

EE892

Digital CO₂ Sensor Module for OEM Applications

The E+E CO₂ module EE892 is designed for OEM applications and for demanding environment. 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. EE892 is highly insensitive to pollution and offers outstanding long term stability.

With its small dimensions and electrical connection via contact pins and pads, EE892 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 10000 ppm, is available on the E2 digital interface.

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



Typical Applications

- Automotive**
- 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

CO₂

Measurement principle	Dual wavelength (non-dispersive infrared technology) NDIR	
Working range	0...2000 / 5000 / 10000 ppm	
Accuracy at 25 °C and 1013 mbar ¹⁾ (77 °F and 14.69 psi)	0...2000 ppm:	< ± (50 ppm +2 % of measuring value)
	0...5000 ppm:	< ± (50 ppm +3 % of measuring value)
	0...10000 ppm:	< ± (100 ppm +5 % of measuring value)
Response time t ₉₀	105 s with measured data averaging (smooth output) 60 s without measured data averaging.	
Temperature dependency	typ. ± (1 + CO ₂ concentration [ppm] / 1000) ppm/°C (-20...45 °C) (-4...113 °F)	
Calibration interval ²⁾	>5 years	
Measuring time interval	adjustable from 15 s up to 1 h (factory setting: 15 s)	

General

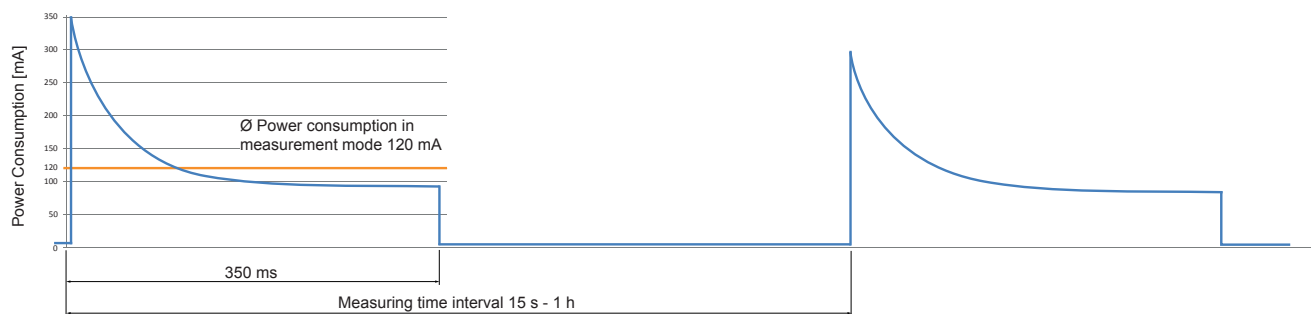
Digital interface	E2 (details: www.epluse.com)
Supply voltage	4.75 - 7.5 V DC
Average power consumption ³⁾	58 µA (at 1h measurement interval) ... 3.7 mA (at 15 s measurement interval)
Peak current	see power consumption graph
Electrical connection	contact pins, edge card socket
Working conditions	-40...60 °C (-40...140 °F) 0...95 % RH (not condensating) 85...110 kPa (12.33...15.95 psi)
Storage conditions	-40...60 °C (-40...140 °F) 0...95 % RH (not condensating) 70...110 kPa (10.15...15.95 psi)

1) for averaging output

2) under normal operating conditions

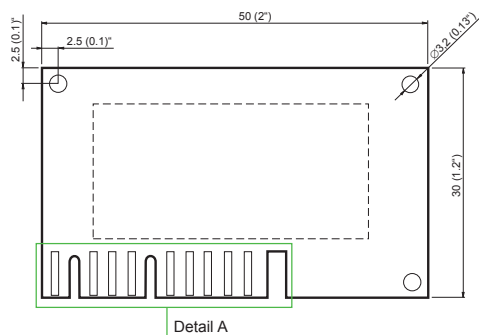
3) the average power consumption depends on the adjusted measuring time interval

Power Consumption

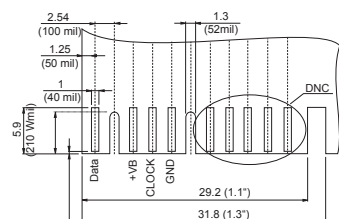


Connection Diagram / Dimensions in mm (inch)

Mounting X (Contact Pads)

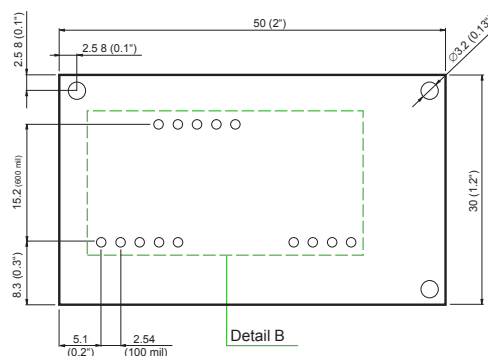
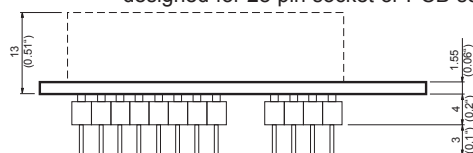


Detail A / Connection Diagram:

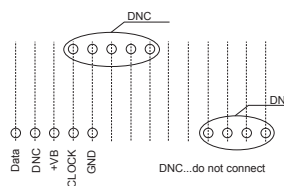


Mounting Y (Contact Pins)

designed for 28 pin socket or PCB soldering



Detail B / Connection Diagram:



Ordering Guide

MEASURING RANGE	TYPE	OUTPUT	MOUNTING
0...2000 ppm	(02)	CO ₂ (C)	E2 interface (2)
0...5000 ppm	(05)		contact pads (X)
0...10000 ppm	(10)		contact pins (Y)
EE892-			

Order Example

EE892-02C2X

measuring range: 0...2000 ppm
type: CO₂
output: E2 interface
mounting: contact pads

Accessories (see also data sheet "Accessories")

E2 Test and Configuration Adapter
E+E Product Configuration Software

HA011010
EE-PCS (Download: www.epluse.com/Configurator)