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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: **Presafe 20 ATEX 75160X** **Issue 0**
- [4] Product: **Ex d Enclosure (TT,FI & IF)**
- [5] Manufacturer: **NOVA SMAR S/A**
- [6] Address: **Dr. Antonio Furlan Jr., 1028
Sertãozinho SP-14170-480
Brazil**
- [7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV GL Presafe AS, notified body number 2460, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the 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 reports listed in section 16.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2018 and EN 60079-1:2014
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of 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 this certificate.
- [12] The marking of the product shall include the following:

 **II 2 G Ex db IIC T6 Gb -20 °C ≤ Ta ≤ +60 °C**



Date of issue:
2020-09-08



Bjørn Spongsveen
For DNV GL Presafe AS
The Certificate has been digitally signed.
See www.dnvgl.com/digitalsignatures for info

This certificate may only be reproduced in its entirety and without any change, schedule included.

DNV GL Presafe AS, Veritasveien 3, 1363 Høvik, Norway, Tel +47 67 57 88 00, www.dnvgl.com

[13] **Schedule**

[14] **EU-Type Examination Certificate No:** Presafe 20 ATEX 75160X Issue 0

[15] **Description of Product**

The SMAR TT, FI & IF Series is a flameproof enclosure, intended to transmitter & electrical converters and consists of housing and electronic circuit. The electrical parameters are within the specified limits.

The equipment is manufactured in AISI316/CF-8M or SAE305 or SAE336/ANSI356, closed by removable screwed covers with M76 x 1,27 threads, with or without visor, and the cable entry for electronic circuits is mounted in the wall of the housing with options 1/2"-14 NPT or M20x1,5. Under the one cover, being equipped with an inspection glass, an alphanumeric LCD-display is arranged optionally; under the other cover, terminals for the signal-circuit are arranged.

The TT300 Series are temperature transmitters mainly intended for measurement of temperature using RTD's or thermocouples, but can also accept other sensors with resistance or mV output such as: pyrometers, load cells, resistance position indicators, etc. The model TT301 offer digital communication based in HART®, the model TT302 offer digital communication based in Foundation™ Fieldbus and the model TT303 offer digital communication based in PROFIBUS PA.

The FIs and IFs are electrical converters devices for connection to Foundation™ Fieldbus or Profibus PA. The FI302 converts a FIELDBUS signal into a 4 to 20 mA signal. If the frequency converter does not have FIELDBUS capability, the bus signal can be converted into a conventional 4 to 20 mA by the FI302 and has three independent channels, which means that three 4 to 20 mA outputs are available.

The FI303 is a converter mainly intended for interface of a PROFIBUS PA system to control valves, or other actuators. The equipment produces a 4-20 mA output proportional to input received over the PROFIBUS network and has three outputs available.

The IF302 is a converter mainly intended for interface of analog transmitters to a Fieldbus network. The equipment receives a current signal, typically 4-20 mA or 0-20mA, and makes it available to the Fieldbus system. The IF303 is a converter mainly intended for interface of analog transmitters to a PROFIBUS system. The equipment receives a current signal, typically 4-20 mA or 0-20 mA, and makes it available to the PROFIBUS PA network. The digital technology used in the IF303 enables a single converter to accept three inputs and also provide several types of transfer functions.

However, the assessment has been restricted only to the Ex d requirements.

Type Designations

TT 301, TT 302, TT 303, FI 302, FI 303, IF 302 & IF 303

Electrical Data

28 V DC

12mA, quiescent current consumption: 12 mA for Fieldbus/ Profibus protocol

Degrees of protection (IP Code)

IP66W and IP68W

10m for a period of 24 hours for IP68. Tested in a saturated solution of NaCl 5% w / w, at 35°C for a period of 200 h.

Ambient temperature:

-20°C to +60°C

Routine tests

None

[16] **Report No.:** 190349

[17] **Specific Conditions of Use**

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in EN/IEC 60079-1.

[18] **Essential Health and Safety Requirements**

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

[19] Drawings and documents

Number	Title	Rev.	Date
102A-1116	Boards Arrangements TT301	03	13-10-01
102B-0881	PCB Interconnection TT301	02	13-10-01
LM-102-1074	LM TT301	02	14-12-03
LM-102-0238	LM General Components Temperature Transmitters	04	12-08-24
102A-1470	Label Plate TT301 NEMKO-EXAM/BVS IP66/68	05	20-08-07
102A-1526	Label Plate TT301 NEMKO-EXAM/BVS IP66/68W	05	20-08-07
102A-0341	Boards Arrangements TT302/303	04	14-09-24
102B-0440	PCB Interconnection TT302/303	03	14-09-24
LM-102-1128	LM TT302/303	01	14-12-03
LM-102-0238	LM General Components Temperature Transmitters	04	12-08-24
102A-1473	Label Plate TT302 NEMKO - EXAM/BVS - IP66/68	05	20-08-07
102A-1529	Label Plate TT302 NEMKO - EXAM/BVS - IP66/68W	05	20-08-07
102A-1476	Label Plate TT303 NEMKO - EXAM/BVS - IP66/68	05	20-08-07
102A-1532	Label Plate TT303 NEMKO - EXAM/BVS - IP66/68W	05	20-08-07
102A-0343	Boards Arrangements FI302/303	04	15-08-31
102B-0441	PCB Interconnection FI302/303	04	15-08-31
LM-102-1162	LM FI302/303	00	15-09-02
LM-102-0244	LM General Components Converters	04	12-08-24
102A-1266	Label Plate FI302 NEMKO-EXAM/BVS IP66/68	05	20-08-07
102A-1479	Label Plate FI302 NEMKO-EXAM/BVS IP66/68W	05	20-08-07
102A-1271	Label Plate FI303 NEMKO-EXAM/BVS IP66/68	05	20-08-07
102A-1486	Label Plate FI303 NEMKO-EXAM/BVS IP66/68W	05	20-08-07
102A-0342	Boards Arrangements IF302/303	04	15-02-24
102B-0442	PCB Interconnection IF302/303	03	15-02-24
LM-102-1131	LM IF302/303	00	15-02-25
LM-102-0244	LM Terminal General Components Converters	04	12-08-24
102A-1415	Label Plate IF302 NEMKO-EXAM/BVS IP66/68	05	20-08-07
102A-1497	Label Plate IF302 NEMKO-EXAM/BVS IP66/68W	05	20-08-07
102A-1417	Label Plate IF303 NEMKO-EXAM/BVS IP66/68	05	20-08-07
102A-1499	Label Plate IF303 NEMKO-EXAM/BVS IP66/68W	05	20-08-07
101-E-0471	Dimensional drawing TT30X ATEX/ IECEx	00	20-08-11
101-E-0472	Dimensional drawing IF30X FI30X	00	20-08-11
102A-2158	Label marking TT301 smar Baldota IP66W/IP68W	01	20-08-07
102A-2159	Label marking TT301 smar Baldota IP66W/IP68W	01	20-08-07

[20] Certificate History

Issue	Description	Issue date	Report no.
0	Original issue	2020-09-08	190349

END OF CERTIFICATE