



Certificate no.:  
**TAA00003J9**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**that the Peripheral Equipment**

with type designation(s)

**Monitor (7HD-27HD, 7VG-19VG), Touchscreen (7TS-27TS, 8TSV-19TSV), HB Touchscreen (10HB-27HB)**

issued to

**Beetronics B.V.**

**Amsterdam, Netherlands**

is found to comply with

**DNV 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.**

### Location classes:

| Type                               | Temperature | Humidity | Vibration | EMC | Enclosure                                |
|------------------------------------|-------------|----------|-----------|-----|------------------------------------------|
| Monitor (7HD-27HD, 7VG-19VG)       | B           | B        | A         | B   | A / IP20                                 |
| Touchscreen (7TS-27TS, 8TSV-19TSV) | B           | B        | A         | B   | A / IP20,<br>B / IP65 (front panel only) |
| HB Touchscreen (10HB-27HB)         | B           | B        | A         | B   | A / IP20,<br>B / IP65 (front panel only) |

Issued at **Høvik** on **2025-12-04**

This Certificate is valid until **2030-12-03**.

for **DNV**

DNV local unit: **Netherlands CMC**

Approval Engineer: **Sonali Marathe**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

## Product description

Display monitors and touchscreens in metallic casing, comprising of models as listed below.

Model number identification:

**15**   **TS**   **7**   **M**   **/U1**  
**#1**   **#2**   **#3**   **#4**   **#5**

**#1:** Display Size – Indicates the diagonal size of the monitor in inches.

**#2:** Screen Type – Defines the type of screen:

HD – 16:9 or 16:10 monitor  
VG – 4:3 or 5:4 monitor  
TS – 16:9 or 16:10 touchscreen  
TSV – 4:3 or 5:4 touchscreen  
HB – 16:9 or 16:10 high brightness touchscreen

**#3:** Series Version – Identifies the product line:

7 Series – all standard models  
9 Series – only HB models

**#4:** Casing Type – Displays with M have a metal casing.

**#5:** PCB Version – Shown as /U1 if using the U1 PCB board with USB-C.

*If /U1 is not present, the display uses the 7 Series PCB board with USB-A.*

| Product Line                                              | Model Number | Compass safe distance |                  |
|-----------------------------------------------------------|--------------|-----------------------|------------------|
|                                                           |              | Standard compass      | Steering compass |
| Monitor<br>(HD and VG)<br><br>Firmware: BEEV3-V56-0.4-1.0 | 7HD7M        | 350 mm                | 300 mm           |
|                                                           | 8HD7M        | 850 mm                | 800 mm           |
|                                                           | 9HD7M        | 850 mm                | 800 mm           |
|                                                           | 10HD7M       | 850 mm                | 800 mm           |
|                                                           | 12HD7M       | 850 mm                | 800 mm           |
|                                                           | 13HD7M       | 850 mm                | 800 mm           |
|                                                           | 15HD7M       | 850 mm                | 800 mm           |
|                                                           | 17HD7M       | 850 mm                | 800 mm           |
|                                                           | 19HD7M       | 850 mm                | 800 mm           |
|                                                           | 22HD7M       | 850 mm                | 800 mm           |
|                                                           | 24HD7M       | 850 mm                | 800 mm           |
|                                                           | 27HD7M       | 850 mm                | 800 mm           |
|                                                           | 7VG7M        | 350 mm                | 300 mm           |
|                                                           | 8VG7M        | 850 mm                | 800 mm           |
|                                                           | 10VG7M       | 850 mm                | 800 mm           |
|                                                           | 12VG7M       | 850 mm                | 800 mm           |
|                                                           | 15VG7M       | 850 mm                | 800 mm           |
|                                                           | 17VG7M       | 850 mm                | 800 mm           |
|                                                           | 19VG7M       | 850 mm                | 800 mm           |
| Touchscreen<br>(TS and TSV)<br><br>Firmware: 2.6.3        | 7TS7M/U1     | 650 mm                | 300 mm           |
|                                                           | 10TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 12TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 13TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 15TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 17TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 19TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 22TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 24TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 27TS7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 8TSV7M/U1    | 1000 mm               | 750 mm           |
|                                                           | 10TSV7M/U1   | 1000 mm               | 750 mm           |
|                                                           | 12TSV7M/U1   | 1000 mm               | 750 mm           |
|                                                           | 15TSV7M/U1   | 1000 mm               | 750 mm           |
|                                                           | 17TSV7M/U1   | 1000 mm               | 750 mm           |
|                                                           | 19TSV7M/U1   | 1000 mm               | 750 mm           |

| Product Line                                               | Model Number | Compass safe distance |                  |
|------------------------------------------------------------|--------------|-----------------------|------------------|
|                                                            |              | Standard compass      | Steering compass |
| HB (High Brightness)<br>Touchscreen<br><br>Firmware: 2.6.3 | 10HB9M       | 500 mm                | 400 mm           |
|                                                            | 10HB9M/U1    | 500 mm                | 400 mm           |
|                                                            | 12HB9M       | 900 mm                | 700 mm           |
|                                                            | 12HB9M/U1    | 900 mm                | 700 mm           |
|                                                            | 15HB9M       | 900 mm                | 700 mm           |
|                                                            | 15HB9M/U1    | 900 mm                | 700 mm           |
|                                                            | 15HBV9M      | 900 mm                | 700 mm           |
|                                                            | 17HB9M       | 900 mm                | 700 mm           |
|                                                            | 17HB9M/U1    | 900 mm                | 700 mm           |
|                                                            | 19HB9M       | 900 mm                | 700 mm           |
|                                                            | 19HB9M/U1    | 900 mm                | 700 mm           |
|                                                            | 22HB9M       | 900 mm                | 700 mm           |
|                                                            | 22HB9M/U1    | 900 mm                | 700 mm           |
|                                                            | 24HB9M       | 900 mm                | 700 mm           |
|                                                            | 24HB9M/U1    | 900 mm                | 700 mm           |
|                                                            | 27HB9M       | 900 mm                | 700 mm           |
|                                                            | 27HB9M/U1    | 900 mm                | 700 mm           |

### Place of manufacture

DNV ID: 10778878

### Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

### Application/Limitation

Monitors are approved to use with the AC power adapter model FJ-SW2017S2403000 or galvanically isolated power adapter of approved type.

### Type Approval documentation

### Tests carried out

Applicable tests according to Class Guideline DNV-CG-0339, August 2021.

Special purpose test of 'Acoustic noise and signals' and the 'Compass safe distance' were measured according to sections 11.1 and 11.2 of IEC 60945, 4th edition (2002).

### Marking of product

- manufacturer name
- model name
- serial number
- power supply ratings

### 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 the certificate.

END OF CERTIFICATE