

AERASGARD® RCO₂ / RLQ-CO₂ - Modbus AERASGARD® RFTM-(LQ)-CO₂ - Modbus



S+S REGELTECHNIK

**Multifunctional room sensors and measuring transducers,
for humidity, temperature, air quality (VOC) and CO₂ content,
calibratable, with Modbus connection**

The maintenance-free, microprocessor-controlled **AERASGARD® RFTM-LQ-CO₂-Modbus** and **RCO₂ / RLQ-CO₂ / RFTM-CO₂-Modbus** with Modbus connection, with /without optional display, in an elegant enclosure, plastic, with snap-on lid, base with 4-hole attachment, is used to monitor the entire room climate. For this purpose, measurands air humidity, temperature, CO₂ concentration as well as air quality (VOC) are measured. By using a single device to monitor all four measurands, it is possible to effectively monitor and regulate the entire room climate. It measures CO₂ in the range of 0...5000 ppm, VOC at one of three selectable sensitivity levels LOW / MEDIUM / HIGH, temperatures in the range of 0...+50°C, as well as relative air humidity from 0...100% r.H.

The relative humidity (% r.H.) quotient of water vapour partial pressure divided by the saturation vapour pressure at the respective gas temperature. A digital, long-term stable sensor used as measuring element for relative air humidity and temperature guarantees exact measurement results. The air quality is determined based on a (VOC) gas mixture sensor. The CO₂ content of the air is measured using an optical NDIR sensor (non-dispersive infra-red technology).

RCO₂-Modbus
RLQ-CO₂-Modbus
RFTM-CO₂-Modbus
RFTM-LQ-CO₂-Modbus
without display



TECHNICAL DATA

Voltage supply:	24 V AC / DC (± 10%)
Power consumption:	< 4.4 W / 24 V DC typical; < 6.4 VA / 24 V AC typical; peak current 200 mA
Data points:	temperature, relative humidity, air quality (VOC), carbon dioxide (CO ₂)

HUMIDITY

Sensors:	digital humidity sensor with integrated temperature sensor, low hysteresis, high long-term stability
Operating range, humidity:	0...95% r.H. (without dew formation)
Deviation, humidity:	typically ± 2.0% (20...80% r.H.) at +25 °C, otherwise ± 3.0%

TEMPERATURE

Operating range, temperature:	0...+50 °C
Deviation, temperature:	± 0.2K at +25 °C

AIR QUALITY (VOC)

Sensor, VOC:	VOC sensor (metal oxide) with automatic calibration (VOC = volatile organic compounds)
Measuring range, VOC:	0...100% air quality; referred to calibrating gas; multi-range switching VOC sensitivity low, medium, high
Measuring accuracy, VOC:	± 20% of final value (referred to calibrating gas)
Service life:	> 60 months (under normal load conditions)

CARBON DIOXIDE (CO₂)

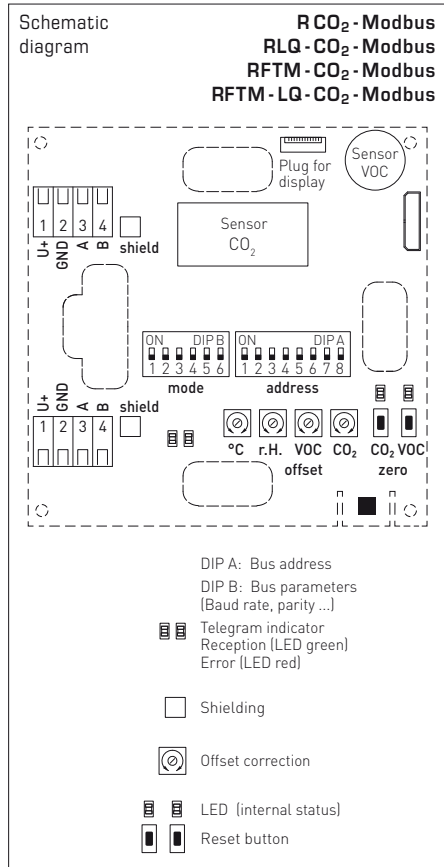
Sensor, CO ₂ :	optical NDIR sensor (non-dispersive infra-red technology) with automatic and manual calibration
Measuring range, CO ₂ :	0...5000 ppm
Measuring accuracy, CO ₂ :	± 30 ppm ± 3% of measured value
Temperature dependence, CO ₂ :	± 5 ppm / °C or ± 0.5% of measured value / °C (whichever is higher)
Pressure dependence:	± 0.13% / mm Hg
Long-term stability:	< 2% in 15 years
Gas exchange:	by diffusion
Bus protocol:	Modbus (RTU-Mode), address range 0... 247 selectable
Signal filtering:	4 s / 32 s
Ambient temperature:	0...+50 °C
Warm up time:	approx. 1 hour
Response time:	< 2 minutes
Electrical connection:	0.2 - 1.5 mm ² , via push-in terminal
Enclosure:	plastic, material ABS, colour pure white (similar to RAL 9010)
Dimensions:	98 x 98 x 33 mm (BalduR 2)

Installation: wall mounting or on in-wall flush box, Ø55 mm, base with 4 holes, for attachment to vertically or horizontally installed in-wall flush boxes for rear cable entry, with predetermined breaking point for cable entry from top /bottom in case of plain on-wall installation

Protection class:	III (according to EN 60 730)
Protection type:	IP 30 (according to EN 60 529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61 326, EMC Directive 2014 / 30 / EU, Low Voltage Directive 2014 / 35 / EU

Optional: **display with illumination**, two line, cutout approx. 36 x 15 mm (W x H), for displaying actual humidity, actual temperature, air quality and/or the actual CO₂ content

ACCESSORIES see table





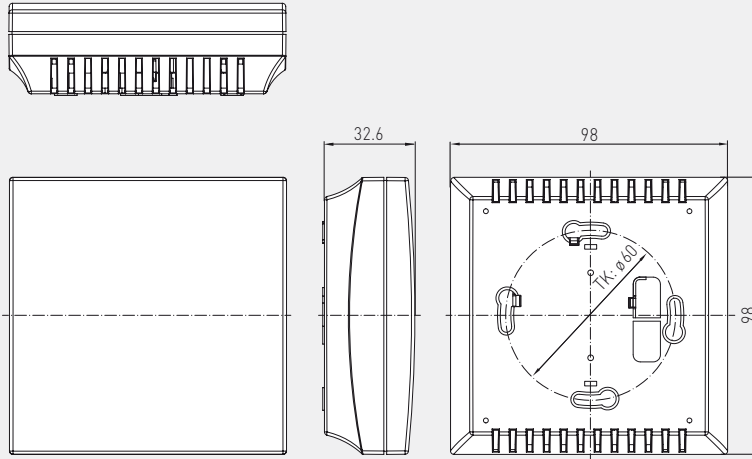
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Dimensional drawing
(Balduur 2)



R CO₂ - Modbus
RLQ - CO₂ - Modbus
RFTM - CO₂ - Modbus
RFTM - LQ - CO₂ - Modbus

R CO₂ - Modbus
RLQ - CO₂ - Modbus
RFTM - CO₂ - Modbus
RFTM - LQ - CO₂ - Modbus
with Display



AERASGARD® RCO ₂ - Modbus	Room CO ₂ sensor, <i>Deluxe</i>
AERASGARD® RLQ - CO ₂ - Modbus	Room air quality (VOC) and CO ₂ sensor, <i>Deluxe</i>
AERASGARD® RFTM - CO ₂ - Modbus	Multifunctional room sensor for humidity, temperature and CO ₂ content, <i>Deluxe</i>
AERASGARD® RFTM - LQ - CO ₂ - Modbus	Multifunctional room sensor for humidity, temperature, air quality (VOC) and CO ₂ content, <i>Deluxe</i>

Type / WG02	Measuring Range		CO ₂	VOC	Display	Item No.	Price
	Humidity	Temperature					
RCO₂ - Modbus							
RCO2 MODBUS	-	-	5000ppm	-		1501-61B0-6001-200	239,70 €
RCO2 MODBUS DISPLAY	-	-	5000ppm	-	■	1501-61B0-6021-200	281,73 €
RLQ - CO₂ - Modbus							
RLQ-CO2 MODBUS	-	-	5000ppm	0...100%		1501-61B1-6001-200	346,80 €
RLQ-CO2 MODBUS DISPLAY	-	-	5000ppm	0...100%	■	1501-61B1-6021-200	388,83 €
RFTM - CO₂ - Modbus							
RFTM-CO2 MODBUS	0...100% r.H.	0...+50 °C	5000ppm	-		1501-61B6-6001-200	271,32 €
RFTM-CO2 MODBUS DISPLAY	0...100% r.H.	0...+50 °C	5000ppm	-	■	1501-61B6-6021-200	313,14 €
RFTM - LQ - CO₂ - Modbus							
RFTM-LQ-CO2 MODBUS	0...100% r.H.	0...+50 °C	5000ppm	0...100%		1501-61B8-6001-200	377,40 €
RFTM-LQ-CO2 MODBUS DISPLAY	0...100% r.H.	0...+50 °C	5000ppm	0...100%	■	1501-61B8-6021-200	419,43 €
Note:	This unit must not be used as safety-relevant device!						
Accessories							
KA-2	Modbus communication adapter with USB/RS485 interface for system connection or/and as an active bus termination resistance						on request