



**WE
ALERT**

**WE
CONNECT**

**WE
PROTECT**

**Preventive detection of
electrical storms**

**Air terminals and
accessories**

Internal protection

Earthing

Exothermic welding



OUR COMPANY

We offer **technologically advanced solutions for lightning protection**. Our specialisation areas include research, development, production and commercialisation of every element which is part of the lightning protection system.

For over 30 years, we have been **technology leaders** in our field thanks to our strong commitment with innovation, quality, client satisfaction and environmental respect.



Headquarters Office Aplicaciones Tecnológicas, Paterna (Valencia), Spain

OUR VALUES

Client Satisfaction

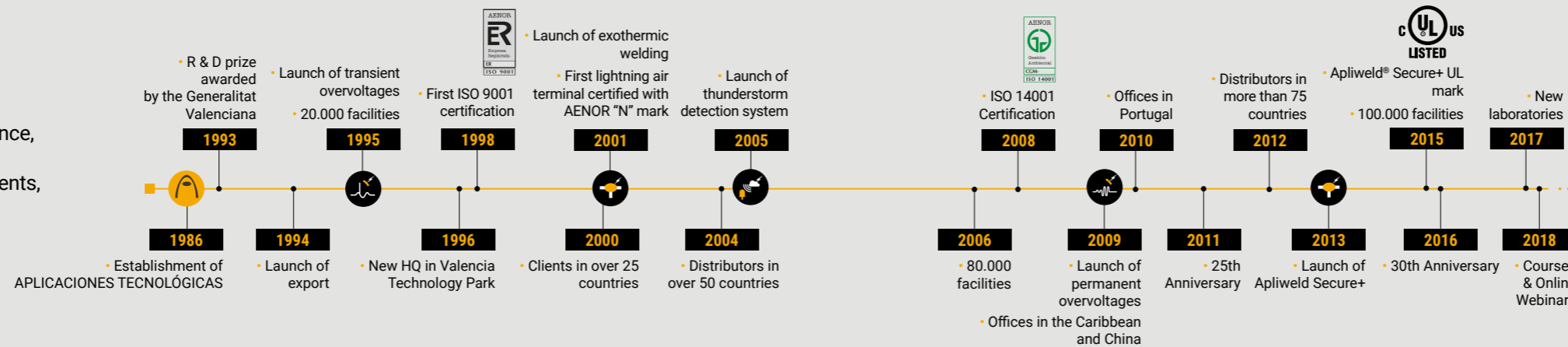
We care about understanding our client needs to be able to give them a solution to their problems while taking respect, kindness, quality, opportunity and excellence into consideration.

R&D Effort and investment

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

HISTORY

With over 30 years of market presence, **Aplicaciones Tecnológicas** has accomplished important achievements, recognition and innovation.



Environmental responsibility

Environmental Management System certification according to standard ISO 14001: 2015, certified by IVAC.

Quality: Solutions and products beyond the regulatory requirements

Company registered by AENOR for quality assurance system in accordance with standard ISO 9001:2015 for all of our products and services.

Standardisation: Participation and dedication

We promote the evolution of the standard regulations in our field by participating actively in both national and international standardisation committees.



LIGHTNING PROTECTION IN THE FIVE CONTINENTS

Aplicaciones Tecnológicas is represented in more than 80 countries in the five continents, developing lightning protection projects and adapting ourselves to the needs and demands of the country.

Our headquarter is in Valencia (Spain) and we have branches in Madrid, Barcelona, Portugal, China and The Caribbean.



WE ARE MANUFACTURERS

Our 6 specialisation lines in this division include research and development, production and commercialisation of:



LOCAL STORM DETECTION



AIR TERMINALS AND ACCESSORIES



EARTHING



EXOTHERMIC WELDING



TRANSIENT OVERVOLTAGES



PERMANENT OVERVOLTAGES



ATSTORM®

EXPERT LOCAL EARLY WARNING SYSTEM FOR LIGHTNING STORM RISK PREVENTION



The main purpose of a Lightning Warning System is to identify, with the maximum anticipation, the risk posed by both forming and incoming lightning storms.

Objective

- ✓ Prevention of occupational hazards
- ✓ Suspend work or outdoor activities
- ✓ Suspend or postpone dangerous operations
- ✓ Disconnect electronic equipment
- ✓ Activate auxiliary power systems
- ✓ People evacuation
- ✓ Alert emergency services

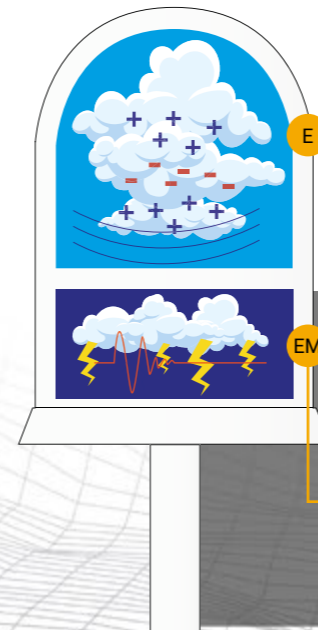
ATSTORM® Maximum efficiency

- ✓ **Detection during all phases of a thunderstorm**
We monitor both the electrostatic and electromagnetic fields, enabling the maximum anticipation in the risk of a lightning event.
- ✓ **Fully electronic, with no moving parts**
Our equipment does not use moving mechanical parts, preventing blockages, wear and failures.
- ✓ **Operated by specialists through Internet of Things (IoT)**
The system is remotely operated, ensuring its proper functioning at all times.
- ✓ **Expert system**
Continuous improvement of its algorithms, increasing their adaptation to the monitored local characteristics.
- ✓ **Risk alerts via multiple channels**
Our customers receive the risk alerts through multiple means: smartphone, tablet, private web portal, emails and remote activation of alert devices.
- ✓ **Ad-hoc projects**
We study each location and determine the best system configuration in terms of number and positioning of the detection units.



Areas of application

- ✓ Health and Safety.
- ✓ Open-pit operations such as mining, shipyards or energy, etc.
- ✓ Potential risk sectors such as oil, gas, chemical, etc.
- ✓ Defence, military equipment, bases, communication sites, etc.
- ✓ Infrastructure operations such as airports, ports, etc.
- ✓ Outdoor activities and events: sports, cultural, tourism, etc.
- ✓ Public administrations responsible for open spaces such as parks, beaches, districts, etc.
- ✓ Environmental risk, disasters, civil protection, etc.
- ✓ Critical electronic environments: data centers, industry, medical centers, laboratories, etc.



Electrostatic field sensor

Detection of thunderstorms forming over the target area by monitoring the increase in electrostatic field:

- Tens of minutes for EARLY ALERT WARNINGS

Electromagnetic field sensor

Detection of lightning in active thunderstorms approaching the target area:

- 40km radius



Thunderstorm detection network



DAT CONTROLER® REMOTE

Early streamer emission air terminal.
Certified, with remote testing & autodiagnostic features.

Standard adherence (UNE 21186, NF C 17-102 and NP 4426)

Consecutive testing of the same sample

- ✔ Salt mist test.
- ✔ Sulphurous humid atmosphere test.
- ✔ Withstand current test (3 impulses of 100kA with 10/350 µs wave).
- ✔ Advance time test.

In addition, the DAT CONTROLER® REMOTE Air Terminal goes beyond the standards, with the following characteristics:

- ✔ AENOR Product certification.
- ✔ Withstand current test: 20 impacts of 100kA + 5 impacts of 200kA.
- ✔ Insulation superior to 95% under rain.
- ✔ Daily autodiagnostic and connectivity features: Autoevaluation of status with remote data transmission of autotest results.

DAT CONTROLER® REMOTE protects people and goods against the direct effects of atmospheric electrical discharges, with maximum guarantees.



DAT CONTROLER® REMOTE is a certified product through AENOR, the Spanish National standards association, symbol of third party product quality and safety. The AENOR certification implies a periodic and continued testing of product samples by AENOR technicians in official independent laboratories.

Certified advance time (ΔT)

The advance time, the main characteristic of an ESE air terminal must be calculated according to annex C of the standard UNE 21.186:2011. Advance times of the early streamer emission DAT CONTROLER® REMOTE have been calculated from laboratory data, obtaining the following certified results:

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

ATLOGGER

Smart lightning event counter.

- ✔ 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.
- ✔ Stores up to 40 events.
- ✔ Easy and friendly data management software.
- ✔ Easy installation: no need to disconnect the down-conductor.

Protection radii metres (Rp)

The protection radii (metres) for different heights of the air terminal above the element to protect are calculated for every protection level in the attached table:

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

Ref.	PROTECTION LEVEL I (D = 20 m)				PROTECTION LEVEL II (D = 30 m)				PROTECTION LEVEL III (D = 45 m)				PROTECTION LEVEL IV (D = 60 m)			
	AT-2515	AT-2530	AT-2545	AT-2560	AT-2515	AT-2530	AT-2545	AT-2560	AT-2515	AT-2530	AT-2545	AT-2560	AT-2515	AT-2530	AT-2545	AT-2560
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

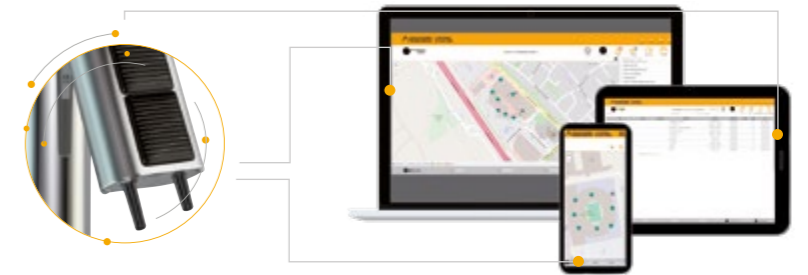
h (m): Height of the air terminal over the surface to be protected (in meters).

D: Rolling sphere radius.

Autodiagnose and connectivity (IoT)

The REMOTE device allows the daily autodiagnosis of the ESE air terminal without the need to disassemble the terminal or the requirement of any means of auxiliary elevation.

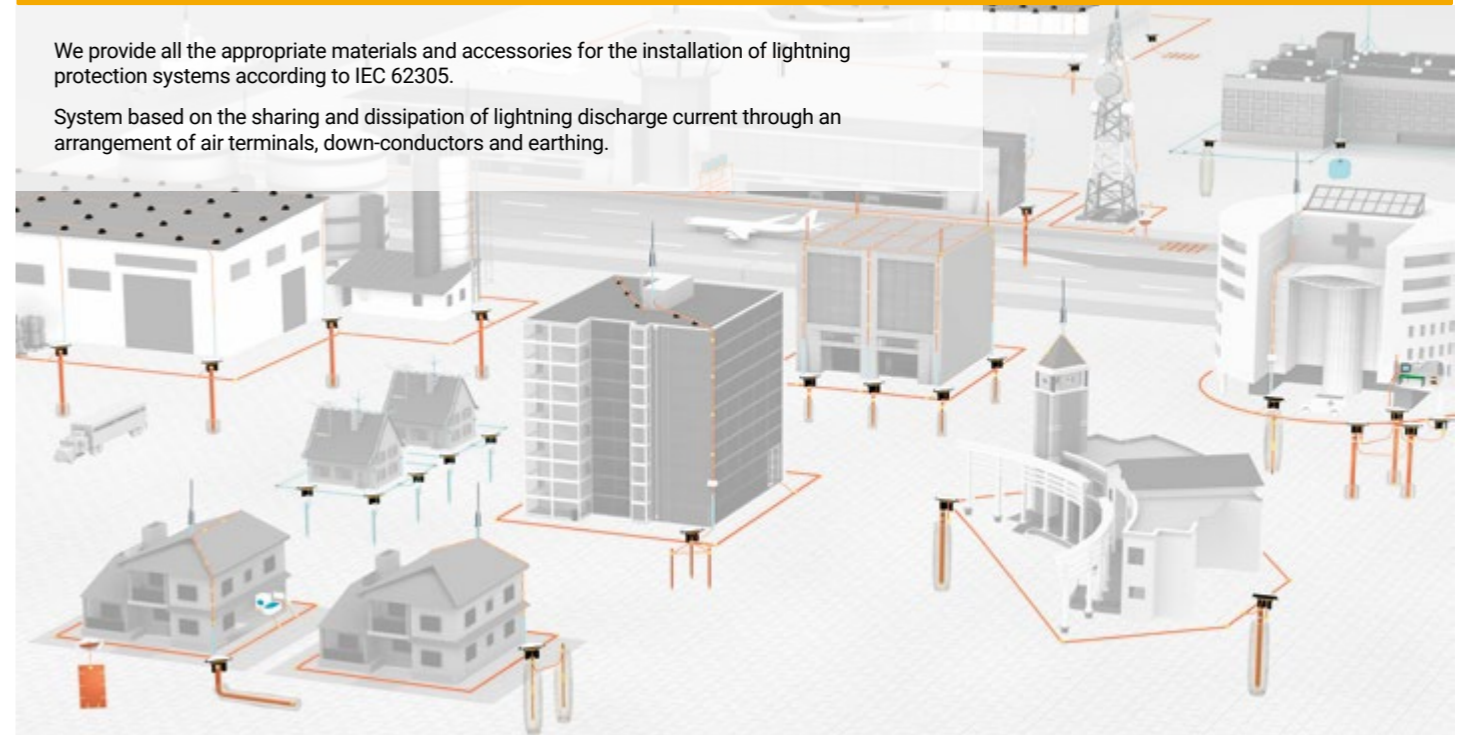
The result of the autotest is sent by M2M communication to a receptor device (phone, tablet, computer). The information can be viewed from a website along with other personalized notifications, making the appropriate preventive and corrective maintenance much easier.



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 IEC 63052
- According to IEC 61643
- Compact (includes main protective device)



IGA TEST COMPACT SERIES

- 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 IEC 63052
- According to IEC 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 IEC 63052
- According to IEC 61643



KIT ATCONTROL/B SERIES

- Combined protection against permanent and transient overvoltages
- Circuit breaker included (6-63 A)
- For single-phase and three-phase lines
- According to IEC 63052
- According to IEC 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 IEC 63052
- According to IEC 61643



KIT ATCONTROL/B PLUS SERIES

- 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 IEC 63052
- According to IEC 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 IEC 63052
- According to IEC 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 IEC 63052
- According to IEC 61643

PROTECTION AGAINST PERMANENT OVERVOLTAGES



IGA TEST SERIES

- Protection against permanent overvoltages
- Circuit breaker included (6-63 A)
- For single-phase and three-phase lines
- According to IEC 63052



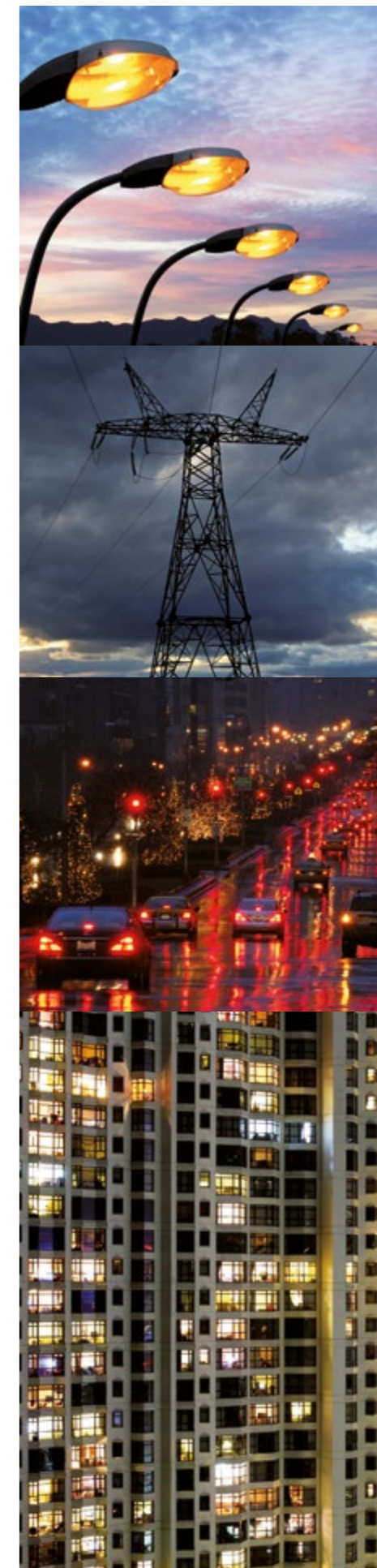
IGA TEST PLUS SERIES

- Protection against permanent overvoltages
- Protection against undervoltages
- Circuit breaker included (25-63 A)
- For single-phase and three-phase lines
- According to IEC 63052



IGA TEST D SERIES

- Protection against permanent overvoltages
- Circuit breaker with D curve included (63-125 A)
- For three-phase lines
- According to IEC 63052





Protection of power supply lines

PROTECTION AGAINST TRANSIENT OVERVOLTAGES



ATSHOCK SERIES

Type 1

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



ATSHIELD SERIES

Type 1 + 2

- Able to derive lightning type currents (10/350 μ s)
- Low residual voltage
- According to IEC 61643



ATSUB SERIES

Type 2

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



ATCOVER SERIES

Type 2 + 3

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



ATVOLT SERIES

Type 3

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



MORE THAN 500 SOLUTIONS FOR PROTECTING AGAINST OVERVOLTAGES



ATPV SERIES

Type 2

- Protection for photovoltaic installations
- According to IEC 61643



ATPLUG + ATSOCKET SERIES

Type 3

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



ATLINK SERIES

- Inductance for coordinating different protection steps
- Tested according to IEC 61643



ATCOMPACT SERIES

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



ATBARRIER SERIES

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

ATFONO SERIES

SPD for telephone lines

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

ATLINE SERIES and ATDB9 SERIES

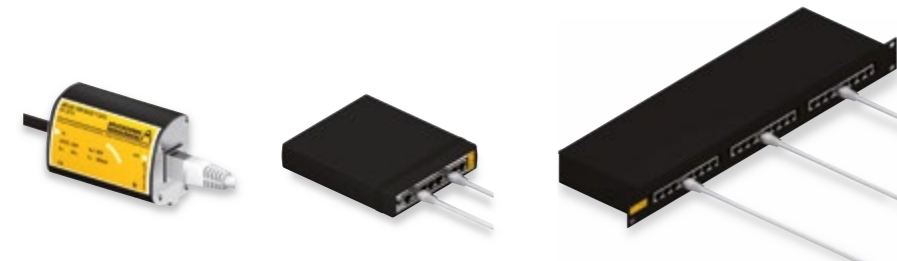
SPD for data lines and communication buses

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

ATLAN SERIES

SPD for Ethernet and LAN (RJ45)

- Cat 5E
- Cat 6
- PoE and PoE++
- 100 Mb/s or 1000 Mb/s
- According to IEC 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



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+

THE EFFICIENT EXOTHERMIC WELDING

Certified quality

Earthing systems and their connections must last throughout the lifetime of an installation. The technology of the **APLIWELD® Secure+** system ensures this is achieved by overcoming the result of other types of welding and traditional techniques such as mechanical connections.



- ✓ Ease of use.
- ✓ Methodic process avoids errors and misuse.
- ✓ Certified connections.



Unique compound for every weld

The innovative tablet format of **APLIWELD® Secure+** generates substantial storage cost savings as well as operational cost savings:

- ✓ Carry out all weld types using one or various tablets, eliminating the need for multiple powder references.
- ✓ Optimize stock rotation and eliminate obsolete stocks.
- ✓ Does not absorb humidity, avoiding material losses.
- ✓ Work in adverse weather conditions.
- ✓ Ignition rate of over 99% avoids material wastage.
- ✓ Decrease in mould wear due to lower thermal shock.
- ✓ Reduction in residual waste on site.
- ✓ Facilitates last-minute project execution.



APLIWELD® Secure+ Selector

APLIWELD® Secure+ Selector is the new specification tool for any project with exothermic welding.

APLIWELD® Secure+ Selector provides the references and quantities of material required through a simple process.



Maximum Safety procedure

APLIWELD® Secure+ establishes a new standard in safety surpassing the technical & risk limitations of other weld formats.

The tablets and ignition caps of **APLIWELD® Secure+** contain no flammable material (ignition temperature above 900°C). This characteristic, along with the remote electronic ignition activated via bluetooth, avoids:

- ✓ Risk of projections and burns.
- ✓ Risk of accidental ignitions.
- ✓ Risks in material storage.



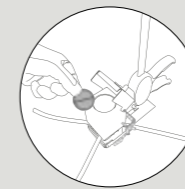
Safe and easy procedure

APLIWELD®-T

Welding compound in tablets



- 1 Insert the tablets **APLIWELD®-T**

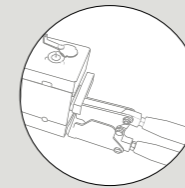


APLIWELD®-E

Electronic starter



- 2 Place and connect the electronic starter **APLIWELD®-E**

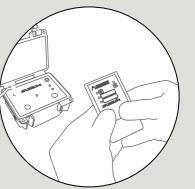


Kit APLIWELD®-E

Electronic starting device



- 3 Press both push-buttons on ignition device or the Bluetooth remote control

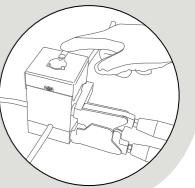


RESULTS

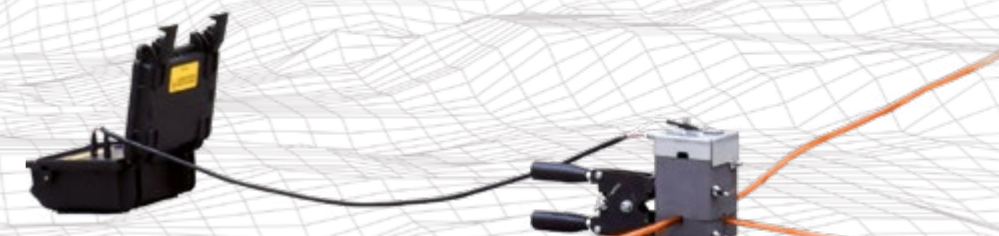
Final weld



- 4 Remove the completed joint from the GRAPHITE MOULD



NON-FLAMMABLE
NON-EXPLOSIVE





LOCAL STORM
DETECTION



AIR TERMINALS
AND ACCESSORIES



EARTHING



EXOTHERMIC
WELDING



TRANSIENT
OVERVOLTAGES



PERMANENT
OVERVOLTAGES

