



Confirmation of Product Type Approval

Company Name: AUTO-MASKIN AS

Address: HVAMSVINGEN 22 N-2013 Norway

Product: Diesel Engine, Monitoring and Control Equipment

Model(s): Diesel Control Units DCU 305 A R2, DCU 305 P R2, DCU 305 R3 and Remote Panel RSP 305

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	22-2227067-PDA	03-MAR-2022	02-MAR-2027
Manufacturing Assessment (MA)	22-5128879	31-JAN-2022	30-JAN-2027
Product Quality Assurance (PQA)	NA	NA	NA

Tier

5 - Unit Certification Required

Intended Service

Electronic control units for safety and alarm monitoring of marine diesel propulsion engines and generator sets fitted on-board of ACC or ACCU Vessels

Description

Electronic marine engine control unit comprises of a main control unit DCU 305 type A R2 (06400), P R2 (06401) or R3 (06602) with graphical and backlit display, LEDs, buzzer and buttons (with version 4.47 (R2) and 6.59 (R3) firmware). The remote panel RSP 305 (06500) (with version 5.09 firmware) can be used for monitoring of up to four DCUs. Ancillary components comprise of: Terminal Block, Item RK-66; Analogue card converter connections, Item AK-6 (for 4 -20 mA); and relay output card, Item MK- 6 / MK-14.

The RSP 305 is connected to the communication port of one or several DCU 305 units via a 4-wire twisted pair cable. Self-configuring RS-232/RS-422 signal converters are used. Configuration tool: 'Rudolf' parameter program.

Ratings

Power supply: 24 V DC Smoothed; Power consumption for DCU 305 is 700 mA max; IP30 back and IP54 front panel; Operating temperatures: 0°C to 70°C

Service Restrictions

1) Unit Certification is required if it is incorporated in a Category II or Category III system as detailed in 4-9-3/7.1 and 4-9-3/Table 1 of the ABS Rules for Building and Classing Marine Vessel Rules (2022).

2) Unit Certification is to be carried out during Factory Acceptance Test of individual modules at the plant of manufacture or during Factory Acceptance Testing of the overall system.

3) If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments

1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

2) Tests and approval are for hardware and firmware only.

3) Each configuration and external connection is to be specifically approved.

4) When incorporated in a system of Category I, II or III in accordance with 4-9-3/7.1 and 4-9-3/Table 1 of the ABS Rules for Building and Classing Marine Vessel Rules 2022 the documentation detailed in 4-9-3/Table 2 is to be submitted to ABS or is to be available for review by ABS as applicable.

Notes, Drawings and Documentation

Nemko Report No. E21169.02, Test Report Electromagnetic Compatibility dated 08-09-2021, Revision: 02, Pages: 32

Drawing No. 1100587, QIG - Quick Installation Guide DCU 305 A R2, Revision: -, Pages: 2

Drawing No. 1100586, QIG - Quick Installation Guide DCU 305 R3, Revision: -, Pages: 2

Drawing No. EU Declaration of Conformity, EU-Declaration-of-Conformity-DCU_RSP-305, Revision: -, Pages: 1

Drawing No. 1-1201- AMS015, Software-Validation-Process-C, Revision: C, Pages: 1

DNV Environmental Test Lab Report No. 2001-3056, Technical Report – Type testing of Engine Control Unit type DCU 305 A/P R2 with termination board type RK-66 dated 08-03-2001, Revision: 02, Pages: 32

DNV Environmental Test Lab Report No. 2002-3290, Technical Report – EMC Testing of DCU 305 Version 4.3 dated 16-10-2002, Revision: 01, Pages: 19

DNV Environmental Test Lab Report No. 2005-3292, Technical Report – EMC Testing of DCU 305A R3 Diesel Engine Control Unit with termination board type RK-66 dated 27-06-2005, Revision: 01, Pages: 12

Drawing No. 3-1201-AMS015, Software-Development-Process-B, Revision: B, Pages: 6

Drawing No. 5001-Firmware revisions R2, 5001-Firmware revisions DCU 305 R2, Revision: -, Pages: 4

Drawing No. 5002 Firmware Revision, 5002-Firmware revisions DCU 305 R3, Revision: -, Pages: 3

Drawing No. 5003-Firmware Revision, 5003-Firmware revisions RSP, Revision: -, Pages: 2

Drawing No. Auto-M-Dokum-DCU-305-R3-Test-Spec, DCU 305 R3 Test Plan & Procedures, Revision: 659, Pages: 79

Drawing No. Auto-M_A4_Kv_QMS_eng_2, Nemko ISO 9001:2008 Certificate Jan 2004, Revision: -, Pages: 1

Drawing No. Auto-M_IQNet_IQNet_QMS_2, IQNET ISO 9001:2008 Certificate Jan 2004, Revision: -, Pages: 1

Drawing No. DCU 305 R3 LT Datasheet, DCU 305 R3 LT Engine Control Unit, Revision: -, Pages: 2

Drawing No. DCU-305-R3-and-R3-LT-Users-Manual, User's Manual – DCU 305 R3_DCU 305 R3 LT Diesel Engine Control Unit, Revision: -, Pages: 20

Drawing No. DCU-305-R3-CAN-Attac, CAN / J1939 Manual, Revision: -, Pages: 29

Drawing No. DCU_305_R3_LT_Product_Sheet, DCU 305 R3 LT Engine Controller, Revision: -, Pages: 2

Drawing No. DCU-305-R3 and R3-LT-Communication-Manual, Communication Manual – DCU 305 R3_DCU 305 R3 LT Diesel Engine Control Unit, Revision: -, Pages: 17

Drawing No. J1939-J1587 Test Specification 4_27, Test plan (Sept 04), Revision: -, Pages: 19

Drawing No. Requirement Spec 305-D12-02, Requirement Specification DCU305 on D12 application P989, Revision: V02, Pages: 2

Drawing No. DFMEA DCU 305 - FMEA, Design Failure Mode Effects Analysis DCU 305 Series, Revision: -, Pages: 2

Drawing No. DCU-305-R3-and-R3-LT-Installation-Manual, Installation Manual – DCU 305 R3_DCU 305 R3 LT Diesel Engine Control Unit, Revision: -, Pages: 44

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 02/Mar/2027 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

2022 Rules for Conditions of Classification 1-1-4/7.7, 1-1-A3 and A4, which covers the following:

2022 Rules for Building and Classing Marine Vessel Rules: 4-9-3/3, 4-9-3/5, 4-9-3/7, 4-9-3/9, 4-9-3/11, 4-9-9/13.1

2022 Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2 and A3, which covers the following:

2022 Rules for Building and Classing Mobile Offshore Units: 4-3-4/5

2022 Rules for Conditions of Classification - Light and High Speed Craft 1-1-4/11.9, 1-1-A2 and A3, which covers the following:

2022 Rules for Building and Classing High Speed Crafts: 4-7-8/3, 4-7-8/7, 4-7-8/9, 4-7-9/15.1

International Standards

IACS UR E10 Rev.8 Corr.1 Jan 2022; E22 Rev.2 June 2016

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in dark ink, appearing to read "Joseph W. Wilson".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 09-Mar-2022 5:24

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.