



II 2G Ex d IIC T6 Gb



II 2GD Ex d IIC T6 Gb Ex tb IIIC T85°C Db



LOM08ATEX2059 X

Detectors for explosive gases and CO₂ using infrared technology, with 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, offering a high level of protection and destined to be used, also, in explosive dust atmospheres.

Available formats

- RS485C addressable 4 wires connection, compatible with EUROSONDELCO, SIEMENS CC62P & DURGAS control units. They can be installed in parallel, and up to 16 detectors in the same loop.
- 4-20mA 3 wires connection, compatible with any system provided of 4-20mA inputs.

Internal optical indicators for loop and sensor fault

Optional alarm output relay (RS485C)

Optional programmable alarm relay module (4-20mA)

	Explosive gases	CO ₂
Range	0-100% L.E.L.	0-2% vol (0-20.000ppm)
Resolution	>0,5% L.E.L.	>1.2% of measurement range

AVAILABLE GASES

Explosive gases: Methane, Natural Gas, Butane, Propane, Propylene, Ethylene Oxide, Ethane, Pentane.

Toxic gases: Carbon Dioxide CO₂. For other gases, please consult availability.

APPLICATIONS

Detection of explosive gases and CO₂

- Installations with presence of inhibitors or poisonous gases for catalytic detectors – pellistors –
- In atmospheres with lack of oxygen.
- Those installations where maintenance operations must be reduced to the minimum.

PLACE / HEIGHT OF INSTALLATIONS

In those areas where the gas is accumulated, at 1,5 meters away from gas appliances and avoiding air flows.

Coverage area is 16m² for explosive gases and 75 m² for CO₂.

Recommended height of installation

- 30 cm from ceiling: Methane, Natural Gas
- 30 cm from floor: Butane, Propane, Ethylene Oxide, Propylene, Pentane.
- 75/100 cm from floor: CO₂, Ethane and Ethanol.

MAINTENANCE

DIREX detectors have been calibrated at factory with target gas therefore and do not need to be recalibrated during initial startup of the installation.

Check DIREX detectors at least once per 3 years, and follow the instructions of the installation manual for testing and recalibrating operations if required.

WARNING

Use wire hose of the correct section for the cable gland input.

Do not immerse the detector in water or any other liquid.

TECHNICAL CHARACTERISTICS

Technology	Double wavelength infrared sensor with thermal compensation and microprocessor	Humidity range	0 to 95% HR no condensation
Voltage supply	From 10V to 30V DC	Atmospheric pressure limit	80 to 110 kPa (0.8 to 1.1 bar)
Maximum consumption	60mA at 12V DC	Connections 4-20mA	3 wires + earth ground mesh
Max. loop resistance (4-20mA)	250Ω	Connections RS485C	4 wires
Max.current output (4-20mA)	21.3 mA (Tip)	Loop & sensor fault optical indicator	Internal
Fault loop current (4-20mA)	< 2mA	Communications state optical indicator	Internal
Measurement range for explosive gases	0-100% L.E.L. (5% vol. Methane) – linear full scale-	Optional & programmable alarm relay (4-20mA)	2 programmable alarm levels, instantaneous/delayed disconnection with disconnection retard programming. Starting programming: idle mode relay
Measurement range for CO ₂	0-20.000 ppm (0-2% v.v.) – linear full scale-	Coverage area	Exp 16 m ² approx CO ₂ 75 m ² approx.
Resolution	Exp: >0,5% L.E.L CO ₂ : >1.2% of measurement range	Protection grade	IP65
Zero deviation	EXP: ±3% LEL max. per year / 20°C CO ₂ : ±0.7% year	Box material	Aluminium / Stainless Steel
Span deviation	EXP: ± 3% L.E.L./ year at 20°C CO ₂ : ±0.7% bottom of scale / year	Regulation code for explosive atmospheres (gas/dust)	Ex d IIC T6 Gb / Ex tb IIIC T85°C Db
Stabilization time	< 30 min –all specifications-	Cable diameter	6-10mm ²
Response time T50/T90	< 15s & 30s. respectively	Cable type (4-20mA)	Shield cable 3 x 1,5mm ø
Useful life (MTBF)	> 6 years	Cable type (RS485C)	4 wires 2x1,5mm - 2x0,25mm ø
Maintenance periods	Every 3 years – recommended-	Installation max. distance	1000m (RS485C) 350/400m (4-20mA)
Temperature range	-20°C to +50°C	Dimensions (mm)	155 x 180 x 110
		Weight (gr)	1.700 approx.

WARRANTY

DIREX detectors are guaranteed against any manufacturing defect for 1 year from the date of purchase. Warranty conditions are gathered in the installation manual of the detector.

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.

Do not forget to add the name of the gas to be detected at the code

DIREX X - RS485C Detectors		DIREX X - 4-20mA Detectors	
CODE	DESCRIPTION	CODE	DESCRIPTION
DIRYLXCO2	Flameproof RS485C detector for CO ₂ by infrared	DIRY4LXCO2	Flameproof 4-20mA detector for CO ₂ by infrared
DIRYLXCO2r	Flameproof RS485C detector for CO ₂ by infrared provided of relay output	DIRY4LXCO2r	Flameproof 4-20mA detector for CO ₂ by infrared provided of relay output
DIRYLX-HC	Flameproof RS485C detector for explosive gases by infrared	DIRY4LX-HC	Flameproof 4-20mA detector for explosive gases by infrared
DIRYLX-HCr	Flameproof RS485C detector for explosive gases by infrared provided of relay output	DIRY4LX-HCr	Flameproof 4-20mA detector for explosive gases by infrared provided of relay output

Note: Add a "t" after the "X" in the code if you require ATEX certified detectors for explosive dust.

Ex: for RS485C detectors for carbon dioxide in explosive dust environment, the code would be DIRYLXtCO2

Ex: for 4-20mA detectors for carbon dioxide in explosive dust environment, the code would be DIRY4LXtCO2r

I-fichadirex-v06



Certificate nº FS82426

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