Siemens 6ES7322-1HH01-0AA0

01 Sixteen-Channel Relay Output Module

Siemens 6ES7322-1HH01-0AA0 provides contact outputs for solenoids, contactors and signaling loads. Relay-supply wiring and load-side circuits require separate consideration because a correct PLC output bit does not prove that the switched load has operated.

1 PLC output image — 2 Relay supply + coils — 3 Grouped contacts — 4 Protected AC/DC loads

Physical and functional arrangement

The module separates its backplane interface from the switched field circuits. The two output groups must retain the intended common and load-voltage arrangement. The available current per contact does not remove the aggregate current limit for its group.

Signal path and configuration

Relay contacts have a finite electrical life governed by the load category, voltage, current and switching rate. Use external suppression appropriate to the load because this execution has no internal contact protection. Parallel outputs are not a method of increasing the permissible load current.

Application boundary

An internal buffer provides a short interval after power loss in which the user program can establish a defined relay state. Treat this as part of a designed shutdown sequence, not as a guarantee of a safe mechanical result. Verify the final contact and actuator behavior under the application test plan.

Ratings apply to the stated hardware execution and operating conditions. Installed firmware, companion modules and configured functions must match the application.

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02 Technical data and engineering limits

Relay outputs	16
Isolation grouping	8 channels per group
Relay supply	24 V DC
Load voltage	24–120 V DC or 24–230 V AC
Continuous contact current	2 A maximum, subject to load duty
Current per output group	8 A maximum
Backplane current	100 mA maximum
Relay-supply current	250 mA maximum
Power loss	4.5 W typical
Front connection	20-pin connector
Resistive-load switching	1 Hz maximum
Inductive-load switching	0.5 Hz maximum

Additional interface data

Minimum load	10 V / 10 mA
Mechanical switching rate	10 Hz maximum
Lamp load	50 W at 230 V AC; 5 W at 24 V DC
Diagnostics / interrupts	None
Parallel redundant control	Permitted only within the same group
Parallel current increase	Not permitted
Power-off buffer	200 ms
Contact suppression	External protective circuit required as appropriate

Ratings apply to the stated hardware execution and operating conditions. Installed firmware, companion modules and configured functions must match the application.

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03 Application map and integration boundaries

01 Contactor command circuits

Switch compatible contactor coils with suitable suppression.

02 Solenoid control

Operate AC or DC solenoids within the selected contact duty.

03 Signal lamps

Switch indication loads within their specified lamp-load limits.

04 Legacy relay I/O service

Restore grouped field circuits and verify individual load operation.

Load duty

Apply electrical switching limits for the actual load category; maximum thermal current is not a universal switching rating.

Group budget

Evaluate simultaneous current per eight-channel group and preserve separation between group circuits.

Feedback requirement

An output status LED does not prove contact or load operation. Use the application feedback needed for the process.

Configuration scope: Match the relay execution, load duty, grouping and front connector. A transistor output is not an equivalent contact replacement.

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04 Technical questions that affect operation

Why can an output LED on 6ES7322-1HH01-0AA0 be on while the actuator remains off?

The indication does not prove the external load supply, contact path or actuator wiring. Check those parts of the circuit separately.

Can two outputs of 6ES7322-1HH01-0AA0 be paralleled for more load current?

No. Parallel outputs are allowed for redundant control only within one group, not for increasing switching capacity.

How should inductive loads be protected when connected to 6ES7322-1HH01-0AA0?

Provide an appropriate external protective circuit. This execution has no internal contact protection, and suppression affects contact life and release behavior.

Why must total group current be checked on 6ES7322-1HH01-0AA0?

Several individually acceptable loads can exceed the shared group limit when operated together. Evaluate the simultaneous load pattern.

Does the 200 ms buffer in 6ES7322-1HH01-0AA0 guarantee a safe actuator position?

No. It provides time for the program to set a defined relay state. Validate the complete power-loss and mechanical response for the application.

What determines contact life on 6ES7322-1HH01-0AA0?

Voltage, current, load category and switching duty determine electrical life. A mechanical switching-rate rating alone is not an electrical-duty rating.

Can diagnostics from 6ES7322-1HH01-0AA0 identify a welded relay contact?

This module has no diagnostic functions. Use appropriate external feedback or application checks when proof of contact operation is required.

Why should small signal loads on 6ES7322-1HH01-0AA0 be reviewed separately?

Very low voltage or current may fall below the minimum switching load. Verify the actual contact wetting conditions rather than considering only the maximum current.

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05 Selection, service planning and related equipment

Match the installed arrangement

Match the complete Siemens 6ES7322-1HH01-0AA0 marking and installed configuration. Confirm the full SM 322 order number, front connector and load-group wiring.

Support and migration

The current production and manufacturer-support stage for this exact execution is unconfirmed. Match the relay execution, load duty, grouping and front connector. A transistor output is not an equivalent contact replacement.

Equipment boundary

Confirm the relay output module and front connector only if itemized. Companion hardware and accessories are included only when itemized; the function of the complete installed arrangement depends on the correct combination.

Engineering review before intervention

Inventory switched loads	Record each contact assignment, supply and load type. Identify inductive suppression and feedback signals, and establish the approved de-energized state before removing field wiring.
Check group and contact limits	Evaluate simultaneous current per group and the electrical switching duty for each load. Keep redundant parallel outputs within the permitted group and do not use parallel contacts to increase load capacity.

Related equipment navigation

Siemens 6ES7214-1AG40-0XB0

Siemens 6ES7972-0AA01-0XA0

Siemens 6ES7221-1BH32-0XB0

Related references support separate application assessment and do not imply replacement compatibility. Technical basis: Siemens S7-300 Module Data, A5E00105505-AK.