1

01 Identity and operating boundary

Siemens 6ES7431-7KF00-6AA0 is the 48-pole screw-contact front connector with reference-temperature detection for SM 431 module 6ES7431-7KF00-0AB0. It is supplied with that module and carries its field terminations and thermocouple reference circuit.

Model	System	Contact method	Pole count
6ES7431-7KF00-6AA0	SIMATIC S7-400 SM 431	Screw contacts	48

Action A

Confirm 6ES7431-7KF00-6AA0 and companion module 6ES7431-7KF00-0AB0 before work.

Contact method	Screw contacts
Pole count	48

Action B

Record all 48 terminal numbers, channel assignments and thermocouple reference connections.

Acceptance	48-pole field connection and thermocouple reference-temperature coupling for SM 431
Evidence	Retained service record

CONTACT APTER POWER

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com

6ES7431-7KF00-6AA0

2

02 Interface and configuration map

Siemens 6ES7431-7KF00-6AA0 terminates the SM 431 analog channels while its integrated reference-temperature path supports the module's thermocouple measurement arrangement.

Model	System	Pole count	Reference function
6ES7431-7KF00-6AA0	SIMATIC S7-400 SM 431	48	Reference-temperature detection

Action A

Place the S7-400 station and affected analog loops in the approved maintenance state.

Pole count	48
Reference function	Reference-temperature detection

Action B

Isolate field circuits and verify each conductor before loosening any screw contact.

Acceptance	48-pole field connection and thermocouple reference-temperature coupling for SM 431
Evidence	Retained service record

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3

03 Installation sequence

Siemens 6ES7431-7KF00-6AA0 terminates the SM 431 analog channels while its integrated reference-temperature path supports the module's thermocouple measurement arrangement.

Model	System	Reference function	Measurement context
6ES7431-7KF00-6AA0	SIMATIC S7-400 SM 431	Reference-temperature detection	Thermocouple channels

Action A

Inspect connector keying, terminal condition and the reference-temperature path.

Reference function	Reference-temperature detection
Measurement context	Thermocouple channels

Action B

Restore each conductor to its recorded pole and apply the approved terminal torque.

Acceptance	48-pole field connection and thermocouple reference-temperature coupling for SM 431
Evidence	Retained service record

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4

04 Diagnostics and functional verification

Siemens 6ES7431-7KF00-6AA0 terminates the SM 431 analog channels while its integrated reference-temperature path supports the module's thermocouple measurement arrangement.

Model	System	Measurement context	Supply status
6ES7431-7KF00-6AA0	SIMATIC S7-400 SM 431	Thermocouple channels	Contained in module scope of delivery

Action A

Seat and latch the connector without forcing it onto a different SM 431 execution.

Measurement context	Thermocouple channels
Supply status	Contained in module scope of delivery

Action B

Verify channel values and reference-temperature behavior before releasing 6ES7431-7KF00-6AA0.

Acceptance	48-pole field connection and thermocouple reference-temperature coupling for SM 431
Evidence	Retained service record

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5

05 Acceptance and service handover

Siemens 6ES7431-7KF00-6AA0 terminates the SM 431 analog channels while its integrated reference-temperature path supports the module's thermocouple measurement arrangement.

Model	System	Supply status	Approximate weight
6ES7431-7KF00-6AA0	SIMATIC S7-400 SM 431	Contained in module scope of delivery	100 g

CHECK	REQUIRED RECORD
Action A	Confirm 6ES7431-7KF00-6AA0 and companion module 6ES7431-7KF00-0AB0 before work.
Action B	Record all 48 terminal numbers, channel assignments and thermocouple reference connections.
Acceptance	48-pole field connection and thermocouple reference-temperature coupling for SM 431
Evidence	Retained service record

Related Siemens product pages

- Siemens 6ES7431-7QH00-0AB0 — View product page
- Siemens 6ES7432-1HF00-0AB0 — View product page
- Siemens 6ES7422-1BL00-0AA0 — View product page

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WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com

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