

**OPT.H2.SENS.K1**  
**OPT.H2.SENS.K2**

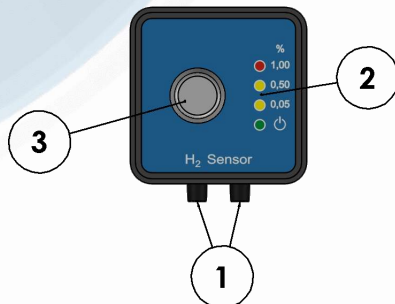


## H2 SENSOR

OPT.H2.SENS.1 is a security system that constantly detects the amount of Hydrogen present in the working environment of the GC and blocks the Hydrogen generation if it detects an amount greater than the safety threshold.

The OPT.H2.SENS.RCV controller reads the percentage of Hydrogen measured by the sensor OPT.H2.SENS.1 and, if the value exceeds the threshold alarm, the Controller deactivates the solenoid valve in the OPT.H2.SENS.VB.V2 block.

The alarm can be signaled to a PC and to a remote device.



- 1 Serial port RS-485 / Power supply
- 2 Status LEDs
- 3 Hydrogen sensor

**OPT.H2.SENS.1** is engineered to work in standalone mode connected by RS-485 network to a Hydrogen Generator. The sensor can be connected directly with the MicroPROGEL Hydrogen Generators.

When the hydrogen concentration detected exceeds a threshold of safety, the Hydrogen Generator automatically stops the production and audible and visual alarms will be reported.

### Main application

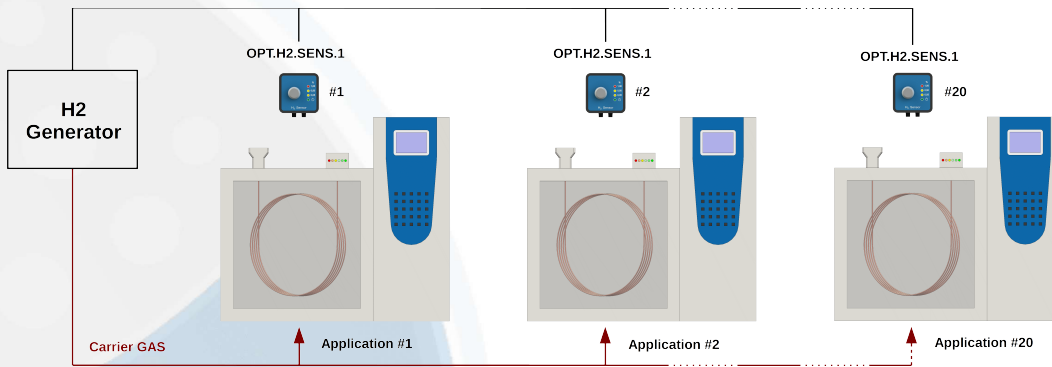
- GC working environment
- All environments where Hydrogen is used

### Main advantages

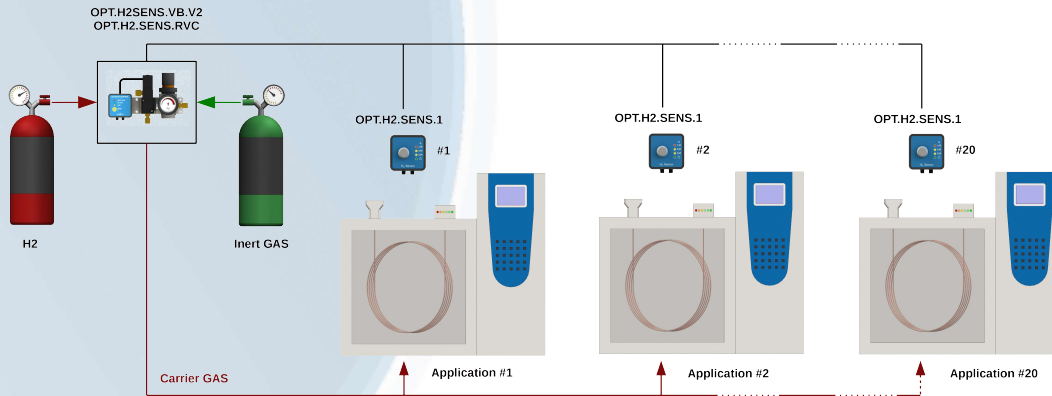
- Continuous monitoring of the working environment
- Acoustic and optical alarms
- Potential explosion risks eliminated
- Compatible with all GCs
- Simple installation
- Simple calibration
- Low operating costs

## Principle diagram

### OPT.H2.SENS.K1



### OPT.H2.SENS.K2



## Technical specifications OPT.H2.SENS.RVC

<b>Power Supply Voltage</b>	12 VDC +/- 5%
<b>Power Supply Current</b>	0.8 A use with OPT.H2.SENS.VB.V2
<b>Valve output</b>	Open collector 12VDC/500mA
<b>Ambient temperature</b>	5-35°C (41-95°F)
<b>Ambient Humidity (max, non condensing)</b>	80% at 25°C (77°F)
<b>IP rating</b>	IP20

## Technical specifications OPT.H2.SENS.1

<b>Hydrogen Sensitivity Range</b>	0.01% to 1.00% by hydrogen volume (25% LEL, Lower Explosion Limit)
<b>Accuracy</b>	± (5.0% of F.S. + 1000ppm)
<b>Typical Response Time</b>	less than 20 sec
<b>Power Supply Voltage</b>	From 9VDC to 28VDC
<b>Communication port</b>	RS-485
<b>Protocol</b>	MODBUS-RTU
<b>Calibration Interval</b>	1 year (suggested 180 days)
<b>Hydrogen Sensor Technology</b>	Dioxide semiconductor
<b>Product Life Expectancy</b>	10 years
<b>Body temperature range</b>	-10 °C to 40 °C

## Technical specifications OPT.H2.SENS.VB.V2

<b>Hydrogen Inlet pressure</b>	1 to 9 bar
<b>Inert Inlet pressure</b>	1 to 10 bar
<b>Pressure regulator</b>	1 to 9 bar