For measurement of the volume percentage in air and nitrogen mixtures

3-027-R002

SF_6 Volume percentage measuring device

This device serves for measuring the gas purity necessary to maintain the dielectric property for arc quenching in circuit breakers. Thanks to the speed of sound measurement developed by DILO it provides results immediately. The microprocessor installed converts the values measured into the SF_6 volume percentage.

Easy rinsing after the measuring process - and the device can be used again for another gas compartment immediately.

The device can be deployed for measurements of pure SF_6 gas or SF_6 gas mixtures containing N_2 or CF_4.
In this case we kindly ask you to contact DILO.

- Easy handling
- Measurement independent of the air pressure and its position
- Response time about 1 minute
- Digital indication of the measuring values

Devices for determination of the SF_6 gas quality

3-027-R002
SF_6 Volume percentage measuring device

Technical data:

Dimensions (with handle): W 415 mm, H 155 mm, D 450 mm
Dimensions (transport case): W 535 mm, H 180 mm, D 470 mm
Weight: 10.5 kg
Weight with transport case: 14 kg
Measuring media: SF_6 / N_2 or SF_6 / air-gas mixtures
Measuring principle: Velocity of sound
Measuring range: 0 - 100 volume-% SF_6
Measuring accuracy: ± 0.5 volume-% for SF_6 / N_2-gas mixture or SF_6 / air-gas mixture
Operating pressure: input pressure of the device without pressure regulation p_a (absolute) = 1.7 to 10 bar (p_e [effective] = 10.2 to 130.5 psi). At a pressure of p_a (absolute) = 1.2 to 1.7 bar (p_e [effective] = 2.9 to 10.2 psi) the function is still guaranteed. However, the response time increases.
Measuring pressure: The measuring process is effected under atmospheric pressure.
Operating temperature: temperature compensation of -20 °C to +50 °C (-4 °F up to +122 °F) ambient temperature
Ambient moisture: up to 90 % relative moisture, non condensing during operation
Response time: Approx. 1 min. with a rinsed connecting hose. The response time as well as the rinsing of the connecting hose depend on the supply pressure. In the most unfavourable case at p_a (absolute) = 1.7 bar (p_e effective = 10.2 psi) the time to get an exact measurement is 5 min. if the rinsing valve is not operated.
Flow rate: max. 1.2 g / min. (0.04 oz / min) at 100 % SF_6 gas and an operating pressure of p_a (absolute) = 10 bar (p_e [effective] = 130.5 psi)
Electrical connection: 220 V - 240 V / 50 - 60 Hz reversible to 110V - 127V / 50 - 60 Hz
Interface: RS232

Standard equipment:

Volume percentage measuring device with digital display
Measuring cell with electronic part
2 m long connecting hose with coupling DN8 and DN20
Housing with front and back covering with big handle for transportation and placing of the device
Mains plug with 2 m long connecting cable
Transport case
1 operating manual (multilingual) on CD-ROM

Optional accessories at an extra charge:

Data cable for RS232 interface and CD-ROM with computer indicating programme	**6-1106-R001**
Additional operating manual on CD-ROM	**6-0004-R213**

Packing:

Packing for 3-027-R002	**3-775-R009-C**

Modification for discharge gas collection unit (only for devices delivered up to the middle of 2004)

It is possible to modify the device in such a way as to allow the recovery and storage of measuring gas so that the measuring gas is no longer released into the atmosphere. The B151R95 measuring gas collecting bag is suitable for storing the measuring gas.

Retrofit kit for discharge gas collection unit (modification carried out by DILO)	**6-1104-R011**
Retrofit kit for discharge gas collection unit (modification executed by the customer)	**6-1104-R021**