

Schneider BME Series Service Manual

BMEP584040S

1. Description

standalone safety processor, Modicon M580, 16MB, 61 Ethernet devices, 16 remote IO racks of X80 and Quantum, 64 CIP safety devices

3. Product Information

standalone safety processor, Modicon M580, 16MB, 61 Ethernet devices, 16 remote IO racks of X80 and Quantum, 64 CIP safety devices

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Main

Range of product

Modicon M580

Product or component type

Processor module

Impregnation material

Conformal coated

Complementary

Number of racks

8

Local I/O processor capacity (discrete)

4096 I/O

Local I/O processor capacity (analog)

1024 I/O

Number of application specific channel (local rack)

144

Application specific I/O

Counter

Motion control

SSI encoder

Accurate time stamping

Serial link

HART

Checks

Safety control

Process control

Control channels

Programmable loops

Integrated connection type

1 Ethernet TCP/IP for service port

2 Ethernet TCP/IP for device network

USB type mini B

Number of remote I/O station

16 - 2 rack(s) per remote drop

Number of distributed equipment

64

Number of CIP safety IO devices

64

Communication module processor capacity

16 AS-Interface module

4 Ethernet communication module

Communication service

RIO scanner

DIO scanner

Memory description

Expandable flash, 4 GB for data storage

Integrated RAM, 10 kB for system memory

Integrated RAM, 16 MB for program process

Integrated RAM, 2048 kB for data process

Integrated RAM, 4 MB for program safety

Integrated RAM, 1024 kB for data safety

Application structure

2 auxiliary tasks

1 periodic safe task

128 event tasks

1 periodic fast task

1 cyclic/periodic master task

Cybersecurity

Achilles certified

DoS prevention

IPSec

SNMP logging

Syslog protocol support

Audit trail

Embedded firewall

Firmware signature

Password protection

Port hardening

Security log

Number of instructions per ms

30 Kinst/ms 65 % Boolean + 35 % fixed arithmetic

40 Kinst/ms 100 % Boolean

Current consumption

295 mA at 24 V DC

MTBF reliability

775000 H

Marking

CE

Environment

Vibration resistance

3 gn

Shock resistance

15 gn

Ambient air temperature for operation

-25...60 °C

Ambient air temperature for storage

-40...85 °C

Operating altitude

0...2000 m

2000...5000 m with derating factor

Relative humidity

5...95 % at 55 °C without condensation

IP degree of protection

IP20

Directives

2014/30/EU - electromagnetic compatibility

2006/42/EC - machinery

2014/34/EU - ATEX directive

Product certifications

CE

UL

CSA

RCM

EAC

Merchant Navy

ATEX zone 2/22

IECEx zone 2/22

TÜV

Standards

IEC 61131-2

IEC 61010-2-201

UL 61010-2-201

CSA C22.2 No 61010-2-201

IACS E10

EN/IEC 61000-6-5, interface type 1 and type 2

EN/IEC 61850-3, location G

IEC 60079-0

Environmental characteristic

Hazardous location class I division 2

Gas resistant class Gx conforming to ISA S71.04

Gas resistant class 3C4 conforming to IEC 60721-3-3

Dust resistant class 3S4 conforming to IEC 60721-3-3

Sand resistant class 3S4 conforming to IEC 60721-3-3

Salt resistant level 2 conforming to IEC 68252

Mold growth resistant class 3B2 conforming to IEC 60721-3-3

Fungal spore resistant class 3B2 conforming to IEC 60721-3-3

Protective treatment

Conformal coating

Safety level

SIL 3 conforming to IEC 61508

SIL 3 conforming to IEC 61511

SILCL 3 conforming to IEC 62061

SILCL 3 conforming to ISO 13849-1 category 4

SIL 4 conforming to EN 50126

SIL 4 conforming to EN 50128

SIL 4 conforming to EN 50129

Supply

Internal power supply via rack

Status LED

1 LED (green) processor running (RUN)

1 LED (red) processor or system fault (ERR)

1 LED (red) I/O module fault (I/O)

1 LED (green) download in progress (DL)

1 LED (red) memory card or CPU flash fault (BACKUP)

1 LED (green/red) ETH MS (Ethernet port configuration status)

1 LED (green/red) Eth NS (Ethernet network status)

1 LED (green) processor in safety mode (SRUN)

1 LED (green) processor in maintenance mode (SMOD)

1 LED (red) I/O values overridden by user (FORCED IO)

Net weight

0.849 kg

Packing Units

Unit Type of Package 1

PCE

Number of Units in Package 1

1

Package 1 Height

8.900 cm

Package 1 Width

17.800 cm

Package 1 Length

25.200 cm

Package 1 Weight

880.000 g

Unit Type of Package 2

S03

Number of Units in Package 2

6

Package 2 Height

30.000 cm

Package 2 Width

30.000 cm

Package 2 Length

40.000 cm

Package 2 Weight

5.758 kg