

## OPERATING INSTRUCTION

## GMF 730 IR RS485-BUS-Sensor

### Sensor with Infrared Sensor for Carbon Dioxide



**GMF 730 IR**

### Important!

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

### Sensor Technology

The sensor GMF 730 IR is powered by infrared sensors.

The sensor signal is processed digitally and is available as information for reading via the RS 485 BUS and analysis via a BUS center.

### Mounting

The sensor is suitable for surface wall mounting.

### Sensor connection

The gas sensor 730 GMF IR can be operated with an unregulated DC voltage of 12-35V.

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

The wire colors can be 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 cable bushing	=> drain wire

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

**CAUTION:** When installing, make sure that bare wire and the bare drain wire be covered with insulation and can not come into contact with the circuit.

### Maintenance

The sensor is preset at the factory with calibration gas.  
Regular maintenance is required to obtain its functionality.

### Maintenance aids

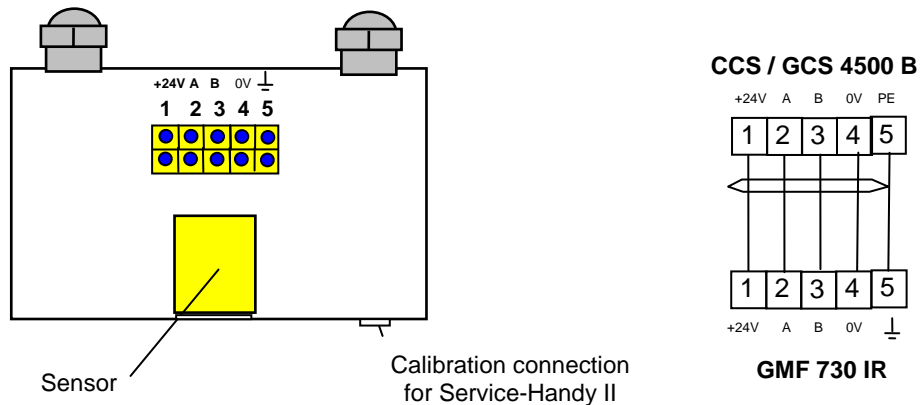
Operating element "Service Handy II"  
Test gas ((known gas concentration)  
Gas feed adapter  
Flow controller, flow meter 0-1 liters / min

## Adjustment

The sensor can be calibrated using any known gas concentration:

1. For this, the Service Handy is connected to the jack socket, that displays the current gas concentration.
2. Use test gas adapter for feeding test gas (about. 0,2 l/min)
3. The balance is carried out by means of the adjustment trimmer on Service Handy until the required gas concentration is displayed

## Connecting diagram



## Commissioning

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

## Maintenance

Maintenance at certain intervals for maintaining the function security is required. The maintenance interval can be seen from the test sticker on the controller. There is a maximum of 1 year.

## Decommissioning

If the sensor is for longer than 4 weeks out of operation, it must be checked after a week uptime using test gas or be recalibrated.

## Specification: GMF 730 IR

Suitability:	dusty and dirty areas, underground car parks, laboratories etc.
Measuring principle:	infrared absorption
Gas type:	CO <sub>2</sub>
Measuring range:	0..5 vol% and others
Accuracy:	<+/-1% of measuring range
Response time T90:	< 30 sec
Temperature range:	-20..+55°C (ambient)
Humidity range:	0..95% RH
Pressure range:	700-1300 hPa
Housing:	glass reinforced plastic, LxWxD: 100x80x30mm
Protection type:	IP65 (sensor IP 44)
Gas entry:	diffusion
Output signal:	digital via RS 485 BUS
CE-conformity:	emission: residential area, immunity: industrial area
Weight:	150g
Supply:	12..36 V DC
Current consumption:	60mA @ 24 V DC
Connection line:	up to 1200 m: JY (ST) Y 2x2x0,8 mm <sup>2</sup>

Status August 2013

Subject to technical changes

Order no.	Gas type	Measuring range
GMF 730 IR CO <sub>2</sub> 5V	Carbon dioxide	0...5 vol%
GMF 730 IR CO <sub>2</sub> 10V	Carbon dioxide	0...10 vol%
GMF 730 IR CO <sub>2</sub> 1000	Carbon dioxide, air quality	0...1000 ppm
GMF 730 IR CO <sub>2</sub> 3000	Carbon dioxide, air quality	0...3000 ppm
GMF 730 IR CH <sub>4</sub> UEG	Methane / natural gas	0...100 LEL
GMF 730 IR PRP UEG	Propane	0...100 LEL
GMF 730 IR N <sub>2</sub> O 1000	Nitrous oxide	0...1000 ppm