



Lloyd's
Register

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate supersedes certificate number 10/20024(E1) issued 17.05.2015 which is hereby cancelled.

This certificate is issued to:

PRODUCER	Bachmann Electronics GmbH Kreuzäckerweg 33 6800 Feldkirch Austria
DESCRIPTION	Control-, Operating and Web- Terminal
TYPE	OT115/R/② * WT205/①/② *
	①: Display Resolution (standard 5.7" QVGA 320x240) OT115/R/② (standard 4.2" LCD 240x64) M = Marine 5.7" VGA(640x480) Version with internal buzzer and potential free relay output. V = 5.7" VGA(640x480) Version without internal buzzer and without potential free relay output. W = 5.7" QVGA (320x240) Version without internal buzzer and Without potential free relay output.
	②: Bachmann Touch Front Panel BE1 = small Panel (without keyboard) BE2 = large Panel (with keyboard) xxx = customer specific front panel

Certificate No.	10/20024(E2)
Issue Date	20 July 2016
Expiry Date	17 June 2020
Sheet	1 of 3



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TYPE (continued)

OT12xx *	Description
<i>Bachmann LINUX V1.30R</i> <u>Technical Data</u>	- ARM®Cortex®-A9 i.MX6Dual 2x 1.2 GHz - 1x or 2x Ethernet 10/100Mbit/s - 2x USB 2.0 - 4GB storage and 1GB or 2GB DDR3 RAM - 1x CFast-Slot (optional) - 1x rechargeable battery for RTC (optional)
07	- 7" VGA (800x480); resistive touch
10	- 10.1" WVGA (1280x800); capacitive touch
15	- 15.6" Full-HD (1920x1080); capacitive touch

OT13xx *	Description
<i>M-VIS: WINDOWS 7:</i> Variant Ce1G1	- Intel Celeron 847E (2x1.1GHz) - 2GB DDR3 RAM - 60GB SSD - 2x Ethernet 10/100/1000Mbit/s - 4x USB 2.0 - 1x COM 1 RS232C - 1x CFast ≥ 4GB
Variant CO1G7	- Intel Core i7 3517UE (2x1.7GHz) - 4GB DDR3 RAM - 60GB SSD - 2x Ethernet 10/100/1000Mbit/s - 4x USB 2.0 - 1x COM 1 RS232C - 1x CFast ≥ 4GB
12	- 12.1" SVGA (800x600); resistive touch
15	- 15" XGA (1024x768); resistive touch - 15.6" Full-HD (1920x1080); capacitive touch

APPLICATION

Marine, Offshore and Industrial applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4, as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2002. The Operating Terminals OT12xx and OT13xx can be used in Marine, Offshore and Industrial applications and are satisfying the environmental categories ENV1, ENV2, ENV3 and ENV5, as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2015.

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ADDITIONAL TESTS

Flame Retardant Test according to IEC60092-101 and IEC60695-11-5
 Low Temperature Test (-25°C/16hrs)
 Compass Safe Distance Test (Standard=50cm; Steering=50cm)
 Ingress Protection Rating for OT12xx and OT13xx
 (front IP65 and rear IP20)

OTHER CONDITIONS

Type approval of products according to Test Specification No.1 is essentially a Type Approval of hardware. Systems comprising the components described above are subject to a separate plan appraisal according to applicable Rules and Regulations when installed on LR classed vessels.
 The equipment marked with * exceeds the maximum conducted emission level for bridge and deck zones. If the units are to be installed within these areas, a Common Mode Filter with minimum 2x 1.8mH is to be installed. For selection of the choke's rated current see Manufacturer's Specification.

The Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

The Design Appraisal Document No. HTS/ETS 33935-16 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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