



CDD 24S



CDD 24HTL

Features

- Measuring CO₂ levels in air ducts
- As option Humidity + Temperature outputs
- Providing one or three 0-10 Vdc or 4-20mA analogue outputs
- LCD display as option and can display CO₂ + Humidity + Temperature measurements
- 3-color backlit LCD gives the CO₂ level more clearing and alarm function
- Modbus RS485 compatible interface makes usage and test more convenient
- Fifteen years lifetime, calibrate themselves to local background levels
- Attractive housing based on smart structure provide you a unique operation feeling
- Easy and skillful design and installation with a take-down and replacing filter to provides dust-proof protection
- Special made a 180° rotatable fastness position for the probe can change the direction of air detection

Ordering

Type no.	Description
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Carbon Dioxide (CO₂) Transmitter for Duct Mounting

- | | |
|------------------|---|
| CDD 24S | selectable CO ₂ output 0-10 Vdc or 4-20 mA, 0-2000 ppm and Modbus RS485 interface |
| CDD 24HT | selectable CO ₂ output 0-10 Vdc or 4-20 mA, 0-2000 ppm and Modbus RS485 interface, selectable Humidity output 0-10 Vdc or 4-20 mA selectable Temp. output 0-10 Vdc or 4-20 mA |
| CDD 24L | selectable CO ₂ output 0-10 Vdc or 4-20 mA, 0-2000 ppm and Modbus RS485 interface with LCD display |
| CDD 24HTL | selectable CO ₂ output 0-10 Vdc or 4-20 mA, 0-2000 ppm and Modbus RS485 interface, selectable Humidity output 0-10 Vdc or 4-20 mA selectable Temp. output 0-10 Vdc or 4-20 mA with LCD display |

Technical data

CO2 sensor

Type	Non-Dispersive Infrared Detector (NDIR)
Measurement range	0-2000 ppm, on request 0-5000 ppm
Accuracy	±40 ppm +3% of reading at +22°C
Stability	<2% of full scale over the life of the sensor (15 years typical).
Calibration	Self-calibration system.
Response time	< 5 minutes for a 90% step change at low duct speeds.
Non-linearity	<1% of full scale at +22°C
Duct air velocity	0 to 450 meter/min.
Pressure dependence	0.135% of reading per mm of mercury
Temp dependence	0.2% of full scale per °C
Warm-up time	24 hours (first time) 10 minutes (operation)

Humidity and Temperature

Sensing element

Humidity	Capacitive humidity sensor
Temp.	Bap-gap-sensor

Measuring range

Humidity	5-100% RH
Temp.	-20°C to +50°C

Accuracy

Humidity	±3% RH ((25°C, 40%-60% RH)
Temp.	±4°C (25°C)

Stability

Humidity	±1% RH per year
Temp.	±0.1°C per year

Display resolution

Humidity	±0.1% RH
Temp.	±0.1°C

Technical data

General

Power supply	24 Vac/dc
Consumption	1.8 W max. ; 0.8 W avg.
LCD display	3-color backlit Display CO2 measurement or CO2+Humidity+Temperature measurement
Analog output (s)	1 x 0-10 Vdc or 4-20 mA for CO2 3 x 0-10 Vdc or 4-20 mA for CO2+Humidity+Temperature The voltage output and the current output can be selectable by jumpers
Modbus RS485	19200bps, 15KV antistatic protection
Operating conditions	
Humidity	0 to 95% RH, non-condensing
Temp.	0°C to +50°C
Storage conditions	-20°C to +70°C
Weight	240 g
IP class	IP54
Approval	CE approval

Description

The CDD 24 is a duct CO2 transmitter series designed to be installed in HVAC return air ducts.

The CO2 sensing element uses the Non-Dispersive Infrared Technology (NDIR) with the patented self-calibration system to guarantee the long term stability and up to 15 years life time.

CDD 24 duct probe transmitter offers temperature and humidity option. The high accuracy temperature and humidity combined sensor provide a digital interface and outstanding full range linearity.

The one or three analog 0-10 Vdc or 4-20mA outputs are selectable by jumpers. Modbus RS485 communication interface is provided.

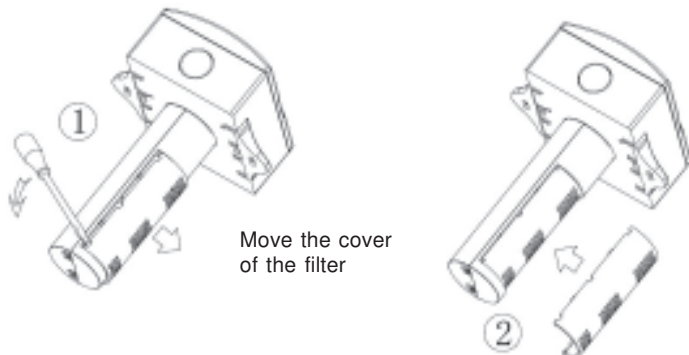
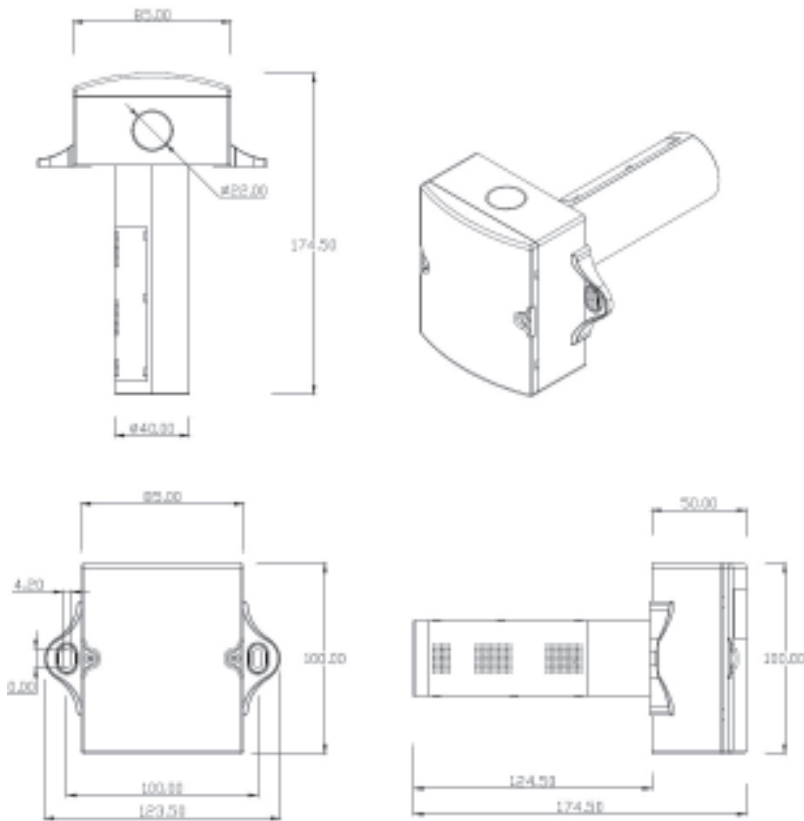
Optional LCD can display all measurements and is usable easily in more applications. Unique 3-color backlit LCD provides more clear indication and an alarm function.

CDD 24 offers simplicity in design and installation with special the take-down filter to avoid pollution and influence of measurement.

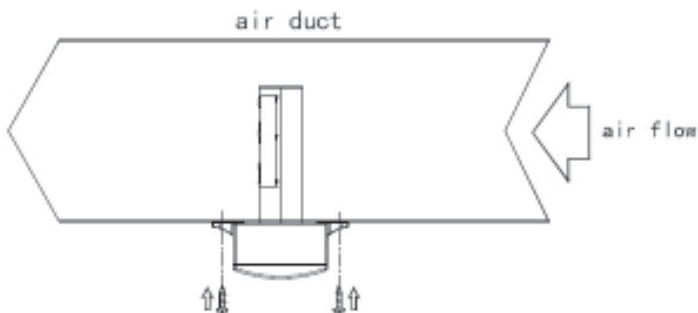
Typical applications

- Building management for office areas and residentials
- Ventilation control systems

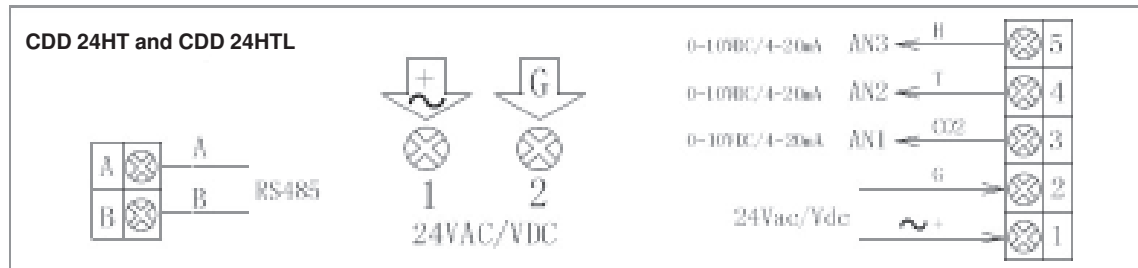
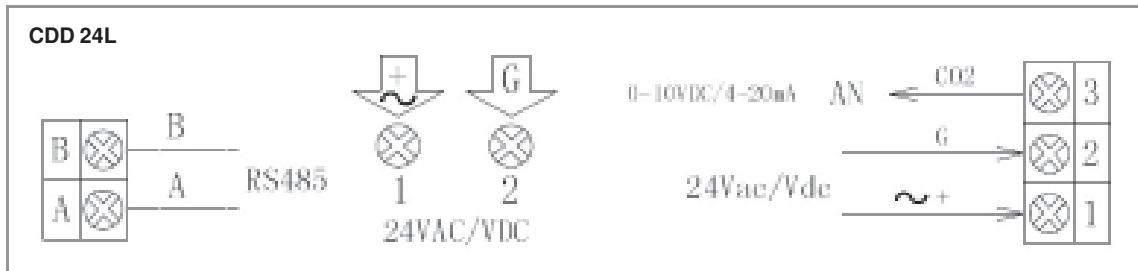
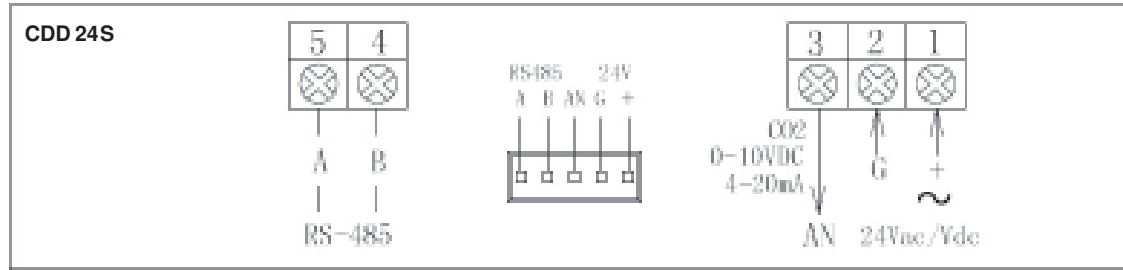
Dimensions



Mounting



Wiring



Note: 3 wires for both 4-20 mA and 0-10 Vdc outputs.

We reserve the right to make changes in our products without any notice which may effect the accuracy of the information contained in this leaflet.