



Certificate No. 03-002218/031866

## TYPE APPROVAL CERTIFICATE

This is to certify that this product complies with the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products.

TYPE AND DESCRIPTION OF PRODUCT:

### Electronic Vessel Control System – EVC 2.0 with Engine Control and Monitoring System for Multiple Propulsion – EMS 2.4

MANUFACTURER:

**AB Volvo Penta**  
**SE 405 08 Göteborg**  
**SWEDEN**

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

**Croatian Register of Shipping: Rules for the Classification of Ships,  
Part 1, Ch.6, Sec. 6 – Cyber Resilience**

**IACS UR E27**

FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.

APPROVAL IS VALID UNTIL: **2030-04-23**

Place and date: **Split, 2026-04-24** Seal

Marinko Popović, dipl.ing.

NOTE: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.

**DETAILED PRODUCT DESCRIPTION:**

Cyber security capabilities of Electronic Vessel Control system – EVC 2.0 system with Engine Control and Monitoring System for Multiple propulsion – EMS 2.4.

EVC 2.0 is equipped with a Telematic Gateway (TGW3) for remote connectivity.

EVC 2.0 with EMS 2.4 system components (including IPS application):

Component	SW Version	Physical interface
Telematic Gateway (TGW3)	24913991 (25RelB) 24914095 (25RelB)	JTAG UART / Serial debug interface RS232 Digital inputs Digital output Microphone Speaker Line out Internal USB USB
Powertrain Control Unit (PCU)	24830174	DEUTSCH DT & Molex connectors
Helm Control Unit (HCU)	24830173	DEUTSCH DT & Molex connectors
Electronic Key System, Twin (EKS)(IP67)	24729267	DEUTSCH DT & Molex connectors
Servo Unit Steering (SUS20)	SUS20 24932263 SUS20_s 24932264	DEUTSCH DT & Molex connectors
Generic Button Panel	24865772	DEUTSCH DT & Molex connectors
VMM Vessel Main Module	24830176	DEUTSCH DT
Gear Control Module (GCM)	24925371	DEUTSCH DT & Molex connectors
Local Control Module (LCM)	24925373	DEUTSCH DT & Molex connectors
Powertrain Control Module (PCM)	24905046	DEUTSCH DT & Molex connectors
8" Type Approved Display Pres-Series Hatteland	V1.0	DEUTSCH DT & Molex connectors, USB
Managed Layer 3 Ethernet Switch	see TAA0000364 rev.1	RJ45
ACM	24910456	DEUTSCH DT
SDM	24836851	DEUTSCH DT
EMS	24732978	DEUTSCH DT

**APPLICATION / LIMITATIONS:**

The system is approved to comply with the requirements of Croatian Register of Shipping, Rules for the Classification of Ships, Part 1, Chapter 6, Section 6 – Cyber Resilience, with assigned IEC 62443 Security Level 1.  
The products listed under product description are accepted for installation on CRS classed vessels.

**TYPE APPROVAL DOCUMENTATION:**

Type Approval Documentation:

- Inventory list v1.3
- System topology v1.2
- Description of security capabilities v1.1
- Test procedure at manufacturer v1.3
- Guidelines for hardening and configuration of security capabilities v1.1
- Switch configuration manual v3.1
- Secure development lifecycle v2.0
- Procedure for verification of security functions on-board v1.1
- Information supporting incident response and recovery v1.1
- Test report 50471581 dated 2025-06-11 according to “Test procedure at manufacturer v1.3”

**MARKING OF PRODUCT:**

Both, hardware part number and software version are to be marked.

**CONDITIONS FOR CERTIFICATION:**

Vessel-specific product certification is required.

All changes in hardware or software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to CRS for evaluation and approval.