6ES7431-7QH00-0AB0

SIMATIC S7-400 SM 431 16-Channel Analog Input Module

CONTROLLED ENGINEERING COPY

Siemens 6ES7431-7QH00-0AB0 is an isolated SIMATIC S7-400 SM 431 analog input module with 16 universal inputs, 16-bit conversion, diagnostics and process/diagnostic interrupt support.

INSTALLATION IDENTITY	REQUIRED VALUE
Complete model	6ES7431-7QH00-0AB0
Manufacturer	Siemens
System family	Siemens SIMATIC S7-400
Record scope	Installation, application and verification

1 2 3 4 5

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com

01 PRE-INSTALLATION PLAN

1. Confirm 6ES7431-7QH00-0AB0 and SM 431 on the module label.
2. Place the S7-400 process and affected loops in the approved maintenance state.
3. Back up the STEP 7 hardware configuration and channel parameters.
4. Isolate field supplies and record slot, connector and all 16 channel assignments.
5. Use ESD controls and inspect connector keying and wiring condition.

MATCHED HARDWARE

- 6ES7431-7QH00-0AB0 with complete nameplate identity
- Matched host, rack or transducer system
- Recorded cable, terminal and connector schedule
- Approved grounding, shielding and configuration record

INSTALLATION CONTROL RECORD

CONTROL ITEM	REQUIRED RECORD
Identity	6ES7431-7QH00-0AB0 recorded
Physical interface	Probe, cable and sensor matched
Functional proof	Static gap and dynamic response

02 WIRING & INTERFACE CHECKS

CHECK ITEM	REQUIRED VALUE
Siemens article number	6ES7431-7QH00-0AB0
Module family	SM 431 analog input
Input channels	16
Isolation	Isolated
Resolution	16 bit
Supported measurements	Voltage, current, resistance, thermocouple and Pt100
Diagnostics	Configurable diagnostic functions
Interrupts	Process and diagnostic interrupt support
Host system	SIMATIC S7-400
Channel configuration	Parameter-dependent measurement type and range

RELATED GE PRODUCT PAGES

1. Schneider Electric 140cpu43412
2. Schneider Electric 140cpu67160
3. Schneider Electric 140cpu43412u
4. Schneider Electric tsxp574634m
5. Schneider Electric tsxp57302m
6. Schneider Electric bmxp3420302
7. Schneider Electric bmxddo1602-321419
8. ABB dsqc651
9. ABB ypc111b

FIELD NOTE

Match 6ES7431-7QH00-0AB0 to the configured S7-400 rack and STEP 7 hardware configuration. Record the slot, front connector, every channel type/range, sensor wiring, compensation, diagnostics and interrupt settings before replacement.

03 COMMISSIONING WORKFLOW

1. Confirm 6ES7431-7QH00-0AB0 and SM 431 on the module label.
2. Place the S7-400 process and affected loops in the approved maintenance state.
3. Back up the STEP 7 hardware configuration and channel parameters.
4. Isolate field supplies and record slot, connector and all 16 channel assignments.
5. Use ESD controls and inspect connector keying and wiring condition.
6. Restore sensor type, range, compensation, diagnostics and interrupt settings.

COMMISSIONING ACCEPTANCE EVIDENCE

EVIDENCE ITEM	ACCEPTANCE CONDITION
Identity	6ES7431-7QH00-0AB0
Physical interface	Exact identity, installed position and every connected interface matched
Configuration	Recorded hardware and software configuration restored
Functional proof	Diagnostics and controlled functional response recorded

04 RETURN-TO-SERVICE RECORD

- [ ] Use ESD controls and inspect connector keying and wiring condition.
- [ ] Restore sensor type, range, compensation, diagnostics and interrupt settings.
- [ ] Review module and channel diagnostics after controlled energization.
- [ ] Inject representative signals on every affected channel and record response before release.

VERIFICATION RECORD

PRODUCT IDENTITY	6ES7431-7QH00-0AB0
INSTALLED POSITION	Documented installed system position
VERIFICATION METHOD	Controlled inspection and functional test
RELEASE RECORD	Final diagnostic state retained before service

FUNCTIONAL ACCEPTANCE CHECKLIST

- [ ] Confirm the exact model remains assigned to the documented host position.
- [ ] Verify every mating interface and field connection against the as-found record.
- [ ] Exercise the intended product function under controlled conditions.
- [ ] Retain the diagnostic and functional-test result before release.

SOURCE IDENTIFIERS

SIMATIC S7-400 Module Data | Siemens manual 109820852