



**GMF 802 with  
LCD display of measured values  
and remoted measuring cell**

### **Important!**

**The handling of the device depends on the knowledge and observation of this manual.  
The attached “Safety info for installers and operators” must be observed!  
If you are not supplied with this manual, please request for information.**

### **Sensors**

The sensor GMF 8xx PID is operated with a photo ionisation sensor.  
Within the measuring range the signal is converted with the signal power range of 4-20mA

The current signal can generate an analyzable voltage signal by leading it over a load resistor in the evaluation unit.

### **Sensor connection**

In order to supply the gas sensor, a DC voltage of 12 – 28V ist needed.

As sensor feed cable a shielded cable, such as JY (St) 2x2x0.8 mm should be used.  
On the sensor tot he housing the shield wire should be connected.  
The bare shield wire must not come into contact with the circuit.

The other wire colors can be assigned as follows:

red => +24V (KI 1), white => 4-20mA (KI 2), black => 0 V (KI 3)

**Inside the evaluation unit the shield wire is to be twisted with the yellow wire and be connected to the protective conductor PE (terminal 4 at the evaluation units).**  
(This should be done only when the sensor housing is not grounded already by mounting).

## Equipment

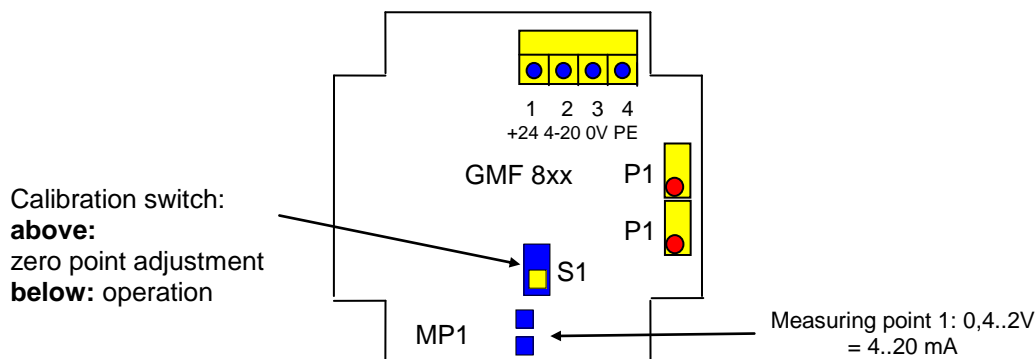
Zero gas (synthetic air)  
Calibration gas (40%..100% of measuring range)  
Gas calibration valve, (flow control valve, flow meter, 0-1 liter / min)  
Suitable gas calibration adapter

## Adjustment

The test gas must have ambient temperature, i.e. the same temperature as the sensor.

1. adjustment of zero point:  
calibration switch to bring in position "calibration"  
- apply zero gas  
- use potentiometer P1 to adjust the signal current to 4 mA
2. adjustment of the gain:  
calibration switch to bring in position "operation"  
- apply test gas  
- use potentiometer P2 to adjust the signal current to the gas concentration PK corresponding to signal current ( $I = 4 \text{ mA} + 16 \text{ mA} * PK / \text{measuring range}$ )

## Terminals for GMF 802 PID



## Commissioning

**When starting applying with test gas concentration, the setting of the sensor must be checked.**

## Maintenance

**To maintain the security function, maintenance in specific intervals is necessary. The maintenance interval is taken from a test sticker on the evaluation unit. It is no longer than 1 year.**

## Decommissioning

If the sensor is longer than 4 weeks out of service, it must be reviewed after a week of operation time and if necessary recalibrated with test gas.

## Specifications:

Measuring principle:	photoion detection
Type of gas:	hydrocarbon
Range:	factory setting
Accuracy:	+/-5% of measuring range
Run-up time:	< 30 sec
Response time T90:	< 30 sec
Temperature range:	-40..+65°C
Humidity range :	0..95% RH
Pressure range:	700 - 1300 hPa
Housing:	aluminium LxWxH: 160x80x80mm
Protection type:	housing: IP65 sensor head: IP44
Gas entry:	diffusion, teflon membrane
Output signal:	4-20mA linear
Maximum load:	500 R
CE conformity:	emission: residential: immunity for industrial environments
Weight:	sensor: 450g sensor head: 200g connecting cable: depending on the length
Supply:	12-28V DC
Connecting cable:	up to 500 m: JY (ST) Y 2x2x0,8 mm

State in November 2010

Subject to technical changes