



# Certificate of Compliance

**Certificate:** 1369892

**Master Contract:** 161129

**Project:** 80182879

**Date Issued:** 2023-10-25

**Issued To:** General Monitors, Incorporated.  
16782 Von Karman Ave. Unit 14  
Irvine, California, 92606  
United States

**Attention:** Larry Vlaga

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.*

**Issued by:**

Daniel Ergezi



## **PRODUCTS**

CLASS - C482801 - SIGNAL APPLIANCES Combustible Gas Detection Instruments-For Hazardous Locations  
CLASS - C482881 - SIGNAL APPLIANCES Combustible Gas Detection Instruments - For Hazardous Locations  
-Certified to U.S. Standards

### **Class I, Div. 1 & 2, Groups B, C and D; TYPE 4X**

Model IR400, Stand Alone Sensor/Transmitter, input rated 24 Vdc, 4.8 W Max., provides a 4-20mA output with Modbus or optional Hart output. May be used with Calibration Cup p/n 32554 and Splash Guard p/n 32545 or IR Remote Gas Calibrator Cup p/n 32541. Temperature Code of T5, Ta = -40°C to +75°C. The IR400 monitors 0-100% LEL of either; methane, propane, hexane, pentane, ethane, ethylene or butane. May be connected to IR4000S, IR4000M, or junction box P/N 31305 (Class I, Div. 1, Group B, C and D, Type 4X).  
Part number: 32500-a



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a: Output -1, 2, 5 through 8, 11, 12, 15, 16, 17, 18, 21 through 32, 65, 68, 86, 100, 101 which denotes gas detected, material of enclosure and outputs.

Model IR4000S, Stationary single or dual channel, stand alone control unit for combustible gas detectors, input rated 24 Vdc, 2 W Max., provides a 4-20mA output. Temperature Code of T5, Ta = -40°C to +75°C. Control unit monitors 0-100% LEL gas-in-air atmospheres from the IR400. If provided with relays, contacts rated 8A, 250V ac or 8A, 30V dc resistive.

Part number: 32563-a

a: 1 through 4, 9 through 12, 29, 38, 39, 40 which denotes relay options, field wiring termination combinations, and material and color of enclosure.

Model IR4000M, Stationary single or dual channel, stand alone control unit for combustible gas detectors, input rated 24 Vdc, 2 W Max., provides a 4-20mA output with optional Modbus or Hart output. Temperature Code of T5, Ta = -40°C to +75°C. Control unit monitors 0-100% LEL gas-in-air atmospheres from the IR400. If provided with relays, contacts rated 8A, 250V ac or 8A, 30V dc resistive.

Part number: 32580-a

a: 1 through 8 and 17 through 24 which denotes relay options, field wiring termination, HART and Modbus combinations and material of enclosure.

CLASS - C482802 - SIGNAL APPLIANCES Toxic Gas Detection Instruments - For Hazardous Locations

CLASS - C482882 - SIGNAL APPLIANCES Toxic Gas Detection Instruments- For Hazardous Locations -  
Certified to U.S. Standards

#### **Class I, Div. 1 & 2, Groups B, C and D; TYPE 4X**

Model IR700, Stand Alone Sensor/Transmitter, input rated 24 Vdc, 4.8 W Max., provides a 4-20mA output with Modbus or optional Hart output. May be used with Calibration Cup p/n 32554 and Splash Guard p/n 32545 or IR Remote Gas Calibrator Cup p/n 32541. Temperature Code of T5, Ta = -40°C to +75°C. The IR700 monitors 0-5000 ppm of Carbon Dioxide. May be connected to IR4000S CO2 or junction box P/N 31305.

Part number: 32700-a

a: Output -1, 2, 3, 4 which denotes material of enclosure and outputs.

Model IR4000S CO2, Stationary single or dual channel, stand alone control unit for the IR700, input rated 24 Vdc, 2 W Max., provides a 4-20mA output. Temperature Code of T5, Ta = -40°C to +75°C. Control unit monitors 0-5000 ppm of CO2 from the IR700. If provided with relays, contacts rated 8A, 250V ac or 8A, 30V dc resistive.

Part number: 32563-a

a: 13 through 20, which denotes relay options, field wiring termination combinations, and material of enclosure



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### **APPLICABLE REQUIREMENTS**

<b>Title</b>	<b>Class Number</b>	<b>Date</b>
Electrical Equipment for Use in Hazardous (Classified) Locations, General Requirements	3600	1998
Electrical Equipment for Use in Class I, Division 2, Class II, Division 2 and Class III, Division 1 and 2 Hazardous Locations	3611	2004
Explosionproof Electrical Equipment – General Requirements	3615	2006
Electrical and Electronic Test, Measuring and Process Control Equipment	3810	2005
Performance Requirements for Combustible Gas Detectors	ANSI/ISA-12.13.01	2000
Combustible Gas Detectors	6310, 6320	2001
Enclosures for Electrical Equipment, Environmental Considerations	ANSI/UL 50E (Second Edition)	2015
Enclosures for Electrical Equipment, Environmental Considerations	CSA C22.2 No. 94.2	2015
Explosion-proof Enclosures for Use in Class I Hazardous Locations	CSA C22.2 No 30	1986
Non-incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations	CSA C22.2 No 213	1987
Process Control Equipment Industrial Products	CSA C22.2 No 142	1987
Combustible Gas Detection Instruments	CSA C22.2 No 152	1984

### **MARKINGS**

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.



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**Nameplate adhesive label material approval information:**

N/A

The markings appear on a metal nameplate material, 0.025 inch thick, secured by drive pins or rivets, markings are silkscreened, engraved or laser etched.

**IR400 and IR700:**

- CSA Monogram with C US indicator;
- Submittor identification;
- Model number
- Serial number, date code or month and year of manufacture;
- Electrical rating;
- Hazardous location designation is Class I, Div. 1& 2, Groups B, C and D
- The words C22.2 No 152 (IR400 only);
- Caution – READ AND UNDERSTAND INSTRUCTION MANUAL BEFORE OPERATING OR SERVICING and “LIRE ET COMPRENDRE LE MANUEL D'INSTRUCTIONS AVANT L'UTILISATION OU L'ENTRETIEN”.
- The words “DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT” and “NE PAS OUVRIR EN PRESENCE D'UNE ATMOSPHERE EXPLOSIVE”
- The words “POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS” and “RISQUE POTENTIEL DE DECHARGE ELECTROSTATIQUE -VOIR LES INSTRUCTIONS”
- Type 4X

**IR4000S, IR4000M and IR4000S CO2:**

- CSA Monogram with C US indicator;
- Submittor identification;
- Model number
- Serial number, date code or month and year of manufacture;
- Electrical rating;
- Hazardous location designation is Class I, Div. 1& 2, Groups B, C and D; may also have the optional zone marking of Class I, Zone 1, Group IIB+H2
- The words C22.2 No 152 (IR4000S and IR4000M);
- Caution – “READ AND UNDERSTAND INSTRUCTION MANUAL BEFORE OPERATING OR SERVICING” and “LIRE ET COMPRENDRE LE MANUEL D'INSTRUCTIONS AVANT L'UTILISATION OU L'ENTRETIEN”- The words “DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT” and “NE PAS OUVRIR EN PRESENCE D'UNE ATMOSPHERE EXPLOSIVE”
- The words “POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS” and “RISQUE POTENTIEL DE DECHARGE ELECTROSTATIQUE -VOIR LES INSTRUCTIONS”
- Type 4X
- Contact ratings, if relay option provided, see manual



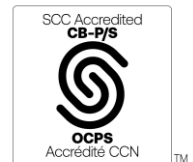
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**Notes:**

Products certified under Class C482801, C482802 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). [www.scc.ca](http://www.scc.ca)





## *Supplement to Certificate of Compliance*

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*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### **Product Certification History**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
80182879	2023-10-25	<p>The scope of this project is to update report 1369892 to address the non-conformance issues noted in FIR (Factory ID: 4550181; Factory Contract: 161131; Date: March 22, 2023). Modifications are primarily minor documentation changes. Further, the following standards were removed:</p> <p>ANSI/NEMA 250 (2003) CAN/CSA No. 94 (1991) CAN/CSA C22.2 No. 0 (1991) ANSI/IEC 60529 (2004)</p> <p>The following standards were added to the “APPLICABLE REQUIREMENTS” table:</p> <p>CAN/CSA C22.2 No. 94.2 (2015) ANSI/UL 50E (Second edition) (2015)</p>
80002956	2019-06-21	<p>GCA-1841: Evaluation for update of Report 1369892 (last update 70107307) to include updates to drawings 32508 and 32563 as well as updates to manuals.</p> <p>Quote assumes no testing is required. General Monitors to provide a marked up copy of project 70107307.</p>
70107307	2017-01-12	<p>Update Report 1369892 with various drawings related to include new IR400 and IR4000S configurations, revised nameplates and a change to the 5V regulator on the IR4000 series.</p>
70031200	2015-05-13	<p>Update to Report 1369892. Changes to schematic for EMC, alternative configurations and changes to label including French warnings</p>
2693147	2014-01-24	<p>Update to report 1369892 to cover revised documents and a firmware change to the IR400.</p>
2557767	2012-10-15	<p>Update to report 1369892 to cover revised documents and a firmware change to the IR400.</p>



2472832	2011-11-09	Update to report 1369892 to cover revised documents and a firmware change to the IR400.
2443376	2011-08-18	Update to report 1369892 to cover junction box for use with IR400 and new model IR700. Also add new model IR4000S CO2.
2375871	2010-12-07	Update report 1369892 to cover updating drawings to cover change in nameplates (non CSA related issues), addition of stainless steel housing for IR4000M/S, added IR400 Ethylene version and added tyco relays.
2308260	2010-05-13	Update report 1369892 to cover revised documentation.
2254864	2009-12-23	Update to report 1369892 to cover revised construction.
2203260	2009-07-28	Update to cover the mention of the Power /AO HART Board and other minor revised construction.
2121723	2008-12-18	Update to cover the mention of Calibration Cup p/n 32554 and Splash Guard p/n 32545 and the addition of IR Remote Gas Calibrator Cup p/n 32541, revised drawings and manuals
2062657	2008-08-21	Update to cover addition of Model IR400, deletion of Model IR2200 and revised construction of Model IR4000