



**POTVRDA O TIPNOM ODOBRENJU**  
*TYPE APPROVAL CERTIFICATE*

**Br / No 03-001270/030940**

Potvrđuje se da je ovaj proizvod, u skladu s Pravilima za klasifikaciju brodova, Dio 1. - Opći propisi, Odjeljak 3. - Tipno odobrenje proizvoda, odobren za ugradnju na brodove i postrojenja pod nadzorom Hrvatskog registra brodova.  
*This is to certify that this product on the basis of the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products, is approved for use on board ships and installations under supervision of the Croatian Register of Shipping.*

**TIP I OPIS PROIZVODA:**  
*TYPE AND DESCRIPTION OF PRODUCT:*

**Monitoring, Alarm and Safety System for Diesel Engines – AHD 514**

AHD 514A	Alarm System and Start/Stop Unit	SW – Ver. 3.11
AHD 514S	Safety System	SW – Ver. 1.14
AHD 514OP	Operator Panel	SW – Ver. 1.18

**PROIZVOĐAČ:**  
*MANUFACTURER:*

**Böning Automationstechnologie GmbH & Co.KG**  
**Am Steenöver 4**  
**27777 Ganderkesee**  
*GERMANY*

**PROIZVOD UDOVOLJAVA SLIJEDEĆIM PRAVILIMA/PROPISIMA:**  
*THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:*

**Hrvatski registar brodova:** **Pravila za klasifikaciju brodova,**  
**Dio 9. – Strojevi, Dio 13. – Automatizacija**  
*Croatian Register of Shipping:* *Rules for the classification of ships,*  
*Part 9. – Machinery, Part 13. – Automation*

**IACS UR E10:**

**DETALJI O PROIZVODU I UVJETIMA CERTIFIKACIJE DANI SU NA POLEĐINI.**  
*FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.*

**ODOBRENJE VRIJEDI DO:** **2015-10-12**  
*APPROVAL IS VALID UNTIL:*

**Mjesto i datum** Split, 2011-10-12  
*Place and date*

**M.P.** \_\_\_\_\_  
*(Seal)*

Goran Begović, dipl.ing.

**Napomena: Ova potvrda nije valjana ako se proizvod ili način njegove proizvodnje promijenio u odnosu na tipno ispitani proizvod. Proizvođač treba obavijestiti Hrvatski registar brodova o bilo kojoj izmjeni na proizvodu kako bi ishodio valjanu potvrdu.**  
*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.*

**PODROBNIJI OPIS PROIZVODA:***DETAIL PRODUCT DESCRIPTION:***Osnovne funkcije AHD 514A:***Basic functions of AHD 514A:*

6 analog inputs 4-20mA  
 6 analog inputs PT100/PT1000  
 1 RPM input  
 2 additional binary inputs  
 6 binary inputs - control  
 2 voltage inputs for fuse trip and charging  
 2 voltage inputs for speed up/down  
 8 binary relay outputs 6A  
 2 binary transistor outputs  
 Degree of protection: IP20, Power Supply 24 VDC  
 Interfaces: 2 CAN bus, RS232 diagnostic, serial I/O

**Zaštitne karakteristike AHD 514S:***Safety characteristics of AHD 514S:*

2 emergency stop inputs  
 5 binary inputs for automatic shut down  
 5 binary inputs for control  
 1 RPM input  
 4 binary relay outputs 6A  
 2 transistor outputs 8A  
 1 transistor output 8A, short circuit proof  
 1 current output 4-20mA  
 8 alarm LEDs  
 Degree of protection: IP20, Power Supply 24 VDC  
 Interfaces: 1CAN bus, serial I/O

**Upravljački panel AHD 514OP:***Operator Panel AHD 514OP*

5.7" colour display, auto dimmer  
 Engine analog parameters indication  
 Engine status indication  
 Alarm pages  
 Membrane keys for engine start/stop  
 Degree of protection: IP20  
 Degree of protection: front side IP44  
 Power Supply 24 VDC  
 Interfaces: 2 CAN bus

**PODRUČJE PRIMJENE / POSEBNI I GRANIČNI UVJETI:***APPLICATIONS / LIMITATIONS:***Sustav je primjenjiv na porivne i pomoćne motore***System is applicable on the propulsion and auxiliary engines***DOKUMENTACIJA ZA TIPNO ODOBRENJE:***TYPE APPROVAL DOCUMENTATION:***Tehnička dokumentacija***Technical documentation***- Dok-ID: PaB-1021****Tipno ispitivanje – Elektromagnetska kompatibilnost***Type Testing – Electromagnetic Compatibility***- ZEISS P-QK/EMV 060/2009\_02****Tipno ispitivanje – Utjecaji okoliša***Type Testing – Environmental Tests***- Paconsult, Test report No. 09-2664****Tipno ispitivanje – IP zaštita***Type Testing – IP enclosure***- Paconsult, Test report No. 09-2665****Tipno ispitivanje – Elektromagnetska kompatibilnost***Type Testing – Electromagnetic Compatibility***- EMV Services, Test report No. 09/9062-2-1****Ispitivanje funkcionalnosti***Performance Test***- Test protocol ver. 8.3 – dated 14.09.2011****OZNAČAVANJE PROIZVODA:***MARKING OF PRODUCT:***Alarm-, Start-/Stop- and Safety System for Diesel Engines – AHD 514, BÖNING****UVJETI ZA CERTIFIKACIJU:***CONDITIONS OF CERTIFICATION:***Bitne izmjene u hardveru i softveru moraju se odobriti prije instalacije na brod.****Sve hardverske i softverske promjene sustava moraju biti zapisane tijekom primjene na brodu.****Zapisi o izmjenama moraju se dostaviti HRB-u radi provjere i odobrenja.***Major changes in the hardware and software are to be approved before being installed on the vessel.**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.*

Raščlana

13.01.01

Zamjenjuje potvrdu

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