Product dashboard

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.

Exact model	Product type	System	Companion designation
6ES7431-7KF00-6AA0	Front Connector	SIMATIC S7-400 SM 431	SM 431 AI 8 x 16 bit

PARAMETER	DOCUMENTED VALUE
Exact model	6ES7431-7KF00-6AA0
Product type	Front connector
Host system	SIMATIC S7-400
Companion module	6ES7431-7KF00-0AB0
Companion designation	SM 431 AI 8 x 16 bit
Contact method	Screw contacts
Pole count	48
Reference function	Reference-temperature detection
Measurement context	Thermocouple channels

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6ES7431-7KF00-6AA0

System and signal path

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

SM 431 field termination

Carries the eight analog-channel conductors to the exact 48-pole module interface.

Thermocouple measurement

Provides the documented reference-temperature connection used by the SM 431.

Panel rewiring control

Preserves terminal numbering when the connector is transferred during module service.

Legacy S7-400 maintenance

Restores the approved connector and module pair without borrowing another 48-pole execution.

SYSTEM POSITION	CONTROLLED RECORD
Identity	6ES7431-7KF00-6AA0
Host	SIMATIC S7-400 SM 431
Role	48-pole field connection and thermocouple reference-temperature coupling for SM 431

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Technical data map

PARAMETER	VALUE
Exact model	6ES7431-7KF00-6AA0
Product type	Front connector
Host system	SIMATIC S7-400
Companion module	6ES7431-7KF00-0AB0
Companion designation	SM 431 AI 8 x 16 bit
Contact method	Screw contacts

PARAMETER	VALUE
Pole count	48
Reference function	Reference-temperature detection
Measurement context	Thermocouple channels
Supply status	Contained in module scope of delivery
Approximate weight	100 g
Acceptance	Seating, screw termination and reference-temperature

Configuration boundary

Preserve the exact SIMATIC S7-400 SM 431 relationship and every setting tied to 6ES7431-7KF00-6AA0.

Release boundary

Record diagnostics and a controlled test of 48-pole field connection and thermocouple reference-temperature coupling for SM 431.

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Applications and service checks

1. Confirm 6ES7431-7KF00-6AA0 and companion module 6ES7431-7KF00-0AB0 before work.
2. Record all 48 terminal numbers, channel assignments and thermocouple reference connections.
3. Place the S7-400 station and affected analog loops in the approved maintenance state.
4. Isolate field circuits and verify each conductor before loosening any screw contact.
5. Inspect connector keying, terminal condition and the reference-temperature path.
6. Restore each conductor to its recorded pole and apply the approved terminal torque.
7. Seat and latch the connector without forcing it onto a different SM 431 execution.
8. Verify channel values and reference-temperature behavior before releasing 6ES7431-7KF00-6AA0.

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6ES7431-7KF00-6AA0

Engineering FAQ and related products

Which module uses Siemens 6ES7431-7KF00-6AA0?

It is the front connector for SM 431 analog input module 6ES7431-7KF00-0AB0.

How many poles does Siemens 6ES7431-7KF00-6AA0 provide?

The exact connector has forty-eight poles.

Which termination method does Siemens 6ES7431-7KF00-6AA0 use?

It uses screw-contact field terminals.

What reference function is built into Siemens 6ES7431-7KF00-6AA0?

The connector provides reference-temperature detection for the matched SM 431 thermocouple arrangement.

Related Siemens product pages

- Siemens 6ES7421-1BL01-0AA0 — View product page
- Siemens 6ES7416-2XK02-0AB0 — View product page
- Siemens 6ES7417-4HL04-0AB0 — View product page

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