



Marine & Offshore

Certificate number: 46990/B0 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

FOR information only

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 is a renewal of certificate N° 46990/A3 BV expiring on 30/05/2023

This certificate will expire on: 30 May 2028

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 17 May 2023

This certificate was created electronically and is valid without signature

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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. Safety related versions for use in safety instrumented systems are available and are transmitting signals via the control station's fieldbus coupler to a safety controller using the black channel communication principle.

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	01.10.xx	01.03.xx
1334940000	UR20-FBC-PL	Ethernet POWERLINK	01.10.xx	01.05.xx 01.06.xx
1334910000	UR20-FBC-EC	EtherCAT	02.01.xx	02.04.xx 02.06.xx
2625010000	UR20-FBC-CC	CC-Link	01.02.xx	01.00.xx 01.01.xx
2680260000	UR20-FBC-CC-TSN	CC-Link	01.03.xx	01.01.xx 01.02.xx
2476450000	UR20-FBC-MOD-TCP-V2	Modbus TCP	02.10.xx	01.05.xx 01.06.xx
2661310000	UR20-FBC-IEC61162-450	IEC 61162-450 (LWIP)	01.02.xx	01.05.xx 01.06.xx
1334920000	UR20-FBC-EIP	EtherNet/IP	02.13.xx	02.03.xx 02.04.xx
1550550000	UR20-FBC-EIP-V2	EtherNet/IP, redundancy protocol	01.03.xx	01.00.xx 01.01.xx
2566380000	UR20-FBC-PN-IRT-V2	PROFINET IRT	01.13.xx	01.00.xx 01.01.xx
2614380000	UR20-FBC-PB-DP-V2	PROFIBUS DP-V1	01.12.xx	01.00.xx 01.01.xx

Digital I/O modules

Order no.	Model	Description	SVN	HVN
1460140000	UR20-2DI-P-TS	2 digital inputs, P-switching, time stamp function	-	01.30.xx
1315350000	UR20-4DI-N	4 digital inputs, N-switching	-	01.30.xx
1315170000	UR20-4DI-P	4 digital inputs, P-switching	-	01.30.xx
1460150000	UR20-4DI-P-TS	4 digital inputs, P-switching, time stamp function (16 bit)	-	01.30.xx
2792150000	UR20-4DI-P-TS-V2	4 digital inputs, P-switching, time stamp function (32 bit)	-	01.02.xx
1550070000	UR20-4DI-2W-230V-AC	4 digital inputs, 230V	-	01.31.xx
2009360000	UR20-4DI-P-3W	4 digital inputs, P-switching	-	01.30.xx
2464570000	UR20-4DI-4DO-PN-FSPS-V2	4 digital inputs, 4 digital outputs, P-or N-switching; safety related I/O module for connection to a safety controller via PROFIsafe protocol	01.06.xx	01.13.xx/ 01.14.xx
2464580000	UR20-4DI-4DO-PN-FSOE-V2	4 digital inputs, 4 digital outputs, P-or N-switching; safety related I/O module for connection to a safety controller via Fail Safe over EtherCAT protocol	01.00.xx	01.03.xx/ 01.14.xx
1315370000	UR20-8DI-N-3W	8 digital inputs, N-switching	-	01.60.xx
1315180000	UR20-8DI-P-2W	8 digital inputs, P-switching	-	01.10.xx
1394400000	UR20-8DI-P-3W	8 digital inputs, P-switching	-	01.40.xx
1315190000	UR20-8DI-P-3W-HD	8 digital inputs, P-switching	-	01.11.xx
2457240000	UR20-8DI-ISO-2W	8 digital inputs	-	01.02.xx

2464590000	UR20-8DI-PN-FSPS-V2	8 digital inputs, P- or N-switching; safety related I/O module for connection to a safety controller via PROFIsafe protocol	01.00.xx	01.13.xx/ 01.14.xx
2464600000	UR20-8DI-PN-FSOE-V2	8 digital inputs, P- or N-switching; safety related I/O module for connection to a safety controller via Fail Safe over EtherCAT protocol	01.00.xx	01.12.xx/ 01.14.xx
2456530000	UR20-8DIO-P-3W-DIAG	8 digital inputs/outputs, P-switching, diagnostics	01.00.xx	01.10.xx
1315210000	UR20-16DI-P-PLC-INT	16 digital inputs, P-switching, PLC connector	-	01.30.xx
1315400000	UR20-16DI-N-PLC-INT	16 digital inputs, N-switching, PLC connector	-	01.30.xx
1315200000	UR20-16DI-P	16 digital inputs, P-switching	-	01.40.xx
1315390000	UR20-16DI-N	16 digital inputs, N-switching	-	01.40.xx
1315410000	UR20-4DO-N	4 digital outputs, N-switching	-	01.11.xx
1315420000	UR20-4DO-N-2A	4 digital outputs, N-switching	-	01.11.xx
1315220000	UR20-4DO-P	4 digital outputs, P-switching	-	01.31.xx
1315230000	UR20-4DO-P-2A	4 digital outputs, P-switching	-	01.40.xx
2457250000	UR20-4DO-ISO-4A	4 digital outputs	-	01.53.xx

Digital I/O modules (continued)

1509830000	UR20-8DO-P-2W-HD	8 digital outputs, P-switching	-	01.11.xx
1394420000	UR20-4DO-PN-2A	4 digital outputs, P or N-switching	-	01.11.xx
1315430000	UR20-8DO-N	8 digital outputs, N-switching	-	01.21.xx
1315240000	UR20-8DO-P	8 digital outputs, P-switching	-	01.61.xx
1315250000	UR20-16DO-P	16 digital outputs, P-switching	-	01.92.xx
1315440000	UR20-16DO-N	16 digital outputs, N-switching	-	01.21.xx
1315270000	UR20-16DO-P-PLC-INT	16 digital outputs, P-switching, PLC connector	-	01.41.xx
1315450000	UR20-16DO-N-PLC-INT	16 digital outputs, N-switching, PLC connector	-	01.21.xx

Analogue I/O modules

Order no.	Model	Description	SVN	HVN
2705620000	UR20-2AI-UI-16	2 analogue inputs, 24 bit	01.02.xx	01.20.xx
2566090000	UR20-2AI-UI-16-DIAG	2 analogue inputs, 24 bit, diagnostics	01.00.xx	01.40.xx
2617520000	UR20-4AI-I-HART-16-DIAG	4 analogue inputs	01.00.xx	01.40.xx
1394390000	UR20-4AI-UI-12	4 analogue inputs	01.02.xx	01.40.xx
1315620000	UR20-4AI-UI-16	4 analogue inputs, 16 bit	01.02.xx	01.40.xx
1506920000	UR20-4AI-UI-16-HD	4 analogue inputs, 16 bit, separate connector	01.02.xx	01.10.xx
1315690000	UR20-4AI-UI-16-DIAG	4 analogue inputs, 16 bit, diagnostics	01.02.xx	01.40.xx
1506910000	UR20-4AI-UI-16-DIAG-HD	4 analogue inputs, 16 bit, diagnostics, separate connector	01.02.xx	01.10.xx
1993880000	UR20-4AI-UI-DIF-16-DIAG	4 analogue inputs, 16 bit, diagnostics	01.05.xx	01.30.xx
2544660000	UR20-4AI-UI-DIF-32-DIAG	4 analogue inputs, 32 bit, diagnostics	01.01.xx	01.30.xx
1315700000	UR20-4AI-RTD-DIAG	4 temperature sensors, 16 bit, diagnostics	01.00.xx	01.30.xx
2456540000	UR20-4AI-RTD-HP-DIAG	4 temperature sensors, 16 bit, high-precision, diagnostics	01.00.xx	01.30.xx
1315710000	UR20-4AI-TC-DIAG	4 temperature sensors, 16 bit, diagnostics	01.00.xx	01.30.xx
2566960000	UR20-4AI-UI-ISO-16-DIAG	4 analogue inputs, 16 bit, diagnostics	01.01.xx	00.60.xx
2001670000	UR20-4AI-R-HS-16-DIAG	4 analogue inputs, 16 bit, diagnostics	01.00.xx	01.10.xx
1315650000	UR20-8AI-I-16-HD	8 analogue inputs, 16 bit, separate connector	01.02.xx	01.10.xx
1315720000	UR20-8AI-I-16-DIAG-HD	8 analogue inputs, 16 bit, diagnostics, separate connector	01.02.xx	01.10.xx
1315670000	UR20-8AI-I-PLC-INT	8 analogue inputs, 16 bit, PLC interface unit	01.02.xx	01.20.xx
2705630000	UR20-2AO-UI-16	2 analogue outputs, 16 bit	01.03.xx	01.31.xx
2566100000	UR20-2AO-UI-16-DIAG	2 analogue outputs, 16 bit, diagnostics	01.03.xx	01.31.xx
2566970000	UR20-2AO-UI-ISO-16-DIAG	2 analogue outputs, 16 bit, diagnostics, isolated outputs	01.00.xx	01.10.xx
1315680000	UR20-4AO-UI-16	4 analogue outputs, 16 bit	01.03.xx	01.31.xx
1315730000	UR20-4AO-UI-16-DIAG	4 analogue outputs, 16 bit, diagnostics	01.03.xx	01.31.xx
2453880000	UR20-4AO-UI-16-M	4 analogue outputs, 16 bit	01.03.xx	01.10.xx
2453870000	UR20-4AO-UI-16-M-DIAG	4 analogue outputs, 16 bit, diagnostics	01.03.xx	01.10.xx
1315700000	UR20-8AI-RTD-DIAG-2W	8 analogue temperature sensors, 16 bit, diagnostics	01.00.xx	01.30.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	-	01.01.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	-	01.21.xx
1315540000	UR20-4RO-SSR-255	4 digital outputs, semiconductor	-	01.31.xx
1315570000	UR20-1CNT-100-1DO	1 channel, counter, 100kHz	-	01.01.xx
1315580000	UR20-1CNT-500	1 channel, counter, 500kHz	-	01.11.xx
1315590000	UR20-2CNT-100	2 channel, counter, 100kHz	-	01.02.xx
1508080000	UR20-2FCNT-100	2 channel, frequency counter, 100kHz	-	01.02.xx

Interface modules

Order no.	Model	Description	SVN	HVN
1315750000	UR20-1COM-232-485-422	1 serial interface, 115200 bps	01.00.xx	01.20.xx
2826800000	UR20-1COM-232-485-422-V2	1 serial interface, 230400 bps	01.00.xx	01.00.xx
2489840000	UR20-1COM-CANOPEN	1 CANopen interface, 10~1000kbps	01.00.xx	01.20.xx
2007430000	UR20-1COM-SAI-PRO	1 SAI Active Universal interface, 250 kbps	01.02.xx	01.20.xx
1508090000	UR20-1SSI	1 SSI encoder	-	01.11.xx
1315600000	UR20-2PWM-PN-0.5A	2x 0.5A pulse-width-modulation outputs PN or P switching	-	01.11.xx
1315610000	UR20-2PWM-PN-2A	2x 2A pulse-width-modulation outputs PN or P switching	-	01.11.xx

Power feed modules

Order no.	Model	Description	SVN	HVN
1334710000	UR20-PF-I	For input current path	-	01.31.xx
1334740000	UR20-PF-O	For output current path	-	01.31.xx

The UC20- series of controllers comprise 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
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
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

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 - In accordance with IACS UR E22 and as applicable to programmable devices for computer based systems of Category II or III, for each ship application:

- ship specific documentation is to be submitted including software documentation and categorization of the computer based system.

- Inspection and testing before installation onboard is to be performed under the surveillance of the Society.

4.5 - 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.

4.6 - Ex-certification is not covered by this certificate. Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified Certification Body.

4.7 - Suppliers using the safety related I/O modules in safety related applications shall comply with the latest version of the equipment manual, the u-remote functional safety manual and the requirements for safe use in the latest functional safety certificate and associated report.

4.8 - Equipment is not to be installed in the vicinity of the standard or steering magnetic compass. Separation with 5m relative distance to either compass is to be maintained.

4.9 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev. 8.

*** END OF CERTIFICATE ***

For information only