DURAN® electrónica

DURTEX X-HC PRO

Flameproof detector for explosive gases

II 2G Ex db IIC T6 Gb

II 2G Ex db IIC T6 Gb
II 2D Ex tb IIIC T85ºC Db

CE

LOM 08ATEX2059X

Detector for explosive gases using catalytic 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:

- RS485 addressable 4 wires connection, compatible with **EUROSONDELCO & DURGAS**, and could be installed in parallel up to 16 detectors in the same loop.
- 4-20mA 3 wires connection, compatible with any system provided of 4-20mA inputs.

Detection range from 0 to 100% L.E.L.
Optical indicators of loop and sensor fault
Selection of gas to detect by jumper (RS485 format only)
Optional programmable alarm relay module (4-20mA) and optional output relay (RS485)
Resistant to silicone vapours (HDMS)

AVAILABLE GASES

Methane – natural gas, hydrogen, butane, propane, heptane, hexane, pentane, methanol, styrene, ethane, ethanol, ethylene, propylene, acetone, ammonia, cyclohexane, cyclopentane, dioxane, butyl acetate, ethyl acetate, acetic acid, isobutyl alcohol, isopropilic alcohol, decane, benzene, iso-octane, methyl ethyl ketone (butanone), nonane, propanol, toluene, xilene, kerosene, propyl alcohol and methyl isobutyl ketone.
For other gases, please consult availability.

Appropriated 4-20mA detectors calibration at factory requires prior information about the gas to detected.

DURTEX X-HC PRO allows the selection of the gas to detect of any available gases by using a jumper – RS485 models-

A special version for the detection of ACETYLENE is also available.

PLACE / HEIGHT OF INSTALLATION

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

Coverage area is 16m^2 approx. Recommended height of installation

- **30 cm. from ceiling:** Methane, natural gas, ammonia, hydrogen.
- **30 cm. from floor:** Butane, propane, acetone, ethyl acetate, butyl acetate, acetic acid, isobutyl alcohol, isopropilic alcohol, benzene, cyclohexane, cyclopentane, decane, dioxane, styrene, heptane, hexane, methyl ethyl ketone (butanone), nonane, pentane, toluene, xilene, kerosene, propyl alcohol, methyl isobutyl ketone and iso-octane.
- **100 cm. from floor:** ethane, ethanol, ethylene, methanol, propanol, propylene.
- **180 cm. from floor:** acetylene

MAINTENANCE

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

Check **DURTEX X-HC PRO** detectors at least once per year, and follow the instructions of the installation manual for testing and recalibrating operations if required.

WARNING

Do not use these detectors in presence of hydrogen sulphur, fluorine, methyl chloride, trichloroethylene, sulphur dioxide, silicon vapours or sulphydric acid, as presence of these gases can inhibit sensor response or been damaged.

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

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

DURTEX X-HC PRO has been designed for atmospheres with lower value than 100% L.E.L. of the gas which are calibrated for and with a normal presence of oxygen.

TECHNICAL CHARACTERISTICS

Technology	Catalytic sensor and microprocessor
Voltage supply	10V – 30V DC
Max. consumption	75mA at 12V DC / 125mA with relay activated
Max. loop resistance (4-20mA)	250Ω
Max. current output (4-20mA)	21.3 mA (Tip)
Fault loop current (4-20mA)	< 2mA
Measurement range	0-100% L.E.L. Methane -linear full range-
Resolution	±1% L.E.L.
Zero deviation	± 7mV/year
Span deviation	± 9% L.E.L./ year
Stabilization time	< 15 min -all specifications-
Response time T50/T90	3s & 8s respectively
Useful life (MTBF)	4 years approx.
Maintenance time	Recommended once per year
Temperature range	-20ºC to +70ºC
Humidity range	0 to 90% HR with no condensation

Pressure limits	80 to 110 kPa (0.8 to 1.1 bar)
Connections 4-20mA	3 wires + earth ground mesh
Connections RS485	4 wires
Loop & sensor fault optical indicator	Internal
Communications state optical indicator	Internal – Digital transmission in RS485 Models-
Programmable alarm relay -optional 4-20mA-	2 programmable alarm levels, instantaneous/delayed disconnection, disconnection retard programming. Starting programming: idle mode relay.
Coverage area	16 m^2 approx.
Protection Grade	IP65
Box material	Aluminium / Stainless Steel
Regulation code for explosive atmospheres (gas/dust)	Ex db IIC T6 Gb / Ex tb IIIC T85ºC Db
Cable diameter	10,1-13mm^2
Cable type (4-20mA)	Shield type cable 3x1,5mm Ø
Cable type (RS485)	4 wires 2x1,5mm 2x0,25mm Ø
Installation max distance	1000m (RS485) 300/400m (4-20mA)
Dimensions -mm-	155 x 180 x 110
Weight -gr-	1.700 approx.

GUARANTEE

DURTEX X-HC PRO detectors are guaranteed against any manufacturing defect for 1 year from the date of purchase. Guarantee 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 that for detectors RS485, gas selection is done by protocol assigned by a jumper

For detectors 4-20mA prior indication of the gas to be detected is required.

RS485 Detectors

CODE	DESCRIPTION
DPLNLX-HC	Flameproof detector for explosive gases
DPLNLX-HCr	Flameproof detector for explosive gases provided of relay
DPLNLXACT	Flameproof detector for acetylene
DPLNLXACTr	Flameproof detector for acetylene provided of relay

4-20mA Detectors

CODE	DESCRIPTION
DPLN4LX***	Flameproof detector for explosive gases
DPLN4LX*** r	Flameproof detector for explosive gases provided of relay module

Add a **"t"** after the **"X"** in the code if you require ATEX certified detectors for explosive dust.
Ex: for flameproof RS485 detectors for explosive dust, the code would be DPLNLXt-HC
Ex: for flameproof 4-20mA detectors for butane with relay module, the code would be DPLN4LXtBUTr
*** Add at the end of the code the three letters corresponding to the selected gas
Ex. For styrene, the code would be DPLN4LXEST (adding an **"r"** at the end if you require a relay output).

Natural gas, methane **NAT**, butane **BUP**, propane **PRO**, hydrogen **HID**, ammonia -exp- **AMN**, hexane **HEX**, ethylene **ETI**, butyl acetate **ABT**, ethyl acetate **AET**, acetone **ACA**, acetic acid **ACE**, acetylene **ACT**, isobutyl alcohol **ABU**, isopropilic alcohol **AIP**, benzene **BCN**, butyl methyl ketone **BMC**, cyclohexane **CHX**, cyclopentane **CHP**, decane **DEC**, dioxane **DIO**, ethane **ETO**, ethanol **ETA**, heptane **HEP**, methanol **MTL**, methyl ethyl ketone (butanone) **EMC**, nonane **NON**, octane **OCT**, pentane **PEN**, propanol **PRL**, propylene **PRE**, styrene **EST**, toluene **TOL**, xilene **XIL**, Kerosene **QRS** (others, consult).

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