1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **KIWA 17ATEX0055X** Issue: **3**

4 Equipment: **Temperature Transmitter, Model IPAQ R530X**

5 Applicant: **INOR Process AB**

6 Address: Travbanegatan 10
213 77 Malmö
Sweden

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

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

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 1G
Ex ia IIC T6 ... T4 Ga

Signed:

M Halliwell
Title: Director of Operations

PRODUCTS
RvA C 652

Project Number 80213753

**SCHEDULE**

**EU-TYPE EXAMINATION CERTIFICATE** **KIWA 17ATEX0055X**
**Issue 3**

13 **DESCRIPTION OF EQUIPMENT**

Rail mounted Temperature Transmitter Model IPAQ R530X, with a non-metallic enclosure, is a loop powered device that converts the measurement signals of temperature sensors (RTD or thermocouple) or resistance or mV signals into a 4 – 20 mA output signals with HART communication.

The transmitter is provided with a USB port and NFC technology for service and configuration.

**Ambient temperature range:**

| $P_i$ | Temperature class | Ambient temperature range |
|---|---|---|
| 900 mW | T6 | -40°C to +55°C |
| | T5 | -40°C to +70°C |
| | T4 | -40°C to +85°C |
| 700 mW | T6 | -40°C to +60°C |
| | T5 | -40°C to +75°C |
| | T4 | -40°C to +85°C |

**Electrical data:**

Supply and output circuit (terminals +21 and -22):
In type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit; with following maximum values:
$U_i$ = 30 V; $I_i$ = 100 mA; $P_i$ = 0,9 W; $C_i$ = 23,1 nF; $L_i$ = 20 µH.

Sensor circuits (terminals 1 ... 4):
In type of protection intrinsic safety Ex ia IIC, with following maximum values:
$U_o$ = 6,5 V; $I_o$ = 11,7 mA; $P_o$ = 19,1 mW; $C_o$ = 24 µF; $L_o$ = 400 mH.

The sensor circuits are infallible galvanically isolated from the power supply and output circuit and withstand a test voltage of 500 VAC for 1 minute.

Communication port (mini USB connector):
Only for connection to the associated ICON-X or ICON Interface.

The USB circuit is protected in accordance with the requirements of type of protection intrinsic safety Ex ia IIC, and has following maximum values (for information only):

$U_i$ = 10 V, $I_i$ = 100 mA, $P_i$ = 0,25 W and
$U_o$ = 30 V, $I_o$ = 18 mA, $P_o$ = 135 mW, $C_o$ = 66 nF, $L_o$ = 40 mH.

**Variation 1** - This variation introduced the following changes:

i. Change of electronics and printed circuit board layout.
ii. Update of the ambient temperature range related to the supply input power parameter
iii. Update of the marking plates, installation manual and control drawing
iv. Update of a standard from EN 60079-0: 2012 + A11: 2013 to EN IEC 60079-0: 2018

**Variation 2** - This variation introduced the following changes:

i. To permit the update of the address on the side label to list the postal address in place of PO box address.

ii. To permit minor change to the construction of the transformer.
iii. To permit minor technical / administrative changes to drawings not affecting previous assessments.

## 14 DESCRIPTIVE DOCUMENTS

### 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated Reports and Certificate History

| Issue | Date | Report number | Comment |
|---|---|---|---|
| 1 | 15 March 2018 | 171101122-1 | The release of the prime certificate. |
| 2 | 25 May 2021 | R80072673A | The introduction of Variation 1. |
| 3 | 27 August 2024 | R80213754A | The introduction of Variation 2. |

## 15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 The communication port (USB connection) may only be connected to the associated ICON Interface if the temperature transmitter is outside of the hazardous area.

- If certified ICON-X interface is used, a connected sensor may be located in the hazardous area.
- If non-Ex ICON interface is used, a connected sensor shall not be located in the hazardous area.

15.2 For the applicable ambient temperature range, refer to the Product Description.

15.3 The transmitter shall be mounted in to a suitable enclosure that provides a degree of protection of at least IP20.

## 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

## 17 CONDITIONS OF MANUFACTURE

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

# Certificate Annexe

**Certificate Number:** **KIWA 17ATEX0055X**

**Equipment:** **Temperature Transmitter, Model IPAQ R530X**

**Applicant:** **INOR Process AB**

**Issue 1**: Refer to the report stated in section 14.2

**Issue 2**

| Drawing | Sheets | Rev. | Date (Stamp) | Title |
|---|---|---|---|---|
| APPR DESC 821205 | 1 to 16 | 2 | 14 Apr 21 | Description of IPAQ R530X / OPTITEMP TT 53 R Ex |
| APPR BOM 821205-2 | 1 to 15 | 2 | 14 Apr 21 | List of components IPAQ R530X / OPTITEMP TT 53 R Ex |
| APPR BSD 821205-01 | 1 of 1 | 2 | 14 Apr 21 | Basic Safety Diagram, IPAQ R530X / TT 53 R Ex |
| APPR MRPRT 821204-03 | 1 to 5 | - | 14 Apr 21 | Temperature tests on transmitters |
| 4006524701 | 1 to 65 | 3 | 14 Apr 21 | IPAQ C530/R530/C530X/R530X-en Manual |
| MNB SC-1506 | 1 of 1 | 2 | 14 Apr 21 | Model Number Breakdown SC-1506 |
| 73R530X000 | 1 of 3 | 9 | 14 Apr 21 | Schematic diagram IPAQ R530X / OPTITEMP TT 53 R Ex |
| Spec 4006051507 | 1 to 13 | 1 | 14 Apr 21 | PCB specification and layout R530C / TT 53 R Ex |
| 4006360701 | 1 of 1 | 2 | 14 Apr 21 | IPAQ R530X Installation and Control drawing |
| 4007456202 | 1 of 1 | 1 | 14 Apr 21 | IPAQ R530X Label 1, 54,5x34,0 ATEX + IECEX |

**Issue 3**

| Drawing | Sheets | Rev. | Date (Stamp) | Title |
|---|---|---|---|---|
| APPR DL 821205_2 | 1 of 1 | - | 19 Jul 24 | IPAQ R530X, list of schedule and related drawings. |