EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRA000001N
Revision No:
1

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

ABB Automation Products GmbH
Heidelberg, Baden-Württemberg, Germany

for
Monitors, Terminals

with type designation(s)
CP604, CP607, CP610

The product is found to comply with
EU RO Mutual Recognition Technical Requirements for Display Monitors, Video Screens, Terminals
EU RO Mutual Recognition Technical Requirements for Computers and Programmable Logic Controllers

Intended service
Displays for control, monitoring, alarm, and safety functions subject to classification requirements.
System context: Application of the control, monitoring, alarm, and safety systems are subject for approval of the individual RO classing the vessel.

Temperature [°C]:	**5°C and 55°C**
Vibration:	**±1 mm / 0.7 g**
EMC:	**All locations including bridge and open deck**
IP Code:	**IP66 (front) / IP20 (rear)**

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2023-03-21**.

Issued at **Høvik** on **2018-12-19**

for **DNV GL**

DNV GL local station: **Augsburg**

Approval Engineer: **Nils Jarem**

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Jan Tore Grimsrud
Head of Section

Product description

Model name	Description	Standard compass safe distance	Steering compass safe distance
CP604(-x)	4.3" TFT color display, resolution 480x272 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 300 MHz 1 Ethernet port 1 USB (V2.0) port 1 RS-232/RS-485/RS-422	35 cm	20 cm
CP607(-x)	7" TFT color display, resolution 800x480 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 300 MHz 1 Ethernet port 1 USB (V2.0) port 1 RS-232/RS-485/RS-422	50 cm	40 cm
CP610(-x)	10.1" TFT color display, resolution 1024x600 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 1 GHz 1 Ethernet port 1 USB (V2.0) port 1 RS-232/RS-485/RS-422	35 cm	25 cm

Manufactured by
EXOR International S.p.A.
NEXCOM (Taiwan)

Application/Limitation
The Type Approval covers all hardware listed under Product description. The displays are intended for use in alarm and monitoring systems subject to classification.

All monitors are available with touch screen functionality, which is beyond the scope of this approval. The touch screen hardware has been verified according to the DNV GL Class Programme for EU-RO-MR, but any use of touch functionality in classed applications needs to be verified through functional testing.

The dimming function is programmable and needs to be verified through functional testing when used in a system subject to classification.

Type Approval documentation
Title			Drw No	Rev
eSMART	10	Vibration	V17089301	-
eSMART	10	Shock	V15123901	
eSMART	10	Safety	S17098901	-
eSMART	10	Compass 35/25cm	R17106801	-
eSMART	10	EMC	R17090801	-
eSMART	10	Climatic	E17099501	-
eSMART	07	Vibration	V17096601	-
eSMART	07	Shock	V15123801	
eSMART	07	Safety	S17099401	-
eSMART	07	Compass 50/40cm	R17107001	-
eSMART	07	EMC	R17090601	-
eSMART	07	Climatic	E17100001	-

Title			Drw No	Rev
eSMART	04	Vibration	V17096501	-
eSMART	04	Shock	V15123701	
eSMART	04	Safety	S17099301	-
eSMART	04	Compass 35/20cm	R17107201	-
eSMART	04	EMC	R17086801	-
eSMART	04	Climatic	E17099901	-
Component mounting plan BE15A			BE15A	-
Block diagram BE15A			BE15A	11.16
Component mounting plan ECO3A			ECO3A	-
Schematic ECO3A			-	-
Component mounting plan ECO1A			ECO1A	-
Schematic ECO1A			-	-
Component mounting plan ECO1A1			ECO1A1	-
Schematic ECO1A1			-	-
Component mounting plan ECO2A			ECO2A	-
Schematic ECO2A			-	-
Schematic ECO2A1			-	-
Component mounting plan ECO2A1			ECO2A1	-
eSMART10 frame			DIS4794	02
eSMART04 frame			DIS4793	02
eSMART07 frame			DIS4679	02
eSMART10 cover			DIS4805	02
eSMART04 cover			DIS4804	02
eSMART07 cover			DIS4678	02
Installation Instructions CP604, CP607, CP610			3ADR059054M6803	-
Operating Instructions CP604, CP607, CP610			3ADR059055M0201	-
Labels CP604, CP607, CP610			-	-
EU RO MR TYPE APPROVAL PQA SCHEME PERIODICAL ASSESSMENT CHECKLIST (EXOR)			90.05a	2017-08-09
EU RO MR TYPE APPROVAL PQA SCHEME PERIODICAL ASSESSMENT CHECKLIST (ABB)			90.05a	2018-03-22

Marking of product

Model name and part number: As listed under Product description
Serial number: Unique for each delivered item

Other Conditions

The units have been verified for compliance with EU Mutual Recognition Technical Requirements for "Display Monitors, Video Screens, Terminals" version 0.3, dated 2016-04-01.
EU Mutual Recognition Technical Requirements for "Computers and programmable logic controllers (PLC)" version 0.3, dated 2016-04-01 have additionally been verified.

Environmental test parameters
Temperature: 5°C and 55°C
Vibration: ±1 mm / 0.7 g
EMC: All locations including bridge and open deck
Enclosure: IP20 standalone, IP66 when sealed to console (IP ratings according to IEC 60529)

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 annually and at renewal of this certificate.

END OF CERTIFICATE