



GAS IMAGING TECHNOLOGY, LLC

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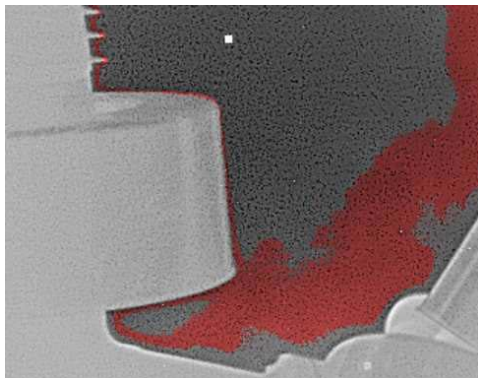
Sherlock[®]SF6

Remote SF6 Gas Leak Imaging & Quantification

Sherlock SF6 is a small hand held battery operated imaging spectrometer that has been designed for gas leak imaging, concentration calculation in ppm-v, and analysis. The Sherlock SF6 model has been laboratory tested and found to detect Sulphur Hexafluoride (SF₆) gas leaks at rates below 1 ml/min or 7 lbs/year¹.

Sherlock uses passive detection technology as opposed to other instruments that use lasers. Because of this, the Sherlock can detect gas leaks against a sky background since there is no need for a reflective surface as required when using a laser based system. Using the Sherlock, an operator can stand a safe distance from potential leaking high voltage components and find leaks without interrupting a plant operation.

The Sherlock contains a display with hood for viewing components and gas leaks, a tuned infrared detector for SF₆ gas, a spectrometer for gas analysis, video frame grabber enabling video clip recording and an embedded computer allowing direct interface to a computer network over an Ethernet port. The embedded digital video clip recorder and file naming ability as well as easy access to a computer network makes documentation and reporting easy. There is no need for time consuming video editing as required by other products.



Our proprietary HyPAT software uses false color to highlight the gas leak

The Sherlock SF6 is used by the power industry for the detection of gas leaking from switchgear and circuit breakers. SF₆ gas is invisible to the human eye and can only be detected using infrared technology. This gas is expensive and one of the most potent greenhouse gases since it can remain in the atmosphere for thousands of years. SF₆ has a 22,000-time higher global warming potential than CO₂. Therefore, early detection is essential in reducing the amount of greenhouse gases in the atmosphere.

Sherlock is based on patented IMSS spectral imaging² technology that has been proven for several Department of Defense related applications. Now, this technology is available to the commercial market and has been developed for several applications related to gas imaging, analysis and quantification.

¹ Function of the temperature of the ambient background

² U. S. Patent numbers: 5,479,258; 5,867,264; 6,680,778

Gas Imaging Technology

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Specifications

Sherlock Mechanical Characteristics

Weight	15 pounds without battery 19 pounds with battery
Size	12(L) x 7(W) x 8(H) inches
Power	12 volt battery or AC supply

Sherlock SF6 Optical Characteristics

Embedded Lens System with digital focus	
Spectral Range	10.5 microns
F number	f/2.38 at 8 microns
Focal Length	70 mm at 8 microns
Instantaneous Field of View	0.4 mrad
Field of View	7.3° x 5.5°
Spatial Resolution	320 x 240 pixels
Variable Integration	10 discrete settings
Minimum leak rate (<35mK NEDT)	1 ml/min (7 lbs/year)

Basic Sherlock Includes

1. Embedded software
2. Electrical Interfaces - Ethernet, RS232, NTSC, S-Video, USB
3. User Interface - Push button allowing one hand operation
4. Small LCD Video Display (640 x 480 pixel display)
5. Sun Shield
6. Embedded Digital Video Clip Recording
7. Standard 12 volt battery
8. Battery Charger/AC supply
9. Shipping Pelican Case
10. All Necessary Cables
11. HyPAT software for post processing and gas quantification
12. Two day training at manufacturer's facility

Accessories

1. Tripod ¼-20 Threaded Mount
2. Easy Rig pneumatic harness for easy caring when using in the field for many hours
3. Extra Batteries
4. Small Portable VCR

Specifications can change without notice

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