

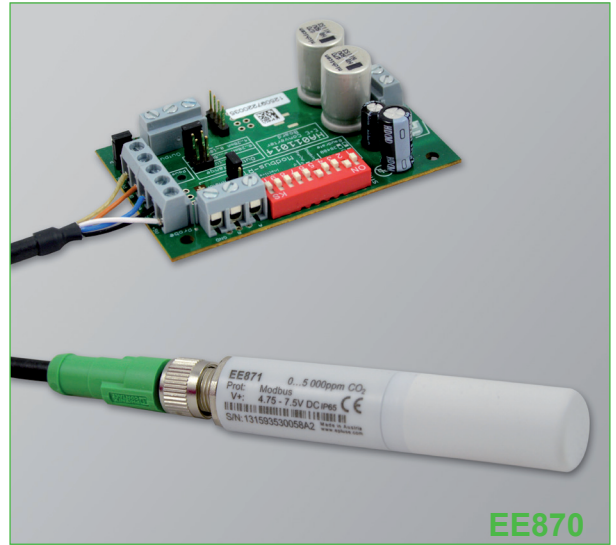
EE870

Modular CO₂ Transmitter for Demanding OEM Applications

The modular E+E CO₂ transmitter EE870 is designed for easy integration into OEM equipment for demanding applications.

The interchangeable CO₂ probe incorporates the dual wavelength NDIR CO₂ sensor, which compensates for ageing effects, is highly insensitive to pollution and offers outstanding long term stability. Multiple point CO₂ and temperature adjustments lead to excellent measurement accuracy over the entire temperature working range, ideal for use in agriculture and outdoors.

The IP65 enclosure and the replaceable PTFE filter offer excellent protection in harsh, polluted environments. The compact size, the M12 connector and the optional mounting flange allow for fast probe installation or replacement. An optional kit facilitates easy configuration and adjustment of the probe.



EE870

The measured data range of up to 10,000ppm is available on the analog outputs. Several voltage and current ranges can be selected with jumpers. Additionally, the data is available on the Modbus RTU interface, which can be configured by the user with DIP switches on the board.

Typical applications

Greenhouses
Fruit and vegetable storage
Stables
Hatchers
Incubators

Key features

Auto-calibration
Outstanding long-term stability
Temperature compensation
Interchangeable probe
Easy installation

Technical data

Digital CO₂ Probe EE871

Measuring principle	Dual wavelength (non-dispersive infrared technology) NDIR
Measurement range	0...2000 / 5000 / 10000ppm
Accuracy at 25°C and 1013mbar (77°F and 14.69psi)	0...2000ppm: < ± (50ppm +2% from the measured value) 0...5000ppm: < ± (50ppm +3% from the measured value) 0...10000ppm: < ± (100ppm +5% from the measured value)
Response time t ₉₀	60s and 105s selectable by software
Temperature dependency	typ. 1ppm CO ₂ /°C (-20...45°C) (-4...113°F)
Measurement interval	adjustable from 15s to 1h (Factory setting 15s)
Housing / Protection class	Plastic PC / Housing IP65
Cable length	max. 10m (32ft)
Electromagnetic compatibility (Industrial environment)	EN61326-1 EN61326-2-3



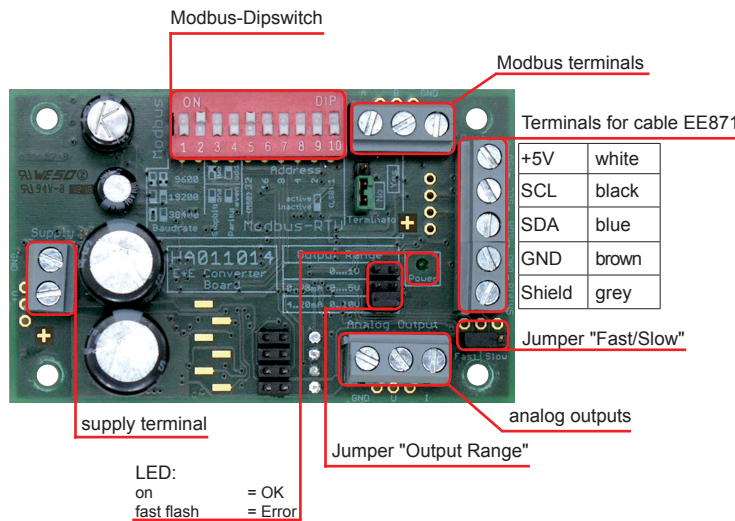
Conversion Board

Supply voltage	10-35VDC / 10-28.8VAC
Supply current	120mA at 24VDC / 300mA at 10VDC
Protection class	IP00
Electrical connection	screw terminal size: 2.5mm ²

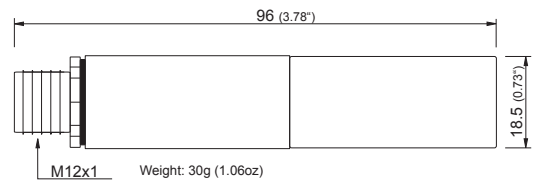
Technical data

Analog outputs selectable by jumpers	0-1V; 0-5V; 0-10V 0-20mA; 4-20mA	$-1\text{mA} < I_L < 1\text{mA}$ $R_L < 500\Omega$
Resolution	12bit	
Response time t_{90}	60s or 105s selectable by jumpers	
Modbus RTU	setup with dip switches (see operation manual)	
Temperature dependence	Voltage: typ. $\pm 0.2\text{mV} / ^\circ\text{C}$ Current: typ. $\pm 1\mu\text{A} / ^\circ\text{C}$	
EE870 Operating conditions	-40...60°C (-40...140°F) 0...95% RH (not condensating) 85...110kPa (12.33...15.95psi)	
EE870 Storage condition	-40...60°C (-40...140°F) 0...95% RH (not condensating) 70...110kPa (10.15...15.95psi)	

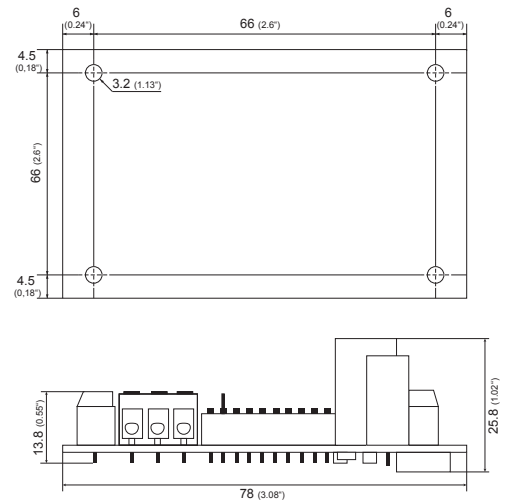
Connection



Dimensions mm (inch) Digital CO₂ Probe EE871



Conversion Board



Ordering information

Configuration

MEASUREMENT RANGE	TYPE	FILTER	CABLE LENGTH
0...2000ppm (02)	CO ₂ (C)	PTFE-Filter (E)	1m (C)
0...5000ppm (05)			2m (E)
0...10000ppm (10)			5m (G)
			10m (H)
EE870-			

EE870-02CEG

Measurement range: 0...2000ppm
Type: CO₂
Filter: PTFE
Cable length: 5m

Spare parts and Accessories (see data sheet "Accessories")

Replacement probe EE871-xC2	see data sheet EE871
Connecting cable	HA0108xx
Probe Mounting Flange	HA010212

Support literature

www.epluse.com/EE870