Certificate of Compliance

Certificate: 2055846 **Master Contract:** 225996

Project: 80094610 **Date Issued:** 2022-05-19

Issued To: **Endress+Hauser Optical Analysis Inc.**
11027 Arrow Route
Rancho Cucamonga, California, 91730
United States

Attention: Paulo Silva

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: *Peter Do*
Peter Do

PRODUCTS
CLASS 2258 02 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations
CLASS 2258 82 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations – Certified to US Standards

Class I, Division 2, Groups A, B, C and D, T3
Enclosure Type 4X and IP66

Trace Gas Monitor for Process Streams - Model SS2100-*****-a*b**0-*c***** (ARM 9 Hardware). Rated as indicated below.
Where,

* = Any alphanumeric digit, specifying features that are not relevant to certification
a = Controller Power and Mounting: 1 (120Vac, 50/60Hz, 60W max, integral mount)
2 (240Vac, 50/60Hz, 60W max, integral mount)
3 (24Vdc, 1.6A max, integral mount
Y (remote mounting only)

b = Ambient Temperature:	1 (-20°C to +55°C) Y (-10°C to +60°C)
c = Sample System Enclosure:	1 (120Vac Heated 304 Stainless Steel Enclosure) 2 (240Vac Heated 304 Stainless Steel Enclosure) 3 (120Vac Heated 316 Stainless Steel Enclosure) 4 (240Vac Heated 316 Stainless Steel Enclosure) 5 (120Vac Heated 316 SS Enclosure with Keypad Protection) 6 (240Vac Heated 316 SS Enclosure with Keypad Protection)

Max process pressure: 2 bar (30 psig), Max instrument air pressure: 5.5 bar (80 psig)

Relay contact ratings for external connection:
Inductive Load Ratings: AC 15; 250V, 3A N.O. Contact; 1.5A N.C. Contact
DC 13; 24V, 1A N.O. Contact; 1A N.C. Contact

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 94.2:15	Enclosures for Electrical Equipment, Environmental Considerations
CAN/CSA-C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements
CAN/CSA C22.2 No. 213-17 + UPD 1 (2018) + UPD 2 (2019) + UPD 3 (2021)	Non-incendive Electrical Equipment for Use in Class I and II, Division 2, and Class III Hazardous (Classified) Locations
ANSI/UL 50E-2015 Second Edition	Enclosures for Electrical Equipment, Environmental Considerations
ANSI/UL 61010-1-2012 Third Edition	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements
ANSI/ISA 12.12.01 - 2021	Non-Incendive Electrical Equipment for Use in Class I and II, Division 2, Class III Divisions 1 and 2 Hazardous (Classified) 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.

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.

Nameplate adhesive label material approval information:

The following markings are provided on a CSA Accepted (Class 7921.xx) or UL Recognized to Canadian requirements (PGDQ8) and UL Recognized (PGDQ2) or CSA Accepted to US Standards (Class 7921.8x) adhesive nameplate, which is suitable for indoor and outdoor use on stainless steel, at a maximum service temperature of 60°C or higher. Nameplate is affixed to exterior of the analyzer enclosure.

- Manufacturer's Name "Endress+Hauser Optical Analysis Inc.", or Master Contract Number "225996", adjacent to the CSA mark in lieu of name.
- Model designation: As specified in the PRODUCTS section, above.
- Electrical ratings: As specified in the PRODUCTS section, above.
- ISO 60417, Symbol 5031 ⎓ adjacent to the DC input terminal rating.
- ISO 60417, Symbol 5032 ~ adjacent to the AC input terminal rating.
- Manufacturing date, or serial number, traceable to year and month of manufacture.
- Hazardous Location designation: As specified in the PRODUCTS section, above. The word "Class" may be abbreviated "CL", the word "Division" may be abbreviated "DIV", and the word "Groups" may be abbreviated "GRP" or "GP".
- Temperature Code "T3C", or "T3" when used with heater.
- The following optional additional markings may be used: "Class I, Zone 2 IIC T3"
- Enclosure Ratings: Type 4X and IP66.
- The CSA Mark, with or without the "C" and "US" indicators, as shown on the Certificate of Conformity.
- The manufacturing location shall be identified if the equipment can be produced in more than one facility.
- The following words, or suitable equivalent, in both English and French language:
  - "WARNING - EXPLOSION HAZARD – DO NOT DISCONNECT WHILE CIRCUIT IS LIVE OR UNLESS THE AREA IS FREE OF IGNITIBLE CONCENTRATIONS." and "AVERTISSEMENT - RISQUE D'EXPLOSION - NE PAS DÉBRANCHER PENDANT QUE LE CIRCUIT EST SOUS TENSION OU À MOINS QUE L'EMPLACEMENT NE SOIT EXEMPT DE CONCENTRATIONS INFLAMMABLES"

- "WARNING - EXPLOSION HAZARD – DO NOT REMOVE OR REPLACE FUSE WHEN ENERGIZED." and "AVERTISSEMENT - RISQUE D'EXPLOSION - NE PAS RETIRER NI REMPLACER UN FUSIBLE SI L'APPAREILLAGE EST SOUS TENSION"
- "CLASS 1 LASER PRODUCT. REFER SERVICING TO MANUFACTURER QUALIFIED PERSONNEL" and "PRODUIT LASER DE CLASSE 1. RÉFÉRER L'ENTRETIEN AU PERSONNEL QUALIFIÉ DU FABRICANT"
- "CAUTION – INVISIBLE LASER RADIATION WHEN OPEN. *(on optical head assembly)*" and "ATTENTION - RAYONNEMENT LASER INVISIBLE LORS DE L'OUVERTURE. (sur la tête optique)"

· The type and rating of each replaceable fuse shall be permanently marked adjacent to the fuse holder.

· Terminal Designations shall be permanently marked adjacent to each field wiring terminal.

· ISO 60417, Symbol 5019 ⏚ shall be permanently marked adjacent to the equipment ground (protective conductor) terminal.

Notes:

Products certified under Class C225802, C225882 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca

Supplement to Certificate of Compliance

Certificate: 2055846 **Master Contract:** 225996

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
80094610	2022-05-19	Update of cCSAus report 2055846 for Class I, Division 2 Trace Gas Monitor for Process Steams, Model SS2100 (ARM 9 Hardware) for drawing updates, addition of new solenoid valve part numbers and other modifications. Scope includes update to CSA No. 94.2-15/UL 50E-15 and CSA No. 213-17/UL 121201 Ninth Edition.
70219778	2019-05-09	Update report 2055846 project 70053338 to include three new power supplies tested before and replace some electronic boards with RoHS compliant boards and display (no design change).
70217649	2019-03-27	Update of CSA report 2055846 to include Class I, Zone 2 IIC on the nameplate as per the NEC and ANSI/ISA 12.12.01 allowances.
70053338	2016-11-11	Update Report 2055846 to add IP66 Ratings and some minor drawings updates.
70023314	2015-08-12	UPDATE REPORT 2055846 MC 225996 TO RE-EVALUATE THE PRODUCT (SS2100 ARM9) WITH NEW POWER SUPPLY AND UPDATED PRINTED CIRCUIT BOARDS
2717990	2014-05-02	Update of Report 2055846 to make minor product construction and descriptive document changes for the SS2100 (ARM 9 Hardware) trace gas monitor.
2685375	2014-01-13	Update of Report 2055846 to make minor product construction changes for the SS2100 (ARM 9 Hardware) trace gas monitor.
2585991	2013-10-07	Addition of Type 4X and IP65 ratings, deletion of Type 3 rating, and incorporation of component and electronic changes to the SS2100 (ARM9 Hardware) trace gas monitor and incorporation of necessary Descriptive Document updates.
2559395	2012-11-07	Update to allow for the connection of any certified device to the relay contacts of Model SS2100 Trace Gas Monitor.

2501435	2012-05-11	Update of Report 2055846 to include addition of PCB Temperature stabilization for analog board
2406145	2011-03-22	Update of Report 2055846 to include alternate sealents used to seal keypad ribbon cable on enclosure door.
2376297	2010-12-14	Update of Report 2055846 to include alternate 24Vdc - Dc converter.
2320175	2010-06-21	Update of Report 2055846 to include an alternate 4-20mA Low Noise PCB and minor revisions.
2195552	2009-07-23	Update of Report 2055846 to apply clerical corrections.
2055846	2008-08-30	Initial evaluation of Model SS2100 (ARM 9 Hardware) for use in hazardous locations; Class I, Division 2, Groups ABCD; 61010 evaluation; Tamb - 20ºC to +60ºC