



Certificate of Compliance

Certificate: 70204508

Master Contract: 247622

Project: 80088813

Date Issued: 2021-11-01

Issued To: Fluenta AS
Haraldsgate 90
PO Box 420
Haugesund, Rogaland, N-5501
Norway

Attention: Maria Borlik

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: Sorin Tat
Sorin Tat



PRODUCTS

CLASS - C225804 - PROCESS CONTROL EQUIPMENT Intrinsically Safe, Entity - For Hazardous Locations

CLASS - C225884 - 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, AEx/Ex ia IIC T4...T6 Ga:

Ultrasonic sensor Model TFS-55 and TFS-55 Bias-90, intrinsically safe when connected via energy limiting shunt safety barrier compliant with entity parameters below. Temperature code varies depends on the process temperature.

Tamb.: -40 to +60°C. Intrinsically safe when installed per drawing 77.122.509.



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Temperature class (varies with the process temperature) as follows:

T6: for process temperature from -110 to +60°C
T5: for process temperature from -110 to +85°C
T4: for process temperature from -110 to +120°C

Entity Parameters:

Parameter \ Options	Option 1	Option 2
Ui / Vmax (V)	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 Acceptability:

1. The Ultrasonic sensor head is made of titanium, avoid impact or friction
2. 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.
3. The minus polarity of the piezoelectric sensor is connected to the metallic enclosure.

APPLICABLE REQUIREMENTS

- | | |
|--|--|
| CSA-C22.2 No. 61010-1-12 | - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements |
| UL Std. No. 61010-1 3 rd Ed. | - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements |
| C22.2 No. 60079-0 7 th Ed:2019 | - Explosive atmospheres – Part 0: Equipment – General requirements |
| UL 60079-0 7 th Ed:2019 | - UL Standard for Safety Explosive atmospheres – Part 0: Equipment – General requirements –SeventhEdition |
| C22.2 No. 60079-11 6 th Ed.: 2014 | - Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i” |
| UL 60079-11: 6 th Ed.: 2013 | - 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.

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

- CSA Monogram with C-US indicator.
- Submitter Identification or CSA master contract number 247622 adjacent to CSA monogram
- Certificate number CSA18CA70204508X
- 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.



Supplement to Certificate of Compliance

Certificate: 70204508

Master Contract: 247622

*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
80088813	2021-11-01	Update to CSA report 70204508 (last project 70204508) for addition of alternate model TFS-55 Bias-90.
70204508	2018-12-17	Original Hazloc certification of Ultrasonic sensor Model TFS-55