



INSTALLATION AND VERIFICATION

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# PM564-RP Field Reference

Pre-installation checks, mounting limits,  
interface cautions and commissioning sequence

Order code: 1SAP 121 000 R0001 | Supply: 24 V DC | Interface:  
RS-485 COM1

# Before installation

## Safety basis

Read the current ABB AC500-eCo documentation and the host control-panel instructions. Verify the module nameplate before work begins.

## Identification checkpoint

|   |                                                                                      |
|---|--------------------------------------------------------------------------------------|
| 1 | Order code on the unit: 1SAP 121 000 R0001                                           |
| 2 | Module name: PM564-RP; AC500-eCo processor module                                    |
| 3 | Onboard I/O: 6 digital inputs, 6 relay outputs, 2 analog inputs, and 1 analog output |
| 4 | Power supply variant: 24 V DC                                                        |
| 5 | Do not use PM564-TP, PM564-RP-AC, or Ethernet-variant data for this unit             |

## Power and environment

| Supply requirement                                                                                                              | Operating limits                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 24 V DC, -15% to +20%<br>3 A fast fuse<br>Use SELV, PELV, class 2, limited-voltage or limited-power sources as specified by ABB | 0 to +60 °C horizontal<br>0 to +40 °C vertical with output load reduced to 50% per group<br>Maximum 95% humidity, no condensation |

## Overvoltage warning

ABB states that exceeding 30 V DC for process or supply voltages can cause unrecoverable system damage.

# Mounting and interface checks

## Cabinet and protection

IP20 applies only when all terminal screws are tightened. Install the module inside a control cabinet suitable for the operating environment.

## Mechanical mounting

Use 35 mm DIN rail with 7.5 mm or 15 mm depth, or 4 mm mounting screws. ABB specifies a fastening torque of 1.2 Nm.

## Module orientation

Horizontal or vertical mounting is permitted. Apply the published vertical temperature limit and output-load reduction.

## ESD practice

Before touching communication connectors, discharge static electricity or use other suitable ESD-reduction measures.

## COM1 verification

|                      |                                                             |                          |                       |
|----------------------|-------------------------------------------------------------|--------------------------|-----------------------|
| <b>Physical link</b> | RS-485, non-isolated                                        | <b>Connector</b>         | 9-pin D-sub female    |
| <b>Rate</b>          | 1.2 to 187.5 kbit/s, configurable                           | <b>Common-mode range</b> | Typical -8 V to +12 V |
| <b>Available use</b> | Programming, Modbus master/slave, serial ASCII, CS31 master |                          |                       |

### COM1 damage risk

Do not allow the signal to exceed the published common-mode range. ABB warns that the interface can be damaged.

## Field wiring review

|   |                                                                                                                                         |
|---|-----------------------------------------------------------------------------------------------------------------------------------------|
| - | Verify terminal assignments and conductor requirements in the current ABB system documentation.                                         |
| - | Confirm input signal type, relay-output load, analog signal range, common reference, shielding, and protective devices for the project. |
| - | Confirm that optional COM2, memory, or real-time-clock accessories match the installed configuration.                                   |
| - | Tighten all terminal screws and recheck the cabinet protective-earth and separation design before power is applied.                     |

# Commissioning sequence



|   |                                                                                                                                      |
|---|--------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Confirm the full order code, supply variant, and physical condition before installation.                                             |
| 2 | Verify cabinet location, DIN-rail or screw mounting, temperature allowance, and terminal tightness.                                  |
| 3 | With power isolated, verify supply polarity, fuse, field-signal wiring, relay loads, analog circuits, and communication connections. |
| 4 | Load the approved PLC project and confirm that the selected hardware and optional accessories match the physical module.             |
| 5 | Apply power and check Power, Run, Error, and I/O status indications before commanding outputs.                                       |
| 6 | Test each input, relay output, analog channel, COM1 function, and configured I/O-bus expansion under controlled conditions.          |
| 7 | Record the final firmware, project revision, network settings, accessory configuration, and verification results.                    |

## Document basis

|                                  |                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------|
| <b>Manufacturer source basis</b> | ABB data sheet 3ADR010065, revision 8, dated 2022-01-31; ABB product record 1SAP121000R0001. |
| <b>Official data sheet</b>       | <a href="https://library.e.abb.com/-/3ADR010065">library.e.abb.com - 3ADR010065</a>          |
| <b>Official product record</b>   | <a href="https://www.abb.com/-/1SAP121000R0001">abb.com - 1SAP121000R0001</a>                |



**Apter Power product page**

<https://www.apterpower.com/ABB/1sap121000r0001-pm564-rp>

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Important: This Apter Power field reference summarizes manufacturer-published information. It is not an ABB installation manual. Qualified personnel must use current ABB safety, wiring, and engineering instructions for the installed system.