WMT.CT Series

Wall Mounted CO_2 Transmitters **20251110R1**

Technical Catalogue

WMT.CT.1021 is a wall-mounted CO_2 transmitter with external probe, designed for continuous monitoring of carbon dioxide concentration in HVAC air streams and internal air handling units.

The device utilizes a **non-dispersive infrared (NDIR) sensing principle** to ensure long-term stability, low drift, and reliable measurement performance.

The transmitter measures CO_2 concentration in the range of **0–2000 ppm** and provides a **selectable analog output (0–10V / 2–10V / 4–20mA)**, configurable via internal selection switch.

The IP54 enclosure combined with a Ø20 mm external probe allows accurate sensing directly within internal airflow, ensuring optimal measurement conditions inside ventilation equipment.

Features

- 0…..2000 ppm CO_2 measurement range
- Selectable 0–10V / 2–10V / 4–20mA output
- 24 V AC/DC power supply
- Max. 3 VA power consumption
- ±(40 ppm + 3% of reading) measurement accuracy
- 5-minute update interval
- Operating range: −10 °C to +60 °C
- 0–90% RH (non-condensing)
- Compact wall-mounted housing: 100 × 80 × 40 mm
- IP54 enclosure protection (excluding sensor probe)
- External probe Ø20 mm, total length 125 mm
- Long-life NDIR CO_2 sensor for reliable and stable performance

Order Codes

WMT.CT.1021	0…2000 ppm Selectable 0-10V/2-10V/4-20mA Output

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	3 VA
	Connection	Connector 1.5 mm^2
Environmental Specifications	Operating Temperature	-10 … +60°C
	Storage Temperature	-25 … +70°C (Without icing and condensation)
	Relative Humidity	0…90% RH (non-condensing)
	Altitude	Max. 2000m.
	Operating Environment	Non-flammable and non-corrosive environments
Measurement Specifications	Measurement Principle	NDIR (Non-Dispersive Infrared)
	Measurement Range	0…2000 ppm
	Accuracy	±(40 ppm + 3% of reading)
	Repeatability	±20 ppm
	Response Time (T90)	< 60 s
	Warm-up Time	< 2 minutes
	Update Interval	5 minutes
Functions	Outputs	Selectable 0–10V / 2–10V / 4–20mA
Safety Information	IP Protection Rating	IP54 enclosure protection (excluding sensor probe)
	Certification EN	EN60529

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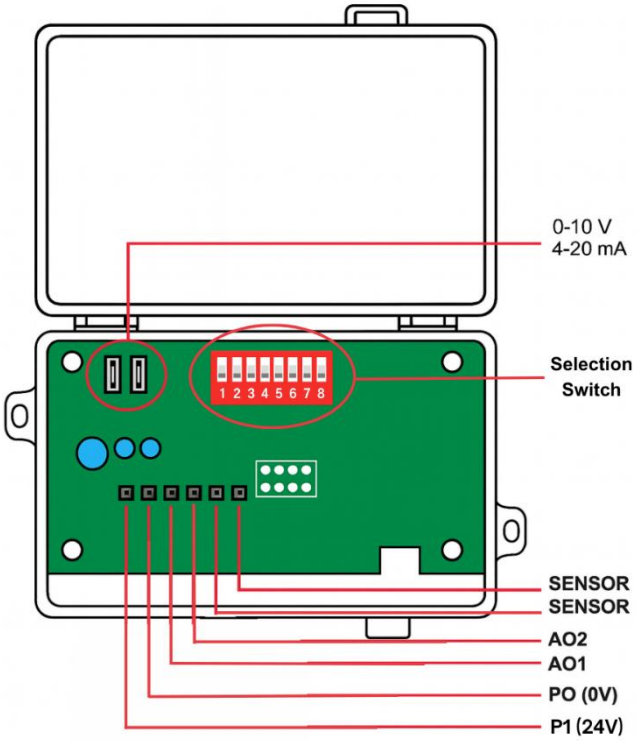
Enclosure Specifications

Enclosure Type	Wall Mounted (Internal Unit Installation)
Dimensions	**W100 x H80 x D40 (mm)** (*Width x Height x Depth*)
Weight	168gr
Housing Material	Polycarbonate (PC)

Probe Specifications

Probe Diameter	Ø20 mm
Total Probe Length	125 mm
Smooth Section Length	100 mm
Perforated Tip Length	25 mm
Probe Material	Polycarbonate (PC)



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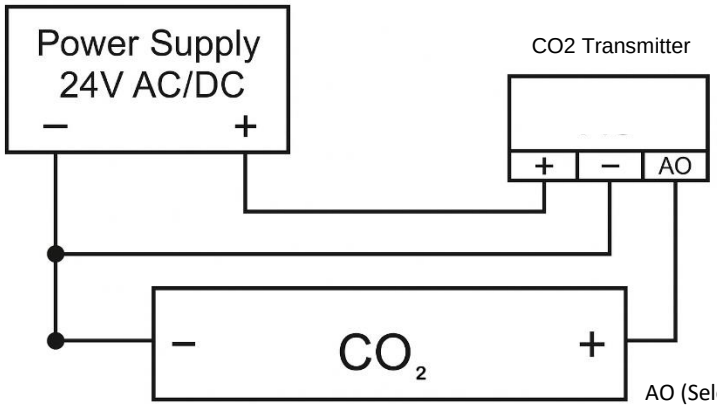
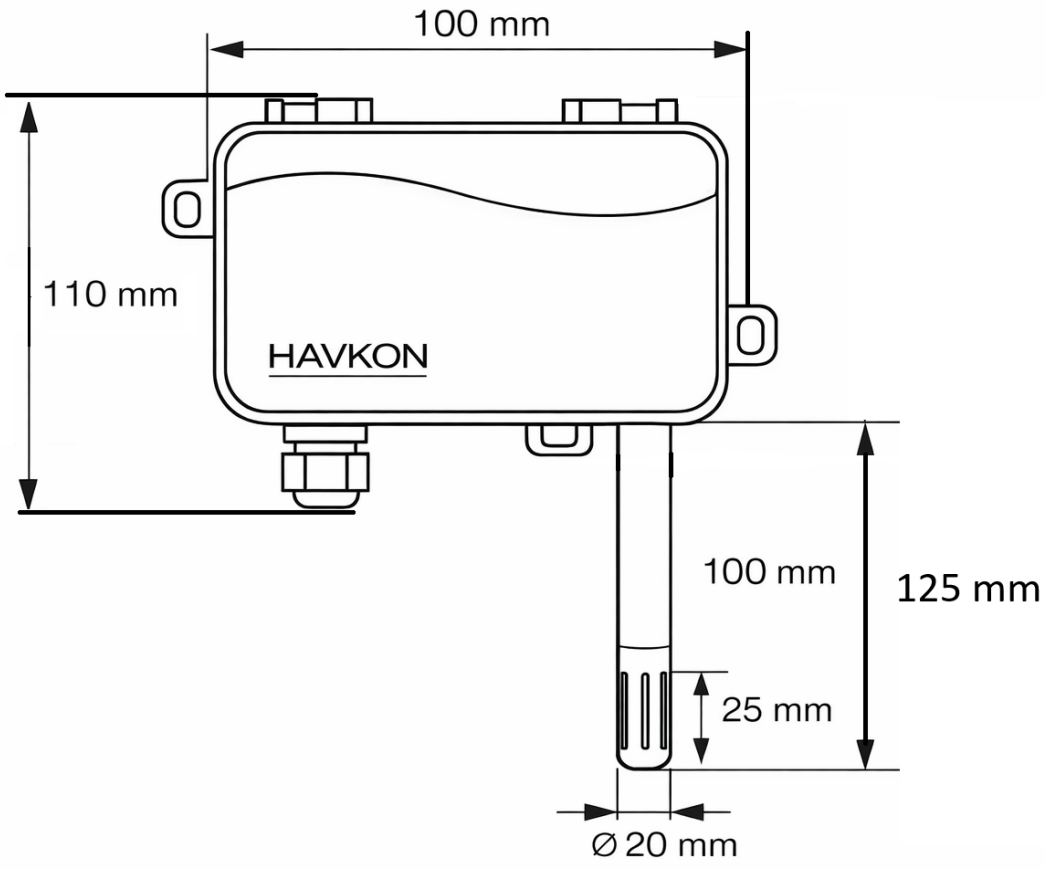
Wiring Diagram

WMT.CT Series controller enables proportional fan speed adjustment via built-in potentiometer and switch.



AO (Selectable: 0–10V / 2–10V / 4–20mA)

Dimensions



All dimensions in mm.

Safety Instructions

- The WMT.CT series is a wall mounted CO_2 transmitter with external probe and must be operated in accordance with this manual.
- Ensure that the connection cables are **de-energized during installation**.
- The device must be protected from **moisture, vibration, and contamination**. Respect the specified operating temperature range.
- For signal and analog output lines, **shielded and twisted pair cables** must be used. These cables must be routed away from high-power lines and equipment to prevent interference.
- Installation and electrical connections must be performed by **qualified personnel** in accordance with applicable regulations and standards.
- Fuse ratings and cable cross-sections must be selected based on the load current and the device's operating voltage.
- Power supply cables must conform to **IEC 60227 or IEC 60245 standards**.
- For safety, the main switch must be located in a position **easily accessible to the operator and clearly marked** as being related to the device.
- Do not expose the sensor probe to **direct water jets or mechanical impact**.