

EE82

CO₂ Switch for harsh environment

EE82 is optimized for harsh climate control applications such as life stock barns or storage of fruit and vegetables. The robust enclosure has been tailored for best protection of the CO₂ sensing cell. The air diffuses first through the filter on the front cover into the instrument enclosure and then through a second membrane filter into the CO₂ sensing cell. As there is no flow through the sensing cell, this is very well protected against pollution.

The CO₂ measurement is based on the Non-Dispersive Infrared (NDIR) technology. A patented auto-calibration procedure compensates for the aging of the infrared source and leads to outstanding long-term stability.

EE82 is available with measuring ranges of 0...2000, 0...5000 or 0...10000ppm. The switch threshold and hysteresis can be set with potentiometers on the printed circuit board.

The EE82 with snap-in mounting flange and M12 electrical connector allows for easiest installation, replacement or removal of the device during site cleaning and sterilizing operation.



Typical Applications

fruit and vegetable storage
 life stock barns

Features

easy installation
 compact housing
 auto-calibration

Technical Data

Measured values

Measuring principle	Non-Dispersive Infrared Technology (NDIR)	
Sensing element	E+E Dual Source Infrared System	
Measuring range	0...2000 / 5000 / 10000ppm	
Accuracy at 25°C (77°F) and 1013mbar	0...2000ppm:	< ± (50ppm +2% of measuring value)
	0...5000ppm:	< ± (50ppm +3% of measuring value)
	0...10000ppm:	< ± (100ppm +5% of measuring value)
Response time τ_{95}	< 195s	
Temperature dependence	typ. 2ppm CO ₂ /°C	
Long term stability	typ. 20ppm / year	
Sample rate	approx. 15s	

Switch Output

Max. switching voltage	50V AC / 60V DC	
Max. switching load	0.7A at 50V AC	1A at 24V DC
Min. switching load	1mA at 5V DC	
Contact material	Ag+Au clad	

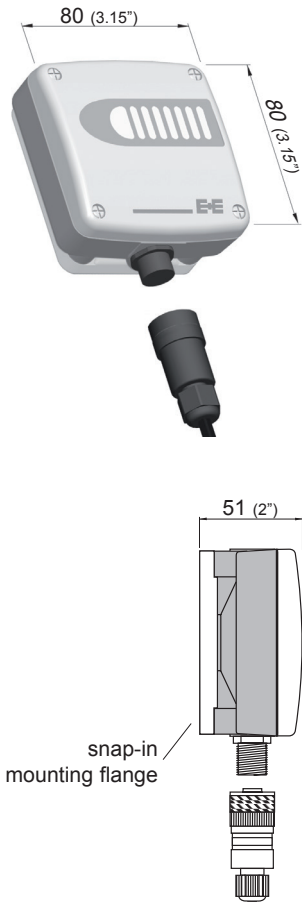
General

Supply voltage	24V AC ±20%	15 - 35V DC
Current consumption	typ. 10mA max. 0.5A for 0.3s	
Warm up time ¹⁾	< 5 min	
Housing / protection class	PC / IP54	
Electrical connection	M12 plug	
Electromagnetic compatibility	EN61326-1	FCC Part 15
	EN61326-2-3	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)

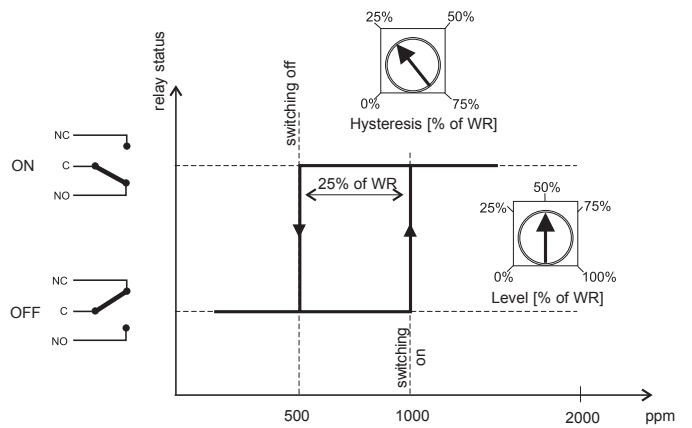
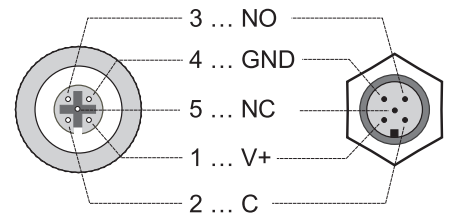
1) warm up time for performance according specification



Dimensions (mm)



Connection Diagram



NO = normally open
NC = normally closed
WR = working range

Ordering Guide

MEASURING RANGE	MODEL
0...2000ppm (2)	CO ₂ Switch (CS)
0...5000ppm (5)	
0...10000ppm (10)	
EE82-	

Order Example

EE82-5CS

Measuring range: 0...5000ppm
Model: CO₂ Switch