



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 31 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 access stored files for deeper analysis. 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

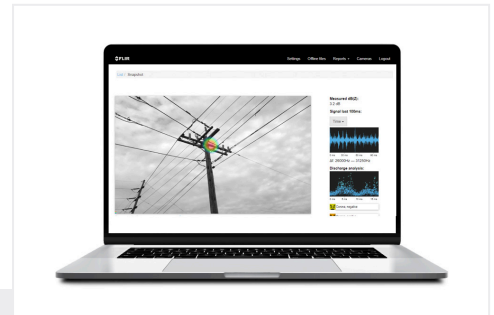
- Pinpoint costly leaks in noisy industrial environments
- Instantly view the leak rate (l/min or CFM) and estimated yearly energy loss
- Extend compressor life by eliminating wasted output



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, even in the daytime, 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
- Determine if service or replacement is necessary by classifying PD/corona types instantly

SPECIFICATIONS

Acoustic specifications		Si124
Acoustic measurement		124 low-noise MEMS microphones, real-time sound visualization
Sensitivity, accuracy		<0 dB
Dynamic range		>120 dB
Bandwidth		2 kHz to 31 kHz, adjustable range
Distance		From 0.3 m (1.0 ft) up to 100 m (328 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"> • Discharge into air • Surface discharge • Floating discharge
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		1640 × 1234
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 SD card, non-removable
Storage, external		8 GB USB mass storage, provided with device
Power supply		
Nominal input voltage		12 V Max input: 15 V 2 A
External battery		LiFePO 12 V 7 Ah, 84 Wh Usage: 7 h (depends on ambient conditions) Charge time: 4 to 6 h
Battery charger		Input: 100-240 V ~ 50/60Hz 1.5 A Max output: 13.8 V, 4.0 A
Internal battery (only for camera backup use)		Li-Ion 6 Wh

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 lb)
Battery size	90 × 145 × 65 mm (3.5 × 5.7 × 2.6 in)
Battery weight	985 g (2.2 lb)
Total weight, incl. all accessories	2.9 kg (6.4 lb)
Battery cord length	0.9 m (3.0 ft), extended 2 m (6.6 ft)
Included in the Box	



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

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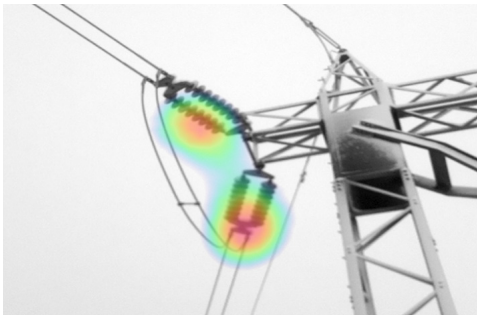


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FLIR Si124™

The FLIR Si124 is an easy-to-use, stand-alone system for detecting partial discharge problems in high voltage electrical systems. This lightweight, one-handed solution is designed to help maintenance, manufacturing, and engineering professionals identify issues up to 10 times faster than with traditional methods. Built with 124 microphones, the Si124 produces a precise acoustic image that visually displays ultrasonic information, even in loud industrial environments. The acoustic image is transposed in real time on top of a digital camera picture, which allows the user to accurately pinpoint the source of the sound. Equipped with the FLIR Acoustic Camera Viewer cloud service, this smart tool automatically saves images to the cloud after they're captured. Users can then access stored files and separate sound sources for deeper analysis and classification of problems. Through a regular maintenance routine, the FLIR Si124 can help facilities save money on utility bills.

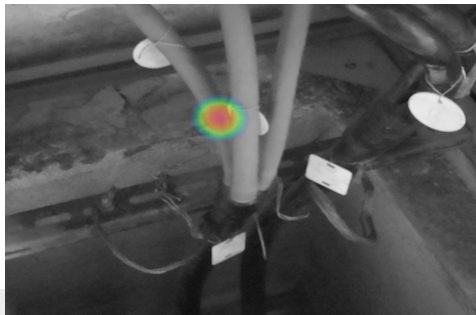
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FIND PARTIAL DISCHARGE PROBLEMS FASTER

Detect partial discharge and coronas up to 10 times faster with sound imaging vs. traditional methods

- Locate problems precisely, even in loud industrial environments, thanks to high-resolution acoustic images and 124 built-in microphones
- Optimize staff time, as minimal training is required to use Si124
- View visual and sound images simultaneously



IMPROVE RELIABILITY

Minimize equipment failures and downtime that result from partial discharge issues

- Analyze partial discharge pattern and classify problems to improve reliability of electrical systems
- Classify partial discharge type, including surface discharge, floating discharge, and discharge into air
- Evaluate frequency to determine the type and severity of the discharge, which allows maintenance to be scheduled



INSPECT EASILY

Locate, analyze, and classify discharge with this convenient, smart tool

- Safely detect problems from a distance up to 100 m (328 ft)
- Upload, store, and backup data; create reports; and conduct deep analysis using FLIR Acoustic Camera Viewer cloud analytics
- View images in the cloud immediately after capture thanks to the automatic upload feature
- Operate the lightweight camera with one hand, and easily review images on-screen even in bright, outdoor conditions

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