



CO2-U/A

CO2 air quality sensor for flush mounting indoors

Measuring size: CO2

Output: 0-10 V, NOC

Highlights: discrete flush mounting



Description

The indoor air quality sensor CO2-U/A registers the CO2 concentration in the air in the environment in the range of 0-10000 ppm via a nondispersive infrared sensor (NDIR). For further processing a linear output signal 0-10 V or a changeover contact is available. The zero point balance depending on the actual ambient conditions can be performed on the device by manual calibration. The quality sensor performs an automatic self-calibration at regular interval, thus ensuring a long-term stable CO2 measurement.

Technical Specifications

Measurement range CO2	0-2000 ppm (optional: 0-5000 ppm, 0-10000 ppm, 0-20000 ppm)
Accuracy	0-2000 ppm: ± 50 ppm + 2% f. mv, 0-5000 ppm: ± 50 ppm + 3% f. mv, else: ± 100 ppm + 5% f. mv (at 20°C, 1013 mbar, auto-calibration ON)
Temperature dependency	CO2: ± 5 ppm / K
Pressure dependency	CO2: 0,16% f. mv/hPa
Running-in time	10 min
Response time (t90)	< 5 min
Long term stability	$\pm 1\%$ FS/year
Sensor	Nondispersive infrared sensor (NDIR)
Sensor protection	mounted inside housing
Supply voltage	24 V AC/DC ($\pm 5\%$)
Current consumption	\varnothing 100 mA
Analogue output 0-10 V	3-wire connection
Alarm output	potential-free change-over contact max. 24 V (100 mA), threshold can be defined by 270° potentiometer
Switching Hysteresis Relay	2% FS (without Display), 0,5...5% FS adjustable (with Display)
Electrical connection	screw terminals max. 1,5 mm ²
Light switch program	GIRA Standard 55, pure white satin (other on request)
Cable gland	bottom side
Protection type	IP30
Protection class	III
Working range r.H.	0...98% r.H. in contaminant-free, non-condensing air



Working temperature	0...+50°C
Storage temperature	-20...+50°C
Initial operation	After switch-on of the device follows a self-test and the tempering, which takes ca. 10 minutes depending on the environmental conditions. At this time the analogue output drifts from the actual measurement value.
Automatic calibration	The automatic CO2 calibration takes place every 7 days, thereby compensating for any drifts and achieving excellent long-term stability. The device must be supplied with fresh air for at least 10 minutes within this interval. This function can be deactivated on the device using a DIP switch.
Manual calibration	The manual CO2 calibration of the output signal to 400 ppm (zero point) is started by pressing the button on the circuit board (hold it down for approx. 5 seconds until the LED flashes). Before that, continuous operation of min. 10 minutes in fresh air. The LED is deactivated after successful calibration.
Installation	into in-wall junction box, diameter 55 mm
Approvals	CE, EAC, RoHS

Variants

Article Number		
CO2	Output CO2	Light switch program
CO2-U/A-U		
0-2000 ppm	0-10 V	GIRA Standard 55, pure white satin

Accessories

motrona AX350

AX350: touchMATRIX® Process Indicator with two 16 bit Analog Inputs



motrona AX020

AX020: Process Indicator for Analog Signals





Dimensional Drawing

