

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 Schneider Electric

8ème Rue-ZI Carros F-06516 Carros Cedex

France

PLACE OF Schneider Electric Manufacturing Carros

PRODUCTION ZI Carros

8ème Rue – ZI Carros F-06516 Carros Cedex

France

PT Schneider Electric Manufacturing Batam

Batamindo Industial Park block 4 Muka Kuning- Batam Island

Indonesia

DESCRIPTION Programmable Logic Controller, Automation Platform

TYPE Modicon M340 – M580-x80

APPLICATION Marine and Offshore applications for Environmental category ENV 3 as

defined in Lloyd's Register Type Approval Scheme, Test Specification

number 1, 2015

STANDARD IEC 61131-2 / IACS E10

Rules and Regulations of Ships 2018

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Type approval department Lloyd's Register EMEA

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LIMITATION Alarms and safeties are not to be combined in same PLC.

For safety related software SCA Software conformity assessment needs to

be complied with.

REMARKS -Any application software is not included in this certificate and should be

submitted for review against The Rules and regulations.

-Components to be placed in EMC cabinet to comply with limits 156-165

MHz.

RATINGS Voltage: 24Vdc, 230V ac and 100V ac @ 50/60 Hz

Modicon M340, M580 consists of the following components:

(H) = harsh environment

Processors

BMX P34 1000 Processor, 1 channel Modbus BMX P34 1000 H Processor, 1 channel Modbus BMX P34 2000 Processor, 2 channel Modbus BMX P34 2010 Processor, Modbus CANopen

BMX P34 20102 Processor, Modbus CANopen and Ethernet BMX P34 20102 CL Processor, Modbus CANopen and Ethernet

BMX P34 2020 Processor, Modbus Ethernet
BMX P34 2020 H Processor, Modbus Ethernet
BMX P34 2030 Processor, Ethernet CANopen
BMX P34 20302 Processor, Ethernet CANopen
BMX P34 20302 H Processor, Ethernet CANopen
BMX P34 20302 CL Processor, Ethernet CANopen
BMX PRA 0100 Peripheral Remote IO Adaptor

BMX P34 20 ITRB Processor, 2 channels dedicated to IT business

BME P58 6040 Control Processor Unit BME P58 6040 C Control Processor Unit BME P58 5040 Control Processor Unit

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BME P58 5040 C Control Processor Unit BME P58 4040 Control Processor Unit BME P58 4020 Control Processor Unit BME P58 3040 Control Processor Unit BME P58 3020 Control Processor Unit BME P58 2040 Control Processor Unit BME P58 2040 H Control Processor Unit Control Processor Unit BME P58 2020 BME P58 2020 H Control Processor Unit BME P58 1020 Control Processor Unit BME P58 1020 H Control Processor Unit BME H58 6040 Control Processor Unit Hot-Standby BME H58 6040 C Control Processor Unit Hot-Standby BME H58 4040 Control Processor Unit Hot-Standby BME H58 4040 K Control Processor Unit Hot-Standby BME H58 4040 C Control Processor Unit Hot-Standby BME H58 2040 Control Processor Unit Hot-Standby BME H58 2040 K Control Processor Unit Hot-Standby BME H58 2040 C Control Processor Unit Hot-Standby **Power Supply** BMX CPS 2000 Power Supply, standard AC BMX CPS 2010 Power Supply, standard isolated DC Power Supply, high power isolated 24VDC to 48VDC BMX CPS 3020 Power Supply, high power isolated 24VDC to 48VDC BMX CPS 3020 H BMX CPS 3500 Power Supply, high power AC BMX CPS 3500 H Power Supply, high power AC BMX CPS 3540 T Power Supply, high power AC BMX CPS 4002 Power Supply, redundant, high power AC BMX CPS 4002 H Power Supply, redundant, high power AC BMX CPS 4022 Redundant HP 24-48 VDC Power Supply BMX CPS 4022 H Redundant HP 24-48 VDC Power Supply BMX CPS 3522 Redundant HP 125 VDC Power Supply

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BMX CPS 3522 H

Digital I / O **BMX DAI 0814** Digital input module, 08l, 100...120 Vac Digital input module, 08l, 220 Vac **BMX DAI 0805 BMX DAI 1602** Digital input module, 16I 24VAC/24VDC source BMX DAI 1602 H Digital input module, 16I 24VAC/24VDC source **BMX DAI 1603** Digital input module, 16I 48VAC Digital input module, 16I 48VAC BMX DAI 1603 H BMX DAI 1604 Digital input module, 16I, 100VAC to 120VAC BMX DAI 1604 H Digital input module, 16I, 100VAC to 120VAC **BMX DAO 1605** Digital output module, 16Q triacs **BMX DAO 1605 H** Digital output module, 16Q triacs **BMX DDI 1602** Digital input module, 16I 24VDC sink BMX DDI 1602 H Digital input module, 16I 24VDC sink **BMX DDI 1603** Digital input module, 16I 48VDC sink BMX DDI 1603 H Digital input module, 16I 48VDC sink BMX DDI 1604 T Digital input module, 16I 125 V DC sink BMX DDI 3202 K Digital input module, 32I 24VDC sink BMX DDI 3202 KH Digital input module, 32I 24VDC sink Digital input module, 64I 24VDC sink BMX DDI 6402 K BMX DDI 6402 KH Digital input module, 64I 24VDC sink Digital mixed I/O module, 8I 24VDC 8Q transistors source **BMX DDM 16022** BMX DDM 16022 H Digital mixed I/O module, 8I 24VDC 8Q transistors source Digital mixed I/O module, 8I 24VDC 8Q relays BMX DDM 16025 Digital mixed I/O module, 8I 24VDC 8Q relays BMX DDM 16025 H BMX DDM 3202 K Digital mixed I/O module, 16I 24VDC 16Q transistors source **BMX DDO 1602** Digital output module, 16Q transistors source 0.5A **BMX DDO 1602 H** Digital output module, 16Q transistors source 0.5A **BMX DDO 1612** Digital output module, 16Q sink transistors **BMX DDO 1612 H** Digital output module, 16Q sink transistors BMX DDO 3202 K Digital output module, 32Q transistors source 0.1A BMX DDO 3202 KC Digital output module, 32Q transistors source 0.1A

Redundant HP 125 VDC Power Supply

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BMX DDO 6402 K

BMX DDO 6402 KC Digital output module, 64Q transistors source 0.1A **BMX DRA 0805** Digital relay output module, 8Q isolated relays BMX DRA 0805 H Digital relay output module, 8Q isolated relays **BMX DRA 1605** Digital relay output module, 16Q relays BMX DRA 1605 H Digital relay output module, 16Q relays BMX DRA 0804 T Digital relay output module, 8Q isolated relays DIG 8Q 125VDC/250VAC ISOLATED RELAYS **BMX DRA 0815** BMX DRA 0815H DIG 8Q 125VDC/250VAC ISOLATED RELAYS Analog I / O **BMX AMI 0410** Analog input module, 4 U/I In isolated high speed BMX AMI 0410 H Analog input module, 4 U/I In isolated high speed Analog input module, 8 U/I In No Isolated Fast **BMX AMI 0800 BMX AMI 0810** Analog input module, 8 U/I In Isolated Fast BMX AMI 0810 H Analog input module, 8 U/I In Isolated Fast BMX AMM 0600 Analog mixed I/O module, 4 In U/I, 2 Out U/I BMX AMM 0600 H Analog mixed I/O module, 4 In U/I, 2 Out U/I BMX AMO 0210 Analog output module, 2 U/I isolated Out BMX AMO 0210 H Analog output module, 2 U/I isolated Out Analog output module, 4 U/I Isolated out BMX AMO 0410

Analog output module, 4 U/I Isolated out

Analog output module, 8 Current No Isolated out

Analog input module, 4 TC/RTD isolated Inputs Analog input module, 4 TC/RTD isolated Inputs

Analog input module, 8 TC/RTD isolated Inputs

Analog input module, 8 TC/RTD isolated Inputs

Analog input module 8 current channels (HART)

Analog input module 8 current channels (HART) Analog output module 8 current channels (HART)

Digital output module, 64Q transistors source 0.1A

BME AHO 0412 C Analog output module 8 current channels (HART) Communication device

BMX AMO 0410 H

BMX AMO 0802

BMX ART 0414

BMX ART 0814 BMX ART 0814 H

BME AHI 0812

BME AHI 0812 H

BME AHO 0412

BMX ART 0414 H

BMX NOE 0100 Communication module Ethernet 10/100 RJ45

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BMX NOE 0100 H Communication module Ethernet 10/100 RJ45

BMX NOE 0110 M340 Factorycast module

BMX NOE 0110 H M340 Factorycast module

BMX NOC 0401 Communication module Ethernet 10/100 RJ45 BMX NOC 0402 Communication module Ethernet 10/100 RJ45

BME NOC 0301 Full Communication Ethernet
BME NOC 0301 C Full Communication Ethernet
BME NOC 0311 Full FactoryCast Ethernet
BME NOC 0311 C Full FactoryCast Ethernet

BME NOC 0321 NOC Control
BME NOC 0321 C NOC Control
BMX NOM 0200 2 serial link ports
BMX NOM 0200 H 2 serial link ports
BMX NGD 0100 Global Data module
BME NOS 0300 Ethernet embedded switch

BME NOS 0300 C

BME NOP 0300 M580 IEC 61850 Communication Module BME NOP 0300 C M580 IEC 61850 Communication Module

Ethernet embedded switch

BME CXM 0100 CANopen module
BME CXM 0100 H CANopen module
BMX XBE 1000 Extension rack module
BMX XBE 1000 H Extension rack module
BMX EIA 0100 AS-interface module

BMX NOR 0200 RTU communication module BMX NOR 0200 H RTU communication module **BMX NRP 0200** Communication with optic fiber BMX NRP 0200 C Communication with optic fiber **BMX NRP 0201** Communication with optic fiber BMX NRP 0201 C Communication with optic fiber BMX CRA 31200 Communication module IO adapter Communication module IO adapter **BMX CRA 31210** BMX CRA 31210 C Communication module IO adapter

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BME CRA 31210 Communication module remote IO adapter BME CRA 31210 C Communication module remote IO adapter

Counting & Positioning

BMX EHC 0200 Counting module, high speed 2Ch
BMX EHC 0200 H Counting module, high speed 2Ch
BMX EHC 0800 Counting module, high speed 8Ch
BMX EHC 0800 H Counting module, high speed 8Ch

BMX ETM 0200 Frequency module BMX ETM 0200 H Frequency module

BMX MSP 0200 Positioning module (Pulse Output Train)

BMX EAE 0300 SSI encoder interface BMX EAE 0300 H SSI encoder interface BMX ERT 1604 T Time stamping

Backplanes

BMX XBP 0400 Backplane, 4 slots BMX XBP 0400 H Backplane, 4 slots BMX XBP 0600 Backplane, 6 slots BMX XBP 0600 H Backplane, 6 slots **BMX XBP 0800** Backplane, 8 slots BMX XBP 0800 H Backplane, 8 slots BMX XBP 1200 Backplane, 12 slots BMX XBP 1200 H Backplane, 12 slots

BME XBP 0400 Backplane Ethernet, 4 slots
BME XBP 0400 H Backplane Ethernet, 4 slots
BME XBP 0800 Backplane Ethernet, 8 slots
BME XBP 0800 H Backplane Ethernet, 8 slots
BME XBP 1200 Backplane Ethernet, 12 slots
BME XBP 1200 H Backplane Ethernet, 12 slots

BME XBP 0602 Backplane, 6 slots, dual power supplies
BME XBP 0602 H Backplane, 6 slots, dual power supplies
BME XBP 1002 Backplane, 10 slots, dual power supplies
BME XBP 1002 H Backplane, 10 slots, dual power supplies

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Accessories

ABE7 CPA xxx Wiring block for analog inputs

BMX FC... Associated Cables
BMX FT... Associated Cables

BMX FTB 2000 Terminal block kit, screw 20 std. points
BMX FTB 2010 Terminal block kit, screw 20 cir. points
BMX FTB 2020 Terminal block kit, spring 20 points
BMX FTB 2820 Terminal block kit, spring 28 points

BMX RMS 008MP Memory card 8Mo

BMX RMS 008MPF Memory card 8Mo / 8Mo Files BMX RMS 128MPF Memory card 8Mb / 128Mo files BMX RMS 004GPF 4Go Memory card for M580 CPU

BMX RWS B000M Memory card NOE Web B

BMX RWS C016M Memory card NOE Web C 16Mo

BMX RWS FC032M Memory Card 16Mo
BMX XBC xxxK BusX Cord (xxx = length)
BMX XCA USB Hxx USB cable (x = length)
BMX XEM 010 Protective cover
BMX XSP xx00 Shield bar kit , xx slots
BMX XTS CPSxx Connector kit

BMX XTS HSC20 Connector kit
TCS CCN... Associated Cables

TCS MCN 3M4... Modbus communication cables

490 NAC 0100 HSBY socket 490 NAC 0201 HSBY socket

PACK & KIT

BMX XBE 2005 Extension Rack KIT (2 BMX XBE 1000; Cable BMX XBC 008K; TSX TLY EX)

Safety

BMEP584040S Safety processor BMEP58CPROS3 Safety coprocessor

BMXCPS4002S Safety power supply 100...240 Vac BMXSAI0410 Safety analogic inputs, 4 ch 4-20mA

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BMXSDI1602 Safety digital inputs, 16 ch 24 Vdc
BMXSDO0802 Safety digital outputs, 8 ch 0,5 A, 24 Vdc
BMXSRA0405 Safety digital outputs, 4 ch, 5 A, 24Vdc/230Vac

"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. W05111662 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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