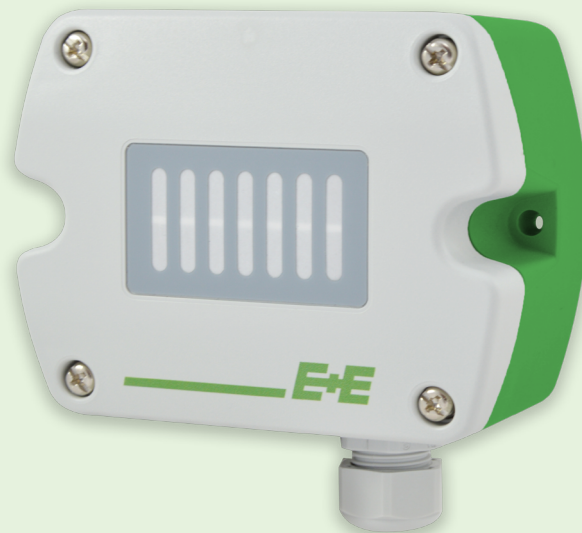




—
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technology.

+ Datasheet EE820

CO₂ Sensor for Demanding Applications



EE820

CO₂ Sensor for Demanding Applications

The EE820 CO₂ sensor is optimized for use in harsh, demanding applications, such as hatchers, incubators, life stock barns or greenhouses.

Outstanding Accuracy

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.

Long-term Stability

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.

High Resistance to Pollution

With its robust, functional IP54 enclosure with a special filter the EE820 can be employed even in harsh environment.

Fast Response Time

For an even lower response time, a forced air circulation module is available as an accessory.

Analogue Output

The CO₂ measured data with range up to 10 000 ppm is available on the analogue output (voltage/current).

Easy Configuration and Adjustment

An optional adapter and the free EE-PCS Product Configuration Software facilitate the configuration and adjustment of the EE820.



EE820 with cable gland



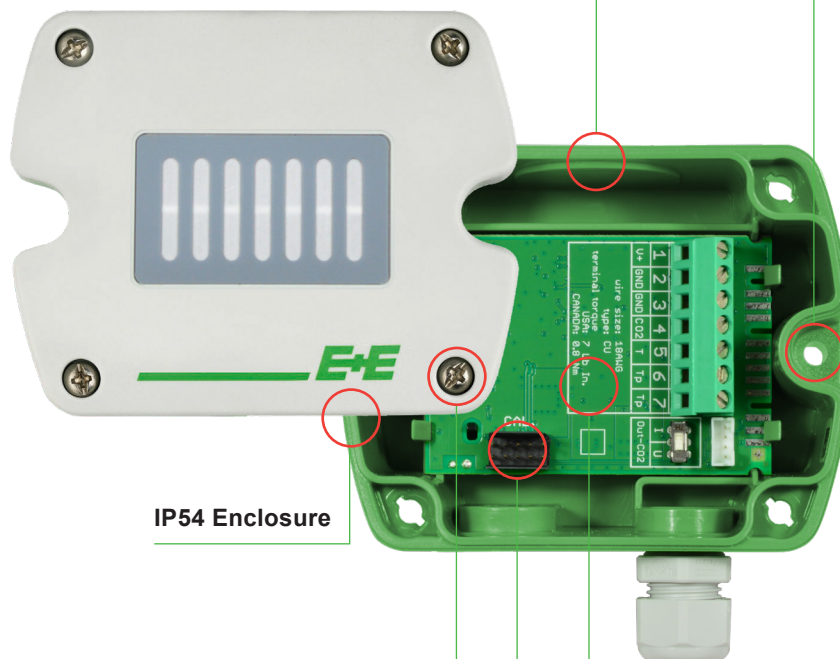
EE820 with M12x1 plug

Features

External Mounting Holes

- Easy and fast mounting with closed cover
- Electronics protected against construction site pollution

Knockout for 1/2" Conduit Fitting (US)



IP54 Enclosure

Bayonet screws

- Open/closed with a 1/4 rotation

Electronics

- Optimum protection against mechanical damage during installation
- CO₂ auto-calibration
- Temperature compensation
- Excellent resistance to pollution

Service interface for configuration and adjustment

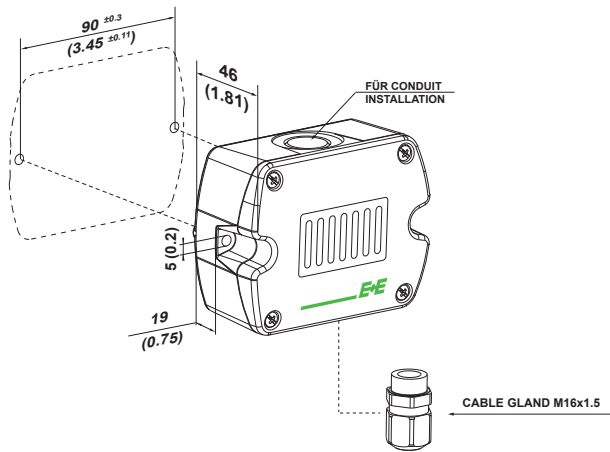
Test Report

According to DIN EN 10204-2.2

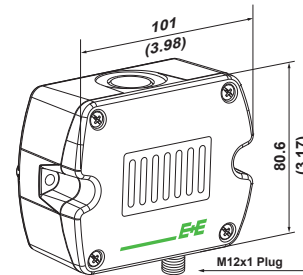
Dimensions

Values in mm (inch)

EE820 with cable gland



EE820 with plug



Tecnical Data

Measurands

CO₂

Measurement principle	Dual wavelength non-dispersive infrared technology (NDIR)
Measuring range	0...2 000/5 000/10 000 ppm
Accuracy @ 25 °C (77 °F) and 1 013 mbar (14.7 psi)	0...2 000 ppm < ±(50 ppm + 2 % of measured value) 0...5 000 ppm < ±(50 ppm + 3 % of measured value) 0...10 000 ppm < ±(100 ppm + 5 % of measured value)
Temperature dependency in the range of -20...45 °C (-4...113 °F)	±(1 + CO ₂ concentration [ppm] / 1 000) ppm/°C
Response time t ₆₃ , typ.	300 s
Sampling interval	Approx. 15 s




Outputs

Analogue

CO ₂	0...2 000/0...5 000/0...10 000 ppm	0 - 10 V 4 - 20 mA	-1mA < I _L < 1 mA R _L ≤ 500 Ω	I _L = load current R _L = load resistance
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Technical Data

General

Power supply class III  USA & Canada: Class 2 supply necessary, max. voltage 30 V DC	24 V DC $\pm 20\%$ 15 - 35 V DC
Current consumption , typ.	15 mA + output current
Peak current , max. @ analogue output	350 mA for 0.3 s
Warm-up time ¹⁾	< 5 min
Electrical connection	Screw terminals max. 2.5 mm ² or M12 plug
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
Enclosure Material Protection rating	Polycarbonate (PC), UL94 V-0 approved IP54
Electromagnetic compatibility	EN 61326-1 EN 61326-2-3 Industrial environment FCC Part15 Class B ICES-003 Class B
Conformity	 

1) For performance according to specification.

Ordering Guide

Feature	Description	Code		
Hardware Configuration		EE820-		
	CO ₂ measuring range	0...2000 ppm	HV1	
		0...5000 ppm	HV2	
		0...10000 ppm	HV3	
	Analogue output	0 - 10 V	A3	
		4 - 20 mA	A6	
	Electrical connection	M16x1.5 cable gland	E1	
		M12 connector, 4 poles		E9
	Accessories	No accessories		AC0
		M12x1 cable socket, for self assembly		AC2

Order example

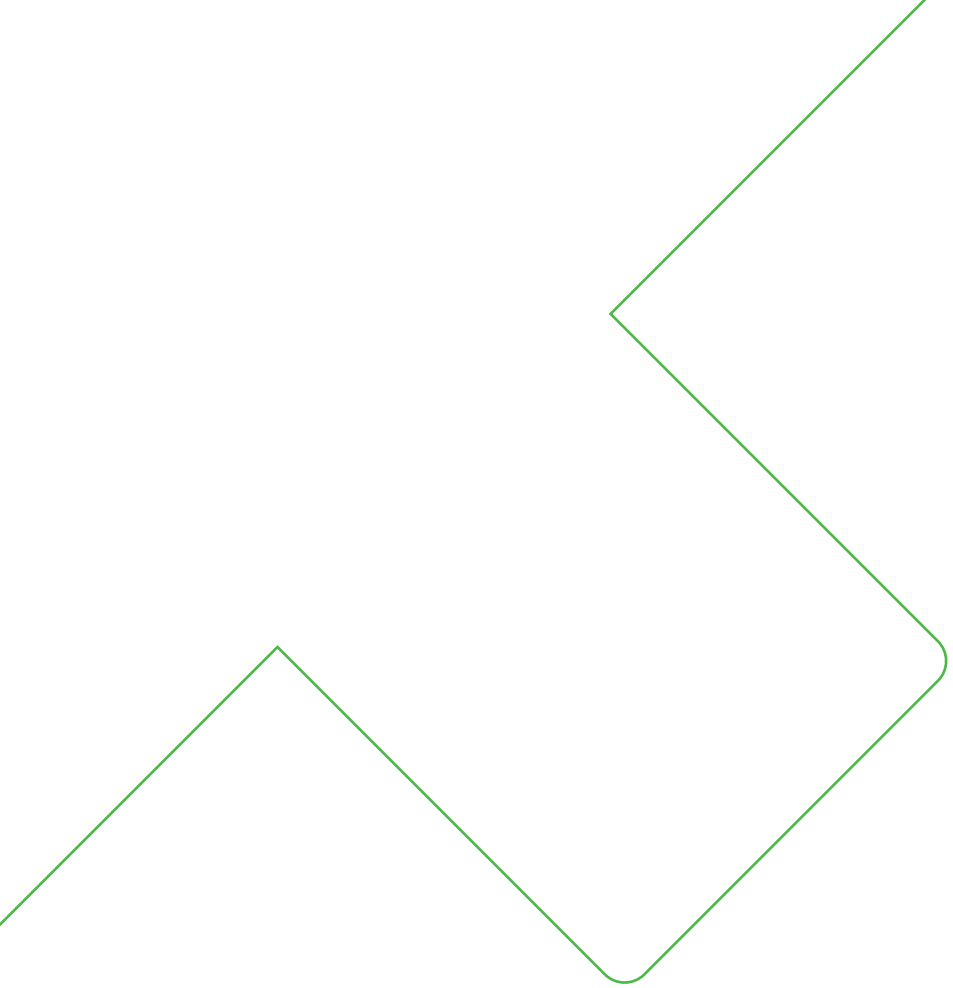
EE820-HV2A6E1AC0

Feature	Code	Description
CO ₂ measuring range	HV2	0...5000 ppm
Analogue output	A6	4 - 20 mA
Electrical connection	E1	M16 cable gland
Accessories	AC0	No accessories

Accessories

For further information, see data sheet [Accessories](#).

Accessories	Code	
USB configuration adapter	HA011066	
E+E Product Configuration Software (Free download: www.epluse.com/configurator)	EE-PCS	
EE820-FAC Forced Air Circulation Module	HA011302	
Connection cable M12x1 socket - flying leads	1.5 m (3.3ft)	HA010819
	5 m (16.4 ft)	HA010820
	10 m (32.8 ft)	HA010821
Protective cap for female M12 connectors	HA010781	
Protective cap for male M12 connectors	HA010782	
Power supply adapter	V03	



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