DNV

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
Control Panels CP600 series

Issued to
ABB AG
Heidelberg, Baden-Württemberg, **Germany**

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.

Temperature	**A**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**C / IP66 (front), IP20(rear)**

Issued at **Hamburg** on **2022-01-05**

This Certificate is valid until **2023-05-03**.

DNV local station: **Augsburg**

Approval Engineer: **Jens Dietrich**

for **DNV**

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Joannis Papanuskas
Head of Section

Product description

CP 600 Series are HMI panels, comprising the following models:

CP620-*; CP620-*-WEB
- 4.3" TFT color display
- 480x272 pixel resolution, 64K colors
- 2 Ethernet ports with switch function
- Standard Compass Safe Distance: 35 cm
- Steering Compass Safe Distance: 20 cm

CP630-*; CP630-*-WEB
- 5.7" TFT color display, LED backlight
- 320x240 pixel (QVGA) resolution, 64K colors
- 2 Ethernet ports with switch function
- Standard Compass Safe Distance: 35 cm
- Steering Compass Safe Distance: 20 cm

CP635-*; CP635-*-WEB
- 7" TFT color display, LED backlight
- 800x480 pixel (WVGA) resolution, 64K colors
- 2 Ethernet ports with switch function
- Standard Compass Safe Distance: 45 cm
- Steering Compass Safe Distance: 25 cm

CP651-*; CP651-WEB
 - 10"4 TFT color display, LED backlight
- 800x600 pixel resolution (SVGA), 64K colors
- 2 Ethernet ports with switch function
- Standard Compass Safe Distance: 60 cm
- Steering Compass Safe Distance: 40 cm

CP661-*; CP661-*-WEB
 - 12"1 TFT color display, LED backlight
- 800x600 pixel resolution (SVGA), 64K colors
- 2 Ethernet ports with switch function
- Standard Compass Safe Distance: 25 cm
- Steering Compass Safe Distance: 15 cm

CP665-*; CP665-*-WEB
- 13"3 TFT color display, LED backlight
- 1280x800 pixel resolution (WXGA) 64K colors
- 2 Ethernet ports with switch function
- Standard Compass Safe Distance: 50 cm
- Steering Compass Safe Distance: 15 cm

CP676-*; CP676-*-WEB
 - 15" TFT color display, LED backlight
- 1024x768 pixel (XGA) resolution, 64K colors
- 2 Ethernet ports with switch function
- Standard Compass Safe Distance: 55 cm
- Steering Compass Safe Distance: 30 cm

* may be followed be suffixes B (Black), G (Grey), W (White) etc. + some specific manufacturer colors.
Power supply voltage: 24 VDC. Operating System: Microsoft Windows CE 6.0

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 Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate
If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the

certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. 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 for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Tests carried out
Applicable tests according to DNV Class Guideline CG-0339, August 2021.
For the bridge mounted components the 'Compass safe distance' was measured according to section 11.2 of IEC 60945 4th edition (2002).

Marking of product
-Model name and part number
-ywwy – week and year of production
-Unique serial no.
-Version number of the product
-Version number of the microbrowser (only valid for CP6xx-WEB)
-Power supply: 24 VDC
-Compass safe distance

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, after 3.5 years and at renewal of this certificate.

END OF CERTIFICATE