RMT.CT Series

Room Type CO_2 Transmitters

20250911R1

Technical Catalogue

The Room Type CO_2 Transmitter uses high-accuracy NDIR (Non-Dispersive Infrared) technology, providing long-term stability, low drift, and reliable CO_2 measurement for indoor environments. Its optical sensing principle ensures minimal influence from temperature and humidity variations, delivering repeatable and stable output values.

Depending on the model, the device can also measure temperature using NTC10K, Pt100, or Pt1000 sensing elements, allowing combined CO_2 and temperature monitoring for HVAC and energy-efficient ventilation control.

Designed for use in ventilation and building automation systems, the transmitter continuously monitors indoor air parameters and provides proportional analog or Modbus-RTU signals depending on the model. This enables precise control of IAQ, fresh-air supply, and energy-efficient HVAC operation.

Features

- High-accuracy NDIR CO_2 sensor with long-term stability
- Analog output: 0–10 V or 4–20 mA
- Optional RS485 Modbus-RTU communication
- Designed for indoor wall-mount applications
- Fast response and low drift performance
- Modern, compact enclosure suitable for all interiors

Typical Applications

- Offices and meeting rooms
- Hospitals, laboratories, schools
- Hotels and commercial buildings
- Air handling units (AHU), VAV systems
- Smart home and building automation systems

Order Codes

RMT.CT.1021	Room Type CO_2 Transmitter
RMT.CT.1021.NTC10K	Room Type CO_2 Transmitter with Temperature Sensor(NTC10K)
RMT.CT.1021.Pt100	Room Type CO_2 Transmitter with Temperature (Pt100)
RMT.CT.1021.Pt1000	Room Type CO_2 Transmitter with Temperature (Pt1000)
RMT.CT.1021.R	Room Type CO_2 Transmitter with Relay Output*

***** *The relay-output version has its own separate technical manual.*

Warnings

Before starting the installation of the device, carefully read the user manual and the warnings below.
The user is responsible for any damage, loss, or personal injury resulting from failure to comply with the warnings in this manual. Do not modify or attempt to repair the device. Any intervention on the device may cause malfunction, damage to the device or the system.
In such cases, the device will be excluded from the warranty coverage.

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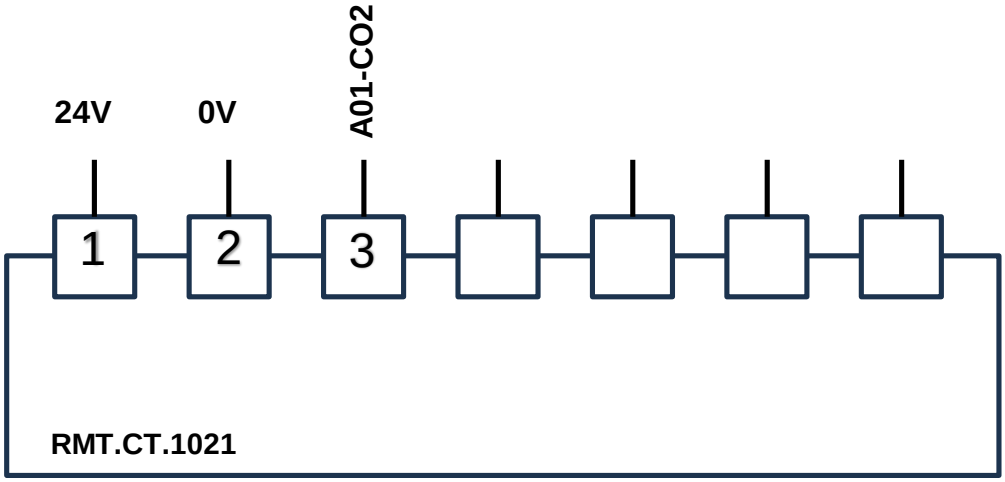
Technical Specifications

Electrical Specifications	Power Supply	24 V AC/DC ±10% , 50/60 Hz
	Power Consumption	Max. 2 VA
	Connection	Connector 1.5 mm^2
Measurement Data	Measured Parameter	CO_2
	Measurement Range	0…2000 ppm
	Accuracy	±50 ppm ±3% of reading.
Materials	Body Material	ABS
	Color Options	White, Black
Functions	Sensor Technology	CO_2 – NDIR (Non-Dispersive Infrared)
	Optional Temperature Sensor	NTC10K / Pt100 / Pt1000 (model dependent)
	Application	Indoor Air Quality (IAQ)
Security / Environmental Data	IP Protection Class	IP20 (EN 60529)
	Ambient Temperature	0…50°C

Enclosure Specifications

Enclosure Type	Wall mounted with screws
Dimensions	**W100 x H90 x D30 (mm)** (*Width x Height x Depth*)
Weight	135gr

Wiring Diagram



Supply Voltage: 24 VAC/VDC

1: 24 VAC/VDC

2: 0 V / GND

Output:

3: AO1: 0–10 V or 4–20 mA

Safety Instructions

- The device is a **room-type CO_2 transmitter** and must be installed and operated in accordance with this manual.
- All **wiring** must be performed with the **power supply disconnected**.
- Protect the device from **moisture**, **vibration**, **dust**, and **contamination**.
- Operate the device only within the specified **temperature** and **humidity limits**.
- Use **shielded** and **twisted-pair cables** for signal and analog outputs; route them away from **high-power lines** and equipment to avoid interference.
- Installation and electrical connections must be carried out by **qualified personnel**.
- **Cable cross-sections** and **fuse ratings** must be selected according to the device's supply voltage and load requirements.
- Power supply cables must comply with **IEC 60227** or **IEC 60245** standards.
- The **mains switch** connected to the device must be easily accessible and clearly labeled.