



ANNOVEX-
Sensor/transmitter



ANNOVEX-Monitor
with alarm unit AVS 3



Audio-visual alarm
device type AVS 4




MONIMET-Monitor



MONIMET-Monitor
for the gas exhaustion

ANNOVEX / MONIMET

-  I M1 Ex ia I Ma
- Data processing by microcontroller system
- Measurement span of the output signal is variable
- Illuminated four-digit display with alphanumeric prompt line
- Adjustments or status enquiries by means of a press button unit or a magnetic pointer. The housing stays closed
- Code lock to prevent unauthorized manipulation (can be switched off)
- Fault self diagnosis with alphanumeric display
- Test of the output signal by simulated values
- Choice between normed analog or digital output signals (optional)
- Two built-in limit switches with optocouplers or relays in the ANNOVEX/MONIMET-Monitor
- Audiovisual alarm unit AVS 3 optional for the ANNOVEX-Monitor
- On site changeable sensor block
- Housing protection rating IP65, sensor protection rating IP 54
- ANNOVEX devices included in antistatic plastic housings
- MONIMET devices included in robust die cast metal housings
- Special device constructions for the gas suction treatment

The economical, permanently installed sensor/transmitter and monitor are characterised by their stable measuring characteristic, simple and secure operation, robustness, low weight and compact construction.

These devices conform to the explosion protection rating of intrinsic safety „i“, category I M1 Ex ia I Ma. This means that these devices can be used in the zone M1 of underground mines, even when unpermitted high concentrations of the methane gas are prevailing.

This certification conforms to the ATEX directive 2014/34/EU for devices and protective systems permitted for use in areas endangered by explosions.

The ANNOVEX/MONIMET-Monitor differs from the sensor/transmitter because of an additional limit value unit which is equipped with optocouplers or relays.

The test gases can be fed to the gas measuring devices by means of a plug-on adapter of the type PGA 3.

The operation of the device is very simple and the housing need not be opened: The operator places a small magnetic press button unit on the device. As an alternative he can also use a magnetic pointer. A four digit code protects against unauthorized changing of the set values (can be switched off).

A self monitoring microcontroller system not only processes the measurement values precisely, it also carries out the operator specific instructions such as the entry of the code, signal instructions and messages, analog and digital outputs and test functions etc. A four digit back lit graphic display shows the measured values in 12 mm high digits.

The ANNOVEX devices are protected by antistatic plastic housings (impact strength 7 Joule).

The MONIMET devices are protected against shocks, dust and humidity by die cast metal housings (impact strength 20 Joule).

They are to be connected by means of a plug-in connector.

The sensor block with the specific sensor is attached on the lower side of the housing and it can be replaced easily on site.

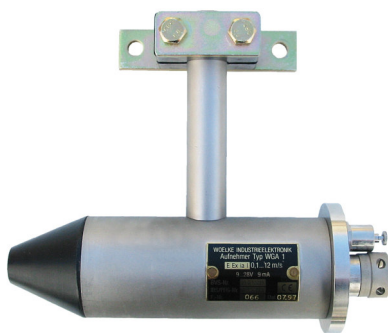
For the suspension of the MONIMET device a steel hanger is attached. Holes on the back of the ANNOVEX device permit a rigid mounting.

In addition the ANNOVEX-Monitor can be equipped with the audio visual alarm unit AVS 3 for giving alarms in the monitored area.

If a sensor/transmitter has to be installed at a hardly accessible place, an ANNOVEX-Evaluator can be connected via the digital interface, so it can take on the display, the evaluation and the service of the sensor/transmitter.



ANNOVEX-Evaluator Type GMA 30.00.xxx



ANEMOMETER Type GMx 15.07.180



Power supply unit Type USV 4

Device types

CH₄-Sensor/transmitter or Monitor Type GMx 01.01.xxx

Measuring range: 0.00...5.00 vol %

Measuring principle: Catalytic combustion

Temperature compensation

CH₄-Sensor/transmitter or Monitor Type GMx 01.02.xxx

Measuring range: 0.0...100.0 vol %

Measuring principle: Thermal conductivity

Humidity and temperature compensation

CH₄-Sensor/transmitter or Monitor Type GMx 01.03.xxx

Measuring range: 0.00...5.00...100.0 vol %

Measuring principle: Catalytic combustion/thermal conductivity

Catalytic combustion sensor protection against high gas concentrations

Humidity and temperature compensation

CH₄-Sensor/transmitter or Monitor Type GMx 01.04.xxx

Measuring range: 0.00...5.00...100.0 vol %

Measuring principle: Infrared (NDIR)

Temperature, humidity and pressure compensation

CH₄-Sensor/transmitter or Monitor for the gas exhaust

Type GMM 01.13.xxx

Measuring range: 0.0...100.0 vol %

Measuring principle: Thermal conductivity

Humidity and temperature compensation

Pressure compensation (optional)

Pipe probe RSM 01 with test gas connection (optional)

O₂-Sensor/transmitter or Monitor Type GMx 02.05.xxx

Measuring range: 0.00...30.00%

Measuring principle: Electrochemical

Temperature and pressure compensation

CO-Sensor/transmitter or Monitor Type GMx 03.05.xxx

Measuring range: 0.0...500.0 ppm

Measuring principle: Electrochemical

Temperature and pressure compensation

CO₂-Sensor/transmitter or Monitor Type GMx 04.04.xxx

Measuring range: 0.00...10.00 vol %

Measuring principle: Infrared (NDIR)

Temperature and pressure compensation

CO₂-Sensor/transmitter or Monitor for the gas exhaust

Type GMM 04.14.xxx

Measuring range: 0.00...10...20.00 vol %

Measuring principle: Infrared (NDIR)

Temperature and pressure compensation

Pipe probe RSM 01 with test gas connection (optional)

H₂-Sensor/transmitter or Monitor Type GMx 11.05.xxx

Measuring range: 0.0...1000.0 ppm

Measuring principle: Electrochemical

Temperature and pressure compensation

H₂S-Sensor/transmitter or Monitor Type GMx 05.05.xxx

Measuring range: 0.0...100.0 ppm

Measuring principle: Electrochemical

Temperature and pressure compensation

NO-Sensor/transmitter or Monitor Type GMx 13.05.xxx

Measuring range: 0.0...100.0 ppm

Measuring principle: Electrochemical

Temperature and pressure compensation

NO₂-Sensor/transmitter or Monitor Type GMx 14.05.xxx

Measuring range: 0.0...20.0 ppm

Measuring principle: Electrochemical

Temperature and pressure compensation

Temperature-Sensor/transmitter or Monitor Type GMx 10.10.xxx

Measuring range: -20.0...60.0 °C

Measuring principle: Thermoresistive (PT 100)

ANEMOMETER-Sensor/transmitter Type GMx 15.07.180

Measuring range: 0.15...12.00 m/s or 0.005...1800 m²/s

Measuring principle: Hot film anemometry

Temperature and pressure compensation

Common technical Data

Supply voltage: 9...16 V=

Current consumption: 15 mA to 160 mA depending on sensor and equipment

ANNOVEX

Dimensions without hanger:

W 122 mm, D 90 mm, H 179 mm (305 mm with alarm unit AVS 3)

Weight without alarm unit: 2 kg

Type of protection: IP 65, gas inlet port IP 54

Material, impact strength: Polyester, R₀ <10³ Ohm, >7 Joule

MONIMET

Dimensions without hanger: W 100 mm, D 100 mm, H 200 mm

Weight: 4 kg

Type of protection: IP 65, gas inlet port IP 54

Material, color, impact strength: Die cast metal, RAL 5012 (blue), 20 Joule

Audiovisual alarm unit Type AVS 3 (supplement for ANNOVEX-Monitor)

Audiovisual alarm device Type AVS 4

Signal tone: Sweeping 2400-2850 Hz at 7 Hz

Sound intensity: max. 103 dB (1m)

Flashing light: 10 ultra highbright, pulsed LEDs

Signal frequency Alarm 1, Alarm 2: 0.5 Hz, 1 Hz

Current consumption: 100 mA max.

Dimensions of the AVS 4 without hanger: W 124 mm, D 93 mm, H 290 mm

Power supply unit Type USV 4 for the uninterruptible power supply

Input voltages: 42 V~, 100 V~, 230 V~

Output voltage 1, 2: 12 V=, 0.5 A

Output voltage 3: 14 V=, 0.1 A

Capacity of the accumulators: 8 Ah

Dimensions: H 424 mm, W 298 mm, D 139 mm

Weight: 17 kg