Siemens 505-6108A

Complete Product Information

Siemens 505-6108A is a single-wide SIMATIC 505 analog input module with eight single-ended channels and selectable voltage or current operation.

PRODUCT ROLE AND VERIFIED FEATURES

Feature 1

Provides eight single-ended analog input channels.

Feature 2

Selects either ±5 V/0 to 20 mA or ±10 V operation.

Feature 3

Provides 12-bit-plus-sign conversion.

Feature 4

Updates all eight channels within 250 ms.

VERIFIED DATA SNAPSHOT

Input channels	8 single-ended
Selectable ranges	±5 V and 0 to 20 mA, or ±10 V
Resolution	12 bits plus sign
Least significant bit	1.25 mV or 5 microampere

SYSTEM RELATIONSHIP

Field device → **Product interface** → **System channel** → **Verified response**

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Technical profile

Verified technical values for the complete product string are arranged below for selection and engineering review.

Input channels	8 single-ended
Selectable ranges	±5 V and 0 to 20 mA, or ±10 V
Resolution	12 bits plus sign
Least significant bit	1.25 mV or 5 microampere
Maximum update time	250 ms for all channels
Voltage accuracy	±0.82% full scale over operating range; ±0.5% at 25 °C
Current accuracy	±1.25% full scale over operating range; ±0.7% at 25 °C
Repeatability	±0.1%
User power	Not required
Module format	Single-wide

SELECTION ANCHORS

- Provides eight single-ended analog input channels.
- Selects either ±5 V/0 to 20 mA or ±10 V operation.
- Provides 12-bit-plus-sign conversion.
- Updates all eight channels within 250 ms.

IMPORTANT NOTICE	Use the values as one matched configuration. Do not substitute a nearby ordering code without a separate check.

MANUFACTURER SOURCE CONTROLS

Manufacturer source	SIMATIC 505 Analog I/O Modules User Manual, order number 505-8120-3
Evidence boundary	Technical statements are limited to the identified product or applicable manufacturer family.
Selection control	Use the complete ordering string and verify the installed system before purchase or installation.

ADDITIONAL ENGINEERING CHECKS

Which cable construction suits Siemens 505-6108A analog inputs?	Use shielded twisted-pair conductors within the documented terminal range.
How is Siemens 505-6108A commissioned?	Verify each channel with a calibrated reference, then confirm scaling, alarms and the intended control response.

System role and architecture

Field device → **Product interface** → **System channel** → **Verified response**

APPLICATION POINTS

Transmitter acquisition

Read 0 to 20 mA process transmitters through configured channels.

Bipolar voltage measurement

Acquire ±5 V or ±10 V signals from compatible instrumentation.

Legacy-module migration

Replace the older double-wide 505-6108 while retaining field wiring.

Condition monitoring

Bring eight analog machine or process variables into the SIMATIC 505 controller.

INTEGRATION RECORD

Identity	Record the complete marking and installed position.
Mechanical interface	Confirm mounting, support, clearance and connector engagement.
Electrical interface	Confirm signal path, shield, common and receiving-channel assignment.
Configuration	Retain the controlled channel settings and acceptance criteria.
Functional evidence	Record the expected static value, dynamic response and system status.

The 8-channel analog input module belongs to the SIMATIC 505 modular control platform. Selection must preserve the documented signal role, terminal arrangement and rack interface.

ENGINEERING REVIEW QUESTIONS

How many channels does Siemens 505-6108A provide?	It provides eight single-ended analog input channels.
Which input ranges can Siemens 505-6108A select?	It can be configured for ±5 V with 0 to 20 mA operation, or for ±10 V operation.
What conversion resolution is provided by Siemens 505-6108A?	The module uses 12 bits plus sign.
How quickly does Siemens 505-6108A update all channels?	The documented maximum update time is 250 ms for all eight channels.

Engineering checks and acceptance

PRODUCT PRECAUTIONS

01	Confirm the 505-6108A range configuration before connecting a field signal.
02	Record every channel, return, shield and configured scaling value.
03	Isolate current loops before opening the circuit.
04	Use shielded twisted-pair wiring within the documented conductor range.
05	Keep analog conductors away from switching and motor-power wiring.
06	Do not apply a voltage signal to a channel configured for a current loop.
07	Compare every digitized value with a calibrated reference after startup.
08	Verify scaling, alarms and control behavior across the required operating range.

RELEASE EVIDENCE

Exact identity	Product marking and intended system position agree.
Interface condition	Mounting, connectors, terminals and cable routing are secure.
Signal response	The expected static and dynamic behavior has been observed.
Protection state	Channel status, alarms and controlled bypass state are restored.

IMPORTANT NOTICE	Treat Siemens 505-6108A as one complete execution and verify every field connection before the controlled system returns to service.

APPLICATION BOUNDARIES

Transmitter acquisition	Read 0 to 20 mA process transmitters through configured channels.
Bipolar voltage measurement	Acquire ±5 V or ±10 V signals from compatible instrumentation.
Legacy-module migration	Replace the older double-wide 505-6108 while retaining field wiring.
Condition monitoring	Bring eight analog machine or process variables into the SIMATIC 505 controller.

Technical questions and related models

MODEL-SPECIFIC QUESTIONS

How many channels does Siemens 505-6108A provide?	It provides eight single-ended analog input channels.
Which input ranges can Siemens 505-6108A select?	It can be configured for ±5 V with 0 to 20 mA operation, or for ±10 V operation.
What conversion resolution is provided by Siemens 505-6108A?	The module uses 12 bits plus sign.
How quickly does Siemens 505-6108A update all channels?	The documented maximum update time is 250 ms for all eight channels.
Does Siemens 505-6108A require a separate user-power supply?	No separate user power is required.
Can Siemens 505-6108A replace the older Siemens 505-6108?	It is identified as a single-wide replacement that can retain the earlier field wiring; configuration and functional acceptance must still be verified.

RELATED MODELS ON APTERPOWER

Siemens 6ES5946-3UA22	Related product reference. Review the complete ordering string before selection.
Siemens 6ES7431-7KF00-6AA0	Related product reference. Compare the required interface and system position.
Siemens 6GK1143-0TA00	Related product reference. Confirm the execution independently for the intended task.

SOURCE AND SELECTION RECORD

Manufacturer source	SIMATIC 505 Analog I/O Modules User Manual, order number 505-8120-3
Evidence boundary	Technical statements are limited to the identified product or applicable manufacturer family.
Selection control	Use the complete ordering string and verify the installed system before purchase or installation.

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