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UNITED KINGDOM CONFORMITY ASSESSMENT

UK-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially Explosive Atmospheres –
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 UK-Type Examination Certificate No: FM21UKEX0047X

4 Equipment or protective system: Model 2240 Multi-Input Temperature Transmitter
(Type Reference and Name)

5 Name of Applicant: Rosemount Tank Radar AB

6 Address of Applicant: Layoutvägen 1
SE-43533 Mölnlycke
Sweden

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

8 FM Approvals Ltd, Approved Body number 1725, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.

The examination and test results are recorded in confidential report number:

3035518EC - RR227549 dated 9th July 2021

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, EN 60079-11:2012, and EN 60529:1991+A1:2000+A2:2013

10 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.

11 This UK-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance with the Regulations. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:



II 1 G Ex ia IIC T4 Ga; Ta = -50°C to +70°C
II 2(1) G Ex ib [ia Ga] IIC T4 Gb; Ta = -50°C to +70°C

Victor Aluko-Oginni
Certification Manager, FM Approvals Ltd.

Issue date: 11th January 2022

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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F UKEX 020 (Jan/21)



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SCHEDULE



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to UK-Type Examination Certificate No. FM21UKEX0047X

13 Description of Equipment or Protective System:

General - The Rosemount Tank Radar AB Model 2240 is a Temperature Multiplexer Transmitter.

Construction - The circuitry for the 2240 is contained on a single printed circuit board that is mounted in an aluminium two-piece enclosure.

Ratings - The ambient operating temperature range of the Model 2240 Transmitters is -50°C to +70°C.

Environmental Ratings: IP66, IP67.

2240SabcdefgAijk. Multi-Input Temperature Transmitter.

Energy Limitation Parameters:

Ui = 30 V, Ii = 300 mA, Pi = 1.3 W, Ci = 2.2nF, Li = 2μH

FISCO Parameters:

Ui = 17.5 V, Ii = 380 mA, Pi = 5.32 W, Ci = 2.2nF, Li = 2μH

RTD Terminals, X11 (16 Channels)

Uo = 5.9V, Io = 398mA, Po = 585mW,

Groups A/B, IIC Co = 43μF, Lo = 0.2mH

Groups C/D, IIB, Co = 1000μF, Lo = 0.7mH

Groups D, IIA, Co = 1000μF, Lo = 1.8mH

Sensorbus Terminals, X5:

Uo = 6.6V, Io = 223mA, Po = 363mW,

Groups A/B, IIC Co = 22μF, Lo = 0.7mH

Groups C/D, IIB, Co = 500μF, Lo = 3.3mH

Groups D, IIA, Co = 1000μF, Lo = 6mH

a = Performance Class: Any single character

b = Number of Temperature Sensor Inputs: 16, 08, 04, 00, X

c = Leads per Temperature Element: 4, 3, 0, X

d = Auxiliary Inputs: A, 0, X

e = Tank Bus: Power and Communication: F, X, U

f = Hazardous Location Certification: I1, KA, KB, KC

g = Custody Transfer Type Approval: Any single character

i = Cable/Conduit Connections: 1, 2, G, E, M

j = Mechanical Installation: M, W, P, 0, X.

k = Options: WR3, WR5, ST, Q1, Q4 and/or Q7.

14 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.
2. Rating II 2(1) G Ex ib [ia Ga] IIC T4 Gb Ta = -50°C to 70°C FISCO D9240040-976; IP66, IP67 is only applicable when supplied from a certified Ex [ib] FISCO Power Supply with triplicate output voltage limitation meeting the requirements for two faults ("ia" voltage limitation).
3. The Model 2240 Multi-input Temperature Transmitter will not pass the 500Vrms dielectric strength test and this must be taken into account during installation.

15 Essential Health and Safety Requirements:

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the confidential report identified in item 8.

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to UK-Type Examination Certificate No. FM21UKEX0047X

16 **Test and Assessment Procedure and Conditions:**

This UK-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for UKCA Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Regulations in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's UKCA Certification Scheme.

17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Approved Body.

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
14 th July 2021	Original Issue.
11 th January 2022	<u>Supplement 1:</u> Report Reference: RR230986 dated 10 th January 2022. Description of the Changes: Documentation Updates

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Rosemount Tank Radar AB (1000003453)

Class No 3610

Original Project I.D. 3035518

Certificate I.D. FM21UKEX0047X

<u>Drawing No.</u>	<u>Revision</u> <u>Level</u>	<u>Drawing Title</u>	<u>Last</u> <u>Report</u>	<u>Electronic</u> <u>Drawing</u>
000809-0100-2240	EB	Reference Manual/ Rosemount 2240S Multi-Input Temperature Transmitter	RR227549	Yes (pdf)
D7000003-297	04	APPR. DWG. MAIN LABEL Rosemount 2240	RR227549	Yes (pdf)
D9240040-910	4	SYSTEM CONTROL DWG FM, FM-C Rosemount 2240S	RR227549	Yes (pdf)
D9240040-911	4	APPR. DWG FM PCB TTM Rosemount 2240	RR230986	Yes (pdf)
D9240040-912	03	APPR. DWG. FM TRANSFORMER IS	RR227549	Yes (pdf)
D9240040-918	03	APPR. DWG. FM	RR221344	Yes (pdf)
D9240040-946	04	APPR. DWG. FM CONFORMAL	RR221344	Yes (pdf)
D9240040-972	03	Model Code Description	RR227549	Yes (pdf)
D9240040-976	4	SYSTEM CONTROL DWG ATEX, IECEx Rosemount 2240S	RR227549	Yes (pdf)