



Type Approval Certificate

[Programmable Logic Controller]

Initial Approval 19 August 2019

Applicant Weidmueller Interface GmbH & Co. KG
Klingenbergrasse 26, D-32758 Detmold, Germany

Product Description U-control programmable logic controllers [Type : UC20]
Remote I/O System [Type : UR20]

* Manufacturing Place

- Weidmueller Interface GmbH & Co. KG
Klingenbergrasse 16, 32758 Detmold, Germany
- ZES Zollner Electronic S.R.L.
Parc Industrial Sud nr.10 440247 Satu Mare Romania

" See Appendix 1 "

Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification of Steel Ships.

This Certificate is valid until 18 August 2029

Issued at Busan, Korea on 12 July 2024



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME24034224716) and certificate No.(HMB39428-AC001).



KOREAN REGISTER

*General Manager of
Marine & Ocean Equipment Team*

Note : 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 12 July 2024

A. Product Description

1. Product Specification

The modular u-remote systems support common fieldbus systems and conform to IEC 61131-2.
Up to 64 active I/O modules can be combined in a u-remote station.
The following components belong to the u-remote product series ;

- Fieldbus coupler & controller
 - Active I/O modules
 - Passive I/O modules
 - Functional safety modules
 - Mechanical fixing elements
- 1) 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,
 - 2) AUX-Module
UR20-ES, UR20-16AUX-I, UR20-16AUX-O, UR20-16AUX-FE, UR20-16AUX-GND-I, UR20-16AUX-GND-O
 - 3) Digital Input
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
 - 4) Digital Output
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
 - 5) Digital Input and Output
UR20-8DIO-P-3W-DIAG
 - 6) Digital Pulse Width Modulation
UR20-2PWM-PN-0.5A, UR20-2PWM-PN-2A
 - 7) Analog Input
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
 - 8) Analog Output
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
 - 9) Power-Feed
UR20-PF-I, UR20-PF-O
 - 10) Counter
UR20-2FCNT-100, UR20-2CNT-100, UR20-1CNT-100-1DO, UR20-1CNT-500
 - 11) Communication module
UR20-1SSI, UR20-1COM-232-422-485, UR20-1COM-232-485-422-V2, UR20-1COM-SAI-PRO,
UR20-1COM-CANOPEN
 - 12) Safe I/O
UR20-4DI-4DO-PN-FS0E-V2, UR20-8DI-PN-FS0E-V2, UR20-4DI-4DO-PN-FSPS-V2,
UR20-8DI-PN-FSPS-V2
 - 13) 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

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2. Approved Drawings and Documents

1) Drawings

54150 Rev. 6, 57790 Rev. 0, 60998 Rev. 0, 62640 Rev. 1, 61002 Rev. 1, 55805 Rev. 2,
 59294 Rev. 2, 60757 Rev. 0, 60743 Rev. 0, 60744 Rev. 0, 60755 Rev. 0, 55831 Rev. 3,
 60728 Rev. 0, 60761 Rev. 1, 55811 Rev. 4, 60722 Rev. 0, 60800 Rev. 1, 60799 Rev. 2,
 60752 Rev. 1, 60753 Rev. 1, 60729 Rev. 0, 60738 Rev. 0, 60804 Rev. 0, 61240 Rev. 0,
 55845 Rev. 3, 59300 Rev. 2, 60790 Rev. 3, 60751 Rev. 1, 60719 Rev. 1, 60739 Rev. 1,
 60742 Rev. 1, 61244 Rev. 2, 62650 Rev. 0, 60077 Rev. 0, 60754 Rev. 0, 54496 Rev. 5,
 60758 Rev. 1, 57789 Rev. 0, 60798 Rev. 1, 60764 Rev. 1, 60723 Rev. 0, 60725 Rev. 0,
 60766 Rev. 1, 60737 Rev. 1, 55818 Rev. 3, 60733 Rev. 0, 60731 Rev. 0, 60732 Rev. 1,
 60792 Rev. 1, 60724 Rev. 0, 61003 Rev. 1, 56118 Rev. 2, 55837 Rev. 1, 61252 Rev. 2,
 62639 Rev. 2, 60734 Rev. 0, 60735 Rev. 0, 55812 Rev. 2, 60787 Rev. 3, 61250 Rev. 0,
 55810 Rev. 0, 60813 Rev. 0, 60806 Rev. 1

2) Conducted Emission – Issue Analysis and Solution with UR20-FBC-CAN

3) Quick reference u-remote UR 20 fieldbus coupler

4) Software Release Process Description

Basic Software Development Process(1217053) ver. 1.0

Software Construction(1221113) ver. 1.0

UR 20 Build steps ver. 1.0

SW Release Process Description(3933305) ver. 1.0

Engineering Change Management Instruction(6573695) ver. 2.0

5) Remote-I/O-System u-remote Manual : 1432790000 (2017.12.12)

6) Data sheet

1432790000 UR20-4AI-R-HS-16-DIAG, 2614380000 UR20-FBC-PB-DP-V2,
 2617520000 UR20-4AI-I-HART-16-DIAG, 2674620000 UC20-SL2000-EC-CAN,
 2792150000 UR20-4DI-P-TS-V2, 2457240000 UR20-8DI-ISO-2W,
 2457250000 UR20-4DO-ISO-4A, 2456530000 UR20-8DI-P-3W-DIAG,
 1315600000 UR20-2PWM-PN-0.5A, 1315610000 UR20-2PWM-PN-2A,
 2705620000 UR20-2AI-UI-16, 2566090000 UR20-2AI-UI-16-DIAG,
 2544660000 UR20-4AI-UI-DIF-32-DIAG, 2566960000 UR20-4AI-UI-ISO-16-DIAG,
 1506920000 UR20-4AI-UI-16-HD, 1506910000 UR20-4AI-UI-16-DIAG-HD,
 1315650000 UR20-8AI-I-16-HD, 1315720000 UR20-8AI-I-16-DIAG-HD,
 1315670000 UR20-8AI-I-PLC-INT, 2456540000 UR20-4AI-RTD-HP-DIAG,
 2555940000 UR20-8AI-RTD-DIAG-2W, 2705630000 UR20-2AO-UI-16,
 2566100000 UR20-2AO-UI-16-DIAG, 2566970000 UR20-2AO-UI-ISO-16-DIAG,
 1315680000 UR20-4AO-UI-16, 1315730000 UR20-4AO-UI-16-DIAG,
 2826800000 UR20-1COM-232-485-422-V2, 2007430000 UR20-1COM-SAI-PRO,
 2489840000 UR20-1COM-CANOPEN, 2464580000 UR20-4DI-4DO-PN-FSOE-V2,
 2464570000 UR20-4DI-4DO-PN-FSPS-V2, 2464590000 UR20-8DI-PN-FSPS-V2,
 2625010000 UR20-FBC-CC, 2680260000 UR20-FBC-CC-TSN,
 1550550000 UR20-FBC-EIP-V2, 2661310000 UR20-FBC-IEC61162-450,
 2566380000 UR20-FBC-PN-IRT-V2, 2674520000 UC20-SL2000-EC,
 2674520000 UC20-SL2000-OLAC-EC, 2674620000 UC20-SL2000-OLAC-EC-CAN,
 1334950000 UC20-WL2000-AC, 2928020000 UC20-WL2000-AC-CAN,
 1334990000 UC20-WL2000-IOT

3. Test Reports, etc.

1) Environmental / EMC Test Report

LAB18426, LAB20841E, LAB20918E, LAB20971E, LAB20972E, LAB21033E, LAB21221E,
 LAB21222E, LAB21232E, LAB21507E, LAB21546E, L016-00907, L017-00364, LAB20772E,
 LAB20776E, LAB20778E, LAB20807E, LAB20808E, LAB20987E, LAB21109E, LAB21552E,
 2016142a, 2016142b, 2016142c, 2017013, 2017074, 2018010,
 Test Setup DUT1 & DUT2 EMC and DUT3 & DUT4 EMC and DUT5 & DUT6 EMC,
 Test Setup DUT3 & DUT4 ENV and DUT5 & DUT6 ENV, Conducted Emission Test DUT5 & DUT6,
 LAB22416E, LAB22533E, 2019160, LAB22778E, LAB22869E, 2020044,
 LAB22790E, LAB23060E, 2020043, LAB23782E, LAB23717E, LAB23718E, LAB24090E,
 LAB24027E, LAB24026E, LAB24025E, LAB24111E, LAB24151E

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B. Approval Condition

1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and approved documentation.
- 2) Degree of protection is to be complied with Rule Pt.6 Ch.1 Sec.2 201.2. (5).
- 3) The manufacturer is to inform this Society of all kinds of revisions of the equipment. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 4) When this system is to be installed in the vicinity of a standard or a steering magnetic compass, it should have the minimum safe distance 5m or more at which it may be mounted from such compasses.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is not required.

3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

4. Others

- 1) Test condition

Test	Condition	Remark
EMC	All locations including the bridge and deck zone	-
Temperature	-25 ~ +70°C	-
Vibration	Acceleration +4.0g	-

< End of Certificate >