



iSens 5G

Environmental multiple wireless gas sensors with LoRa, LoraWAN & Nb-IoT technology

01 PRODUCT DESCRIPTION

iSens use a wide range of sensor types to achieve a wide variety of configurations, allowing up to five measured gas reading to be transmitted either to the GasVisor control panel for fast and accurate measurement of all types of gases or to cloud software. Among these sensors, we can choose Electrochemicals for oxygen and toxic gases, catalytic and infrared for flammable gases, infrared for CO2 and PID for Volatile Organic Compounds.

The iSens 5G comes prepared to be easily installed, only needing its placement at the measurement point for the electrochemical sensors as it has an internal battery for continuous use for two years. Only a 110-220 VAC plug will be required for PID and IR sensors. An iSens 5G network can be connected to a Central GasVisor LoRa, which will monitor the status of each of the detectors to indicate alarm conditions and sensor status, with a wide variety of controls, indications and options. Devices can also be monitored using Sensotral cloud software over LTE or LoRaWAN networks from a remote site.

The transmission distance on LoRa y LoRaWAN reaches up to 13 km. LoS (Line of Sight). In urban or industrial environments, this distance will be significantly reduced depending on the obstacles between the emitter and the receiver. A distance of 1 km is highly probable in normal environments. In case of loss of signal or low battery, the control panel detects the incident and alerts the user. LTE modem will avoid those restrictions anytime telephone signal will be available.

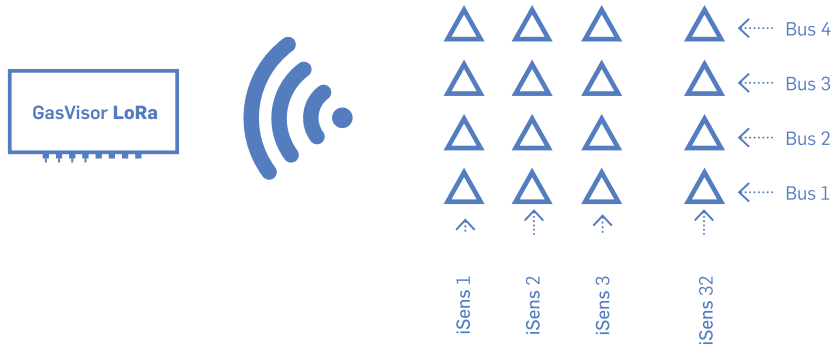
02 KEY FEATURES

- Easy to install
- Wireless transmission
- 2 years battery time
- Up to 5 sensors simultaneously
- NFC calibration
- Sdressable
- Plug and Play
- One man calibration
- Optional external power

03 TECHNICAL SPECIFICATIONS

Sensors	Electrochemical, infrared, PID
Communication	Bidirectional LoRA - 7 Km Maximum distance LoS - 1 Km typical distance LoRaWAN - 3 Km Maximum distance LoS - 1 Km typical distance Optional NB-IoT - LTE
Power supply	2 x Alkaline battery 1,5V D. 24 months lifetime. Optional adaptador 110-220 VAC
Data transmission	LoRa Modem - GasVisor NB-IoT or LoRa WAN Modem - MQTT or HTTP messages to cloud Software
Ingress Protection	IP-65
Calibration	Zero & Span calibration with NFC and Android App
Weight	450 gr
Size	14 cm x 11 cm x 4 cm
Temperature	-20 °C to + 50 °C
Humidity	0 to 95% RH

04 CONNECTION SCHEME



05 AVAILABLE SENSORS

PART NUMBER	Gas	Range	Sensor
S2-001-30	O ₂	0 – 30% vol.	Electrochemical
S2-002-30	CO	0 – 1.000 ppm	Electrochemical
S2-003-30	H ₂ S	0–100 ppm	Electrochemical
S2-004-30	NO	0–250 ppm	Electrochemical
S2-005-30	NO ₂	0–20 ppm	Electrochemical
S2-006-30	Cl ₂	0 – 10 ppm	Electrochemical
S2-007-30	SO ₂	0 – 5,00 ppm	Electrochemical
S2-008-30	NH ₃ (standard range)	0 – 300 ppm	Electrochemical
S2-009-30	NH ₃ (high range)	0 – 1.000 ppm	Electrochemical
S2-010-30	CH ₄ Vol. (IR high range)	0 – 100% vol.	Infrared
S2-011-30	CO ₂	0 – 10.000 ppm	Infrared
S2-012-30	CO ₂	0 – 50.000 ppm	Infrared
S2-013-30	CO ₂	0 – 100% vol.	Infrared
S2-014-30	COV	0,01 – 20,0 ppm	PID
S2-015-30	COV	0,1 – 200 ppm	PID
S2-016-30	COV	0 – 2.000 ppm	PID
S2-017-30	PH ₃	0 – 20 ppm	Electrochemical
S2-018-30	H ₂ S (high range)	0 – 2.000 ppm	Electrochemical
S2-019-30	L.I.E. (IR)	0 – 100% L.I.E.	Infrared
S2-021-30	ETO	0 – 10 ppm	Electrochemical
S2-022-30	HCN	0 – 50 ppm	Electrochemical
S2-023-30	HF	0 – 10 ppm	Electrochemical
S2-024-30	H ₂	0 – 2.000 ppm	Electrochemical
S2-025-30	O ₃	0 – 10 ppm	Electrochemical
S2-026-30	HCl	0 – 50 ppm	Electrochemical
S2-027-30	HCHO	0 – 10 ppm	Electrochemical
S2-028-30	CH ₃ SH	0 – 10 ppm	Electrochemical
S2-029-30	C ₂ H ₃ Cl	0 – 20 ppm	Electrochemical
S2-030-30	COCl ₂	0 – 1,00 ppm	Electrochemical