



Marine & Offshore

Certificate number: 46990/A1 BV

File number: AP4768

Product code: 4501H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Weidmüller Interface GmbH & Co. KG

Detmold - GERMANY

for the type of product

PROGRAMMABLE LOGIC CONTROL UNITS

u-control programmable logic controllers / UC20-... series

u-remote I/O-System / UR20-... series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 33B

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 30 May 2023

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 08 Apr 2021,

Dirk Hoepfner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 5 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **u-control** and **u-remote** series of automation products are used to assemble u-control and u-remote control stations.

A u-control station will consist of an u-control controller connected via the u-remote bus to active and passive u-remote I/O modules installed on a DIN-rail. The **UC20-WL2000** controllers are preinstalled with the u-create web or u-create IoT engineering suites for programming application programs, configuration and parameterization via a web browser. The **UC20-SL2000** controllers are programmed, configured and parameterized with the separate u-create studio suite.

The modular u-remote I/O system supports common fieldbus systems. Interconnected u-remote stations with bus coupler and connected modules are intended for a decentralised control or monitoring systems.

The **UR20-** series are DIN rail mounted and comprises of the following modules:

Fieldbus couplers

Order no.	Model	Description	SVN	HVN
1334890000	UR20-FBC-CAN	CANopen	01.01.xx	01.03.xx
1334940000	UR20-FBC-PL	Ethernet POWERLINK	01.00.xx	01.03.xx
1334910000	UR20-FBC-EC	EtherCAT	01.01.xx	02.02.xx
2625010000	UR20-FBC-CC	CC-Link	01.00.xx	01.00.xx
2680260000	UR20-FBC-CC-TSN	CC-Link	01.00.xx	01.01.xx
2476450000	UR20-FBC-MOD-TCP-V2	Modbus TCP	02.08.xx	01.05.xx
2661310000	UR20-FBC-IEC61162-450	IEC 61162-450 (LWE)	01.00.xx	01.21.xx
1334920000	UR20-FBC-EIP	EtherNet/IP	02.02.xx	02.01.xx
1334880000	UR20-FBC-PN-IRT	PROFINET	01.03.xx	01.05.xx
2566380000	UR20-FBC-PN-IRT-V2	PROFINET IRT	01.08.xx	01.21.xx
1334870000	UR20-FBC-PB-DP	PROFIBUS	01.03.xx	01.13.xx

Digital I/O modules

Order no.	Model	Description	SVN	HVN
1460140000	UR20-2DI-P-TS	2 digital inputs, P-switching, time stamp function	-	01.01.xx
1315350000	UR20-4DI-N	4 digital inputs, N-switching	-	01.10.xx
1315170000	UR20-4DI-P	4 digital inputs, P-switching	-	01.10.xx
1460150000	UR20-4DI-P-TS	4 digital inputs, P-switching, time stamp function	-	01.01.xx
1550070000	UR20-4DI-2W-230V-AC	4 digital inputs, 230V	-	01.10.xx
2009360000	UR20-4DI-P-3W	4 digital inputs, P-switching	-	01.00.xx
1315370000	UR20-8DI-N-3W	8 digital inputs, N-switching	-	01.30.xx
1315180000	UR20-8DI-P-2W	8 digital inputs, P-switching	-	01.01.xx
1394400000	UR20-8DI-P-3W	8 digital inputs, P-switching	-	01.31.xx
1315190000	UR20-8DI-P-3W-HD	8 digital inputs, P-switching	-	01.00.xx
1315210000	UR20-16DI-P-PLC-INT	16 digital inputs, P-switching, PLC connector	-	01.02.xx
1315400000	UR20-16DI-N-PLC-INT	16 digital inputs, N-switching, PLC connector	-	01.11.xx
1315200000	UR20-16DI-P	16 digital inputs, P-switching	-	01.01.xx
1315390000	UR20-16DI-N	16 digital inputs, N-switching	-	01.01.xx
1315410000	UR20-4DO-N	4 digital outputs, N-switching	-	01.00.xx
1315420000	UR20-4DO-N-2A	4 digital outputs, N-switching	-	01.00.xx
1315220000	UR20-4DO-P	4 digital outputs, P-switching	-	01.20.xx
1315230000	UR20-4DO-P-2A	4 digital outputs, P-switching	-	01.11.xx
1509830000	UR20-8DO-P-2W-HD	8 digital outputs, P-switching	-	01.00.xx
1394420000	UR20-4DO-PN-2A	4 digital outputs, P or N-switching	-	01.02.xx
1315430000	UR20-8DO-N	8 digital outputs, N-switching	-	01.00.xx
1315240000	UR20-8DO-P	8 digital outputs, P-switching	-	01.01.xx
1315250000	UR20-16DO-P	16 digital outputs, P-switching	-	01.03.xx
1315440000	UR20-16DO-N	16 digital outputs, N-switching	-	01.10.xx
1315270000	UR20-16DO-P-PLC-INT	16 digital outputs, P-switching, PLC connector	-	01.13.xx
1315450000	UR20-16DO-N-PLC-INT	16 digital outputs, N-switching, PLC connector	-	01.01.xx

Analogue I/O modules

Order no.	Model	Description	SVN	HVN
1990070000	UR20-2AI-SG-24-DIAG	2 analogue inputs, 24 bit, diagnostic	01.00.xx	01.02.xx
2617520000	UR20-4AI-I-HART-16-DIAG	4 analogue inputs	01.00.xx	01.00.xx
1394390000	UR20-4AI-UI-12	4 analogue inputs,	01.00.xx	01.20.xx
1315620000	UR20-4AI-UI-16	4 analogue inputs, 16 bit	01.00.xx	01.20.xx
1315690000	UR20-4AI-UI-16-DIAG	4 analogue inputs, 16 bit, diagnostic	01.00.xx	01.20.xx
1993880000	UR20-4AI-UI-DIF-16-DIAG	4 analogue inputs, 16 bit, diagnostic	01.02.xx	01.20.xx
1315700000	UR20-4AI-RTD-DIAG	4 temperatur sensors, 16 bit, diagnostic	01.00.xx	01.02.xx
1315710000	UR20-4AI-TC-DIAG	4 temperatur sensors, 16 bit, diagnostic	01.00.xx	01.02.xx
2566960000	UR20-4AI-UI-ISO-16-DIAG	4 analogue inputs, 16bit	01.00.xx	00.41.xx
2001670000	UR20-4AI-R-HS-16-DIAG	4 analogue inputs, 16bit	01.00.xx	01.03.xx
2453880000	UR20-4AO-UI-16-M	4 analogue outputs, 16 bit	01.02.xx	01.00.xx
2453870000	UR20-4AO-UI-16-M-DIAG	4 analogue inputs, 16 bit, diagnostic	01.02.xx	01.00.xx

Auxiliary modules

Order no.	Model	Description	SVN	HVN
1334770000	UR20-16AUX-I	Potential distribution, 16 connections, input path	-	01.02.xx
1334780000	UR20-16AUX-O	Potential distribution, 16 connections, output path	-	01.02.xx
1334800000	UR20-16AUX-GND-I	Potential distribution, 16 connections, input path	-	01.02.xx
1334810000	UR20-16AUX-GND-O	Potential distribution, 16 connections, output path	-	01.02.xx
1334790000	UR20-16AUX-FE	Potential distribution, 16 connections, functional earth	-	01.02.xx
1315770000	UR20-ES	Empty slot as reserve module	-	01.00.xx

Digital modules

Order no.	Model	Description	SVN	HVN
1315550000	UR20-4RO-CO-255	4 digital relay outputs	-	01.03.xx
1315540000	UR20-4RO-SSR-255	4 digital outputs, semiconductor	-	01.10.xx
1315570000	UR20-1CNT-100-1DO	1 channel, counter, 100kHz	-	00.91.xx
1315580000	UR20-1CNT-500	1 channel, counter, 500kHz	-	01.00.xx
1315590000	UR20-2CNT-100	2 channel, counter, 100kHz	-	00.90.xx
1508080000	UR20-2FCNT-100	2 channel, frequency counter, 100kHz	-	00.91.xx

Interface modules

Order no.	Model	Description	SVN	HVN
1315750000	UR20-1COM-232-485-422	1 serial interface, 115200 bps	01.00.xx	01.06.xx
2489840000	UR20-1COM-CANOPEN	1 CANopen interface, 10~1000kbps	01.00.xx	01.00.xx
1508090000	UR20-1SSI	1 SSI encoder	-	01.00.xx

Power measurement module

Order no.	Model	Description	SVN	HVN
2007420000	UR20-3EM-230V-AC	6 channels for 3-phase measurements	01.00.xx	01.40.xx

Power feed modules

Order no.	Model	Description	SVN	HVN
1334710000	UR20-PF-I	For input current path	-	01.01.xx
1334740000	UR20-PF-O	For output current path	-	01.01.xx

The UC20- series of controllers comprises of the following modules:

Order no.	Model	Description	SVN	HVN
2674520000	UC20-SL2000-EC	Interfaces: 2xEthernet TCP/IP; 1xMicro USB Memory: 4GB Flash; EtherCAT field bus protocol	1.20.xx	01.23.xx
2674620000	UC20-SL2000-EC-CAN	Interfaces: 2xEthernet TCP/IP; 1xMicro USB; 1xCAN Memory: 4GB Flash; EtherCAT and CANopen field bus protocol	1.20.xx	01.23.xx
1334950000	UC20-WL2000-AC	Interfaces: 2xEthernet TCP/IP; 1xMicro USB Memory: 4GB Flash; Preinstalled u-create web	01.10.xx	01.23.xx
2564970000	UC20-WL2000-AC-CAN	Interfaces: 2x Ethernet TCP/IP; 1xMicro USB; 1xCAN Memory: 4GB Flash; Preinstalled u-create web	01.10.xx	01.23.xx

Order no.	Model	Description	SVN	HVN
1334990000	UC20-WL2000-IOT	Interfaces: 2xEthernet TCP/IP; 1xMicro USB Memory: 4GB Flash; Preinstalled u-create IoT	1.20.xx	01.23.xx
2708400000	UC20-SL2000-AC-EC	Interfaces: 2x Ethernet TCP/IP; 1xMicro USB Memory: 4GB Flash; EtherCAT field bus protocol Automation Control runtime licence	1.20.xx	01.23.xx
2655600000	UC20-SL2000-AC-EC-CAN	Interfaces: 2x Ethernet TCP/IP; 1x Micro USB Memory: 4GB Flash; EtherCAT and CANopen field bus protocol; Automation Control runtime licence	1.20.xx	01.23.xx
2638910000	UC20-SL2000-OLC-EC	Interfaces: 2xEthernet TCP/IP; 1xMicro USB Memory: 4GB Flash; EtherCAT field bus protocol Open Linux Control runtime licence	1.20.xx	01.23.xx
2655570000	UC20-SL2000-OLC-EC-CAN	Interfaces: 2xEthernet TCP/IP; 1xMicro USB Memory: 4GB Flash; EtherCAT and CANopen field bus protocol; Open Linux Control runtime licence	1.20.xx	01.23.xx
2638920000	UC20-SL2000-OLAC-EC	Interfaces: 2x Ethernet TCP/IP; 1xMicro USB Memory: 4GB Flash; EtherCAT fieldbus protocol Open Linux + Automation Control runtime licence	1.20.xx	01.23.xx
2655590000	UC20-SL2000-OLAC-EC-CAN	Interfaces: 2xEthernet TCP/IP; 1xMicro USB Memory: 4GB Flash; EtherCAT and CANopen field bus protocol; Open Linux + Automation Control runtime licence	1.20.xx	01.23.xx

HVN: Hardware Version Number

SVN: Software Version Number

Main characteristics:

Power supply: 24VDC nominal voltage
Degree of protection: IP20
Pollution degree: 2

2. DOCUMENTS AND DRAWINGS:

- Manual: 1432790000 dated 12/December 2017

For A1 version:

- Manuals: 260408000 revision 03/August 2020; 2604080000 revision 05/December 2020 DRAFT; 1432790000 revision 20/April 2020

- Datasheet: 2729220000/00 dated 10.2020

- Laboratory test plans: LPP 2020-02-25 revision 5 dated 2020-02-21; LPP 2020-01-28 revision 4 dated 2020-01-28;

- Assembly drawings: 3 66419 issue 00 dated 02.08.2018; 63785 issue 3 dated 08.04.2019; 63775 issue 2 dated 06.05.2020; 71161 issue 1 dated 03.02.2020; 70403 issue 1 dated 11.12.2019; 3 55117 issue 2 dated 16.10.2017; 70402 issue 1 dated 11.12.2019; 3 62340 issue 03 dated 25.09.2017; 69152 issue 0 dated 26.04.2019; 70337 issue 1 dated 27.03.2020; 69465 issue 4 dated 20.10.2020; 55131 issue 2 dated 30.03.2020;

- Schematics: 62655 issue 4 dated 05.05.2019; 63785 issue 4 dated 08.04.2019; 63775 issue 2 dated 06.05.2020; 66220 issue 0 dated 16.07.2019; 68005 issue 2 dated 12.07.2019; 62139 issue 2 dated 17.12.2019; 67904 issue 0 dated 28.05.2019; 3 62640 issue 2 dated 15.03.2016; 3 66975 issue 1 dated 04.07.2018; 69978 issue 1 dated 13.03.2020; 3 62640 issue 2 dated 30.01.2018; 3 59294 issue 2 dated 08.08.2016; 3 62639 issue 3 dated 05.09.2017; 3 61002 issue 2 dated 30.01.2018; 3 59294 issue 2 dated 08.08.2016;

- Part Lists: 62655 issue 4 dated 06.05.2019; 63785 issue 4 dated 08.04.2019; 63775 issue 2 dated 06.05.2020; 6620 issue 0 dated 16.07.2019; 68005 issue 2 dated 12.07.2019; 62139 issue 2 dated 17.12.2019; 67904 issue 0 dated 20.08.2018; 62640 issue 2 dated 15.03.2016; 4 66975 issue 1 dated 04.07.2018; 69978 issue 1 dated 13.03.2020; 62640 issue 2 dated 15.03.2018; 59294 issue 2 dated 14.03.2018; 62639 issue 3 dated 05.09.2017; 4 61002 issue 2 dated 30.01.2018

- Software Quality Plan:

Process description - Integrated Management System (IMS) Software Quality Assurance Process Nr.: P_C12_132_PD version 01 dated 04/09/18;

3. TEST REPORTS:

Weidmüller:

- LAB20808E dated 2017-01-04; LAB20807E dated 2017-01-04; LAB20772E dated 2016-12-21; LAB21033E dated 2017-05-09; LAB20841E dated 2017-04-06; LAB21232E dated 2017-07-12; LAB21221E dated 2017-08-22; LAB21222E dated 2017-08-22; LAB21507E dated 2018-02-14; LAB21546E dated 2018-02-09

RS Schwarze:

- 2016142a dated 10.11.2016 (LAB20776E); 2016142c dated 14.11.2016 (LAB20778E)

- 2017013 dated 31.01.2017 (LAB20987E); 2017074 dated 08.06.2017 (LAB21109E)
- 2018010 dated 06.02.2018 (LAB21552E)

For A1 version:

Weidmüller Central Laboratory:

- LAB22790E dated 2020-05-06; LAB23060E dated 2020-11-03; LAB22778E dated 2020-09-08; LAB22869E dated 2020-09-09; LAB22524E dated 2019-11-04; LAB22539E dated 2019-09-20; LAB23001E dated 2020-10-05; LAB22997E dated 2020-10-05;

RS Schwarze:

- 2020043 dated 13.05.2020; 2020044 dated 12.05.2020; 2019091 dated 27.09.2019; 2019143 dated 27.09.2019; 2020101 dated 05.10.2020;

4. APPLICATION / LIMITATION:

4.1 - Bureau Veritas Rules for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.

4.3 - Bureau Veritas Environmental Category, **EC Code: 33B**

4.4 - Suppliers using the equipment are required to submit documentation for information or approval in dependence of the system category of the application prior fitting on board.

4.5 - Suppliers using the equipment are to consider Bureau Veritas requirements for data communication links for system categories II or III in their application.

4.6 - Factory acceptance, simulation, integration, and on-board tests are to be performed for category II or III systems in which the equipment is used to approved test programs.

4.7 - Only Hardware and Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer is covered by this certificate.

4.8 - The equipment (except UR20-FBC-IEC61162-450, UR20-4DI-P-3W and UR20-3EM-230V-AC) is certified for use in hazardous areas of Zone 2 with either types of protection Ex 'nA', Ex 'nC' or Ex 'ec', gas group IIC and temperature class T4. Equipment ratings, specific conditions of use and any information related to installations in hazardous areas are to be obtained from the latest Ex-component certificate. This type approval does not cover aspects related to design and construction of equipment intended for use in potentially explosive atmospheres.

4.9 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 7.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **Weidmüller Interface GmbH & Co. KG** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **Weidmüller Interface GmbH & Co. KG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
32758 Detmold
GERMANY

Zollner Electronic AG
Unterschwandt 3
94371 Rattenberg
GERMANY

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Parc Industrial Sud Nr. 10
440247 Satu Mare
ROMANIA

6. MARKING OF PRODUCT:

- Maker's name or trademark.
- Date of manufacture and/or serial number.
- Equipment type or model identification under which it was type-tested.
- For each application title and version of each software element included in the installed software system shall be either marked on the equipment or displayed on a panel on command.

7. OTHERS:

7.1 - It is the responsibility of **Weidmüller Interface GmbH & Co. KG** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 46990/A0 BV issued on 30 May 2018 by the society.

*** END OF CERTIFICATE ***