



# Certificate of Compliance

**Certificate:** 1073872

**Master Contract:** 178551

**Project:** 80098960

**Date Issued:** March 11, 2022

**Issued To:** Flowline Incorporated  
10500 Humbolt St  
Los Alamitos, California, 90720  
United States

**Attention:** Michael Rafferty

*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:** Bill Bizuk, P.Eng.  
Bill Bizuk, P.Eng.



## **PRODUCTS**

**CLASS - C2258 04** - PROCESS CONTROL EQUIPMENT Intrinsically Safe, Entity - For Hazardous Locations

**CLASS - C2258 84** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups A, B, C, and D; Class II, Groups E, F and G; Class III

-LC90 series Isolation Controllers, Models LC90-1001, LC91-1001 and LC92-1001 (Ordinary Locations only).  
Rating: 120/240Vac, 50/60Hz, 5W; Relay max output ratings: 250Vac, 10A, 1/2hp; provides intrinsically safe outputs with entity parameters per channel when installed in accordance with drawing No LCD1 as follows:



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$V_{oc} = 17.47V$  dc,  $I_{sc} = 0.4597A$ ,  $C_a = 0.494\mu F$ ,  $L_a = 0.119mH$

Note: These devices are for installation in suitable enclosures as acceptable to the local authority having jurisdiction.

- Sensor Models LP10-XXXX and LO10-XXXX, rated 32V dc max, intrinsically safe with entity parameters per control drawing No. LSD1 as follows:

$V_{max} = 32V$  dc,  $I_{max} = 0.5A$ ,  $C_i = 0$ ,  $L_i = 0$

- Sensor Model LU10-XXXX, rated 32V dc max, intrinsically safe with entity parameters per control drawing No. U10900 as follows:

	<u>12-36Vdc Input</u>	<u>Opto Output</u>	<u>Relay Output</u>
$V_{max}$	32V	32V	32V
$I_{max}$	400mA	85mA	500mA
$P_{max}$	1.3W	0.3W	1.3W
$C_i$	0uF	0uF	0uF
$L_i$	0uH	0uH	0uH

Class I, Groups A, B, C and D:

- Sensor Model LP50-XXXX, rated 32V dc max, intrinsically safe with entity parameters per control Drawing No LSD1 as follows:

$V_{max} = 32V$  dc,  $I_{max} = 0.5A$ ,  $C_i = 0$ ,  $L_i = 0$

### APPLICABLE REQUIREMENTS

CSA Standard C22.2 No 0-M1991	- General Requirements - Canadian Electrical Code Part II.
0.4-M1982	- Bonding and Grounding of Electrical Equipment (Protective Grounding).
142-M1987	- Process Control Equipment.
157-92	- Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations.
UL 913, Fifth Edition	- Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, III, Division 1, Hazardous (Classified) Locations.
UL 508 17 <sup>th</sup> edition	- Process Control Equipment.



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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.

## Controllers

- CSA Monogram with NRTL/C indicator
- Submitter's Identification
- Model Number
- Serial number, Date Code or Month and Year of Manufacture
- Electrical Rating
- Hazardous Location Designation
- Entity Parameters
- The words "ASSOCIATED EQUIPMENT/APPAREILLAGE CONNEXE"
- The symbol [Exia]
- Reference to Installation Instructions
- Bilingual Caution re Substitution of Components:  
"WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY:  
"ADVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA  
SECURITE INTRINSEQUE".

## Sensors

- CSA Monogram with NRTL/C indicator
- Submitter's Identification
- Model Number
- Serial number, Date Code or Month and Year of Manufacture
- Electrical Rating
- Hazardous Location Designation
- Entity Parameters
- The words "INTRINSICALLY SAFE/SECURITE INTRINSEQUE"
- The symbol Exia
- Reference to Installation Instructions



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Notes:

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Products certified under Class C225804, C225884 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). [www.scc.ca](http://www.scc.ca)





## Supplement to Certificate of Compliance

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*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
80098960	2022-03-11	Update to report 178552 for non-conformance issues noted in FC# 178552, FIR dated June 15, 2021, with alternate component
1966932	2007-11-23	Update to report 1073872 to include alternate relay
1073872	2001/05/07	Supercedes -4 to revise LU10 Sensor
LR 79326-6	1995/05/15	Update to report LR 79326-4 to add NRTL/C to products and to change model number.
LR 79326-4	1994/09/06	LC90 Series Isolation Controllers and Sensor Models LP50-6001, LP10-XXXX, L010-XXXX and LU10-XXXX with entity parameters. Superceded by 1073872.