



# Certificate of Compliance

**Certificate:** 2295633

**Master Contract:** 248589

**Project:** 70143810

**Date Issued:** 2017-09-12

**Issued to:** Senscient Ltd  
F1 Arena Business Centre  
Holyrood Close  
Poole, Dorset BH17 7FP  
UNITED KINGDOM  
Attention: Steve Carpenter

*The products listed below 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 US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only*



**Issued by:**

James Jarman

## **PRODUCTS**

**4818 04 SIGNAL APPLIANCES Systems - For Hazardous Locations**

**4818 84 SIGNAL APPLIANCES Systems - For Hazardous Locations - Certified to US Standards**

**Class I, Div. 1, Groups B, C, D; Class II, Groups E F G, Class III; Temperature Code T5**

**Ex d IIB + H2; T5**

**Class I, Zone 1, AEx d IIB + H2; T5**

Enhanced Laser Diode Spectroscopy Open Path Gas Detector Transmitter Tx, Part Nos. X-X0XX-4 (stainless) and X-X1XX-4 (aluminum), 18-32 Vdc, 12 W, Ta = -40 °C to 60°C; Type 4X/6 (Part Nos. X-X0XX-4) or Type 4/6 (Part Nos. X-X1XX-4), IP66/67

Enhanced Laser Diode Spectroscopy Open Path Gas Detector Receiver Rx, Part Nos. X-X0XX-4 (stainless) and X-X1XX-4 (aluminum), 18-32 Vdc, 10W, Ta = -40 °C to 60°C; Type 4X/6 (Part Nos. X-X0XX-4) or Type 4/6 (Part Nos. X-X1XX-4), IP66/67



**Certificate:** 2295633  
**Project:** 70143810

**Master Contract:** 248589  
**Date Issued:** 2017-09-12

**Part number breakdown:**

<u>X-</u>	<u>X</u>	<u>0</u>	<u>XX-</u>	<u>4</u>
S=Short 5-40m	1=Single Laser	0=Stainless	Gas and Span	Cert 4 = CSA
M=Medium 40-120m	2=Dual Laser	1=Aluminum	Others	
L=Long 120-200m	Others			
XD=Cross Duct				
Others				

Note: X's in the nomenclature breakdown above indicate variables not limited to nor controlled by CSA.

Note: These systems are certified only for electrical safety and for use in hazardous locations. The performance aspects have not been investigated.

**APPLICABLE REQUIREMENTS**

CSA C22.2 No. 0-M91	General Requirements – Canadian Electrical Code, Part II
CSA-C22.2 No. 25-1966	Enclosures for Use in Class II Groups E, F and G Hazardous Locations
CSA-C22.2 No. 30 1986	Explosion-proof Enclosures for Use in Class I Hazardous Locations
CSA-C22.2 No. 94- 1991	Special Purpose Enclosures
CSA-C22.2 No. 142- 1987	Process Control Equipment
CAN/CSA E60079-0, 5 <sup>th</sup> Ed	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
CAN/CSA E60079-1, 6 <sup>th</sup> Ed	Electrical Apparatus for Explosive Gas Atmospheres - Part 1: Flameproof Enclosures "d"
CSA-C22.2 No. 60529-2005	Degrees of protection provided by enclosures
UL 50, 11 <sup>th</sup> Ed	Enclosures for Electrical Equipment
UL 916, 3 <sup>rd</sup> Ed	Energy Management Equipment
UL Standard 1203, 4 <sup>th</sup> Ed	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment For Use in Hazardous (Classified) Locations
UL 60079-0, 5 <sup>th</sup> Edition	Electrical Apparatus for Use in Class I, Zones 0 & 1 Hazardous (Classified) Locations General Requirements
UL 60079-1, 6 <sup>th</sup> Edition	Electrical Apparatus for Use in Class I, Zone 1 Hazardous (Classified) Locations Type of Protection - Flameproof "d"
ANSI/ISA 60529 2004	Degrees of protection provided by enclosures (IP Code)



**Certificate:** 2295633  
**Project:** 70143810

**Master Contract:** 248589  
**Date Issued:** 2017-09-12

---

## **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.

- CSA Monogram
- Company name and/or CSA master contract number
- Model number
- Serial number or date code
- Electrical rating
- Hazardous locations designation:
  - Class I, Div. 1, Groups B C D, T5
  - Class II/III, Div. 1, Groups E F G
  - Ex d IIB + H2; T5
  - Class I, Zone 1, AEx d IIB + H2; T5
- Tamb = - 40°C to + 60°C
- Special purpose enclosure designation: Type 4/6 or Type 4X/6 (depending on enclosure material)
- IP 66/67
- Warning: "Keep cover tight while circuits are live" (or equivalent)
- Warning: "Seal conduit within 18 inches" (or equivalent)



## *Supplement to Certificate of Compliance*

**Certificate:** 2295633

**Master Contract:** 248589

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

### **Product Certification History**

<b>Project</b>	<b>Date</b>	<b>Description</b>
70143810	Sep 12, 2017	Update to include alternative lens material, Liba 2000, chemically toughened.
70097341	April 27, 2017	Update to include alternate lens material Borosilicate Simax 3.3 with guarded cover and a change of voltage rating from 14Vdc to 18Vdc have been assessed.
2693861	Jan 28, 2014	Update to include minor update to drawings.
2413871	Apr 14, 2011	Update Report 2295633 to include minor update to drawing and correction to part number.
2295633	Jun 18, 2010	CSA C-US Certification of ELDS Transmitters for CL I, II, III, Div 1, Grps BCDEFG & CL I, Zone 1: Ex/AEx d IIB+H2; Type 4X/6; IP66/67.