

EE820

CO₂ Transmitter for Demanding Applications

The EE820 is designed for use in harsh, demanding applications. A multiple point CO₂ and temperature factory adjustment procedure leads to excellent CO₂ measurement accuracy over the entire temperature working range, so the EE820 can even be installed outdoors.

The EE820 incorporates the E+E dual wavelength NDIR CO₂ sensor, which compensates for ageing effects, is highly insensitive to pollution and offers outstanding long term stability. With its robust, functional housing with a special integrated filter the EE820 can be installed in polluted applications such as in agriculture and live stock barns.

An optional M12 connector facilitates easy removal of EE820 before site cleaning operations.



The measured data range of up to 10,000ppm is available on the voltage or current analogue outputs. An optional kit facilitates easy configuration and adjustment of the EE820.

Typical Applications

- Greenhouses
- Fruit and vegetable storage
- Stables
- Hatchers and Incubators
- Vehicles, Trains, Trams

Key Features

- Autocalibration
- Outstanding long-term stability
- Temperature compensation
- High resistance to pollution
- Easy installation

Technical Data

Measured values

Measuring principle	dual wavelength non-dispersive infrared technology (NDIR)	
Measurement range	0...2000 / 5000 / 10000ppm	
Accuracy at 25°C and 1013mbar (77°F...14,7psi)	0...2000ppm:	< ± (50ppm +2% of measured value)
	0...5000ppm:	< ± (50ppm +3% of measured value)
	0...10000ppm:	< ± (100ppm +5% of measured value)
Response time τ ₆₃	typ. 300s	
Temperature dependency	typ. 1ppm CO ₂ /°C (-20...45°C) (-4...113°F)	
Sample rate	approx. 15s	

Output

0...2000 / 5000 / 10000ppm	0 - 5 / 0 - 10V	-1mA < I _L < 1mA
	4 - 20mA	R _L < 500 Ohm

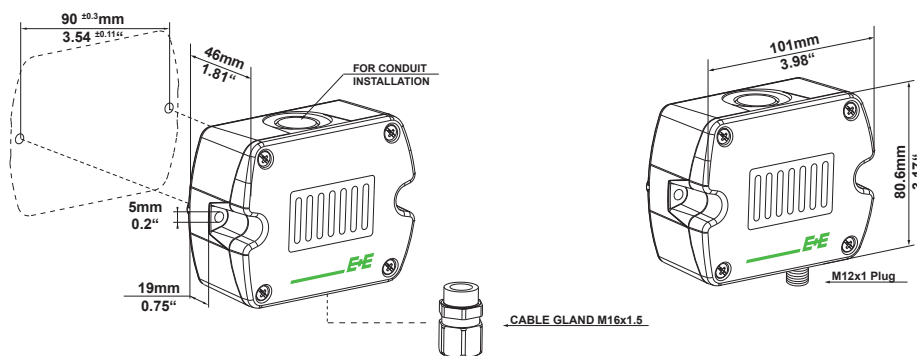
General

Supply voltage	24V AC ±20%	15 - 35V DC
Current consumption	typ. 15mA + output current max. 0.5A for 0.3s	
Warm up time ¹⁾	< 5 min	
Housing material	Polycarbonate, UL94V-0 approved	
Protection class	IP54	
Electrical connection	Screw terminals 2.5mm ² or M12 plug	
Electromagnetic compatibility	EN61326-1	EN61326-2-3 Industrial Environment
	FCC Part 15	ICES-003 ClassB
Working conditions	-20...60°C (-4...140°F) 0...100% RH (non-condensing)	
Storage conditions	-20...60°C (-4...140°F) 0...95% RH (non-condensing)	



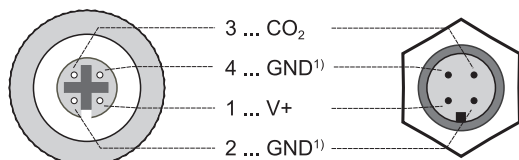
1) for performance according to specification

Dimensions (mm/inch)



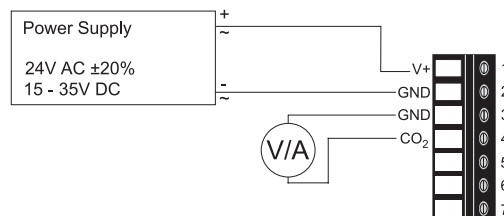
Connection Diagram

EE820 with M12 plug



1) GND internally connected

EE820 with cable gland



Ordering Guide

MODEL	ANALOGUE	DIGITAL	HOUSING	CONNECTION	SCALING	RESPONSE TIME
CO ₂ (C)	0-5V (2) 0-10V (3) 4-20mA (6)	none (x)	standard (P)	cable gland (P) M12 plug (N)	0...2000ppm (002) 0...5000ppm (005) 0...10000ppm (010)	standard (S)
EE820-						

Order Example

EE820-C6xPP-002S

Model: CO₂
Analog output: 4-20mA
Housing: standard
Connection: cable gland
Scaling: 0...2000ppm
Response time: standard

Accessories (see data sheet „Accessories“)

Product configuration adapter
Product configuration software
Female connector 4pol. self assembly M12x1
Connection cable 5 pins, M12x1 socket - flying leads,shielded, 1,5m (3.3ft)
Connection cable 5 pins, M12x1 socket - flying leads,shielded, 5m (16.4ft)
Connection cable 5 pins, M12x1 socket - flying leads,shielded, 10m (32.8ft)
Protective cap for female M12 connectors
Protective cap for male M12 connectors
Power supply adapter

see data sheet EE-PCA
EE-PCS (free download: www.epluse.com/EE820)
HA010707
HA010819
HA010820
HA010821
HA010781
HA010782
V03

Support Literature

www.epluse.com/EE820