Siemens 6ES7232-4HD32-0XB0

01 SM 1232 Analog Output Module / system role

Product function and operating context

Siemens 6ES7232-4HD32-0XB0 translates controller setpoints into four field analog signals with mode-specific resolution, load limits and diagnostic behavior.

Each output supports ±10 V, 0–20 mA or 4–20 mA operation. Voltage resolution is 14 bits and current resolution is 13 bits, so the nominal module description must not be read as 14-bit current output.

Functional path

Controller setpoint → Configured SM 1232 channel → Voltage or current circuit → Field receiver

Configuration	Four configurable analog outputs
Interface	14-bit voltage and 13-bit current resolution
Operating feature	Selectable last or substitute value on STOP

Voltage loads must be at least 1000 ohms, while current loads must not exceed 600 ohms. Settling time depends on the output mode and connected reactive load, making actuator input characteristics part of the response assessment.

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02 Technical operating envelope

Analog outputs	4
Output ranges	±10 V, 0–20 mA, 4–20 mA
Voltage resolution	14 bits
Current resolution	13 bits
Voltage load	≥1000 Ω
Current load	≤600 Ω

Accuracy at 25 °C	±0.3% of full scale
Accuracy over -20 to +60 °C	±0.6% of full scale
Bus current consumption	80 mA
24 V consumption without load	45 mA
Power dissipation	2.0 W
Maximum signal cable	100 m, twisted and shielded

Values refer to the four-output SM 1232, 6ES7232-4HD32-0XB0. Output resolution and load limits differ between voltage and current modes.

Operating interpretation

Voltage and current outputs have different resolution and load limits.

Configuration boundary

Restore mode, scaling, common references and STOP behavior before enabling actuators.

How does 6ES7232-4HD32-0XB0 behave when the CPU changes from RUN to STOP?

It can retain the last output value or apply a configured substitute value. The default substitute is zero, so configure the required process response explicitly.

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03 System integration and applications

Valve and actuator setpoints

Configured current or voltage signals command compatible field devices.

Drive reference signals

Analog setpoints connect an S7-1200 application to a receiving drive input.

Process signal simulation

Controlled output values support commissioning checks with the process secured.

Defined STOP behavior

Per-channel substitute or retained values support the engineered response to CPU state changes.

System and supply context

Siemens 6ES7232-4HD32-0XB0 operates within the following defined system context. Confirm the four-output 4HD32 execution and each channel range.

Application boundary

Values refer to the four-output SM 1232, 6ES7232-4HD32-0XB0. Output resolution and load limits differ between voltage and current modes.

Can a 500-ohm device be connected to a voltage output of 6ES7232-4HD32-0XB0?

The voltage-mode load must be at least 1000 ohms. A 500-ohm load does not meet that requirement.

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04 Engineering selection decisions

Does 6ES7232-4HD32-0XB0 provide 14-bit resolution in current mode?

No. Voltage resolution is 14 bits and current resolution is 13 bits. Use the appropriate resolution for the selected output mode.

What is the maximum loop resistance in current mode on 6ES7232-4HD32-0XB0?

The stated current-mode load limit is 600 ohms. Include the receiving input and wiring resistance when assessing the loop.

What settling time is stated for a resistive voltage load on 6ES7232-4HD32-0XB0?

The time to 95% of a new value is 300 µs for a resistive load; it increases to 750 µs with a 1 µF load.

How are channels 2 and 3 connected on 6ES7232-4HD32-0XB0?

They use connector X13 in the four-output arrangement. Preserve the separate output and return assignments for each channel according to the wiring diagram.

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05 Configuration boundary and references

Lifecycle and support

The current manufacturing and factory-support phase of 6ES7232-4HD32-0XB0 is unconfirmed. Apter Power availability is assessed separately from manufacturer lifecycle status.

Replacement assessment

Restore mode, scaling, common references and STOP behavior before enabling actuators.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains selection and system context. The separate installation guide covers preparation, connection, tests and handover; use it together with the applicable manufacturer instructions.

Technical basis

Siemens S7-1200 System Manual V4.6, A5E02486680-AP.

Related product navigation

- Siemens 6ES7231-4HF32-0XB0
- Siemens 6SL3055-0AA00-5AA3

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries