

**POTVRDA O TIPNOM ODOBRENJU**
TYPE APPROVAL CERTIFICATEBr / No **03-001616/031331**

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:

The Electronic Engine Alarm and Monitoring Systems
exclusively for Caterpillar Engines
MPD, MMPD, CMPD

- *MPD – Marine Power Display*
- *MMPD – Mini Multi-Purpose Display*
- *CMPD – Color Multi-Purpose Display*

PROIZVOĐAČ:

MANUFACTURER:

Sturdy Corporation

1822 Carolina Beach Road

WILMINGTON, NC 28401*United States of America***PROIZVOD UDOVOLJAVA SLIJEDEĆIM PRAVILIMA/PROPISIMA:**

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

Hrvatski registar brodova: **Pravila za klasifikaciju brodova,**
Dio 12. – Električna oprema, Dio 13. – Automatizacija

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

APPROVAL IS VALID UNTIL:

2022-04-23

Mjesto i datum Split, 2018-04-23

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:*DETAIL PRODUCT DESCRIPTION:*

Elektronički sustavi za alarmiranje i nadzor MPD, MMPD, CMPD namjenjeni su samo za Caterpillar motore za instalacije na brodovima i odobalnim objektima, na palubi i u strojarnici. Koriste se da prikažu radne parametre motora.

The Electronic Engine Alarm and Monitoring Systems MPD, MMPD, CMPD are intended exclusively for Caterpillar engines for Marine and Offshore installation, suitable for open deck and engine room. It is used to display engine operating parameters.

TEHNIČKA DOKUMENTACIJA / NACRTI:*TECHNICAL DOCUMENTATION / DRAWINGS:*

Assembly CAT Display (MPD) – 37A-01335, issue G (Caterpillar P/N 267-8623);

MPD LEBM0189-04, 2006 Caterpillar;

SES-248, Rev.03 – Caterpillar CMPD (D3:C4) Hardware Specification – April 04, 2007;

SES-259, Rev.01 – Caterpillar CMPD (D3:C4) Electromagnetic Compatibility Test Plan Specification, dated Dec 04, 2007;

SES-252, Rev.00 – Caterpillar MMPD (D2:M3) Hardware Specification – Mar 31, 2006;

SES-268, Rev.01 – Caterpillar MMPD (D2:M3) Electromagnetic Compatibility Test Plan Specification, dated Dec 04, 2007.

PODRUČJE PRIMJENE / POSEBNI I GRANIČNI UVJETI:*APPLICATIONS / LIMITATIONS:*

Napon napajanja 9-32 V DC, 0,5Amps ; Radna temperatura (trajno) -20 °C to 70 °C ; IP 56.

Power supply 9-32 V DC, 0,5Amps ; Operating Temperature (Continuous) -20 °C to 70 °C ; IP 56.

DOKUMENTACIJA ZA TIPNO ODOBRENJE:*TYPE APPROVAL DOCUMENTATION:*

MPD Design Verification Plan and Report – Final Environmental TEST TP-039, dated Sept 8, 2003;

MPD Caterpillar Marine Power Display Module Marine Society Test Plan and Report, dated September 19, 2000;

CMPD Production Validation Plan and Report, Results dated 2/12/2008;

CMPD Electromagnetic Compatibility Tests – Elite ETR No. 38639-01, July 23 – Aug 14, 2007;

CMPD Electromagnetic Compatibility Tests – Elite ETR No. 38871-02, Sept 24 – Oct 10, 2007;

CMPD Electromagnetic Compatibility Tests – Elite ETR No. 39069-01, Oct 29-31, 2007;

MMPD Production Validation Plan and Report, Results dated 10/22/2007;

MMPD Electromagnetic Compatibility Tests – Elite ETR No. 38543-01, July 23 – Aug 14, 2007;

MMPD Electromagnetic Compatibility Tests – Elite ETR No. 38871-01, Sept 22-25, 2007;

MPD Software version – 42A-00199 Sturdy / 275-2174-00 CAT, updated May 31, 2006;

CMPD Software version – Windows CE V5.0;

MMPD Software version – Rom boot Loader V3.00, updated Sept 23, 2013.

OZNAČAVANJE PROIZVODA:*MARKING OF PRODUCT:*

Ime proizvođača, tip proizvoda, serijski broj-identifikacija, datum proizvodnje, napon napajanja i programska izvedba.

The Manufacturer and Type Designation of the product, serial number, date of manufacture, supply voltage and software version.

UVJETI ZA CERTIFIKACIJU:*CONDITIONS OF CERTIFICATION:*

Za svaku pojedinačnu primjenu na brodovima HRB klase potrebno je dostaviti tehničku dokumentaciju stvarne izvedbe na brodu. Sve softverske izmjene treba dostaviti HRB-u na uvid i odobrenje.

Documentation for the actual application is to be submitted for approval in each case on the CRS classed vessels. All software changes are to be forwarded to CRS for evaluation and approval.