



USER'S GUIDE

EE820 – CO₂ Transmitter for Demanding Applications

GENERAL

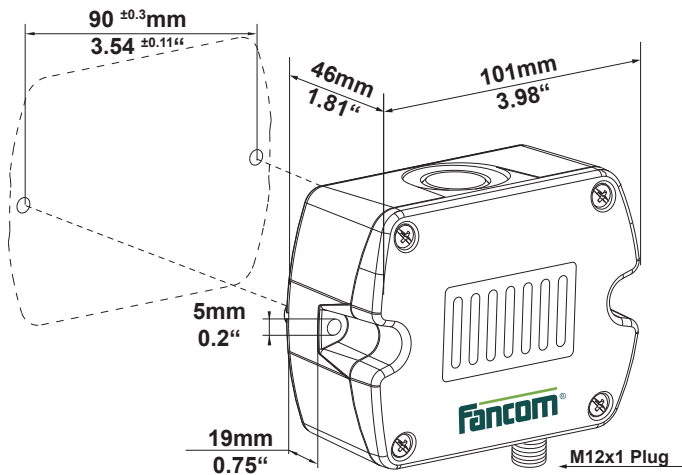
The EE820 transmitter is designed for the measurement of CO₂ in demanding applications. It incorporates the dual wavelength NDIR CO₂ sensor, which compensates for ageing effects, is highly insensitive to pollution and offers outstanding long term stability.

For use in special applications do not hesitate to contact Fancom 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.

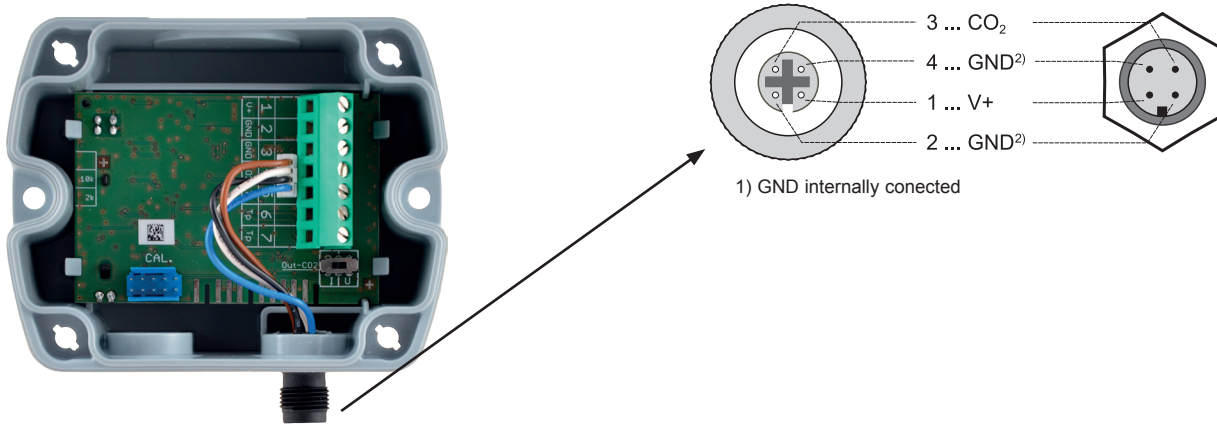
EE820 with cable



Mounting material for EE820



CONNECTION DIAGRAM

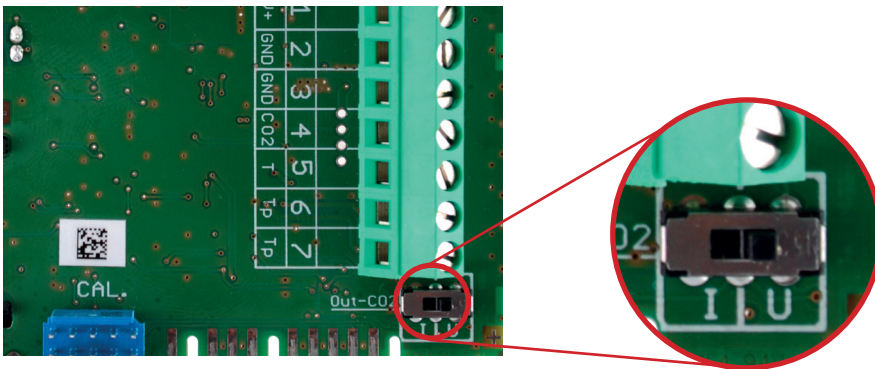


SETUP

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.

TECHNICAL DATA

(Modification rights reserved)

Measured values

Measuring principle	dual wavelength non-dispersive infrared technology (NDIR)	
Measurement range	0...5000ppm	
Accuracy at 25°C and 1013mbar (77°F...14.7psi)	0...5000ppm: < ± (50ppm +3% 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...5000ppm	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	M12x1.5 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

DECLARATION OF CONFORMITY

(According to ISO/IEC 17050-1)

Product(s) Type	From Version:	Measure:	Output signal:
EE820-Cxxx	151308_2	CO2 / temperature	0-5V, 0-10V 4-20mA



Fancom BV
Wilhelminastraat 17
5981 XW Panningen
The Netherlands

We declare under our sole responsibility that this product(s) (see product table above) corresponds to the following regulations and their subsequent modifications:

Directive Ref.	Directive area
2004/108/EC	Electromagnetic compatibility
2011/65/EC	RoHS

The products conform with the following standards or standardized documents:

Standard	Year of ratification
EN 61326-1	2006
EN 61326-2-3	2006
EN 50581	2012

Designed for use in industrial environment
Affixing of the CE marking (for the first time): 2011

Test Report: Conformity_EE820_01.doc
Modification: Product update

City: Panningen

Date: 15-7-2013

Paul Smits

Managing Director

INFORMATION T (31) 077 - 306 96 00 / fancom@fancom.com

Fancom BV
Wilhelminastraat 17
5981 XW Panningen
The Netherlands

