

Serie-AC

Acoustic cameras



AC—130

Introducing the new AC series of SATIR industrial acoustic cameras.

Available in 3 models of industrial acoustic cameras: AC-130, AC-160 and AC-250, incorporating low noise MEMS 136/163/251 acoustic sensors.

The digital MEMS acoustic sensors have a sensitivity of -26 dBFS (1 kHz, 94 dB SPL). The acoustic scanning frequency is 25 FPS.

The AC series acoustic cameras can be used for partial discharge detection, gas leak detection, vacuum leak detection, mechanical failure and anomalous noise detection, to name a few applications.

SATIR AC-130 industrial acoustic camera is easy to operate and can be used quickly. The device adopts strong and durable aluminum alloy housing, can adapt to the complex and changing working environment.

Real-time acoustic ultrasound image display helps to detect partial discharge problems in electrical systems as well as leaks in pressurized systems, vacuum systems quickly and accurately.

AC-130 only needs to adjust the parameters of the test frequency range and dynamic range for the vast majority of inspections, both in applications: electrical, mechanical and pneumatic systems, gas, pneumatic systems and others.

The acoustic camera can work in camera mode, video mode and flexible field data recording. Large storage capacity, field data can be saved and inspection results can be exported to a PC for quick reporting.

Helps companies reduce losses caused by gas leaks, pneumatic system leaks, vacuum system leaks, partial discharges, mechanical failures, among others.

High-performance acoustic sensors for efficient detection

136 digital MEMS acoustic sensors can provide exceptionally high sensitivity, sound resolution, detection accuracy, real-time audio-visual display, anti-interference filters, allowing real-time detection and analysis of different failure modes.

Leak detection

When the leak detection function is activated, the camera continuously displays the number of leaks and losses, as well as a quantification of the level of losses in monetary value.

Leak detection in vacuum systems

The vacuum system consists of one or more vacuum generating equipment and its accessories, which act to reduce the pressure of an industrial process to pressures below atmospheric pressure.

Partial Discharge Detection & Partial Discharge Type Identification.

Partial discharges can be detected before more serious faults occur, even before they are detected by a thermal imaging camera or corona camera. Types of faults: Tracking, Electrical arborescence (Tracking), Corona effect, Electrical arcing, Lack of fit in mechanical connection (electrical connectors).

Mechanical Fault Detection.

Detection of mechanical failures, wear of bearings, friction bearings, valves, among others.

Analysis and reporting.

Processing and recording of data based on templates, supports the recording of waveforms, spectra and spectrograms, allowing analysis and reporting, generating editable protocols. Software for Fast Fourier Transform FFT analysis.

Serie-AC Specifications

Model	AC-130	AC-160
Number of Microphones	136	163
Type of microphones	MEMS digital electroacoustic transducer	
Sensitivity	-26 dBFS (1 kHz, 94 dB SPL)	
Signal to Noise Ratio	64.3 dB (A)	
Sound sampling frequency	200 kS/s/ch	
Maximum frame rate range	2kHz - 100kHz	
Acoustic frame rate / Average frame rate	25 FPS	
Detection range	0.3—130 m	
Leakage detection rate	>0,0047 l/min @ 6 bar from 0,5 m >0,0073 l/min @ 5 bar from 1 m	>0.0015 l/min @ 6 bar from 0.5 m >0.0024 l/min @ 5 bar from 1 m
Leak rate estimation	Included	
Leakage cost estimation	Included	
Focus area	Central circle	
Camera & Display		
LCD touch screen resolution	930x558	1302x781
Visible lens focal length	3.4mm	3.4mm
Camera field of view (FOV)	65º ±3º (H) x 40º ±3º (V)	64º(H) x 40º (V)
Digital zoom	1x a 8X	1x a 8X
Digital Camera	13 M Pixel	13 M Pixel
Storage	Built-in 128GB, Optional (1TB)	Built-in 128GB, Optional (1TB)
Acoustic image resolution	1280 x 720 M Pixel	1920 x 1200 M Pixel
Acoustic video resolution	1280 x 720 M Pixel	1920 x 1200 M Pixel
Focus mode	Automatic	Fixed focus
Screen Size	5 Inch	7 inches
Screen Brightness	Adjustable Brightness	Adjustable brightness
Functions & Interface		
Bluetooth	Bluetooth 4.2	
Port	USB—Tipo C	
Image recording	Incorporated	
Image format	JPG/JPEG	
Video Recording	Incorporated	
Video format	MP4	
Text Annotation	Incorporated	
User interface language	English/Spanish	
Wi-Fi	Incorporated	
Storage memory	128GB, Optional (1TB)	
Form of use	Portable/Tripod	
Other Parameters		
Battery	Rechargeable Li-Ion 3400 mAh battery	Rechargeable Li-Ion 3400 mAh battery
Battery life	4 hours	4 hours
Additional battery	Additional battery included	Additional 2 battery included
Electromagnetic compatibility (EMC)	Class B	Class A
Operating temperature	-20ºC a 50ºC	
Relative humidity	<10% a 95% No-condensation	<10% a 95% No-condensation
Explosion-Proof Certification	Optional	
ATEX Certification	Optional	
Protection level	IP54	
Weight	820g	1.2 Kg
Size	110mm x 150mm x 80mm	232mm x 165mm x 86 mm
Accessories	Power adapter and cable, USB, Type-C to USB-A cable, wrist strap, shoulder strap, industrial wrist carrying case.	
Software	Professional reporting software for an unlimited number of users-computers, minimum validity 15 years.	
Calibration certificate	Calibration certificate updated 2024 (In the name of the end user). Calibration certificate updated 2024 (To the end user).	
Year of manufacture	2024	

Please note that specifications are subject to change without notice.

Software Report Export



SOFTWARE REPORT EXPORT, Professional Reporting Software provides acoustic ultrasound professionals with advanced analysis and research tools. Users can flexibly perform partial discharge analysis, acoustic and daylight image processing, video sonograms, real-time acoustic ultrasound videos, and batch report generation efficiently.

Main Characteristics

- Development of customized templates for each type of inspected equipment.
- Automatic evaluation of the type of Partial Discharge and its severity level.
- Evaluation of compressed air leakage quantification and evaluation of leakage cost.
- Evaluation of vacuum leaks in industrial systems.
- Evaluation of mechanical failures: wear of bearings, friction bearings, valves, among others.
- Acoustic image analysis and comparison with multiple windows.
- Video visualization, acoustic and digital images.
- Acoustic analysis, editing, *.mp4 format for video recording.
- Search and selection of acoustic images.
- Description of acoustic images.
- Isotherm analysis for acoustic anomalies.
- Software for Fast Fourier Transform FFT analysis.
- Waveform analysis, forced frequency analysis to determine the different failure modes.
- Automatic diagnostic tools for failure mode type and criticality level definition.
- Fusion of digital and acoustic images.
- Analytical data export.
- Creation of reports in Microsoft Word or PDF document with their respective analysis.
- Compatible with Windows XP, Windows 7, 8, 8, 10, 11, Windows Vista.