NL CAMERA

Datasheet 90019000-PL001

The **NL Camera** is a smart acoustic device for localizing and detecting leaks in compressed air systems and partial discharges in high voltage electrical systems. The NL Camera automatically locates problems by the often ultrasonic sound that they emit, even in loud industrial environments. The device is lightweight, easy to use, and offers industry-leading performance.

The 124 microphones of the NL Camera allow leak detection in a wide field of view and from an extended range. This enables identifying leaks up to 10 times faster than with traditional methods. In power grids, the NL Camera locates 50/60 Hz partial discharges automatically from more than 130 meters away.

The NL Camera instantly shows the located leaks and partial discharges on camera view, allowing users to pinpoint and report the problems effortlessly. The NL Camera analyzes the findings in real time, utilizing its built-in processing power. Users can also upload the data and images to the included NL Cloud service for deeper analysis and reporting, such as leak size and cost estimate, partial discharge severity assesment, and recommended actions. The NL Camera Viewer and NL Camera Viewer Pro offline software are for those who cannot use WiFi.

Technical Specifications

Acoustic Specifications

Acoustic measurement	124 low-noise MEMS microphones, real-time sound visualization
Sensitivity	<-15 dB
Dynamic range	>120 dB
Bandwidth	2 kHz to 35 kHz, adjustable range
Distance	From 0.3 m (1.0 ft) up to and above 130 m (430 ft)
Leak rate	In typical industrial environment: >0.032 l/min @ 3 bar from 3 m (9.8 ft) >0.05 l/min @ 3 bar from 10 m (32.8 ft) Absolute minimum detection in a quiet environment: 0.016 l/min @ 1.2 bar from 0.3 m (1.0 ft)
Discharge classification	PRPD pattern Negative corona Positive corona Floating discharge Surface discharge or discharge inside a component
Discharge detection	Automatic detection 50/60 Hz
Leak detection	Automatic leak regocnition

User Interface

Display	5 in, 800 × 480 resistive touchscreen
Brightness	1000 cd/m2 (adjustable)
Snapshot resolution	800 x 480
Video frame rate	25 fps (optical image) / 30 fps (acoustic image)
Zoom	2x digital zoom

Communication and Data Storage

Wireless data transfer	IEEE 802.11.b/g/n/ac
Storage, internal	2000 snapshots (typical)
Storage, external	8 GB USB mass storage, 500 snapshots (typical)
Camera power input	Nominal input voltage: 12 V_{dc} Max input: 15 VDC, 2.5 A
External battery	$LiFePO_4$ 84 Wh, 12 VDC Use time 6 h, charge time 4-6 h Max output: 13.8 V, 4.0 A
Battery charger	Input: 100-240 V_{AC} ~ 50/60 Hz 1.3-1.5 A Max output: 13.8-14.6 VDC, 4 A (depends on the charger provided)
Internal battery	Li-Ion 6 Wh (only for backup purposes)

Environmental

Operating and storage temperature range	-10°C – +50°C (14°F – 122°F)
Charging temperature	0°C – +40°C (32°F – 104°F)
Humidity	Recommended 0–90%
Ingress Protection	IP51

Physical Data

Camera size & weight	273 × 170 × 125 mm (10.7 × 6.7 × 4.9 in), 980 g (2.2 lb)
Battery size & weight	90 × 145 × 65 mm (3.5 × 5.7 × 2.6 in), 985 g (2.2 lb)
Total weight	2.9 kg (6.4 lb) (includes all accessories)

Supported Languages

Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Thai, Traditional Chinese, Turkish, Vietnamese

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