DIGITAL GAS DETECTOR

ADDRESSABLE, W/ RS485 PORT

type

with removable, intelligent
semiconductor, electrochemical or Infra-Red SENSOR

gazex®

Warsaw

DG/M

models: **DG-nn/M, DG-nE/M, DG-nR/M, DG-PnE/M DG-PnR/M**

version W1

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PURPOSE

  Digital detector type **DG/M** 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. Gas concentration values produces an signal in the system via RS-485 network.

 Detector can be equipped with semiconductor sensor (models DG-nn/M), electrochemical sensor (models DG-*n*E/M, DG-P*n*E/M) or Infra-Red sensor (models DG-nR/M, DG-PnR/M).

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

  Detector DG/M can not be used in hazardous locations.
"n" - means a natural number, code of the calibration (detected) gas in accordance with GAZEX nomenclature

SCOPE OF APPLICATION

- industrial areas, factories, logistic centers, public buildings
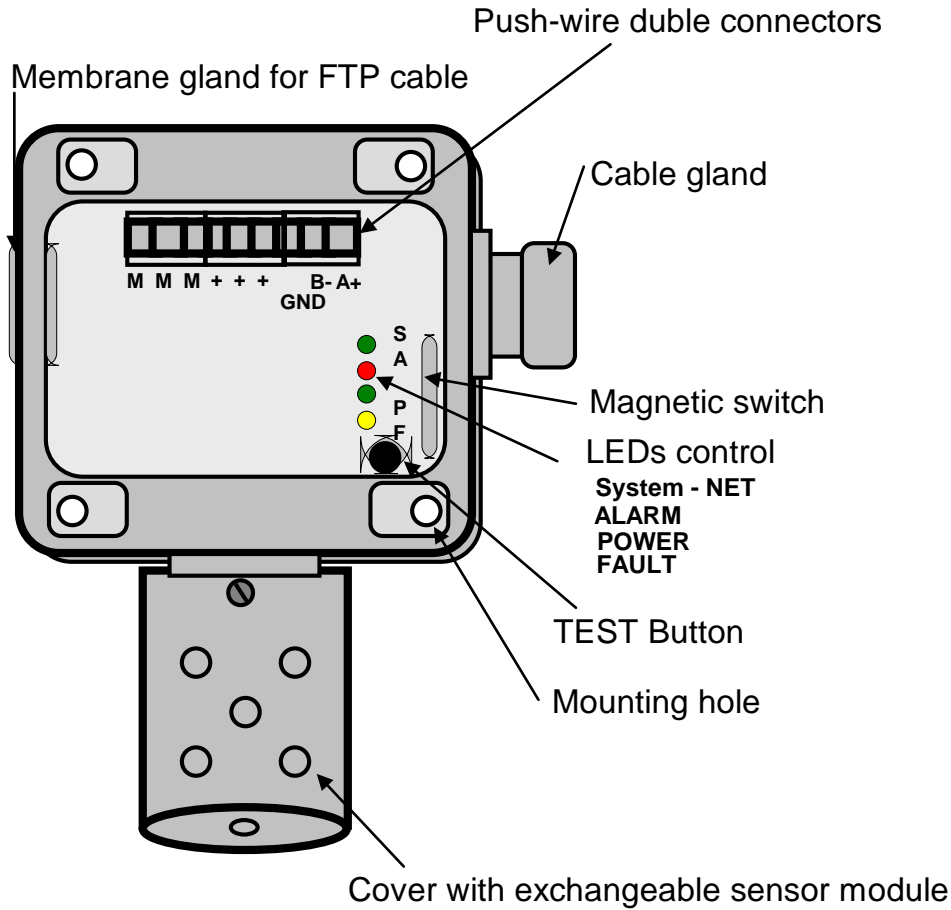- dispersed gas detection systems

FEATURES

- communication, control and transfer of information through the port RS-485 with MODBUS RTU protocol
- relatively fast response for gases
- 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 mode or gas concentration measurement mode
- optical signaling (4x LEDs); fast removable connection pins for FTP type cables
- splash-proof case (IP44) with 2 cable glands
- optional: additional steel pipes cover (AR-1d) or the duct-mouting casing (version DG…/Mw)

TECHNICAL SPECIFICATIONS

Type	DG/M
Power supply	24 V DC (10,0 ÷ 30,0V)
Power consumption	max 3W *(depending on the sensor)*
Operating temperature	-10°C … +40°C recommended; allowed: see DG/F or DG/P data sheets
Humidity	30% … 90% RH
Gas sensors type	semiconductor– models DG-*nn*/M, electrochemical – models DG-*n*E/M and DG-P*n*E/M, Infra-Red – models DG-*n*R/M and DG-P*n*R/M, in EXCHANGEABLE sensor module
Detectable gases	according to DG/F or DG/P data sheets
Method of measurement	diffusion
Alarm thresholds or measurement range	According to DG/F or DG/P data sheets
Threshold accuracy	± 15% , at calibration conditions: 20(-2/+5)°C, 65(±10)%RH, 1013(±30)hPa, >72h pre-heating
Thresholds stability	± 15% In the range 0°C … 40°C; see DG/F or DG/P data sheets
Calibration period	recommended: < 36 months for semiconductor or IR sensors, < 6 months for electrochemical sensors optimal: according to DG/F or DG/P data sheets
Optical/acoustic indication	4x LEDs: green = NET activity, red = ALARM, green = POWER, yellow = FAULT
Communication	isolated RS-485 , MODBUS RTU protocol
Addressing	semi-automatic address control using magnet (without opening the housing)
Detectors Network capacity	optimally: up to 32; theoretically up to 224 units
Dimensions	140 x 110 x 55 mm (H x W x D)
Housing, weight	ABS / PC, IP44; ~ 0,3kg

DETECTOR DESCRIPTION

View in mounting position (without front cover)

Push-wire duble connectors

Membrane gland for FTP cable

M M M + + + B- A+
GND

Cable gland

S
A
P
F

Magnetic switch

LEDs control
System - NET
ALARM
POWER
FAULT

TEST Button

Mounting hole

Cover with exchangeable sensor module

L I F E   I S   S A F E   W I T H   U S ! ©gazex

BLOCK DIAGRAM of the SYSTEM

DG/M

Detector No max 224

FTP
max 1200m

...

DG/M

DG/M

DG/M

PU…/T
Power supply
24VDC, >2A

24V DC

FTP <12m   FTP <12m

2x 2,5

DG/M

FTP

connection box CB-4   CB-4   FTP

relay and alarm outputs

visualization unit
MDD-L32/T
additional units
MDD-R4/T
MDD-C32/T

FTP

System No 2

DG/M

PU…/T
Power supply
24VDC, >2A

DG/M

PU…/T
Power supply
24VDC, >2A

FTP <12m   24V DC   FTP <12m   24V DC

...   2x (min 1,5)   2x 2.5

CB-4   FTP   CB-4   FTP   CB-4   FTP

Det.Net

relay and alarm outputs

Main control unit

MDD-256/T

FTP

System No 1

Out.Net

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to BMS