

CERTIFICATE OF CONFORMITY

- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
- Certificate No:** FM17US0283X
- Equipment:** IPAQ C330X / IPAQ R330X
(Type Reference and Name) Temperature Transmitter / Signal Conditioner
- Name of Listing Company:** INOR Process AB
- Address of Listing Company:** PO Box 9125
SE-200 39 Malmo
Sweden
- The examination and test results are recorded in confidential report number:

3062739 dated 16th July 2018
- 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 3810:2018,
ANSI/ISA 60079-0:2013, ANSI/ISA 60079-11:2014, ANSI/ISA 61010-1:2012
- 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.
- Equipment Ratings:**

Intrinsically Safe for Class I, Division 1, Groups A, B, C, and D and Intrinsically Safe Class I, Zone 0, AEx ia IIC Ga in accordance with drawing ZZ4005488502 / ZZ4005499602 with a temperature rating of T6...T4;
With $P_i \leq 700\text{mW}$: T6 Ta = -40 °C to +60 °C, T5 Ta = -40 °C to +75 °C, T4 Ta = -40 °C to +85 °C.
With $P_i \leq 900\text{mW}$: T6 Ta = -40 °C to +55 °C, T5 Ta = -40 °C to +70 °C, T4 Ta = -40 °C to +85 °C.

Certificate issued by:



J.E. Marquedant
VP, Manager - Electrical Systems

25 February 2020

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

SCHEDULE



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11. The marking of the equipment shall include:

Intrinsically Safe Class I Division 1, Groups A, B, C, D; T6...T4

Class I, Zone 0, AEx ia IIC T6 ...T4 Ga

Ta : -40°C to +55/70/85°C for T6/T5/T4

12. **Description of Equipment:**

General - The IPAQ C330X and R330X is a programmable transmitter / signal conditioner designed mainly for temperature measurements in the process industry. It is a two-wire, 4-20 mA current-loop transmitter with power supply on the 4-20 mA wires. Zero, span, and linearization in the input processing are calibrated either through a NFC tag to the transmitter via NFC interface in a smart phone or a PC's USB port to the transmitter via a USB interface, eliminating manual trimming. The different communication interfaces NFC / USB are only used when the transmitter is in safe, non-hazardous area, except for Ex certified smart phones. A non-volatile memory in the microcontroller stores calibration and configuration settings.

Construction - The IPAQ C330X/R330X is housed in a small cylindrical enclosure (C330X) or small square Din Rail Mount housing (R330X) consisting of ABS Polycarbonate and filled with a casting compound.

Ratings - The IPAQ C330X/R330X Transmitter has the following electrical ratings;

In type of protection intrinsic safety, Energy limitation parameters:

Ui/Vmax:30Vdc, Ii/Imax:100mA, Pi/Pmax:900mW, Li:20µH, Ci:23.1nF (4-20mA loop / power)

Uo/Voc:6.5Vdc, Io/Isc:11.7mA, Po:19.1mW, Lo/La:400mH, Co/Ca:24 µF (sensor output)

IPAQ C330X Temperature Transmitter / Signal conditioner (Hockey Puck Enclosure)

IPAQ R330X Temperature Transmitter / Signal conditioner (Square Din Rail Enclosure)

13. **Specific Conditions of Use:**

1. The communication interface (USB connection) may only be connected to the certified ICON-X interface. When the ICON-X is connected, the temperature transmitter shall be outside of the hazardous area; a connected sensor may be located in the hazardous area.
2. For the applicable ambient temperature range see control drawing ZZ4005488502 / ZZ4005499602.
3. The transmitter shall be mounted in to a suitable enclosure that provides a degree of protection of at least IP20.

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.

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16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
16 th July 2018	Original Issue.
1 st August 2018	<u>Supplement 1:</u> Report Reference: RR215064 dated 1 st August 2018. Description of the Change: Added missing control drawing number 4005488501 to specific conditions of use.
25 th February 2020	<u>Supplement 2:</u> Report Reference: RR222203 dated 25 th February 2020. Description of the Change: Changed sensor port output parameters.

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