# Siemens 39PSMNAN
# Installation and Commissioning Guide

## INSTALLATION SCOPE

| | |
|---|---|
| Target product | 39PSMNAN |
| Installed platform | APACS+ |
| Work scope | Controlled replacement of the rack power supply module position |
| Completion point | Verified mechanical, electrical, configuration and functional state |

## READINESS CHECKLIST

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|---|---|
| Work authorization | Place the affected equipment in the approved maintenance condition. |
| Exact identity | Confirm the complete 39PSMNAN marking before removal. |
| Tools and ESD | Prepare approved tools and electrostatic controls. |
| As-found capture | Photograph connectors, labels, orientation and conductor positions. |
| Configuration capture | Save addresses, scaling, ranges, logic and diagnostic settings. |
| Isolation plan | Identify every electrical, process and communication energy source. |
| Replacement condition | Inspect the replacement item for damage or contamination. |
| Test plan | Define the static, dynamic and process checks before starting. |

## WORK PACKAGE CONTENTS

| | |
|---|---|
| Connection map | Terminal, connector, common, shield and grounding assignments. |
| Configuration record | Address, range, scaling, logic and diagnostic settings. |
| Isolation record | Confirmed electrical, process and communication boundaries. |
| Acceptance record | Static, dynamic, alarm and process-response results. |

ApterPower product support
Scan for model-specific assistance.

# Isolation and removal

## CONTROLLED REMOVAL SEQUENCE

| | |
|---|---|
| 1. Stabilize | Move the affected loop, channel or controller to its approved safe state. |
| 2. Isolate | De-energize required supplies and isolate related process energy. |
| 3. Verify | Confirm absence of hazardous energy with approved test equipment. |
| 4. Label | Label every cable, connector, terminal and shield before disconnection. |
| 5. Capture | Retain orientation, keying, switch positions and indicator state. |
| 6. Disconnect | Release connectors without twisting, pulling cable bodies or damaging pins. |
| 7. Remove | Support the product and disengage latches, screws or guides evenly. |
| 8. Inspect | Check the vacated position, mating contacts and terminal hardware. |

## AS-FOUND CAPTURE

| | |
|---|---|
| Mechanical<br>Orientation, support, fasteners and connector engagement. | Electrical<br>Supply, polarity, common, shield and field assignments. |
| Configuration<br>Address, range, scaling, logic and communication settings. | Operating state<br>Displayed values, channel status, alarms and bypasses. |

## REMOVAL STOP CONDITIONS

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|---|---|
| Unexpected energy | Stop and restore the isolation boundary. |
| Damaged connector | Repair or replace the mating hardware before installation. |
| Unclear conductor | Trace and identify the circuit before disconnection. |
| Identity mismatch | Do not install until the complete execution is resolved. |

# Physical and electrical installation

## INSTALLATION SEQUENCE

| | |
|---|---|
| 1. Compare | Compare the replacement marking with 39PSMNAN and the removed item. |
| 2. Prepare | Clean the mounting position and remove foreign material. |
| 3. Align | Align guides, keys and connectors without forcing the assembly. |
| 4. Seat | Seat the product fully and tighten fasteners evenly. |
| 5. Reconnect | Restore every labeled conductor and connector to its original position. |
| 6. Shield | Restore shields, commons and protective grounding exactly as assigned. |
| 7. Inspect | Check strain relief, clearance, polarity and connector latching. |
| 8. Verify | Perform an independent point-to-point connection review. |

## CONNECTION RESTORATION

| | |
|---|---|
| Field side | Match the saved terminal and cable labels. |
| Rack side | Confirm backplane or carrier engagement. |
| Reference circuits | Restore common, return and reference conductors. |
| Communication | Restore network connectors, addressing hardware and termination. |
| External supply | Verify supply class, polarity and protective devices. |
| Mechanical support | Remove strain from connectors and cable entries. |

## PRE-POWER INSPECTION

| | |
|---|---|
| Identity<br>Complete marking matches the work order. | Hardware<br>No bent pins, loose strands or damaged insulation. |
| Connections<br>All assigned positions restored and checked. | Area<br>Tools, jumpers and temporary materials removed. |

# Configuration and startup

## CONFIGURATION RESTORATION

| | |
|---|---|
| Addressing | Restore the retained rack, slot, node or channel identity. |
| Signal range | Restore the intended voltage, current or communication range. |
| Scaling | Restore engineering units, zero, span and direction. |
| Logic | Restore interlocks, permissives, fail states and output behavior. |
| Diagnostics | Restore fault thresholds, masks and status handling. |
| Communication | Restore baud rate, protocol, link or peer settings where applicable. |
| Operator display | Confirm tags, labels and values map to the intended point. |
| Change control | Document every approved difference from the saved configuration. |

## CONTROLLED STARTUP

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|---|---|
| Power application | Energize under supervision and watch for abnormal current, heat or odor. |
| Status review | Check ready, fault and communication indications. |
| Static comparison | Compare the idle value or state with the process reference. |
| Channel walkdown | Confirm each affected input, output or communication path. |
| Alarm review | Verify expected alarms and clear only understood conditions. |
| Bypass control | Track every bypass until final release. |

## STARTUP HOLD POINTS

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|---|---|
| Fault status<br>Stop before forcing operation. | Unstable value<br>Check wiring, reference and scaling. |
| Wrong destination<br>Review channel ownership and addressing. | Unexpected output<br>Return the process to the safe state. |

# Commissioning and release

## ACCEPTANCE SEQUENCE

| | |
|---|---|
| Mechanical acceptance | Fasteners, supports and connectors secure. |
| Electrical acceptance | Supply, polarity, common, shield and grounding verified. |
| Configuration acceptance | Address, range, scaling and diagnostics restored. |
| Static acceptance | Idle value or state agrees with the retained reference. |
| Dynamic acceptance | Controlled stimulus produces the expected proportional response. |
| Alarm acceptance | Configured alarms, interlocks and indications operate correctly. |
| Process acceptance | Operations confirms the final process response. |
| Release | Remove authorized bypasses and close the work package. |

## TROUBLESHOOTING GUIDE

| | |
|---|---|
| No status | Check supply, seating, fuse and rack enable state. |
| Fault indication | Review wiring, configuration and diagnostic code. |
| Wrong value | Check range, scaling, polarity, common and channel mapping. |
| Unstable value | Inspect shielding, grounding, connector contact and source stability. |
| No communication | Check address, protocol, cable path and network termination. |
| No process response | Trace the path from source through controller to destination. |

## RELATED INSTALLATION PAGES

| | |
|---|---|
| Siemens 6ES5301-3AB13 | https://www.apterpower.com/Siemens/Siemens-Simatic-S5/6es5301-3ab13 |
| Siemens 6ES5300-3AB11 | https://www.apterpower.com/Siemens/Siemens-Simatic-S5/6es5300-3ab11 |