

# CERTIFICATE OF CONFORMITY



1. **HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
2. **Certificate No:** FM21CA0005X
3. **Equipment:** Model 2240S Multi-Input Temperature Transmitters  
**(Type Reference and Name)**
4. **Name of Listing Company:** Rosemount Tank Radar AB
5. **Address of Listing Company:** Layoutvägen 1  
Mölnlycke, 43533  
Sweden
6. The examination and test results are recorded in confidential report number:  
  
3035518 dated 25<sup>th</sup> August 2010
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:  
  
CAN/CSA/C22.2 No. 61010-1:2012, CAN/CSA/C22.2 No. 25:2017,  
CAN/ CSA C22.2 No. 60529:2005 (R2010), CSA/C22.2 No. 60079-0:2019,  
CAN/CSA-C22.2 No. 60079-11:2014, CAN/CSA-C22.2 No.94:2011
8. 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.
9. 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.
10. **Equipment Ratings:**  
  
Intrinsically safe for use in Class I,II,III, Division 1, Groups A, B, C, D, E, F, and G; Temperature Class T4  
Tamb = -50°C to +70°C; when installed in accordance with control drawing D9240040-910; Hazardous Locations.

**Certificate issued by:**

  
\_\_\_\_\_  
J.E. Marquedant  
VP, Manager - Electrical Systems

10 January 2022  
\_\_\_\_\_  
Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmapprovals.com](mailto:information@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

# SCHEDULE



Canadian Certificate Of Conformity No: FM21CA0005X

Intrinsically safe for use in Class I, Zone 0, Group IIC, Temperature Class T4 Tamb = -50°C to +70°C; when installed in accordance with control drawing D9240040-910; Explosive Atmospheres;

Intrinsically safe for use in Class I, Zone 1, Group IIC Temperature Class T4 Tamb = -50°C to +70°C with Intrinsically safe connections to Class I, Zone 0, Group IIC when installed in accordance with control drawing D9240040-910; Explosive Atmospheres

Enclosure protections: Type 4X, IP66, IP67.

11. The marking of the equipment shall include:

IS CL I, II, III, Div 1, GPS ABCDEFG  
Ex ia IIC Ga  
Ex ib [ia Ga] IIC Gb  
Temp Class T4, Tamb Ta = -50°C to +70°C  
Install Per Control Drawing D9240040-910  
Type 4X; IP66; IP67  
FISCO Field Device

12. **Description of Equipment:**

**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. In type of protection intrinsic safety, connection can only be made to certified intrinsically associated equipment with the following values:

Energy Limitation Parameters:

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

FISCO Parameters:

Ui = 17.5V, li = 380 mA, Pi = 5.32W, Ci = 2.2 nF, 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

**Environmental Ratings:** Type 4X, IP66, IP67.

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## **2240Sabcdefghijk. Multi-Input Temperature Transmitter.**

- 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: I6, KB, KD, KF.
- g = Custody Transfer Type Approval: Any single character.
- h = Housing: A
- 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.

### **13. 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 I / 1 / Ex ib [ia Ga] IIC T4 Gb Ta = -50°C to 70°C D9240040-910 FISCO; Type 4X/IP66/IP67 is only applicable when supplied from an FM 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.

### **14. Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

### **15. Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

### **16. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
25 <sup>th</sup> August 2010	Original Issue.
23 <sup>rd</sup> February 2021	<u>Supplement 3:</u> Report Reference: – RR226574 dated 23 <sup>rd</sup> February 2021. Description of the Change: Convert certificate to new format. Clerical updates to manual. Add model options. Clerical changes to transformer drawing.
9 <sup>th</sup> July 2021	<u>Supplement 4:</u> Report Reference: – RR227549 dated 9 <sup>th</sup> July 2021.

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	Description of the Change: Updated 60079-0 and 60079-11 to the latest editions. Removed CSA/C22.2 No. 157-92:1992 (R2012). Added missing input and output parameters. Document updates due to addition of UKEX certificate (FM21UKEX0047X).
10 <sup>th</sup> January 2022	Supplement 5: Report Reference: – RR230986 dated 10 <sup>th</sup> January 2022. Description of the Change: 1) CSA C22.2 No. 61010-1:2004 updated to CSA C22.2 No. 61010-1:2012

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