

GAS LEAK & DISCHARGE VIEWER

MK-770

ISO9001



JQA0950

Energy Saving & Preventive Maintenance



Detects and Displays Air/Gas Leak & Partial Discharge from a Safe Distance.

Realtime Imaging :

Displays air/gas leak or partial discharge as sound pressure map by calculating the sound arrival time differences to the microphones placed in our unique array.

FFT Graph :

Presented in Partial Discharge mode.

Easy operation :

In Auto mode, complicated settings are not necessary.

Noise Canceling :

Algorithm that analyzes data and eliminates noise for less false detection.

Value assessment :

Estimates air/gas leak amount and quantify loss cost.

No interference from operating noise :

Perceptible surrounding noises by the ear does not interfere with sensing ultrasonic waves to measure air/gas leak or partial discharge.

Record :

Recorded photo images and videos help making your reports.

Leakage Calibration :

Compensation for leakage errors can be set by the correction factor.

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JAPANESE PATENT



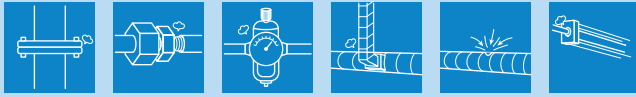
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Application

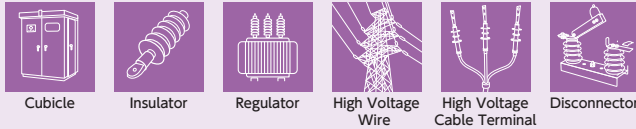
Air/Gas Leak



Air/Gas leak from:

- Piping pinholes and regulator joints due to corrosion
- Loose flange, deteriorated packing, defective welding
- Suction in vacuuming system

Partial Discharge



Partial Discharge at:

- High-voltage transmission and transformer for substations and electrical room
- Switchboard, Insulator, Equipment terminal, Disconnecter switch, Cable terminal, Joint section, etc.

Specifications

Model	MK-770-CE
Ultrasonic sensor	Center frequency 40 kHz
Performance	Leak source locating: Pressure 70 kPa / Able to detect leak from 0.2 mm hole in 7-meter distance ^{*1} Partial discharge locating: Able to detect partial discharge 1000 pC equivalent in 3-meter distance ^{*1}
Analysis ^{*2}	Time Waveform / Frequency Spectrum / Discharge Component Ratio
Mode	Auto Mode: Auto Noise Identification, Gain Adjustment Manual Mode: Items user selectable/adjustable
Detect area	Horizontally approx. 62° / Vertically approx. 35°
Display	4.3 inch LCD / 800×480 pixels
Display Refreshment freq.	High: About 8 times/sec Eco: About 5 times/sec About 3 times/sec (Partial Discharge Mode wave form displayed)
Other functions	Loss Cost Estimation, Flow Adjustment, Peak Hold, Sleep Mode, Auto Power Off
Record contents	Jpg: Photo image, Image with Sound pressure map overlay mp4: Video with Sound pressure map overlay onto image CSV: Sound pressure map data, Measurement information list, Time waveform ^{*2} , Frequency spectrum ^{*2}
Storage Capacity	Leak: Image Format 3,500 files Partial Discharge: Image Format 3,000 files Video Format: Up to 5 minutes/movie, Total within 30 minutes ※ Internal memory: 1 GB ※ The maximum records number of when only recording still images or only video.
File Transfer	USB communication (PC with Windows® OS required)
Power	Rechargeable Lithium ion battery Continuous use: Approx. 6 hours (normal temp.) ^{*3}
Size	W182 mm×H114 mm×D64 mm (Wrist strap and protector not included)
Weight	Approx. 740 g (including Lithium ion battery, Excluding wrist strap and protector)
Ingress Protection	IP42
Enclosed items	Main Unit, Lithium ion battery (RRC2057), Charger (RRC-SMB-MBC), Wrist strap (MK-9907), Protector (Blue) (MK-9910), USB cable, User manual
Optional Accessories	Lithium ion battery (RRC2057), Neck strap (MK-9908), Carrying case (MK-9705), Waist bag (MK-9706), Protector (Black) (MK-9909), Oscillator for air/gas leak detection (MP-161-S001), Oscillator for partial discharge detection (MP-161-S002)

*1 : Test using our equipment

*2 : In Partial Discharge Mode

*3 : Continuous use time length becomes shorter as the temperature inside the instrument becomes higher.

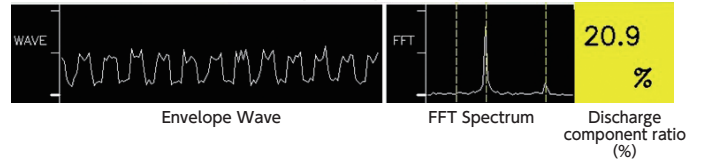
Features

Automatic Noise Identification Optimization



In AUTO mode, the detected data is statistically analyzed. Thanks to the improved noise identification accuracy, noise is not displayed as a sound pressure map, which helps prevent false detections.

FFT (Frequency Analysis)



It detects the ultrasonic signal generated during discharge and determines whether it contains a periodic component (double the period of the power supply frequency) unique to partial discharge.

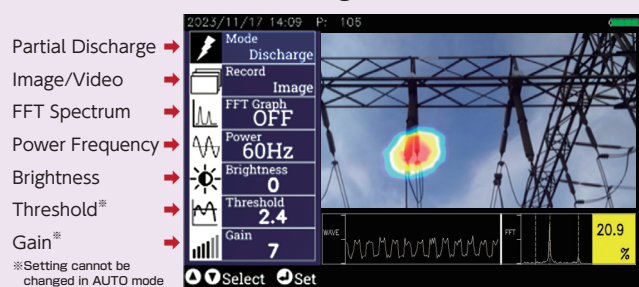
Display

Air/Gas Leak Detection

Based on the input values of the unit price, equipment operating time, and distance to the target, the estimated cost for one year is calculated from the amount of the approximate leakage.



Partial Discharge Detection



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※ Specifications may be changed with or without notice.



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