

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 is issued to:

PRODUCER Böning Automationstechnologie GmbH & Co. KG

> Am Steenöver 4 27777 Ganderkesee

Germany

DESCRIPTION IAMC serves as a control and display platform for processing and

visualizing

TYPE AHD-IAMCS

> Device description Designation AHD 1110 F (3) 10" Display with foil front 10" Display with glass front AHD 1110 G (3) 15" Display with foil front AHD 1115 F AHD 1115 G 15" Display with glass front 19" Display with foil front AHD 1119 F AHD 1119 G 19" Display with glass front

AHD 1200⁽³⁾ Embedded PC

15" Panel PCs with foil front AHD 1215 F 15" Panel PCs with glass front AHD 1215 G AHD 1219 F 19" Panel PCs with foil front AHD 1219 G 19" Panel PCs with glass front AHD 1224 G 24" Panel PCs with glass front AHD-DPU9(3) Data processing station AHD 1310 F (3) 10" Panel PC with foil front 10" Panel PC with glass front AHD 1310 G(3)

AHD 406-2(3) Cabin duty alarm AHD 570 5,7" LCD colour display

Certificate No. 16/20052

Issue Date 03 June 2016

Expiry Date 02 June 2021

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Designation Device description AHD 651⁽²⁾ 6,5" Operating panel

AHD 880 E⁽²⁾ 8,8" Operating panel with engine

monitoring

AHD 880 G⁽²⁾ 8,8" Operating panel with glass front AHD 880 TC ⁽²⁾ 8,8" Operating panel with foil front

AHD 882⁽¹⁾ Central unit

AHD-DPS 02 A07 (3), (4) Extension module for navigation and signal

light control and monitoring

AHD-DPS 02 BS (3) Operation and indicator module for

console

AHD-DPS 02 E07 ⁽⁴⁾ Emergency switch units with 7 switches AHD-DPS 02 E14 ⁽⁴⁾ Emergency switch units with 14 switches Basic module for navigation and signal

light control and monitoring

AHD-PS 15⁽¹⁾ Data station for 15 binary inputs

AHD-PS 15B⁽¹⁾ Data station with duty selection function

AHD-PS 30⁽¹⁾ Data station for 30 binary inputs AHD-PS 47⁽¹⁾ Data station for 47 binary inputs

AHD R 101^{(1), (3)} Microprocessor controlled relay station AHD-SAS 15^{(1), (3)} Data station for analog and binary sensors

AHD-UCC⁽³⁾ Repeater

AHD-UIC Compact protocol converter AHD-WAOP K Personnel alarm system

AHD-WAOP BNWAS

AHD-DRM T

AHD-GAP General alarm unit with fire alarm function

AHD 570 DP 5,7" LCD colour display

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AHD-DRM R Control unit for colour displays and monitors with rotary push drive

Control unit for colour displays and

monitors with trackball

APPLICATION

Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV3, ENV4 (components marked with ⁽¹⁾) and ENV5 (components marked with ⁽²⁾, front only) as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – July 2015.

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ADDITIONAL TESTS Low temperature test (-25°C/16hrs) components marked with (3)

STANDARD Manufacturer's specification

RATINGS Power supply: 24V DC

Power supply: (4) = 24V DC; 115V AC and 230V AC

OTHER CONDITIONS The complete installation is subject to a separate plan appraisal

according to applicable Rules and Regulations when installed on LR

classed vessels.

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 33680-16 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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