

EE85 Series

CO₂ Transmitter for Duct Mounting

Duct mounted CO₂ transmitters EE85 series are designed for HVAC applications. The CO₂ sensing element uses the Non-Dispersive Infrared Technology (NDIR). A patented auto-calibration procedure compensates for drift caused by the aging of the sensing element and guarantees outstanding long term stability.

Installed into a duct a small flow of air will be established by convection through the probe into the transmitter housing and back into the duct. Inside the transmitter housing the air will diffuse through a membrane into the CO₂ sensing element. The operation in closed loop air stream avoids pollution of the CO₂ sensor.

Measuring ranges 0...2000ppm and 0...5000ppm correspond to analogue voltage output 0 - 5/10V or 4 - 20mA. The instrument can be easily positioned in the duct with the standard mounting flange.


EE85

Typical Applications

building management for residential and office areas
ventilation control

Features

very simple installation
compact housing
auto-calibration

measuring ranges: 0...2000ppm or 0...5000ppm

Technical Data

Measuring Values

CO₂

Measurement principle	Non-Dispersive Infrared Technology (NDIR)	
Sensing element	E+E Dual Source Infrared System	
Measuring range	0...2000ppm / 0...5000ppm	
Accuracy at 20°C (68°F) and 1013mbar	0...2000ppm:	< ± (50ppm +2% of measuring value)
	0...5000ppm:	< ± (50ppm +3% of measuring value)
Response time τ_{63} ¹⁾	< 120s	
Temperature dependence	typ. 2ppm CO ₂ /°C	
Long term stability	typ. 20ppm / year	
Sample rate	ca. 30s	

Outputs

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

General

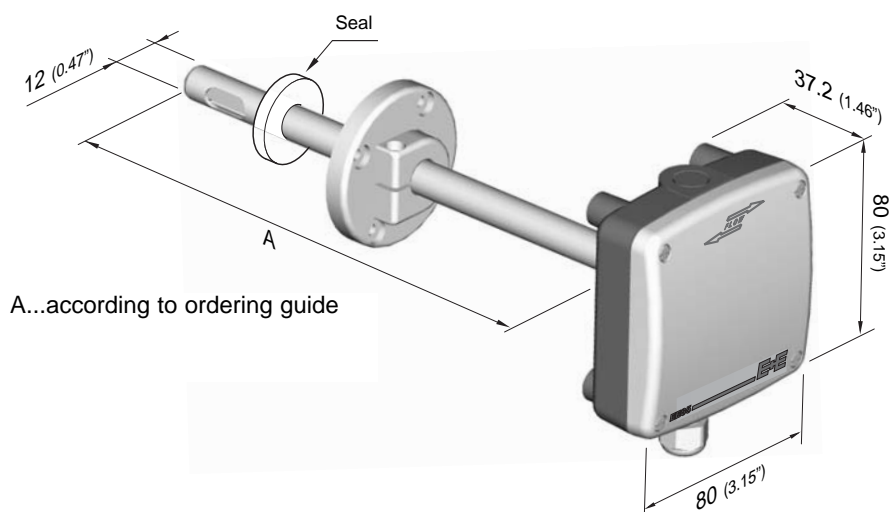
Supply voltage SELV	24V AC ±20%	15 - 35V DC
Power requirement	< 3W	
Warm up time ²⁾	< 5 min	
Housing / protection class	PC / housing: IP65, probe: IP20	
Cable gland	M16 x 1.5	cable Ø 4.5 - 10 mm (0.18 - 0.39")
Electrical connection	screw terminals max. 1.5 mm ² (AWG 16)	
Electromagnetic compatibility	EN 61000-6-3	ÖVE EN61326-1+A1+A2:05.2002
	EN 61000-6-1	FCC Part 15 ICES-003 ClassB
Working temperature and conditions	-5...55°C (23...131°F)	0...95% RH (not condensating)
Storage temperature and conditions	-20...60°C (-4...140°F)	0...95% RH (not condensating)

1) minimum flow speed 1m/s (200ft/min)

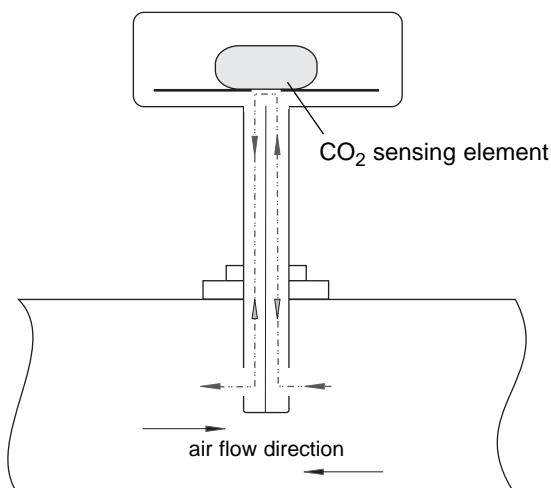
2) warm up time for performance according to specification



Dimensions (mm)

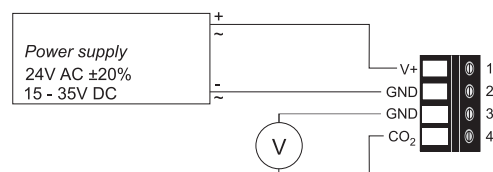


Operation Principle

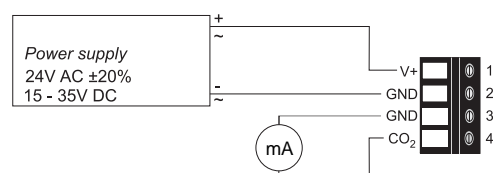


Connection Diagram

EE85-xC2/3x



EE85-xC6x



Ordering Guide

MEASURING RANGE	MODEL	OUTPUT	PROBE LENGTH (see dimensions "A")
0...2000ppm (2)	CO ₂ (C)	0 - 5V (2)	50mm (2)
0...5000ppm (5)		0 - 10V (3)	200mm (5)
		4 - 20mA (6)	
EE85-			

Order Example

EE85-5C35

measuring range: 0...5000ppm
 model: CO₂
 output: 0 - 10V
 probe length: 200mm

Contact

E+E ELEKTRONIK
 Langwiesen 7
 A-4209 Engerwitzdorf
 Austria

Tel: +43 7235 605 0
 Fax: +43 7235 605 8
 info@epluse.at
 www.epluse.com