

ESCO2THWxxDM



Environmental Sensor, CO₂, Temperature & Humidity Transmitter, Wall type



Main features

- Wall mounting
- 0-10 V or 4-20 mA Output
- 2000 or 5000 ppm measuring range
- Compact housing to measure 3 variables
- With Modbus communication
- Comes with LCD display
- Software for monitoring: ESCO2 Soft

Applications

- Environmental monitoring for various building
- Monitoring for HVAC process / air conditioning/ environmental ventilation control
- Humidity and CO₂ monitoring for house and building

Description

Non-dispersive infrared (NDIR) sensor and MEMS sensor for good long-life and long-term stability and with an exceptionally high accuracy. Compact 3-in-1 wall mount sensor for CO₂, temperature and humidity. Perfectly suitable to be used in building environmental monitoring. Comes with LCD display and Modbus communication.



References

Product selection key

ESCO2THW DM

Enter the code option instead of

Code	Option	Description
ESCO2TH	-	Model
W	-	Wall mounting
<input type="checkbox"/>	2	CO ₂ 2000 ppm
	5	CO ₂ 5000 ppm
<input type="checkbox"/>	A	Output 4...20 mA
	V	Output: 0...10 V
D	-	Display
M	-	Modbus RS485

Type selection

Mounting	Range	Output	communication	Code
Wall	2000 ppm	0...10 V	Modbus RS485	ESCO2THW2VDM
Wall	5000 ppm	0...10 V	Modbus RS485	ESCO2THW5VDM
Wall	2000 ppm	4...20 mA	Modbus RS485	ESCO2THW2ADM
Wall	5000 ppm	4...20 mA	Modbus RS485	ESCO2THW5ADM

Features

Power Supply

Power supply	DC	12 ... 36 V
	AC	24 V \pm 10%
Current consumption	DC	150 mA
	AC	120 mA
Starting current	DC	12 V: 550 mA
	DC	24 V: 250 mA
	AC	24 V: 230 mA

Outputs

2 x Analogue output	0-10 V or 4-20 mA (only T and CO ₂)
Humidity only through Modbus	RS485 (CO ₂ , T and H)

Environmental

Ambient temperature	0° ... +50°C (32° ... +122°F)	Operating
	-20° ... +60°C (-4° ... +140°F)	Storage
Degree of protection	IP20	
Electrical protection	Polarity protection and short circuit	

Measuring Values

Sensor type	CO ₂	NDIR
	Temperature & Humidity	MEMS
Media measured	Air	
Working range	CO ₂	0...2000 ppm / 0...5000 ppm
	Temperature	0...50°C (32...122°F)
	Humidity	0...100%
Signal connection	3-wire	
Accuracy (@ +25°C; V=24 VDC)	CO ₂	±40 ppm+3%
	Temperature	±0.5°C
	Humidity	±3% RH (20-90%RH)
Warm-up time (CO₂)	< 2 min, stable time 20 min	
Response times (t90) CO₂ (@ +23°C)	< 2 min.	
Time Sampling CO₂	about 6 secs.	
Load resistance	Voltage output	> 10 KΩ

Mechanics/electronics

▶ Connection

Electrical connection	signal & communication	Screw terminal
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▶ Display

Display type	LCD double line character	
Display range	Up array displays CO ₂ / down array displays temp. and humidity which can interchange	
	CO ₂	Four-digital numbers
	Temperature & Humidity	Three-digital numbers and one decimal place
	Height of character	17.84 mm
Display size	47.8 mm x 41.1 mm	

▶ Wiring

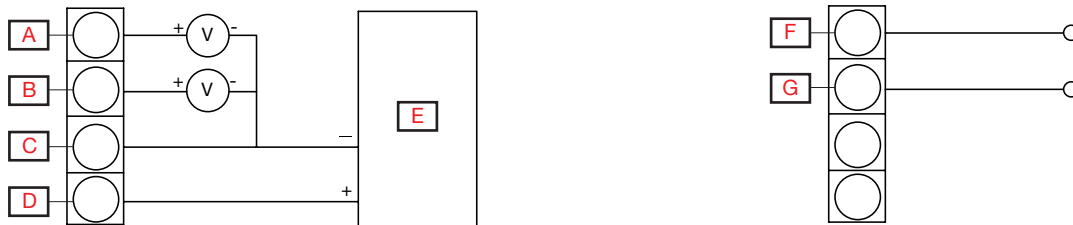


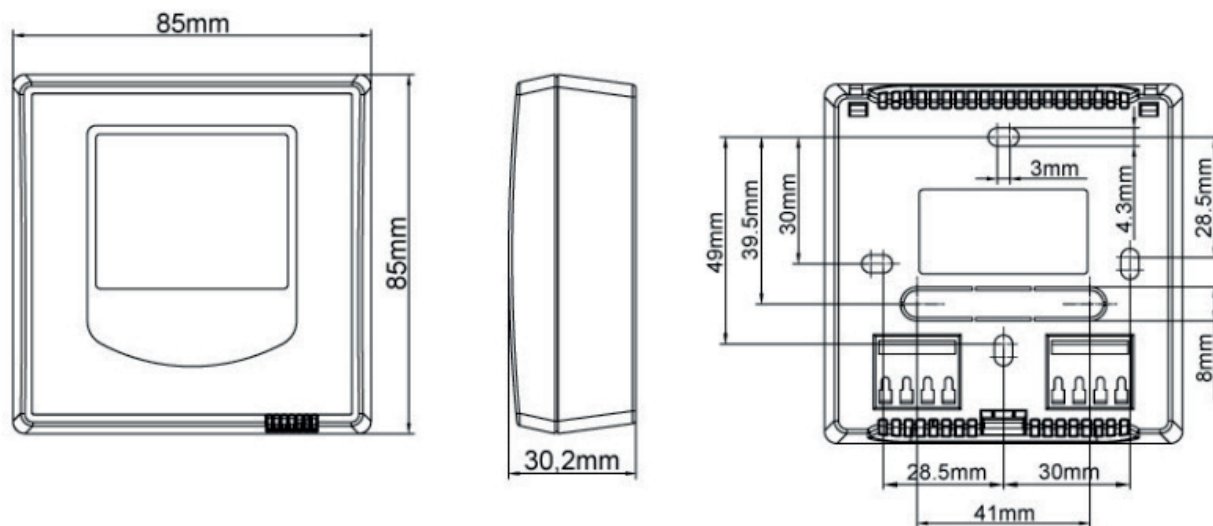
Fig. 1 RS485 signal connector

A	CH 1	E	12...36 VDC and 24 VAC
B	CH 2	F	RS485+
C	GND	G	RS485-
D	AC/DC		

▶ Housing

Housing	PC fire-proof class (PC-110)
Installation	Wall mounting
Weight	100 g

Dimensions



Compatibility and conformity

Approvals and markings

CE-marking	
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Delivery contents and accessories

▶ Delivery contents

Environmental sensor: ESCO2THWxxDM

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