



II 2G Ex db IIC T6 Gb



II 2G Ex db IIC T6 Gb
II 2D Ex tb IIIC T85°C Db



LOM 08ATEX2059 X

Detector of explosive gases, CO₂ and N₂O by infrared technology, with a flameproof housing, for use in explosive gas atmospheres and offering a high level of protection.

There is a version of the detector, also ATEX certified, with a high level of protection and moreover intended for use in explosive **dust** atmospheres.

Available formats:

- **RS485** addressable, 4-wire connection, compatible with **DURGAS** control units, with up to 16 detectors installable in parallel in the same loop, up to a distance of 1km.
- **4-20mA** 3-wire connection, compatible with any system with this type of input.

Internal optical indicators of sensor and loop faults

Optional alarm relay output (**RS485**)

Optional programmable alarm relay module (**4-20mA**)

	Explosive gases	CO ₂	N ₂ O
Range	0-100% L.E.L.	0-2% vol (0-20,000ppm)	0-1,000ppm
Resolution	>0.5% L.E.L.	>1.2% of measurement range	±2% measurement range

AVAILABLE GASES

Explosive gases: Methane, Natural Gas and Propane.

Toxic gases: Carbon Dioxide CO₂ and Nitrogen Oxide (I) N₂O.

APPLICATIONS

Detection of explosive gases, CO₂ and N₂O.

- Livestock installations and in intensive farming processes in general.
- Installations with the presence of inhibitor or poisonous gases of catalytic detectors – pellistors-.
- Atmospheres with a lack of oxygen.
- Installations where maintenance operations must be reduced to a minimum.

LOCATION / HEIGHT OF THE INSTALLATION

In areas where gas tends to accumulate, at a distance of 1.5m from any gas outlet point and avoiding any draughts.

The coverage area is 16 m² for explosive gases, 75m² for CO₂ and 30m² for N₂O

Recommended height of installation:

- 30 cm from the ceiling: Methane, Natural Gas.
- 100 cm from the floor: Propane.
- 75/100 cm from the floor: CO₂
- 30/50 cm from the floor: N₂O

MAINTENANCE

The **DIREX-X** detectors have been factory-calibrated with span gas and do not require recalibration during the initial start up of the installation.

Easy sensor replacement in the installation by incorporation of factory calibration.

Revise **DIREX-X** detectors at least once every 3 years and follow the installation manual's instructions for verification and recalibration operations whenever necessary or in accordance with current standards.

WARNING

Use the appropriate diameter of cable hose for the cable gland's inlet.
Do not under any circumstances immerse in water or in any other liquid.

TECHNICAL CHARACTERISTICS

Technology	Dual wavelength infrared sensor with thermal compensation and microprocessor	Humidity range	0 to 95% HR no condensation
Supply voltage	From 10V to 30V DC	Atmospheric pressure limit	80 to 110kPa (0.8 to 1.1 bar)
Maximum consumption	80mA at 12V DC/100mA activated relay	4-20mA connections	3 wires + earthing mesh
Max. loop resistance	250Ω 4-20mA	RS485 connections	4 wires
Max. output current	21.3 mA (Tip) 4-20mA	Optical indicators of sensor and loop failures	4-20mA internal / RS485 digital
Loop fault current	< 2mA 4-20mA	Optical indicator of communication statuses	Internal, 4-20mA digital in RS485 models
EXP gases measurement range	0-100% L.E.L. (5% vol. Methane) - linear full scale -	Optional 4-20 mA programmable alarm relay	Choose between 2 programmable alarm levels immediate/delayed with delayed disconnection programming. Initial idle mode relay programming.
CO₂ measurement range	0-20,000 ppm (0-2% v/v) - linear full scale -	Coverage area	EXP 16 m ² approx. CO ₂ 75 m ² approx. N ₂ O 30 m ² approx.
N₂O measurement range	0-1,000ppm linear full scale	Protection grade	IP65
Resolution	Exp: >0.5% L.E.L. CO ₂ : >1.2% of measurement range N ₂ O >2% of measurement range	Box material	Aluminium / Stainless steel
Zero drift	Exp: ±3% L.E.L. max / year at 20°C CO ₂ : ±0.7% / year N ₂ O ±1% F.S year	Standard code for explosive atmospheres (gas/dust)	Ex db IIC T6 Gb /Ex tb IIIC T85°C Db
Span drift	EXP: ± 3% L.E.L. / year at 20°C CO ₂ : ±0.7% F.S./ year N ₂ O ±1% F.S year	Cable diameter	10.1-13mm ²
Stabilisation time	< 30 min. -all specifications-	Cable type (4-20mA)	Shielded 3 x 1.5mm ø
Resistance to H₂S	Yes totally immune	Cable type (RS485)	4 wires 2 x 1.5mm - 2 x 0.25mm ø
Response Time T50/T90	<15s and 30s respectively	Installation max. distance	1,000m (RS485) 300/400m (4-20mA)
Useful life (MTBF)	> 5 years	Dimensions (mm)	155 x 180 x 110
Maintenance periods	Every 3 years -recommended-	Weight (g)	1,700 approx.
Temperature range	-20°C to +50°C		

WARRANTY

DIREX-X detectors are guaranteed against any manufacturing defect for 1 year from the date of purchase. The warranty conditions are set out in the equipment's installation manual.

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