OPERATING INSTRUCTION **GAS SENSOR GMF 404 E 0-10V CO 300**

GMF 404

Attention!

Read and understand all the instructions before you start working.

Due application

This sensor device measures carbon monoxide up to 300 ppm in the air of car parks.
It forms a standard output 0...10V voltage signal.

Sensoric

The sensitive element of this measuring device is an electrochemical sensor for carbon monoxide.

Assembly

This unit is to be installed in 1,5 m ... 1,8 m height.

Connection to a gaswarning unit

The supply voltage can be within 8...30 Volt DC.

Use shielded 4-wire cable JY(St) 2x2x0.8mm. The wires can be assigned as follows:
red => +24V (clamp 1), white => 0-10V (clamp 2), black => 0V (clamp 3), yellow => PE(clamp4)
shield (ground) wire => screw on metal sensor case
Make sure, that the non isolated shield wire doesn´t touch the electronic circuit.

At the gas warning central (GAZ 401/801 or GDS 3232) drill the shield wire on the yellow wire and both must be connected to clamp 4 (PE) at the gas warning central.
But do **not** connect the shield wire and the yellow wire to clamp 4 at the gas warning central **if the sensor unit is mounted on an iron or steel girder**.

Adjusting the output signal

The probe gas must be temperated to the surrounding air, as well as the measuring unit.

Equipment

Multimeter 0-20 V
Screw driver
Zero gas can (synth. air)
Calibration gas can (approx. 300 ppm CO)
Flow control valve, flow meter 0..1 liter/minute)
gas exposing adaptor

Zero point adjusting

The sensor must be exposed to zero-gas (synthet. air) with a flow rating =< 0,5 liter/minute.

It must be required that the sensor is clean with CO-gas.

If no zero-gas is available put the jumper to position „**N**".

Adjust trimmer „**N**" so, that you can read a voltage of approx. 10 mV at **MP2**.
So your output signal will be approx. 10mV

If you changed the jumpers position, now put the jumper back to position „**B**".
Now the sensor signal is connected to the amplifier and you can read a voltage approx. 30..50mV. This is the sensors zero offset. You can eleminate it with the zero trimmer „N" down to 10mV.

Span adjusting

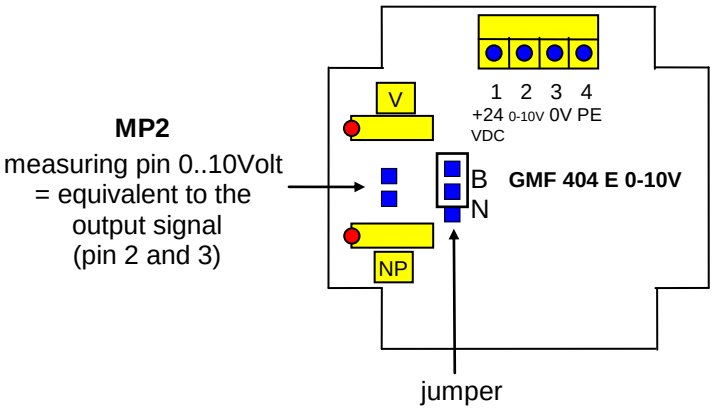
The sensor must be exposed to CO-gas (approx. 300 ppm) with a flow rating =< 0,5 liter/minute.

The trimmer „**V**" must be adjusted to a special reading on **MP2**. The reading must be calculated as follows:

Reading MP2 = 10 Volt * gas-concentration / 300 ppm (if measuring range = 300 ppm)

for example: a gas probe with 280 ppm carbon monoxide must give a reading of 9,33 Volt.

Place plan GMF 404 E 0-10V



Start-up

The correct setting of the output signal is to be controlled by exposing the measuring unit to an well-known gas concentration. The setting of alarm points at the gaswarning unit is to be controlled.

Maintenance

The sensor needs maintenance and adjusting every half year.

Putting out of operation

Is the sensor out of operation for more than 4 weeks, the sensor needs calibration before it can be used correctly.

Technical data

Application:	dusty, dirty areas
Housing:	aluminum, LxWxD: 90x80x80 mm, protection class: IP65
Gas entry:	diffusion, sinter metal filter, protection class IP44
Output signal:	0-10V, linear, temperature compensated
Supply:	12,5-30V DC
Connection cable:	up to 1500 m: JY (ST) Y 2x2x0,8 mm²

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Technical changes reserved