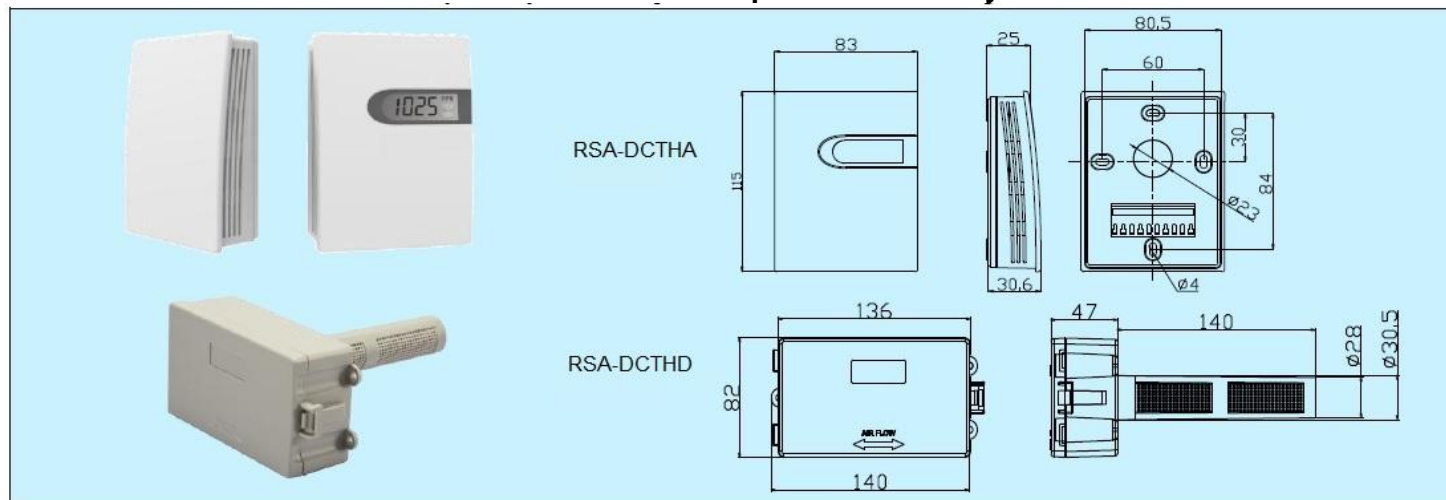




A mais completa em soluções para HVAC e Automação.

RSA-DCTHA / RSA-DCTHD Carbon Dioxide CO₂ Temperature Humidity Transmitter



Applications & Features

- RSA-DCTH series carbon dioxide (CO₂) /temperature/ humidity transmitters are designed for monitoring & controlling indoor air quality, temperature and humidity in one unit
- RSA-DCTHA is suitable for wall mount and RSA-DCTHD 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(RSA-DCTHA)
- Digital technology applied, multiple outputs optional, over voltage and reverse polarity protection, high reliability and anti-interference capability
- Large LCD with unit indicator(RSA-DCTHA), display carbon dioxide (CO₂), temperature and humidity alternatively

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

Relative Humidity

Sensor: Digital polymer

Range: 0~100%RH

Accuracy: see accuracy table

Hysteresis: <±1%RH

Response time: <10s (25°C, in slow air)

Drift: <±0.5%RH/year

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

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

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

Display: Optional LCD Display (DCTHA)

Display resolution: 1ppm, 0.1°C, 0.1%RH

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

Temp. compensation: 0~50°C

Storage temperature: -20~60°C

Housing material: ABS+PC (RSA-DCTHA), fireproof ABS (RSA-DCTHD)

Protection: IP30 (RSA-DCTHA), IP65 (RSA-DCTHD)

Weight: 175g (RSA-DCTHA), 416g (RSA-DCTHD)

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	RSA-DCTHA			Wall mount CO ₂ / Temp. Transmitter
	RSA-DCTHD			Duct mount CO ₂ / Temp. Transmitter
CO ₂ Output		1	C	4~20mA/0~10VDC RS485/Modbus
Temp. Output		1	3	4~20mA / 0~10VDC
		4	4	PT1000, ±0.2°C @ 25°C
		5	5	PT100, ±0.2°C @ 25°C
		6	6	NTC20K, ±0.4°C @ 25°C
		7	7	Ni1000, ±0.4°C @ 25°C
		9	9	NTC10K-II, ±0.4°C @ 25°C
		A	A	NTC10K-III, ±0.4°C @ 25°C
		C	C	NTC10K-A, ±0.4°C @ 25°C
Display (RSA-DCTHA)		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	RSA-DCTHA		RSA-DCTHD	
	T (@10~40°C)	RH (@25°C, 20~80%RH)	T (@10~40°C)	RH (@25°C, 20~80%RH)
0~10V DC	<±0.5°C	3%RH	<±0.5°C	3%RH
4~20mA	<±1.0°C	5%RH	<±0.5°C	3%RH
RS485/ Modbus	<±0.5°C	3%RH	<±0.5°C	3%RH
RTD/ thermistor	See models	See models	See models	See models

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

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