



Member of the FM Global Group

FM Approvals  
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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

### **2230aFbcdAef Graphical Field Display**

IS/I,II,III/1/ABCDEFGH/T4 Ta = -50°C to +70°C – 9240040-949; Entity; FISCO.

I/O/AEx ia IIC T4 Ta = -50°C to +70°C – 9240040-949; Entity; FISCO.

Type 4X; IP66, IP67

#### Entity Parameters:

Ui = 30V, Ii = 300mA, Pi = 1.3W, Ci = 2.1nF, Li = 1.1uH.

#### FISCO Parameters:

Ui = 17.5V, Ii = 380mA, Pi = 5.32W.

- a = Default Language: Any single character
- b = Firmware: Any single character.
- c = Hazardous Location Certification: I5, KA, KD or KE.
- d = Custody Transfer Type Approval: Any single character.
- e = Cable/conduit Connections: 1, 2, G, E or M.
- f = Mechanical Installation: W, D, X or P.

#### Special Conditions of Use:

1. *The non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore particularly when it is used for applications that specifically require Division 1 and Group II, Zone 0 located equipment, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. Additionally, the equipment shall only be cleaned with a damp cloth.*
2. *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.*
3. *The associated apparatus through which the equipment is supplied shall provide galvanic isolation between the input and output of the associated apparatus.*



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## Equipment Ratings:

Intrinsically Safe (Entity) for use in Class I, II, III, Division 1, Groups A, B, C, D, E, F and G; Temperature Class T4 Ta = -50°C to +70°C in accordance with Control Drawing No 9240040-949.

Fieldbus Intrinsically Safe concept (FISCO) for use in Class I, II, III, Division 1, Groups A, B, C, D, E, F and G; Temperature Class T4 Ta = -50°C to +70°C in accordance with Control Drawing No 9240040-949.

Intrinsically Safe for use in Class I, Zone 0, AEx ia IIC T4 Ta = -50°C to +70°C in accordance with Control Drawing No 9240040-949.

Fieldbus Intrinsically Safe concept (FISCO) for use in Class I, Zone 0, AEx ia IIC T4 Ta = -50°C to +70°C in accordance with Control Drawing No 9240040-949.

Indoor and Outdoor, Type 4X; IP66, IP67 Hazardous (Classified) Locations.

## FM Approved for:

Rosemount Tank Radar AB  
GÖTEBORG SE-40251 Sweden



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This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	2011
Class 3610	2010
Class 3810	2005
ANSI/NEMA 250	2008
ANSI/IEC 60529	2004
ANSI/ISA 60079-0	2013
ANSI/ISA 60079-11	2013
ANSI/ISA 60079-26	2011

Original Project ID: 3037177

Approval Granted: December 23, 2010

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3049392	January 20, 2014		

FM Approvals LLC

J.E. Marquedant  
Group Manager, Electrical

20 January 2014

Date



**FM APPROVED PRODUCT/SPECIFICATION-TESTED REVISION REQUEST FORM** Manufacturer's Tracking Number:

**SENDER:** Forward one original copy with updated drawings or other appropriate changes to the attention of **FM Approvals**. Original forms will be returned showing course of action taken.

**FORWARD TO:**  
**FM Approvals**  
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 E-mail: approvals@fmglobal.com  
 FM Approvals Representative: **Jay Pungitore**  
 Received 3-18-2014

Please provide the following information below: Attention of, Company Name, Address, State & Zip Code.

**Customer ID:** 1000003453 **Company Website** www.rosemount-tankradar.com

**Attn: Dajana Prastalo**  
**Rosemount Tank Radar AB**  
**Gamlestadsvägen 18B**  
**Box 13045**  
**SE-40251 GÖTEBORG**  
**Sweden**  
**Invoice to:**  
**Box 823**  
**SE-83326 STRÖMSUND, Sweden**

DATE SUBMITTED (MM/DD/YY) 2014-03-17
SUBMITTED BY Dajana Prastalo
SUBMITTER EMAIL ADDRESS Dajana.prastalo@emerson.com
SUBMITTER PHONE +46 31 330177
SUBMITTER TITLE Manager Product Approvals

<b>TYPE OF CHANGE (CHECK ALL THAT APPLY):</b>	<b>FORMER NAME/ADDRESS/CONTACT</b>
<input type="checkbox"/> COMPANY NAME CHANGE (New name above)	
<b>ADDRESS CHANGE</b>	
<input type="checkbox"/> BILLING (New address above)	
<input type="checkbox"/> PRODUCT LISTING (New address above)	
<input type="checkbox"/> MANUFACTURING (New address above)	
<b>IF MANUFACTURING LOCATION CHANGE, WHICH FM APPROVED PRODUCTS ARE MANUFACTURED AT THE NEW FACILITY?</b>	
<input type="checkbox"/> CONTACT CHANGE (New contact above)	
<input type="checkbox"/> PRODUCT/MODEL/TYPE CHANGE	PRODUCT DESCRIPTION/MODEL NO:
<b>TYPES OF APPROVAL/CERTIFICATION AFFECTED BY THIS PRODUCT CHANGE (CHECK ALL THAT APPLY):</b>	US <input checked="" type="checkbox"/> CA <input checked="" type="checkbox"/> ATEX <input checked="" type="checkbox"/> CPD <input type="checkbox"/>
<b>INDICATE FM APPROVALS ORIGINAL PROJECT ID:</b>	3035492, 3035466, 3035518, 3037177, 3035522 (IEC), 3035491 (IEC), 3035462 (IEC)
<input type="checkbox"/> OTHER CHANGE (Describe)	
<b>REASON FOR CHANGE(S)/COMMENTS:</b> Adding an optional conformal coating , e.g. HumiSeal 1B73 and 1B31.	

<u>REVISION DETAILS</u>	<u>AFFECTED DRAWING NUMBER</u>	<u>REVISION</u>	<u>NEW DRAWING NUMBER</u>	<u>REVISION</u>	<u>US/CA/ATEX/CPD</u>
9240040-946		02	9240040-946	03	(INDICATE ALL THAT APPLY)

**TAB TO CONTINUE TABLE**

**FOR FM APPROVALS USE ONLY**

<b>ENGINEERING COMMENTS:</b>  Addition of PCB coating materials does not affect approvals. HumiSeal 1B73 and 1B31 coatings are similar in properties.  3 Supplement Reports Issued for IECEx.  Controlled Document List was updated.	<b>Master Agreement Implementation Date: 4-21-2003</b>		
	<b>Attachments:</b> <input type="checkbox"/> YES <input type="checkbox"/> NO		
	REVISION REPORT J. I.	ACCESS IDENTIFICATION	CLASS NUMBER
		<b>797-35490-283</b>	
	REVISION ACCEPTED	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Third Signature Required	
	EXAMINED BY (PRINT AND SIGN NAME) Jay Pungitore/ <i>Jay Pungitore</i>	DATE 20-March-2014	
	REVIEWED BY (PRINT AND SIGN NAME) <i>J. Adam</i>	DATE 3/24/14	
APPROVED BY (PRINT AND SIGN NAME) <i>J. Adam</i>	DATE 3/25/14		