



OXYGEN & TOXIC GAS DETECTOR

Omniguard® model 2100

The Omniguard® model 2100 gas detector is designed to detect and measure the presence and level of oxygen and toxic 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 2100 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® 2100 gas detector easy to use and maintain and very reliable in field operation. Easy to read display, standard 4-20 mA and HART rev 7 output makes installation and operation of the detector quick and easy.

Specifications

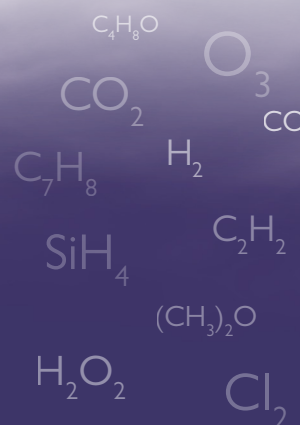
General specifications

Measuring type	Diffusion
Measuring method	Electrochemical cell, Semiconductor cell
Detectable gases	O ₂ , Toxic gases (CO, Cl ₂ , NH ₃ , H ₂ S etc.)
Measuring range	Depending on gas
Accuracy	≤ ±3% / Full range
Zero drift	≤ ±2% / Full range
Response time	O ₂ : Typical 90% of range in less than 15 seconds (depending on sensor) CO, Cl ₂ , NH ₃ , H ₂ S: Typical 90% of range in less than 45 seconds (depending on sensor)
Basic interface	Analog 4-20 mA current interface
HART interface	HART rev 7
Certification	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/71/220/20/0567
Protection class	IP66
Operating temperature	Transmitter: -40°C to +80°C (-40°F to +176°F) Sensor: Depending on sensor
Operation humidity	Transmitter: 5 to 99% RH (non-condensing) Sensor: Depending on sensor
Pressure range	90 to 110 kPa
Max air velocity	6 m/s

Specifications continue on next page...

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, UL, SIL2, CE



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Specifications (continued)

Electrical specifications

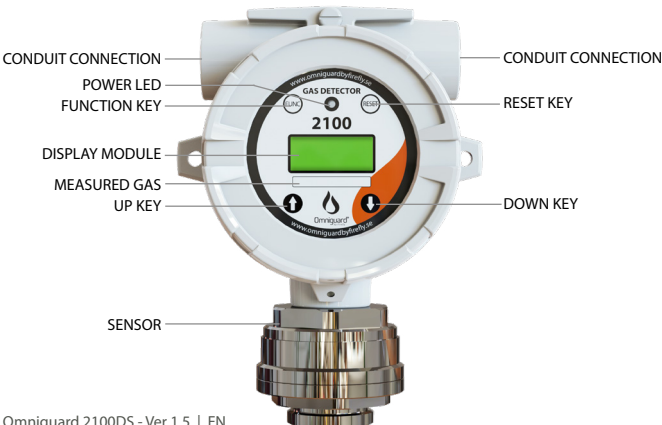
Input voltage	18 to 31 VDC Nominal: 24 VDC Ripple voltage: <1 V
Power consumption	Max. wattage: 3.6W@+24 VDC Max. current: 150 mA@+24 VDC
Current loop	0-20 mA (source or sink) 500 ohms max load
Measured value signal:	4 mA (zero) to 20 mA (full range)
Fault:	0 mA
HART fault:	2 mA
Maintenance:	3 mA
0-100%:	4 mA-20 mA
100-109%:	20 mA-21.4 mA
Over 110%:	22 mA
Current loop ripple & noise max	±20 µA
Wiring requirement	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

Housing	Aluminum (ALDC) or Stainless Steel (316) Sensor: Stainless Steel (316)
Weight	1.8 kg (4.0 lbs) (Aluminum) 4.0 kg (8.8 lbs) (Stainless Steel)
Dimensions	136 (W) x 166 (H) x 110 (D) mm (5.4 (W) x 6.5 (H) x 4.3 (D)) in
Conduit entry	3/4-14 NPT or M20-1.5
Mounting holes	Ø 7 ±0.1 (Ø 0.28 in)

Accessories/Spare Parts	Art.no
Rain cover, plastic	27727
Rain cover, SS (304)	28368
Collecting cone	27729
Pole mount	28236
Splash guard	27728
Magnet bar	27730
Sensor module	2100-S

Warranty	2 years (Transmitter) / 1 year (Sensor)
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Ordering information

Type	Omniguard® model 2100
Designation	Oxygen & toxic gas detector
Ordering number	2100 - X X X X X X X

Housing material/conduit entry

- 0 Aluminum, 3/4-14 NPT (white)
- 1 Stainless Steel, 3/4-14 NPT
- 2 Aluminum, M20x1.5 (white)
- 3 Stainless Steel, M20x1.5

Detectable gas

- 0 O₂ (Oxygen)
- 1 CO (Carbon monoxide)
- 2 Cl₂ (Chlorine)
- 3 NH₃ (Ammonia)
- 4 H₂S (Hydrogen sulfide)
- 9 Other, please specify

Measuring method

- 0 Electrochemical cell
- 1 Semiconductor cell

Measuring range

- 0 0-3 ppm (Cl₂)
- 1 0-30 ppm (H₂S)
- 2 0-75 ppm (NH₃)
- 3 0-150 ppm (CO)
- 4 0-300 ppm (CO)
- 5 0-25% Vol (O₂)
- 9 Other, please specify

Output signal

- 0 4-20 mA, and HART rev 7

Configuration

- 0 Standard
- 1 Remote option

Approvals

- 0 IECEx, ATEX, UL, SIL2, CE



For information on the specific certifications and approvals each Omniguard® Gas Detector holds please visit:
www.omniguardbyfirefly.com/our-certifications/