

**GMF 800 PID****GMF 802 PID****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 800/802 PID is operated with a photo ionisation detector. Within the measuring range the signal is converted with the signal power range of 4-20 mA.

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 is needed.

As sensor feed cable a shielded cable, such as JY (St) 2x2x0.8 mm should be used.

On the sensor side the shield wire should be connected to the housing.

The bare shield wire never should come into contact with the circuit.

The 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

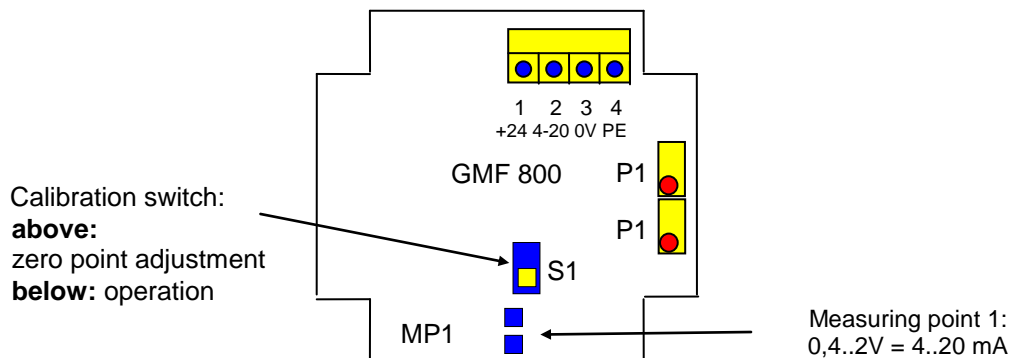
Zero gas (synthetic air)
Calibration gas (40%..100% of measuring range)
Gas calibration valve, flow control valve, flow meter, 0-1 liter / min)
Suitable gas calibration adapter

Adjustment

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

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

Terminals



Commissioning

With the first start up, the setting of the sensor must be checked by applying a test gas concentration.

Maintenance

To maintain the security function, maintenance in specific intervals is necessary. The maintenance interval is registered on the test label 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:	hydrocarbons, VOCs
Range:	factory setting
Accuracy:	+ -5% of full scale
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:	aluminum LxWxH: 160x80x80mm
Protection:	IP44
Gas access:	diffusion, teflon membrane
Output signal:	4-20mA linear
Maximum load:	500 R
CE-conformity:	emission: residential, immunity: for industrial environments
Weight:	600g
Supply:	12-28V DC
Connecting cable:	up to 500 m: JY (St) Y 2x2x0, 8 mm

Status in December 2011

Subject to technical changes