Product role and integration

ABB / PM511V16-3BSE011181R1

ABB PM511V16-3BSE011181R1

ABB PM511V16-3BSE011181R1 is a 16 Mbyte processor module for Advant Controller 450, with ECC RAM, an S100 I/O interface and a PCMCIA program-card slot.

PCMCIA system program — PM511V16 / AC450 — S100 I/O extension

Installed-system role

Within Advant Controller 450, ABB PM511V16-3BSE011181R1 runs the configured control application and provides the processor-side S100 I/O connection. System and application backups remain separate service records.

Supply boundary

Confirm PM511V16 and 3BSE011181R1 on the module side label, the 16 Mbyte memory version and the offered program-card/accessory scope.

Configuration context

The front designation PM511V is shared by the 8 and 16 Mbyte versions. Use the component-side label and complete product ID to distinguish the V16 item before preparing a processor replacement.

Technical scope

Module facts follow the PM511V16 ordering identity and applicable PM511V design. Redundancy and takeover values describe the complete matched AC450 arrangement.

Apter Power technical support

sales13@apterpower.com | +86 18030235313

Technical capability map

ABB / PM511V16-3BSE011181R1

Parameter	Value
Manufacturer	ABB
Type designation	PM511V16
Product ID	3BSE011181R1
Controller family	Advant Controller 450
Processor	Motorola MC68040
Processor clock	25 MHz
Dynamic RAM	16 Mbyte
Memory protection	ECC
Memory contents	Runtime system, controller configuration and application

Parameter	Value
Program-card interface	Dedicated PCMCIA slot
System software storage	Flash program card; loaded to RAM during start-up
I/O connection	Dedicated S100 I/O extension interface
Engineering connection	Dedicated Advant Station 140 port
Processor redundancy	Two PM511V modules in hot standby
Redundant-pair memory	Both processors require the same RAM size
Documented standby takeover	Less than 25 ms under the specified redundant arrangement
Front controls	Four-position mode selector and ENTER/restart control
Front diagnostics	Status indicators and character display

Module facts follow the PM511V16 ordering identity and applicable PM511V design. Redundancy and takeover values describe the complete matched AC450 arrangement.

Apter Power technical support

sales13@apterpower.com | +86 18030235313

Applications and engineering precautions

ABB / PM511V16-3BSE011181R1

Regulatory process control

Execute the AC450 application using the installed AMPL program and the selected software functions. Confirm the program and system versions before processor work.

Sequence and interlock logic

Run configured process sequences and logic within the AC450 project. Validate the actual application behavior after restoration rather than assuming a processor swap restores the project.

Redundant controller service

Use a matched hot-standby PM511V pair where the installed AC450 design provides processor redundancy. Retain equal RAM sizes and verify the changeover state.

S100 I/O coordination

Connect the processor to the S100 I/O extension arrangement used by the controller. Keep the extension cabling and I/O configuration aligned with the installed rack design.

Precaution	Engineering check
Read the side label	Distinguish PM511V16 from PM511V08 using the component-side marking and product ID, not the common PM511V front designation.
Preserve program cards	Keep the correct system program card with the controller. Its presence is required for starting the backup CPU in a redundant pair.
Keep separate backups	Retain the application and controller configuration backup independently of the system program card; the two backups cannot be combined on one program card.
Match redundant memory	Use the same RAM size in both PM511V processors of a redundant arrangement. Follow the plant changeover procedure.
Control mode selection	Record the intended rotary-switch position before restoration. Apply the documented start or operating mode and check the front diagnostics.
Protect module handling	Use the controller isolation and electrostatic-handling procedure. Recheck processor seating, program-card fit and S100 connection before release.

Apter Power technical support

sales13@apterpower.com | +86 18030235313

Exact-model engineering questions

ABB / PM511V16-3BSE011181R1

How can PM511V16-3BSE011181R1 be distinguished from an 8 Mbyte PM511V?

Both versions carry PM511V on the front. The component-side label distinguishes PM511V16 with 16 Mbyte RAM from PM511V08 with 8 Mbyte RAM; retain product ID 3BSE011181R1 in the comparison.

What is held in the RAM of PM511V16-3BSE011181R1?

The dynamic RAM with ECC holds the running system software, controller system configuration and application program. The V16 version provides 16 Mbyte RAM.

Which processor is used in PM511V16-3BSE011181R1?

The PM511V design uses a Motorola MC68040 running at 25 MHz. Its controller-side role is the AC450 processor, rather than an independent field I/O module.

Can a redundant pair use PM511V16-3BSE011181R1 with a different RAM-size PM511V?

The AC450 product guide requires the two processors in a redundant configuration to have the same RAM size. Check both module side labels before planning the pair.

Why must a program card remain associated with PM511V16-3BSE011181R1?

The controller system software is stored on a PCMCIA flash program card and loaded to RAM at system start. The program card is required to start the backup CPU of a redundant pair.

Does replacing PM511V16-3BSE011181R1 automatically recover the application program?

The system software card and the application backup serve different roles. Restore the controller configuration and application from the appropriate engineering backup or correctly prepared optional application backup card.

How does PM511V16-3BSE011181R1 connect to the S100 I/O system?

The module provides a dedicated S100 I/O bus-extension connection on its front. Retain the approved extension arrangement and controller configuration for the installed I/O racks.

What takeover time is described for a redundant installation using PM511V16-3BSE011181R1?

For the specified matched AC450 redundant processor arrangement, the product guide describes backup takeover in less than 25 ms with bumpless transfer. This is a system arrangement characteristic and must not be treated as a guaranteed untested plant recovery time.

Apter Power technical support

sales13@apterpower.com | +86 18030235313

Lifecycle, verification and portfolio

ABB / PM511V16-3BSE011181R1

Manufacturer lifecycle context

ABB Advant Controller 450 lifecycle material identifies the AC450 platform as Classic and includes product 3BSE011181R1. Confirm the current status and service scope for the exact supplied module with ABB.

Support boundary

Provide the complete product ID, memory size, program-card identity and controller configuration when requesting current support or migration guidance. Apter Power availability is confirmed separately.

Technical references

Advant Controller 450 Product Guide, 3BSE 015 953R201 Rev. B.

Related ABB portfolio references

Independent catalogue references; these links do not establish compatibility, substitution or endorsement.

Complete product reference	Navigation
ABB CI532V02 3BSE003827R1	View ABB CI532V02 3BSE003827R1
ABB CI532V04 3BSE003829R1	View ABB CI532V04 3BSE003829R1
ABB PM864AK01-3BSE018161R1	View ABB PM864AK01-3BSE018161R1
ABB PM864AK02 3BSE018164R1	View ABB PM864AK02 3BSE018164R1

Commissioning focus

Read front and side markings together. Review the processor-side S100 and engineering connections.

Release criterion

Verify process I/O and the restored application under plant control. Observed behavior agrees with the saved project and handover record.

Apter Power technical support

sales13@apterpower.com | +86 18030235313