

# ESCO2xxxx



## Environmental Sensor, CO<sub>2</sub> Transmitters, Wall or Duct Type



### Main features

- Wall or duct mounting
- 0-10 V or 4-20 mA output
- 2000 or 5000 ppm measuring range
- Simple installation
- Compact housing
- With or without Modbus communication
- Software for monitoring and configuration: ESCO2 Soft

### Applications

- HVAC control.
- Instrument testing equipment.
- Environmental control and monitoring system.
- Ventilation system control for parking lots and buildings.
- Green houses, fruit and vegetable storage.

### Description

A high CO<sub>2</sub> concentration indoors will make people feel tired easily.

So by controlling the CO<sub>2</sub> value relevantly, people will feel more energetic.

Now, for the most part, CO<sub>2</sub> transmitters are used inside buildings, and some are applied in the agricultural area to grow plants in a healthier and quicker way.

## References

### Product selection key



Enter the code entering the corresponding option instead of

Code	Option	Description
ESCO2	-	Model
<input type="checkbox"/>	D	Duct mounting
	W	Wall mounting
<input type="checkbox"/>	2	Range: 2000 ppm
	5	Range: 5000 ppm
<input type="checkbox"/>	V	Output: 0...10 V
	A	Output: 4...20 mA
<input type="checkbox"/>	M	Modbus RS485
	-	Without communication

### Type selection

Mounting	Range	Output	communication	Code
Duct	2000 ppm	4...20 mA	-	ESCO2D2A
Duct	5000 ppm	4...20 mA	-	ESCO2D5A
Duct	2000 ppm	0...10 V	-	ESCO2D2V
Duct	5000 ppm	0...10 V	-	ESCO2D5V
Duct	2000 ppm	4...20 mA	Modbus RS485	ESCO2D2AM
Duct	5000 ppm	4...20 mA	Modbus RS485	ESCO2D5AM
Duct	2000 ppm	0...10 V	Modbus RS485	ESCO2D2VM
Duct	5000 ppm	0...10 V	Modbus RS485	ESCO2D5VM
Wall	2000 ppm	4...20 mA	-	ESCO2W2A
Wall	5000 ppm	4...20 mA	-	ESCO2W5A
Wall	2000 ppm	0...10 V	-	ESCO2W2V
Wall	5000 ppm	0...10 V	-	ESCO2W5V
Wall	2000 ppm	4...20 mA	Modbus RS485	ESCO2W2AM
Wall	5000 ppm	4...20 mA	Modbus RS485	ESCO2W5AM
Wall	2000 ppm	0...10 V	Modbus RS485	ESCO2W2VM
Wall	5000 ppm	0...10 V	Modbus RS485	ESCO2W5VM

## Features

### Power Supply

Power supply	DC	12...36 V
	AC	24V +/- 10%
Current consumption	DC	≤ 37mA
	AC	≤ 70mA
Starting current	DC	>200mA
	AC	>210mA

### Outputs

Output	4...20 mA / 0...10 V, RS-485 & Analogue
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### Environmental

Ambient temperature	0°... +50°C (32°... +122°F)	Operating
	-20° ... +60°C (-4° ... +158°F)	Storage
Degree of protection	ESCO2D	IP64
	ESCO2W	IP54
Electrical protection	Polarity protection, over voltage and short circuit	
Humidity	0...95% (not condensing)	



## Measuring Values

<b>Sensor type</b>	Non-Dispersive Infrared, Technology (NDIR)	
<b>Media measured</b>	Non-aggressive gas (HVAC system)	
<b>Measuring range</b>	0...2000ppm / 0...5000ppm	
<b>Signal connection</b>	3-wire	
<b>Accuracy</b>	400-2000ppm	+/- 40ppm +/- 3% reading
	Other	+/-50ppm +/- 3% reading
<b>Response times (t90)</b>	ESCO2D	< 6 min
	ESCO2W	< 2 min
<b>Sensitivity</b>	$\pm 1\text{ppm} \pm 1\%$ of measured value	
<b>Load resistance</b>	Current output	< 250 $\Omega$
	Voltage output	> 10 K $\Omega$



# Mechanics/electronics

## ▶ Connection

Electrical connection	M12 connector (Included)
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## ▶ Wiring

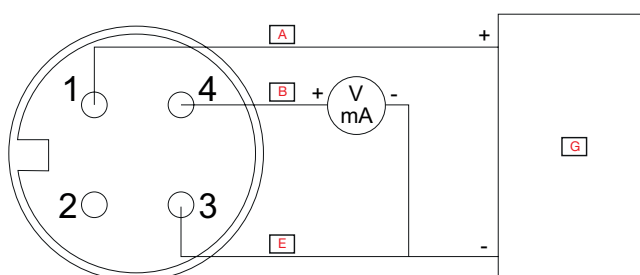


Fig. 1 Analogue output

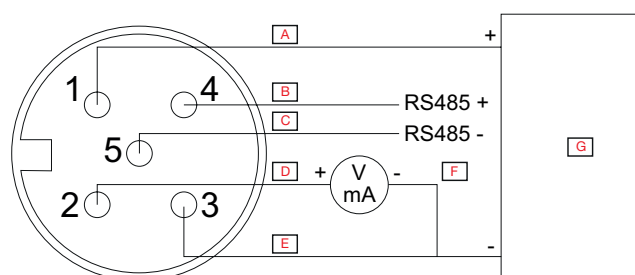


Fig. 2 RS-485 & Analogue

<b>A</b>	Brown	<b>E</b>	Blue
<b>B</b>	Black	<b>F</b>	Output
<b>C</b>	Grey	<b>G</b>	12...36 VDC or 24 +/- 10% VAC
<b>D</b>	White		

## ▶ Housing

<b>Housing</b>	PC fire-proof class (PC-110)	
<b>Installation</b>	ESCO2D	Duct mounting
	ESCO2W	Wall mounting
<b>Weight</b>	ESCO2D	126 g
	ESCO2W	155 g



**Dimensions**

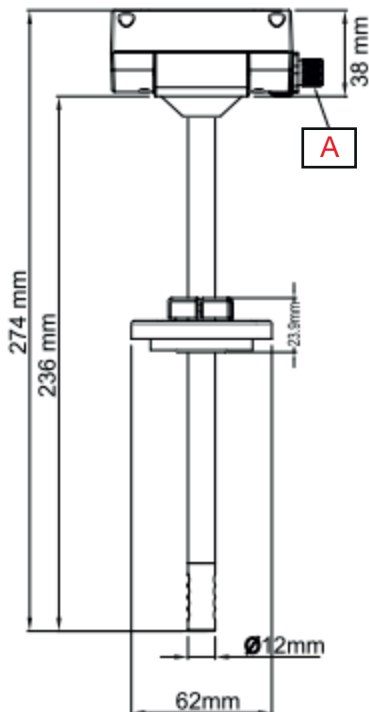


Fig. 3 ESCO2D

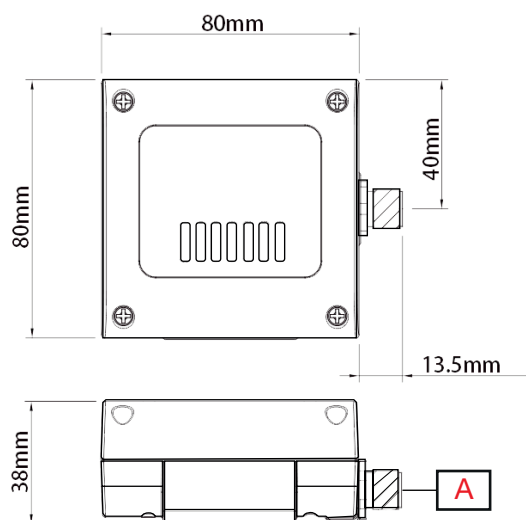


Fig. 4 ESCO2W

A	M12 x 1 connector
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## Compatibility and conformity

**Approvals and markings**

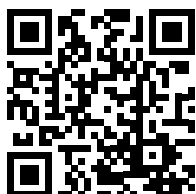
CE-marking	
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## Delivery contents and accessories

### ▶ Delivery contents

Environmental sensor: ESCO2xxxx  
M12 connector



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