

PDA600

Acoustic Partial Discharge Detector

This advanced **thermal and acoustic imaging camera** combines infrared technology with a high-performance microphone array to accurately detect **gas leaks and partial discharge** in industrial and electrical environments. By visualising both heat and sound sources, it enables fast, non-contact identification of faults, even in complex or hard-to-reach areas.

With high-resolution 640×512 thermal imaging, sensitive acoustic detection, and integrated analysis tools such as PRPD, the system supports efficient condition monitoring and predictive maintenance. Ideal for use on compressed air systems, gas pipelines, switchgear, and high-voltage equipment, it helps reduce downtime, improve safety, and optimise operational performance.

Key Features

- Thermal + acoustic imaging
- 640×512 resolution, $<40\text{mK}$ sensitivity
- 136-mic array (up to 130m detection)
- Gas leak & PD detection + PRPD
- Temp range up to 650°C (2000°C optional)
- 5" touchscreen, 5MP camera
- Interchangeable lenses
- WiFi / 4G optional
- IP54 rugged design



Specifications

Model	
Infrared parameters	
Detector type	Uncooled FPA
Detector resolution	640x512
NETD	<40mK (@30°C)
Spectral range	7.5~14μm
Standard lens	24°
Optional lens	48°, 12°, 6°
Minimum focusing distance	0.15 m (48° lens/24° lens), 0.5 m (12° lens), 2 m (6° lens)
Spatial resolution	0.66 mrad (24° lens), 1.39 mrad (48° lens), 0.33 mrad (12° lens), 0.16 mrad (6° lens)
Focus	Manual focus
Image frame rate	30 Hz
Acoustic parameters	
microphone	136 digital silicon MIC arrays
Microphone sensitivity	-26dBFS@1kHz
Frequency bandwidth	2kHz ~ 100kHz
Distance	0.3-130 m (depending on the magnitude of the sound source signal)
Sound intensity display	the highest point
Acoustic detection mode	Gas leak detection mode, partial discharge detection mode
Acoustic frequency	25Hz
Maximum sound pressure level	120dB
Minimum imaging sound pressure level	<20dB SPL, frequency-dependent
PRPD	support
Acoustic sampling rate	200kHz
Positional error	<0.05m@1m,40kHz
Gas leakage loss display	support
Gas leakage rate display	support
Gas leak level display	support
Partial discharge detection	support
Partial Discharge Type Identification	Tip discharge, floating discharge, surface discharge, particle discharge
Temperature measurement parameters	
Temperature measurement range	-20°C to 650°C, up to +2,000°C(optional)
Temperature measurement accuracy	±2°C or ±2% of the reading
Visible parameters	

Digital camera	Built-in 5-megapixel digital camera with LED lighting
Image display	
Display	5-inch sunlight-resistant display
Display resolution	800x480 pixels
Visible camera	5MP visual camera with built-in LED photo lamp
Palette	10 color palettes including Iron Red, Gray, Anti-Iron Red, and Anti-Gray
Touch screen	Capacitive touch screen
Wireless transmission	
4G (optional)	Transmit real-time images to the phone via 4G and view cloud-based photos
Measurement Analysis	
Analysis tool	10 points, 10 boxes, and 5 lines, including maximum, minimum, and average values.
Emissivity correction	Automatic, based on emissivity input values
Atmospheric transmission correction	Automatic, based on input values of distance, atmospheric temperature, and relative humidity
Alarm	
Alarm method	Set temperature values above/below/automatically trigger audiovisual alarms
Satellite positioning	
GPS(optional)	For outdoor use, the screen displays the latitude and longitude of the device's location. Photos saved can show latitude and longitude in the analysis software.
Image storage	
Storage method	32GB high-speed SD card
Infrared image format	.jpg (with full temperature data) /.png (with full temperature data)
Visible light image format	.jpg
Infrared video format	H.264 or full-radiometric infrared video
Video out	
Video out	HDMI
Video output interface	Micro HDMI interface
Partial discharge detection	
Partial discharge detection configuration	AA(Non-contact Ultrasonic) and TEV(Transient Ground Voltage)
AA parameters	
Detection band	40±1kHz
Detect dynamic range	-8 ~ 68dBμV
transducer sensitivity	-65dB(0dB=1volt/μbar RMS SPL)
Linearity error	≤10%
TEV parameter	
Detection band	3 ~ 100MHz
Detect dynamic range	0 ~ 60dBmV
Linearity error	≤10%
Power supply	
Battery type	Removable rechargeable lithium battery
Supply voltage	DC 12V
Working hour	>3 hours
Charging method	Dual Charging Dock
Charging type	AC adapter

Power-saving mode	Support
Physical parameters	
Weight	1.23 kg (including battery)
Dimension	159.5x135.9x330.7mm
Environmental parameters	
Working temperature	-20°C~55°C
Storage temperature	-40°C~70°C
Humidity	≤95%, non-condensable
Encapsulation	IP54

Please be aware specifications can vary from time to time