



CERTIFICATE NUMBER
EFFECTIVE DATE
EXPIRY DATE
ABS TECHNICAL OFFICE

19-1920922-1-PDA
18-May-2020
02-Dec-2024
Rio de Janeiro Engineering -
Machinery

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

B & R INDUSTRIAL AUTOMATION GMBH

located at

B & R STRASSE 1, EGGELSBERG, Austria, 5142

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Input/Output Module

Model X20-IO Module System Series

This Product Design Assessment (PDA) Certificate remains valid until 02/Dec/2024 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Roberto B Assumpcao, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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Product: Input/Output Module

Model: X20-IO Module System Series

Intended Service:

ABS classed vessels and offshore installations in accordance with the listed ABS Rules and International Standards.

Description:

The X20-IO Module System Series includes coated module variants, which are marked with a "c" between X20 and its type designation.

Power Supply Modules

0AC524.9, X20PS2100, X20PS3300, X20PS4951, X20PS9400, X20PS9500, X20PS8002, X20PS9402, X20PS9502, X20PS9600, X20PS9602

Terminal Blocks

0TBxx, X20TBxx

Analog Input Modules

X20AI2632, X20AI2636, X20AI4632, X20AI4636, X20AI2222, X20AI2322, X20AI2437, X20AI2438, X20AI2622, X20AI4222, X20AI4322, X20AI4622, X20AI4632-1, X20AI8221, X20AI8321, X20AI2632-1,

Analog Output Modules

X20AO2622, X20AO2632, X20AO2632-1, X20AO4622, X20AO4632, X20AO4635, X20AO2437, X20AO2438, X20AO4632-1

Temperature Modules

X20AT4222, X20AT2402, X20AT2222, X20AT6402, X20AT2311

Bus Base Modules

X20BB22, X20BB27, X20BB42, X20BB47, X20BB80, X20BB82, X20BB57, X20BB52, X20BB81

Bus Controller Modules

X20BC0043, X20BC0043-10, X20BC0053, X20BC0083, X20BC0087, X20BC0143-10, X20BC1083, X20BC8083, X20BC8084

Bus Modules

X20BM01, X20BM05, X20BM11, X20BM12, X20BM15, X20BM33, X20BM21, X20BM23, X20BM31, X20BM32

Universal Mixed Module

X20CM8281, X20CM0985-1, X20CM2821

Compact CPU's

X20CP0292, X20CP0201, X20CP0291, X20XC0201, X20XC0202, X20XC0292, X20CP0482, X20CP0483, X20CP0484

CPU Modules

X20CP1483, X20CP1483-1, X20CP1484, X20CP1484-1, X20CP1485, X20CP1485-1, X20CP1486, X20CP3484, X20CP3484-1, X20CP3485, X20CP3485-1, X20CP3486, X20CP1583, X20CP1584, X20CP1585, X20CP1586, X20CP3583, X20CP3584, X20CP3585, X20CP3586, X20CP1382-RT, X20CP1301, X20CP1381, X20CP1382, X20CP1381-RT

Communication Modules

X20CS1020, X20CS1030, X20CS1070

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Counter Modules

X20DC1176, X20DC1178, X20DC1196, X20DC1198, X20DC11A6, X20DC1376, X20DC137A, X20DC1396, X20DC1398, X20DC1976, X20DC2395, X20DC2396, X20DC2398, X20DC4395

Digital Input Modules

X20DI2371, X20DI2372, X20DI2377, X20DI4371, X20DI4372, X20DI4375, X20DI4760, X20DI6371, X20DI6372, X20DI6373, X20DI8371, X20DI9371, X20DI9372, X20DID371, X20DIF371,

Digital Output Modules

X20DO2322, X20DO2649, X20DO4322, X20DO4529, X20DO6322, X20DO6529, X20DO8232, X20DO8322, X20DO8332, X20DO9322, X20DOF322, X20DOD322, X20DO4649, X20DO6639, X20DO6325

Counter and Positioning Modules

X20DS1119, X20DS1319, X20DS4389

Hub System Modules

X20HB1881, X20HB1882, X20HB2880, X20HB2881, X20HB8815, X20HB8880, X20HB8884

Dummy Modules

X20IF0000, X20ZF0000

Interface Modules

X20IF1020, X20IF1030, X20IF1041-1, X20IF1043-1, X20IF1051-1, X20IF1053-1, X20IF1072, X20IF1074, X20IF1082, X20IF1082-2, X20IF2181-2, X20IF2772, X20IF1061-1, X20IF1063-1, X20IF10A1-1, X20IF10E1-1, X20IF10E3-1, X20IF10D1-1, X20IF10D3-1, X20IF10G3 1, X20IF10H3-1, X20IF10X0

Motor Bridge Modules

X20MM2436

Modules for measure active, reactive and apparent power

X20AP3111; X20AP3121; X20AP3131; X20AP3161

Memory Keys

X20MKxxxx

Safety CPU Modules (*1, *2)

X20SL8000, X20SL8001, X20SL8010, X20SL8011

Safety CPU Modules (*1, *2)

X20SL8100, X20SL8101

Safety Digital Input Modules (*1, *2)

X20SI4100, X20SI2100, X20SI9100

Safety Digital Output Modules (*1, *2)

X20SO2110, X20SO2120, X20SO4110, X20SO4120

Safety Analog Input Modules (*1, *2)

X20SA4430, X20ST4492

Safety Intelligently Programmable Modules (*1, *2)

X20SLX210, X20SLX410, X20SLX910

Safety Counter and Positioning Module (*1, *2)

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X20SD1207

Safety Digital Mixed Modules (*1, *2)
X20SC2212, X20SC2432

Power Distribution Modules
X20PD0011, X20PD0012, X20PD0016, X20PD2113

CPU Accessory
0CFCRD.0xxxE.01, 5CFCRD.xxxx-0x

Rating:

Temp: -20 to +60C

Power: 24VDC

Service Restriction:

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes:

*1 - To be cooled inside cabinet

*2 - To be mounted inside control cabinet

To avoid damages through electrostatic discharge the components have to be mounted inside a control cabinet. All instructions in the User's Manual must be observed and followed.

Notes/Drawing/Documentation:

Drawing No. Data Sheet X20(c)BB81, Data Sheet X20(c)BB81, Revision: -, Pages: -
Drawing No. Data Sheet X20(c)HB1881, Data Sheet X20(c)HB1881, Revision: -, Pages: -
Drawing No. Data Sheet X20(c)HB2881, Data Sheet X20(c)HB2881, Revision: -, Pages: -
Drawing No. Data Sheet X20(c)IF10X0, Data Sheet X20(c)IF10X0, Revision: -, Pages: -
Drawing No. Data Sheet X20HB1882, Data Sheet X20HB1882, Revision: -, Pages: -
Drawing No. IO Rack 10 Test Description, IO Rack 10 Test Description, Revision: -, Pages: -
Drawing No. IO Test Rack 10 (EMC Test Report), IO Test Rack 10 (EMC Test Report), Revision: -, Pages: -
Drawing No. IO Test Rack 10 (Environmental Test Report), IO Test Rack 10 (Environmental Test Report), Revision: -, Pages: -

Support documentation from previous review:

Drawing No. C37156-00-00MV, C37156-00-00MV, Revision: -, Pages: -
Drawing No. C40223-00-00MV, C40223-00-00MV, Revision: -, Pages: -
Drawing No. C42785-00-00FT, C42785-00-00FT, Revision: -, Pages: -
Drawing No. C43195-02-00FT, C43195-02-00FT, Revision: -, Pages: -
Drawing No. C43857-02-00FT, C43857-02-00FT, Revision: -, Pages: -
Drawing No. C44611-00-00FT, C44611-00-00FT, Revision: -, Pages: -
Drawing No. C44612-00-00FT, C44612-00-00FT, Revision: -, Pages: -
Drawing No. E34466-00-01HP, E34466-00-01HP, Revision: -, Pages: -
Drawing No. E34467-00-01HP, E34467-00-01HP, Revision: -, Pages: -
Drawing No. E34468-00-01HP, E34468-00-01HP, Revision: -, Pages: -
Drawing No. E34469-00-01HP, E34469-00-01HP, Revision: -, Pages: -

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Drawing No. E37149-00-00MU, E37149-00-00MU, Revision: -, Pages: -
Drawing No. E37640-00-01MH, E37640-00-01MH, Revision: -, Pages: -
Drawing No. E38921-01-00HM, E38921-01-00HM, Revision: -, Pages: -
Drawing No. E40222-00-00VK, E40222-00-00VK, Revision: -, Pages: -
Drawing No. E42783-00-00JA, E42783-00-00JA, Revision: -, Pages: -
Drawing No. E43194-00-00JA, E43194-00-00JA, Revision: -, Pages: -
Drawing No. E43951-00-01JA, E43951-00-01JA, Revision: -, Pages: -
Drawing No. E44620-00-01JA, E44620-00-01JA, Revision: -, Pages: -
Drawing No. E44621-00-00JA, E44621-00-00JA, Revision: -, Pages: -
Drawing No. S34470-00-02AV, S34470-00-02AV, Revision: -, Pages: -
Drawing No. S34471-00-03AV, S34471-00-03AV, Revision: -, Pages: -
Drawing No. S34471-00-04AV, S34471-00-04AV, Revision: -, Pages: -
Drawing No. S34471-00-05AV, S34471-00-05AV, Revision: -, Pages: -
Drawing No. S34982-00-00JK, S34982-00-00JK, Revision: -, Pages: -
Drawing No. S37154-00-00AV, S37154-00-00AV, Revision: -, Pages: -
Drawing No. S37155-00-01AV, S37155-00-01AV, Revision: -, Pages: -
Drawing No. Test Description (Rack 1 in 2013), Test Description (Rack 1 in 2013), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 1-4 in 2011), Test Description (Rack 1-4 in 2011), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 11 in 2018), Test Description (Rack 11 in 2018), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 12 in 2019), Test Description (Rack 12 in 2019), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 2 in 2014), Test Description (Rack 2 in 2014), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 5 in 2015), Test Description (Rack 5 in 2015), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 6 in 2017), Test Description (Rack 6 in 2017), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 7 in 2015), Test Description (Rack 7 in 2015), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 8 in 2019), Test Description (Rack 8 in 2019), CSA Group, Revision: -, Pages: -
Drawing No. Test Description (Rack 9 in 2018), Test Description (Rack 9 in 2018), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (Rack 1 2013), Test description X20 IO (Rack 1 2013), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (Rack 11 2018), Test description X20 IO (Rack 11 2018), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (Rack 12 2019), Test description X20 IO (Rack 12 2019), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (Rack 2 2014), Test description X20 IO (Rack 2 2014), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (Rack 5 2015), Test description X20 IO (Rack 5 2015), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (Rack 7 2015), Test description X20 IO (Rack 7 2015), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (former Rack 1-4 2011), Test description X20 IO (former Rack 1-4 2011), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (former Rack 6 2017), Test description X20 IO (former Rack 6 2017), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (former Rack 8 2019), Test description X20 IO (former Rack 8 2019), CSA Group, Revision: -, Pages: -
Drawing No. Test description X20 IO (former Rack 9 2018), Test description X20 IO (former Rack 9 2018), CSA Group, Revision: -, Pages: -
Drawing No. X20 User's Manual, X20 User's Manual, Revision: -, Pages: -
Drawing No. pcb's (X20 Module No. 107 - 199), pcb's (X20 Module No. 107 - 199), Revision: -, Pages: -
Drawing No. pcb's (X20 System Module No. 001 - 051), pcb's (X20 System Module No. 001 - 051), Revision: -, Pages: -
Drawing No. pcb's (X20 System Module No. 052 - 075), pcb's (X20 System Module No. 052 - 075), Revision: -, Pages: -

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Drawing No. pcb's (X20 System Module No. 076 - 085), pcb's (X20 System Module No. 076 - 085), Revision: -,

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Drawing No. pcb's (X20 System Module No. 086 - 106), pcb's (X20 System Module No. 086 - 106), Revision: -,

Pages: -

Drawing No. pcb's (X20 System Module No. 200 - 218), pcb's (X20 System Module No. 200 - 218), Revision: -,

Pages: -

Terms of Validity:

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STANDARDS

ABS Rules:

- Marine Vessels Rules (2019): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-9-9/7, 4-9-9/13, 4-9-9/Table1
- Steel Vessels for Service on Rivers and Intracoastal Waterways Rules (2019): 1-1-4/7.7, 1-1-A3, 1-1-A4
- Steel Barge Rules (2019): 1-1-4/7.7, 1-1-A3, 1-1-A4
- High-Speed Crafts Rules (2019): 1-1-4/11.9, 1-1-A2, 1-1-A3, 4-6-1/11, 4-7-9/7, 4-7-9/15, 4-7-9/Table 9
- Mobile Offshore Units Rules (2019): 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-1-1/7.9, 4-3-1/11, 6-1-1/9, 6-1-1/13
- Facilities on Offshore Installations Rules (2019): 1-1-4/9.7, 1-1-A2, 1-1-A3

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA