


## Type Examination Certificate

for Electrical Equipment used in Potentially Explosive Atmosphere

Issued by Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK	
Applicant	Emerson Japan, Ltd 1-2-5 Higashi-Shinagawa, Shinagawa-ku, Tokyo Japan
Manufacturer name	Rosemount Tank Radar AB Layoutvagen 1, Molnlycke, 43533, Sweden
Product name	TANK HUB
Type/model code	Model 2410 Refer to attachment 1 for model breakdown
Type of protection	Flameproof, Increased Safety, Intrinsic safety, FISCO & Entity
Group, Temperature Class and EPL	IIB T4 Gb; FISCO [ia IIC Ga] IIB T4; HART/4-20mA Active IIB T4 Gb; HART/4-20mA Passive (refer to attachment 1)
The equipment shall be marked with the following	Ex de [ib] IIB; FISCO Ex de [ia IIC] IIB; HART/4-20mA Active Ex de ib IIB; HART/4-20mA Passive (refer to attachment 1)
Ratings	Refer to attachment 1
Special condition for safe use	Refer to attachment 2
Certificate number	<b>CML 17JPN2086X</b>
Term of validity	From 12-07-2017 to 11-07-2020 

This is to certify that the equipment specified above complies with the requirements stipulated in Ordinance on Examination of Machines and Other Equipment of the Ministry of Health, Labour and Welfare, Japan.

Issue date:12-07-2017

Signature of examiner:



**Attachment 1: Type model codes & variations are as follows:**

<p><b>Model 2410-abcdefghijklmno. Tank Hub.</b></p> <p>Ex db e [ib] IIB T4 Gb Ta = -20°C to +60°C; FISCO; IP66 / IP67</p> <p><b>FISCO Parameters:</b>            Uo = 15V, Io = 354mA, Po = 5.32W            a= Number of Tanks: Any single character.            b= Tank Bus (Fieldbus - Power and Communication): F.            c = Primary Communication Bus (Non-IS): R, 4, E, L, V, H, G, U, T, A, B, 6 or 7.            d = Secondary Communication Bus (Non-IS): R, E, 5, K, L, V, H, G, A, U, T, B, 6, 7, 0, or F.            e = Relay Output (SIS/SIL): 3, 2, S, F or 0. (Option 3, 2 and S are not verified by FM Approvals).            f = Relay Outputs (Non-SIS/SIL): 1, 2, F, A or 0. (Option A was not verified by FM Approvals).            g = Integral Display: 1 or 0.            h = Power Supply: P.            i = Firmware: Any single character without influence to the type of protection.            j = Hazardous Location Certification: E4.            k = Custody Transfer Type Approval: Any single character without influence to the type of protection.            l = Housing: A or S.            m = Cable/Conduit Connections: 1.            n = Mechanical Mounting: P, W or 0.            o = Options: Any multiple characters without influence to the type of protection or N/A</p>
<p><b>Model 2410-abcdefghijklmno. Tank Hub.</b></p> <p>Ex db e [ib] IIB T4 Gb Ta = -20°C to +60°C; FISCO; IP66 / IP67</p> <p>Ex db e [ia IIC Ga] IIB T4 Gb Ta = -20°C to +60°C; Entity; IP66 / IP67</p> <p><b>FISCO Parameters:</b>            Uo = 15V, Io = 354mA, Po = 5.32W</p> <p><b>Entity Parameters:</b>            Uo = 23.1V; Io = 95.3mA; Po = 550mW            IIC: Co = 0.14µF, Lo = 3.9mH            IIB: Co = 1.0µF, Lo = 15mH            IIA: Co = 3.67µF, Lo = 33mH            a= Number of Tanks: Any single character.            b= Tank Bus (Fieldbus - Power and Communication): F.            c = Primary Communication Bus (Non-IS): R, 4, E, L, V, H, G, U, T, A, B, 6 or 7.            d = Secondary Communication Bus (HART®/4-20mA Active IS Input/Output): W, C or 8.            e = Relay Output (SIS/SIL): 3, 2, S, F or 0. (Option 3, 2 and S are not verified by FM Approvals).            f = Relay Outputs (Non-SIS/SIL): 1, 2, F, A or 0. (Option A was not verified by FM Approvals).            g = Integral Display: 1 or 0.            h = Power Supply: P.            i = Firmware: Any single character without influence to the type of protection.            j = Hazardous Location Certification: E4.            k = Custody Transfer Type Approval: Any single character without influence to the type of protection.            l = Housing: A or S.            m = Cable/Conduit Connections: 1.            n = Mechanical Mounting: P, W or 0.            o = Options: Any multiple characters without influence to the type of protection or N/A</p>

**Attachment 1 [continued]: Type model codes & variations are as follows:**

<b>Model 2410-abcdefghijklmno. Tank Hub.</b>
Ex db e [ib] IIB T4 Gb Ta = -20°C to +60°C; FISCO; IP66 / IP67
Ex db e ib IIB T4 Gb Ta = -20°C to +60°C; Entity; IP66 / IP67
<b>FISCO Parameters:</b> Uo = 15V, Io = 354mA, Po = 5.32W
<b>Entity Parameters:</b> Ui = 30V; Ii = 300mA; Pi = 1W, Ci = 0; Li = 0 a= Number of Tanks: Any single character. b= Tank Bus (Fieldbus - Power and Communication): F. c = Primary Communication Bus (Non-IS): R, 4, E, L, V, H, G, U, T, A, B, 6 or 7. d = Secondary Communication Bus (HART@/4-20mA Passive IS Input/Output): D or 9. e = Relay Output (SIS/SIL): 3, 2, S, F or 0. (Option 3, 2 and S are not verified by FM Approvals). f = Relay Outputs (Non-SIS/SIL): 1, 2, F, A or 0. (Option A was not verified by FM Approvals). g = Integral Display: 1 or 0. h = Power Supply: P. i = Firmware: Any single character without influence to the type of protection. j = Hazardous Location Certification: E4. k = Custody Transfer Type Approval: Any single character without influence to the type of protection. l = Housing: A or S. m = Cable/Conduit Connections: 1. n = Mechanical Mounting: P, W or 0., o = Options: Any multiple characters without influence to the type of protection or N/A

**Attachment 2: Special Condition(s) of Use:**

- i. The Flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
- ii. Use wiring rated for the maximum ambient temperature +15°C, as per the user instructions.