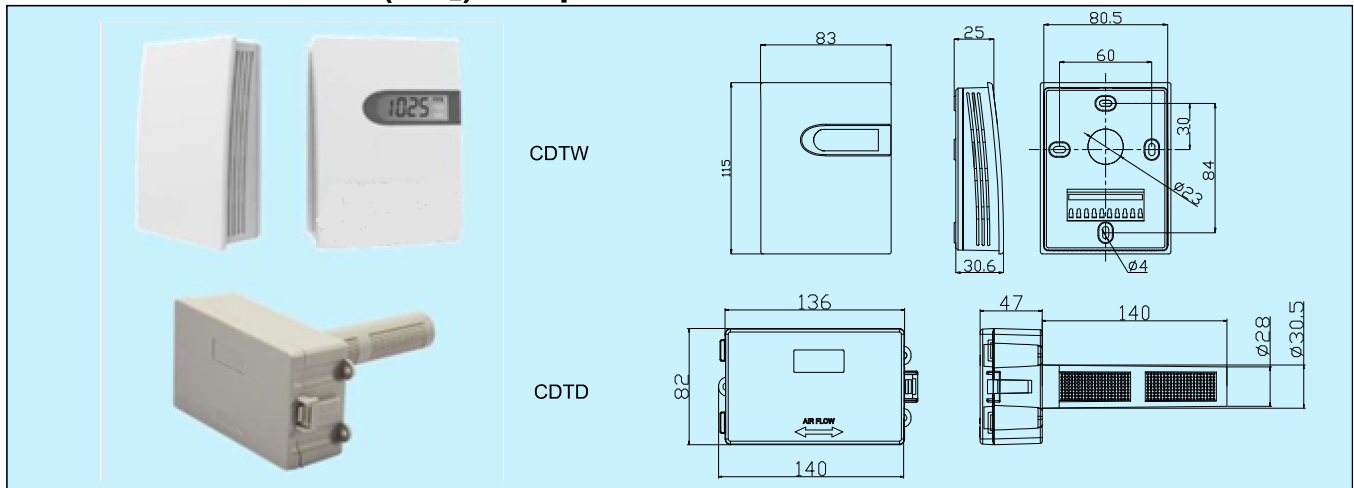


CDT Carbon Dioxide (CO₂)/Temperature Transmitter



Applications & Features

- CDT series carbon dioxide (CO₂) & temperature transmitters are designed for monitoring & controlling indoor air quality and temperature in one unit
- CDTW is for wall mount and CDTD is for duct mount
- High performance NDIR digital sensor and circuit, ensure precise measurement and temperature compensation
- Multiple optional RTD or thermistor sensors, compatible with a variety of control systems
- Stable, reliable and fast response
- 15 years of CO₂ sensor life without maintenance
- All electrical terminals are on the inside bottom, avoid any possible destroy to PCB when wiring (CDTW)
- Digital technology applied, multiple outputs optional, over voltage and reverse polarity protection, high reliability and anti-interference capability
- Large LCD with unit indicator (CDTW), display carbon dioxide (CO₂) and temperature alternatively (no temperature display for RTD or thermistor models)

Specifications

Carbon dioxide (CO₂) measurement

- Sensor:** NDIR sensor, with ABC algorithm*
- Sampling Method:** diffusion
- Accuracy:** (40+3%MV) ppm
- Response time(T90):** <120s (30cc/min, low airflow)
- Drift:** <±10ppm/year
- Range:** 0~2000ppm (measure range 400~2000ppm)
- Output:** 4~20mA, 0~10V, RS485/Modbus

Temperature measurement

- Sensor:** Digital, RTD or thermistor, see models
- Range:** 0~50°C
- Accuracy:** see accuracy table
- Output:** 4~20mA, 0~10V, RS485/Modbus or RTD/ thermistor

Power supply: 16~28VAC/16~35VDC

Load resistance: ≤500Ω (Current output), ≥2kΩ (Voltage output)

Display: Optional LCD Display (CDTW)

Display resolution: 1ppm, 0.1°C

Working environment: 0~50°C, 0~95%RH (Non-cond.)

Temp. compensation: 0~50°C

Storage temperature: -20~60°C

Housing material: fire retardant PC(UL94V-0) (CDTW),
fire retardant ABS(UL94V-0) (CDTD)

Protection: IP30 (CDTW), IP65 (CDTD)

Weight: 175g (CDTW), 415g (CDTD)

Approval: CE

***ABC algorithm:** Automatic Baseline Correction, it constantly keeps track of the sensor's lowest reading over a few days interval and slowly corrects for any long term drift detected as compared to the expected fresh air value of 400 ppm CO₂.

Models

Model	CDTW	CDTD	Room CO ₂ / Temp. Transmitter	Duct mount CO ₂ /Temp. Transmitter
CO₂ Output		1 C	4~20mA/0~10VDC	RS485/Modbus
Temp. Output		1 3 4 5 6 7 9 A C	4~20mA / 0~10VDC PT1000, ±0.2°C @25°C PT100, ±0.2°C @25°C NTC20K, ±0.2°C @25°C Ni1000, ±0.5°C @25°C NTC10K-II, ±0.2°C @25°C NTC10K-III, ±0.3°C @25°C NTC10K-A, ±0.3°C @25°C	RS485/Modbus
Display (CDTW)			0 1	N/A LCD

1. All products are factory set to 4~20mA as output default, and can be set to 0~10V by jumper on the PCB.

2. See resistance table on page 1 of this catalog.

Accuracy table for temperature

Outputs	CDTW	CDTD
0~10V DC	<±0.5°C@10~40°C	<±0.5°C@10~40°C
4~20mA	<±0.8°C@10~40°C	<±0.5°C@10~40°C
RS485/Modbus	<±0.5°C@10~40°C	<±0.5°C@10~40°C
RTD/ thermistor	See models	See models

When select RTD/ thermistor, CDTW's total error will be 0.5°C more than the accuracy in the models while CDTD's total error is the same as in the models.