CSA INTERNATIONAL

Certificate of Compliance

Certificate: 2385571 **Master Contract:** 252010

Project 2390265 **Date Issued:** January 28, 2011

Issued to: **Mine Safety Appliances**
1000 Cranberry Woods Drive
Cranberry Township, PA 16066
USA

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

Issued by: Jocelyn Jens
Technical Assistant

Authorized by: Terry Nagy
Operations Manager

PRODUCTS

CLASS 4818 03 - SIGNAL APPLIANCES - Miscellaneous - For Hazardous Locations

Class I, Div. 1 & 2, Groups C and D

UV/IR test lamp, Model FlameGard 5 Test Lamp, portable, battery operated (12 V).

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-M91 - General Requirements - Canadian Electrical Code, Part II
C22.2 No. 30-M1986 - Explosion-Proof Enclosures for Use in Class I Hazardous Locations
C22.2 No. 142-M1987 - Process Control Equipment

MARKINGS

Appear on a metal nameplate secured to the enclosure via drive pins or rivets.

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

PRODUCTS

CLASS 4818 03 - SIGNAL APPLIANCES -Miscellaneous - For Hazardous Locations

Class I, Div. 1, Groups B, C and D; Class II, Div. 1, Groups E, F and G; Class III

Model FlameGard 5 MSIR, flame detector, input rated 20 to 36 V dc, 4.4 W max, output 4-20 mA, relay contacts rated 250 V ac or 30 V dc, 8 A resistive, Enclosure Type 6P/ IP67, Ambient Temperature -40°C to +80°C.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-M91	-	General Requirements – Canadian Electrical Code, Part II
CSA Std C22.2 No. 25-1966	-	Enclosures for Use in Class II, Groups E, F and G Hazardous Locations
CSA Std C22.2 No. 30-M1986	-	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA-C22.2 No. 94-M91	-	Special Purpose Enclosures
CSA Std C22.2 No. 142-M1987	-	Process Control Equipment
IEC 60529, Ed. 2.1	-	Degrees of Protection provided by enclosures.

MARKINGS

Adhesive nameplates are attached to a powder coated metal surface. The markings appear on a CSA accepted nameplate material manufactured by Nelson Name Plate Co., type A- Heavy Duty, Pressure sensitive '300' (9472LE adhesive), Clear Polyester, 3 mil to 4 mil.

Note: Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".

CSA INTERNATIONAL

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.

C US

PRODUCTS

CLASS 4818 03 - SIGNAL APPLIANCES -Miscellaneous - For Hazardous Locations
CLASS 4818 83 - SIGNAL APPLIANCES - Miscellaneous - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

Class I, Groups B, C and D; Class II, Groups E, F and G; Class III; Type 4X:

Flame detectors, explosion-proof, Models FlameGard 5 UV/IR and FlameGard 5 UV/IR-H2, input rated 24 V dc, 3.6 W max, output 4-20 mA, relay contacts rated 250 V ac or 30 V dc, 8 A resistive.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-M91	-	General Requirements - Canadian Electrical Code, Part II
CSA Std C22.2 No. 25-1966	-	Enclosures for Use in Class II, Groups E, F and G Hazardous Locations
CSA Std C22.2 No. 30-M1986	-	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA-C22.2 No. 94 -M91	-	Special Purpose Enclosures
CSA Std C22.2 No. 142-M1987	-	Process Control Equipment
UL 50 (11th Ed.)	-	Enclosures for Electrical Equipment
UL Std No. 916(4th Ed.)	-	Energy Management Equipment
UL Std No. 1203(4th Ed.)	-	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations

MARKINGS

The marking details appear on a metal nameplate attached to the cover by means of drive pins.

Note: Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".

CSA INTERNATIONAL

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

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

Class I, Div. 1, Groups B, C and D;
Class I, Zone 1, Group IIB+H2

Intelligent Sensor,H_2S Gas, Model Ultima MOS-5, Stationary, Input rated 24 V dc, 7 W Max; Output rated 0-22 Ma, relay contacts rated 8 A, 250 V ac or 8 A, 30 V dc resistive, Encl. Type 4X with remote sensor. May be used with sensors: Part No 50445-1, -5, -9 or 50448-1, -5, -9 or 50454-1, -5, -9 or 50457-1, -5, -9, or 51457-1, -5, -9 or 51457-1L, -5L, -9L.

Ultima MOS-5 P/N 32426-21 through -28, -37 through -44 which denotes relay options, field wiring termination, HART and Modbus combinations and material of enclosure.

APPLICABLE STANDARDS

CAN/CSA-C22.2 No. 0-M91	-	General Requirements – Canadian Electrical Code, Part II
CSA Std C22.2 No.30-M1986	-	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA-C22.2 No.94-M91	-	Special Purpose Enclosures
CSA Std C22.2 No.142-M1987	-	Process Control Equipment
CSA Std C22.2 No.152-M1984	-	Combustible Gas Detection Instruments

MARKINGS

Appear on a metal nameplate secured to the enclosure via screws.

Note - Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".

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

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Class I, Div. 1, Groups B, C, D; Class II, Div. 1, Groups E, F, G; Class III, Div. 1:
Class I, Div. 2, Groups B, C, D; Class II, Div. 2, Groups E, F, G; Class III, Div. 2:

Open Path Gas Detector, Model Ultima OPIR-5, consisting of Source, P/N 329001-3 and P/N 329001-4 and Receiver, P/N 329000-a; input rated 20-36 V dc (24 V dc nominal), 12 W (Source) 10 W (Receiver), with 4-20 mA, Modbus and HART communications; Relay Contact Rated 250 V ac, 8 A resistive, 30 V dc, 8 A resistive; -60 Deg. C ≤ Tamb. ≤ +75 Deg. C; Temperature Code T3C; Encl. Type 4X, IP66/67.

Model Code:

P/N 329000-a
where "a" denotes Output and Terminals; 17 through 24.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-M91	-	General Requirements – Canadian Electrical Code, Part II
C22.2 No. 25-1966	-	Enclosures for Use in Class II, Groups E, F and G Hazardous Locations
C22.2 No. 30-M1986	-	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA-C22.2 No. 94-M91	-	Special Purpose Enclosures
C22.2 No. 142-M1987	-	Process Control Equipment
C22.2 No. 213-M1987	-	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-C22.2 No. 60529:05	-	Degrees of protection provided by enclosures (IP Code)

MARKINGS

Markings are silk-screened onto a min 0.02 in. thick 316 SST nameplate, secured to the enclosure with drive pins or screws, mounted in bottomed holes.

The following marking details appear:

- CSA Monogram;
- Manufacturer's name;
- Model designation;
- Date code and/or Serial number;

- Electrical Input rating in volts and watts;
- Relay contact ratings (appears in referenced Installation Manual);
- Hazardous location designations;
- Temperature code rating;
- Minimum and Maximum ambient temperature;
- Special Purpose Enclosure Rating "Type 4X";
- Ingress Rating "IP 66/67";
- The statement" "WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT";
- The statement: "Seal all conduits within 18 inches of enclosure";
- The statement: "Use wiring suitable for 32 Deg. C above ambient" (Source);
- The statement: "Use wiring suitable for 16 Deg. C above ambient" (Receiver);
- The statement: "Read and understand Instruction Manual before operating or servicing".