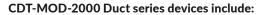


CARBON DIOXIDE TRANSMITTERS CDT-MOD-2000 DUCT SERIES

CO₂ transmitters with temperature output for duct that use Modbus serial communication protocol

The CDT-MOD-2000 Duct series air quality transmitters are engineered for building automation systems in the HVAC/R industry. The CDT-MOD-2000 Duct series measures carbon dioxide ($\mathrm{CO_2}$), utilizing the industry standard NDIR measurement principle, and temperature (T). Illuminated display ensures easy readability also from a distance. The CDT-MOD-2000 Duct has a screwless lid and an easily adjustable mounting flange that make the installation of the device easy.

The CDT-MOD-2000 Duct series transmitters calibrate themselves automatically using ABCTM logic. The ABCTM logic requires that the space in which the transmitter is used needs to to be unoccupied for four hours per day so that the indoor CO $_2$ concentration drops to the outside level. CDT-MOD-2000-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. CDT-MOD-2000-DC Duct is also suitable for buildings that are continuously occupied.



- Separate Modbus output for each measurement parameter (CO₂ and T)
- Mounting flange
- Clear backlit display

APPLICATIONS

CDT-MOD-2000 Duct series devices are commonly used to monitor:

- CO₂ and temperature levels of incoming and return air in ventilation system
- CDT-MOD-2000-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

	CDT-MOD-2000	Product code	
Description	Model		
Duct mounted carbon dioxide transmitter with Modbus configuration and display	CDT-MOD-2000 Duct-D	302.001.006	
- with dual channel sensor	CDT-MOD-2000-DC Duct-D	301.007.003	



CARBON DIOXIDE TRANSMITTERS CDT-MOD-2000 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

Calibration:

Automatic self-calibration ABC Logic[™] or continuous

comparison (DC) **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

Mounting:

With flange, adjustable 0...188 mm

Weight: 150 g

Materials: Case: ABS Cover: PC Probe: ABS

Protection standard:

Flectrical connections:

4 spring loaded terminals

Power supply:

(24 V and GND)

0.2-1.5 mm² (12-24 AWG)

Modbus RTU:

A and B line

0.2-1.5 mm² (12-24 AWG)

Electrical

Supply voltage: 24 VAC or VDC ±10 %

Current consumption: max 230 mA (at 24 V) + 10 mA

for each voltage output

Communication

Protocol: MODBUS over Serial Line

Transmission Mode: RTU

Interface: RS485

Byte format (11 bits) in RTU mode:

Coding System: 8-bit binary

Bits per Byte:

1 start bit

8 data bits, least significant bit sent

first

1 bit for parity

1 stop bit

Baud rate: selectable in configuration

Modbus address: 1-247 addresses selectable in

configuration menu

Conformance

Meets requirements for CE marking:

EMC Directive: 2014/30/EU RoHS Directive: 2011/65/EU

WEEE Directive: 2012/19/EU

COMPANY WITH MANAGEMENT SYSTEM

CERTIFIED BY DNV GL = ISO 9001 = ISO 14001 =





HOW TO GENERATE A MODEL?

Example: CDT-MOD-2000 Duct-D	Product series							
	CDT2000	Carbon dioxide transmitter, analog configurations						
	CDT-MOD-2000	Carbon dioxide transmitter, Modbus configuration						
		Calibration						
			ABC logic™, Automatic Background Calibration -DC Dual channel, for continuously occupied space					
		-DC						
			Mounting					
				Wall mount				
			Duct Duct mount (not available with relay or relative humidity sensor)				tive humidity sensor)	
				Relay (only for wall mount model)				
				-1R	With rela	у		
				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	CDT-MOD-2000		Duct			-D		