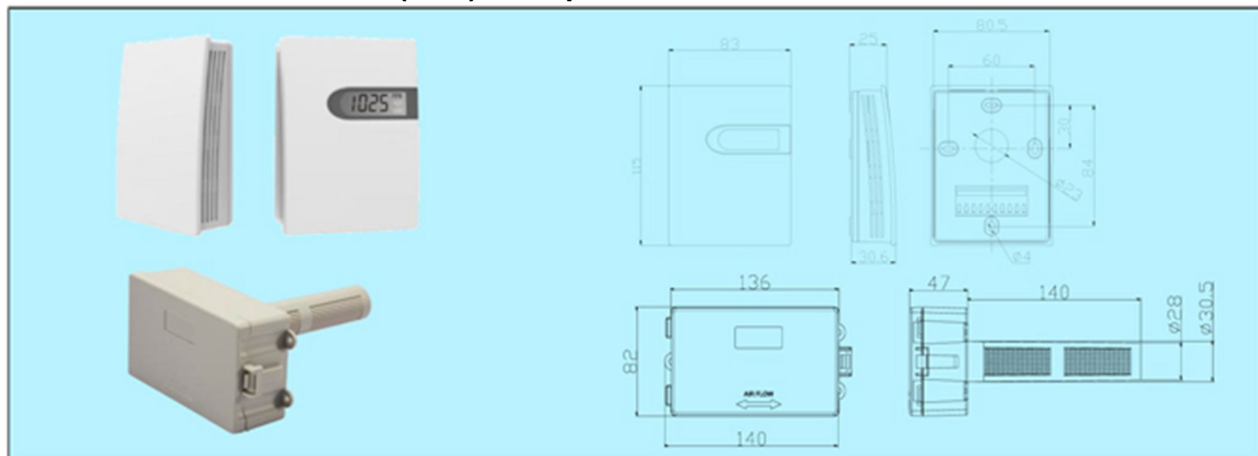


RSA-DCTH Carbon Dioxide (CO₂) / Temperature Transmitter



Applications & Features

- CDT series carbon dioxide (CO₂) & temperature transmitters are designed for monitoring & controlling indoor air quality and temperature in one unit
- CDTW is suitable for wall mount and CDTD is suitable 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)

Sensor: NDIR sensor, with ABC algorithm*

Sampling Method: diffusion

Accuracy: (40+3%MV) ppm

Response time: <10s (30cc/min, low airflow)

Drift: <±10ppm/year

Range: 0~2000ppm (measure range 400~2000ppm)

Output: 4~20mA, 0~10V, RS485/Modbus

Temperature

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: ABS+PC (CDTW), fireproof ABS (CDTD)

Protection: IP30 (CDTW), IP65 (CDTD)

Weight: 175g (CDTW), 416g (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	C	1	Room CO ₂ / Temp. Transmitter Duct mount CO ₂ /Temp. Transmitter
CO ₂ Output			1	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, ±0.4°C @25°C Ni1000, ±0.4°C @25°C NTC10K-II, ±0.4°C @25°C NTC10K-III, ±0.4°C @25°C NTC10K-A, ±0.4°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.