

OPERATION INSTRUCTION

GMF 435 E RS485-BUS-Sensor

BUS-Sensor with electrochemical sensor in stainless steel housing (chloride-resistent)



GMF 435 E

Important!

The handling of the device requires the knowledge and observance of this manual.

Sensoric technology

The sensor GMF 435 E is operated with electrochemical sensors.
The sensor signal is processed digitally and is available as information for reading via RS 485 BUS and analysis via a BUS-center.

Mounting

The sensor is suitable for surface wall mounting.

Sensor connection

The sensor GMF 435 E can be operated with an unregulated DC voltage of 12-30V.

For connecting is used the shielded cable JY(St) 2x2x0.8 mm.

The wire colors are assigned as follows:

Terminal 1: +24V	=> red
Terminal 2: RS485 Terminal A	=> white
Terminal 3: RS485 Terminal B	=> yellow
Terminal 4: 0V	=> black
Terminal 5: shield bushing	=> drain wire

The drain wire in the cable is connected to the shield.

CAUTION: When mounting, make sure, that bare cable end and the bare drain wire is to be covered with a insulation and does not come in contact with the circuit.

Maintenance

The sensor is factory pre-adjusted with test gas.
Regular maintenance is required to maintain its functionality.

Maintenance aids

Operating element "CO-KEY"

Test gas (known concentration)

Gas feed adapter

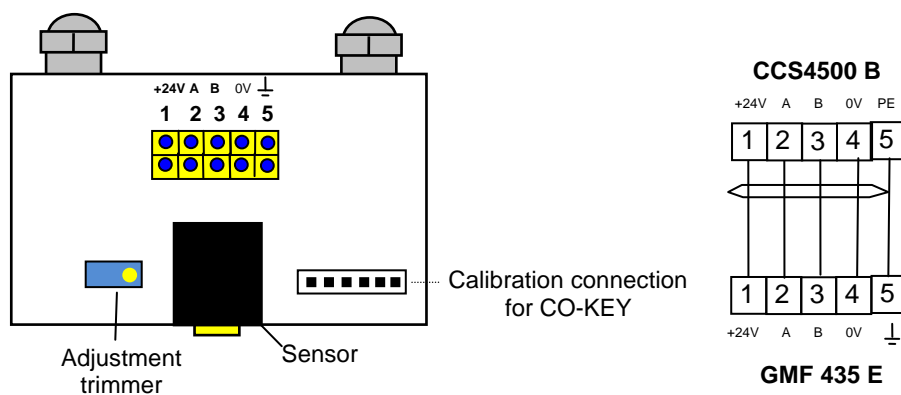
Flow controller, flow meter 0-1 liters / min

Justage

The sensor can be calibrated using any known gas concentration:

1. For this, the CO-KEY is connected, that displays the current gas concentration.
2. Use test gas adapter for feeding test gas (about. 0,2 l/min)
3. The balance of the adjustment trimmer until the required gas concentration is displayed.

Connection diagram



Commissioning

The setting of the sensor must be checked during commissioning by the test gas feeding.

Maintenance

In order to maintain safety function, a regular maintenance at certain intervals is necessary. The maintenance interval can be seen from the test sticker on the controller. The validity is 1 year.

Decommissioning

Is the sensor for longer than 4 weeks off, it must be checked or recalibrated after one week of operation time with test gas.

Technical Data: GMF 435 E

Suitability: food industry, meat processing industry,
wet areas with high pressure cleaner kit,
breweries, wineries

Measuring principle: electrochemical

Gas type: diverse

Measuring range: CO: 0..300 ppm, NO₂: 0..20 ppm, O₂: 0..25 vol% a. others

Accuracy: <+/-1% of measuring range

Response time T₉₀: < 30 sec

Temperature range: -20..+55°C (ambient)

Humidity: 0..95% RH

Pressure range: 700-1300 hPa

Housing: stainless steel, stainless and acid resistant, LxWxD: 110x110x70mm

Protection type: housing: IP66 K

Gas entry: diffusion, Teflon filter

Output signal: digital via RS 485 BUS

Life time: >5 Jahre (warranty: 2 years)

Storage time: > 1/2Jahr

CE-conformity: emission: residential, immunity: industrial area

Weight: 400g

Supply: 12..30 V DC (nominal 24V DC)

Current consumption: 15mA @ 24 V DC

Connection line: up to 1200 m: JY (ST) Y 2x2x0,8 mm²

Bestell-Nr.	Gasart	Messbereich
GMF 435 E CLO1 1 VA	Chlorine dioxide	0...1000 ppb
GMF 435 E H2S 20 VA	Hydrogen sulfide	0...20 ppm

Status as of February 2011

Subject to technical changes