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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.

Manufacturer	**B&R Industrial Automation GmbH**
Address	B&R Straße 1, 5142 Eggelsberg, Germany
Type	Computer Systems
Description	Power panel series and I/O modules refer to the Appendix for details
Trade Name	T30/T50/T80 series and X20 series
Application	Marine and offshore applications for use in environmental categories ENV1, ENV2 and ENV3 (except safety modules marked with "(1)") as defined in Lloyd's Register Type Approval System, Test Specification Number 1, March 2019.
Specified Standard	Manufacturer's specification IACS unified requirements E10 (Rev.8 Feb 2021)

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.

Previous Version:	This certificate supersedes certificate number LR2002532TA-01 issued on 07.04.2020 which is hereby cancelled

Thorsten Wolff

Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

TA01 1.0.0

Type Approval Certificate

The Design Appraisal Document HPC1962075-22/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Appendix

TYPES T30/T50/T80 series

Power Panel T30 series
Type 6PPT30.(1)(2)–(3)(4)(5)

(1) Screen dimension:
043	4,3 inch
057	5,7 inch
070	7,0 inch
101	10,1 inch

(2) Resolution:
2	WVGA (800 x 480) landscape
3	VGA (640 x 480) landscape
F	WQVGA (480 x 272) landscape
G	WSVGA (1024 x 600) landscape
K	WQVGA (272 x 480) portrait
L	VGA (480 x 640) portrait
M	WVGA (480 x 800) portrait
N	WSVGA (600 x 1024) portrait

(3) Display- / Touch: 2 TFT color + analog resistive touch screen

(4) Optional interfaces
and features: 0 No optional board

(5) Front design:
B	Anthracite gray pinstripe
W	Anthracite white pinstripe
I	cont. number I[xxx] costumized variant
F	cont. number F[xxx] costumized variant
C	cont. number C[xxx] costumized variant

Power Panel T50 series
Type 6PPT50.(1)(2)–(3)(4)(5)(6)

(1) Screen dimension:
050	5,0 inch
070	7,0 inch
101	10,1 inch
121	12,1 inch
156	15,6 inch

(2) Resolution:	2	WVGA (800 x 480) landscape
	B	HD (1366 x 768) landscape
	E	WXGA (1280 x 800) landscape

(3) Display- / Touch:	1	TFT color + multi-touch PCT (glass)

(4) Optional interfaces and features:	0	1 Ethernet interface
	6	Integrated switch with second Ethernet Interface

(5) Front design:	A	Black, anti-glare glass design
	B	Black, glare glass design
	G	Glass design, costumized variant

(6) Software*:	0	B&R standard
	S	Costumized linux image
	000-S00	Sequential number [0…Z] costumized variant

*Software is not covered by this type approval and is listed for information only.

Power Panel T80 series
Type 6PPT80.(1)(2)–(3)(4)(5)

(1) Screen dimension:	070	7,0 inch
	101	10,1 inch
	121	12,1 inch
	156	15,6 inch

(2) Resolution:	2	WVGA (800 x 480) landscape
	B	HD (1366 x 768) landscape
	E	WXGA (1280 x 800) landscape

(3) Display- / Touch:	1	TFT color + multi-touch screen

(4) Optional interfaces and features:	0	No optional interfaces / features
	6	Integrated switch with second Ethernet Interface

(5) Front design:	A	Black, anti-glare glass design
	B	Black, glare glass design

X20 series

Analog Input Modules

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

Coated Analog Input Modules

X20cAI2222, X20cAI2322, X20cAI2437, X20cAI2438, X20cAI2622, X20cAI2632,
X20cAI2632-1, X20cAI2636, X20cAI4222, X20cAI4322, X20cAI4622, X20cAI4632,
X20cAI4632-1, X20cAI4636, X20cAI8221, X20cAI8321

Analog Output Modules

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

Coated Analog Output Modules

X20cAO2437, X20cAO2438, X20cAO2622, X20cAO2632, X20cAO2632-1, X20cAO4622,
X20cAO4632, X20cAO4632-1, X20cAO4635

Temperature Modules

X20AT2222, X20AT2311, X20AT2321, X20AT2402, X20AT4222, X20AT6402, X20ATA312,
X20ATA492, X20ATB312, X20ATC402

Coated Temperature Modules

X20cAT2222, X20cAT2311, X20cAT2321, X20cAT2402, X20cAT4222, X20cAT6402,
X20cATA312, X20cATA492, X20cATB312, X20cATC402

Bus Base Modules

X20BB22, X20BB27, X20BB42, X20BB47, X20BB52, X20BB57, X20BB62, X20BB67,
X20BB72, X20BB77, X20BB80, X20BB81, X20BB82

Coated Bus Base Modules

X20cBB22, X20cBB27, X20cBB42, X20cBB47, X20cBB52, X20cBB57, X20cBB62, X20cBB67, X20cBB72, X20cBB77, X20cBB80, X20cBB81, X20cBB82

Bus Controller Modules

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

Coated Bus Controller Modules

X20cBC0043, X20cBC0043-10, X20cBC0053, X20cBC0083, X20cBC0087, X20cBC0143-10, X20cBC1083, X20cBC8083, X20cBC8084

Bus Modules

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

Coated Bus Modules

X20cBM01, X20cBM05, X20cBM11, X20cBM12, X20cBM15, X20cBM21, X20cBM23, X20cBM31, X20cBM32, X20cBM33

Universal Mixed Modules

X20CM0985-1, X20CM2821, X20CM4800X, X20CM8281

Coated Universal Mixed Modules

X20cCM0985-1, X20cCM2821, X20cCM4800X, X20cCM8281

Cabinet Monitoring Modules

X20CMR100, X20CMR111

Coated Cabinet Monitoring Modules

X20cCMR100, X20cCMR111

Compact CPU Modules

X20CP0201, X20CP0291, X20CP0292, X20XC0201, X20XC0202, X20XC0292, X20CP0410, X20CP0411, X20CP0482, X20CP0483, X20CP0484, X20CP0484-1

Coated Compact CPU Modules

X20cCP0201, X20cCP0291, X20cCP0292, X20cXC0201, X20cXC0202, X20cXC0292, X20cCP0410, X20cCP0411, X20cCP0482, X20cCP0483, X20cCP0484, X20cCP0484-1

CPU Modules

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

Coated CPU Modules

X20cCP1301, X20cCP1381, X20cCP1381-RT, X20cCP1382, X20cCP1382-RT, X20cCP1483, X20cCP1483-1, X20cCP1484, X20cCP1484-1, X20cCP1485, X20cCP1485-1, X20cCP1486, X20cCP1583, X20cCP1584, X20cCP1585, X20cCP1586, X20cCP3484, X20cCP3484-1, X20cCP3485, X20cCP3485-1, X20cCP3486, X20cCP3583, X20cCP3584, X20cCP3585, X20cCP3586

Communication Modules

X20CS1020, X20CS1030, X20CS1070

Coated Communication Modules

X20cCS1020, X20cCS1030, X20cCS1070

Counter Modules

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

Coated Counter Modules

X20cDC1176, X20cDC1178, X20cDC1196, X20cDC1198, X20cDC11A6, X20cDC1376, X20cDC137A, X20cDC1396, X20cDC1398, X20cDC1976, X20cDC2395, X20cDC2396, X20cDC2398, X20cDC4395

Digital Input Modules

X20DI2371, X20DI2372, X20DI2377, X20DI2653, X20DI4371, X20DI4372, X20DI4375, X20DI4653, X20DI4760, X20DI6371, X20DI6372, X20DI6373, X20DI8371, X20DI9371, X20DI9372, X20DID371, X20DIF371

Coated Digital Input Modules

X20cDI2371, X20cDI2372, X20cDI2377, X20cDI2653, X20cDI4371, X20cDI4372, X20cDI4375, X20cDI4653, X20cDI4760, X20cDI6371, X20cDI6372, X20cDI6373, X20cDI8371, X20cDI9371, X20cDI9372, X20cDID371, X20cDIF371

Digital Output Modules

X20DO2322, X20DO2649, X20DO4322, X20DO4332-1, X20DO4529, X20DO4649, X20DO4F49, X20DO6322, X20DO6325, X20DO6529, X20DO6639, X20DO8232, X20DO8322, X20DO8332, X20DO9321, X20DO9322, X20DOD322, X20DOF322

Coated Digital Output Modules

X20cDO2322, X20cDO2649, X20cDO4322, X20cDO4332-1, X20cDO4529, X20cDO4649, X20cDO4F49, X20cDO6322, X20cDO6325, X20cDO6529, X20cDO6639, X20cDO8232, X20cDO8322, X20cDO8332, X20cDO9321, X20cDO9322, X20cDOD322, X20cDOF322

Counter and Positioning Modules

X20DS1119, X20DS1319, X20DS4389

Coated Counter and Positioning Modules

X20cDS1119, X20cDS1319, X20cDS4389

Hub System Modules

0AC808.9-1, X20HB1881, X20HB1882, X20HB2880, X20HB2881, X20HB8815, X20HB8880, X20HB8884

Coated Hub System Modules

X20cHB1881, X20cHB1882, X20cHB2880, X20cHB2881, X20cHB8815, X20cHB8880, X20cHB8884

Dummy Modules

X20IF0000, X20ZF0000

Interface Modules

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

Coated Interface Modules

X20cIF0000, X20cIF1020, X20cIF1030, X20cIF1041-1, X20cIF1043-1, X20cIF1051-1, X20cIF1053-1, X20cIF1061-1, X20cIF1063-1, X20cIF1072, X20cIF1074, X20cIF1082, X20cIF1082-2, X20cIF10A1-1, X20cIF10D1-1, X20cIF10D3-1, X20cIF10E1-1, X20cIF10E3-1, X20cIF10G3-1, X20cIF10H3-1, X20cIF2181-2, X20cIF2772, X20cIF10X0

Motor Bridge Module

X20MM2436

Coated Motor Bridge Module

X20cMM2436

Modules for measure active, reactive and apparent power

X20AP3111, X20AP3121, X20AP3131, X20AP3161

Coated Modules for measure active, reactive and apparent power

X20cAP3111, X20cAP3121, X20cAP3131, X20cAP3161

reACTION Technology Modules

X20RT8001, X20RT8201, X20RT8202, X20RT8401

Coated reACTION Technology Modules

X20cRT8001, X20cRT8201, X20cRT8202, X20cRT8401

Memory Keys

X20MK0201, X20MK0203, X20MK0211, X20MK0213, X20MK0223

Coated Memory Keys

X20cMK0201, X20cMK0203, X20cMK0211, X20cMK0213, X20cMK0223

Power Distribution Modules

X20PD0011, X20PD0012, X20PD0016, X20PD2113

Coated Power Distribution Modules

X20cPD0011, X20cPD0012, X20cPD0016, X20cPD2113

Power Supply Modules

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

Coated Power Supply Modules

X20cPS2100, X20cPS3300, X20cPS4951, X20cPS8002, X20cPS9400, X20cPS9402, X20cPS9500, X20cPS9502, X20cPS9600, X20cPS9602

Safety Digital Input Modules [1]

X20SI2100, X20SI4100, X20SI9100

Coated Safety Digital Input Modules [1]

X20cSI2100, X20cSI4100, X20cSI9100

Safety CPU Modules [1]

X20SL8000, X20SL8001, X20SL8010, X20SL8011, X20SL8100, X20SL8101

Coated Safety CPU Modules [1]

X20cSL8000, X20cSL8001, X20cSL8010, X20cSL8011, X20cSL8100, X20cSL8101

Safety Intelligently Programmable Modules [1]

X20SLX210, X20SLX410, X20SLX910

Coated Safety Intelligently Programmable Modules [1]

X20cSLX210, X20cSLX410, X20cSLX910

Safety Digital Output Modules [1]

X20SO2110, X20SO2120, X20SO4110, X20SO4120

Coated Safety Digital Output Modules [1]

X20cSO2110, X20cSO2120, X20cSO4110, X20cSO4120

Safety Analog Input Modules [1]

X20SA4430, X20ST4492

Coated Safety Analog Input Modules [1]

X20cSA4430, X20cST4492

Safety Digital Mixed Modules [1]

X20SC2212, X20SC2432

Coated Safety Digital Mixed Modules [1]

X20cSC2212, X20cSC2432

Terminal Blocks

X20TBxx, 0TBxx

CPU Accessory

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