



Certificate No:  
**TAA000039B**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

That the **Peripheral Equipment**

with type designation(s)  
**u-remote I/O-System, u-control I/O-System**

Issued to

**Weidmüller Interface GmbH & Co. KG**  
**Detmold, 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.**

### Location classes:

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>B</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>A</b>

Issued at **Hamburg** on **2023-07-31**

This Certificate is valid until **2028-07-30**.

DNV local unit: **Essen**

for **DNV**

Approval Engineer: **Dariusz Lesniewski**

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**Joannis Papanuskas**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

The modular u-remote system supports common fieldbus systems and conforms to IEC 61131-2. Up to 64 active I/O modules can be combined in a u-remote/u-control station.

The following components belong to the u-remote product series:

- Programmable fieldbus controller (u-control)
- Fieldbus coupler (gateway) (u-remote)
- Active I/O modules - Passive I/O modules
- Functional safety modules
- Mechanical fixing elements (end bracket, end plate)

### CPUs / Fieldbus Controllers

UC20-SL2000-EC  
UC20-SL2000-EC-CAN  
UC20-SL2000-OLAC-EC  
UC20-SL2000-OLAC-EC-CAN  
UC20-WL2000-AC  
UC20-WL2000-AC-CAN  
UC20-WL2000-IOT

### Digital Input Modules

UR20-4DI-P  
UR20-4DI-P-3W  
UR20-8DI-P-2W  
UR20-8DI-P-3W  
UR20-8DI-P-3W-HD  
UR20-16DI-P  
UR20-16DI-P-PLC-INT  
UR20-2DI-P-TS  
UR20-4DI-P-TS  
UR20-4DI-P-TS-V2  
UR20-4DI-N  
UR20-8DI-N-3W  
UR20-16DI-N  
UR20-16DI-N-PLC-INT  
UR20-4DI-2W-230V-AC  
UR20-8DI-ISO-2W

### Digital Output Modules

UR20-4DO-P  
UR20-4DO-P-2A  
UR20-4DO-PN-2A  
UR20-8DO-P  
UR20-8DO-P-2W-HD  
UR20-16DO-P  
UR20-16DO-P-PLC-INT  
UR20-4DO-N  
UR20-4DO-N-2A  
UR20-8DO-N  
UR20-16DO-N  
UR20-16DO-N-PLC-INT  
UR20-4DO-ISO-4A  
UR20-4RO-SSR-255  
UR20-4RO-CO-255

### Digital Input and Output Modules

UR20-8DIO-P-3W-DIAG

### Digital Pulse Width Modulation Modules

UR20-2PWM-PN-0.5A  
UR20-2PWM-PN-2A

### Analog Input Modules

UR20-2AI-UI-16  
UR20-2AI-UI-16-DIAG  
UR20-4AI-UI-16

UR20-4AI-UI-16-DIAG  
UR20-4AI-UI-DIF-16-DIAG  
UR20-4AI-UI-DIF-32-DIAG  
UR20-4AI-UI-ISO-16-DIAG  
UR20-4AI-UI-16-HD  
UR20-4AI-UI-16-DIAG-HD  
UR20-4AI-UI-12  
UR20-8AI-I-16-HD  
UR20-8AI-I-16-DIAG-HD  
UR20-8AI-I-PLC-INT  
UR20-4AI-RTD-DIAG  
UR20-4AI-RTD-HP-DIAG  
UR20-4AI-TC-DIAG  
UR20-4AI-R-HS-16-DIAG  
UR20-4AI-I-HART-16-DIAG  
UR20-8AI-RTD-DIAG-2W

#### **Analog Output Modules**

UR20-2AO-UI-16  
UR20-2AO-UI-16-DIAG  
UR20-2AO-UI-ISO-16-DIAG  
UR20-4AO-UI-16  
UR20-4AO-UI-16-M  
UR20-4AO-UI-16-DIAG  
UR20-4AO-UI-16-M-DIAG

#### **Digital Counter Modules**

UR20-1CNT-100-1DO  
UR20-2CNT-100  
UR20-1CNT-500  
UR20-2FCNT-100

#### **Communication Modules**

UR20-1SSI  
UR20-1COM-232-485-422  
UR20-1COM-232-485-422-V2  
UR20-1COM-SAI-PRO  
UR20-1COM-CANOPEN

#### **Safe I/O Modules**

UR20-4DI-4DO-PN-FSOE-V2  
UR20-8DI-PN-FSOE-V2  
UR20-4DI-4DO-PN-FSPS-V2 <sup>(1)</sup>  
UR20-8DI-PN-FSPS-V2 <sup>(1)</sup>

#### **Fieldbus Coupler**

UR20-FBC-EC  
UR20-FBC-CAN  
UR20-FBC-CC  
UR20-FBC-CC-TSN  
UR20-FBC-EIP  
UR20-FBC-EIP-V2  
UR20-FBC-IEC61162-450  
UR20-FBC-MOD-TCP-V2  
UR20-FBC-PB-DP-V2  
UR20-FBC-PL  
UR20-FBC-PN-IRT-V2

#### **Diverse**

UR20-PF-I  
UR20-PF-O  
UR20-ES  
UR20-16AUX-I  
UR20-16AUX-O  
UR20-16AUX-FE

UR20-16AUX-GND-I  
UR20-16AUX-GND-O

Compass Safe Distance acc. to IEC 60945 (all modules):

Standard compass:	0,65 m
Steering compass:	0,45 m

<sup>(1)</sup>The functional safety modules UR20-...-FSPS comply with IEC 61131-6, criterion "FS". An operator acknowledgement (OP\_ACK) of the safety PLC may be necessary to meet DNV-CG-0339:2021, Sec. 3-14, criterion "B".

Flammability rating UL94: V0  
Type of connection: Push In

## 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 DNVRU SHIP Pt.4 Ch.9 Sec. 1.

### 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.

## Application/Limitation

Corrosion test (salt mist) was not carried out. Compliance with the IEC 60945 in this regard to be considered case-by-case.

## Type Approval documentation

### Tests carried out

Applicable tests according to Class Guideline DNV-CG-0339, August 2021.  
Applicable tests for protected equipment according to IEC 60945, 4th edition (2002).  
(Application/Limitation to be observed)

### Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

### 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 and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.



Job Id: **262.1-035260-1**  
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END OF CERTIFICATE