

Datasheet - 8.701

QMS MultiSensor

The QMS MultiSensor is designed to measure and continuously monitor CO₂, air temperature, relative humidity and volatile organic compounds (VOC) in HVAC applications. CO₂ measurement is based on a high-accuracy non-dispersive infrared sensor (NDIR). Advanced digital sensor technology ensures stable and consistent temperature and humidity detection.



Technical specifications

CO ₂ sensor	Non-dispersive infrared technology (NDIR)
Temperature and humidity sensor	Digital
CO ₂ measuring range	0 – 5.000 ppm
Repeatability	± 35 ppm ± 3 % of measured value
Annual zero drift	< ± 10 ppm
Temperature measuring range	-10 – 50 °C
Accuracy	± 1 K
Relative humidity measuring range	0 – 95 % RH (non-condensing)
Accuracy	± 2 % RH (at 10 % – 90 % RH / 25 °C)
Long-term stability	Relative humidity: < ± 0,25 % per year Temperature: < ± 0,03 K per year
Analogue outputs	1 V – 10 V ± 150 mV, DC < 5 mA
Optional analogue inputs	1 V – 10 V ± 150 mV

Features

- ✓ Maintenance free
- ✓ Self calibration and self diagnostics
- ✓ Loss free cover with 8 position alignment
- ✓ 3 fully configurable analog outputs (voltage)
- ✓ Fast wiring via screw cover and removable spring terminals without tools

Interested in or questions about QMS?

Our experts are happy to advise you on the application of this product within your project or installation.

☎ +32 (0)16 29 93 00

✉ info@belparts.com

Optional relay module	DC 30 V, 1 A, changeover contact
Optional VOC sensor	± 15 index points
Warm-up time	approx. 30 s. VOC-sensor approx. 30 min.
Power supply	19 – 26 V DC, 24 V AC ± 10 %
Power consumption	38 mA (24 V DC), 61 mA (24 V AC)
Sensor tube	PBT, color approx. RAL 7016
Housing lower part	PBT, color approx. RAL 7016
Display	PC, transparent
Cover	PC, color approx. RAL 7016
Ring	PBT, color approx. RAL 5015
Seal	EPDM
Degree of protection	Housing: IP65 Sensor tube: IP20
Strain relief	2 x M16 and 2 x M12, PA, color approx. RAL 7001
Cable connection	Removable spring terminals, 0,2 – 1,5 mm ²
Permitted ambient conditions	-10 – 50 °C 0 – 95 % RH (non-condensing)
Minimum air velocity	0,3 m/s (air)

Example

Voorbeeld:

QMS = without VOC sensor

QMSV = with VOC-sensor

QMS . 080 . B . LCD

A = with Modbus (RTU)

B = with BACnet (MS/TP)

U = without bus communication

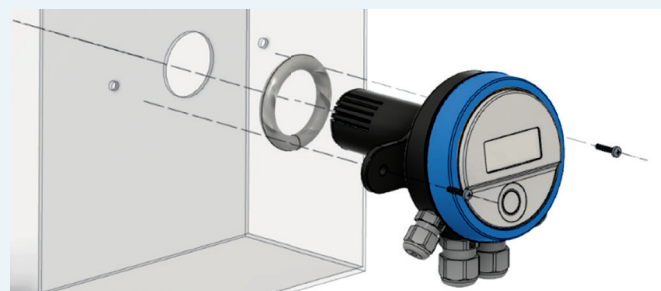
LCD = with NFC display

(blank) = without NFC display

See our catalogue for all available versions.

Installation

All work such as installation, electrical connection, commissioning, operation and maintenance may only be carried out by suitably qualified personnel. Local regulations and standards, such as building regulations and electrical or VDE guidelines, must be observed. Installers and users are required to inform themselves sufficiently before commissioning. Read the product description before commissioning the device. Check whether the product is suitable for the intended application.



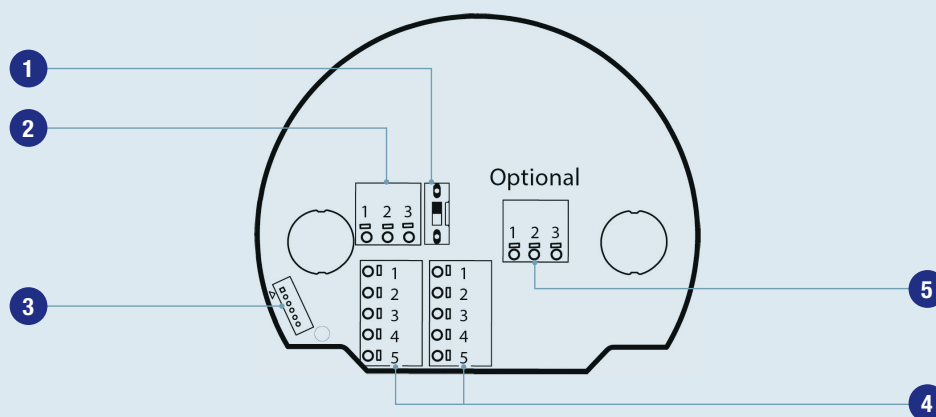
We accept no liability for printing errors or changes after the printing date. Correct and proper use requires compliance with the operating and installation instructions. We accept no liability for damage resulting from improper use. Unauthorised or improper interventions and modifications to the device will void the operating approval and any warranty and liability claims.

Drill a hole with a diameter of Ø 35 mm in the air duct. Insert the sensor tube through the hole and secure it laterally to the duct using the mounting flange with 2 screws (max. Ø 4 mm, not supplied). Ensure that the seal between the sensor tube and the duct fits tightly all around.

Optional

- Display with NFC interface
- Modbus or BACnet version
- VOC sensor
- 2 analogue inputs. Reading via Modbus. Modbus version only
- 1 relay output. 1 × C/NO/NC for two-point control.
Input signal, setpoint and hysteresis freely adjustable
- Parameterisation via BELPARTS NFC Tool (app)

Electrical connections



- 1 DIP switch ON = 120 Ω**
Termination resistor active

- 2 Analogue outputs ***
Configurable 1 V – 10 V

- 3 NFC display connectiong**
NFC display is optional

- 4 Terminal block connector:**

1	0 V	Ground (-)
2	24 V	Supply (+) 24 V AC/DC
3	A	RS485 bus (Data+)
4	B	RS485 bus (Data-)
5	S	Shield connection clamp

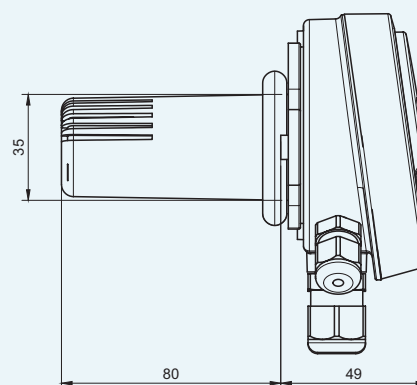
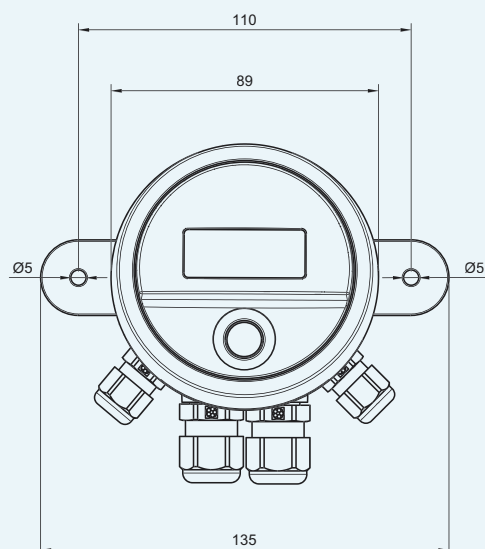
- 5 Optional modules:**

	Relay module	Analogue input module
1	NC	Analogue input 1 (1 V – 10 V)
2	NO	Analogue input 2 (1 V – 10 V)
3	C	GND (same as terminal 1 of the supply)

- * Analogue outputs (configurable) - factory setting:**

	Analogue outputs	Settings
1	CO ₂ actual value	1 V = 0 ppm. 10 V = 2.000 ppm
2	Temperature actual value	1 V = -25 °C. 10 V = 50 °C
3	Relative humidity actual value	1 V = 0 %. 10 V = 100 %

Dimensions



Dimensions in mm