

Datasheet

Fixed Toxic Gas Detector

G1Max Series



| Description

The G1Max series is a high-performance fixed toxic gas detector developed and manufactured by GDS INSTRUMENTS. According to the target measured gas types, the product adopts high-performance sensors with electrochemical, semiconductor, photo-ionization, infrared and other detection principles gas sensors, with its unique diffuse design, effectively improve the detection response time.

The G1Max series fixed toxic gas detector provides a 4-20mA signal output and a RS48-Modbus protocol, which is compatible with most control systems. It also provides 2 programmable relay outputs to connect with audible and visual alarms to be used as an independent gas detection system.

The G1Max series fixed toxic gas detector uses infrared remote to set and adjust parameters, which can be easily calibrated and maintained in the field without opening the cover.

The G1Max series fixed toxic gas detector is globally certified to be used in various harsh environments such as petrochemical, chemical, metallurgical and environmental protection, and its certification level is up to ExdIICT6 Gb; Ex tD A21 IP67 T80°C.

| Features

- 4-digit 15-segment highlight LED display and status indication
- The 4-20mA, RS485-Modbus and relays output signals can satisfy different control systems' requirements.
- Smart sensor module with built-in memory containing various calibration configuration information
- Sensor module design, sensor fault diagnosis function
- IR remote control, easy to operate
- Explosion-proof design for zone 1 and zone 2 hazardous locations
- A variety of built-in different gases databases (applicable to some gas types)
- On-site software upgrades available



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Specifications

System Specifications

DISPLAY	4-digit 15-segment LED display Highlight LED lights Indicate normal, fault, low alarm, high alarm status
DETECTION PRINCIPLE	Electrochemical Semiconductor Photo-ionization Infrared
DETECTION METHOD	Diffusion

Environmental Specifications

TEMPERATURE RANGE	-40~+70°C(Part of the gases)
HUMIDITY RANGE	0~95%RH (Non-condensing)
INGRESS PROTECTION	IP67(Passed PCEC test)

Mechanical Specifications

MATERIAL OF HOUSING	Aluminum (SS316 optional)
WEIGHT	1kg
DIMENSIONS	160×120×90mm
INSTALLATION	Mounting bracket

Electrical Specifications

INPUT POWER	24 VDC nominal, 9 to 30 VDC
POWER CONSUMPTION	<1.6W, max current 65mA at 24VDC
SIGNAL OUTPUT	4-20mA(HART is optional) RS485-Modbus 2 relay outputs 1 low alarm relay, 1 high alarm relay (Default the low alarm relay is a active relay with 24VDC, the rest are passive SPDT) Relay capacity 30VDC/3A
CABLE ENTRY	2*M25×1.5 (Others are optional)
CABLE REQUIREMENTS	3 wires, recommended cable diameter is 1.5mm ²
OPERATING MODE	IR remote

Sensor Specifications

GAS	RANGE	RESOLUTION	RESPONSE TIME
CO	0-1000ppm	1ppm	≤20s
O ₂	0-25%VOL	0.1%vol	≤20s
O ₃	0-10ppm	0.01ppm	≤20s
H ₂ S	0-100ppm	1ppm	≤30s
H ₂	0-1000ppm	1ppm	≤30s
C ₆ H ₆	0-20ppm	0.1ppm	≤10s
Cl ₂	0-20ppm	0.1ppm	≤60s
NH ₃	0-100ppm	1ppm	≤60s
SO ₂	0-20ppm	0.1ppm	≤30s
NO	0-250ppm	0.1ppm	≤30s
NO ₂	0-20ppm	0.1ppm	≤30s
CH ₂ O	0-50ppm	0.01ppm	≤30s
HCl	0-20ppm	0.5ppm	≤30s
C ₂ H ₄ Cl ₂	0-50ppm	1ppm	≤30s

*For other ranges, please consult your local GDS INSTRUMENTS representative

Approvals

PCEC	Ex d IIC T6 Gb Ex tD A21 IP67 T80°C
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Product Configuration

G1Max Series Gas Detector
Mounting bracket
Calibration cover
Manual
IR Remote (Optional)

*For standard configuration, please refer to the actual product provided by the factory. And for more accessories, please consult your local GDS INSTRUMENTS representative.



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