



Certificate of Compliance

Certificate: 1369892 (LR 25993)

Master Contract: 161129

Project: 2557767

Date Issued: October 15, 2012

Issued to: General Monitors, Incorporated

26776 Simpatica Cir
Lake Forest, CA 92630
USA
Attention: Larry Vlagea

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.



Glenn Black

Issued by: Glenn Black

PRODUCTS

CLASS 4828 01 - SIGNAL APPLIANCES - - Combustible Gas Detection Instruments-For Hazardous Locations

CLASS 4828 81 - SIGNAL APPLIANCES-Combustible Gas Detection Instruments - For Hazardous Location-Certified to U.S. Standards

CLASS 4828 01

CLASS 4828 81

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

Class I, Zone 1, IIB +H2

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, 66, 68, 86 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 and 9 through 12 which denotes relay options, field wiring termination combinations, and material 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 4828 02

CLASS 4828 82

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

Class I, Zone 1, IIB +H2

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.



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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

APPLICABLE REQUIREMENTS

FM Std. 3600, 1998, Electrical Equipment for Use in Hazardous (Classified) Locations, General Requirements

FM Std. 3611, 2004, Electrical Equipment for Use in Class I, Division 2, Class II, Division 2 and Class III, Division 1 and 2 Hazardous Locations

FM Std. 3615, 2006, Explosionproof Electrical Equipment – General Requirements

FM Std. 3810, 2005, Electrical and Electronic Test, Measuring and Process Control Equipment

ANSI/ISA-12.13.01, 2000, Performance Requirements for Combustible Gas Detectors

FM Std. 6310, 6320, 2001, Combustible Gas Detectors

ANSI/NEMA 250, 2003, Enclosures for Electrical Equipment (1000 Volts Maximum)

ANSI/IEC 60529, 2004, Degrees of Protection Provided by Enclosures (IP Code)

CAN/CSA-C22.2 No. 0, 1991, General Requirements – Canadian Electrical Code, Part II

CSA C22.2 No 0.5, 1982, Threaded Conduit Entries

CSA C22.2 No 30, 1986, Explosion-proof Enclosures for Use in Class I Hazardous Locations

CAN/CSA-C22.2 No. 94, 1994, Special Purpose Enclosures

CSA C22.2 No 213, 1987, Non-incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

CSA C22.2 No 142, 1987, Process Control Equipment Industrial Products

CSA C22.2 No 152, 1984, Combustible Gas Detection Instruments

MARKINGS



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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;
- The words C22.2 No 152 (IR400 only);
- Warning re read and understand manual;
- The words “DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT”
- 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;
- The words C22.2 No 152 (IR4000S and IR4000M);
- Warning re read and understand manual;
- The words “DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT”
- Type 4X
- If provided with relays contact rating