEM

> EXOTHERMIC WELDING IN TABLETS

With exothermic welding, the joints between conductors are made permanent, they do not increase resistance nor corrosion.

c UL us LISTED

APLIWELD® Secure+
The exothermic welding in tablets

> APLIWELD®-T
Tablets for exothermic welding

- Compact and easy to use
- Reduces stock costs
- Shortens welding process time
- Improves operativity
- To be used either with powder or electronic starter
- Non-flammable substance

> APLIWELD®-E
Electronic starter for exothermic welding

- Less occupational hazards thanks to their safe use, storage and transportation
- Safe and easy placement
- Non-flammable substance

> KIT APLIWELD®-E
Electronic ignition unit

- Kit that enables remote start of the reaction, thus reducing labour risks

APLIWELD® Secure+ replaces the traditional welding powder and its activation with a manually applied spark by **welding tablets with remote activation using an electronic starter.**

> REDUCING LABOUR RISKS	> SAVING COSTS	> SIMPLIFYING WORK
✓ Remote starting	✓ No need of several types of charge	✓ Easy to use
✓ No flammable material	✓ Easier storage and transport	✓ Allows work with wind
	✓ Less labour costs and training	✓ Minimizes waste

> CERTIFICATIONS

- UL Certificate according to the standard UL467 Grounding and bonding equipment
- Non-flammability Certificate (Madariaga Official Laboratory – LOM)
- Complies with NTP 1028: Safety in aluminothermic welding of copper

> APPLICATIONS

+ SAVES COSTS, REDUCES RISKS AND SIMPLIFIES WORK

Construction

Industry

Telecommunications

Railway

> ATSTORM® LOCAL THUNDERSTORM DETECTOR BY MEASUREMENT OF ELECTRIC FIELD

Having information about the risk of thunderstorms allows taking preventive measures.

+ PREVENTION AND SAFETY

> ATSTORM®

Class I detector according to EN 50536

- Thunderstorm detector by measuring the electric field
- Fully electronic, without mobile parts
- Local detection of all phases of a thunderstorm
- Gives a time range of several tens of minutes
- No need of a particular maintenance
- Configurable detection thresholds using a touchscreen
- Electronic module with four relay-type outputs to be connected to visual or audible alarms, UPS, auxiliary generators, etc.
- Data storing and access to the system online via Internet

> APPLICATIONS

Prevention of workplace risk

Prevention of serious accidents

- Sites containing hazardous products (inflammable, radioactive, toxic, explosive)

Prevention of losses in industrial processes and operations

Infrastructures

- Ports and airports
- Roads, highways and trains
- Cable railway

To assure basic service continuity

- Telecommunications
- Power supply, energy transport and distribution
- Health and emergency services

Sensitive goods protection

- Computers
- Electric or electronic controls
- Emergency, alarm and security systems

Buildings, transport or facilities with their external areas open to the public

People in open areas

- Workplaces, sports or open air activities
- Competitions and multitudinous events
- Farming, ranching and fishing activities

Protection to the people and the environment

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