



Lloyd's  
Register

## Type Approval Certificate

*This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.*

This certificate is issued to:

**PRODUCER** Bernecker + Rainer Industrie-Elektronik Ges.m.b.H

**PLACE OF PRODUCTION** B&R Strasse 1  
5142 Eggelsberg  
AUSTRIA

**DESCRIPTION** Programmable Logic Controller X20 - System

**TYPE** X20 series

**Analog Input Modules**

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

**Analog Output Modules**

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

**Temperature Modules**

X20AT2222, X20AT2402, X20AT4222, X20AT6402

**Bus Base Modules**

X20BB22, X20BB27, X20BB42, X20BB47, X20BB80, X20BB82

**Bus Controller Modules**

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

**Certificate No.** 15/20082

**Issue Date** 25 August 2015

**Expiry Date** 24 August 2020

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**TYPE (continues)**

**Bus Modules**

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

**Universal Mixed Module**

X20CM8281

**CPU Modules**

X20CP1583, X20CP1584, X20CP1585, X20CP1586

**Communication Modules**

X20CS1020, X20CS1030, X20CS1070

**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, X20DOD322, X20DOF322

**Counter and Positioning Module**

X20DS1119, X20DS1319, X20DS4389

**Hub System Modules**

X20HB2880, X20HB8880, X20HB8884

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**TYPE (continues)**

**Interface Modules**

X20IF0000, X20IF1020, X20IF1030, X20IF1041-1, X20IF1043-1, X20IF1051-1, X20IF1053-1, X20IF1061-1, X20IF1063-1, X20IF1072, X20IF1074, X20IF1082, X20IF1082-2, X20IF2181-2, X20IF2772

**Memory Keys**

X20MKxxx

**Power Supply Modules**

X20PS2100, X20PS3300, X20PS4951, X20PS9400, X20PS9500

**Safety Digital Input Modules <sup>(1)</sup>**

X20SI2100 <sup>(1)</sup>, X20SI4100 <sup>(1)</sup>

**Safety CPU Modules <sup>(1)</sup>**

X20SL8000 <sup>(1)</sup>, X20SL8001 <sup>(1)</sup>, X20SL8010 <sup>(1)</sup>, X20SL8011 <sup>(1)</sup>

**Safety Digital Output Modules <sup>(1)</sup>**

X20SO2110 <sup>(1)</sup>, X20SO2120 <sup>(1)</sup>, X20SO4110 <sup>(1)</sup>, X20SO4120 <sup>(1)</sup>

<sup>(1)</sup> = operation conditions 0 to 55°C

**X20 coated series**

**Coated Analog Input Modules**

X20cAI2438, X20cAI4632, X20cAI4632-1

**Coated Analog Output Modules**

X20cAO2437, X20cAO2438, X20cAO4622, X20cAO4632, X20cAO4632-1

**Coated Temperature Modules**

X20cAT2222, X20cAT6402

**Coated Bus Base Modules**

X20cBB80, X20cBB82

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**TYPE (continues)**

Coated Bus Controller Modules  
X20cBC0083, X20cBC0087, X20cBC1083, X20cBC8083, X20cBC8084

Coated Bus Modules  
X20cBM01, X20cBM11, X20cBM12, X20cBM23, X20cBM31, X20cBM32,  
X20cBM33

Coated CPU Modules  
X20cCP1584, X20cCP1586

Coated Counter Modules  
X20cDC1198, X20cDC1396, X20cDC2395

Coated Digital Input Modules  
X20cDI4371, X20cDI4375, X20cDI4760, X20cDI6371, X20cDI6372,  
X20cDI9371, X20cDI9372

Coated Digital Output Modules  
X20cDO4322, X20cDO6322, X20cDO8332, X20cDO9322

Coated Counter and Positioning Module  
X20cDS1119

Coated Hub System Modules  
X20cHB2880, X20cHB8880, X20cHB8884

Coated Interface Modules  
X20cIF1030, X20cIF1041-1, X20cIF1061-1, X20cIF1063-1, X20cIF1082-2,  
X20cIF2181-2

Coated Memory Keys  
X20cMKxxx

Coated Power Supply Modules  
X20cPS2100, X20cPS3300, X20cPS9400

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**TYPE (continues)**

Coated Safety Digital Input Modules <sup>(2)</sup>  
X20cSI4100 <sup>(2)</sup>

Coated Safety Digital Output Modules <sup>(2)</sup>  
X20cSO2110 <sup>(2)</sup>, X20cSO4110 <sup>(2)</sup>, X20cSO4120 <sup>(2)</sup>

<sup>(2)</sup> =operation conditions 0 to 55°C

Terminal Blocks  
X20TBxx, 0TBxx

Power Supply Module 24V AC/DC  
0AC524.9

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

Hub Module  
0AC808.9-1

**OTHER CONDITION**

To avoid damages through electrostatic discharge the components have to be mounted inside a metallic control cabinet. All instructions in the user manual must be observed and followed in all cases.

Examination of Software aspects is restricted to functional operation as demonstrated in the Performance Test.

Project specific arrangements (HW & SW) of the X20 system has to comply with the LR Rules and Regulations for the Classification of Ships Part 6, Chapter 1 and are to be approved on a project related basis.

Changes within the Software shall be recorded and the files shall be presented on request.

Major Software changes shall be approved by the Class Society prior to implementation in the product(s).

Other components of the X20 series (like monitors, PC or Panel PC's) are covered by separate type approval certificates.

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**APPLICATION**

Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2013.

The Safety Modules for marine, offshore and industrial applications are accepted for use in environmental categories ENV1 and ENV2 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2013 only.

**STANDARDS**

Manufactures Specifications

**RATINGS**

Power Supply: 24 V DC

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."*

*The Design Appraisal Document No. HTS/ETS 32296-15 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

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