E2639
Carbon Dioxide Detector

Evikon

Sensor Technologies
Measurement & Control Instrumentation

evikon.eu

Standalone and multifunctional

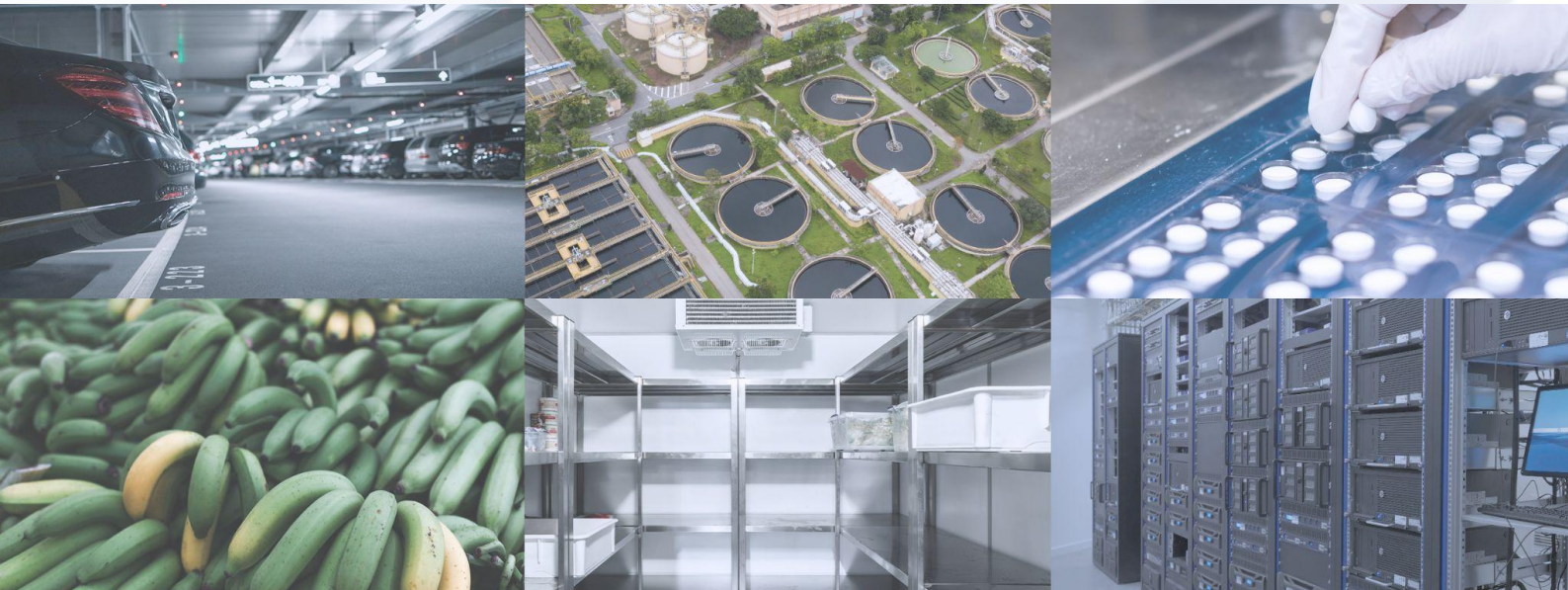
E2639 is a next-generation product developed to deliver reliable detection of toxic and combustible gases in a wide range of market sectors such as:

- HVAC/R
- Agriculture
- Food and beverage
- Healthcare and laboratories
- Process industries

The detector is based on the unified PluraSens® Platform having RS485 Modbus RTU and 2 × 4-20 mA outputs offering customers different possibilities for communication with controllers and SCADA systems.

E2639 is also equipped with 3 x SPDT relays (2 for alarms, 1 for fault) accompanied with 4 x LEDs and a buzzer for better safety and visual, audible indication.

Most of known sensing technologies are implemented providing a possibility to detect more than 20 different gases and gas groups.



Convenience of use

User-oriented installation

E2639 is equipped with **3 x M20 cable glands** and **duplicated terminals** to save time during installation.

Enclosure design features side **mounting brackets** making mounting of the detector easier.

Multiple calibration possibilities

Optional **WiFi module** gives a possibility of connection to a smartphone or tablet PC for convenient calibration and configuration.

No additional apps are required. Access is provided via URL and password protection with multiple levels of access.

GSH Smart Sensors calibration can be done through E2639 or by connecting the GSH module directly to PC using special **configurator (SSC).**

Pre-calibrated Smart Sensors

GSH Smart Sensors come **already pre-calibrated.**

M12 connector enables fast sensor replacement without the need to open the enclosure lid.

Being fully **interchangeable**, any GSH Smart Sensor can be connected to the same E2639 main unit (for example, HFC sensor can be replaced with CO_2 or NH_3 sensor and so on) and purchased separately.

Built-in calendar can notify end customers when calibration is due.

24V OUT | IP65 | 4-20 mA | RS485 Modbus

Carbon Dioxide Detector
E2639-CO2

Features

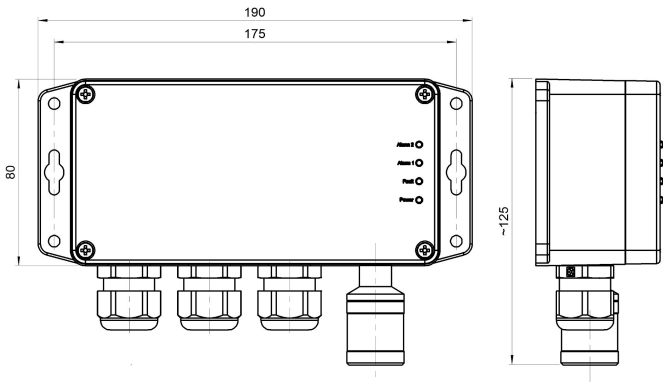
- 2 x 4-20 mA user configurable analog outputs
- RS485 Modbus RTU digital interface
- 3 x SPDT Relays: 2 for alarms, 1 for fault
- 2 x 24 V outputs for controlling alarm signals*
- Magnetic button for alarm reset & WiFi enable
- WiFi interface option for configuration and calibration

Specifications

Calibration	Carbon dioxide CO_2
Sensor type	Infrared (NDIR) Photoacoustic
Sampling method	Diffusion
Typical detection ranges	0...10 000 ppm (ordering code 10K) 0...40 000 ppm (ordering code 40K) 0...5% vol (ordering code 50 KN) Up to 100% CO_2 on request
Resolution / digital unit	1 ppm for 10K 10 ppm for 40K 0.01% vol for 50KN
Response time	T60 ≤ 60 s for 10K/40K T50 ≤ 20 s; T90 ≤ 60 s for 50 KN
Signal update	Every 5 seconds for 10K/40K Every 1 second for 50 KN
Sensor lifetime	~ 10 years for 10K/40K ~ 5 years for 50 KN
Maintenance interval	No field recalibration if ABC algorithm is enabled for 10K/40K 12 months for 50 KN
Self-diagnostics	Full functionality check at start-up
Warm-up time	≤ 1 min
Power supply	14...36 VDC (default) 24 VAC or 230 VAC as options
Power consumption	< 6 VA**
Digital interfaces	RS485, Modbus RTU protocol 2.4 GHz WiFi (802.11 b/g/n) option
Analog outputs	2 × 4-20 mA, user configurable
Output scale width	Recommended: 5-100% of the range; > 10 × resolution in any case
Enclosure	Grey ABS plastic, wall mount, protection class IP65
Dimensions	H80 × W190 × D55 mm (housing only) H109 with cable glands
Operating conditions	-40...+60 °C, 0...100 %RH
Alarm signalling	
Visual	4 x LEDs (red, green and yellow)
Acoustic	Buzzer 85 dB
Applicable standards	EN378-3; EN62990-1; EN61010-1; EN50270; EN50271; ASHRAE 15

* 24V outputs are relative to power supply e.g. supplied voltage of device is transferred to output voltage
** Does not consider 24V output connected device consumption

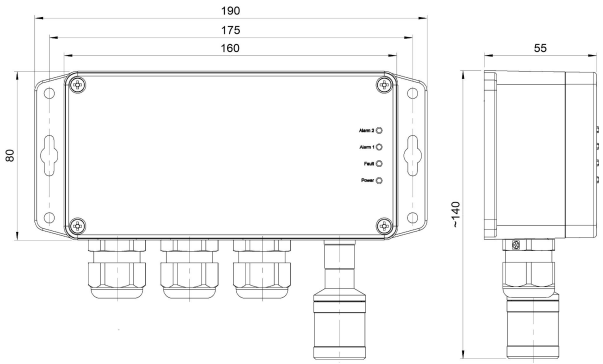
Dimensions



GSH Smart Sensors Specification

Connector	M12 industrial circular
Service counter	Built-in calendar indicates when calibration is due
Calibration	Through E2639 or by connecting to SSC configurator
Remote sensor probe (option)	Shielded cable up to 5 m length
Sensor head dimensions	Ø25 mm, height 54 mm

E2639-GSH Dimensions



Ordering code for E2639-CO2 standard version

Target gas	CO2			
Sensor type	-IR (for infrared sensor)	-PA (for photoacoustic sensor)		
Detection range	-10K (for 0…10 000 ppm)	-40K (for 0…40 000 ppm)	-50KN (for 0…5% vol)	Other (mention range, up to 100% CO2)
WiFi	-WF (yes)	Leave the field empty (no)		
Power supply	-24VDC	-24VAC	-230VAC	

Code example: E2639-CO2-PA-10K-WF-230VAC

Ordering code for version with Smart Sensor

E2639-GSH main unit *			
WiFi	-WF (yes)	Leave the field empty (no)	
Power supply	-24VDC	-24VAC	-230VAC

* Can be supplied separately

Code example: E2639-GSH-WF-24VDC

GSH-CO2 Smart Sensor *				
Target gas	CO2			
Sensor type	-IR (for infrared sensor)	-PA (for photoacoustic sensor)		
Detection range	-10K (for 0…10 000 ppm)	-40K (for 0…40 000 ppm)	-50KN (for 0…5% vol)	Other (mention range, up to 100% CO2)
Remote probe (option)	-RP	Leave the field empty (if no remote probe)		
Length of remote probe (m)	-3	-5	Other length on request	

* Can be supplied separately

Code example: GSH-CO2-PA-10K-RP-3

Disclaimer

This document is subject to change.

The latest and actual version is located on the Manufacturer's web page.