

ULTRA IR800

INFRARED GAS DETECTOR

Prioritise Performance

Protecting Life, Safe Guarding Asset



GASENSOR TECHNOLOGY
THE CHOICE FOR PERFORMANCE



INTRODUCTION

The Model Ultra IR800 Infrared (IR) Point Detector is a microprocessor-based combustible gas detector that continuously monitors combustible gases in lower explosive limit (LEL) range.

Ultra IR800 is housed in an explosion-proof enclosure complete with status display, which consists of three high-brightness nixie tubes and four status indicators for gas concentration readings and status conditions.

This IR point detector provides various output interfaces which includes 4-20mA current output, three sets of Normally Open Contact for Warning/Alarm/Fault status, two sets of communication interfaces for RS485 and HART interfaces.

Ease of Use

- One person adjustment-free calibration
- Multiple gas type support

Multiple Outputs

- 4-20mA analog output
- Warning, Alarm and Fault Relay
- Redundant modbus and HART

Highly Reliable

- Event logging
- Real time fault diagnosis



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Our Gas Detector deserve the best quality

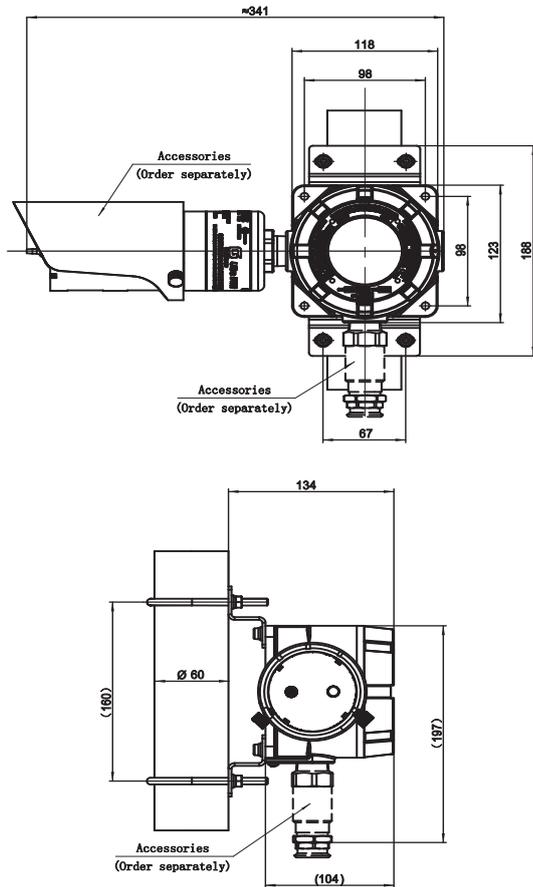


Figure 1: Outline and Mounting Dimensions

Technical key points

Electrical Specification	
Input Power	24VDC nominal, 20-36VDC, 6.5W max
Analog Output	0-22mA (500 Ω max. load)
	<1 mA Fault (1)
	1.5mA Gas Check, Calibration, Setup mode (2)
	4-20mA Detection range
	20-22mA Over-range
	2mA ± 0.2mA Optical path fault
RS-485 Output:	Dual redundant Modbus RTU,
(Optional)	suitable for linking up to 128 units or up to 247 units with repeaters
Baud Rate:	2400, 4800, 9600, or 19200BPS
HART:	HART7, HART Device Descriptor Language available
(Optional)	AMS Aware
Relay Ratings:	0.3A @ 250 VAC / 2A @ 30 VDC res. max
(Optional)	Warning, Alarm, Fault
Status Indicators:	Digital Display with 4 LED indicators for Warning, Alarm, Fault, Run
Cable Requirement:	Three wire shielded cable
	Max. distance between Ultra IR800 and power source @ 24VDC nominal: 14AWG - 1400m
	Max. distance for analog output (500 Ohms max): 14AWG - 2700m
Mechanical Specification	
Housing:	Aluminum alloy or 316 Stainless steel
Cable Entry:	3/4" NPT
Weight:	4Kg (Aluminum) / 6.8Kg (Stainless steel)

Technical Data of the Ultra IR800 series

Product Specifications	
Sensor Type:	Continuous diffusion, Nondispersive infrared (NDIR)
Sensor Life:	5 years typical
Measuring Ranges:	0 ~ 100% LEL
Accuracy:	±2% LEL (≤ 50%LEL) , ±5% LEL (> 50%LEL)
Response Time:	T90 <5 s with 100% LEL methane applied
Zero Drift:	< 2% of full scale per year
Operating Mode:	Calibraiton, gas check, setup
Gas Setting:	Methane
Warranty:	Two years
Other Specifications	
Classification:	ATEX/ IECEx Ex db IIC T6 Gb, II 2D Ex tb IIIC T100 °C Db IP66 (Tamb = -40 °C to + 70 °C)
	SIL 2 Certified
Environmental Specifications	
Operating Temperature Range:	- 40°C to + 70°C
Storage Temperature Range:	- 50°C to + 85°C
Operating Humidity Range:	5% to 100% RH, non-condensing

⁽¹⁾ Under HART, AO value can be either 3.5mA or 1.25mA, depending on user selection
⁽²⁾ Under HART, AO value can be either 3.5mA or 1.5mA, depending on user selection
 Specifications subject to change without notice.



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