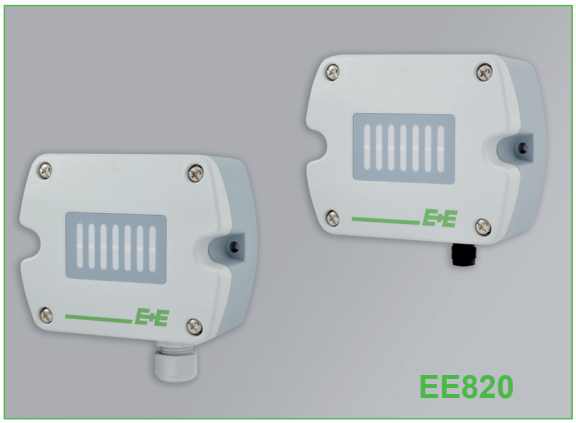
EE820

CO_2 Transmitter for Demanding Applications

The EE820 is designed for use in harsh, demanding applications. A multiple point CO_2 and temperature factory adjustment procedure leads to excellent CO_2 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 CO_2 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 measuring value)
	0...5000ppm:	< ± (50ppm +3% of measuring value)
	0...10000ppm:	< ± (100ppm +5% of measuring 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

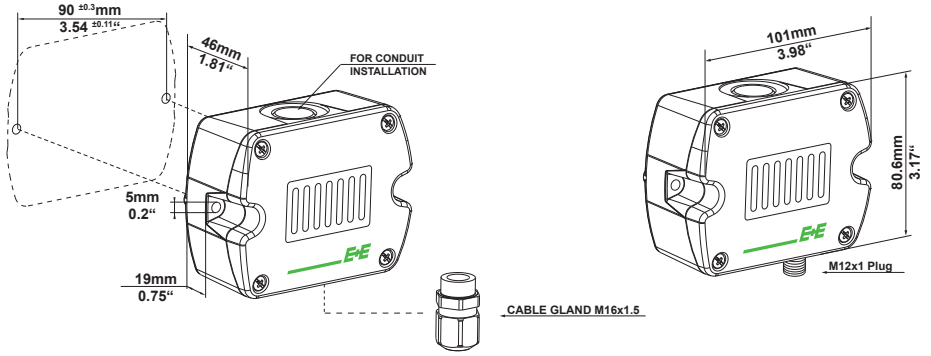
0...2000 / 5000 / 10000ppm	0 - 5 / 0 - 10V	-1mA < I_L < 1mA
	4 - 20mA	R_L < 500 Ohm

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 2.5mm² or M12 plug		
Electromagnetic compatibility	EN61326-1	EN61326-2-3	Industrial Environment
	FCC Part 15	ICES-003 ClassB	
Working temperature and conditions	-20...60°C (-4...140°F)	0...100% RH (non-condensing)	
Storage temperature and conditions	-20...60°C (-4...140°F)	0...95% RH (non-condensing)	

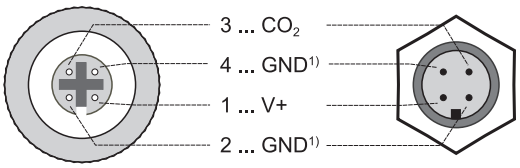
1) for performance according to specification

Dimensions (mm/inch)



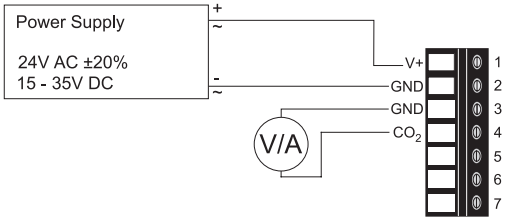
Connection Diagram

EE820 with M12 plug



1) GND internally conected

EE820 with cable gland



Ordering Guide

MODEL	ANALOGUE	DIGITAL	HOUSING	CONNECTION	SCALING
CO_2 (C)	0-5V (2)	none (x)	standard (P)	cable gland (P)	0...2000ppm (002)
	0-10V (3)			M12 plug (N)	0...5000ppm (005)
	4-20mA (6)				0...10000ppm (010)
EE820-					

Order Example

EE820-Cx6xPP-002

Model:	CO_2
Analog output:	4-20mA
Housing:	standard
Connection:	cable gland
Scaling:	0...2000ppm

Accessories

Configurations kit consisting of:

- Product configuration adapter	EE-PCA (data sheet EE-PCA)
- Product configuration software	EE-PCS (free download: www.epluse.com/EE820)
- Connection cable	HA011062
Female connector 4pol. self assembly M12x1	HA010707
Connection cable 4pol. M12x1 male-female, shielded, 2m (6.5ft)	HA010816
Connection cable 4pol. M12x1 male-female, shielded, 5m (16.4ft)	HA010817
Connection cable 4pol. M12x1 male-female, shielded, 10m (32.8ft)	HA010818
Protective cap for female M12 connectors	HA010781
Protective cap for male M12 connectors	HA010782

Support Literature

www.epluse.com/EE820