



Certificate No. 03-002112/031574

## 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:

**Integrated Automation System**

**INTEMAR v2.0**

MANUFACTURER:

**Interval d.o.o.**

**Pešćići 19  
51216 Viškovo  
CROATIA**

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

**Croatian Register of Shipping: Rules for the classification of ships,  
Part 12. – Electrical Equipment  
Part 13. – Automation**

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

APPROVAL IS VALID UNTIL: 2029-04-01

Place and date: Split, 2025-04-02 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:**

Integrated automation system INTEMAR v2.0 on marine vessels consists of:

- CPU : S7-1500R, CPU 1515R-2, 6ES7515-2RM00-0AB0
- CPU : S7-1200, CPU 1214C, 6ES7214-1HG40-0XB0
- PSU : SITOP PSU100S, 6EP1336-2BA10
- Selectivity module : SITOP PSE200U, 6EP1961-2BA21
- Redundancy module : SITOP PSE202U, 6EP1961-3BA21
- Server : SIMATIC IPC427E, 6AG4141-5BB07-0FA0
- Distributed I/O system (base unit) : SIMATIC ET 200SP, 6ES7193-6BP00-0DA0(0BA0)
- DI module : SIMATIC ET 200SP, DI8x24V, 6ES7131-6BF00-0CA0
- DO module : SIMATIC ET 200SP, DQ16x24V, 6ES7132-6BH01-0BA0
- DO module : SIMATIC ET 200SP, DQ8x24V, 6ES7132-6BF00-0CA0
- AI module : SIMATIC ET 200SP, AI 4xRTD/TC, 6ES7134-6GD00-0BA1
- AI module : SIMATIC ET 200SP, AI 4xRTD/TC, 6ES7134-6JD00-0CA1
- AO module : SIMATIC ET 200SP, AQ 4XU/I, 6ES7135-6HD00-0BA1
- Serial comm. module : SIMATIC ET 200SP, CM PTP, 6ES7137-6AA00-0BA0
- Profinet comm. module : SIMATIC ET 200SP, PROFINET, 6ES7155-6AU01-0CNO
- 22" Flat panel display : SIMATIC IFP2200 Flat Panel 22" display, 6AV7863-4MA00-0AA0
- 7" TFT display : SIMATIC HMI TP700 Comfort, 6AV2124-0GC01-0AX0
- Keyboard : Tipro K847
- Printer : HP Color Laserjet Pro M453 M454 series
- UPS : Socomec Netys RT M NRT2-U1700C
- Network switch (managed) : Scalance XC208, 6GK5208-0BA00-2AC2
- Network F.O. switch (managed) : SCALANCE XC206-2, 6GK5206-2BB00-2AC2
- Network switch (unmanaged) : SCALANCE XB108-2, 6GK5108-2BB00-2AB2

Software version: v2.0

**APPLICATION / LIMITATIONS:**

System is approved for use on board vessels granted with automation notations – AUT1, AUT2 and AUT3.

Product certification is required, supervision during manufacture and testing in the presence of CRS surveyor.

Prior to product certification, documentation that needs to be submitted to CRS is listed in Rules for Classification of ships, Part 12, Chapter 2.10, Annex: Documents for the Register and test attendance.

In addition to the above, the following documentation must be submitted:

- Detailed electrical drawings
- List of alarm and measurement points (I/O list)

Type approval covers hardware and software listed in Product description. In case of software update, CRS is to be notified.

**TYPE APPROVAL DOCUMENTATION:**

- Test report : 21583ALL22320
- Drawing No. : 797-103
- Drawing No. : 797-100\_autom.
- Drawing No. : 797-100\_power
- Document : List of equipment
- Document : FMEA analysis
- Document : EAS v2.0
- Document : Alert Management
- Document : Time synchronization
- Document : QA program
- Document : Operating manual
- Document : Service manual
- IACS UR E10 Rev.8 test report by Končar Electrical Institute, dated 30.06.2022.
- Block diagram INTEMAR v2.0
- Block diagram INTEMAR v2.0
- Block diagram INTEMAR v2.0
- INTEMAR v2.0 list of equipment
- INTEMAR v2.0 FMEA analysis
- Extended alarm system EAS v2.0
- Alert management operating principle INTEMAR v2.0
- Time synchronization between operator panels and external NTP server
- Software quality assurance program INTEMAR v2.0
- INTEMAR v2.0 operating manual
- INTEMAR v2.0 service manual

**MARKING OF PRODUCT:**

In accordance with IEC60945 – Marking and identification (The Manufacturer and Type Designation of the product, serial number, date of manufacture, safe distance to magnetic compass, supply voltage, software version...).

**CONDITIONS FOR CERTIFICATION:**

All changes in 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 before being installed.