



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	200 m ²
Sulphidric acid H ₂ S	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 (O₂).

AVAILABLE FORMATS

- RS485 addressable 4 wires connection, compatible with EUROSONDELCO and DURGAS control panels, up to 16 detectors can be installed in parallel in the same loop. This versions is also availables 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 O₂ 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 $\pm 2\%$ 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 & 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)
Resolution	± 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 ₂ S ≤ 20s - O ₂ ≤ 15s NO ≤40s - Cl ₂ ≤ 60s - NO ₂ ≤20s
Temperature and humidity ranges	-10°C to +50°C - 20-90% Hr
Working atmospheric pressure	90-110 KPa
Maximum permitted air velocity	<0.1-0.5m/s (depending on gas)
Maintenance periods	Annual -recommended-
Explosive atmosphere code (dust/gas)	Ex db IIC T6 Gb / Ex tb IIIC T85°C Db
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 and sintered filter 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) recommended minimum
Cable type (4-20mA)	3 x 1,5mm Ø hose, recommended minimum
Maximum installation distance	1000m (RS485) and 350m (4-20mA)
Dimensions (mm) & weight (gr)	155 x 180 x 110 / 1.700 aprox

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.

RS485 Detectors		4-20mA Detectors	
CODE	DESCRIPTION	CODE	DESCRIPTION
DSQNLX-CO	DURTOX-X CO 0-300ppm RS485 ATEX	DSQN4LX-CO/H	DURTOX-X CO 0-300ppm 4-20 mA ATEX
DSQNLXH2S	DURTOX-X H2S 0-100ppm RS485 ATEX	DSQN4LXH2S/F	DURTOX-X H2S 0-100ppm 4-20 mA ATEX
DSQNLXNH3	DURTOX-X NH3 0-100ppm RS485 ATEX	DSQN4LXNH3/F	DURTOX-X NH3 0-100ppm 4-20 mA ATEX
DSQNLXNO2	DURTOX-X NO2 0-20ppm RS485 ATEX	DSQN4LXNO2/C	DURTOX-X NO2 0-20ppm 4-20 mA ATEX
DSQNLX-O2	DURTOX-X O2 0-25% RS485 ATEX	DSQN4LX-O2	DURTOX-X O2 0-25% 4-20 mA ATEX
DSQNLXNO	DURTOX-X NO 0-100ppm RS485 ATEX	DSQN4LX-NO/F	DURTOX-X NO 0-100ppm 4-20 mA ATEX
DSQNLXCL2	DURTOX-X Cl2 0-10ppm RS485 ATEX	DSQN4LXCl2/B	DURTOX-X Cl2 0-10ppm 4-20 mA ATEX
DSQNLXS02	DURTOX-X SO2 0-20ppm RS485 ATEX	DSQN4LXS02/C	DURTOX X SO2 0-20ppm 4-20 mA ATEX

Note: add a "t" after the "X" in the code to request ATEX certified detectors for explosive dust.

E.g. for 4-20mA oxygen detectors for explosive dust, the code would be DSQN4LXt-O2

Note: add "r" at the end if a relay output is required - only RS485

E.g. for RS485 ammonia detectors with relay module, the code would be DSQNLXNH3r

E.g. for RS485 SO₂ detectors with relay module and for explosive dust, the code would be DSQNLXtSO2r

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