



Industrial Acoustic Imaging Camera

FLIR Si124™

The FLIR Si124 is an intelligent, easy-to-use imaging system designed to visually show pressurized leaks in compressed air systems and display partial discharge problems in high-voltage electrical systems. This lightweight, one-handed solution can help utility, manufacturing, and engineering professionals identify efficiency loss and potential failures up to 10 times faster than traditional methods. Built with 124 microphones and a frequency range that covers audible and ultrasound (2 kHz to 35 kHz), the Si124 sees through background noise commonly found in industrial environments to produce precise acoustic imagery. The acoustic image is overlaid in real time on top of a digital camera picture, which allows the user to accurately pinpoint the source of the sound and classify problems. Equipped with the FLIR Acoustic Camera Viewer cloud service, this smart tool automatically saves images to the cloud after they are captured. Users can then apply the FLIR Advanced Severity Assessment analysis to classify the severity of the issue and provide guidance on recommended actions to resolve the problem. Adopting the FLIR Si124 as part of a regular maintenance routine, professionals can identify issues fast—helping utilities keep the power flowing and manufacturing operations going.

www.flir.com/Si124



FIND LEAKS 10x FASTER

Reduce electricity waste and optimize equipment performance

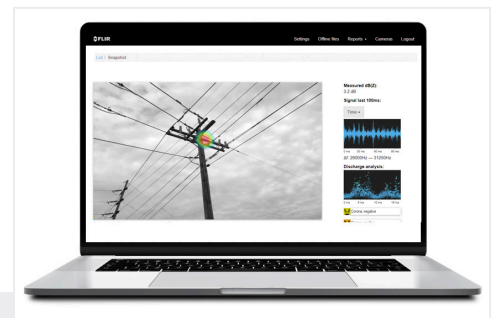
- Pinpoint costly compressed air leaks in noisy industrial environments
- Instantly view the leak rate (l/min or CFM) and estimate yearly energy loss
- Extend compressor life by eliminating wasted output



SEE THE SOUND OF PD AND CORONA

Minimize equipment failures and downtime that result from PD/corona issues

- Classify partial discharge type—including surface discharge, floating discharge, and discharge into air—to improve reliability of electrical systems
- Identify corona discharge day or night, allowing quick replacement of defective components before a catastrophic failure
- Operate the lightweight camera with one hand



VISUALIZE, CLASSIFY, QUANTIFY

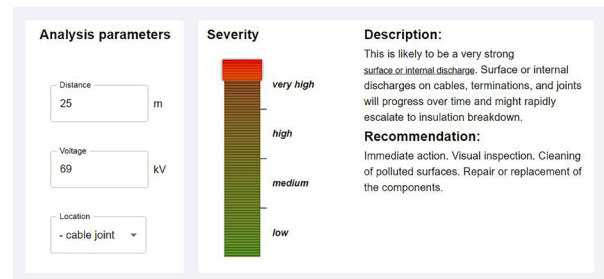
Calculate critical decision-making data instantly with cloud analytics software

- Upload, store, and back up data; create reports; and conduct deep analysis using FLIR Acoustic Camera Viewer cloud analytics
- Quickly calculate estimated yearly energy expense caused by a compressed air/vacuum leak
- Assess whether service or replacement are needed by classifying PD/corona types instantly
- Determine the level of threat from partial discharge with Advanced Severity Assessment software analytics

SPECIFICATIONS

Acoustic specifications	
Acoustic measurement	Si124 124 low-noise MEMS microphones, real-time sound visualization
Sensitivity, accuracy	<-15 dB
Dynamic range	>120 dB (frequency-dependent)
Bandwidth	2 kHz to 35 kHz, adjustable range
Distance	From 0.3 m (1.0 ft) up to 130 m (430 ft)
Compressor / Vacuum Leak Rates	In typical industrial environment: <ul style="list-style-type: none"> >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 quiet environment: 0.016 l/min @ 1.2 bar from 0.3 m (1.0 ft)
Electrical discharge classification	<ul style="list-style-type: none"> Negative corona Positive and negative corona Floating discharge Surface or internal discharge PRPD pattern provided in FLIR Acoustic Camera Viewer cloud service.
User interface	
Display	Size: 5 in, 800 × 480 Color: 24-bit RGB Brightness: 1000 cd/m ² (adjustable)
Input device	Resistive touchscreen
Power On indicator	Red LED
Video image resolution	800 × 480
Video frame rate	25 fps
Acoustic image frame rate	30 fps
Zoom	2x digital zoom
Communication and data storage	
Wireless data transfer	Wi-Fi 2.4 GHz and 5 GHz IEEE 802.11.b/g/n/ac wireless LAN
Storage, internal	32 GB/2000 snapshots (typical) on non-removable SD card
Storage, external	8 GB/500 snapshots (typical) USB mass storage, provided with device
Power supply	
Nominal input voltage	12 V Max input: 15 V, 2.5 A
External battery	LiFePO 12 V 7 Ah, 84 Wh Usage: up to 7 h (depends on ambient conditions) Charge time: 4 to 6 h Max output: 13.8 V, 4.0 A
Battery charger	Input: 100-240 V AC, 50/60 Hz 1.3 A Max output: 14.6 V, 4.0 A

Environmental	
Operating and storage temperature range	Recommended: -10°C to 50°C (14°F to 122°F)
Operating and storage humidity	Recommended: 0 to 90%
Physical data	
Camera size	273 × 170 × 125 mm (10.7 × 6.7 × 4.9 in)
Camera weight	Camera: 980 g (2.2 lbs)
Battery size	90 × 145 × 65 mm (3.5 × 5.7 × 2.6 in)
Battery weight	985 g (2.2 lbs)
Total weight, incl. all accessories	2.9 kg (6.4 lbs)
Battery cord length	0.75 m (2.46 ft), extended 1.5 m (4.92 ft)
Included in the Box	
Contents	Camera, camera pouch, hand strap, USB memory stick, and battery with cable, charger, and pouch



Recognize PD issues and determine severity with FLIR Severity Assessment, included in the analysis software

Specifications are subject to change without notice. For the most up-to-date specs, go to www.teledyneflir.com

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