

PM590-ETH-1SAP150000R0271

AC500 PM590-ETH Programmable Logic Controller

ABB PM590-ETH-1SAP150000R0271 is an AC500 programmable logic controller with 2048 kB program memory and 24 V DC supply. It executes control logic and exchanges automation data through onboard Ethernet and two serial interfaces.

BRAND	ABB	FAMILY	ABB AC500 programmable automation controller system
PART	PM590-ETH-1SAP150000R0271	SYSTEM ROLE	Executes the AC500 application and scheduled control tasks

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PM590-ETH-1SAP15000
0R0271

MANUFACTURER SOURCE RECORD

PLC Automation Main Catalog and AC500 PM590-ETH Device Record
ABB 3ADR020077C0204 Rev. E and Control Builder Plus device record

Product Overview

SYSTEM FUNCTION

ABB PM590-ETH-1SAP150000R0271 is an AC500 programmable logic controller with 2048 kB program memory and 24 V DC supply. It executes control logic and exchanges automation data through onboard Ethernet and two serial interfaces.

FUNCTION 1

Executes the AC500 application and scheduled control tasks

FUNCTION 2

Coordinates local and networked ABB I/O resources

FUNCTION 3

Provides integrated Ethernet for programming and plant communication

FUNCTION 4

Supports serial and FBP devices in the documented control architecture

System Components

COMPONENT	DOCUMENTED ROLE
Host / carrier	ABB AC500 programmable automation controller system
Primary interface	Executes the AC500 application and scheduled control tasks
Engineering context	The controller is used with the matched AC500 terminal base, 24 V DC supply, configured local or remote I/O, Ethernet infrastructure and serial field devices. Commissioning restores the approved project and validates communications, I/O mapping, diagnostics and application sequencing.
Commissioning duty	Prove logic sequencing, communications and every affected I/O path before production release.

TECHNICAL NOTE

Mount PM590-ETH-1SAP150000R0271 on the documented AC500 terminal base and record the Ethernet, serial, FBP and I/O configuration before removal. Restore the approved Control Builder project, check supply and communications, then complete controlled logic and I/O tests.

Technical Data

PARAMETER	VALUE	PARAMETER	VALUE
ABB order code	1SAP150000R0271	Serial interfaces	2 x RS-232/485
Controller type	PM590-ETH	Fieldbus interface	FBP
Program memory	2048 kB	Removable storage	SD card slot
Supply	24 V DC	Local display	LCD
Integrated communication	Ethernet and 2 serial interfaces	Minimum cycle time, bit/word/float	0.002 / 0.004 / 0.004 us

Related Products on Apter Power

MODEL	SYSTEM ROLE	APTER POWER PAGE
SR511	DC/DC regulator	View SR511 page
FPBA-01-M	PROFIBUS adapter	View FPBA-01-M page
FEN-21	encoder interface	View FEN-21 page
FEIP-21	EtherNet/IP adapter	View FEIP-21 page
SPDSI22	digital input module	View SPDSI22 page
SPASI23	analog output module	View SPASI23 page
PM566-TP-ETH	AC500-eCo PLC	View PM566-TP-ETH page
PM511V08	Advant controller	View PM511V08 page

ENGINEERING BOUNDARY

Confirm PM590-ETH-1SAP150000R0271, AC500 base and I/O arrangement, hardware and firmware revision, 24 V DC supply, Ethernet and serial settings, FBP devices, grounding, project version and controlled functional-test results before commissioning.

Applications and Precautions

Common Applications

High-speed AC500 machine control

Runs deterministic logic and coordinates distributed device states in an engineered machine station.

Ethernet-connected process skids

Integrates the controller with supervisory and peer systems through the configured Ethernet interface.

Serial field-device coordination

Uses the documented RS-232/485 channels for approved serial devices and protocols.

AC500 controller replacement

Restores an existing PM590-ETH project while retaining terminal-base, network and I/O records.

Product Precautions

- 1

Confirm PM590-ETH and order code 1SAP150000R0271 on the physical label.
- 2

Place the controlled process and connected outputs in the approved maintenance state.
- 3

Isolate the 24 V DC supply and use ESD controls while handling the controller.
- 4

Back up the AC500 project, Ethernet settings, serial parameters and I/O configuration.
- 5

Label the terminal base, FBP, Ethernet, serial and field connections before removal.
- 6

Install the controller on the documented base and restore the approved project and addresses.
- 7

Review power, run, error, network and I/O diagnostics after controlled startup.
- 8

Prove logic sequencing, communications and every affected I/O path before production release.

IMPORTANT NOTICE

Confirm PM590-ETH-1SAP150000R0271, AC500 base and I/O arrangement, hardware and firmware revision, 24 V DC supply, Ethernet and serial settings, FBP devices, grounding, project version and controlled functional-test results before commissioning.

ACCEPTANCE CHECK	REQUIRED EVIDENCE
Identity	PM590-ETH-1SAP150000R0271
Configuration	Review power, run, error, network and I/O diagnostics after controlled startup.
Functional release	Prove logic sequencing, communications and every affected I/O path before production release.

Engineer FAQ

Q1 Which official identity detail distinguishes PM590-ETH-1SAP150000R0271 during receiving inspection?

For PM590-ETH-1SAP150000R0271, the official source identifies abb order code as 1SAP150000R0271. Confirm the same value in the installed record before work.

Q3 How does the published program memory affect selection of PM590-ETH-1SAP150000R0271?

For PM590-ETH-1SAP150000R0271, the official source identifies program memory as 2048 kB. Confirm the same value in the installed record before work.

Q5 Where does PM590-ETH-1SAP150000R0271 fit in the approved installed system arrangement?

For PM590-ETH-1SAP150000R0271, the official source identifies installed system as ABB AC500 programmable automation controller system. Confirm the same value in the installed record before work.

Q7 Which diagnostic sequence should follow controlled energization of PM590-ETH-1SAP150000R0271?

Review power, run, error, network and I/O diagnostics after controlled startup.

Q2 What documented controller type must be matched before PM590-ETH-1SAP150000R0271 is installed?

For PM590-ETH-1SAP150000R0271, the official source identifies controller type as PM590-ETH. Confirm the same value in the installed record before work.

Q4 Which supply condition must remain unchanged when replacing PM590-ETH-1SAP150000R0271?

For PM590-ETH-1SAP150000R0271, the official source identifies supply as 24 V DC. Confirm the same value in the installed record before work.

Q6 What connection evidence should be retained before disconnecting PM590-ETH-1SAP150000R0271?

Back up the AC500 project, Ethernet settings, serial parameters and I/O configuration. Label the terminal base, FBP, Ethernet, serial and field connections before removal.

Q8 What functional result is required before PM590-ETH-1SAP150000R0271 returns to service?

Prove logic sequencing, communications and every affected I/O path before production release.

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