

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM19US0176X
3. **Equipment:** LD301 Pressure Transmitter
(Type Reference and Name) Pressure Transmitter
4. **Name of Listing Company:** Nova Smar S/A
5. **Address of Listing Company:** Av Dr Antonio Furlan Jr 1028
Sertaozino SP 14170-480
Brazil
6. The examination and test results are recorded in confidential report number:

3V1A6.AX dated 13th March 1992
7. 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 Class 3810:2018,
ANSI/UL 121201:2017, ANSI/NEMA 250:1991
8. 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.
9. 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

11 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:

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G, in accordance with drawing 38A-2075; Nonincendive for Class I, Division 2, Groups A, B, C and D; indoor and outdoor hazardous (classified) locations (Type 4, 4X, 6), Temperature Code T4A with an ambient temperature rating of -25°C to +60°C.

11. The marking of the equipment shall include:

I.S. Class I, II, III, Division 1, Groups A, B, C, D, E, F, G, T4A
Class I, Division 2, Groups A, B, C, D; T4A
Tamb = -25°C to +60°C Max; Type 4, 4X, 6

12. **Description of Equipment:**

The LD301 is a HART Series Pressure Transmitter. The LD301 Series Pressure Transmitters are two-wire transmitters which receive a pressure input and convert it to a 4-20mA dc signal which is directly proportional to the applied input. The circuitry within the LD301 Series Pressure Transmitters is based on capacitive sensors and circuitry which converts the pressure into HART communication, 4-20mA current control loop and provides an LCD update.

The LD301 Series Pressure Transmitter is intended for differential, absolute, gauge, level, high static pressure, flow and sanitary measurements. They can be mounted as differential, absolute and manometric and can have several types of connection to the process:

- ¼-18NPT Female (straight on the transmitter flange)
- ½-14NPT female (adapter attached to the flange)
- ½-14NPT female PVDF (inset pressed into the flange)
- ½-14BSD (adapter attached to the flange)
- Flange remote seal (sealed flange attached to the transmitter by capillary with filling fluid, remote mount)
- Flange Level (sealed flange joined by capillary with filling fluid, direct assembly with union pipe)
- Threaded remote seal (remote sealed flange, joined by capillary and filling fluid, use lower housing with 1/4NPT, 3/8NPT, 1/2NPT, 3/4NPT, 1NPT or 1 1/2NPT female threads)
- Sanitary level with and without extension (sealed connection, joined by capillary and filling fluid, direct assembly with union pipe)
- Remote sanitary seal (sealed connection, joined by capillary and filling fluid, remote assembly)

The connections can be identical (high and low) or combined between the connections above. Differential and Flow measurements are identified by type D and range from 1 to 4, Gauge measurements are identified by type M and range from 0 to 6, Absolute measurements are identified by Type A and range from 1 to 6, High Static Pressure measurement are identified by type H and range from 2 to 5, Flanged measurements are identified by type L from range 2 to 5 and Sanitary measurement are identified by Type S and range from 2 to 5. The thickness of central diaphragm changes according to the pressure range and the difference between the options D, M, A, H, L and S is only the assembly of the process connection. All measurement options of LD301 use the same housing and the same electronic.

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Ratings - The ambient operating temperature range of the LD301 Pressure Transmitter is -25°C to 60°C.

Electrical parameters: 30Vdc

Entity Parameters/Nonincendive Field Wiring Parameters:

Supply terminals: Vmax = 30 V dc, Imax = 110 mA, Ci = 0.005 µF, Li = 0.

Model Code Structure:

LD301abcdefgh Differential, Flow, Ggage, Absolute, High Static Pressure Transmitter

LD301L-bcdefgh Flanged Pressure Transmitter

LD301S-bcdefgh Sanitary Differential Pressure Transmitter

a = Type D, M, A or H

b = range D0, D1, D2, D3, D4, M0, M1, M2, M3, M4, M5, M6, A1, A2, A3, A4, A5, A6, H2, H3, H4, H5, L2, L3, L4, L5 (L ranges only for flanged type) or S2, S3, S4, S5 (S ranges only for sanitary type).

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

g = Identification Plate I1

h = 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
13 th March 1992	Original Issue.
22 nd June 2004	<u>Supplement 1:</u> Report Reference: 3020638 dated 22 nd June 2004. Description of the Change: Re-Examination to the 1999 edition of FM3611 as Nonincendive for use in Class I Division 2, Groups A, B, C, and D Hazardous (Classified)

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	Locations
4 th August 2020	<u>Supplement 2:</u> Report Reference: – PR453306 dated 4 th August 2020. Description of the Change: Re-Examination to the 2010 edition of FM3610 as Intrinsically Safe apparatus. Update editions of FM 3600 to 2018, FM 3611 to 2018, and FM 3810 to 2018.
11 th January 2021	<u>Supplement 3:</u> Report Reference – RR226349 dated 11 th January 2021. Description of the Change: Correct description and model code structure to show all available configurations.

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