DNV·GL

Certificate No:
TAA00001W4

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Measurement Converter

with type designation(s)
MEV 265…

Issued to
Dr. E. Horn GmbH & Co. KG
Gaertringen, Baden-Württemberg, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

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	**A**
Enclosure	**Required protection according to DNVGL Rules shall be provided upon installation on board**

Issued at **Hamburg** on **2018-06-04**
This Certificate is valid until **2023-06-03**.
DNV GL local station: **Augsburg**

Approval Engineer: **Jens Dietrich**

for **DNV GL**

Joannis Papanuskas
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.

Product description

CPU: 80C552 12/16 MHz
Voltage: 230V AC +10% (reversible to 115 V AC) or 24 V DC
Rated frequency: 50 ... 60 Hz
Power consumption: max. 5 VA
Display: 7-segment-LED; 5 digits
Speed sensor inputs: 1 or 2 input frequency range 0...50 KHz
Pulse output: NPN-open collector output max. 24 V output current- </= 10 mA
Switch output: switch point with relay outputs; switching mode configurable
Relay data: max. breaking capacity 60W, 125 VA; max. turn-on voltage 220V DC 250 V AC;
max. switch current 2 A DC/AC
Analogue output: current 0/4...20 mA or voltage 0...10 V resolution 12 Bit D/A,
configurable, galvanic isolated
Interface: RS-485 or RS-232
Degree of Protection: IP 40 housing; IP 20 terminals
Software Version: V1.03 dated 24-09-2002 MEV265_H (M15_H)
V1.07 dated 09-02-2006 MEV265_L (M15_L)

Application/Limitation

The Type Approval covers hardware and software 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 RU SHIP Pt.4 Ch.9 Sec.1.

Tests carried out

Applicable tests according to DNV GL Class Guideline CG-0339, November 2016.

Marking of product

Maker, type designation, serial number

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of this certificate.

END OF CERTIFICATE