Preventive detection of electrical storms

Air terminals and accessories

Internal protection

Earthing

Exothermic welding
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.

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.

Environmental responsibility
Environmental Management System certification according to standard ISO 14001:2015, certificated 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.

Apliweld Secure+ UL mark

OUR COMPANY

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Apliweld Secure+ UL mark
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.

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.
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:

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Model</th>
<th>Certified ΔT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-2515</td>
<td>DAT CONTROLER® REMOTE 15</td>
<td>15 μs</td>
</tr>
<tr>
<td>AT-2530</td>
<td>DAT CONTROLER® REMOTE 30</td>
<td>30 μs</td>
</tr>
<tr>
<td>AT-2545</td>
<td>DAT CONTROLER® REMOTE 45</td>
<td>45 μs</td>
</tr>
<tr>
<td>AT-2560</td>
<td>DAT CONTROLER® REMOTE 60</td>
<td>60 μs</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Protection Level I (D = 20 m)</th>
<th>Protection Level II (D = 30 m)</th>
<th>Protection Level III (D = 45 m)</th>
<th>Protection Level IV (D = 60 m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-2515</td>
<td>13</td>
<td>19</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>AT-2520</td>
<td>22</td>
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<td>39</td>
</tr>
<tr>
<td>AT-2525</td>
<td>15</td>
<td>28</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>AT-2530</td>
<td>18</td>
<td>30</td>
<td>44</td>
<td>47</td>
</tr>
<tr>
<td>AT-2545</td>
<td>19</td>
<td>31</td>
<td>44</td>
<td>47</td>
</tr>
<tr>
<td>AT-2550</td>
<td>25</td>
<td>30</td>
<td>50</td>
<td>44</td>
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<td>41</td>
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<tr>
<td>AT-2560</td>
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<tr>
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<td>AT-2575</td>
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<tr>
<td>AT-2580</td>
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<td>AT-2595</td>
<td>34</td>
<td>30</td>
<td>73</td>
<td>51</td>
</tr>
<tr>
<td>AT-2600</td>
<td>35</td>
<td>30</td>
<td>75</td>
<td>51</td>
</tr>
</tbody>
</table>

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 receiver 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 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
- Circuit breaker included (20-63 A)
- For single-phase and three-phase lines
- 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 with D curve included (63-125 A)
- For three-phase lines
- 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
- According to IEC 61643
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 IEC 61643

#### ATSHIELD SERIES

**Type 1 + 2**
- Able to derive lightning type currents (10/350 μs)
- Low residual voltage
- According to IEC 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 IEC 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 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

### 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

**ATFREQ SERIES**

SPD for coaxial lines
- TV and Satellite
- Radiofrequency
- Surveillance cameras (CCTV)
- Connectors: TV, F, BNC, N, TNC, SMA, UHF and 7/11".
- According to IEC 61643
- Verifiable with RF SPD Tester (depending on model)

**ATFONO SERIES**

SPD for telephone lines
- Analogue
- 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
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 900ºC). 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

Kit APLIWELD®-E
Electronic starting device

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

RESULTS

4. Remove the completed
joint from the GRAPHITE
MOULD

OPERATIONAL COST SAVINGS

THE EFFICIENT EXOTHERMIC WELDING

EXOTHERMIC WELDING
Adheres to Standard: UL 467

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

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NON-FLAMMABLE NON-EXPLOSIVE