



Certificate No. 03-002193/031902

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 Alarm, Monitoring and Control System

AHD - IAMC

MANUFACTURER:

BÖNING AUTOMATIONSTECHNOLOGIE GMBH & CO. KG

Am Steenöver 4
27777 Ganderkesee
GERMANY

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

CRS RULES FOR THE CLASSIFICATION OF SHIPS

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

APPROVAL IS VALID UNTIL: 2029-12-21

Place and date: Split, 2026-02-03 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:

Engine room alarm, measurement and control system on marine vessels consists of:

- AHD 1110 F / AHD 1110 G	: 10" Display with foil / glass front (SW. ver. 3.34.XXX)
- AHD 1115 F / AHD 1115 G	: 15" Display with foil / glass front (SW. ver. 3.34.XXX)
- AHD 1119 F / AHD 1119 G	: 19" Display with foil / glass front (SW. ver. 3.34.XXX)
- AHD 1310 F / AHD 1310 G	: 10" Panel PC with foil / glass front (SW. ver. 3.34.XXX) and (SW. ver. 1.5.XXX)
- AHD 1215 F / AHD 1215 G	: 15" Panel PC with foil / glass front (SW. ver. 3.34.XXX); (SW. ver. 2.7.XXXX) and (SW. ver. 1.5.XXX)
- AHD 1219 F / AHD 1219 G	: 19" Panel PC with foil / glass front (SW. ver. 3.34.XXX); (SW. ver. 2.7.XXXX) and (SW. ver. 1.5.XXX)
- AHD 1224 G	: 24" Panel PC with glass front (SW. ver. 3.34.XXX); (SW. ver. 2.7.XXXX) and (SW. ver. 1.5.XXX)
- AHD 406-2	: Cabin duty alarm panel (SW. ver. 1.X)
- AHD 570 / AHD 570 DP	: 5,7" LCD Colour Display (SW. ver. 3.2.XXXX)
- AHD 652	: 6,5" Operating Panel (SW. ver. 3.2.XXXX)
- AHD 880 TC / AHD 880 E / AHD 880 G	: 8,8" Operating Panel with foil / foil / glass front (SW. ver. 3.2.XXXX)
- AHD-DRM R	: Control unit for displays with rotary push drive (SW. ver. 1.X)
- AHD-DRM T	: Control unit for displays with trackball (SW. ver. 1.X)
- AHD-DPU 9	: Data processing station (SW. ver. 4.7.XX) and (SW. ver. 2.7.XXXX)
- AHD 882	: Central unit (SW. ver. 1.5.XX)
- AHD-SAS 15	: Data station for analog and binary sensors (SW. ver. 4.5.XXX)
- AHD-PS 15B	: Data station with duty selection function
- AHD-PS 15 / AHD-PS 30 / AHD-PS 47	: Data station for 15 / 30 / 47 binary inputs
- AHD-R 101	: Microprocessor controlled relay station (SW. ver. 2.X)
- AHD-R 101-2	: Microprocessor controlled relay station (SW. ver. 2.2.X)
- AHD 1200	: Embedded PC (SW. ver. 3.34.XXX); (SW. ver. 2.7.XXXX) and (SW. ver. 1.5.XXX)
- AHD-UCC	: CAN repeater (SW. ver. 3.5.3.XX)
- AHD-UIC	: Compact protocol repeater (SW. ver. 3.6.XX)
- AHD-WAOP K	: Personnel alarm system (SW. ver. 3.1.X)
- AHD-WOP	: Whistle operation panel (SW. ver. 1.XX)
- AHD-GAP F	: General alarm unit with fire alarm function (SW. ver. 1.X)

* Note for software version: All software updates performed do not invalidate older, already certified firmware versions. Earlier versions remain usable and fully compatible with the current system environment.

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 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 A: Summary of documentation submittal.

In addition to above, following documentation also 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:

Product technical information, drawings and results of laboratory testing with regards to EMC, environmental testing and safe distance from magnetic compass are stated in approval letters 2512/TSE/NP/031534 and 311/TSE/DD/031902.

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.