

Appendix 1

Product Description and/or Approval Condition

Certificate No : CPH16186-AC006

Date of Issue : 19th February, 2020

A. Product Description

1. Product Specification

- 1) Product Description (Type : M2500)
The M2500 is an Engine Control and Alarm System.
- 2) Specification
 - Part number : M2500.0010
 - Power Supply : 2 X 24 V DC
 - Firmware version used in testing : 2019-07-23 01.01.10
 - Approved software version : 01.01.XX

2. Approved Drawings and Documents

- 1) Drawings
329-64-2 Rev.B, 329-64 Rev.C
- 2) Documentations
M2500 Engine Controller Installation Manual , Revision 2012-04-23
M2500 Engine Controller Configuration Manual, Revision 2011-04-08
M2500 Engine Controller Operator Manual , Revision 2011-03-08
- 3) Software document
M2500 firmware version history Revision: 2019-09-11

3. Test Reports, etc.

- 1) ENV and EMC
DANAK-1910664, DELTA-A506392
- 2) Function test
M2500 Function Test witnessed by KR surveyor dated on 8th Jan. 2020

B. Approval Condition

1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and the approved documentation.
- 2) Degree of protection shall be complied with Rule Pt.6 Ch.1 Sec.2 201.2.(5).
- 3) The manufacturer should inform this Society of all kinds of revisions of the equipment including 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) An independent safety system shall be installed in addition to this system.
- 5) Safety functions by control system shall be adjusted in line with independent safety system.
- 6) Safety functions that are in addition to the ones required by Rules, shall have possibilities to be overridden or eliminated, "AUTO RESET" function shall be disabled.
- 7) The product shall not be installed in the bridge and deck zone.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is required.
- 2) In case where this system is to be installed on board a ship, the system drawings are to be approved by this Society. The following documentation is to be submitted for each delivery.
 - Reference to this Type Approval Certificate
 - Information about engine type and usage
 - Control, alarm and monitoring points, safety parameters
 - Software versions used in each delivery
 - System diagram, power supply arrangement
 - Test program for FAT

3. Marking

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

Appendix 1

Product Description and/or Approval Condition

Certificate No : CPH16186-AC006

Date of Issue : 19th February, 2020

4. Others

1) Test condition / Installation condition

Test	Condition	Remark
EMC	All locations excluding the bridge and deck zone	-
Temperature	-15 +70°C	-
Vibration	Acceleration $\pm 4.0g$	-
Degree of protection	IP54	1)

* Remark

1) Degree of protection is to be applied to front panel only.

2) Compass safety distance

Type	Standard compass	Steering compass
Automation PC910	46 cm	28 cm

< End of Certificate >

