



Member of the FM Global Group

FM Approvals
 1151 Boston Providence Turnpike
 P.O. Box 9102 Norwood, MA 02062 USA
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CERTIFICATE OF COMPLIANCE

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

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/Ex ia IIC T4 Ta = -50°C to 80°C - 9240040-917; Entity; FISCO;
 DIP/II,III/1/EFG/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: I6, KB, KD, KF 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.*

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, Ex 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, Ex 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:

| | |
|-------------------------|-------------|
| CSA-C22.2 No. 157-92 | 1992 (2012) |
| CSA-C22.2 No. 1010-1 | 2004 (2009) |
| CSA-C22.2 No. 25-1966 | 1992 (2009) |
| CSA-C22.2 No. 60529-05 | 2005 (2010) |
| CSA-C22.2 No. E60079-0 | 2011 |
| CSA-C22.2 No. E60079-11 | 2011 |
| CSA-C22.2 No. 94 | 2011 |

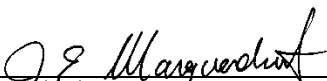
Original Project ID: 3035466C

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 |

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

| | | |
|--|--|--|
| ENGINEERING COMMENTS: 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. | Master Agreement Implementation Date: 4-21-2003 | |
| | Attachments: <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| | REVISION REPORT J. I. | ACCESS IDENTIFICATION |
| | | 797-35490-283 |
| | 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 | |