

# E2639 Refrigerant Detector



Sensor Technologies  
Measurement & Control Instrumentation



[evikon.eu](http://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  $2 \times 4-20$  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<sub>2</sub> or NH<sub>3</sub> sensor and so on) and purchased separately.

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



# Refrigerant Detector

## E2639-HFC



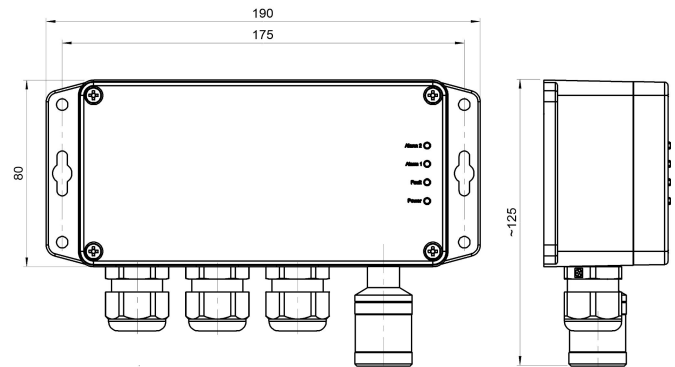
### Features

- 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

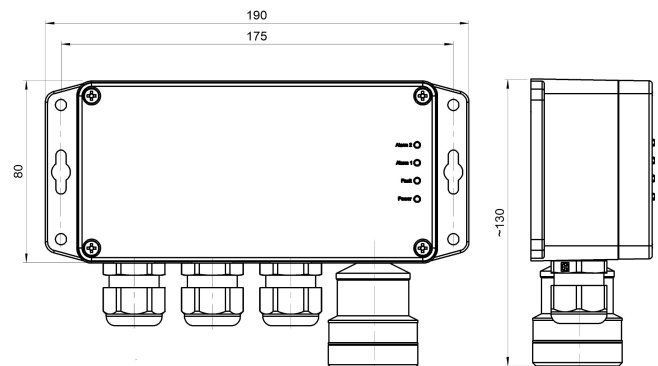
### Specifications

Detected gases	R-22, R-32, R-134a, R-143, R-404a, R-407c, R-410a, R-449a, R-507, R-514a, R-1234ze, R-1233zd, R-1234yf etc.
Sensor type	Metal-oxide semiconductor (MOS), Infrared (NDIR) on request
Sampling method	Diffusion
Typical detection ranges	0...1000 ppm 0...2500 ppm 0...5000 ppm
Resolution / digital unit	1 ppm
Response time T90	< 120 s
Signal update	Every 1 second
Sensor lifetime	> 5 years
Maintenance interval	12 months
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	-30...+60 °C, < 95 %RH
Alarm signalling	
Visual	4 x LEDs (red, green and yellow)
Acoustic	Buzzer 85 dB
Applicable standards	EN378-3; EN62990-1; EN60079-29-1; EN61010-1; EN50270; EN50271; ASHRAE 15

### Dimensions



Version with MOS sensor



Version with NDIR sensor

\* 24V outputs are relative to power supply e.g. supplied voltage of device is transferred to output voltage

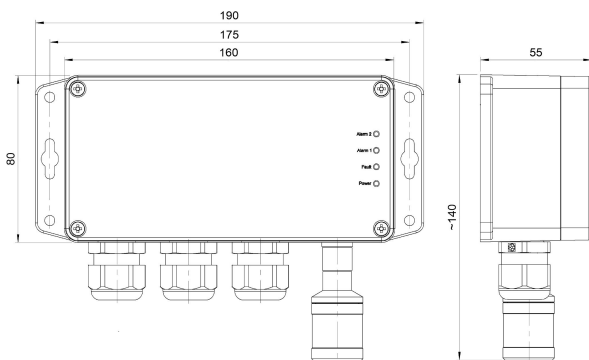
\*\* Does not consider 24V output connected device consumption

## GSH Smart Sensors Specification

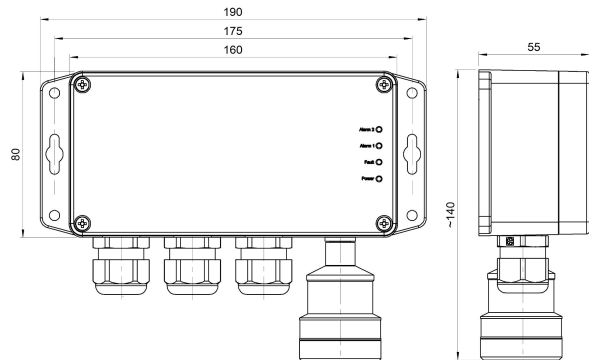
Connector	M12 industrial circular
Service counter	Built-in calendar indicates when calibration is due
Calibration	Through E2639 or by connecting to SSC configurator
Remote sensor probe (option)	Shielded cable up to 5 m length
Sensor head dimensions	Ø25 mm, height 54 mm (for MOS sensor) Ø40 mm, height 58 mm (for NDIR sensor)



## E2639-GSH Dimensions



Version with MOS Smart Sensor



Version with NDIR Smart Sensor

### Ordering code for E2639-HFC standard version

<b>Target gas</b>	R22, R32, R134a, R143, R404a, R407c, R410a, R449a, R507, R514a, R1234ze, R1233zd, R1234yf	Other (mention refrigerant code) on request		
<b>Sensor type</b>	-SC (for metal-oxide semiconductor sensor)	-IR (for infrared sensor)		
<b>Detection range</b>	-1000 (for 0...1000 ppm)	-2500 (for 0...2500 ppm)	-5000 (for 0...5000 ppm)	
<b>WiFi</b>	-WF (yes)	Leave the field empty (no)		
<b>Power supply</b>	-24VDC	-24VAC	-230VAC	

**Code example:** E2639-HFC-R32-SC-1000-WF-230VAC

### Ordering code for version with Smart Sensor

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

\* Can be supplied separately

**Code example:** E2639-GSH-WF-24VDC

<b>GSH-HFC Smart Sensor *</b>				
<b>Target gas</b>	R22, R32, R134a, R143, R404a, R407c, R410a, R449a, R507, R514a, R1234ze, R1233zd, R1234yf	Other (mention refrigerant code) on request		
<b>Sensor type</b>	-SC (for metal-oxide semiconductor sensor)	-IR (for infrared sensor)		
<b>Detection range</b>	-1000 (for 0...1000 ppm)	-2500 (for 0...2500 ppm)	-5000 (for 0...5000 ppm)	
<b>Remote probe (option)</b>	-RP	Leave the field empty (if no remote probe)		
<b>Length of remote probe (m)</b>	-3	-5	Other length on request	

\* Can be supplied separately

**Code example:** GSH-HFC-R32-SC-1000-RP-3

## Disclaimer

This document is subject to change.

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



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