

USER'S GUIDE

EE820 – CO₂ Transmitter for Demanding Applications

GENERAL

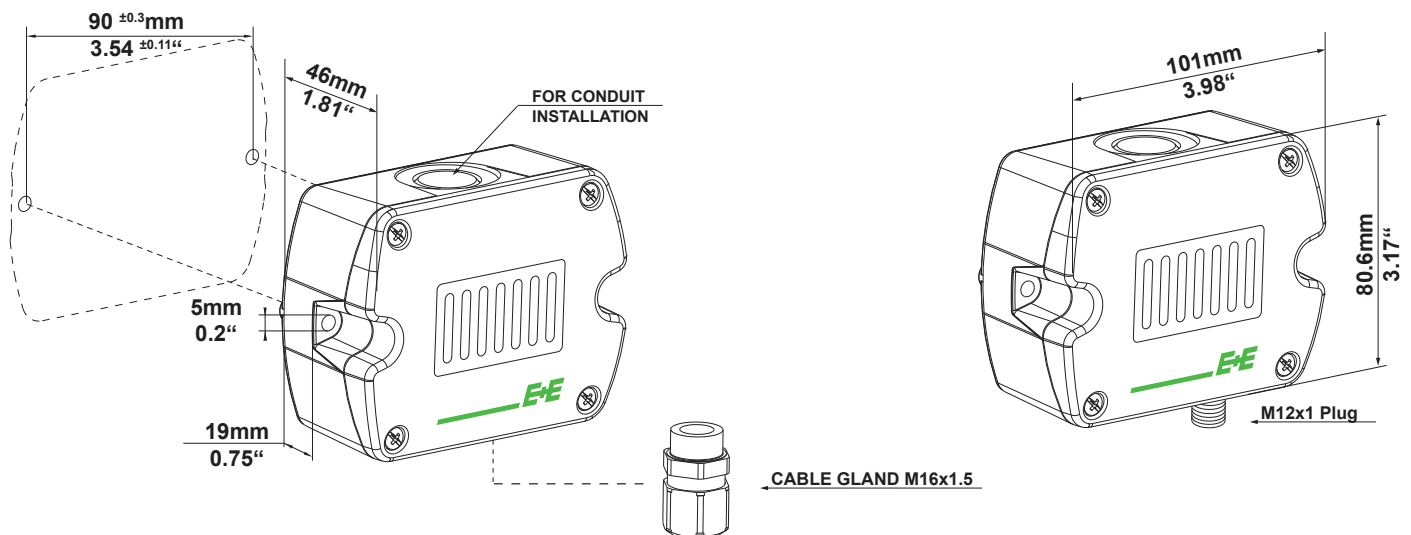
The EE820 transmitter is designed for the measurement of CO₂ in demanding applications. It incorporates the E+E dual wavelength NDIR CO₂ sensor, which compensates for ageing effects, is highly insensitive to pollution and offers outstanding long term stability.

For use in special applications do not hesitate to contact E+E Elektronik or a local distributor.

CAUTION

- The transmitter shall not be exposed to extreme mechanical or thermal stress.
- For use in polluted, dirty environment is essential to close tightly the transmitter cover as well as the cable gland or conduit adapter in order to avoid pollution ingress into the enclosure.

INSTALLATION/DIMENSIONS



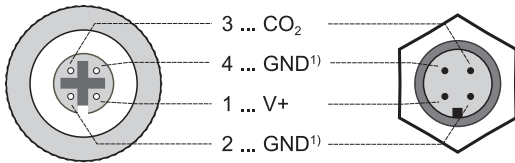
EE820 with M12 plug does not require any wiring inside the device. The external mounting holes allow the device to be mounted without opening the front cover. Please see EE820 data sheet for optional M12 plugs and cables.

EE820 with cable gland: Use a matching wrench to install the cable gland (in the scope of supply) onto the EE820 enclosure. While doing this the blind will knock open. Do not use other, pointed, tools to knock open the blind in order to avoid damaging the electronics inside the enclosure.

EE820 with conduit connection for the North American market: use a flat screwdriver to knock open the blind, carefully, in order to avoid damaging the electronics inside the enclosure. The conduit adapter is not included in the scope of supply.

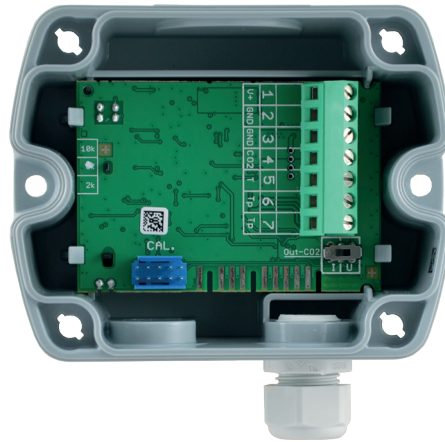
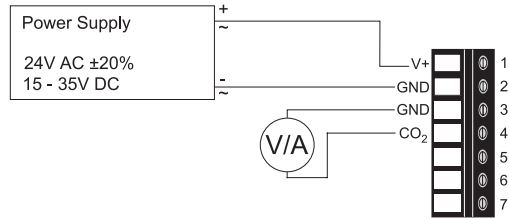
CONNECTION DIAGRAM

EE820 with M12 plug



1) GND internally connected

EE820 with cable gland



TECHNICAL DATA

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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)	

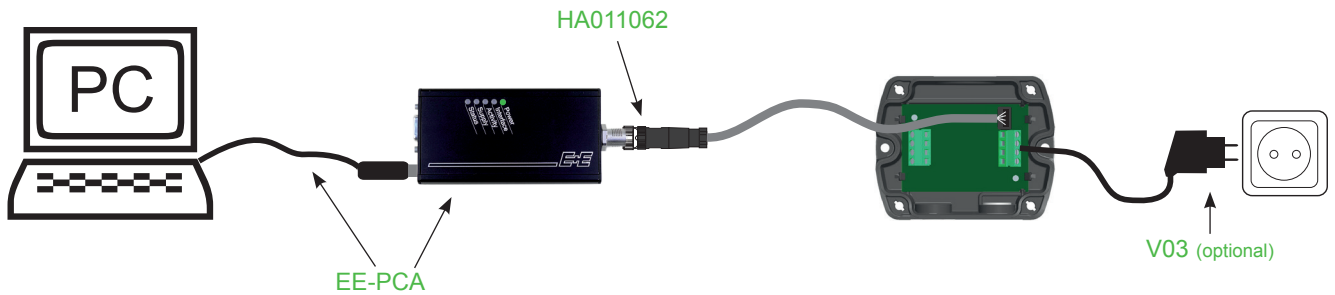


1) for performance according to specification

SETUP AND ADJUSTMENT

The EE820 transmitter is ready to use and does not require any configuration by the user. The factory setup of EE820 corresponds to the type number ordered. For ordering guide please see data sheet at www.epluse.com/EE820

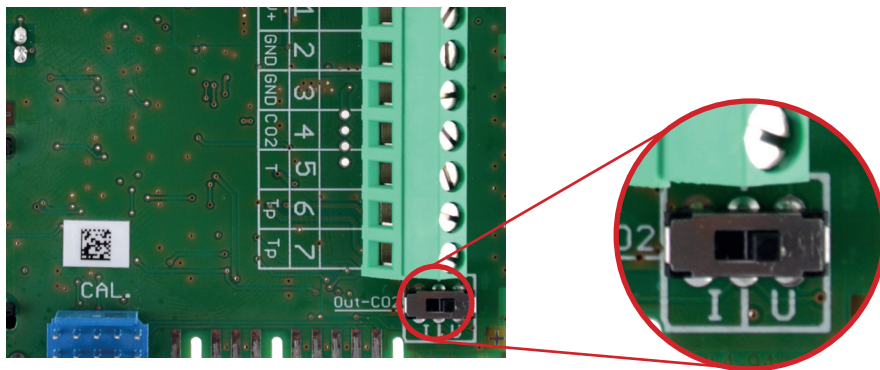
If needed, the user can change the factory setup by using the optional Product Configuration Adapter EE-PCA and the Product Configuration Software EE-PCS. One can change the output signal, the scaling of the output and perform CO₂ adjustment/calibration.



Changing the output signal:

The output signal can be changed from voltage to current or vice-versa.

Set the output signal selection switch to I for current 4 - 20mA output or to U for voltage 0 - 10V output. The original CO₂ output range does not change and the calibration data remains valid.



Example:

Factory setup: voltage output (U), output scale: 0 - 10V = 0 - 5000ppm

User setup (after setting the output signal selection switch to I): current output (I), output scale: 4 - 20mA = 0 - 5000ppm.

Changing the output scale:

The scaling of the output can be changed by using EE-PCA and EE-PCS.

Example:

The initial scaling of the output is 4 - 20mA = 0 - 5000ppm. The output scale after the change can be 4 - 20mA = 400 - 4000ppm.

Important:

- After changing the factory setup (output signal and/or output scale) the original type number on the EE820 identification label loses its validity; it does not match any longer the device setup.
- The return to factory setup function of EE-PCS restores the original adjustment/calibration of the device, but does not affect the user setup for output signal and output scale.

For EE-PCA product data sheet please see www.epluse.com/EE820

The EE-PCS Product Configuration Software is available for free download at www.epluse.com/configurator.

INFORMATION

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