

Toxic CO - NO<sub>2</sub> - NH<sub>3</sub> - H<sub>2</sub>S - Cl<sub>2</sub> - CO<sub>2</sub> - SO<sub>2</sub> y O<sub>2</sub>

## STANDALONE DETECTORS WITH THREE PROGRAMMABLE LEVELS



## Installation & User Manual



# STANDGAS PRO

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## 1. PRESENTATION

STANDGAS PRO LCD is a programmable standalone detector, designed for the detection of toxic gases and oxygen using electrochemical sensor technology and infrared for the detection of CO<sub>2</sub>, with up to three programmable levels:

OPTION 1: Three levels RL1-RL2-RL3.

OPTION 2: Two levels RL1 y RL3 plus a fault output RL2. The O<sub>2</sub> models can also be programmed ascending and descending levels.

STANDGAS PRO LCD is available for detection of the following gases and ranges, CO 0-300ppm, NO<sub>2</sub> 0-20ppm, NH<sub>3</sub> 0-100ppm, H<sub>2</sub>S 0-100ppm, CO<sub>2</sub> 0-20.000 ppm, CL<sub>2</sub> 0-10 ppm, O<sub>2</sub> 0-25% y SO<sub>2</sub> 0-20ppm.

## 2. SPECIAL FUNCTIONS

- Hardware status automatic testing
- Digital filter based on variable samplings of the averages in sensor values.
- Automatic thermal compensation that supplies a correct answer when faced with temperature variations.
- Other functions only accessible in factory allow it to know the remaining useful life of the sensor, date of manufacture and of last calibration, as well as the serial number.



Do not drill a hole in the detector housing; this will invalidate its IP protection



Do not handle the detector with



Do not install the detector near heat sources, ovens, radiators, kitchens, etc.



Do not install the detector near to an air current or outdoors.



Install the detector with the gas sensor opening pointing towards the ground and at



To guarantee its water tightness use the required cable gland and "hose" type cable with the necessary wires for power



Factory parameters, installation height and coverage:

GAS	INSTALLATION HEIGHT	RANGE	PREALARM L. RL1	ALARM L. RL3	AREA COVERED
CO	1.50/2m. Floor.	0-300 ppm	50 ppm	75 ppm	Approx. 200m <sup>2</sup>
NO <sub>2</sub>	40/50cm. Floor.	0-20 ppm	3 ppm	5 ppm	Approx. 100m <sup>2</sup>
NH <sub>3</sub>	30/40cm. Ceiling	0-100 ppm	5 ppm	10 ppm	Approx. 75m <sup>2</sup>
H <sub>2</sub> S	1,5m. Floor.	0-100 ppm	5 ppm	10 ppm	Approx. 100m <sup>2</sup>
CO <sub>2</sub>	1m. Floor.	0-20.000 ppm	5.000 ppm	10.000 ppm	Approx. 100m <sup>2</sup>
O <sub>2</sub>	1.70m. Floor.	0-25%	18%*	17%*	Approx. 100m <sup>2</sup>
Cl <sub>2</sub>	1m. Floor.	0-10 ppm	0.5 ppm	1 ppm	Approx. 100m <sup>2</sup>
SO <sub>2</sub>	30/40cm. Floor.	0-20 ppm	2 ppm	4 ppm	Approx. 75m <sup>2</sup>

- \* Prealarm and Alarm activate due to lack of oxygen.  
The relay programme as fault always will be active
- \* Relay RL2 programmed as fault.

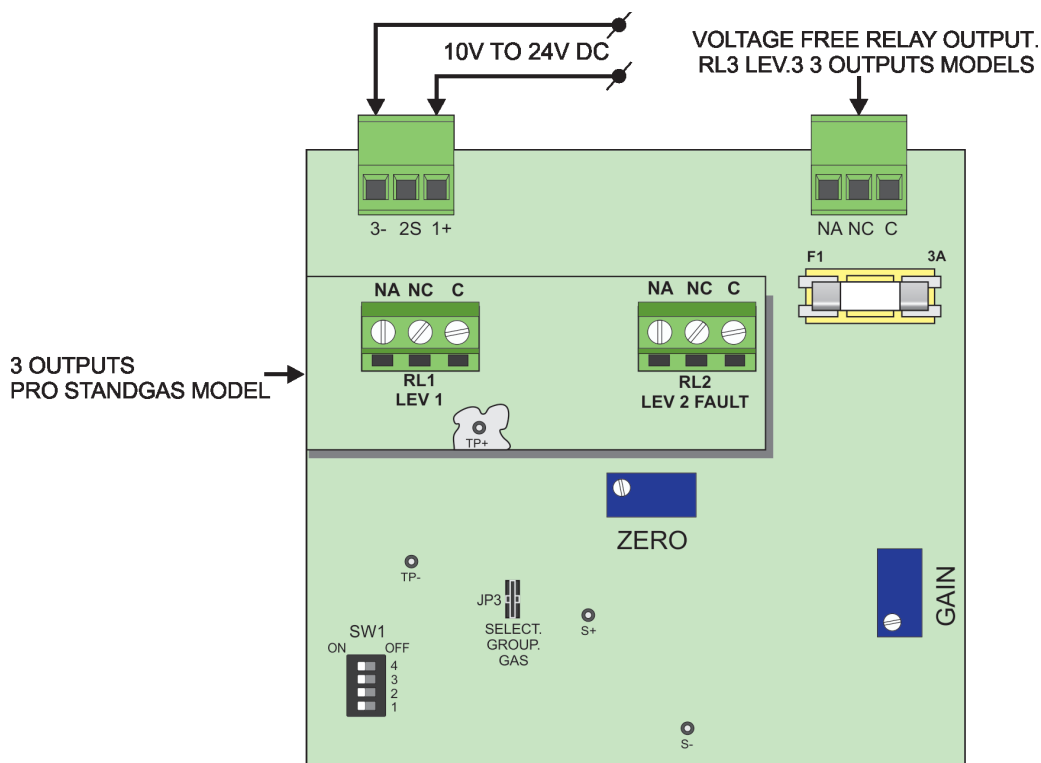
*Coverage data and height is illustrative, as it can vary depending on the surrounding environment.*

#### 4. RECALIBRATION

All detectors manufactured by DURAN ELECTRONICA have been calibrated in factory using pattern gas, therefore it is not necessary or recommended to recalibrate during the initial startup. In this detector family it is not possible to recalibrate the Zero and Gain, because these parameters have previously been memorized in an Eprom memory inside the sensor, so if it became necessary they will have to be sent to the factory.

These detectors incorporate a function for automatic zero adjust. It monitors the zero in relation to the electronics and sensor response. STANDGAS PRO LCD automatically carries out a test every 30 minutes: if the drift is above or under 2% of the full scale, it will readjust to zero; if not the data will be shown as a readout.

#### 5. CONNECTIONS



## 6. 6. TECHNICAL CHARACTERISTICS

Technology	Electrochemical/infrared sensor + 12bit microprocessor
Power supply tension	From 10 to 24V DC
Maximum consumption at 12V DC	80mA at rest - 140mA, 3 relays activated / 3mA and 30mA CO <sub>2</sub>
Gas measurement range	See table on page 6, linear full scale
Resolution	± 1% F.S. toxics - 0.25% O <sub>2</sub> and 1.5% CO <sub>2</sub>
Reproducibility	± 2% F.S.
Annual span drift	± < 1% electrochemical / 0.7% CO <sub>2</sub>
Stabilization time	< 5 minutes all the specifications
Response time T90	CO, NO <sub>2</sub> SO <sub>2</sub> y NH <sub>3</sub> ≤ 30s / H <sub>2</sub> S ≤ 20s / O <sub>2</sub> ≤ 15s / CO <sub>2</sub> ≤ 15s
Approx. useful life (MTBF)	2 years electrochemical NH <sub>3</sub> , H <sub>2</sub> S, NO <sub>2</sub> , Cl <sub>2</sub> , SO <sub>2</sub> y O <sub>2</sub> - 4 years CO y 5 years CO <sub>2</sub> approx.
Maintenance periods	Anual - recommended-
Environmental conditions	-10°C to +50°C and from 0 to 90% H.R. without condensation
Atmospheric pressure limits	80 to 110 kPa (0.8 to 1.1 bar)
Outputs	3 commutated output dry contact 3A 250V AC fuse protected
Coverage area	See table on page 6
Material and protection grade	Makrolon & ABS IP65
Cable entry and diameter	Cable glands / 6-10mm <sup>2</sup>
Dimensions in mm and weight in gr.	120 X 160 X 60 / 350

## 7 . WARRANTY

STANDGAS PRO detectors are guaranteed against any manufacturing defect for 1 year after date of purchase of the equipment. If in this period of time an anomaly is detected, make it known to your provider or installer.

The warranty covers the complete repair of the products that the DURAN ELECTRONICA technical service considers as defective, with the aim of returning to normal use. This warranty will be valid so far as the product has been installed by a competent person and following the specifications in this manual. Negligent installation or use will exempt DURAN ELECTRONICA from responsibilities for damages to persons and/or properties and from compliance with the terms of this warranty. In case of improper handling, or of not respecting the conditions, characteristics and observations described in this manual, DURAN ELECTRONICA WILL NOT BE HELD RESPONSIBLE FOR THE DAMAGES THAT MAY BE INCURRED AS A CONSEQUENCE OF THE INCORRECT USE OR INSTALLATION OF THIS PRODUCT.

The warranty does not include: installations, periodic inspections and maintenance, damage caused by improper handling, inappropriate use, negligence, overload, inadequate power supply or equipment neglect, tension deviations, defective installations and all other external causes, repairs or alterations performed by persons not authorized by DURAN ELECTRONICA, nor transportation costs of the equipment.

DURAN ELECTRONICA reserves the right to modify this manual without previous warning.



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