Warsaw

GENERAL SPECIFICATION

Digital detector CO/LPG/CNG/HFC

ADDRESSABLE, W/ DIGITAL PORT

with exchangeable , iNtelligent semiconductor SENSOR

DG.EN/M

Models: **DG-*nn*.EN/M**

version U2

PURPOSE

The economical, digital detector DG.EN/M is designed for continuous monitoring of gas concentration in the specified areas. Control is based on a cyclic measurement of the concentration of a gas in ambient air. Upon exceeding the preset gas concentration level :

- the optical alarm signalization turns on
- the alarm information will be sent by net in RS-485 standard (MODBUS RTU protocol) on request from the supervisory module (e.g. MDD-256/T).

DG-*nn*.EN/M has an exchangeable module with carbon monoxide, methane, propane-butane or HFC sensor. Interchangeable sensor module streamlines maintenance, simplifies calibration and reduces operating costs.

"n" - means the integer code of the calibration/detected gas according to the nomenclature GAZEX: 22 = carbon monoxide, 15 = propane-butane (LPG), 11 = CNG (methane), 14 = methane (selective), 61 = HFC (chlorofluorocarbons)

SCOPE OF APPLICATION

- industrial area or installations individual protection
- dispersed gas detection systems
- factories, logistic centers, public buildings
- GARAGES and underground parking - ventilation control and warning of the LPG/CNG discharge or CO presence

FEATURES

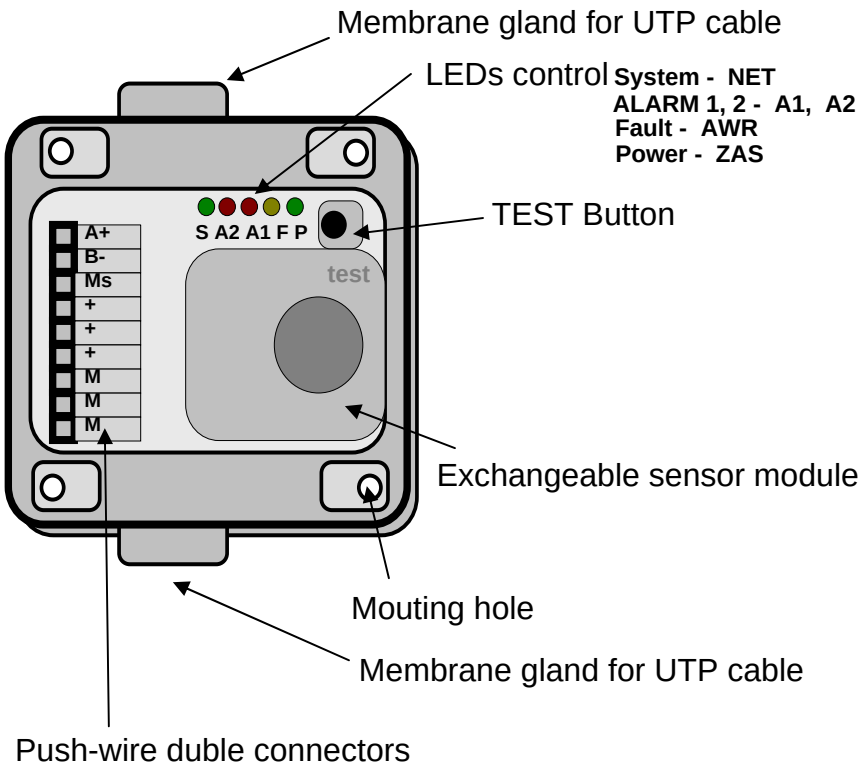
- communication, control and transfer of information through the port RS-485 with MODBUS RTU protocol
- selective measurement of averaged concentration of carbon monoxide or detection of explosive gas levels are exceeded
- semiconductor gas sensor in intelligent, EXCHANGEABLE module
- Built-in microprocessor control provides reliability, stability, thermal compensation system, the history of alarm, semi-automatic address control
- 3 or 2 alarm thresholds CO / explosive gas
- robust, splash-proof housing with high impact ABS (option: polycarbonate or aluminum)

TECHNICAL SPECIFICATIONS

Model	DG-*nn*.EN/M
Power supply	24V DC (12 ÷ 30V)
Power consumption	max 3W
Operating temperature	-5°C ÷ +45°C recommended, -15°C ÷ +50°C temporary permissible (<1h/24h)
Humidity	30% to 90% RH
Gas sensors	semiconductor, with a carbon filter, made in Japan; placed in EXCHANGEABLE module; estimated live time in the clean air – approx.10 years
Detectable gases	CO: range 20 ÷ 1000ppm or Explosive gases: range 10 ÷ 30% LEL or HFC type R32, R134A, R407C, R410A: 100 ÷ 2000ppm
Method of measurement	diffusion, cyclic every 10 - 25 sec.
Alarm thresholds	two (three), A1, A2, (A3)
Standard thresholds (or in the above range)	A1 = ~23mg/m3 of CO (~ 20ppm) (15m average) or 10% LEL combustible gas or 1000 ppm Freon R410A A2 = 117mg/m3 CO (100ppm) (15m average, ~ TWA) or 30% LEL combustible gas or 2000ppm Freon R410A A3> 250ppm CO (momentary concentration), or exceeding the scope of the explosive gas
Threshold accuracy	15% for A2 in the calibration conditions: 20 (-2/+5)°C, 65 (±10)% RH, 1013 (±30) hPa, >72h continuous supply
Thresholds stability	±15% in the range 0°C …+40°C
Long Term Stability	±20% / year but no worse than ± 30% in 3 years
Calibration period	recommended: <36 months; optimum = 12 months
Optical/acoustic indication	LED lamps – A1,A2, (A3) = red, AWR fault = yellow, ZAS power, NET system =green; no acoustic siren
Communication	isolated RS-485 , MODBUS RTU protocol
Detectors net	recommended: 32 units/branch; theoretical max- up to 224
Dimensions	82 x 95 x 68 mm, W x H x D (with rubber glands)
Housing, weight	ABS (option- PC or AL), IP43 /approx.0,2kg

DETECTOR DESCRIPTION

View in mounting position (without front cover)



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BLOCK DIAGRAM of the SYSTEM