

EE891 Series CO₂ Sensor Module for OEM / HVAC Applications

The CO₂ 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 CO₂ 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
exceptional low power consumption
digital interface
highest accuracy
excellent long term stability
adjustable measurement interval

Technical Data

Measuring values

CO₂	
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)
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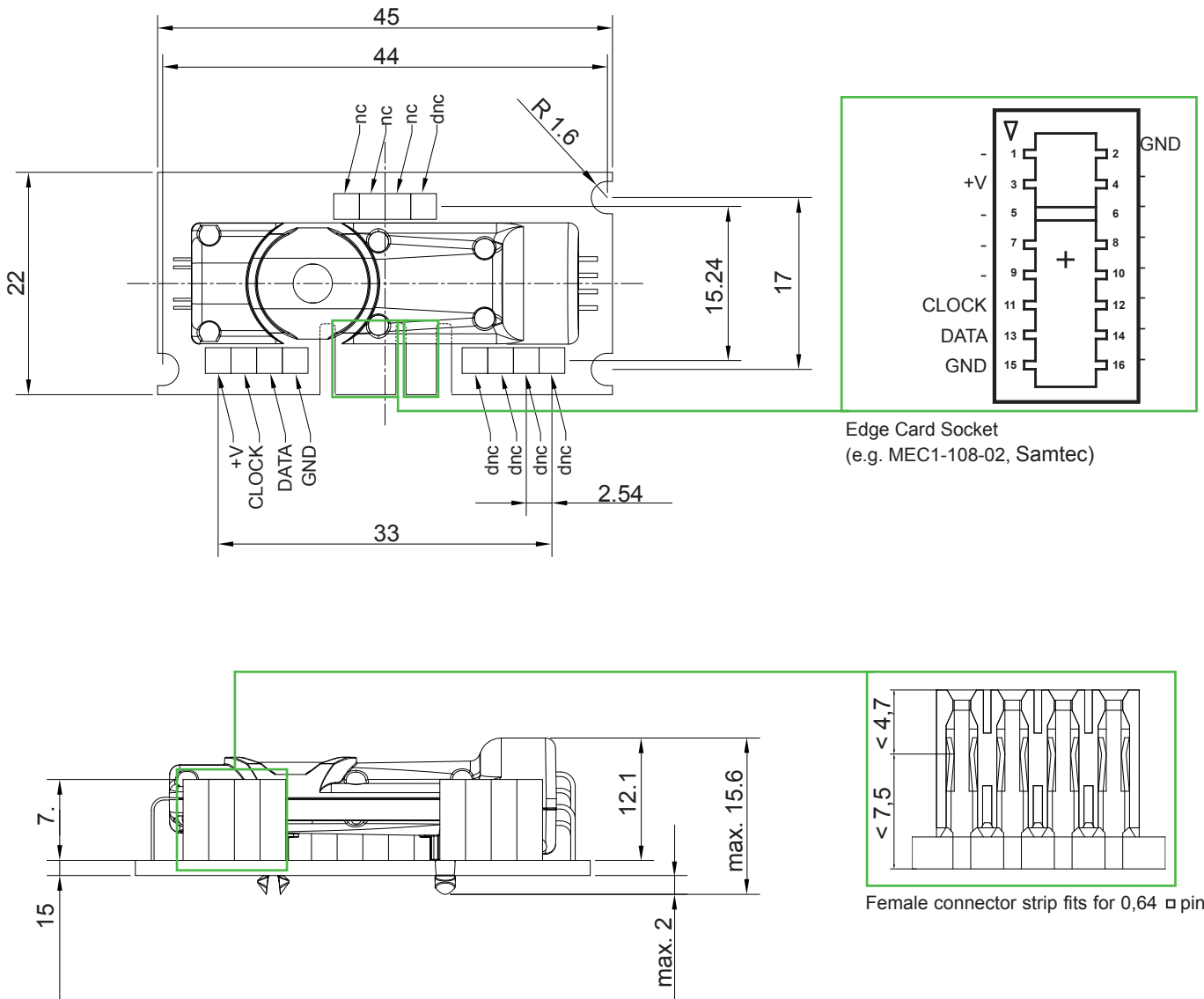
General

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) factory setting = 15 sec.

2) the average power consumptions depends on the adjusted measuring time interval

Connection Diagram / Dimensions (mm)



Ordering Guide

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

Order Example

EE891-2C9

measuring range: 0...2000ppm
type: CO₂
output: digital interface

Accessories

EE89x testboard (HA011010)