DURAN® electrónica

DURTOX RS485

ELECTROCHEMICAL DETECTORS FOR THE DETECTION OF TOXIC GASES AND OXYGEN

IP65

CE



DURTOX are detectors using electrochemical technology for the detection of toxic gases and O_2.

Available gases	Standard range	Installation height aprox.	Coverage area aprox.
Sulphidric acid H_2S	0-100ppm	1,50m from floor	100 m^2
Ammonia NH_3	0-100ppm	30cm from ceiling	75 m^2
Nitrogen dioxide NO_2	0-20ppm	40/50cm from floor	100 m^2
Oxygen O_2	0-25% vol	1,70 to 2m from floor	100 m^2
*Nitrogen Monoxide NO	0-100ppm	1m from floor	25 m^2
Cloro Cl_2	0-10ppm	1m from floor	100 m^2
Sulfur Dioxide SO_2	0-20ppm	30/40cm from floor	75 m^2

* This gas is extremely difficult to detect in air, due to its rapid conversion into NO2 upon coming into contact with oxygen (O_2).

AVAILABLE FORMATS

• RS485 addressable 4 wire connection, compatible with DURGAS and EUROSONDELCO control panels, up to 16 detectors can be installed in parallel in the same loop. A version including a relay output is available.

SPECIAL FUNCTIONS

Provided with a 12bit microprocessor that allows total and precise control over sensor status and electronics.

Thermal compensation that allows a correct response from each of the electrochemical sensors when faced with temperature variations, except for DURTOX O_2, which due to its different functioning, does not require such a feature.

Self testing hardware.

Digital filter based on variable samplings of the sensor's average values.

Zero exact automatic adjustment. This special function monitors zero value in relation to sensor response and electronics. The following protocol is used for this: every 30 minutes an automatic test is performed, if drift is $\pm$ 2% of the full scale value it will readjust itself to zero, otherwise it will be shown as a reading.

Other functions accessible with factory based methodology allow us to check on the sensor's remaining useful life, date of manufacture, date of last calibration and serial number.

APPLICATIONS

DURTOX detectors are designed to be used in an environment in which the formation of toxic atmospheres due to gases or vapors is probable, ensuring the highest level of protection, such as in laboratories, cogeneration, pharmaceutical industry, fermentation rooms, climatic chambers and water treatment plants.

DURTOX is also available in 3-wire 4-20mA format compatible with DURGAS and EUROSONDELCO, by using the 4-20mA to RS485 converter interface.

TECHNICAL CHARACTERISTICS

Technology	12bit Microprocessor and electrochemical sensor
Power	10 to 15V DC
Maximum consumption aprox.	43mA at 12V DC
Useful life	± 2 years (in clear air)
Resolution	1 ppm CO, 2 ppm NH_3, 0,1 ppm NO_2, H_2S, Cl_2, SO_2, 0,5 ppm NO, and 2% O_2
Repeatability	± 1% full scale
Stabilization initial delay - all services -	Approx. 5 minutes
T90 response time	SO_2 y NH_3 ≤30s - H_2S ≤ 20s - O_2 ≤ 15s NO ≤40s - Cl_2 ≤ 60s - NO_2 ≤20s
Temperature and humidity ranges	-10ºC to +50ºC - 20-90% RH
Working atmospheric pressure	90-110 KPa
Maximum permitted Air velocity	<0.1-0.5m/s (depending on gas)
Maintenance periods	Annual - recommended -
Protection grade	IP65
Alarm relay (Optional)	Switched output dry contact 3A 250V AC fuse protected
Cable type and communication system	4 wire shielded (power 2 x 1,5 + 2 x 0,25 twisted pair A and B communications) RS485
Maximum installation distance	1000m
Dimensions (mm) & weight (gr)	125 x 150 x 63 / 300

WARRANTY

DURTOX detectors are guaranteed against any manufacturing defect for 1 year from the date of purchase of the equipment.
Full warranty conditions are included in the installation manual for the detector.

DURAN ELECTRONICA reserves the right to introduce improvements or modifications to this product without prior notice.

ORDERING INFORMATION

When placing the order please take note of the correct product code you require and make sure that product description is correct according to your needs.

RS485 detectors with plastic housing (IP65)

CODE	DESCRIPTION
DSQNNH3	DURTOX NH_3 0-100ppm RS485 Plastic housing IP65
DSQN-NO	DURTOX O_2 0-25% RS485 Plastic housing IP65
DSQN-O2	DURTOX NO 0-100ppm RS485 Plastic housing IP65
DSQNCL2	DURTOX Cl_2 0-10ppm RS485 Plastic housing IP65

RS485 detectors with plastic housing (IP65)

CODE	DESCRIPTION
DSQNNO2	DURTOX NO_2 0-20ppm RS485 Plastic housing IP65
DSQNH2S	DURTOX H_2S 0-100ppm RS485 Plastic housing IP65
DSQNSO2	DURTOX SO_2 0-20ppm RS485 Plastic housing IP65

Note: Add an "r" at the end if a relay output is required
Ex: for RS485 detectors for oxygen with relay module, the code would be DSQN-O2r

bsi. ISO 9001 Quality Management FS82426

C/ Tomás Bretón, 50
28045 MADRID, Spain
TEL.: + 34 91 528 93 75 · FAX: +34 91 527 58 19
duran@duranelectronica.com · www.duranelectronica.com

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