

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.

IDENTITY	VERIFIED VALUE
Manufacturer	ABB
System family	ABB AC500 programmable automation controller system
Part number	PM590-ETH-1SAP150000R0271
Product role	Executes the AC500 application and scheduled control tasks
Lifecycle	Installed product record

DOCUMENT SCOPE

Exact-article identity, technical data, host role, installation checks, applications, precautions and engineering verification.

MODEL-SPECIFIC ENGINEERING NOTE

Mount PM590-ETH-1SAP150000R0271 on the documented AC500 terminal base and record the Ethernet, serial, FBP and I/O configuration before removal.

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com



PM590-ETH-1SAP15000
R0271

Technical Specifications

Technical values below are limited to the named ABB product record and directly applicable manufacturer documentation.

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

Verified Product Record

DATA GROUP	VERIFIED VALUE
Installed host / carrier	ABB AC500 programmable automation controller system
Primary system role	Executes the AC500 application and scheduled control tasks
Connection boundary	Mount PM590-ETH-1SAP150000R0271 on the documented AC500 terminal base and record the Ethernet, serial, FBP and I/O configuration before removal.
Controlled acceptance duty	High-speed AC500 machine control

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.

Pre-Installation Checks

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.

Documented Service Record

RECORD ITEM	REQUIRED ENTRY
As-found article	PM590-ETH-1SAP150000R0271
Installed host	ABB AC500 programmable automation controller system
Connection record	Capture before removal
Controlled release	Diagnostics and functional proof

System Role and Architecture

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

Matched System Components

NO.	DOCUMENTED COMPONENT / ROLE
1	ABB AC500 programmable automation controller system
2	PM590-ETH
3	High-speed AC500 machine control
4	Mount PM590-ETH-1SAP150000R0271 on the documented AC500 terminal base and record the Ethernet, serial, FBP and I/O configuration before removal.

System Integration Record

INTEGRATION ITEM	DOCUMENTED ROLE
Host identity	ABB AC500 programmable automation controller system
Interface role	Executes the AC500 application and scheduled control tasks
Field / power 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 evidence	Prove logic sequencing, communications and every affected I/O path before production release.

Installation and Connection Checks

- 1

Label the terminal base, FBP, Ethernet, serial and field connections before removal.
- 2

Install the controller on the documented base and restore the approved project and addresses.
- 3

Review power, run, error, network and I/O diagnostics after controlled startup.
- 4

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

MANUFACTURER SOURCE RECORD

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

Applications and Engineering Context

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.

TECHNICAL NOTE

Mount PM590-ETH-1SAP150000R0271 on the documented AC500 terminal base and record the Ethernet, serial, FBP and I/O configuration before removal.

Model-Specific Acceptance Evidence

CHECK	ACCEPTANCE CONDITION
Identity	PM590-ETH-1SAP150000R0271 recorded
Host / carrier	ABB AC500 programmable automation controller system
Physical interface	Executes the AC500 application and scheduled control tasks
Configuration	Review power, run, error, network and I/O diagnostics after controlled startup.
Functional proof	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.

Controlled Release Summary

RELEASE ITEM	MODEL-SPECIFIC CONDITION
Article identity	PM590-ETH-1SAP150000R0271
Approved role	High-speed AC500 machine control
Final validation	Prove logic sequencing, communications and every affected I/O path before production release.

Engineering 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.

Related Products on Apter Power

MODEL	SYSTEM ROLE	APTER POWER PAGE
PM566-TP-ETH	AC500-eCo PLC	View PM566-TP-ETH page
PM511V08	Advant controller	View PM511V08 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

MANUFACTURER SOURCE RECORD

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