



Sense By Safety With SENSOSAFE



GM400



Flammable & Toxic Gas Detector

GM400 as an explosion-proof gas detector is equipped with highly sensitive sensors in detecting a variety of flammable and toxic gasses covers the needs of various industries such as oil and gas, petrochemical, steel and etc.



Introduction

GM400 Gas detectors advantage comes from a simple-to-use, low-maintenance universal platform. GM400 supports Electrochemical, Infrared, Catalytic and PID gas sensors and uses standard 4-20mA output, Modbus (optional) and three relay outputs (optional).

With various unique features for configuration and diagnostic capabilities, GM400 satisfies explosion-proof requirements in upstream/downstream oil, gas, refinery and petrochemical, power, steel and other industries. The enclosure is available in stainless steel or aluminum. Two threaded ports, available in metric version, and ruggedized mounting options provide ultimate installation flexibility.

Easy To Use

- Large color OLED display, with backlight and visible for visual monitoring of displayed gas values
- Simple and understandable menu design for configuration, calibration and other settings
- Self-test and fault indication features
- Non-intrusive, one-man calibration
- Quick calibration with auto-inhibit
- Fully configurable via non-intrusive magnetic switches
- Removable plug/socket type terminal blocks for ease of wiring
- Reducing the chance of incorrectly interpreting messages or incorrectly changing settings
- Status checking at a glance and from a distance by 3 LEDs for alarms, power and fault

Easy Installation

- 3 wire operation
- Simple plug-in sensors and replaceable cells
- Three conduit entries for ease of installation
- Integral surface mounting lugs or optional pipe or ceiling mounting brackets

Reliable Local Services

Advantages such as Reliable after-sales services, possibility of unique Customization and Availability make the use of GM400 Gas detectors cost-effective, productive and reliable. we would be available every time which is needed to give service and assist our customers. While this is not possible to give such a service for other foreign brands.

Free Testing and Calibration for Two Years

Datasheet

General Specification

Brand	SENSOSAFE
Model	GM400
Sensor Type	Infrared , Catalytic, Electrochemical.PID
Electrical output	4-20mA analog signal output RS-485 Modbus RTU digital output (Optional) 3 relay outputs for alarms and fault (Optional)
Display	Bright & High-performance OLED screen display
Configuration	Non-contact operation by magnetic bar
LED Indicators	Red, amber and green LEDs for alarms, fault and power

Construction

Dimensions	125×138×96 mm
Weight	1.5 kg
Enclosure Material	Aluminum ,316 stainless steel(optional)
Sensor Housing Material	316 stainless steel
Entries	2×M20×1.5

Electrical

Voltage Power	18-28 VDC <3W
Output	4-20mA :Normal 1 to 4 mA: Under range/Inhibit/Calibration/Fault 22mA :Over range Modbus (optional)
Configurable Parameters	Pre-Alarm and Alarm threshold Relay configuration options : Latching or non-latching

Environmental	
Ingress protection	IP65 in accordance with EN 60079-31
Operating temperature	Infrared (IR): -25°C to +60°C Catalytic: -20°C to +70°C Toxic: -25°C to +50°C
Humidity	0 to 100% RH (non-condensing)
Functional Specification	
Event logging	Records alarm, fault and events. Events can be viewed on-screen by date and downloaded to a PC.
Zero drift	± 2% FSD per year maximum
Repeatability	± 2% F.S range
Resolution	0.2% of F.S range
Response time	Catalytic CH ₄ : T ₉₀ < 20s Toxic H ₂ S: T ₉₀ < 30s IR CH ₄ : T ₉₀ < 30s
Calibration Fault	Automatically reminds the user when calibration is due to ensure sensors remain accurate at all times
Accuracy	± 2% F.S range
Life Time	Catalytic Sensor: 4-5 years Toxic Sensor: 2 years IR Sensor: ≥ 5 years
Certifications	
Approvals	Explosion proof test certificate: II 2G Ex db IIC T6 Gb III 2D Ex tb IIIC T85 °C Db
Performance	IEC/EN 60079.29.1 (flammable gases) IEC 62990, EN 45544 (toxic gases) EN 50104 (oxygen gases) EN50271 (software)
EMC Compliance	IEC 61000-4-(2,3,4,5,6,8), IEC 61000-6-4
IR Sensor functional safety	SIL 2 (EN 61508, EN50402)

GAS TABLE

Gas Type	Unit	Gas Type	Unit
Carbon dioxide (CO ₂)	ppm - %Vol	Sulfur Hexafluoride (SF ₆)	ppm
Butane (C ₄ H ₁₀)	%LEL	Up to 30 Refrigerant gases	ppm - %Vol
Methane (CH ₄)	%LEL - %Vol	Hydrocarbons	%LEL
Propane (C ₃ H ₈)	%LEL	Acetylene (C ₂ H ₂)	%LEL
Propylene (C ₃ H ₆)	%LEL	Ozone (O ₃)	ppm
Ethylene (C ₂ H ₄)	ppm - %LEL	Hydrogen Peroxide (H ₂ O ₂)	ppm
Carbon monoxide (CO)	ppm - %LEL	Hydrogen (H ₂)	%LEL
Hydrogen Sulfide (H ₂ S)	ppm	Methanol (CH ₃ OH)	%LEL
Ammonia (NH ₃)	ppm - %LEL	Ethanol (C ₂ H ₅ OH)	%LEL
Nitrogen dioxide (NO ₂)	ppm	Benzene (C ₆ H ₆)	%LEL
nitric oxide (NO)	ppm	Oxygen (O ₂)	%Vol
Chlorine (Cl ₂)	ppm	LPG	%LEL
Sulfur dioxide (SO ₂)	ppm	Ethyl acetate (C ₄ H ₈ O ₂)	%LEL

Certificates



ATEX Certification



Iranian Petroleum Association



Calibration Certification



EMC Certification



ISO Certification

Clients



منطقه 1 عملیات انتقال گاز



منطقه 2 عملیات انتقال گاز



منطقه 9 عملیات انتقال گاز



منطقه 6 عملیات انتقال گاز



نیروگاه برق حرارتی یزد



ننیا

منابع غذایی کیان فراور ایرانیان



SENSO SAFE