SF₆-IR-Leak
Model GA15

Applications

- Leak path identification in SF₆-filled equipment

Special features

Infrared leak-detection technology offers many advantages:
- Detects small SF₆ gas concentrations down to 1 ppmv
- Detects SF₆ only
  - Unaffected by other gases
  - Unaffected by moisture
  - Unaffected by wind
- Easy operation
- Fast response time

Description

This instrument is used to assure leak-tightness of SF₆-filled compartments. It can be used to find leakages on aged equipment on-site or do quality inspection after manufacturing. SF₆-IR-Leak is the perfect tool to identify the location and magnitude of leaks so that appropriate repairs can be made. It was specifically developed to be easy to use and quickly pinpoint even the smallest SF₆ leaks through the use of the physical working principle of infrared leak detection technology.

To find leaks the sensor is moved across the outside of the tank. As the SF₆ level increases, the beeping of the instrument becomes faster. In the tip a replaceable particle filter prevents the sensor from contamination. If the ambient SF₆ level is higher than 0 ppmv, the reading can manually be set to display zero.

Functionality

The console is carried via a shoulder strap while the sensor gun is handheld. Both the sensor and handheld portions of the unit have a digital display to show the actual SF₆ level. A suction pump inside the console generates a flow from the tip of the handheld through the IR-sensor.
Additional features

Measurement principle
Dual wavelength non-dispersive Infrared Spectrometer (NDIR)

Sensor sensitivity
- 1 ppmv
- No cross sensitivities to other gases
- Moisture: unaffected from 0-100% relative humidity (non-condensing)

Detectable leak rate (calculated)
3.43 g/year equiv. to 1.81 x 10⁻⁵ mbar*L/s (or atm*cc/s)

Range
0 ... 2,000 ppmv

Accuracy
± 2 ppmv < 50 ppmv
± 5 ppmv between 50 ... < 100 ppmv
± 2 % max. of range between 100 ... < 2,000 ppmv

Repeatability
< 0.3 %

Response Time T90
<1 sec

Unit
ppmv

Supply
- Lithium-Ion battery with 8 hours capacity,
- Rechargeable 100-265 V AC 50/60Hz

Alarm
Audio and visual. Factory audio settings are at 30, 100, and 1000 ppmv (other set points possible at the time of order)

Temperature
Storage: -10 ... 60 °C
Operating: 0 ... 45 °C

Dimensions
Console: 285 x 195 x 80 mm (11.2 x 7.7 x 3.2 in)
Hand-gun: 210 x 110 x 90 mm (8.3 x 4.3 x 3.5 in)

Weight
Console: 2.5 kg (5.5 lbs)
Hand-gun: 0.5 kg (1.1 lbs)

Calibration
Every 2 years

The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials.