



Certificate no.:
TAA00003KN

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Monitoring System

with type designation(s)
Rosemount CMS

issued to
Rosemount Tank Radar AB
Mölnlycke, Västra Götalands Län, Sweden

is found to comply with
DNV rules for classification – Ships Pt.6 Ch.5 Sec.21 Cyber security

Application:

This type approval covers security capabilities in accordance with DNV security profile 1 and IACS UR E27 Rev.1 (Sep 2023), subject to conditions stated in this certificate.

Issued at **Høvik** on **2025-06-01**

This Certificate is valid until **2027-05-31**.

DNV local unit: **Denmark CMC**

for **DNV**

Approval Engineer: **Simen Vike Lande**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

The Rosemount CMS: level, temperature, pressure cargo monitoring and alarm system as described in the certificate TAA000003X consist of:

Safe area equipment:

Name	Brand/Manufacturer	Model/Type	Description
SCA	Rosemount Tank Radar AB	SCA 5110	Alarm Panel
SCB	Rosemount Tank Radar AB	SCB 5110	Interface Box
SCC	Hatteland Technology AS	B30KI ROC-A38- E1GG00	Marine Computer
SCD	Rosemount Tank Radar AB	SCD 5110	Touchscreen Display
SCE	Phoenix Contact	FL SWITCH 1005NT	Unmanaged Ethernet Switch
SCT	Rosemount Tank Radar AB	SCT 5110 w/SCM52	EX Barrier w/ Fieldbus Modem
IOT	Weidmüller	UR20-FBC-MOD-TCP-V2	Fieldbus Coupler
IOT	Weidmüller	UR20-8DI-P-2W	Digital Input Module
IOT	Weidmüller	UR20-4AI-UI-12	Analog Input Module
IOT	Weidmüller	UR20-4AO-UI-16-M	Analog Output Module
IOT	Weidmüller	UR20-4RO-CO-255	Relay Output Module
SCF	Moxa Inc.	EDR-8010-2GSFP	Secure Router

Hazardous Area Equipment:

Name	Brand/Manufacturer	Model/Type	Description
TGU	Rosemount Tank Radar AB	TGU 53 TGU 58 TGU 65 TGU 68	Tank Radar Gauge
TGD	Rosemount Tank Radar AB	TGD 5110	Tank Gauge Display
TMU	Rosemount Tank Radar AB	TMU 51 TMU 53	Temperature Measurement Unit
VPS	Keller AG für Druckmesstechnik	PR-23SX-ETR-Ei PAA-23SX-ETR-Ei	Vapor Pressure Sensor

Approval conditions

The following documentation of the actual application is to be submitted for approval in each case where the class notation Cyber secure(Essential) applies:

- Reference to this Type Approval Certificate
- F030 - System topology
- F071 - Inventory list
- F262 - Test report or declaration of hardening and security configuration.

Any modifications in the system to be delivered compared with the type approved system covered by this certificate shall be documented and submitted for approval in each case.

Major changes of the type approved system affecting future deliveries shall be informed to DNV. If the changes are considered to affect functionality for which rule requirements apply, a new functional type test may be required, and the certificate may have to be renewed to identify the new version. Minor changes are covered by this type approval.

Product certificate

Each delivery of the application system is to be certified according to Pt.6 Ch.5 Sec.21. After certification the clause for software control will be put into force.

Software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

Application/Limitation

The following conditions shall be satisfied when the system is installed and used on a vessel where the class notation Cyber secure(Essential) applies:

- The system shall not be connected to untrusted networks.
- The system with its component shall be installed in a restricted area with means to prevent unauthorized access.
- For IP connections between different security zones, the SCF device shall be used.

Tests carried out

Applicable tests according to DNV-RU-SHIP Pt.6 Ch.5 Sec.21 edition July 2024, security profile 1.

Relevant manuals and instructions of Rosemount Tank Radar's management system have been verified for compliance with IACS UR E27 chapter 5.

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate
- Review documented evidence of adherence to Secure Development Lifecycle processes.
- A renewal assessment will be performed at renewal of the certificate.