

Technical Datasheet

SIBER® WIRELESS CO₂ SENSOR



Ventilación inteligente

CHARACTERISTICS

- ✓ Measuring of indoor air quality (IAQ) by CO₂ sensor.
- ✓ RF communication with other devices.
- ✓ Quick and simple installation, RF technology.
- ✓ Capacitive button for manual control.
- ✓ 5 LEDs + 1 two-colour LED for status indication
- ✓ 230 VAC

The wireless CO₂ discharge sensor gives you the flexibility to implement different solutions for your ventilation systems. Now it is easy to implement a demand controlled ventilation (DCV) system using CO₂ sensors.



APPLICATION

The sensor module is a device for measuring the air-quality in a residential environment. The typical application is to measure the indoor air quality (IAQ) and send it by RF signal to a ventilation unit. The ventilation unit will then react according to the sensor information.

The capacitive button is used to select the control functions manually.

TECHNICAL DETAILS

SIBER® WIRELESS CO ₂ SENSOR			
MATERIAL		Front and rear housing: ABS plastic	
SIZE		100 x 100 x 30 mm (height x width x depth)	
POWER SOURCE		230 VAC~ 50Hz	
COMMUNICATION		Ramses 868 MHz RF protocol Bidirectional multipoint communication	
AMBIENT CONDITIONS	Temperature	In operation:	4 to 40°C
		Transport	-20 to 55°C
	Relative humidity powered by battery:		5 to 100% of condensation
	Relative humidity powered by 230 VAC		5 to 90% Without condensation
USER INTERFACE	Capacitive button		1
	5 LEDs		Green
	Two-colour LED		Red / Green
MOUNTING		On the wall (in a flush mounting box)	

CERTIFICATIONS

ETSI EN 300 220-1	<ul style="list-style-type: none"> ✓ Electromagnetic compatibility and radio spectrum matters (ERM). ✓ Short-range devices (SRD). ✓ Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 MW. ✓ Part 1: Technical characteristics and test methods. ✓ For a class 1F application
EN61000-6-3	Emission standard for equipment in residential, commercial and light-industrial environments.
EN61000-6-1	Emission standard for residential, commercial and light-industrial environments.
NEN-EN 60730-1	Automatic electrical controls for the household and similar
EC DIRECTIVES	<ul style="list-style-type: none"> ✓ EMC Directive: 2004/108/EC ✓ Low voltage directive: 2006/95/EC ✓ RTTE Directive: 1999/5/EC ✓ RoHS Directive: 2002/95/EC ✓ WEEE Directive: 2002/96/EC

SENSOR SPECIFICATIONS

CO ₂	
SAMPLING METHOD	Non-dispersive infrared (NDIR), gold coated optics. Diffusion sampling
MEASUREMENT RANGE	400 to 2000 ppm factory calibrated
ACCURACY	± 100 ppm @ 22°C (72°F)
STABILITY	<2% of FS during the useful life of the sensor (15 years generally)

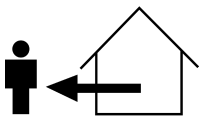
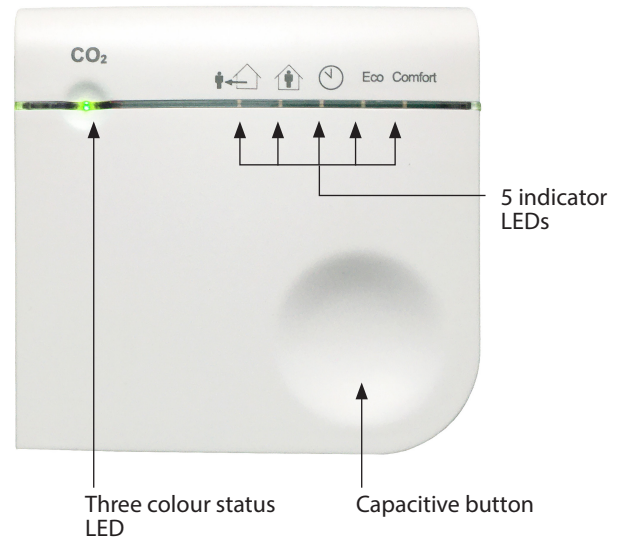
TYPICAL APPLICATIONS

Combined control of CO₂ level powered by 230 VCA / manual control in a combined kitchen / living room area.

- ✓ It measures the CO₂ level and sends an RF signal to the heat recovery unit or mechanical ventilation box to accelerate (or decelerate) to a default ventilation speed.
- ✓ Use as a manual control to establish a default ventilation speed. You can cancel the CO₂ ventilation request.
- ✓ The capacitive button is used to link the RF signal and to select the speed or the automatic function (sensor).
- ✓ The LEDs will indicate a certain CO₂ level, the manually selected ventilation position or a communication status and other information such as a system error or dirty filter.

FRONT VIEW

- ✓ The three-colour LED (red / green / orange) can be used to indicate the current sensor value.
- ✓ The 5 indicator LEDS indicate the current sensor mode.
- ✓ During installation, the capacitive button is used to link the RF signal with another device.
- ✓ The end user can use the device to configure the current ventilation operation.
- ✓ The button can also be used to change the default settings.



AWAY MODE:

Low fan speed when nobody is at home.



AT HOME MODE:

Medium fan speed when someone is at home.



MAXIMUM TIMER:

High fan speed (for a limited time)

Eco

ECO MODE:

Automatic sensor-based ventilation. In ECO mode, the system will start at a higher CO₂ level to ventilate as the COMFORT mode.

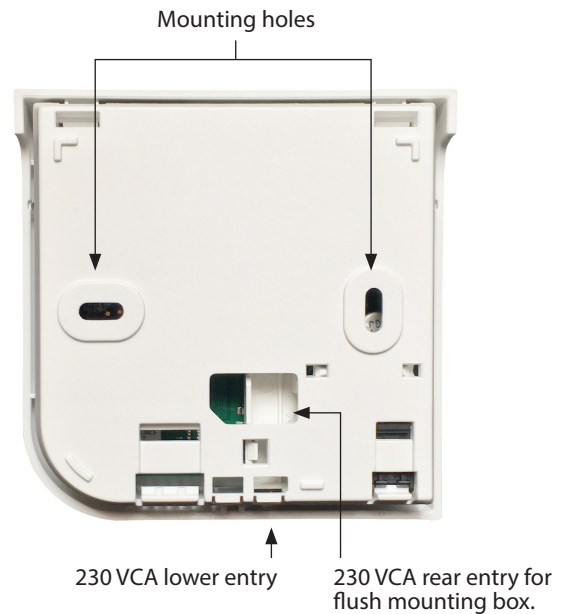
Comfort

COMFORT:

Automatic sensor-based ventilation. The system will accelerate the ventilation based on CO₂ after a certain default activation value is exceeded.

REAR VIEW

- ✓ Mounting holes. The mounting holes are used for screwing the wireless CO₂ sensor on to the wall or flush mounting box.
- ✓ 230 VCA lower entry for separate cable. If you want to fit a 230 VCA cable with a socket on the sensor box, use this connection entry. There is space to relieve the cable tension within the housing.
- ✓ 230 VCA for mounting on flush housing. Use this entry if screwing the wireless CO₂ sensor on to a flush mounting box. Adaptable to the majority of flush mounting boxes in Europe (except the United Kingdom and Italy).



INTERNAL VIEW

- ✓ Mounting holes. The mounting holes are used for screwing the wireless CO₂ sensor on to the wall or flush mounting box.
- ✓ Terminal block Connect the 230 VCA cables here.
- ✓ There is a cable entry at the rear for the 230 VCA connection from a flush mounting box. And another entry at the bottom for connecting a 230 VCA with plug to the sensor.
- ✓ Electrical connection 230 VAC ~ 50Hz: 2 (cables N and L)

