DNV·GL

Certificate No:
TAA00000S3

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
Control Panel PPC-PLD-7

Issued to
Pleiger Elektronik GmbH & Co. KG
Witten, Nordrhein-Westfalen, Germany

is found to comply with
DNV GL rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature	**B**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**Required protection acc. to DNV-GL Rules shall be provided upon installation on board**

This Certificate is valid until **2021-12-05**.

Issued at **Hamburg** on **2017-01-11**

DNV GL local station: **Essen** for **DNV GL**

Approval Engineer: **Jens Dietrich**

Duy Nam Le
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-023364-1**
Certificate No: **TAA00000S3**

Product description

Control Panel PPC-PLD-7:
• CPU A9/450,
• 7" WVGA-Touch-Display,
• TFT 800x480 Dots,
• 2 x RS 232, 2 x RS 485, 2 x CAN,
• 1 x Ethernet,
• 2 x USB (maintenance only),
• 1 x SD-Memory-Card slot,
• 4 Binary Inputs 24VDC,
• 4 Binary Outputs Transistor, 24V DC, 0,5A,
• Display illumination adjustable for bridge installation.

Power supply 24V DC
Degree of protection: IP54 (front), IP20 (rear).

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate
If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

Tests carried out

Marking of product

Products are marked with the company, type designation, serial number and power supply specification.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.
The main elements of the assessment are:
• Ensure that type approved documentation is available
• Inspection of factory samples, selected at random from the production line (where practicable)
• Review of production and inspection routines, including test records from product sample tests and control routines
• Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
• Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
• Ensuring traceability between manufacturer's product type marking and the type approval certificate
Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE