01 / Product and system dashboard

SCHNEIDER ELECTRIC

BMEP582040H

Processor Module

Product role

Schneider Electric BMEP582040H is a hardened Modicon M580 standalone processor for local I/O, Ethernet remote I/O and distributed-device control.

Local modules
Up to four backplanes

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BMEP582040H
Control application and scanning

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Ethernet equipment
RIO drops and DIO devices

Engineering scope

BMEP582040H is the hardened standalone controller. Capacity values are system maxima and depend on I/O density, backplane slots and network configuration; they are not onboard I/O counts.

02 / Technical capability and hardware relationships

System capacity	Applicable limit	Interface	Applicable fact
Product type	Standalone processor module	Distributed-device allocation	64 connections; 3 reserved for local slaves
Controller family	Modicon M580	Distributed scanning capacity	61 connections after local-slave reservation
Environmental design	Industrially hardened, H variant	Ethernet communication modules	2, excluding the controller
Maximum discrete I/O	2048 system channels	Embedded scanner services	RIO and DIO
Maximum analog I/O	512 system channels	Front Ethernet interfaces	3 RJ45: 1 service and 2 device-network ports
Maximum expert I/O	72 system channels	Ethernet link rate	10/100 Mbps, autonegotiation
Maximum local backplanes	4, main plus extensions	Copper Ethernet segment	100 m maximum
Maximum RIO drops	8; up to 2 backplanes per drop	USB interface	High-speed USB 2.0 mini-B, 480 Mbps

03 / Applications and engineering integration

Local machine and process I/O

Coordinate discrete, analog and expert modules across up to four local backplanes. Validate the complete module allocation against the controller capacity and available rack slots.

Ethernet remote I/O

Manage up to eight RIO drops with compatible X80 adapters. Each drop can contain a main and extended backplane; configure its channels and network topology as part of the complete system.

Distributed Ethernet equipment

Use the embedded DIO scanner for compatible distributed equipment. The 64-connection allocation includes three local-slave reservations, leaving 61 scanning connections.

Engineering and diagnostics

Use the service port for approved monitoring or port mirroring and the mini-B USB interface for supported engineering connections. Keep service access separate from the RSTP ring topology.

Configuration context

The embedded scanner supports both Ethernet remote I/O and distributed equipment. Up to eight RIO drops are supported, with a maximum of two backplanes per drop. The distributed-device allocation is 64 connections, of which three are reserved for local slaves, leaving 61 for scanning distributed equipment. The controller supports two Ethernet communication modules in addition to its embedded interfaces; the adapter and network architecture must match the configured remote system.

04 / Service and installation decisions

Exact controller selection

Retain the H suffix in BMEP582040H. This is a hardened standalone controller; it must not be selected as a Hot Standby or safety controller merely because other M580 references support those functions.

I/O capacity and rack layout

Treat 2048 discrete, 512 analog and 72 expert channels as system maxima. Confirm I/O density, available slots, rack power and all module-specific restrictions.

Remote-drop architecture

Use the compatible adapter and supported main-ring arrangement for each RIO drop. Do not exceed eight drops or two backplanes per drop for this controller.

Service-port topology

The service port does not support RSTP, VLANs or QoS tagging. An inappropriate connection to the device network can create a logical loop and disrupt communications.

Cabling and grounding

Use suitable industrial shielded Ethernet cable and maintain the required equipotential grounding. Limit each copper Ethernet segment to 100 m and use the specified conversion equipment for longer optical links.

Configuration and return to service

Preserve the project, firmware compatibility and configured I/O behavior before replacement. Install the USB driver before a PC connection and validate controller state, network operation and controlled I/O response before release.

05 / Reference basis and related portfolio

Lifecycle and supply

A current manufacturer lifecycle phase for BMEP582040H has not been confirmed. Request current support and replacement guidance using its complete identity and installed configuration. Apter Power availability is confirmed separately in the quotation.

Reference basis

Schneider Electric Modicon M580 Hardware User Guide, EIO0000001578.19, 07/2026.

Apter Power technical summary; not a manufacturer-issued manual. Apply the original instructions for the actual installation.

Related industrial automation products

Navigation only; no substitution or compatibility claim.

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Emerson KJ4001X1-BA2 VE3051C0 12P1562X042

Discuss your installed configuration

Send the full unit marking and connection details.

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