

CARBON DIOXIDE TRANSMITTERS CDT2000 Duct Series

Multifunctional, duct mount CO₂ transmitters for building automation systems



The CDT2000 Duct series air quality transmitters are engineered for building automation systems in the HVAC/R industry. The CDT2000 Duct series measures carbon dioxide (CO₂), utilizing the industry standard NDIR measurement principle, and temperature (T). Illuminated display ensures easy readability also from a distance. The CDT2000 Duct has a screwless lid and an easily adjustable mounting flange that make the installation of the device easy.

The CDT2000 Duct series transmitters calibrate themselves automatically using ABC™ logic. The ABC™ logic requires that the space in which the transmitter is used needs to be unoccupied for four hours per day so that the indoor CO₂ concentration drops to the outside level. CDT2000-DC Duct is a dual channel model with a measuring channel and a reference channel that makes a continuous comparison and the necessary adjustment accordingly. CDT2000-DC Duct is also suitable for buildings that are continuously occupied.



CDT2000 Duct series devices include:

- Separate field configurable output for each measurement parameter (CO₂, T)
- Mounting flange

CDT2000 Duct series device options offer:

- Clear backlit display
- Modbus configuration

The versatility of the CDT2000 Duct series air quality transmitters ensures that the right product for your application is available.

APPLICATIONS

CDT2000 Duct series devices are commonly used to monitor:

- CO₂ levels of incoming and return air in ventilation system
- CDT2000-DC Duct series devices can also be used in applications where there is a constant source of carbon dioxide present (for example hospitals and greenhouses)

MODEL SUMMARY

	CDT2000	
Description	Model	Product code
Carbon dioxide transmitter, duct mounted	CDT2000 Duct	302.001.001
- with display	CDT2000 Duct-D	302.001.002
- with Modbus configuration and display	CDT-MOD-2000 Duct-D	302.001.006
- with dual channel sensor	CDT2000-DC Duct	301.007.001
- with dual channel sensor and display	CDT2000-DC Duct-D	301.007.002
- with Modbus configuration, dual channel sensor and display	CDT-MOD-2000-DC Duct-D	301.007.003

CARBON DIOXIDE TRANSMITTERS

CDT2000 Duct Series

SPECIFICATIONS

Performance

Measurement ranges:

CO₂: 400–2000 ppm

Temperature: 0...50 °C

Accuracy:

CO₂: ±40 ppm + 2 % of reading, DC model: 75 ppm or

10 % of reading (whichever is greater)

Temperature: <0.5 °C

Technical Specifications

Media compatibility:

Dry air or non-aggressive gases

Measuring units:

ppm and °C

Measuring element:

CO₂: Non-dispersive infrared (NDIR)

Temperature: NTC10K

Environment:

Operating temperature: 0...50 °C

Storage temperature: -20...70 °C

Humidity: 0 to 95 % rH, non condensing

Physical

Dimensions:

Case: 119 x 100 x 44.7 mm

Probe: L=188 mm, d=12 mm

Weight:

150 g

Materials:

Case: ABS

Cover: PC

Probe: ABS

Protection standard:

IP54

Electrical connections:

4 spring loaded terminals

(24 V, GND, CO₂, T)

12–24 AWG (0.2–1.5 mm²)

Electrical

Supply voltage: 24 VAC or VDC ±10 %

Current consumption: max 230 mA (at 24 V) + 10 mA for each voltage output

Output signals for every media:

0/2...5/10 VDC, Load R minimum 1 kΩ

Conformance

Meets requirements for CE marking:

EMC Directive: 2014/30/EU

RoHS Directive: 2002/95/EC

WEEE Directive: 2012/19/EU



How to generate a model?

Example: CDT2000 Duct-D	Product series	
	CDT2000	Carbon dioxide transmitter, analog configurations
	CDT-MOD-2000	Carbon dioxide transmitter, Modbus configuration
	Calibration	
		ABC logic™
	-DC	Dual channel
	Mounting	
		Wall mount
	Duct	Duct mount (not available with relay or relative humidity sensor)
	Relay (only for wall mount model)	
	-1R	With relay
		Without relay
	Relative humidity sensor (only for wall mount model)	
	-rH	With relative humidity sensor
		Without relative humidity sensor
	Display	
	-D	With display
		Without display
Model	CDT2000	Duct
		-D