

**POTVRDA O TIPNOM ODOBRENJU**  
**TYPE APPROVAL CERTIFICATE**Br /No **03-001550/031196**

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:

**Electronic Engine Control Module for Caterpillar Engines****ADEM IV (A4:E4v2)**PROIZVOĐAČ:  
MANUFACTURER:**DELPHI DELCO ELECTRONICS DE MEXICO S.A. de C.V.****Delphi Electronics & Safety**

Carretera A, Matamoros KM 13.5

Parque Industrial Reynosa &amp; Parque Industrial de Norte

Reynosa - Tarnaulipas

88747

**MEXICO****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 POLEDINI.**

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

**ODOBRENJE VRIJEDI DO:****2020-10-06**

APPROVAL IS VALID UNTIL:

**Mjesto i datum:**

Split, 2016-10-06

Place and date:

**M.P.**

(Seal)

Marinko Popović, 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:**  
**DETAILED PRODUCT DESCRIPTION:**

A4:E4v2 – Engine Control Module	Caterpillar Engines
Control Gp. - A4E4v2.	478-7926
Air Cooled ECM Assembly Drawing	28306868
Air Cooled Housing	28285842
Schematic	28018074
Schematic - Power Supply	28018081
Board Assembly	28037265
Board Assembly - Power Supply	28306871
ECM Software Version	A4E4v2 253-7873 JV

**PODRUČJE PRIMJENE / POSEBNI GRANIČNI UVJETI:**  
**APPLICATION / LIMITATIONS:**

*Correct configuration and set up for each delivery to be tested during commissioning, after installation, under the supervision of a Society Surveyor.*

*Approval also valid for ships to be granted with class notations: AUT 1, AUT 2 and AUT 3.*

**DOKUMENTACIJA ZA TIPNO ODOBRENJE:**  
**TYPE APPROVAL DOCUMENTATION:**

- ADEM IV – A4:E4v2 Electronic Control Module - Product Information Sheet
- EC-29 Marine Society Test Plan for ADEM IV, Ver. 1.1, September 27,2005.
- EC-29 Marine Society Testing Procedure For A4E4v2 System, Ver. 1.1, September 30, 2005.
- EMC Test Report of the A4E4v2 Marine Engine Controller (1083), October 04, 2005.
- IP Enclosure Test Reports 33260-1/33260-2, September 27-28,2005.
- Functional Test Report, C32 ACERT, September 28,2005.
- Witness Test Summary Report, Ver1.0, October 24,2005.
- Part Number Changes made in accordance with “ADEM IV White Paper” Version 1.0 dated 2012-02-14,
- A4:E4v2/A4:E4v3.1/A5:E4v2 RoHS Update White Paper, Version 1.0, dated 17 March 2016,
- A4:E4v2 RoHS Update Type Approval Test, Version 1.00, dated 16 March 2016,
- Electronics & Systems Integration (E&SI) – ECM RoHS and Obsolescence, Table Top Review //16/15,
- Elite Electronic Engineering Inc. – Engineering Test Report No. 1504199-01 Rev. A, dated 07 March 2016.

**OZNAČAVANJE PROIZVODA:**  
**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-if app., supply voltage, software version...).*

**UVJETI ZA CERTIFIKACIJU:**  
**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. Major changes in the software are to be approved before being installed in the computer.*

**NOTES:**

***Engines for single propulsion vessels as well as engines for emergency generators, must be equipped with two ECM modules.***

***Any relaxation from a.m. applications may be accepted after consideration by the Class Society.***