



Certificate of Compliance

Certificate: 70197495

Master Contract 247622

Project: 80157273

Date Issued: May 17, 2023

Issued to: **Fluenta AS**
Haraldsgate 90
PO Box 420
N-5501, Haugesund,
NORWAY

Attention: **Graham Davies**

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



Issued by:

B J Allen

PRODUCTS

CLASS 2258-04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

CLASS 2258-84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations - Certified to US Standards

Class I, Div. 1, Groups A, B, C & D;

Class I, Zone 0, A/Ex ia IIC T2...T6 Ga:

Ultrasonic sensor Model TFS-HT (Transducer Full Size – High temperature version), intrinsically safe when connected via energy limiting shunt safety barrier compliant with entity parameters below. Temperature code varies depending on the process temperature. IP66.

Tamb.: -40 to +60°C

Tprocess (varies per T-class)

T6: -110 to +60°C

T5: -110 to +85°C

T4: -110 to +120°C

T3: -110 to +180°C

T2: -110 to +200°C



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Entity Parameters:

Parameter \ Options	Option 1	Option 2
Ui / Vmax (V dc)	11.7	13.8
Ii / Imax (A)	1.46	1
Pi / Pmax (W)	1.76	1.16
Ci & Li	Not assigned; refer to Conditions of Certification	

Conditions of Certification:

1. The Ultrasonic sensor head is made of titanium, avoid impact or friction.
2. The minus polarity of piezoelectric device is connected to metallic enclosure.
3. Use only two types of cable, Draka RFOU 250 V S2/S6 4 pair 0.75mm² or Draka FlexFlame RFOU(i) 150/250(300V) S1/S5 1Pair 0.75mm². Max allowed length is 20 meter. However, the cable length can be extended to up to 50 m when a 5.6 Ω current limiting resistor is added in series.

APPLICABLE REQUIREMENTS

CSA-C22.2 No. 61010-1-12, UPD1, UPD2, AMD1:2018	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
UL Std. No. 61010-1-2018 3 rd Ed.	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements
CSA C22.2 No. 60079-0:19	Explosive atmospheres – Part 0: Equipment – General requirements
UL 60079-0-2020	Explosive Atmospheres – Part 0: General requirements
CSA C22.2 No. 60079-11:14 (R2018)	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”
UL 60079-11-2018	Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety “i”



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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.

Marking method:

- CSA Monogram with C-US indicator.
- Submitter Identification or CSA master contract number 247622 adjacent to CSA monogram
- Certificate number CSA18CA70197495X
- Model Number
- Serial Number, Date Code or Month and Year of Manufacture
- Hazardous Location Designation as per product listing
- Ambient temperature range as per product listing
- The wording: “Intrinsically Safe” and “Sécurité Intrinsèque” or the symbol “Ex ia”
- The following may be included in the instruction manual due to space limitation on the label: “Warning: Substitution of components may impair intrinsic safety” or equivalent, in both English and French.

Nameplate adhesive label material approval information:

N/A

The marking is laser engraved on a metal plate secured to the sensor; refer to drawing 77.120.220 for details.