DURTEX HC PRO
Detector for explosive gases using catalytic technology

DURAN® electrónica

CE

Detector for explosive gases using catalytic technology –pellistor-.

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
Selecting the gas to be detected by jumper (RS485)
Optional programmable alarm relay (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 be detected.

DURTEX 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 16 m^2 approx. Recommended height of installation

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

MAINTENANCE

DURTEX HC PRO detectors have been calibrated at factory with target gas therefore do not need to be calibrated at installation again.

Check **DURTEX 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.

Do not drill detector box otherwise it will lose its protection grade (IP65)

DURTEX 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	Pressure limits	80 a 110kPa (0.8 a 1.1 bar)
Voltage supply	From 10V - 30V DC	Connections 4-20mA	3 wires + earth ground mesh
Maximum consumption	75mA a 12V DC/ 125mA relay activated	Connections RS485	4 wires
Max. loop resistance (4-20mA)	250Ω	Loop & sensor fault optical indicator	External
Max. current output (4-20mA)	21.3 mA (Tip)	Communications state optical indicator	External
Fault loop current (4-20mA)	< 2mA	Programmable alarm relay –optional–	2 programmable alarm levels, instantaneous/delayed disconnection, disconnection retard programming. Starting programming: idle mode relay.
Measurement range	0-100% L.E.L. Methane –linear full range–		
Resolution	±1% L.E.L. of measurement range	Coverage area	16 m^2 approx.
Zero deviation	± 7mV/year	Protection Grade	IP65
Span deviation	± 9% L.E.L./ year	Box material	Makrolon & ABS
Stabilization time	< 15 min –all specifications–	Cable diameter	6-10mm^2
Response time T50/T90	3s & 8s respectively	Cable type (4-20mA)	Shield type cable 3x1,5mm Ø
Useful life (MTBF)	4 years approx.	Cable Type (RS485)	4 wires 2x1,5mm 2x0,25mm Ø
Maintenance time	Recommended once per year	Installation max distance	1000m (RS485), 300/400m (4-20mA)
Temperature range	-10ºC to +50ºC	Dimensions –mm–	120 x 160 x 60
Humidity range	0 to 90% HR with no condensation	Weight –gr–	288 approx.

GUARANTEE

DURTEX 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		4-20mA Detectors	
CODE	DESCRIPTION	CODE	DESCRIPTION
DPLN-HC	Detector for explosive gases	DPLN4***	Detector for explosive gases
DPLN-HCr	Detector for explosive gases provided of relay	DPLN4*** r	Detector for explosive gases provided of relay
DPLNACT	Detector for acetylene		
DPLNACTr	Detector for acetylene provided of relay		

***Add at the end of the code the three letters corresponding to the selected gas
Ex: For styrene, code would be DPLN4EST (adding "r" at the end if output relay is required)

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** (others, consult).