

3-035R-R201V0

MirrorAnalyser^{SF6} (two-in-one)

For high-precision gas quality analysis of several parameters

With this multi-function device, depending on the version, up to three quality parameters can be determined with just one measurement. The MirrorAnalyser^{SF6} uses the physical dew point mirror measuring principle which is characterised by its high precision and utmost reliability in order to measure the moisture content. By cooling the integrated mirror the moisture content of the gas is determined by measuring the temperature depending on the condensation or icing of the mirror. The other parameters of SF₆ quality are measured by the velocity of sound (SF₆ volume percentage) and electrochemical reaction (SO₂ concentration).

High-quality manufacture and ergonomic design guarantee the quality standards for a compact, user- and maintenance-friendly measuring device with high measuring accuracy. The MirrorAnalyser^{SF6} allows different methods of operation for emission-free handling of the measured gas. On the one hand the internal storage of the measured gas in the device and pumping back up to 10 bar p_e. On the other hand the external storage of the measured gas into an external cylinder. For measurements on cylinders, vessels or gas compartments at higher pressure or if the measured gas should not be pumped back into the unit, a cylinder can be connected directly to the outlet max. 10 bar p_e. In this case, it is not necessary to use a pressure reducer and to separate the device from the gas cylinder or the gas compartment. Furthermore, the external storage of the measured gas into an external discharge gas collecting bag. By connecting an external discharge gas collecting bag continuous measurements without pumping back the gas are possible. Afterwards, it is possible to empty the external bag by using the MirrorAnalyser^{SF6}, a service cart or compressor unit.

The measuring device offers automated operation via a 7" touch screen. It is possible to operate and exchange data by means of mobile end devices such as smartphones, tablets or laptops via WiFi. The residual lifetime of the SO₂ electrochemical sensor is indicated automatically. The dew point mirror has self-test functions. Integrated into a trolley, the measuring device can be transported in a safe and comfortable way. Modern control technology in conjunction with a user-friendly interface in several languages make device operation simple and convenient.



Standard version

- indication of moisture concentration in dew point °C or °F, referred to atmospheric or inlet pressure, reversible to indication in ppm_w
- indication of inlet pressure in bar, psi, MPa and kPa (in pa or pe)
- 6 m long connecting hose with DN8 and DN20 DILLO couplings
- 2 m long electrical connecting cable
- USB flash drive with data file for evaluation and reading out of measuring results

Special features

- Gas type: SF₆
- Sensors: percentage
- Sensors: moisture
- Features: storage of measuring results
- Features: WiFi
- Features: gas return system

Advantages & functions

Sensor data			
Sensor	Frost / Dew point	Volume percentage	SO ₂
Measuring principle	Dew point mirror (physical measuring principle)	Velocity of sound	Electrochemical reaction
Measuring range	-50 °C to +20 °C	0 - 100.0 vol.-% SF ₆	0 - 20 ppm _v 0 - 100 ppm _v 0 - 500 ppm _v
Measuring accuracy	± 0.5 °C	± 0.5 %	< 2 % of the measuring range

Overview MirrorAnalyser ^{SF6}									
Device	SF ₆ -%		Moisture	SO ₂ to 20 ppm _v	SO ₂ to 100 ppm _v	SO ₂ to 500 ppm _v	HF to 10 ppm	H ₂ S to 100 ppm	CO to 500 ppm
	SF ₆ /N ₂	SF ₆ /CF ₄							
R102			X						
R201	X		X						
R301	X		X	X					
R302	X		X		X				
R303	X		X			X			
R312	X	X	X		X				
R313	X	X	X			X			
R403	X		X			X	X		

- high accuracy and reliability in moisture determination (dew point mirror measuring principle)
- emission-free measurement
- modular interchangeability of the electrochemical sensors
- low maintenance due to self-test functions
- storage of up to 500 measuring results with name, date and time
- precise measuring results for subsequent measurements can be guaranteed by automatically purging the measuring hose prior to each measurement



Technical data

Dimensions (W x H x D)	625 x 297 x 500 mm
Weight	27.5 kg approx.
Inlet pressure p_e	0.2 - 35 bar
Operating temperature	-10 to +40 °C
Ambient moisture	90 % relative moisture non condensing during operation
Operating voltage	85 - 264 V AC
Frequency	47 - 63 Hz
Number of max. measured values to be stored	500
Interface	USB/LAN
Measuring time	≤ 10 min variable calculated by the system, depending on the gas quality
Protection class	IP65 (device closed) / IP20 (device opened)
Measuring range of moisture sensor	-50 to +20 °C
Measuring accuracy of moisture sensor	± 0.5 °C
Measuring principle of moisture sensor	Dew point mirror (physical measuring principle)
Measuring range of vol.-% sensor	0 - 100 vol.-% SF ₆
Measuring accuracy of vol.-% sensor	± 0.5 vol.-%
Measuring principle of vol.-% sensor	Velocity of sound

Optional accessories

3-826-R003	Compressor unit for measuring devices
B151R95	Discharge gas collecting bag
Z340R42	Adapter case for measuring devices
3-531-R060	6 m long connecting hose with self-closing DIL0 couplings (as extension hose)
K176R11	Remote control via mobile devices
K176R21EU	Mobile remote control router for Ethernet devices (EU)
K176R21NA	Mobile remote control router for Ethernet devices (NA)

Note

Options (please inquire separately): All devices with percentage measuring system are additionally available for SF₆ concentrations in SF₆/CF₄ gas mixtures (measuring accuracy: ±2.0 vol.-%). Thus it is possible to switch over between the SF₆/N₂ and SF₆/CF₄ measurement.

