

ESTxWxx



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



Main features

- Wall mounting
- 0-10 V or 4-20 mA output
- 0 to 50°C temperature, 0-100% humidity, CO₂ 2000 or 5000ppm
- 2 x outputs for 2 different measurements
- With or without Modbus communication
- Simple installation
- Software for monitoring and configuration: EST Soft B

Applications

- Monitor and control air quality system for various building.
- Monitoring for HVAC process / air conditioning / environmental ventilation control

Description

Using high grade sensor NDIR and CMOS to measure temperature, humidity and CO₂ for long term stability and high accuracy. Compact housing with Modbus communication perfectly suitable to be used in many HVAC and building system.

References

Product selection key

 EST ☐ W ☐ ☐

Enter the code entering the corresponding option instead of ☐

Code	Option	Description
EST	-	Model
☐	C2	CO ₂ 2000 ppm
	C5	CO ₂ 5000 ppm
	H	Humidity
W	-	Wall mounting
☐	V	Output: 0...10 V
	A	Output: 4...20 mA
☐	M	Modbus RS485
	-	Without communication

Type selection

Mounting	Output function 1	Output function 2	Output	communication	Code
Wall	Temperature	CO ₂ 2000 ppm	4...20 mA	-	ESTC2WA
Wall	Temperature	CO ₂ 5000 ppm	4...20 mA	-	ESTC5WA
Wall	Temperature	CO ₂ 2000 ppm	4...20 mA	Modbus RS485	ESTC2WAM
Wall	Temperature	CO ₂ 5000 ppm	4...20 mA	Modbus RS485	ESTC5WAM
Wall	Temperature	CO ₂ 2000 ppm	0...10 V	-	ESTC2WV
Wall	Temperature	CO ₂ 5000 ppm	0...10 V	-	ESTC5WV
Wall	Temperature	CO ₂ 2000 ppm	0...10 V	Modbus RS485	ESTC2WVM
Wall	Temperature	CO ₂ 5000 ppm	0...10 V	Modbus RS485	ESTC5WVM
Wall	Temperature	Humidity	4...20 mA	-	ESTHWA
Wall	Temperature	Humidity	4...20 mA	Modbus RS485	ESTHWAM
Wall	Temperature	Humidity	0...10 V	-	ESTHWV
Wall	Temperature	Humidity	0...10 V	Modbus RS485	ESTHWVM

Features

Power Supply

Power supply	DC	8...35 V
	AC	12...30 V
Current consumption	DC	8 V: 210 mA
	DC	24 V: 72 mA
	AC	12 V: 275 mA
	AC	24 V: 175 mA

Outputs

2 x Analogue output	4...20 mA / 0...10 V
Modbus	RS485

Environmental

Ambient temperature	0°... +50°C (32°... +122°F)	Operating
	0°... +60°C (32°... +140°F)	Storage
Degree of protection	Housing	IP54
	Probe	IP20
Electrical protection	Polarity protection, over voltage and short circuit	

Measuring Values

Sensor type	CO ₂	NDIR
	Temperature and Humidity	CMOS
Media measured	Air	
Measuring range	CO ₂	0...2000 ppm / 0...5000 ppm
	Temperature	0...50°C
	Humidity	0...100%
Signal connection	3-wire	
Accuracy (@ +23°C; V=24 VDC)	Temperature	±0.3°C
	Humidity	±3% of f.s.
	CO ₂	±50 ppm ±3%
Warm-up time (CO₂)	< 2 min, stable time 20 min	
Response times (t63) CO₂ (@ +23°C)	< 30 sec	

Mechanics/electronics

Connection

Electrical connection	M12 connector (Included)
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Wiring

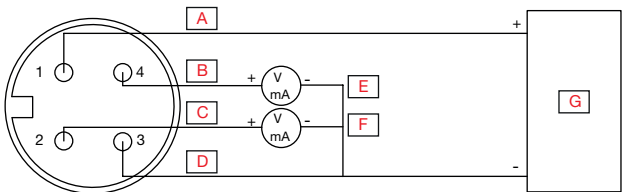


Fig. 1 4P M12 connector

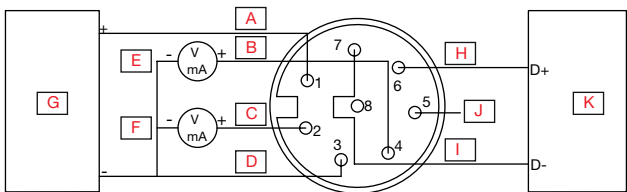


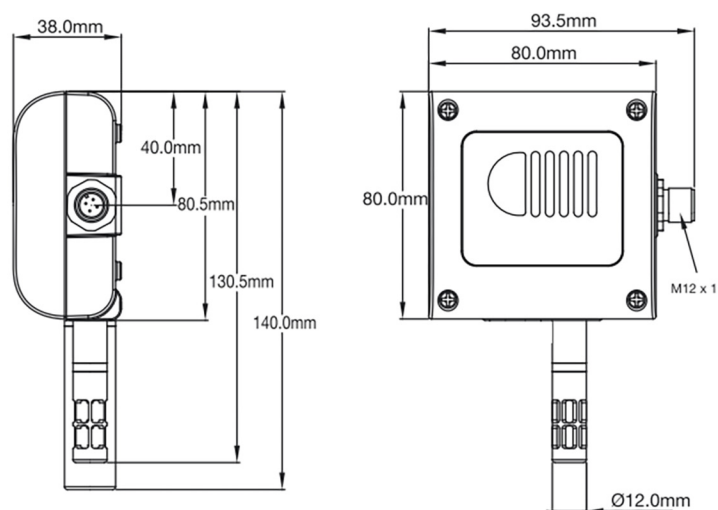
Fig. 2 8P M12 connector

A	Brown	G	8...35 VDC or 12...30 VAC
B	Black	H	Yellow
C	White	I	Grey
D	Blue	J	Green / RS485 / GND
E	Analogue output 1	K	Host (RS485)
F	Analogue output 2		

Housing

Housing	PC fire-proof class (PC-110)
Probe	PC fire-proof class (PC-110)
Installation	Wall mounting
Weight	168 g

Dimensions



Compatibility and conformity

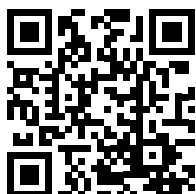
CE-marking



Delivery contents and accessories

Delivery contents

Environmental sensor: ESTxWxx
M12 connector



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