

PULD-40

Ultrasonic inspection



Locates corona effect, arcing and leaks with a single unit

PULD-40

Portable ultrasonic inspection system

amperis

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Product description



PULD-40 system with its digital display and bar graph



Inspection with the external parabolic sensor at a substation

Corona effect and its detection

Corona discharge is caused by the ionisation of the air around an electrically charged conductor, when the electric field is strong enough to form a conductive region without causing a full electrical breakdown. Besides the economic loss of energy it represents for utilities, it generates corrosive gases that degrade and embrittle nearby materials.

Converting ultrasound into audible sound

The PULD-40 detects corona effect, electric arcing and gas or vacuum leaks with a high-sensitivity built-in cone-shaped sensor, showing the result on a digital display and an LED bar graph, while playing back the converted signal as audible sound through its built-in speaker or a headset.

Parabolic sensor for overhead assets

The external parabolic sensor, optimised for 15 m, includes a sight and a laser pointer that make it easy to aim precisely at insulators, arresters, cable terminations, bushings and switches that are hard to reach at height.

Reliable even in noisy environments

Its detection is centred on a narrow band around 40 kHz, making it easier to tell the real signal apart from the background noise typical of industrial plants, and the system can be periodically checked with an ultrasonic noise generator.



Applications and accessories

Applications

- Electrical inspection: locating corona effect and arcing on conductors and high-voltage installations.
- General mechanical inspection of motors, compressors, gears and pumps.
- Detection of pressure or vacuum leaks.
- Checking the airtightness of aircraft doors and windows.
- Predictive maintenance in the chemical, petrochemical, manufacturing and textile industries.
- Inspection in noisy environments thanks to its narrow detection band.

Lightweight design, ready in seconds

Weighing 528 g and built with an impact-resistant housing, the unit is ready to measure as soon as its switch is pressed, with 4 hours of autonomy per lithium-ion battery charge (2.5-hour charging time).

Accessories available

External parabolic sensor with sight and laser pointer (optimal at 15 m), laser enhancement glasses, ultrasonic noise generator for periodic verification of the unit, direct-contact sensor with magnetic holders for metal-clad cabinets, compact cells and dry-type transformers, audio cable for external recording, noise-isolating headphones and a hard-shell transportation case.



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PULD-40 – MEASUREMENT DATA

Dynamic range	96 dB
Sensitivity (built-in sensor)	0.125 mm diameter leak at 0.35 bar, at 3 m
Centre frequency	40 kHz
Bandwidth	38 to 48 kHz
Operating distance	3 m with the built-in sensor; 15 m with the parabolic sensor
Sampling frequency	120 kHz
Audio output	32 ohm impedance; 1 V peak-to-peak level
Battery	Lithium-ion, 3.6 V 750 mA; 4-hour autonomy; 2.5-hour charging
Environmental conditions	Operating -20/+60°C · Storage -30/+85°C · Charging 0/+50°C
Weight and dimensions	528 g; 57 × 52 × 185 mm

Specifications subject to change without notice.



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