DURAN® electrónica

⋈ DURTOX-X-X

Toxic gases and oxygen flameproof detectors

⟨Ex⟩ II 2G Ex d IIC T6 Gb   ⟨Ex⟩ II 2GD Ex d IIC T6 Gb Ex tb IIIC T85ºC Db   C€

Detectors using electrochemical technology with flameproof housing for use in explosive gas atmospheres and offering a high level of protection for toxic gases and oxygen.

There is a version of the detector, also ATEX certified, offering a high level of protection and destined to be used, also, in explosive dust atmospheres.

LOM 10ATEX2076

Available gases	Standard range	Installation height aprox.	Coverage area aprox.
Carbon monoxide CO	0-300ppm	1,50 to 2m from floor	300 m^2
Sulphidric acid H$_2$S	0-100ppm	1m from floor	150 m^2
Ammonia NH$_3$	0-100ppm	30cm from ceiling	75 m^2
Nitrogen dioxide NO$_2$	0-20ppm	1m from floor	200 m^2
Oxygen O$_2$	0-25% vol	1,70 to 2m from floor	200 m^2
Nitrogen Monoxide NO	0-100ppm	1m from floor	150 m^2
Cloro Cl$_2$	0-10ppm	1m from floor	100 m^2
Sulfur Dioxide SO$_2$	0-20ppm	30cm from floor	100 m^2

AVAILABLE FORMATS

• RS485 addressable 4 wires connection, compatible with EUROSONDELCO, SIEMENS CC62P and DURGAS control panels, up to 16 detectors can be installed in parallel in the same loop. This version is also available with its own relay output.

• 4-20mA standard with 3 wire connection, compatible with any system with standard inputs of this kind.

SPECIAL FUNCTIONS

Provided with a 12bit microprocessor that allows total 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-X O$_2$ that due to its different behaviour does not require such a feature..

Self testing hardware.

Digital filter based on variable samplings of the sensors average values.

Auto-zero 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 +/- of 2% of the full scale value it will readjust itself to zero, otherwise it will be shown as a readout.

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

APPLICATIONS

Explosive environments: Pharmaceutical industries, boiler rooms, cogeneration, laboratories, chemical industries, petrochemical industries, petrol stations, etc.

Explosive dust environments: Thermal power plants, silos, beer factories, etc

DURTOX-X is available in two formats: RS485 addressable, compatible with EUROSONDELCO, SIEMENS CC62P, DURGAS and standard 4-20mA compatible with any system equipped with these inputs.

TECHNICAL CHARACTERISTICS

Technology	12bit Microprocessor and electrochemical sensors
Power	10 to 30V DC (4-20mA) / 10 to 15V (RS485)
Maximum consumption	43mA to 12V DC depending on model
Useful life	>3 years for CO, ± 2 years other gases (on air)
Accuracy	± 1% bottom of scale
Repeatability	± 2% bottom of scale
Initialization stabilization delay -all versions-	Approx. 5 minutes
T90 response time	CO, 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% Hr
Working atmospheric pressure	90-110 KPa
Maximum permitted air velocity	<0.1-0.5m/s
Maintenance periods	Annual -recommended-
Explosive atmosphere code	II 2G Ex d IIC T6 Gb
Housing material	Aluminium and Epoxy paint
Stopping plug material	PLG type
Cable gland material and cable diameter	Natural brass and Santoprene joints 6-10mm^2
Adaptor material	Stainless steel.
Alarm relay module (optional)	Switched output dry contact 3A 250V AC fuse protected
Cable type (RS485)	4 wire shielded (power 2 x 1,5 + 2 x 0,25 twisted pair A and B communications)
Cable type (4-20mA)	3 x 1,5mm Ø shielded, recommended minimum
Maximum installation distance	1000m (RS485) and 350m (4-20mA)
Dimensions (mm) **&** weight (gr)	162 x 150 x 90 / 1.392

GUARANTEE

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

DURAN ELECTRONICA reserves the right to introduce improvements and modifications to this product without previous notice.

ORDERING INFORMATION

When placing the order please be sure about the correct product code according to the description and check that it complies with your requirements.

RS485C Detectors		4-20mA Detectors	
CODE	DESCRIPTION	CODE	DESCRIPTION
DSQNX-CO	DURTOX-X for carbon monoxide - CO / 0-300ppm	DSQN4X-CO/H	DURTOX-X for carbon monoxide - CO / 0-300ppm
DSQNXH2S	DURTOX-X for hydrogen sulphide - H_2S / 0-100ppm	DSQN4XH2S/F	DURTOX-X for hydrogen sulphide - H_2S / 0-100ppm
DSQNXNH3	DURTOX-X for ammonia - NH_3 / 0-100ppm	DSQN4XNH3/F	DURTOX-X for ammonia - NH_3 / 0-100ppm
DSQNXNO2	DURTOX-X for nitrogen dioxide - NO_2 / 0-20ppm	DSQN4XNO2/C	DURTOX-X for nitrogen dioxide - NO_2 / 0-20ppm
DSQNX-O2	DURTOX-X for oxygen - O_2 / 0-25%	DSQN4X-O2	DURTOX-X for oxygen - O_2 / 0-25%
		DSQN4LX-NO/F	DURTOX-X for nitrogen monoxide - NO / 0-100ppm
		DSQN4LXCl2/A	DURTOX-X for chlorine - Cl_2 / 0-10ppm
		DSQN4LXSO2/C	DURTOX X SO_2 0-20ppm 4-20 mA ATEX
		DSQN4LXtSO2/C	DURTOX X SO_2 0-20ppm 4-20 mA ATEX for dust

Note: Add an "r" at the end if a relay output is required -only RS485
Ex: for RS485C detectors for ammonia with relay module, the code would be DSQNLXNH3r
Note: Add a "t" after the "X" in the code if you require ATEX certified detectors for explosive dust.
Ex: for 4-20mA detectors for oxygen in explosive dust environment, the code would be DSQN4LXt-O2