

CERTIFICATE OF CONFORMITY




- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
- Certificate No:** FM20US0149X
- Equipment:** LD290, LD291 Pressure Transmitters,
(Type Reference and Name) DT301 Density Transmitter
- Name of Listing Company:** Nova Smar S/A
- Address of Listing Company:** Av Dr Antonio Furlan Jr 1028
Sertaozino SP 14170-480
Brazil
- The examination and test results are recorded in confidential report number:

4B9A4.AX dated 11th September 1997
- FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3610:2018, FM Class 3611:2018, FM 3615:2018, FM Class 3810:2018, ANSI/UL 121201:2017, ANSI/NEMA 250:1991
- If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
- This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

Certificate issued by:



J.E. Marquedant
VP, Manager - Electrical Systems

26 January 2021

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE



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10. Equipment Ratings:

Explosionproof for Class I, Division 1, Groups A, B, C and D; Dustignitionproof for Class II and III, Division 1, Groups E, F and G; Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, in accordance with drawing 102A060702 (for the DT301) and 38A207506 (for the LD290 and LD291); Nonincendive for Class I, Division 2, Groups A, B, C and D; Temperature Code T4A with an ambient temperature rating of -25°C to +60°C; Indoor and outdoor hazardous (classified) locations locations (Type 4, 4X, 6, 6P*).

*Type 6P is for models LD290 and LD291 only.

11. The marking of the equipment shall include:

XP CL I, DIV 1, GP A, B, C, D

DIP CL II, III, DIV 1, GP E, F, G

IS CL I, II, III, DIV 1, GP A, B, C, D, E, F G

NI CL I, DIV 2, GP A, B, C, D

Per inst. Dwg 102A0607 (DT301), 38A2075 (LD290, LD291)

Temp. Class: T4A; Tamb: 60°C Max; Type 4, 4X, 6, 6P*

*Type 6P is for models LD290 and LD291 only.

12. **Description of Equipment:**

The DT301 is a HART Density Transmitter, and the LD290 and LD291 are Pressure Transmitters. They are two-wire transmitters. The DT301 receives a density signal input, and the LD290 and LD291 receive pressure signal inputs, and these inputs are converted to 4-20 mA DC signals which are directly proportional to the applied input. They are available in differential, absolute, gauge, level and flow measurement types. The transmitters contain capacitive sensors and circuitry which converts the density or pressure information into HART, 4-20 mA current and provides an LCD update.

Ratings - The ambient operating temperature range of the DT301 Density Transmitter and LD290/291 Pressure Transmitters is -25°C to 60°C.

Electrical parameters: 30Vdc

Entity Parameters: $V_{max} = 30 \text{ V dc}$, $I_{max} = 110 \text{ mA}$, $P_i = 825 \text{ mW}$, $C_i = 0.005 \mu\text{F}$, $L_i = 0$.

LD29aM-bcdefgh. Gage Pressure Transmitter

LD29aS-bcdefgh. Pressure Sanitary Transmitter

LD29aL-bcdefgh. Low Cost Flanged Pressure Transmitter

LD29al-bcdefgh. Pressure Transmitter with Extended Probe.

a = 0 (4-20 mA) or 1 (4-20 mA + HART)

b = Range 2, 3, 4 or 5 (3, 4, 5 not available for type I)

c = Local indicator 0 or 1

d = Electrical connection 0, A or B

e = Output signal G0

f = Housing material H0, H1, H2, H3 or H4

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g = Identification plate I1
h = Other options

DT301I-abcdef Industrial. Cocentration/Density Transmitter
DT301S-abcdef Sanitary. Cocentration/Density Transmitter

a = Range 1 or 2
b = Local indicator 0 or 1
c = Electrical connection 0, A or B
d = Identification plate I1
e = Housing material H0, H1, H2, H3 or H4
f = Other options

13. Specific Conditions of Use:

1. The enclosure contains aluminum and is considered to present a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
11 th September 1997	Original Issue.
26 th January 2021	Supplement 1: Report Reference: PR458642 dated 26 th January 2021. Description of the Change: Re-examination to current standards, generation of certificate

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