



Member of the FM Global Group

FM Approvals  
 1151 Boston Providence Turnpike  
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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

### 5900abcdefghijklmno. Radar Level Gauge.

IS/I,II,III/1/ABCDEFGH/T4 Ta = -50°C to 80°C - 9240040-917; Entity; FISCO;

\*I/O/1/AEx ia IIC T4 Ta = -50°C to 80°C - 9240040-917; Entity; FISCO;

DIP/II,III/1/EFH/T5 Ta = -50°C to 80°C; Type 4X; IP66; IP67

#### Entity Parameters:

Vmax = 30V, Imax = 300mA, Pi = 1.3W, Ci = 1.1nF, Li = 1.5µH.

#### FISCO Parameters:

Vmax = 17.5V, Imax = 380mA, Pi = 5.32W, Ci = 1.1nF, Li = 1.5µH.

a = Performance: Any two characters.

b = Safety Certification: Any single character.

c = Redundancy: 2, F, 1 or Z.

d = Communication: F or Z.

e = Certification: I5, KA, KD, KE or ZZ.

f = Custody Transfer Type Approval: Any single character.

g = Level Measurement: Any single character.

h = Housing: A, S or Z.

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

j = Antenna:	1A	1P	1H	G1 or G2	1C	1F	11	12	ZZ
k = Antenna Size:	5, 6, 8, A or B	F or X	8 or X	A, B, D or X	3, 4, 6, 8, A or X	4, 6, 8, A or X	2, 0, 3, 4 or X	3, 4, 6, 8 or X	Z
l = Antenna Material:	S	S	S	S	S, H, T, M or Y	S	S	S	Z
m = Tank Seal:	FF or HH	PF	PV	QA	PV, PK, QV or QK	PV, PK, QV or QK	PV, PK, QV or QK	PV, PK, QV or QK	ZZ

n = Tank Connection:	5A, 6A, 8A, AA, BA, KA, LA, MB or XX	WE or CL	8A, 8Z, LA, LZ or XX	4A, 4B, 4C, 6A, 6B, 6C, 8A, 8B or XX	3A, 3B, 4A, 4B, 6A, 6B, 8A, 8B, AA, BA, IA, IB, JA, JB, KA, KB, LA, LB, 00 or XX	4A, 6A, 8A, AA, 4X, 6X, 8X, AX, JA, KA, LB, MB, JX, KX, LX, MX, 00 or XX	2A, 2B, 3A, 3B, 4A, 4B, HB, IA, IB, JA, JB, 00 or XX	3A, 3B, 4A, 4B, 6A, 6B, 8A, 8B, IA, IB, JA, JB, KA, KB, LA, LB, 00 or XX	ZZ
o = Special:	0, C or X	0 or X	0 or X	0, V or X	0, 1, 2, 3 or X	0 or X	1 or X	0, 1, 2, 3, 4 or X	Z

**Special Conditions of Use:**

1. *Parabolic and Array antennas with plastic surfaces and the surface of the painted housing may, under certain extreme conditions, generate an ignition-capable level of electrostatic. Appropriate measures must be taken to prevent electrostatic discharge.*
2. *\*Class I, Zone 0/1 notation: For installation in Zone classified locations, the Rosemount 5900 Radar Level Gauge was evaluated so that an [ib] associated apparatus can connect to it restricting the installation of the electronics to a Zone 1 location while still allowing the antenna to enter a Zone 0 location.*

**Equipment Ratings:**

Intrinsically Safe (Entity) for use in Class I, Division 1, Groups A, B, C and D; Temperature Class T4 Ta = -50°C to 80°C in accordance with Control Drawing No.9240040-917;  
 Intrinsically safe (Entity) for use in Class I, Zone 0/1, AEx ia IIC T4 Ta = -50°C to 80°C; in accordance with Control Drawing No. 9240040-917  
 Fieldbus Intrinsically Safe Concept (FISCO) for use in Class I, Division 1, Groups A, B, C and D; Temperature Class T4 Ta = -50°C to 80°C in accordance with Control Drawing No. 9240040-917  
 Fieldbus Intrinsically Safe Concept (FISCO) for use in Class I, Zone 0/1, AEx ia IIC T4 Ta = -50°C to 80°C; in accordance with Control Drawing No. 9240040-917  
 Dust-Ignitionproof for use in Class II and III, Division 1, Groups E, F and G; Temperature Class T5 Ta = -50°C to 80°C; 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	2003
ANSI/IEC 60529	2004
ANSI/ISA 60079-0	2013
ANSI/ISA 60079-11	2013
ANSI/ISA 60079-26	2011

Original Project ID: 3035466

Approval Granted: February 10, 2010

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3049398	November 15, 2013		

FM Approvals LLC

J.E. Marquedant  
Group Manager, Electrical

15 November 2013

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**  
 1151 Boston-Providence Turnpike  
 P.O. Box 9102 Norwood, MA 02062 USA  
 T: +1 (1)781 762 4300 F: +1 (1)781 762 9375  
 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
		<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)	DATE
	Jay Pungitore/ <i>Jay Pungitore</i>	20-March-2014
REVIEWED BY (PRINT AND SIGN NAME)	DATE	
<i>T. Adam</i>	3/24/14	
APPROVED BY (PRINT AND SIGN NAME)	DATE	
<i>J. Management</i>	3/25/14	