

EE82 Series

CO₂ Transmitter for Agriculture Applications

Measuring instruments in green houses or life stock barns are exposed to a 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.



EE82

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

Measuring Values

Measuring principle	Non-Dispersive Infrared Technology (NDIR)		
Sensing 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		

Output

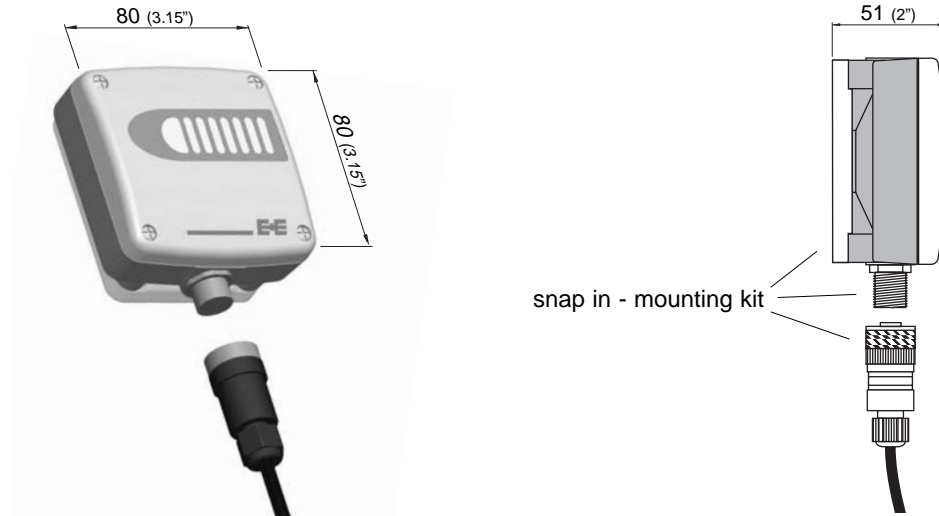
0...2000/5000/7000ppm	0 - 10V	-1mA < I _L < 1mA
	4 - 20mA	R _L < 500 Ohm

General

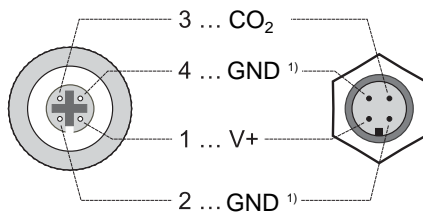
Supply voltage SELV	24V AC ±20%	15 - 35V DC	SELV = Safety Extra Low Voltage
Power requirement	< 3W		
Warm up time	< 5 min		
Housing / protection class	PC / IP54		
Electrical connection	M12 plug		
Electromagnetic compatibility	EN 61000-6-3	ÖVE EN61326-1+A1+A2:05.2002	
	EN 61000-6-1	FCC Part 15 ICES-003 ClassB	
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 condensating)

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

Dimensions (mm)



Connection Diagram



1) GND internally connected

Ordering Guide

MEASURING RANGE	MODEL	OUTPUT
0...2000ppm (2)	CO ₂ (C)	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