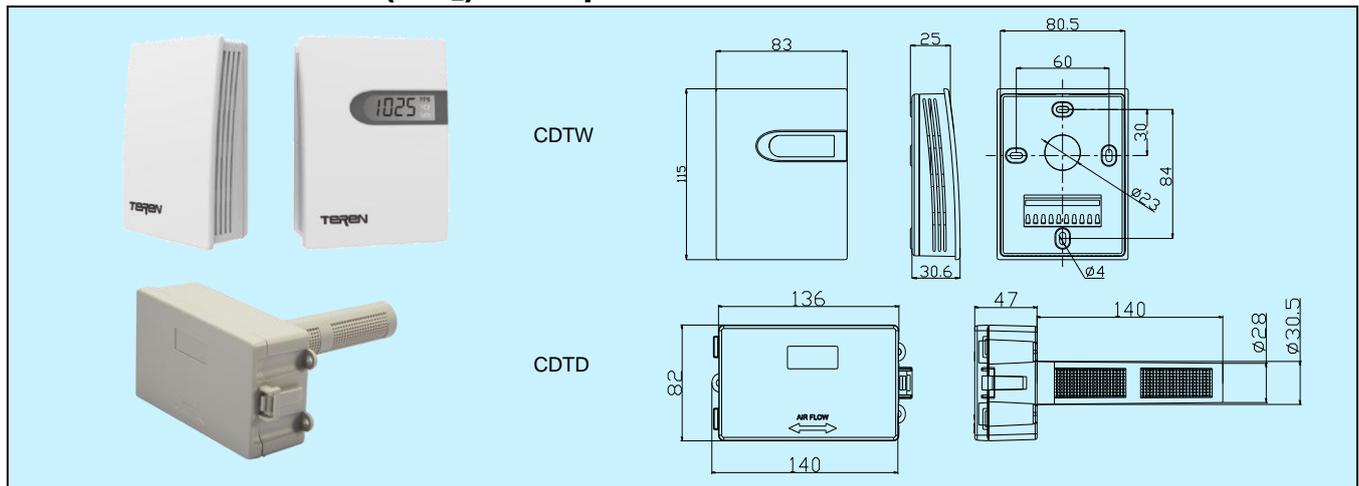


# CDT Carbon Dioxide (CO<sub>2</sub>) / Temperature Transmitter



## Applications & Features

- CDT series carbon dioxide (CO<sub>2</sub>) & 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 CO<sub>2</sub> 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 (CO<sub>2</sub>) and temperature alternatively (no temperature display for RTD or thermistor models)

## Specifications

### Carbon dioxide (CO<sub>2</sub>)

- 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 CO<sub>2</sub>.

## Models

Model	CDTW	CDTD		Room CO <sub>2</sub> / Temp. Transmitter
<b>CO<sub>2</sub> Output</b>		1	C	4~20mA/0~10VDC RS485/Modbus
<b>Temp. Output</b>		1		4~20mA / 0~10VDC
		3		PT1000,±0.2°C @25°C
		4		PT100,±0.2°C @25°C
		5		NTC20K, ±0.4°C @25°C
		6		Ni1000, ±0.4°C @25°C
		7		NTC10K-II, ±0.4°C @25°C
		9		NTC10K-III, ±0.4°C @25°C
		A		NTC10K-A, ±0.4°C @25°C
		C		RS485/Modbus
<b>Display (CDTW)</b>		0		N/A
		1		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.