

Handheld Acoustic & Methane Laser Camera



HA3LX



Hertzinnno third-generation acoustic & laser camera, It integrates cutting-edge 144 MEMS microphones sensors with multi-mode positioning and upgraded AI algorithms, delivering a lighter, faster, and smarter solution for gas leakage detection, mechanical fault diagnosis and partial discharge detection.

Designed for precision and efficiency, the camera empowers industrial professionals to capture and quantify complex acoustic sources in real-world scenarios.

The camera supports real-time monitoring of audio signals via Bluetooth connection to headphones. It also supports the online display of frequency spectrum diagrams for better analysis.

The camera supports one-click analysis and one-click forwarding functions on the device. After taking a photo, users can analyze the file using the one-click analysis function on the device. It also supports the real-time generation of analysis reports. After completing the report analysis, users can export the file via Wi-Fi, Bluetooth or a USB interface.

The camera supports file management and file notes, allowing users to add notes to their photos in a variety of ways, including text, voice, photos, and tags.

The HA3LX integrates a laser methane sensor that works in synergy with the acoustic imaging system. Once the acoustic camera detects a potential gas leak source through sound localization, the laser sensor can then be used to verify and quantify the presence of methane at the leak point.

Utilizing Tunable Diode Laser Absorption Spectroscopy (TDLAS), it enables non-contact, real-time measurement of methane concentration, enhancing detection accuracy and situational awareness.

This dual-detection approach significantly improves the efficiency and safety of gas inspections, particularly in complex or hazardous industrial environments.

KEY FEATURE

- **144 Low-noise MEMS Microphones**
- **Methane Laser Sensor**
- **Gas Leak Detection / Mechanical Noise**
- **Methane Concentration Measurement**
- **Multiple Sound Sources Detection**
- **Real-time Sound Source Localization**
- **Laser Rangefinder**
- **Anti-explosion**



■ Specification



Model	HA3LX
Microphones	144 Digital MEMS Microphones
Dynamic Range Of Camera	-30dB ~ 120dB
Minimum Imaging Sensitivity	10khz: 3db SPL 20khz: -15db SPL 40khz: -5db SPL 60khz: 10db SPL 80khz: 35db SPL 100khz: 45db SPL
Operating Distance	0.3m ~ 200m
Dynamic Range Of Multiple Targets	0 ~ 18dB
Frequency Bandwidth	2khz ~ 150khz
Space Resolution	≤1cm @1m, 40khz
Sensor Self Detection	Support
General	
Optical Camera	13MP
Camera FOV	72°±3°
Lighting	LED Lighting
Photo Image Resolution	4K(3840×2160), 1080P
Digital Zoom	1/2/4/8
Video Image Resolution	1920×1080@30fps, 1920×1080p@60fps
Storage	128GB
Annotation	Text, Voice, Photo, Tags
Display	1920*1080P, 5-inch, Touch Screen
Wi-fi & Bluetooth	IEEE 802.11A/B/G/N/AC 2.4G&5G & BT4.2
E-compass/GPS	Support
Laser Distance Measurement	0.1 - 20m
Data Transmission	USB, Wi-fi, Bluetooth
USB Port	Type-C
Battery	Li-ion Rechargeable Battery
Charging Time	2.5 H(from 10% To 90%) & PD Fast Charging
Protection Level	Ip54
Tripod Mount	Unc 1/4-20
Weight	Less Than 1.2kg
Dimension	333mm*152mm*115mm
Working Temperature Range	-20°C ~ 55 °C
Storage Temperature Range	-40°C ~ 85 °C
Humidity	10% -95% (Non-condensing)
Anti-explosion	ATEX

Applications

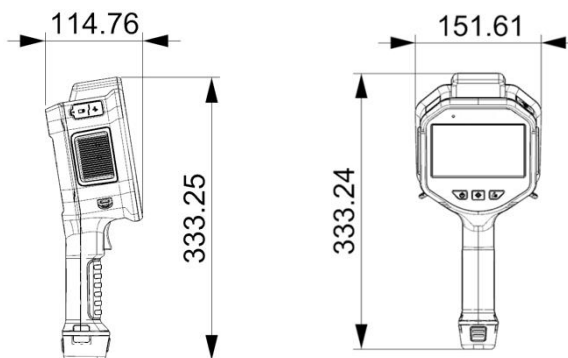
Work Mode	Partial Discharge Detection, Leaks Detection, Mechanical Noise,
Analysis Software	On-device Analysis, PC Software, Cloud Software

■ Specification



Laser Module Specifications	
Sensor	CLASS IIIR LASER PRODUCT
Detecting Gas Type	Methane
Measuring Principle	TDLAS
Detecting Distance	30m (80% reflectance, gas concentration 3000 ppm*m)
Static Detection Limit	5ppm*m
Response Time	0.2s
Measuring Range	0 to 50,000 ppm*m
Anti-Explosion	Ex ib IIIC T130°C Db Ex ib IIC T4 Gb

■ Dimension



■ Packaging list

1. Acoustic Imaging Camera
2. USB Charger
3. Charger docker
4. Spare battery *1
5. Carrying Case
6. User Manual
7. Factory test report
8. Accessory kit

■ Safety Notice & Disclaimer

Laser Safety Warning

When operating the laser rangefinder, **NEVER aim the laser beam at human eyes or reflective surfaces.**

LED Light Warning

Avoid **prolonged direct viewing of LED light sources** (may cause temporary visual discomfort)

HERTZINNO shall not be held liable for any equipment damage or personal injury resulting from **non-compliant operation** (including but not limited to failure to read manuals, laser misuse, etc.).

Users assume all risks and legal consequences arising from failure to follow safety instructions.

■ Notes

Please note that parameters are subject to change, and we encourage you to refer to Hertzinnno's official announcements for the most up-to-date information.

Hertzinnno reserves the right to provide final explanations for any changes that may occur.

