



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): DCU 408E, DCU 410, DCU 410E, RP 410, RP 410E, SDU 410, SDU 404, RIO 410, RPS

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	19-LD1871876-PDA	13-AUG-2019	12-AUG-2024
Manufacturing Assessment (MA)	18-OS3505431	06-JUN-2018	05-JUN-2023
Product Quality Assurance (PQA)	NA	NA	NA

Tier

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Intended Service

ABS Classed Vessels and Offshore Facilities in accordance with the listed ABS Rules and International standards.

Description

Electronic marine engine control unit comprises of a main control unit DCU 410 or DCU 410E with graphic / alarm list being indicated on a backlit LCD display with LEDs, buzzer and menu selection push buttons. Sensor signals are connected directly to the DCU as well as connected through Standard Expansion IO units RIO 410 via Modbus RS-485. DCU also communicates with Safety Unit SDU 410 via Modbus RS-485. The DCU could include an optional CLU external power selector dual supply unit. The remote / slave panel RP 410 or RP 410E is similar in appearance to the DCU and is used for monitoring of the DCU through an Ethernet switch using Ethernet links. SDU 404 Safety Unit may be utilised with direct SDU Link Connection to DCU at 19200 baud. Power supply may be via RPS - Redundant Power Selector

Ratings

Power supply: 18 -32 VDC, 24 V DC Nominal;

Power consumption for DCU 410: 6 W

SDU 404 8-16 VDC or 18-32 VDC, 200-600mA (12 VDC or 24 VDC Nominal)

RPS: Primary 0-32 VDC (24 VDC Typical), Secondary 18-32 VDC (24 VDC Typical), Current Consumption 20mA at 24V DC. Output current Continuous 8A at 70C, 16A at 55C, 2 minutes 32A at 55C

Enclosure protection:

IP30 back and IP54 front panel; RPS IP44

DCU 410E & RP410E: IP 56 front panel

Operating temperatures: 0 to 70 degree C

Service Restrictions

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 Vessels 2019. 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.

Comments

- Tests and approval are for hardware and firmware only. Each configuration and external connection is to be specifically approved.

- 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 Vessels 2019 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.

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

- Unless specifically directed by the Administration, this approval is not to be construed as a substitute for flag Administration's approval for SOLAS (Consolidated Edition 2014), as amended.

Notes, Drawings and Documentation

Drawing No. 5005, DCU 410 / DCU 408 Firmware Revisions, Revision: -, Pages: 1

Drawing No. 5008, SDU 410 Firmware Revisions, Revision: -, Pages: 1

Drawing No. 5009, RIO 410 Firmware Revisions, Revision: -, Pages: 1

Drawing No. 5011, RP 410 Firmware Revisions, Revision: -, Pages: 1

Drawing No. 5022, SDU 404 Firmware Revisions, Revision: -, Pages: 1

Drawing No. DCU 410E Datasheet, Datasheet, Revision: -, Pages: 1

Drawing No. NO-900611, ISO 9001:2015 Certificate, Revision: -, Pages: 1

Drawing No. QIG_RIO 410 and RIO 210, Manual, Revision: -, Pages: 1

Drawing No. QIG_DCU408E, Manual, Revision: -, Pages: 1

Drawing No. QIG_DCU410E, Manual, Revision: -, Pages: 1

Drawing No. QIG_RP410E, Manual, Revision: -, Pages: 1

Drawing No. QIG_RPS, Manual, Revision: -, Pages: 1

Drawing No. QIG_SDU404, Manual, Revision: -, Pages: 1

Drawing No. QIG_SDU410, Manual, Revision: -, Pages: 1

Term of Validity

This Product Design Assessment (PDA) Certificate 19-LD1871876-PDA, dated 13/Aug/2019 remains valid until 12/Aug/2024 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in

existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules

The Rules/Guides applicable to this assessment are:

- Marine Vessels Rules (2019): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-9-3/5, 4-9-3/7, 4-9-3/9 Table 2, 4-9-9/7, 4-9-9/13, 4-9-9/Table1;
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2019): 1-1-4/7.7, 1-1-A3, 1-1-A4
- Steel Barge Rules (2019): 1-1-4/7.9, 1-1-A3, 1-1-A4
- Facilities on Offshore Installations (2019): 1-1-4/9.7, 1-1-A2, 1-1-A3
- Mobile Offshore Units (2019): 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-1-1/7.9, 4-3-1/11, 6-1-1/9, 6-1-1/13

International Standards

IACS UR E10 Rev 6: 2014

IACS UR E22 Rev 2: 2016 (CAT III)

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 30-Aug-2019 2:14

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.