



Warsaw

# HFC / CO/ NG /LPG DIGITAL DETECTOR

ADDRESSABLE, w/ RS485 PORT

type

# DD

version W1

with removable, intelligent semiconductor SENSOR

## PURPOSE

DD-nn digital detector is designed for continuous monitoring of the presence of specified gas on the premises monitored by Digital Gas Detection System. Control is the cyclic measurement of gas concentrations in ambient air. Exceeding the prescribed concentration values produces optical alarm signals, a change of status of the output, activates the buzzer and a status change in the system via RS-485 network.

The detector has a removable module with the intelligent semiconductor sensor, which facilitates maintenance and lowers operating costs.

"n" - means a natural number, code of the calibration (detected) gas in accordance with GAZEX nomenclature : 61 = HFCs (chlorofluorocarbons), 22 = carbon monoxide, 15 = propane-butane, 11 = CNG (methane), 14 = methane (selective)



## TECHNICAL SPECIFICATIONS

Model	DD-nn
Power supply	12/24V DC (range: 8.0 ÷ 30.0V)
Supply current	max 30 mA @24V DC
Operating temperature range	from -5°C up to +45°C recommended, -15°C to +50°C allowed periodically (<1h/24h)
Relative air humidity range	from 30% to 90% RH
Gas sensor	semiconductor type, in a removable module; estimated life time in the clean air - about 10 years
Detectable gases	DD-11: Natural gas/CNG, other hydrocarbons (10÷30 %LEL) DD-14: Natural gas/CNG (selective for CH <sub>4</sub> ); (10÷30 %LEL) DD-15: propane-butane/LPG, other hydrocarbons DD-22: carbon monoxide, range 20 ÷ 500 ppm DD-61: HFC (Freons) type R410A (or R134A, R407C)
Interfering factors	hydrogen, alcohol (high concentrations), chloride, a significant oxygen deficiency (<19% vol.), a large, rapid increase in humidity, long-term presence of gases with concentrations > 1% LEL (combustible gases) or > STEL (toxic gases)
Alarm thresholds (standard)	ALARM = A1=1000, A2=2000, A3=2500 ppm Freon R410A (DD-61) or 20 ppm (TWA), A2= 100 ppm (STEL), A3 ≥250 ppm CO (DD-22); or A1= 10%, A2=20%, A3=30 % LEL (combustible gases - DD-11,14,15)
Alarm threshold accuracy	± 15% rel. for the recommended calibration conditions
Threshold thermal stability	± 15% in range 0°C to 40°C
Long term stability	± 20% rel./year, not more than ± 30% in 3 years
Calibration interval	recommended: < 36 months
Communication port	RS-485 isolated, MODBUS RTU protocol; plug in connectors
Signaling : optical	2 LEDs – ALARM = red; POWER = green, FAULT- yellow
acoustic:	65dB/30cm, piezoceramic buzzer (switchable by jumper)
Relay output	NO/NC type; max 2A/30VDC; plug in connectors
Dimensions	100 x 80 x 30 mm, H x W x D
Housing, weight	ABS, IP30; approx. 90 g

1000 ppm = 0,1% v/v , 10 000 ppm = 1% v/v

## FIELD OF APPLICATION

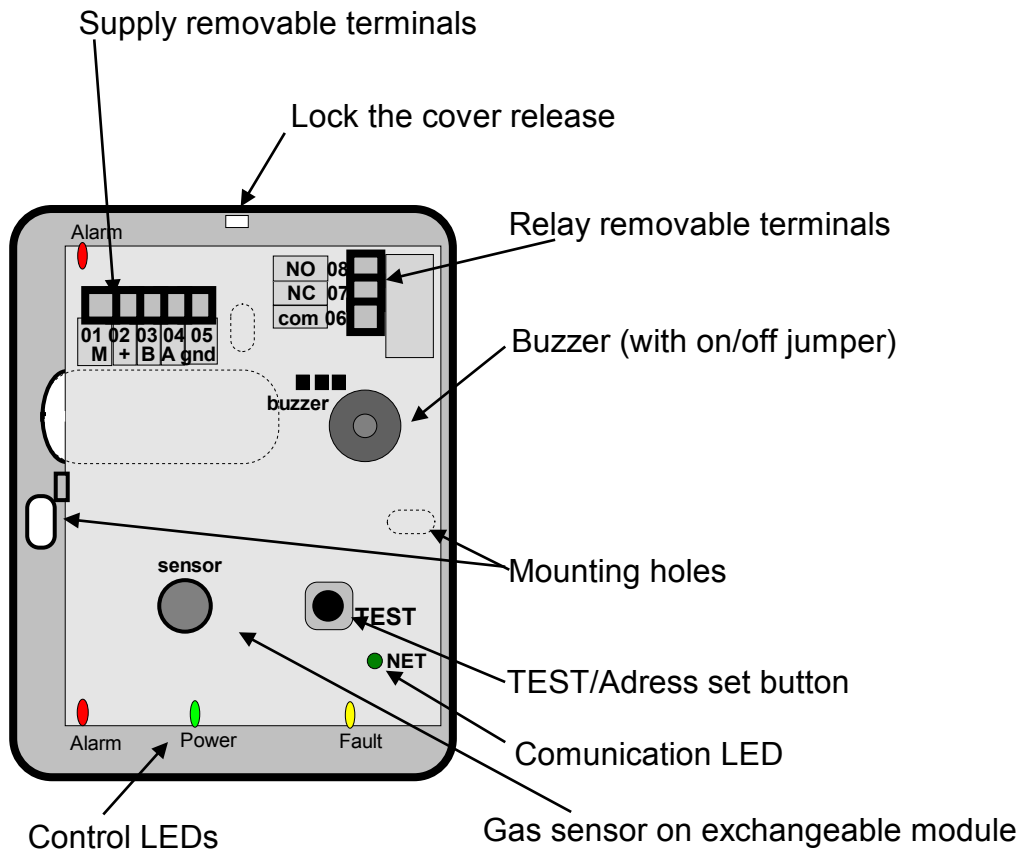
- Hotels, offices, public buildings
- dispersed gas detection systems

## FEATUERS

- long life , semiconductor gas sensor
- ease of installation and connection (detachable terminals)
- RS-485 port (isolated) w/MODBUS RTU protocol
- 3 standard alarm thresholds (A1,A2,A3 factory set)
- relay output (for A2 as standard), NO/NC type (switch up to 30VDC);
- built-acoustic buzzer (with jumper off);
- sensor on removable, intelligent module
- built-in microprocessor control = reliability, stability, thermal compensation system, alarm history
- stylish housing, for wall mounting (cable entry from the plaster or mounting to a typical , Ø60mm, flush-mounted box with screws at the edge).

## DETECTOR DESCRIPTION

View in mounting position (without front cover)



PRODUCER:

**gazex**

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## CONNECTIONS DIAGRAM

