

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 10000ppm, 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 60µA 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 / 10000ppm	
Accuracy at 25°C and 1013mbar ¹⁾ (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	105s with measured data averaging (smooth output) 60s without measured data averaging.	
Temperature dependency	typ. 1ppm CO ₂ /°C (-20...45°C) (-4...113°F)	
Calibration interval ²⁾	>5 years	
Measuring time interval	adjustable from 15s up to 1h (factory setting: 15s)	

General

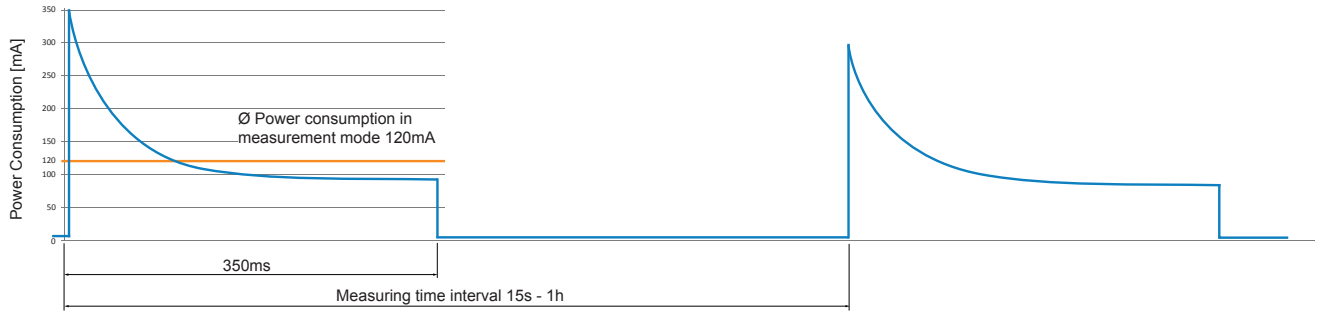
Digital interface	E2 (details: www.epluse.com)	
Supply voltage	4.75 - 7.5V DC	
Average power consumption ³⁾	58µA (at 1h measurement interval) ... 3.7mA (at 15s measurement interval)	
Peak current	see power consumption graph	
Electrical connection	contact pins, edge card socket	
Working conditions	-40...60°C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

²⁾ under normal operating conditions

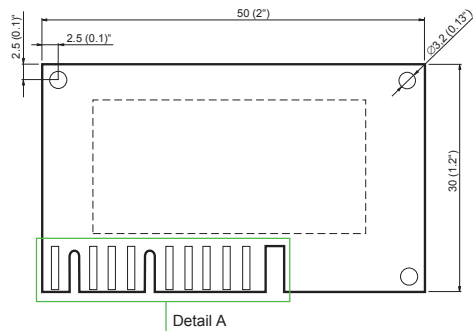
³⁾ the average power consumption depends on the adjusted measuring time interval

Power Consumption

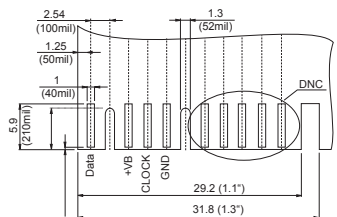


Connection Diagram / Dimensions in mm (inch)

Mounting X (Contact Pads)

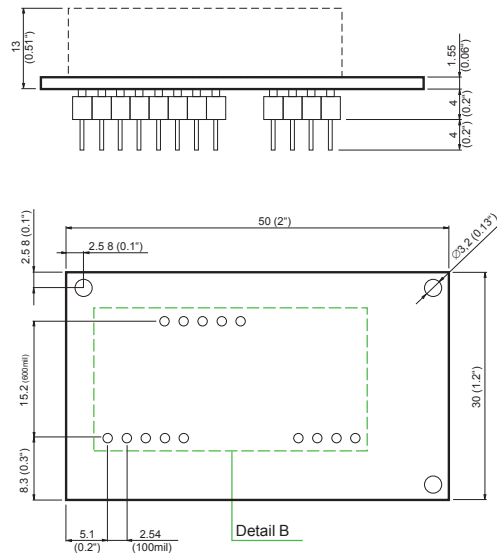


Detail A / Connection Diagram:

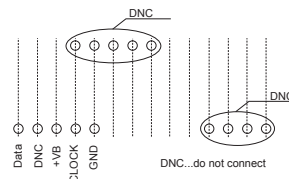


Mounting Y (Contact Pins)

designed for 28 pin socket or PCB soldering



Detail B / Connection Diagram:



Ordering Guide

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

Order Example

EE892-02C2X

measuring range: 0...2000ppm
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)