



Certificate of Compliance

Certificate: 1746881 **Master Contract:** 167534 (024321_0_000)

Project: 70090184 **Date Issued:** 2016-08-10

Issued to: Mine Safety Appliances Company North American Division
1000 Cranberry Woods Dr.
Cranberry Township, Pennsylvania 16066-5296
USA
Attention: Craig Gestler

The products listed below are eligible to bear the CSA Mark shown



Issued by: *Salvatore Grasso*
Salvatore Grasso

PRODUCTS

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

CLASS – 4828 02 - SIGNAL APPLIANCES-Toxic Gas Detection Instruments - For Hazardous Locations

Class I, Division 1, Groups A, B, C and D:

“Ultima XE Gas Monitor” consisting of an “Ultima XE Main” with integral “Ultima XE Sensor”, input rated 7-30V dc, 1A max., 4-20mA signal output, with optional internal relays rated 5A @ 250V ac or 30V dc. Must be used with Weatherguard P/N 10028904. May be used with CSA Certified “Ultima” Calibrator and CSA Certified “Ultima” Controller.

“Ultima XE Gas Monitor” System consisting of an “Ultima XE Main” input rated 7-30V dc, 1A max., 4-20mA signal output, with optional internal relays rated 5A @ 250V ac or 30V dc, for connection to a “Ultima XE Remote Sensor” with integral “Ultima XE Sensor”. Must be used with Weatherguard P/N 10028904. May be used with CSA Certified “Ultima” Calibrator and CSA Certified “Ultima” Controller.

“Ultima X Gas Monitor” System consisting of an “Ultima XE Main with X3 Technology”, input rated 7-30V dc, 10 W max., with optional internal relays rated 5A @ 250V ac or 30V dc; for use with up to 3 of the following: integral Ultima XE Sensor, integral Ultima XIR Gas Monitor (Class I, Groups B, C and D only), Ultima XE Remote Sensor, Ultima XIR Remote Sensor (Class I, Groups B, C and D only), Ultima XE Remote Sensor with AC Power Supply, input rated 120/240 V ac, 5 W max, Ultima XE Remote Sensor with DC Power Supply, input rated 9-30 V dc, 5 W max, Ultima XIR Remote Sensor with AC Power Supply (Class I, Groups B, C and D only),



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input rated 120/240 V ac, 5 W max, Ultima XIR Remote Sensor with DC Power Supply (Class I, Groups B, C and D only), input rated 9-30 V dc, 5 W max. Ultima XE Sensor” and “Ultima XE Remote Sensor” must be used with Weatherguard P/N 10028904. Environmental Guard p/n 10041265 may be used with Ultima XIR Gas Monitor and XIR remote sensor. May be used with CSA Certified “Ultima” Calibrator and CSA Certified “Ultima” Controller.

Class I, Groups B, C and D:

“Ultima XE Gas Monitor” consisting of an “Ultima XE Main” with integral “Ultima XIR Gas Monitor”, input rated 7-30V dc, 1A max., 4-20mA signal output, with optional internal relays rated 5A @ 250V ac or 30V dc. May be used with CSA Certified “Ultima” Calibrator, CSA Certified “Ultima” Controller and Environmental Guard p/n 10041265.

“Ultima XE Gas Monitor” System consisting of an “Ultima XE Main” input rated 7-30V dc, 1A max., 4-20mA signal output, with optional internal relays rated 5A @ 250V ac or 30V dc, for connection to a “Ultima XIR Remote Sensor” with integral “Ultima XIR Gas Monitor”. May be used with CSA Certified “Ultima” Calibrator, CSA Certified “Ultima” Controller and Environmental Guard p/n 10041265.

“Ultima XI Gas Monitor”, input rated 7-30V dc, 800mA max., 4-20mA signal output. May be used with a MSA Environmental Guard p/n 10041265.

CLASS 4828 02 - SIGNAL APPLIANCES - Toxic Gas Detection Instruments - For Hazardous Locations

Class I, Groups A, B, C and D:

“Ultima XE Gas Monitor” consisting of a “Ultima XE Main” with integral “Ultima XE Sensor”, input rated 7-30V dc, 1A max., 4-20mA signal output, with optional internal relays rated 5A @ 250V ac or 30V dc. Must be used with Weatherguard P/N 10028904. May be used with CSA Certified “Ultima” Calibrator and CSA Certified “Ultima” Controller.

“Ultima XE Gas Monitor” System consisting of a “Ultima XE Main input rated 7-30V dc, 1A max., 4-20mA signal output, with optional internal relays rated 5A @ 250V ac or 30V dc, for connection to a “Ultima XE Remote Sensor” with integral “Ultima XE Sensor”. Must be used with Weatherguard P/N 10028904. May be used with CSA Certified “Ultima” Calibrator and CSA Certified “Ultima” Controller.

“Ultima X Gas Monitor” System consisting of an “Ultima XE Main with X3 Technology”, input rated 7-30V dc, 10 W max., with optional internal relays rated 5A @ 250V ac or 30V dc; for use with up to 3 of the following: integral Ultima XE Sensor, Ultima XE Remote Sensor, Ultima XE Remote Sensor with AC Power Supply, input rated 120/240 V ac, 5 W max, Ultima XE Remote Sensor with DC Power Supply, input rated 9-30 V dc, 5 W max. Ultima XE Sensor” and “Ultima XE Remote Sensor” must be used with Weatherguard P/N 10028904. May be used with CSA Certified “Ultima” Calibrator and CSA Certified “Ultima” Controller.



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APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-10	General Requirements - Canadian Electrical Code, Part II
CSA Std C22.2 No. 30-M1986	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CSA Std C22.2 No. 142-M1987	Process Control Equipment
CSA Std C22.2 No. 152-M1984	Combustible Gas Detection Instruments
CSA Std C22.2 No. 157-92	Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

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.

Ultima XE Main:

- Submitter's name or trademark
- Model designation
- Complete electrical rating (amps and volts)
- Serial number traceable to month and year of manufacture
- Hazardous location designation
- The CSA Mark
- The statement: "CAUTION: KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE" and "ATTENTION: GARDER LE COUVERCLE BIEN FERME LORSQUE LES CIRCUITS SONT SOUS TENSION"
- The statement "WARNING: UNDERSTAND MANUAL BEFORE OPERATION"
- Wording regarding seal conduit within 18 inches of the enclosure
- The wording "C22.2 No.152 for Combustible only"
- The wording "Relay ratings: See Manual"

Ultima XE Sensor:

- Submitter's name or trademark
- Model designation
- Serial number traceable to month and year of manufacture
- Hazardous location designation
- The CSA Mark
- Wording regarding keep tightly closed during operation and unscrewing the sensor cap
- The wording "Conduit seal not required"



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Ultima XIR Gas Monitor:

- Submitter's name or trademark
- Model designation
- Serial number traceable to month and year of manufacture
- The statement "WARNING: DO NOT OPEN ENCLOSURE. RISK OF IGNITION OF HAZARDOUS ATMOSPHERES. NO USER SERVICEABLE PARTS INSIDE."

Ultima XE Remote Sensor:

- Submitter's name or trademark
- Model designation
- Complete electrical rating (ac and dc units only)
- Serial number traceable to month and year of manufacture
- Hazardous location designation
- The CSA Mark
- The statement: "CAUTION: KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE" and "ATTENTION: GARDER LE COUVERCLE BIEN FERME LORSQUE LES CIRCUITS SONT SOUS TENSION"
- The statement "WARNING: UNDERSTAND MANUAL BEFORE OPERATION"
- The wording "C22.2 No.152 for Combustible only"
- The wording "Detector Only: See Manual"

Ultima XIR Remote Sensor:

- Submitter's name or trademark
- Model designation
- Serial number traceable to month and year of manufacture
- The statement "WARNING: DO NOT OPEN ENCLOSURE. RISK OF IGNITION OF HAZARDOUS ATMOSPHERES. NO USER SERVICEABLE PARTS INSIDE."

Ultima XE Remote Sensor:

- Submitter's name or trademark
- Model designation
- Complete electrical rating (ac and dc units only)
- Serial number traceable to month and year of manufacture
- Hazardous location designation
- The CSA Mark
- The statement: "CAUTION: KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE" and "ATTENTION: GARDER LE COUVERCLE BIEN FERME LORSQUE LES CIRCUITS SONT SOUS TENSION"
- The statement "WARNING: UNDERSTAND MANUAL BEFORE OPERATION"
- The wording "C22.2 No. 152"
- Wording regarding seal conduit within 3 inches of the enclosure
- The wording "Detector Only: See Manual"



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Controller and Calibrator:

- Submitter's name or trademark
- Model designation
- Serial number traceable to month and year of manufacture
- Hazardous location designation
- The CSA Mark
- The words "WARNING: UNDERSTAND MANUAL BEFORE OPERATION"
- The wording "C22.2 No. 152"
- Temperature Code
- The words "INTRINSICALLY SAFE"
- The word "Exia"
- The words "Warning: Substitution of components may impair intrinsic safety"

Marking Notes

Ultima XE Main, Ultima XE Remote Sensor and Ultima XIR Remote Sensor:

The marking appears on a 0.5mm thick metal nameplate secured by drive pins screwed in bottomed holes, cast, etched, or engraved.

Note: The submitter will mark the XE mains 8-30 volts instead of 7-30 as shown in the Certification Record.

Ultima XE Sensor:

The markings are silk screened onto a metal wrap around label attached by rivet in a recess in the housing

Ultima XIR Gas Monitor:

The markings are laser etching.

Ultima XI Gas Monitor:

The markings appear on a wraparound metal nameplate.



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

Project	Date	Description
70090184	2016-08-10	Update Report 1746881 to permanently mount R43 to the Main PCB and discontinue the component modification outlined in Edition 21 (Figure 8 drawing 10000016666). Drawings 100000016666 and 10000011799 updated.
70049010	2015-12-16	Update Report 1746881 to add a resistor to stabilize the output of a regulated supply on the Main PCB (MSA ACR491169).
2722508	2014-05-06	Update to report 1746881 to include revised drawing per ACR490562.
2699227	2014-03-20	Update to report 1746881 to include document revisions based on 4 ACRs.
2658650	2013-09-23	Update to report to include 4 revised drawings not affecting safety.
2542077	2012-10-23	Update Report 1746881 to include revised drawings for Ultima XE main circuit board. Product Markings moved from Certificate back into descriptive report.
2481469	2012-01-06	Update of report to allow alternate O-rings for Ultima X Series Gas Detector.
2453200	2011-09-28	Update to report 1746881 to cover revised construction of the ULTIMA XIR and ULTIMA XI gas monitor per ACR 490206.
2434210	2011-06-21	Update of report 1746881 to include updated drawing per ACR 490273.
2386034	2011-02-09	Update of report to include revised drawings and transfer Calibrator and Controller from report 1018304 per ACR 490219.
2299089	2010-06-02	Update of report 1746881 to include changes to instruction manual per ACR 490042.
2227675	2009-10-27	Update of report 1746881 to incorporate drawing changes as per ACRs 490065 and 490070.
2221636	2009-10-14	Update of report 1746881 to include changes to instruction manual per ACR 490056.
2196204	2009-07-20	Update of report 1746881 to include drawing revision for Ultima X3 and to correct report as appropriate.
2138310	2009-02-06	Update to report 1746881 to include revised drawings as per ACR's 483285, 483288 and 483317
2129571	2009-01-15	Update to report 1746881 to include revised drawings as per ACR's 483325 and 483302



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2061526	2008-07-17	Update report to include updates to documents per ACR's 483220, 483233, 483237, 483240 and 483243.
1980717	2007-12-28	Revised Construction Per ACR 483114 and 483158
1894128	2007-03-22	Revised construction per ACR#483060
1880097	2007-02-27	Update Report to Include Revised Construction per ACR's 482988, 483031 and 483035
1852143	2006-11-15	Revised construction per ACR 483018
1746881	2006-09-06	Amalgamation of reports 1431951, 1431952, 1583979 and Certification of the Ultima XE Main with X3 Technology and remote XE and XIR sensors with ac or dc power supply.