[1] # EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

[3] EU-Type Examination Certificate Number: **UL 22 ATEX 2648X Rev. 0**

[4] Product: **Pressure Transmitter LD400 HART**

[5] Manufacturer: **Nova Smar S/A**

[6] Address: **Rua Guilherme Volpe nº 1422 – Jardim Sumaré, CEP-14170-530, Sertãozinho - SP, Brazil**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **BR/ULBR/ExTR22.0004/00.**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 **EN 60079-11:2012**

[10] If the sign "**X**" is placed after the certificate number, it indicates that the product is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.

[12] The marking of the product shall include the following:

II 1 G Ex ia IIC T6…T4 Ga

Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2022-12-19

Notified Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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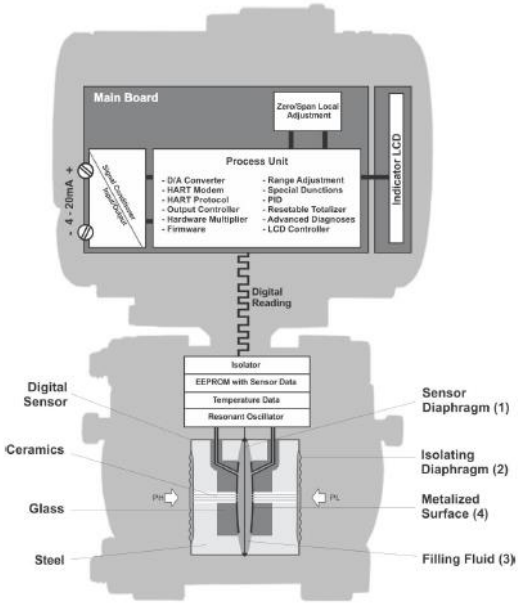
[13] **Schedule**

[14] **EU-TYPE EXAMINATION CERTIFICATE No.**
UL 22 ATEX 2648X Rev. 0

[15] Description of Product
The LD400 HART® uses a highly proven technique for pressure measuring by capacitance reading.
The block diagram of the LD400 HART® pressure transmitter is shown below:



In the cell center is the sensor diaphragm (1). This diaphragm flexes in response to the different pressures applied on the LOW and HIGH sides of the cell (PL and PH). These pressures are directly applied on the isolator diaphragms (2), whose function is to isolate the sensor process and supply high resistance against corrosion caused by process fluids. The pressure is transmitted directly to the sensor diaphragm through the filling fluid (3) and causes its deflection. The sensor diaphragm is a mobile electrode whose two metal surfaces (4) are stable electrodes. A deflection on the sensor diaphragm is read by the capacitance variation between both stable and mobile electrodes.
The resonance oscillator reads the capacitance variations between the mobile and the stable boards and generates a pressure output equivalent to the detected capacitance variation. This pressure value is informed in compliance with the transmitter communication protocol. As the conversion process does not involve an A/D converter, any errors or deviations are eliminated during the process. Temperature compensation is done by a sensor, which combined with a precision sensor, results in a high accuracy and small range measurement.
The process variable, as well as the diagnostic monitoring and information, are supplied by the digital communication protocol.
The LD400 is available with the HART® communication protocol.

Nomenclature:
See Instructions for ordering code or contact the manufacturer

The relation between ambient temperature and the assigned temperature class is as follows:

Ambient temperature range	Temperature class
-40°C ≤ Ta ≤ +80°C	T4
-40°C ≤ Ta ≤ +60°C	T5
-40°C ≤ Ta ≤ +40°C	T6

Electrical data

Intrinsically safe specifications:
Ui = 30V
Ii = 110mA
Pi = 0.825W
Ci = 21,6nF
Li = 4µH

Routine tests
Infallible Transformers 102B030805 and 102B110302 shall be subjected to Routine Tests of 500V rms between input and output windings.

[16] Descriptive Documents
The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[13] [14]

Schedule
EU-TYPE EXAMINATION CERTIFICATE No.
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[17] Specific conditions of use:

- DURING INSTALLATION TAKE ACTIONS TO PREVENT THE EQUIPMENT FROM MECHANICAL IMPACT OR FRICTION

[18] Essential Health and Safety Requirements
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

The trade name ”Nova Smar S/A” will be used as the company identifier on the marking label.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.