



Type Approval Certificate

[Diesel engine safety, control and alarm system]

Initial Approval 9 July 2009
Manufacturer Auto-Maskin AS
 Hvamsvingen 22, NO-2013 Skjetten, Norway

Product Description 400 Series "Marine Pro"

Comprising:

- DCU 410/410E/408/408E : Engine Controller
- SDU 404/410/420 : Safety Shutdown Unit
- RIO 410 : Standard Expansion I/O
- RP 410/410E/480i : Remote Panel
- RPS : Redundant Power Selector

" See Appendix 1 "

Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 8 July 2029

Issued at Busan, Korea on 3 May 2024



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME24021253379) and certificate No.(CPH17663-AC001).



KOREAN REGISTER

*General Manager of
Marine & Ocean Equipment Team*

Note : 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 3 May 2024

A. Product Description

1. Product Specification

1) Product Description :

This system is designed to be integrated with independently approved propulsion and auxiliary marine engines. If possible, sensor inputs for the Alarm System have been provided by the approved engine's electronic control module (ECM) and its associated datalink signal. All other sensor inputs to the Alarm System are provided by sensors, independent of the ECM, connected to the DCU or panel system's Remote Input/Output (RIO) unit. The annunciation and display of these signals will be provided by the panel system display. The Safety System requirement is met with the use of independent switches and sensors that are connected directly to the panel system's safety Shutdown Unit (SDU).

2) Firmware Version :

- DCU 410/408	: 2. x
- DCU 410E/408E	: 3. x
- RP 410	: 2. x
- RP 410E	: 3. x
- RP 480i	: 3. x
- RIO 410	: 1. x
- SDU 410	: 1. x
- SDU 404	: 1. x
- SDU 420	: 1. x
- RPS	: N/A

Minor changes in firmware and consequent changes of firmware version numbers ("x") are allowed and covered by this Type Approval when such changes are performed in accordance with Firmware Version Labeling Strategy-3/1201-AMS007/1 rev. A dated 2013-04-30, i.e. not changing core functionality as it is described in type approval documentation. Such firmware changes to be registered in the above listed Firmware Release descriptions.

2. Approved Drawings and Documents

1) Firmware Documents

- Firmware Version Labeling Strategy No. 3/1201-AMS007/1 rev.A dated 2013-04-30
- DCU 410/408/410E/408E Firmware revisions Document No.5005 dated 2023-01-26
- RP 410/410E Firmware revisions Document No.5011 dated 2023-01-26
- RIO 410 Firmware revisions Document No.5009 dated 2010-10-14
- SDU 410 Firmware revisions Document No.5008 dated 2020-09-29
- SDU 404 Firmware revisions Document No.5022 dated 2023-11-01

2) Document for RP410E and DCU410E/408E

- Datasheet for RP410E Remote Panel dated 2016-10-05
- Layout Drawing No. 1912-HMP548/1 Rev.D dated 2018-02-11
- Datasheet for DCU410E/408E Engine Controller dated 2018-04-18
- Layout Drawing No. 1006445 Rev.0 dated 2016-02-11

3) Document for RP480i and SDU420

- Datasheet for RP480i dated 2022-06-28
- Datasheet for SDU404/420 dated 2022-03-18

3. Test Reports, etc.

1) Test Reports

- DNV test report No.2007-3495
- Nemko test report No.91130/8 ver.2 and No.E14070.00
- Test report No.4P02266:A, No.4P01832E1, No. 4P01832E2, No. 4P01832E3 issued by SP Technical Research Institute of Sweden
- Test report No.5P02252-E and No.5P06927 for RP410E issued by SP Technical Research Institute of Sweden
- EMC test report E21169.02 issued by Nemko

2) Test Reports for RP480i and SDU420

- Report No. 9P04380 issued by Research Institutes of Sweden AB

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- Report No. 9P06118 RevB issued by Research Institutes of Sweden AB
- Report No. 0156095 Rev.1 issued by Research Institutes of Sweden AB
- Report No. 2P03725 issued by Research Institutes of Sweden AB
- Report No. P111935 Rev. B issued by Research Institutes of Sweden AB
- Report No. P113225 issued by Research Institutes of Sweden AB
- Report No. E21093.00 issued by Nemko

B. Approval Condition

1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and the approved documentation and test reports (IACS UR E10 Rev.7)
- 2) Degree of protection is to be complied with Rule Pt.6 Ch.1 Sec.2 201.2. (5).
- 3) The manufacturer is to inform this Society of all kinds of revisions of the equipment including the major changes of software. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 4) This certificate covers hardware and basic software under Product Specification.
- 5) When this system is to be installed in the vicinity of a standard or a steering magnetic compass, it is to have the minimum safe distance stated in the test reports or more at which it may be mounted from such compasses.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is required.
- 2) In case where this system is installed on board, the system drawings for individual vessel are to be approved by this society.

3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

4. Others

N/A

< End of Certificate >