



Government of India
Ministry of Commerce & Industry
Petroleum & Explosives Safety Organisation (PESO)
5th Floor, A-Block, CGO Complex, Seminary Hills,
Nagpur - 440006

E-mail : explosives@explosives.gov.in
 Phone/Fax No : 0712 -2510248, Fax-2510577

Approval No : A/P/HQ/MH/104/7180 (P538180)

Dated : 07/06/2022

To,

M/s. Rosemount Tank Radar AB,
Layoutvägen 1 ,Mölnlycke,
43533
SWEDEN

Sub : Approval of Intrinsically Safe Type Electrical Equipment under Petroleum Rules 2002- Regarding.

Sir(s),

Please refer to your letter No. **OIN1075777** dated **26/05/2022** on the subject.

The following Ex electrical equipment(s) manufactured by you according to **IEC 60079-0 : 2017, IEC 60079-11 : 2011, IEC 60079-26 : 2014,** standards and covered under **FM Approvals LLC** Test reports mentioned below is/are approved for use in **Zone 0** of Gas **IIC** hazardous areas coming under the the Petroleum Rules, 2002 administered by this Organization.

Sr. No	Description	Safety Protection	Equipment reference Number	Test Agency			Drawing no
				Name	Certificate No.	Certificate Date	
1	MODEL 5900 Radar Level Gauge	Ex ia IIC T4 Ga	P538180/1	FM Approvals LLC	IECEX FMG 09.0009X Issue No. 12	10/01/2022	D9240040-913 Issue 3 Sheet 1-4

This Approval is granted subject to observance of the following conditions:-

- 1)The design and construction of the equipment shall be strictly in accordance with description, condition and drawings as mentioned in the FM Approvals LLC Test Reports referred to above.
- 2)The equipment shall be used only with approved type of accessories and associated apparatus.
- 3)Each equipment shall be marked either by raised lettering cast integrally or by plate attached permanently to the main structure to indicate conspicuously:-
 - (a) Name of the manufacturer
 - (b) Name and number by which the equipment is identified.
 - (c) Number & date of the test report of the FM Approvals LLC applicable to the equipment.
 - (d) Equipment reference number of this letter by which use of apparatus is approved.
 - (e) Protection level.
- 4) A certificate to the effect that the equipment has been manufactured strictly in accordance with the drawing referred to in the FM Approvals LLC Test report and is identical with the one tested and certified at FM Approvals LLC shall be furnished with each equipment.
- 5) The customer shall be supplied with a copy of this letter, an extract of the conditions and maintenance schedule, if any, recommended by FM Approvals LLC in their test reports and copy of instructions booklet detailing operation & maintenance of the equipment so as to maintain its Flame Proof characteristics.
- 6) The After sales service and maintenance of subject equipment shall be looked after by your representative EPMI, Plot No A145/4, TTC Industrial Area, MIDC, Pawane | New Mumbai | 400710 | Maharashtra | India

Conditions of the Approval:-

The approval for above equipment is subject to validity of IECEx Quality Assessment Report No. NO/PRE/QAR15.0014.

This approval also covers the permissible variations as approved under the FM Approvals LLC test reports referred above. This approval is liable to be cancelled if any of the conditions of the approval is violated or not complied with . The approval may also be amended or withdrawn at any time, if considered necessary in the interest of safety.

The field performance report from actual users/your customers of the subject equipment may please be collected and furnished to this office for verification and record on annual basis.

The Approval is Valid upto **31/12/2026**

Yours faithfully,

(A.B. Tamgadge)
Controller of Explosives
For Chief Controller of Explosives
Nagpur

Copy to :

1. Jt. Chief Controller of Explosives, West Circle, MUMBAI
2. EPMI,Plot No A145/4, TTC Industrial Area, MIDC, Pawane | New Mumbai | 400710 | Maharashtra | India

for Chief Controller of Explosives
Nagpur

(For more information regarding status,fees and other details please visit our website <http://peso.gov.in>)

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IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX FMG 09.0009X**

Page 1 of 4

Certificate history:

Status: **Current**

Issue No: 12

Issue 11 (2021-07-22)

Issue 10 (2021-05-04)

Issue 9 (2020-07-30)

Issue 8 (2019-12-10)

Issue 7 (2019-09-24)

Issue 6 (2019-03-27)

Issue 5 (2014-03-25)

Issue 4 (2013-12-11)

Issue 3 (2013-11-15)

Issue 2 (2010-08-23)

Date of Issue: 2022-01-10

Applicant: **Rosemount Tank Radar AB**
Layoutvägen 1
Mölnlycke, 43533
Sweden

Equipment: **MODEL 5900 Radar Level Gauge**

Optional accessory:

Type of Protection: **Intrinsically Safe**

Marking: Ex ia IIC T4 Ga
Ex ib IIC T4 Ga/Gb
Tamb = -50°C to +80°C

IP66, IP67

Approved for issue on behalf of the IECEx
Certification Body:

J. E. Marquedant

Position:

VP, Manager - Electrical Systems

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

FM Approvals LLC
1151 Boston-Providence Turnpike
Norwood, MA 02062
United States of America





IECEX Certificate of Conformity

Certificate No.: **IECEX FMG 09.0009X**

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Date of issue: 2022-01-10

Issue No: 12

Manufacturer: **Rosemount Tank Radar AB**
Layoutvägen 1
Mölnhycke, 43533
Sweden

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-26:2014-10](#) Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
Edition:3.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[US/FMG/ExTR09.0018/00](#)
[US/FMG/ExTR09.0018/03](#)
[US/FMG/ExTR09.0018/06](#)
[US/FMG/ExTR09.0018/09](#)
[US/FMG/ExTR09.0018/12](#)

[US/FMG/ExTR09.0018/01](#)
[US/FMG/ExTR09.0018/04](#)
[US/FMG/ExTR09.0018/07](#)
[US/FMG/ExTR09.0018/10](#)

[US/FMG/ExTR09.0018/02](#)
[US/FMG/ExTR09.0018/05](#)
[US/FMG/ExTR09.0018/08](#)
[US/FMG/ExTR09.0018/11](#)

Quality Assessment Report:

[NO/PRE/QAR15.0014/04](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX FMG 09.0009X**

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Date of issue: 2022-01-10

Issue No: 12

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

See Attachment to this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The enclosure contains aluminum and is considered to present a potential risk of ignition by impact or friction. When installed as EPL Ga, care must be taken during installation and use to prevent impact or friction.
2. Non-metallic 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.
3. Using the box provided on the nameplate, the User shall permanently mark the type of protection chosen for the specific installation. Once the type of protection has been marked it shall not be changed.
4. When installed as Ex ib Ga/Gb, the partition wall materials separating EPL Ga from EPL Gb are constructed of different materials depending on the antenna option. Please refer to Control Drawing D9240040-917 for the material type of each antenna. The material shall not be subject to environmental conditions which might adversely affect the partition wall.
5. Maximum Process temperatures are as follows:

When Option n = Tank Seal:	O-Ring Type	Min/Max Process Temperature Range
PV or QV	Viton	-15°C to +180°C
PK, FK, HK or QK	Kalrez	-20°C to +230°C
PE or QE	EPDM	-40°C to +110°C
PB or QB	BUNA-N	-35°C to +90°C
PM, FF, HH or QM	FVMQ	-60°C to +155°C
PF or QF	FEP	-60°C to +180°C



IECEX Certificate of Conformity

Certificate No.: **IECEX FMG 09.0009X**

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Date of issue: 2022-01-10

Issue No: 12

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Documentation Updates

Annex:

[Attachment to certificate IECEx FMG 09.0009X.pdf](#)

Attachment to IECEx FMG 09.0009X Certificate

Equipment and Systems Covered by this Certificate

5900abcdefghijklmno. Radar Level Gauge.

Energy Limitation Parameters:

U_i = 30V, I_i = 300mA, P_i = 1.3W, C_i = 1.1nF, L_i = 1.5μH.

FISCO Limitation Parameters:

U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 1.1nF, L_i = 1.5μH.

a = Product Description: C or S

b = Performance: Any single character.

c = Safety Certification: Any single character.

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

e = Communication: F or Z.

f = Certification: I7, KC, KE, KF or ZZ.

g = Custody Transfer Type Approval: Any single character.

h = Level Measurement: Any single character.

i = Housing: A, S or Z.

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

k = Antenna:	1A	1P	1H	G1, G2, or G4	1C	1F	11	12	ZZ
l = 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
m = Antenna Material:	S	S	S	S	S, H, T, M or Y	S	S	S	Z
n = Tank Seal:	FF, HH, FK or HK	PF, PK	PV	QA, PT	PV, PK, QV or QK	PV, PK, QV or QK	PV, PK, QV or QK	PV, PK, QV or QK	ZZ
o = Tank Connection:	5A, 6A, 8A, AA, BA, KA, LA, MB or XX	WE or CL	8A, 8Z, LA, LZ or XX	1B, 2A, 2B, 3A, 3B, 4A, 4C, 6A, 6B, 6C, 8A, 8B, 8B,	3A, 3B, 4A, 4B, 4T, 6T, 8T, 6A, 6B, 8A, 8B, AA,	4A, 6A, 8A, AA, 4X, 6X, 8X, AX, JA, KA, LB, MB, JX, KX,	2A, 2B, 3A, 3B, 4A, 4A, 4B, 4A, 4B, IA, IB, JA, JB, 00 or XX	3A, 3B, 4A, 4B, 6A, 6B, 8A, 8B, IA, IB, JA, JB, KA, KB,	ZZ

				NA, OA, PA, PB or XX	BA, IA, IB, JA, JB, JT, KA, KB, KT, LA, LB, MT, 00 or XX	LX, MX, 00 or XX		LA, LB, 00 or XX	
p = Special:	0, C, V or X	0, V or X	0, V or X	0, V or X	0, 1, 2, 3 or X	0 or X	1 or X	0, 1, 2, Z 3, 4 or X	