

APD-LT

Partial discharge detection



Remote partial discharge measurement without interrupting line service

APD-LT

Wireless partial discharge meter

amperis

www.amperis.com

 C/ María Barbeito, 14
27003, Lugo, Spain

 **Contact**

T [+34] 982 20 99 20
info@amperis.com | www.amperis.com

Description and advantages



APD-LT measurement module with adjustable capacitive sensor



Wireless remote display with decibel level indicator

The APD-LT is a portable partial discharge meter designed to inspect in-service cable and overhead-line accessories, such as cable heads, line arrestors, insulators and bushings. The capacitive sensor is applied from the ground or with an insulated hotstick, with no need for direct contact with the conductor, and transmits the reading wirelessly to a remote display that shows the discharge level in real time.

Contactless measurement without interrupting service

The APD-LT's capacitive sensor is applied to the line accessory with no need for direct contact with the conductor or for disconnecting the installation, allowing energised equipment to be inspected with maximum safety for the operator.

Compact, lightweight and hotstick-ready

The measurement module attaches to any standard insulated hotstick through a universal end fitting, and its reduced weight makes it easy to handle during extended overhead-line inspections.

Wireless reading at a distance

The reading is transmitted by radio frequency to an independent remote display, so the operator can move away from the measuring point and check the discharge level without approaching the energised accessory.

Long autonomy and immediate start-up

The measurement module runs on a standard 9V alkaline battery, offers up to ten hours of continuous use, and switches off automatically after a period of inactivity to extend battery life.



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Applications and operation

Applications

- Partial discharge detection in cable heads.
- Partial discharge detection in line arrestors.
- Partial discharge detection in insulators.
- Partial discharge detection in bushings.

Operation

Measurement on overhead lines

The measurement module is applied to the energised line accessory from the ground or with an insulated hotstick, with no need to climb the structure or to interrupt the installation's service.

Wireless reading at a distance

The sensor reading is transmitted by radio frequency to the remote display, so the operator can stay away from the measuring point while checking the partial discharge level.

Levels and indicators

The remote display shows the discharge level in decibels on a numeric indicator, together with separate warnings for low battery and for overload of the signal picked up by the sensor.

Sensor and autonomy

The adjustable capacitive sensor adapts to the geometry of the inspected accessory, and the measurement module runs on a 9V alkaline battery with up to ten hours of continuous use.



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Accessories and options



APD-LT wireless remote display



Checking an overhead-line accessory with an insulated hotstick

Wireless remote display

Independent unit that receives the measurement module's reading by radio frequency and shows it on a numeric indicator, together with battery status and signal-overload detection.

Universal hotstick end fitting

Allows the measurement module to be attached to any standard insulated hotstick used in the industry, for checking overhead-line accessories from the ground or from an aerial bucket.

Adjustable capacitive sensor

Highly sensitive sensor built into the measurement module, adjustable to match the geometry of the inspected accessory with no need for direct contact with the conductor.

Semi-rigid carrying case

Semi-rigid case that holds the measurement module, the remote display and their accessories, making the equipment easier to transport and protect between sites.



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APD-LT – TECHNICAL SPECIFICATIONS

Measurement module handling	Compatible with universal insulated hotstick (standard end fitting)
Measurement module power supply	1 9V alkaline battery
Autonomy	10 hours of continuous use; auto shut-off after 15 min (configurable)
Absolute maximum input signal	16 dBm, 3 dBV (1.4 VAC)
Dynamic range	60 dB
Accuracy	± 2 dB (direct contact injection)
Bandwidth	30 MHz to 47 MHz (direct contact injection)
Wireless communication	Bluetooth Low Energy (BLE) 4.1, up to 30 m typical range
Wired connection	USB 2.0, micro-B, for firmware upgrade
Measurement module protection rating	IP66
Measurement module weight and dimensions	0.43 kg; 192.5 x 120.7 x 47.4 mm
Measurement module operating temperature	-20°C to 55°C; 0 to 95%RH non-condensing
Measurement module storage temperature	-40°C to 55°C
Remote display	5.5-inch colour touchscreen, sunlight readable, 720 x 1440 px
Remote display battery	Non-removable 4200 mAh lithium
Remote display protection rating	IP68 (1.2 m for 30 minutes)
Remote display weight and dimensions	196 g; 165 x 82.5 x 12.5 mm
Approval	CE directive

Specifications subject to change without notice.

The measurement module and the remote display form a paired wireless set; they are not sold separately.



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