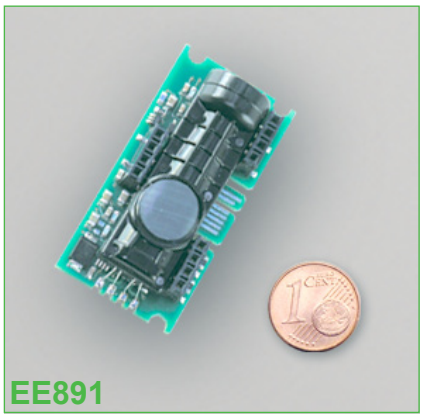
EE891 Series

CO_2 Sensor Module for OEM / HVAC Applications

The CO_2 sensor EE891 is based a second generation measuring cell and is specifically designed for mass production and OEM applications. It impresses with the compact design and is based on infrared technology (NDIR).



The EE891 is maintenance free because of the patented E+E auto-calibration feature, compensating for the effects of aging and therefore a guarantee for outstanding long-term stability.

The digital interface and the small design allow easy integration with e.g. controllers for automatic ventilation of living or workspaces or for data loggers.

The CO_2 sensor EE891 has exceptional low power consumption! Because of the adjustable measurement interval, the average power consumption can be reduced to less than 60µA. The perfect solution for battery powered devices.

The high measurement accuracy and the broad working range up to 10000-ppm makes the EE891 suitable for various applications.

Typical Applications

OEM
building management
demand HVAC installations
data loggers

Features

maintenance free
autocalibration
exeptional low power consumption
digital interface
highest accuracy
excellent long term stability
adjustable measurement interval

Technical Data

Measuring values

CO_2

Measurement principle	Non-Dispersive Infrared Technology (NDIR)		
Sensor	E+E Dual Source Infrared System		
Working 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 t_{90}	< 195s		
Temperature dependence	typ. 2ppm CO_2/°C (0...50°C / 32...122°F)		
Long term stability	typ. 20ppm / year		
Measuring time interval [1]	adjustable from 15s up to 1h		

Output

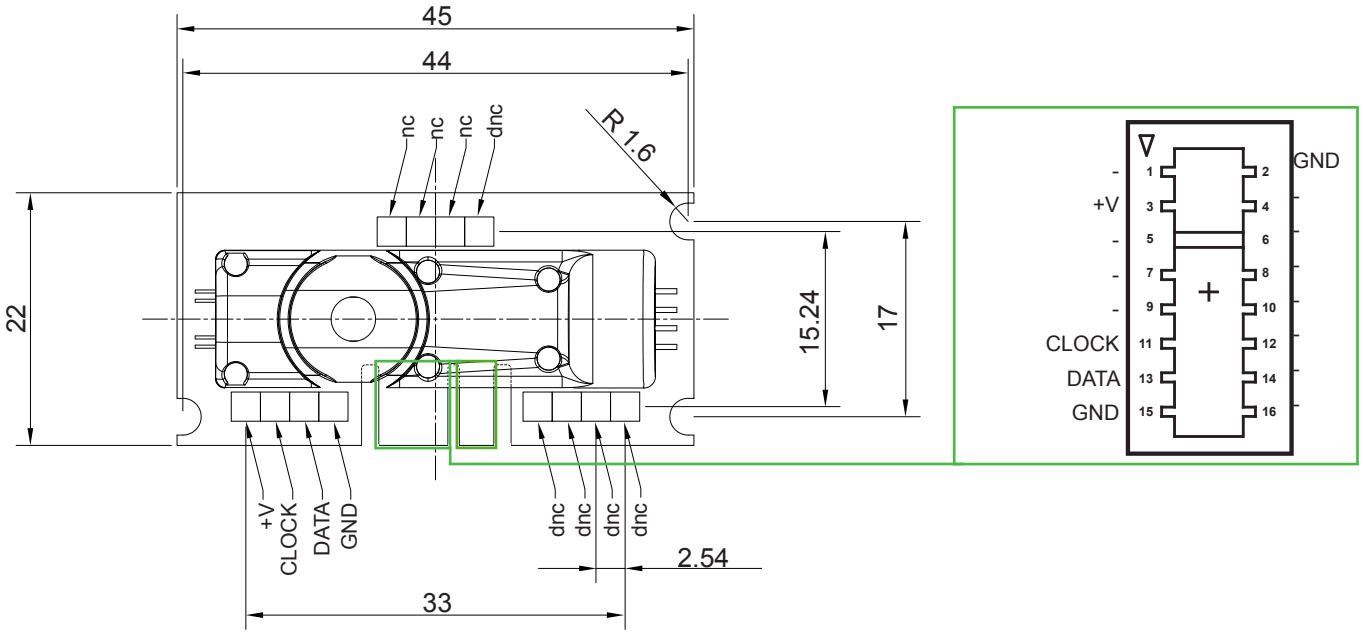
0...2000 / 5000 / 10000ppm	digital E2 interface (details: www.epluse.com)

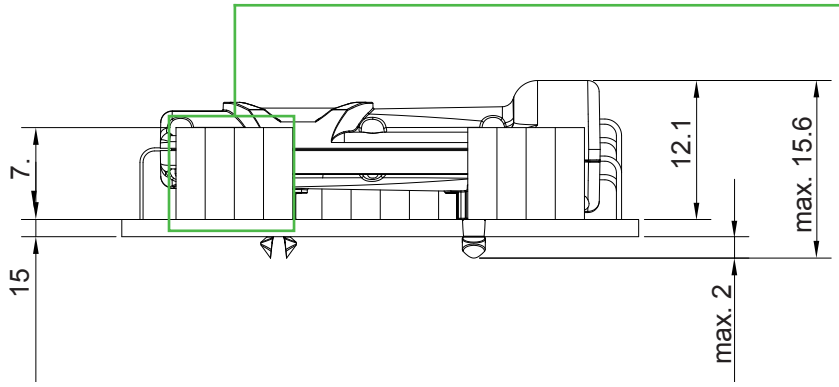
General

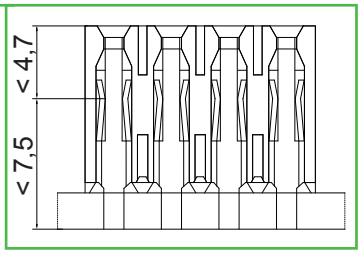
Supply voltage	4.75 - 7.5V DC		
Average power consumption [2]	3.7mA with 15s measurement interval		
	58µA with 1h measurement interval		
Peak current	max. 500mA for 0.05s		
Electrical connection	contact pads or contact pins, plug typ MEC1-108-2		
Working conditions	-40...60°C (-40...140°F)	5...95% RH (not condensating)	85...110kPa
Storage conditions	-40...60°C (-40...140°F)	5...95% RH (not condensating)	70...110kPa
Dimensions	45 x 22mm (1.8 x 0.9")		
Weight	approx. 15g (0.5oz)		

1) fatory setting = 15 sec.
2) the average power consumptions depends on the adjusted measuring time interval

Connection Diagram / Dimensions (mm)







Female connector strip fits for 0,64 □ pins

Ordering Guide

MEASURING RANGE	TYPE	OUTPUT
0...2000ppm (2) 0...5000ppm (5) 0...10000ppm (10)	CO_2 (C)	digital interface (9)
EE891-		

Order Example

EE891-2C9

measuring range: 0...2000ppm
type: CO_2
output: digital interface

Accessories

EE89x testboard (HA011010)