



# Certificate of Compliance

**Certificate:** 1111005 (LR 99673-1)

**Master Contract:** 183951

**Project:** 2052412

**Date Issued:** 2008/12/19

**Issued to:** Smar Equipamentos Industriais Ltda.

Rua Dr Pio Duffles 1350  
Sertaozinho  
Estado de Sao Paulo, São Paulo .  
Brazil  
Attention: Mr. Ricardo Leite

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



**Issued by:** Ron Wildish

**Authorized by:** Patricia Pasemko, Operations  
Manager

## PRODUCTS

**CLASS 2258 02** - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

**Class I, Div. 1, Groups B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1:**

Models LD290, LD291, LD292, LD293, LD301, LD302 and LD303 Series Pressure Transmitters, supply 12-42V dc, 4-20mA; Maximum pressure 3600 psi (LD29x) or 5800 psi (LD30x); Enclosure Type 4/4X; Dual Seal.

**Class I, Div. 2, Groups A, B, C and D; Class II, Div. 2, Groups E, F and G; Class III; Dual Seal:**

Models LD290, LD291, LD292, LD293, LD301, LD302 and LD303 Series Pressure Transmitters, supply



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12-42V dc, 4-20mA; Maximum pressure 3600 psi (LD29x) or 5800 psi (LD30x); Enclosure Type 4/4X; Dual Seal.

**CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations**

**Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1:**

Model LD290, LD291 and LD301 Series Pressure Transmitters, supply 12-42V dc, 4-20mA; Maximum pressure 3600 psi (LD29x) or 5800 psi (LD30x); Enclosure Type 4/4X; intrinsically safe when connected through CSA Certified Diode Safety Barrier, 28V max, 300 ohms min, per SMAR Installation drawing 102A0435; Dual Seal.

**Class I, Div. 1, Groups A, B, C and D:**

Model LD302 and LD303 Series Pressure Transmitters, supply 12-42V dc, 4-20mA; Maximum pressure 5800 psi; Enclosure Type 4/4X; non-incendive with Fieldbus / FNICO Entity parameters:  $V_{max} = 24V$ ,  $I_{max} = 570 \text{ mA}$ ,  $P_{max} = 9.98 \text{ W}$ ,  $C_i = 5 \text{ nF}$ ,  $L_i = 0$ ; when connected through CSA Certified Safety Barriers as per SMAR Installation drawing 102A0552; Temp. Code T3C; Dual Seal.

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

**Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1:**

Model LD290, LD291 and LD301 Series Pressure Transmitters, supply 12-42V dc, 4-20mA; Maximum pressure 3600 psi (LD20x) or 5800 psi (LD30x); Enclosure Type 4/4X; intrinsically safe with Entity parameters,  $V_{max} = 28V$ ,  $I_{max} = 110 \text{ mA}$ ,  $C_i = 5 \text{ nF}$ ,  $L_i = 0$ , when connected through CSA Certified Safety Barriers as per SMAR Installation drawing 102A0435; Dual Seal.

Model LD302 and LD303 Series Pressure Transmitters, supply 12-42V dc, 4-20mA; Maximum pressure 5800 psi; Enclosure Type 4/4X; intrinsically safe with Fieldbus/FISCO Entity parameters,  $V_{max} = 24V$ ,  $I_{max} = 380 \text{ mA}$ ,  $P_{max} = 5.32 \text{ W}$ ,  $C_i = 5 \text{ nF}$ ,  $L_i = 0$ , when connected through CSA Certified Safety Barriers as per SMAR Installation drawing 102A0552; Temp. Code T3C; Dual Seal.

Model LD292 and LD293 Series Pressure Transmitters, supply 12-42V dc, 4-20mA; Maximum pressure 3600 psi; Enclosure Type 4/4X; intrinsically safe with Fieldbus/FISCO Entity parameters,  $V_{max} = 24V$ ,  $I_{max} = 380 \text{ mA}$ ,  $P_{max} = 5.32 \text{ W}$ ,  $C_i = 5 \text{ nF}$ ,  $L_i = 0$ , when connected through CSA Certified Safety Barriers as per SMAR Installation drawing 102A0608; Temp. Code T3C; Dual Seal.

Note: Only models with stainless steel external fittings are Certified as Type 4X.

#### **APPLICABLE REQUIREMENTS**

CAN/CSA-C22.2 No. 0-M91 - General Requirements – Canadian Electrical Code, Part II

CSA Std C22.2 No.25-1966 - Enclosures for Use in Class II, Groups , F and G Hazardous Locations



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CSA Std C22.2 No.30-M1986 - Explosion-Proof Enclosures for Use in Class I Hazardous Locations

CAN/CSA-C22.2 No.94-M91 - Special Purpose Enclosures

CSA Std C22.2 No.142-M1987 - Process Control Equipment

CAN/CSA-C22.2 No.157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

CSA Std C22.2 No.213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

ANSI/ISA 12.27.01-2003 - Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids



## *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**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
2052412	2008/12/19	Update to include Dual Seal Rating; alternative enclosure alloy type; addition of Non-Incendive entity parameters; revised I.S. Entity parameters and minor circuitry revisions.
1515088	2004/04/02	Update to project 1111005 to cover revised Transformer T2 construction and Documentation change (separation of BOM from schematic)

### **History**

1279802 Jan 30/2002 Update to cover revised drawings.

1165308 May 17/2001 Update to include models LD292, LD293 and LD303; and to cover evaluation of new Main/Display pcb for models LD301, LD290 and LD291; and to include wording "Seal not Required".

1111005 July 25/2000 Update to include revised drawings

LR 99673-12 July 21/1999 Update to include Model LD302.

LR 99673-11 March 4, 1999 Update to include revised drawings, and addition of models LD290 and LD291; and coverage for Entity Certification.

LR 99673-10 April 18, 1997 Modifications to Report drawings.

LR 99673-4 Feb. 10, 1995 Modifications to Report drawings.

LR 99673-1 June 21, 1993 Original Certification - Model LD301.