

CO₂ TRANSMITTER FOR AGRICULTURE APPLICATION

EE82 Series

Measuring instruments in green houses or life stock barns are exposed to very demanding environment: high humidity levels, pollutants like fertilizers, herbicides and high ammonia concentrations are just a few of the many hazards. The robust, functional housing of the EE82 with integrated special filter has been designed for such applications.

The air diffuses through the filter into the instrument enclosure. Then the air diffuses further through a second membrane filter integrated in the CO₂ measuring cell.

The CO₂ measurement is based on the non-dispersive infrared (NDIR) technology. The patented auto-calibration procedure compensates for aging of the infrared source and guarantees high reliability, long term stability and eliminates the need of periodical recalibration in the field.

The measuring range is 0...2000/5000/7000ppm; the output signal is 0-10V or 4-20mA.

The very practical snap-in mounting flange and connector for the supply voltage and outputs allow quick and easy installation of the EE82 without ever opening the housing.



Typical Applications

- Green houses
- Fruit and vegetable storage
- Life stock barns

Features

- Easy installation
- Compact housing
- Auto-calibration
- Measuring range 0...2000/5000/7000ppm

Technical Data EE82

Measuring Value

Measurement principle	Non-Dispersive Infrared Technology (NDIR)	
Sensor element	E+E Dual Source Infrared System	
Measuring range	0...2000/5000/7000ppm	
Accuracy at 20°C (68°F) and 1013mbar	0...2000ppm	< ± (50ppm +2% of measuring value)
	0...5000ppm	< ± (50ppm +3% of measuring value)
	0...7000ppm	< ± (50ppm +5% of measuring value)
Response time $\tau_{63}^{1)}$	< 120s	
Temperature dependence	typ. 2ppm CO ₂ /°C	
Long term stability	typ. 20ppm / year	
Sample rate	ca. 30s	

Outputs

0...2000/5000/7000ppm	0 - 10V	-1mA < I _L < 1mA
	4 - 20mA	R _L < 500 Ohm

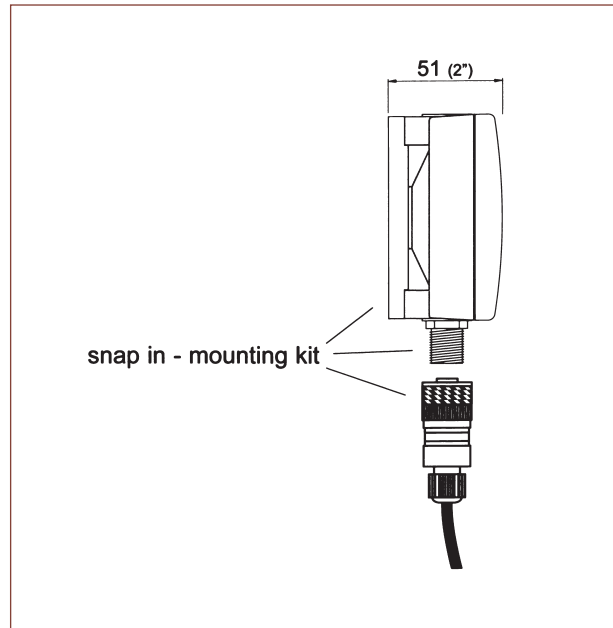
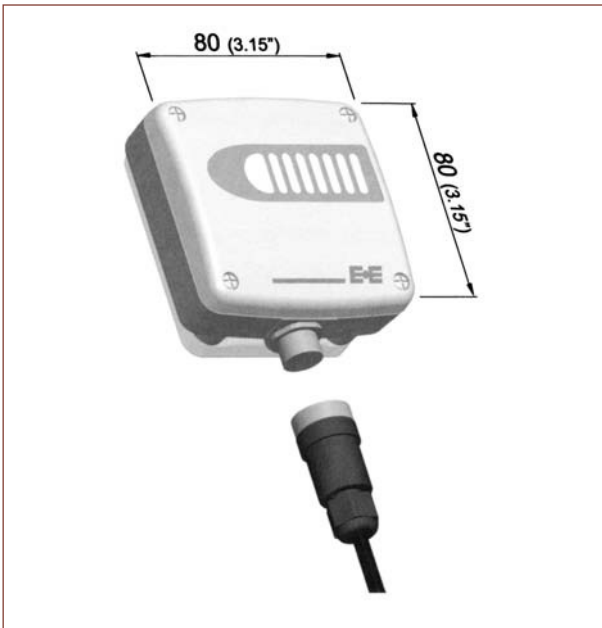
General

Supply voltage SELV	24V AC ±20%	15 – 35V DC	SELV = Safety Extra Low Voltage
Power requirement	< 3W		
Warm up time	< 5 min		
Housing / protection class	PC / IP65		
Electrical connection	M12 plug		
Electromagnetic compatibility	EN 61000-6-3	ÖVE EN61326-1+A1+A2:05.2002	CE
	EN 61000-6-1	FCC part 15 ICES-003 Class B	
Working temperature and conditions	-20...60°C (-4...140°F)	0...100% RH	
Storage temperature and conditions	-20...60°C (-4...140°F)	0...95% RH (not condensation)	

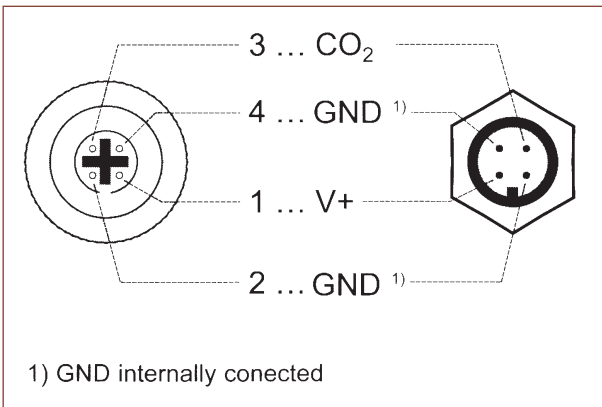
¹⁾ minimum air velocity 1m/s (200ft/min).

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Dimensions (mm)



Connection Diagram



Ordering Guide EE82

Measuring Range	Model	Output
0...2000ppm (2)	CO ₂	0-10V (3)
0...5000ppm (5)		4-20mA (6)
0...7000ppm (7)		
EE82-		

Order Example

EE82-5C3

Measuring range: 0...5000ppm

Model: CO₂

Output: 0 - 10V

