

EE893

Digital CO₂ Sensor Module for OEM Applications

The E+E CO₂ module EE893 is designed for OEM applications and for demanding environments. A multiple point CO₂ and temperature adjustment procedure leads to excellent CO₂ measurement accuracy over the entire temperature working range; this is a must for process control and outdoor applications.

The E+E dual wavelength NDIR CO₂ sensing procedure compensates automatically for ageing effects. EE893 is highly insensitive to pollution and offers outstanding long term stability.

With its small dimensions and electrical connection via contact pins and pads, EE893 is the optimal choice for OEM devices such as wireless transmitters, hand-helds or data loggers. The measured data, with a range of up to 10000ppm, is available on the E2 digital interface.

An optional kit facilitates easy configuration and adjustment of the probe. The measurement interval can be set according to the application requirements; by this the average current consumption can be reduced to less than 60µA for battery-operated devices.



Typical Applications

Data loggers
Hand helds
Wireless transmitters
Building management
Demand controlled ventilation

Key features

Autocalibration
Outstanding long-term stability
Temperature compensation
Low power consumption
Very small size

Technical Data

Measured values

CO ₂	
Measurement principle	Dual wavelength (non-dispersive infrared technology) NDIR
Working range	0...2000 / 5000 / 10000ppm
Accuracy at 25°C and 1013mbar (77°F and 14.69psi)	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	< 60s or < 105s; (depending on the measured value)
Temperature dependency	typ. 1ppm CO ₂ /°C (-20...45°C) (-4...113°F)
Calibration interval ¹⁾	>5 years
Measuring time interval	adjustable from 15s up to 1h (factory setting: 15s)

General

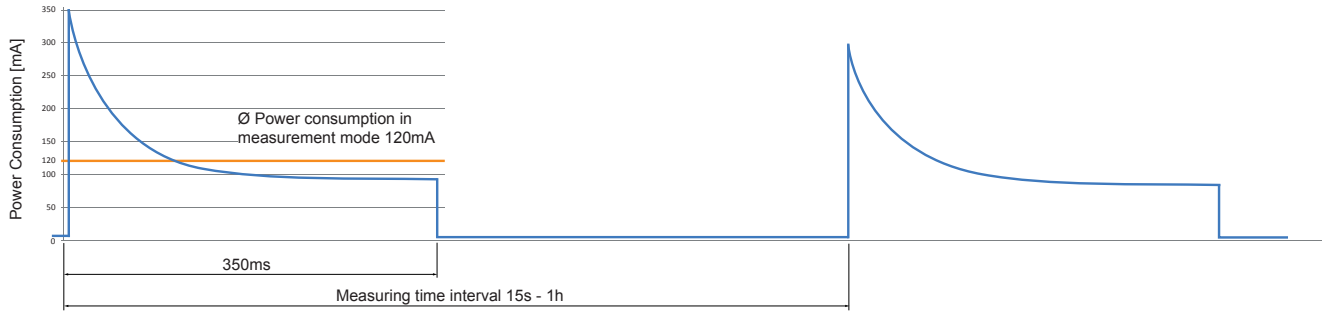
Digital interface	E2 (details: www.epluse.com)
Supply voltage	4.75 - 7.5V DC
Average power consumption ²⁾³⁾	58µA (with 1h measurement interval) ...3.7mA (with 15s measurement interval)
Electrical connection	contact pins, Edge Card Socket (e.g. plug typ MEC1-108-2)
Working conditions	-40...60°C (-40...140°F) 0...95% RH (not condensating) 85...110kPa (12.33...15.95psi)
Storage conditions	-40...60°C (-40...140°F) 0...95% RH (not condensating) 70...110kPa (10.15...15.95psi)

1) under normal operating conditions

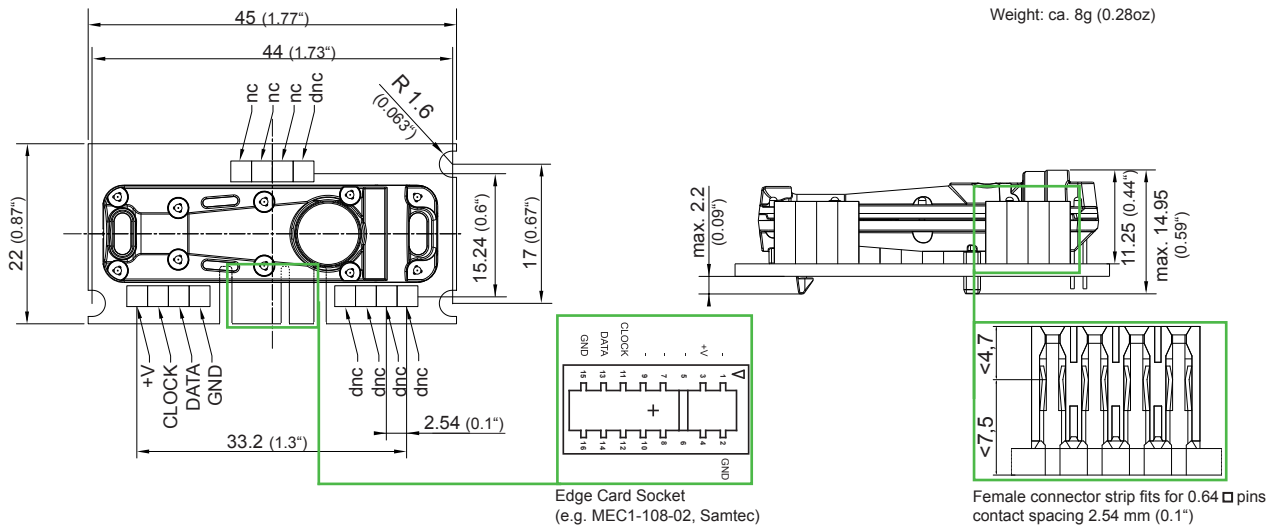
2) the average power consumption depends on the adjusted measuring time interval

3) Peak current see figure

Power Consumption

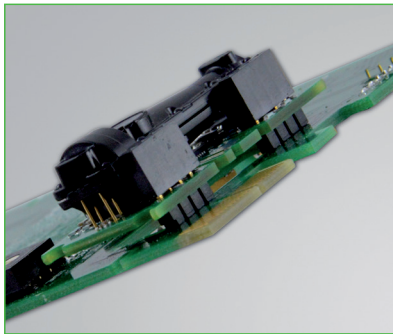


Connection Diagram / Dimensions in mm (inch)

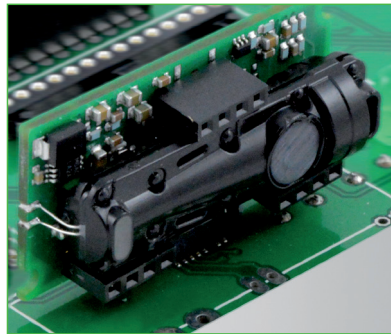


Weight: ca. 8g (0.28oz)

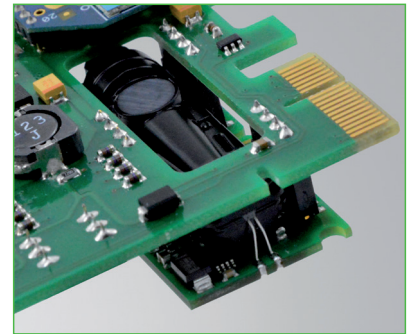
Mounting Possibilities



Mounting from the top



Mounting with Edge Card plug



Mounting from the bottom
(space saving)

Ordering Guide

MEASURING RANGE	TYPE	OUTPUT
0...2000ppm (02)	CO ₂ (C)	digital interface (2)
0...5000ppm (05)		
0...10000ppm (10)		
EE893-		

Order Example

EE893-02C2

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

Accessories (see also data sheet "Accessories")

EE89x testboard HA011010
E+E Product Configuration Software EE-PCS (Download: www.epluse.com/Configurator)

Support literature

www.epluse.com/EE893