NEO WAVE®

OverView:

The TxCDT series transducers for carbon dioxide (CO2) and temperature are engineered to monitor and regulate indoor air quality alongside temperature within a one unit.

Feature:

- Designed for monitoring and controlling indoor air quality and temperature in one unit.
- TxCDTW model for wall mount and TxCDTD model for duct mount.
- Utilizes high-performance NDIR digital sensor and circuit for precise measurement and temperature compensation.
- Offers multiple optional RTD or thermistor sensors, compatible with various control systems.
- Provides stable, reliable, and fast response capabilities.
- Boasts a 15-year CO2 sensor life without requiring maintenance.
- All electrical terminals located on the inside bottom to prevent damage to PCB during wiring (TxCDTW).
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- Incorporates digital technology with optional multiple outputs, overvoltage protection, reverse polarity protection, high reliability, and anti-interference capability.
- TxCDTW variant features a large LCD with unit indicator, displaying CO2 and temperature alternately.
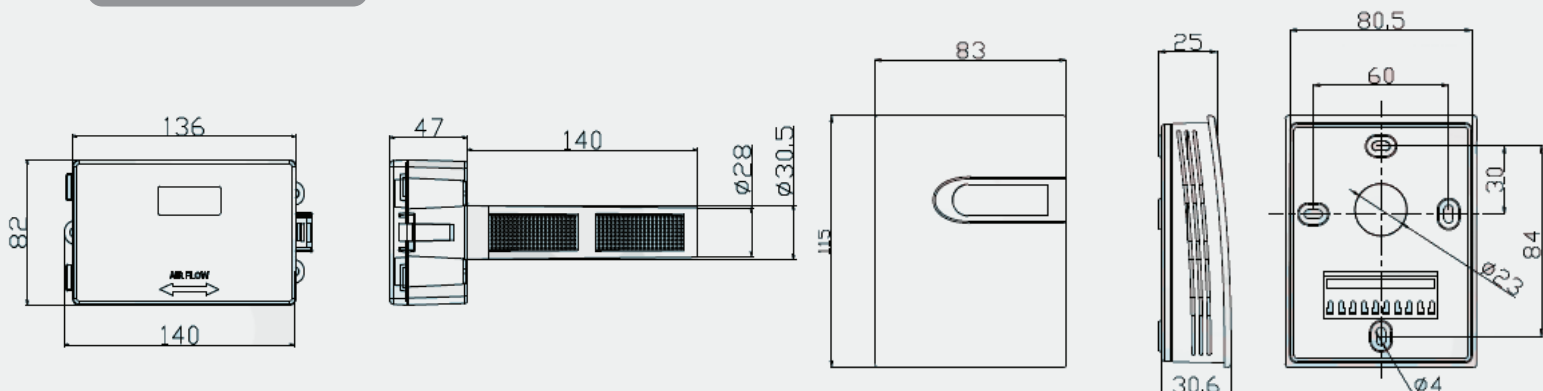
TxCDT

NEOWAVE TxCDT Carbon Dioxide (CO2)/Temperature Transducer

Application:

- Ideal for monitoring indoor air quality and temperature in residential, commercial, and industrial settings.
- Suitable for HVAC systems, building automation systems, environmental monitoring systems, and smart home applications.
- Used in offices, schools, hospitals, laboratories, manufacturing facilities, and other indoor environments to ensure optimal air quality and temperature control.

Dimentions:

Specifications:

NEOWAVE TxCDT Carbon Dioxide (CO2)/Temperature Transducer

Power supply	16~28VAC/16~35VDC
Load resistance	≤500Ω (Current output), ≥2kΩ (Voltage output)
Display	Optional LCD Display (TXCDTW)
Display resolution	1ppm, 0.1°C
Working environment	0~50°C, 0~95%RH (Non-cond.)
Temp. compensation	0°C~50°C
Storage temperature	-20~60°C
Housing material	fire retardant PC(UL94V-0) (TXCDTW) fire retardant ABS(UL94V-0) (TXCDTD)

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

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

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_2。

Accuracy table for temperature:

Outputs	TxCDTW	TxCDTD
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, TxCDTW's total error will be 0.5°Cmore than the accuracy in the models while TxCDTD's total error is the same as in the models.

Order Informations:

Code				Description	Remark
				TxCDT Carbon Dioxide (CO2)/Temperature Transducer	Remark
TxCDTW				Room CO2 / Temp. Tranducer	Model
TxCDTD				Duct mount CO2 /Temp. Transducer	Model
	VA			4~20mA/0~10VDC	CO2 Output
	RS			RS485/Modbus	CO2 Output
		VA		4~20mA / 0~10VDC	Temp. Output
		1		PT1000, ±0.2°C @25°C	Temp. Output
		2		PT100, ±0.2°C @25°C	Temp. Output
		3		NTC20K, ±0.2°C @25°C	Temp. Output
		4		Ni1000, ±0.5°C @25°C	Temp. Output
		5		NTC10K-II, ±0.2°C @25°C	Temp. Output
		6		NTC10K-III, ±0.3°C @25°C	Temp. Output
		7		NTC10K-A, ±0.3°C @25°C	Temp. Output
		RS		RS485/Modbus	Temp. Output
			1	N/A	Display (TxCDTW)
			2	LCD	Display (TxCDTW)

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

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