

GG-SO₂-EXPEXPLOSION-PROOF
SULFUR DIOXIDE SENSOR**Key Features**

- Explosion-proof enclosure for classified areas
- Sulfur dioxide specific electrochemical sensor technology
- 0-20 ppm detection range
- Electronics potted to eliminate internal corrosion
- Industry standard 24VDC, linear 4-20 mA output
- Operating temperature from -4°F to +122°F
- Accurately monitor SO₂ concentrations for important action levels
- No false alarms from interference gases
- Real-time continuous monitoring for early leak detection

Avoid potentially explosive hydrogen gas buildup.
Poison-proof, explosion-proof design.

The GG-SO₂-EXP is designed for detection of sulfur dioxide gas in hazardous areas. The standard detection range of 0-20 ppm provides real-time continuous monitoring of concentrations accurately down to 1 ppm with no false alarms.

The GG-SO₂-EXP utilizes a proven sulfur dioxide specific electrochemical sensor for detecting toxic SO₂ gas concentrations. No false alarms due to cross-sensitivities from other gases, and no false alarms from temperature or humidity fluctuations.

The GG-SO₂-EXP provides an industry standard linear 4/20 mA output signal proportional to ppm concentration of sulfur dioxide. Long sensor life with minimal span adjustment can be expected in most applications. The sensor is designed for simple calibration and the sensor head is easily field replaceable.

Applications

- Wineries
- Wastewater
- Refrigeration systems
- Perimeter Monitoring
- Heat Treatment
- Air quality
- Refineries
- Process manufacturing
- Textiles

Benefits

- Low cost explosion protection
- No false alarms from interference gases
- Simple operation & calibration

AUTHORIZED DISTRIBUTOR:
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Sulfur dioxide gas is twice as heavy as air and will tend to accumulate in low-lying areas in poorly ventilated rooms. For optimum personnel protection (representative concentration reading that an employee would be exposed to), mount the sensor at a height in the breathing zone of the employees. It would typically be no higher than 4 to 5 feet off the ground, which also allows easy access. As a general rule of thumb, try to mount sensors within 30 feet of potential SO₂ sources.

The **GG-SO₂-EXP** is useful for horn/strobe and ventilation activation, and is also useful for alarm outputs such as phone dialers and other alarm functions.

Typical sensor element life is 3 years, with minimal cross-sensitivity to other gases. Field replaceable sensor element keeps long term maintenance simple and low cost. Every circuit board is potted to completely eliminate corrosion to the electronic components and copper tracing on the circuit board. An explosion-proof aluminum enclosure houses the transmitter.

Ordering Information

The **GG-SO₂-EXP** is delivered calibrated and ready to install. The assembly includes sensor and potted transmitter mounted inside an explosion-proof enclosure. Use the model numbers below to order.

Order #: [GG-SO₂-20-EXP](#)
[GG-SO₂-RC-EXP](#) (replacement sensor)



SPECIFICATIONS

Due to ongoing research and product improvement, specifications are subject to change

Input Power:

+24 VDC, 50 mA

Detection Principle:

Electrochemical

Detection Method:

Diffusion

Gases:

Sulfur dioxide (SO₂)

Ranges:

0-20 ppm

Output Signal:

Linear 4/20 mA (max input impedance: 700 Ohms)

Linearity:

+/- 0.5% of full-scale

Repeatability:

+/- 1% of full-scale

Response Time:

T50 = less than 20 seconds
 T90 = less than 45 seconds

Accuracy:

+/- 5% of full-scale

Zero Drift:

Less than 0.1% of full-scale per month, non-cumulative

Span Drift:

Application dependent, but generally less than 3% per month

Temperature Range:

-4°F to +122°F (-20°C to +50°C)

Humidity Range:

5% to 95% non-condensing

Wiring Connections:

3 conductor, shielded, stranded, 20 AWG cable (General Cable C2525A or equivalent) up to 1500 ft

Terminal Block Plugs: (Field Wiring)

26-12 AWG, torque 4 lbs-in

Weight:

3.75 lbs

Dimensions:

6.75" high x 5.25" wide x 4.5" deep

Enclosure:

Copper-free aluminum body, epoxy powder coat finish, neoprene gasket, for hazardous areas.

NEC/CEC:

Class I, Division 1 & 2, Groups B, C, D
 Class II, Division 1, Groups E, F, G
 Class II, Division 2, Groups F, G
 Class III

NEMA/EEMAC: 3, 4, 4X, 7BCD, 9EFG

UL Standard: 1203

CSA Standard: C22.2 No. 30

FM Classification No.: 3615

ATEX Certificate KEMA 02 ATEX 2265U

IEC Standards EN:60079-0, EN:60079-1, EN:60529

Warranty:

2 years (including sensor element)