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

Certificate No:
MRA0000057

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to
Yaskawa Europe GmbH
Hattersheim am Main, Germany

for
Monitors, Terminals

with type designation(s)
smartPanel TP304-SM, smartPanel TP404-SM, smartPanel TP307-SM, smartPanel TP407-SM, smartPanel TP310-SM, smartPanel TP410-SM

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]:	**0°C and 50°C**
Vibration:	**±1mm / 0,7g**
EMC:	**All locations including bridge and open deck**
IP Code:	**IP22 standalone, IP66 when sealed to console (IP ratings according to IEC 60529)**

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 **2027-08-08**.

Issued at **Hamburg** on **2025-04-04**

DNV local unit: **Augsburg**

Approval Engineer: **Holger Jansen**

for **DNV**
Digitally signed by: Dariusz Lesniewski
Location: DNV SE, Germany

Product description

Model name	Description	Standard compass safe distance	Steering compass safe distance
smartPanel TP404-SM Type: H41-A1A41-0	4.3" TFT color display, resolution 480x272 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 1 GHz Operating System: LINUX 1 Ethernet port 1 USB (V2.0) port 1 RS-232/RS-485/RS-422	35 cm	20 cm
smartPanel TP304-SM Type: H41-71A41-0	4.3" TFT color display, resolution 480x272 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 1 GHz Operating System: Windows Embedded Compact 7 1 Ethernet port 1 USB (V2.0) port 1 RS-232/RS-485/RS-422	35 cm	20 cm
smartPanel TP407-SM Type: H71-A1A41-0	7" TFT color display, resolution 800 x480 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 1 GHz Operating System: LINUX 1 Ethernet port 1 USB (V2.0) port 1 RS-232/RS-485/RS-422	55 cm	35 cm
smartPanel TP307-SM Type: H71-71A41-0	7" TFT color display, resolution 800x480 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 1 GHz Operating System: Windows Embedded Compact 7 1 Ethernet port 1 USB (V2.0) port 1 RS-232/RS-485/RS-422	55 cm	35 cm
smartPanel TP410-SM Type: HA1-A1A41-0	10.1" TFT color display, resolution 1024x600 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 1 GHz Operating System: LINUX 1 Ethernet port 1 USB (V2.0) port 1 RS-232/RS-485/RS-422	35 cm	25 cm
smartPanel TP310-SM Type: HA1-71A41-0	10.1" TFT color display, resolution 1024x600 pixel, 64K colors. Resistive touchscreen, Dimmable LED backlight ARM Cortex A8 1 GHz Operating System: Windows Embedded Compact 7 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.

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 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

Name	Number	Date
smartPanel TP304-SM	H41-71A41-0	2022-05-10
smartPanel TP404-SM	H41-A1A41-0	2024-11-06
smartPanel TP307-SM	H71-71A41-0	2022-05-10
smartPanel TP407-SM	H71-A1A41-0	2024-11-06
smartPanel TP310-SM	HA1-71A41-0	2022-05-10
smartPanel TP410-SM	HA1-A1A41-0	2024-11-06
Declaration of IDT_11_ YASKAWA	-	2024-07-19
Test reports and drawings	DNV Job ID: 262.4-000091	-
EU RO MR Type Approval PQA Scheme Periodical Assessment Checklist	90.05a	2025-03-26

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: 0°C and 50°C
Vibration: ±1mm / 0,7g
EMC: All locations including bridge and open deck
Enclosure: IP22 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 typeapproved 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 CERTIFICAT

Generic Statement for EU RO MR Type Approval Certificate

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- American Bureau of Shipping (ABS);
- Bureau Veritas (BV);
- China Classification Society (CCS);
- Croatian Register of Shipping (CRS);
- DNV;
- Indian Register of Shipping (IRS);
- Korean Register (KR);
- Lloyd's Register Group Ltd. (LR);
- Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);
- Polish Register of Shipping (PRS);
- RINA Services S.p.A. (RINA);
- Russian Maritime Register of Shipping (RS).

The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 - recital (25)).