

FuehlerSysteme eNET International Die Marke für Sensorik



FS4085

Multi-sensor measuring device for CO2, humidity and temperature with traffic light display and table stand

Measuring size: CO2, humidity, temperatur Output: LED-Traffic Light, Display, Piezo-Buzzer Highlights: modern housing design, optional LCD-Display



Description

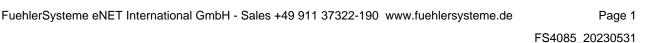
Depending on the device version, the multi-sensor measuring device records the measured quantities CO2 (0-2000/3000/5000/10000 ppm), relative humidity (0-100% r.h.) and temperature (0 ..+50°C). The CO2 concentration is visualized via an LED traffic light (green/yellow/red). The version with a backlit LCD display shows the measured values ??and min/max values ??for CO2, relative humidity and temperature. In addition, the threshold values for the 3 LEDs of the traffic light function (CO2 concentration) can be set separately in the menu. The stand-alone device is operated with a plug-in power supply and can therefore be flexibly positioned in the room.

As an option, the measuring device has a piezo buzzer and / or potential-free changeover contact. The alarm threshold can be set with a potentiometer. When this limit is exceeded, the buzzer beeps every 5 seconds or the changeover contact switches. The buzzer signal is deactivated for 10 minutes or permanently if necessary using a mute button.

The CO2 concentration is measured using a non-dispersive infrared sensor (NDIR). The humidity and temperature are recorded by a digital sensor, which guarantees a highly accurate and long-term stable measurement result. The measuring device carries out an automatic calibration at regular intervals, which guarantees long-term stable measurements.

The modern room housing has a quick-release fastener, extra-large ventilation slots, thermal decoupling and much more.

The measuring device is set up using a high-quality table stand and is ideal for use at workplaces, schools, living rooms, medical facilities to reduce the risk of infection, e.g. To minimize COVID-19 with proper ventilation.







Technical Specifications

Measurement range CO2	0-10000 ppm (scales selectable: 0-2000/3000/5000/10000 ppm)		
Measurement range r.H.	0-100% r.H.		
Measurement range temp.	0+50°C		
Accuracy	CO2 (20°C, 1013 mbar, auto calibration ON): ±50 ppm + 2% of meas. value		
	(0-2000/3000 ppm), ±50 ppm + 3% of meas. value (0-5000 ppm), ±100 ppm + 5%		
	of meas. value (0-10000 ppm); Humidity: ±3% r.h. (30-70% r.h., otherwise ±5% r.h.,		
	at 20°C), Temperature: ±0		
Temperature dependency	CO2: ±5 ppm / K, Humidity: ±0,02% r.F. / K, Temperature: ±0,05°C / 10 K		
Pressure dependency	CO2: 0,16% f. mv/hPa		
Running-in time	< 5 min		
Response time	< 2 min		
Long term stability	±1% FS/year		
Sensor	CO2: nondispersive infrared sensor (NDIR), Humidity/Temperature: combined		
	electronic sensor		
Sensor protection	mounted inside housing		
Supply voltage	Version 5V: 5 V DC		
Current consumption	Ø 100 mA		
Alarm output	1 x potential-free change-over contact, 48 V (1 A) and/or piezo buzzer		
Switching Hysteresis Relay	2%		
Electrical connection	Version 5V: mini USB socket B (power supply available as accessories under		
	Article No. FS9501)		
Housing	ABS polyman, colour signal white like RAL 9003		
Cable gland	on the back side		
Display	traffic light display for CO2 with 3 LEDs (green/yellow/red), optional LCD display		
	with backlight on/off/auto		
Dimensions	Housing: L 82 x W 82 x H 25 mm		
Protection type	IP30, IP20 (with display)		
Protection class			
Working range r.H.	098% 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.		
Automatic calibration	The automatic CO2 calibration takes place every 7 days, this compensates for any		
	drifts and achieves excellent long-term stability. To ensure this function, the device		
	must be supplied with power for at least 7 days without interruption and ventilated		
	once with fresh air (CO2 300400 ppm) for approx. 10 minutes within this period.		
	For the CO2 calibration, the device saves the minimum CO2 value measured during		
	this period internally. After 7 days, this minimum value is normalized to 400 ppm		
	CO2 and the output signal corrected accordingly. The maximum correction is limited		
	to half of the determined drift. If the measured value falls below approx. 300 ppm,		
	the calibration is initialized to 400 ppm.		
	The automatic calibration can be deactivated if necessary and performed manually.		



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	Table stand made of acryl		
Approvals	CE, EAC, RoHS		

Variants

Article Number					
Supply voltage	measurand	Display	Equipment		
FS4085-X-A2-3L5V					
5 V DC	CO2	3 LED traffic lights	-		
	(0-2000/3000/5000/10000				
	ppm)				
FS4085-X-A2-3LP5V					
5 V DC	CO2	3 LED traffic lights	Piezo buzzer		
	(0-2000/3000/5000/10000				
	ppm)				
FS4085-X-A2-6L5V					
5 V DC	CO2	6 LED traffic lights	-		
	(0-2000/3000/5000/10000				
	ppm)				
FS4085-X-A2-6LP5V					
5 V DC	CO2	6 LED traffic lights	Piezo buzzer		
	(0-2000/3000/5000/10000				
	ppm)				
FS4085-X-A2H1T1-D3LP5V					
5 V DC	CO2	3 LED traffic lights	Display, Piezo buzzer		
	(0-2000/3000/5000/10000				
	ppm), rel. humidity				
	(0-100%), temperature				
	(0+50°C)				



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Accessories



FS9501 Power supplies

FS9510 Table stand for room housing



Dimensional Drawing

