AERASGARD® RCO$_2$ / RLQ-CO$_2$-Modbus
AERASGARD® RFTM-(LQ)-CO$_2$-Modbus

Multifunctional room sensors and measuring transducers, for humidity, temperature, air quality (VOC) and CO$_2$ content, calibratable, with Modbus connection

NEW

S+S REGELTECHNIK

The maintenance-free, microprocessor-controlled **AER**ASGARD® **RFTM-LQ-CO$_2$-Modbus** and **RCO$_2$ / RLQ-CO$_2$ / RFTM-CO$_2$-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 to monitor the entire room climate. For this purpose, measurands air humidity, temperature, CO$_2$ 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 CO$_2$ 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.
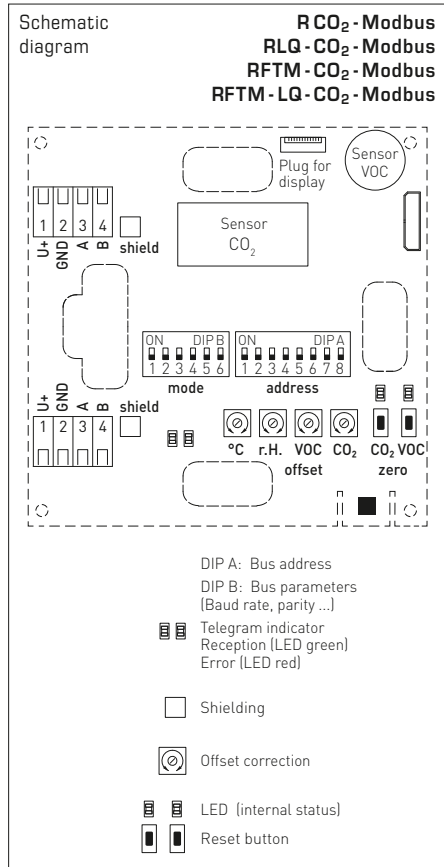
The relative humidity (% r.H.) quotient of water vapour partial pressure divided by the saturation vapour pressure at the respective gas temperature. A digital, long-term stable sensor used as measuring element for relative air humidity and temperature guarantees exact measurement results. The air quality is determined based on a (VOC) gas mixture sensor. The CO$_2$ content of the air is measured using an optical NDIR sensor (non-dispersive infra-red technology).

R CO$_2$-Modbus
RLQ-CO$_2$-Modbus
RFTM-CO$_2$-Modbus
RFTM-LQ-CO$_2$-Modbus
without display

TECHNICAL DATA

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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 of humidity:	**± 3 % r. H.** (20...80 %) at +20 °C, otherwise ± 5 % r. H.
TEMPERATURE	
Operating range, temperature:	0...+ 50 °C
Temperature deviation:	± 0.2 K 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 (CO$_2$)	
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, Ø 55 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 CO$_2$ content

Schematic diagram

R CO$_2$-Modbus
RLQ-CO$_2$-Modbus
RFTM-CO$_2$-Modbus
RFTM-LQ-CO$_2$-Modbus

DIP A: Bus address
DIP B: Bus parameters (Baud rate, parity ...)
Telegram indicator Reception (LED green) Error (LED red)
Shielding
Offset correction
LED (internal status)
Reset button

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

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

NEW

S+S REGELTECHNIK

Dimensional drawing
(Baldur 2)
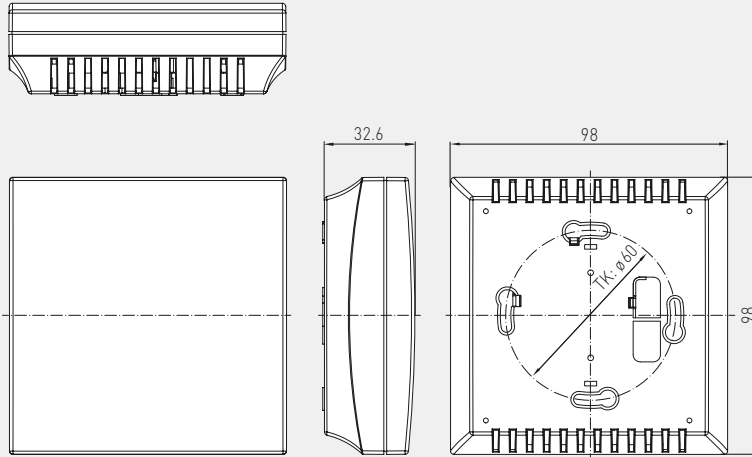
R CO₂ - Modbus
RLQ - CO₂ - Modbus
RFTM - CO₂ - Modbus
RFTM - LQ - CO₂ - Modbus

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

32.6   98   98

TK: ø 60

863 ppm

AER**ASGARD® RCO₂ - Modbus**	Room CO₂ sensor, *Deluxe*
AER**ASGARD® RLQ - CO₂ - Modbus**	Room air quality (VOC) and CO₂ sensor, *Deluxe*
AER**ASGARD® RFTM - CO₂ - Modbus**	Multifunctional room sensor for humidity, temperature and CO₂ content, *Deluxe*
AER**ASGARD® RFTM - LQ - CO₂ - Modbus**	Multifunctional room sensor for humidity, temperature, air quality (VOC) and CO₂ content, *Deluxe*

Type / WG02	Measuring Range				Display	Item No.	Price
	Humidity	Temperature	CO₂	VOC			
RCO₂ - Modbus							
RCO2 MODBUS	–	–	5000 ppm	–		1501-61B0-6001-200	**239,70 €**
RCO2 MODBUS DISPLAY	–	–	5000 ppm	–	■	1501-61B0-6021-200	**281,73 €**
RLQ - CO₂ - Modbus							
RLQ-CO2 MODBUS	–	–	5000 ppm	0...100 %		1501-61B1-6001-200	**346,80 €**
RLQ-CO2 MODBUS DISPLAY	–	–	5000 ppm	0...100 %	■	1501-61B1-6021-200	**388,83 €**
RFTM - CO₂ - Modbus							
RFTM-CO2 MODBUS	0...100 % r.H.	0...+50 °C	5000 ppm	–		1501-61B6-6001-200	**271,32 €**
RFTM-CO2 MODBUS DISPLAY	0...100 % r.H.	0...+50 °C	5000 ppm	–	■	1501-61B6-6021-200	**313,14 €**
RFTM - LQ - CO₂ - Modbus							
RFTM-LQ-CO2 MODBUS	0...100 % r.H.	0...+50 °C	5000 ppm	0...100 %		1501-61B8-6001-200	**377,40 €**
RFTM-LQ-CO2 MODBUS DISPLAY	0...100 % r.H.	0...+50 °C	5000 ppm	0...100 %	■	1501-61B8-6021-200	**419,43 €**
Note:	This unit **must not** be used as safety-relevant device!						