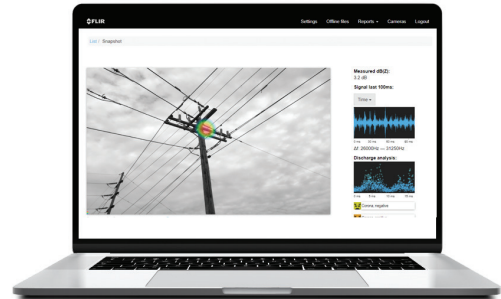
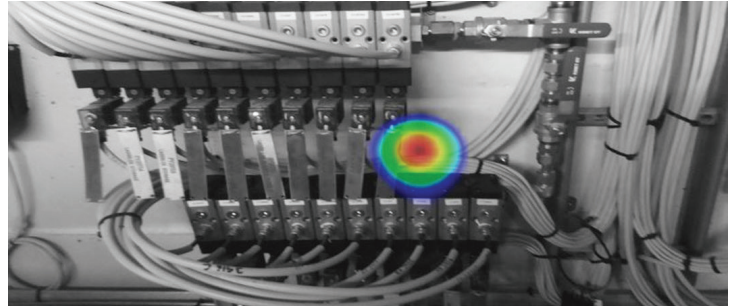


# FLIR Si124™

## Industrial Acoustic Imaging Camera



[www.flir.com/Si124](http://www.flir.com/Si124)

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 65 kHz), the Si124 filters out industrial background noise 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. The Si124 features a plugin that enables users to import acoustic images to FLIR Thermal Studio suite for offline editing, analysis, and advanced report creation. Field analysis and reporting can also be done using the FLIR Acoustic Camera Viewer cloud service. 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.

### 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 cost
- Extend compressor life by eliminating wasted output
- Combine leak reporting with thermography inspection in FLIR Thermal Studio software

### SEE PD AND CORONA

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

- Classify partial discharge type including negative corona, positive and negative corona, floating discharge, and surface or internal discharge
- Identify corona discharge day or night, allowing quick replacement of defective components before a catastrophic failure
- Operate the lightweight camera with one hand for safety and reduced strain

### VISUALIZE, CLASSIFY, QUANTIFY

Conduct offline and online analysis and reporting with FLIR Thermal Studio desktop suite or FLIR Acoustic Camera Viewer cloud software

- Automatically upload, store, and back up images and data to the cloud and conduct deep analysis
- 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 AI powered automatic discharge classification, severity assessment, and recommended action for partial discharge inspections

## SPECIFICATIONS

| FLIR Si124                        |   |
|-----------------------------------|---|
| Acoustic measurement              | 124 low-noise MEMS microphones, real-time sound visualization   |
| Dynamic range, low limit          | <-15 dB (frequency-dependent)   |
| Dynamic range, high limit         | >120 dB (frequency-dependent)   |
| Bandwidth                         | 2 kHz to 65 kHz, adjustable range   |
| Distance                          | From 0.3 m (1 ft) up to 130 m (430 ft)  |
| Discharge detection               | Automatic detection 50 / 60 Hz  |
| Discharge classification          | <ul style="list-style-type: none"> <li>Negative corona</li> <li>Positive and negative corona</li> <li>Floating discharge</li> <li>Surface or internal discharge</li> </ul> <p>PRPD pattern provided in FLIR Acoustic Camera Viewer or FLIR Thermal Studio.</p>                                |
| Severity assessment               | Automatic AI-based severity assessment including recommended actions in FLIR Acoustic Camera Viewer or FLIR Thermal Studio  |
| Leak detection and quantification | Automatic leak recognition including estimated leak size and annual cost  |
| Leak rate                         | <p>In typical industrial environment:</p> <ul style="list-style-type: none"> <li>&gt;0,032 l/min @ 3 bar from 3 m (9.8 ft)</li> <li>&gt;0,05 l/min @ 3 bar from 10 m (32.8 ft)</li> </ul> <p>Absolute minimum detection in quiet environment:<br/>0.016 l/min @ 1.2 bar from 0.3 m (1 ft)</p> |
| User interface                    |   |
| Display                           | <p>Size: 5 in, 800 × 480 pixels</p> <p>Color: 24 bit RGB</p> <p>Brightness: 1000 cd/m<sup>2</sup> (adjustable)</p>  |
| Input device                      | Resistive touchscreen   |
| Power On indicator                | LED (red)   |
| Video image resolution            | 800 × 480   |
| Camera FOV                        | 62° × 49°   |
| Video frame rate                  | 25 fps  |
| Acoustic image frame rate         | 30 fps  |
| Zoom                              | 2x digital zoom   |

Specifications are subject to change without notice.  
For the most up-to-date specs, go to [www.flir.com/Si124](http://www.flir.com/Si124)

Example of Si124 PD severity assessment

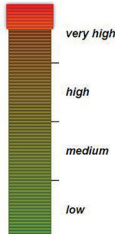
**Analysis parameters**

Distance:  m

Voltage:  kV

Location:

**Severity**



very high

high

medium

low

**Description:**

This is likely to be a very strong surface or internal discharge. Surface or internal discharges on cables, terminations, and joints will progress over time and might rapidly escalate to insulation breakdown.

**Recommendation:**

Immediate action. Visual inspection. Cleaning of polluted surfaces. Repair or replacement of the components.

For more information contact: [Sales@TeledyneFLIR.com](mailto:Sales@TeledyneFLIR.com)  
or to find your local support number, visit: [flir.com/contactsupport](http://flir.com/contactsupport)



| Analysis and reporting                        |  |
|---|--|
| Online  | FLIR Acoustic Camera Viewer (cloud service)  |
| Offline                                       | FLIR Thermal Studio (desktop software)   |
| Communication and data storage                |  |
| Data transfer                                 | <ul style="list-style-type: none"> <li>Wi-Fi 2.4 GHz and 5 GHz IEEE 802.11.b/g/n/ac wireless LAN</li> <li>USB memory stick</li> </ul>  |
| Camera software update                        | <ul style="list-style-type: none"> <li>Automatic over Wi-Fi</li> <li>USB via computer</li> </ul>   |
| Still images                                  | Yes  |
| Video recording                               | Yes, up to 5 minutes   |
| Storage, internal                             | 32 GB / 2000 snapshots (typical) SD card, non-removable  |
| Storage, external                             | 8 GB / 500 snapshots (typical) USB mass storage, provided with device  |
| Power supply                                  |  |
| Camera power input                            | Nominal input voltage 12 V<br>Max input: 15 V, 2.5 A   |
| Replaceable battery                           | Li-ion rechargeable battery pack (RRC 2040):<br>10.8 V, 3.35 Ah, 36.2 Wh<br>Usage: more than 2 h (depends on ambient conditions)<br>Charge time: 4 to 6 h<br>Max output: 12.6 V, 4 A |
| Battery charger                               | Input: 19 to 26 VDC, 2.8 A<br>Max output: 17.4 VDC, 4.8 A  |
| Internal battery (only for camera backup use) | Li-ion 6 Wh  |
| Environmental data                            |  |
| Operating temperature range                   | -10°C to 50°C (14°F to 122°F)  |
| Storage temperature range                     | -20°C to 70°C (-4°F to 158°F)  |
| Relative humidity                             | Recommended 0 to 90%   |
| Physical data                                 |  |
| Camera size                                   | 315 mm × 169 mm × 160 mm (12.4 in × 6.6 in × 6.3 in)   |
| Camera weight                                 | 1.08 kg (2.38 lb)  |
| Battery size                                  | 85 mm × 59 mm × 22 mm (3.34 in × 2.31 in × 0.86 in)  |
| Battery weight                                | 0.17 kg (0.37 lb)  |
| Total weight (camera and battery)             | 1.25 kg (2.76 lb)  |

Distribué par:

**testoon**.COM  
L'innovation à sa juste mesure

99 rue Beranger 92320 Chatillon - France

Tel. : +33 (0) 1 71 16 17 00

E-mail: [contact@testoon.com](mailto:contact@testoon.com)

[www.testoon.com](http://www.testoon.com)

This product is subject to United States export regulations and may require US authorization prior to export, reexport, or transfer to non-US persons or parties. Diversion contrary to US law is prohibited.

For assistance with confirming the Jurisdiction & Classification of Teledyne FLIR, LLC products, please contact [exportquestions@flir.com](mailto:exportquestions@flir.com).

©2022 Teledyne FLIR, LLC. All rights reserved.

Revised 06/01/22  
Si124\_Datasheet-LTR 21-0000