



## FLAMMABLE GAS DETECTOR

### Omniguard® model 1100

The Omniguard® model 1100 gas detector is designed to detect and measure the presence and level of flammable gases in industrial applications such as refineries, drilling and production platforms, gas turbines, chemical plants, fuel loading facilities, compressor stations, waste water treatment facilities, LNG/LPG processing and storage facilities, transportation facilities and manufacturing processes.

The Omniguard® model 1100 gas detector is based on well proven sensor technology and has fast response time, excellent measuring accuracy and long term stability. The microprocessor controlled functionality and the simple calibration procedure makes the Omniguard® 1100 gas detector easy to use and maintain and very reliable in field operation. Easy to read display and standard 4-20 mA and HART rev 7 output makes installation and operation of the detector quick and easy.

### Specifications

#### General specifications

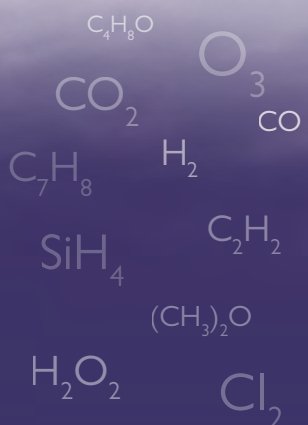
Measuring type	Diffusion
Measuring method	Catalytic cell, Semiconductor cell, Thermal conductivity cell
Detectable gases	Flammable gases (LNG, LPG, H <sub>2</sub> , Methane, Buthane etc)
Measuring range	Depending on gas
Accuracy	≤ ±3% / Full range
Zero drift	≤ ±2% / Full range
Response time	Typical 90% of range in less than 15 seconds
Basic interface	Analog 4-20 mA current interface
HART interface	HART rev 7
Certification	$\text{Ex}$ II 2 G, Ex db IIC Gb T4, T5, T6 Classified for use in hazardous locations Class I, Division 1, Groups A, B, C, D hazardous locations. UL Certificate of Compliance E506030 SIL2 SGS TÜV Certificate number: FS/71/220/20/0568
Protection class	IP66
Operating temperature	Transmitter: -40°C to +80°C (-40°F to +176°F) Sensor: Dependent on sensor
Operation humidity	Transmitter: 5 to 99% RH (non-condensing) Sensor: Dependent on sensor
Pressure range	90 to 110 kPa
Max air velocity	6 m/s

Specifications continue on next page...

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### Key features

- Wide range of detectable gases
- HART rev 7 communication as standard
- Advanced self-test and diagnostics
- Smart programming and auto calibration
- 4-20 mA output signal
- Easy in field calibration and maintenance
- Robust weather- and flame proof enclosure for indoor or outdoor applications
- Low cost of ownership
- IECEx, ATEX, SIL2, CE



# Omniguard® model 1100

## Specifications (continued)

### Electrical specifications

<b>Input voltage</b>	18 to 31 VDC Nominal: 24 VDC Ripple voltage: <1 V
<b>Power consumption</b>	Max. wattage: 4.8W@+24 VDC Max. current: 200 mA@+24 VDC
<b>Current loop</b>	0-20 mA (source or sink), 500 ohms max load
<b>Measured value signal:</b>	4 mA (zero) to 20 mA (full range)
<b>Fault:</b>	0 mA
<b>HART Fault:</b>	2 mA
<b>Maintenance:</b>	3 mA
<b>0-100%:</b>	4 mA-20 mA
<b>100-109%:</b>	20 mA-21.4 mA
<b>Over 110%:</b>	22 mA
<b>Current loop ripple &amp; noise max</b>	±20 µA
<b>Wiring requirement</b>	Power CVVS or CVVSB with shield Analog CVVS or CVVSB with shield

**Signal transmission distance** Analog: 2500 m (8200 ft)

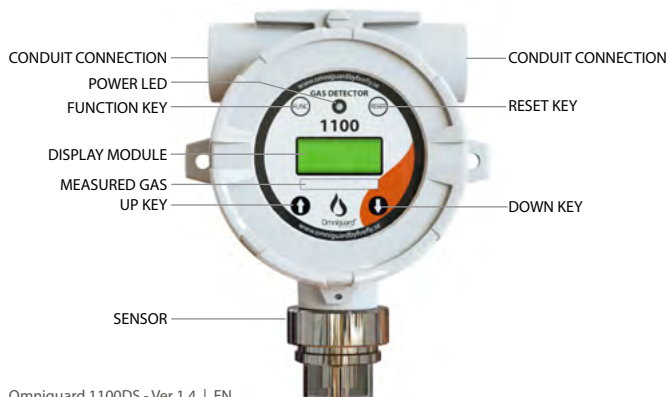
**EMC protection** Complies with EN50270

### Mechanical considerations

<b>Housing</b>	Aluminium (ALDC) or Stainless steel (316) Sensor: Stainless steel (316)
<b>Weight</b>	1.5 kg (3.3 lbs) (aluminum) 3.1 kg (6.8 lbs) (SS)
<b>Dimensions</b>	136 (W) x 166 (H) x 110 (D) mm (5.4 (W) x 6.5 (H) x 4.3 (D)) in
<b>Conduit entry</b>	3/4-14 NPT or M20-1.5
<b>Mounting holes</b>	Ø 7 ±0.1 (Ø 0.28 in)

<b>Optional accessories</b>	<b>Art.no</b>
Pole mount	28236
Rain cover, plastic	27727
Rain cover, SS (304)	28368
Splash guard	27728
Collecting cone	27729
Magnet bar	27730

**Warranty** 2 years (Transmitter) / 1 year (Sensor)



Omniguard 1100DS - Ver 1.4 | EN  
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## Ordering information

Type	Omniguard® model 1100
Designation	Flammable gas detector
Ordering number	1100 - X X X X X X X
<b>Housing material/conduit entry</b>	0 Aluminium, 3/4-14 NPT (white) 1 Stainless steel, 3/4-14 NPT 2 Aluminium, M20-1.5 (white) 3 Stainless steel, M20-1.5
<b>Detectable gas</b>	0 CH <sub>4</sub> (methane) 1 C <sub>4</sub> H <sub>10</sub> (buthane) 2 C <sub>3</sub> H <sub>8</sub> (propane) 3 H <sub>2</sub> (hydrogen) 9 Special gas
<b>Measuring method</b>	0 Semiconductor cell 1 Thermal conductivity cell 2 Catalytic cell
<b>Measuring range</b>	0 0-2000 ppm (C <sub>4</sub> H <sub>10</sub> ) 1 0-100% Vol (H <sub>2</sub> ) 2 0-100% LEL (CH <sub>4</sub> , C <sub>4</sub> H <sub>10</sub> , C <sub>3</sub> H <sub>8</sub> , H <sub>2</sub> ) 9 Special range
<b>Output signal</b>	0 4-20 mA, and HART rev 7
<b>Configuration</b>	0 Standard 1 Remote option
<b>Approvals</b>	0 IECEx, ATEX, SIL2



For information on the specific certifications and approvals each Omniguard® Gas Detector holds please visit:  
<https://omniguardbyfirefly.com/gasdetectors>

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