WOELKE
ENGINEERED SAFETY

MONIMET

Evaluator type GMM 30.00.5xx

- **I M1 Ex ia I Ma**
- **Special housing suited to the working conditions in mines and industry. Steel hanger for the suspension, screw threads on the backside optional**
- **Automatic recognition of the connected sensor/transmitter**
- **Digital data transmission between the devices**
- **Data processing by microcontroller**
- **Output range of the output signal is variable**
- **Illuminated four-digit graphic display with alpha numeric prompt line**
- **Adjustments or status enquiries by means of a press button unit or a magnetic pointer. The housing need not be opened**
- **Code lock to prevent unauthorized manipulation (can be switched off)**
- **Fault self diagnosis with alpha numeric 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 (optional)**
- **Housing protection rating IP65**

The MONIMET-Evaluator is an universal evaluator for the sensors/transmitters of the ANNOVEX/MONIMET-system.
All available device types can be connected. The Evaluator automatically recognizes the sensor/transmitter and takes over the display, the evaluation and operation of the sensor/transmitter.
Simple and secured operability, robustness and small dimensions distinguish the cost efficient, stationary MONIMET-Evaluator.
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 MONIMET-Evaluator can be extended with an additional limit switch unit that is equipped with relays or optocouplers.
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 MONIMET-Evaluator is protected against shocks, dust and humidity by a cast metal housing (impact strength 20 Joule) and are to be connected by means of plug-in connectors. The connector for the sensor/transmitter is attached on the lower side of the housing. On the upper side there is the plug-in connector for the electrical connection.
A steel hanger is attached for the suspension of the device. For a rigid mounting, the device can be provided with thread holes on its rear (extra charge).
One or more audiovisual alarm devices Type AVS 4 can be connected to an MONIMET-Evaluator for giving an extended alarm signal on site.
All ANNOVEX/MONIMET devices can be fed by the uninterruptible power supply device Type USV 4, which also has an ATEX-certification.

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Connectable ANNOVEX/MONIMET device types

CH_4-Sensor/transmitter or Monitor Type GMx 01.01.xxx
Measuring range: 0.00...5.00 vol %
Measuring principle: Catalytic combustion
Temperature compensation

CH_4-Sensor/transmitter or Monitor Type GMx 01.02.xxx
Measuring range: 0.0...100.0 vol %
Measuring principle: Thermal conductivity
Humidity and temperature compensation

CH_4-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

CH_4-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

CH_4-Sensor/transmitter or Monitor for the gas suction treatment
Type GMM 01.13.xxx
Measuring range: 0.0...100.0 vol %
Measuring principle: Thermal conductivity
Humidity and temperature compensation
Pressure compensation (optional)
Diffusion or partial flow pipe with test gas connection (optional)

O_2-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

CO_2-Sensor/transmitter or Monitor Type GMx 04.04.xxx
Measuring range: 0.00...10.00 vol %
Measuring principle: Infrared (NDIR)
Temperature and pressure compensation

CO_2-Sensor/transmitter or Monitor for the gas suction treatment
Type GMM 04.14.xxx
Measuring range: 0,00...10...20,00 Vol %
Measuring principle: Infrared (NDIR)
Temperature and pressure compensation
Diffusion or partial flow pipe with test gas connection (optional)

H_2-Sensor/transmitter or Monitor Type GMx 11.05.xxx
Measuring range: 0.0...1000.0 ppm
Measuring principle: Electrochemical
Temperature and pressure compensation

H_2S-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

NO_2-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 m^3/s
Measuring principle: Hot film anomemetry
Temperature and pressure compensation

Common technical Data

Adjustment range of the device code	0000...9999
Supply voltage	9...16 V–
Current consumption	
with 1 mA- or 15 Hz-output	15 mA
with 20 mA-output	35 mA
with Optocoup. a. 1 mA- or 15 Hz-output	17 mA
with Relays a. 1 mA- or 15 Hz-output	27 mA
with Optocoup. a. 20 mA-output	37 mA
with Relays a. 20 mA-output	47 mA
Current consumption of the audio visual alarm	additionally max. 100 mA
Frequency output	
Frequency range	6...15 Hz, switchable to 5...15 Hz
Adjustable output range	see measuring range of the connected sensor/transmitter
Optocoupler output	max.: 30 V, 100 mA, 100 mW
Current output (alternative to the frequency output)	
Ranges and loads	0,1/0,2...1 mA / ≤ 5200 Ω **or** 4...20 mA / ≤ 200 Ω
Adjustable output range	see measuring range of the connected sensor/transmitter
Test function with simulated measured values	10 decimal steps from the start to the final value of the range of the data transmission output
Limit switch Alarm 1 and Alarm 2	
Setting range	see measuring range of the connected sensor/transmitter
Optocoupler output	max.: 30 V, 100 mA, 100 mW
Relay output (quiescent current principle)	max. 30 V, 1 A, 30 W
Surroundings temperature	-20°C...+60°C
Humidity, non condensing	0...98 % rel.
Dimensions without hanger	W 100 mm, D 100 mm, H 200 mm
Weight	4 kg
Type of protection	IP 65
Material / color	Die cast metal / RAL 5012 (blue)
Impact strength	20 Joule
Accessories to be ordered separately:	
Connecting cable	VDL 4, 20 m; max. length 100 m (R_L ≤ 7,8 Ω)
Press button device	TAS 3

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