

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
Marine Bridge System Displays

Issued to

WinMate INC.
New Taipei City, Taiwan

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

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 B/C**

* Low temperature tested to -15°C
** Enclosure class specified on page 2

This Certificate is valid until **2021-07-03**.

Issued at **Hamburg** on **2016-07-04**

DNV GL local station: **Kaohsiung**

Approval Engineer: **Andrea Grün**

for **DNV GL**

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.

Job Id: **262.1-003004-5**
Certificate No: **TAA00000JH**

Product description

Winmate INC. Marine TFT LCD Bridge System Displays as listed below:

Model	Description	Enclosure class
R10L210-MRXXYY	10.4 inch Marine Bridge System Display	C / IP66 (front panel)
R15L600-MRXXYY	15.0 inch Marine Bridge System Display	C / IP66 (front panel)
R15L600-MRXXYYPT	15.0 inch Marine Bridge System Display	C / IP66 (front panel)
R19L300-MRXXYY	19.0 inch Marine Bridge System Display	C / IP66 (front panel)
R23L100-MRXXYY	23.1 inch Marine Bridge System Display	B / IP44 (front panel)

XX – Panel model
YY – Add on function
PT – Portrait mode

The type approved configuration is described by the respective data sheets.

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

Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test is to be performed at the manufacturer of the application system according to an approved test program before the system is shipped to the yard. After the certification the clause for application software control will be put into force.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV GL for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Compass safe distances for all models:

Standard Compass Safe Distance: 130 cm, Steering Compass Safe Distance: 80 cm

Type Approval documentation

Users Manual:	Version 11.1 dated 2006-08-23	
Data Sheets:	Model # R10L210-MRM2	rev. 2007-11-29
	Model # R15L600-MRM2	rev. 2007-11-29
	Model # R15L600-MRM2PT	rev. 2009-07-06
	Model # R19L300MRA1	rev. 2007-11-29
	Model # R23L100-MRS1	rev. 2007-11-29
Statements:	SGS Reliability Test Supplement Statement Temperature,	2007-12-25
	SGS Reliability Test Supplement Statement Vibration,	2008-02-12
	QuieTek Radiated Emission Test Supplement Statement	2007-12-26

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Test Reports: 10.4": SGS # HC70038B/2007, HC70043B/2007, HC70048B/2007, HCN0004C/2007, HC70058B/2007, HCN0005A/2007, HC70068C/2007, HC70073C/2007, HC70078B/2007, HC80190B/2007, HC70083C/2007, HC70088C/2007, HC80191B/2007
15.0": SGS # HC70039C/2007, HC70044A/2007, HC70049C/2007, HCN0006A/2007, HC70059C/2007, HCN0007A/2007, HC70069B/2007, HC70074B/2007, HC70079B/2007, HC80230B/2007, HC80231B/2007, HC70084C/2007, HC70089C/2007
19.0": SGS # HC70041C/2007, HC70046A/2007, HC70051B/2007, HCN0008A/2007, HC70061C/2007, HCN0009A/2007, HC70071B/2007, HC70076B/2007, HC80081C/2007, HC80197B/2007, HC70086C/2007, HC70091C/2007, HC80199B/2007
23.1": SGS # HC70042C/2007, HC70047A/2007, HC70052B/2007, HCN0010A/2007, HC70062B/2007, HCN0011A/2007, HC70072C/2007, HC70077B/2007, HC70082A/2007, HC80233B/2007, HC70087C/2007, HC70092A/2007, HC80235B/2007, HCD0234/2007
All models:
QuieTek # SN0705027 dated 2007-08-20,
QuieTek # 075L071-MISC dated 2007-11-09,
DNV 2007-3378 Rev.01

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, November 2015, also covering IACS Unified Requirements E10 Rev.5.

Tested as protected equipment according to relevant parts of IEC 60945, 4th edition.

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
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Periodical assessment is to be performed at least every 2.5 year and at renewal of this certificate.

END OF CERTIFICATE