

6ES5451-4UA12

Digital Output Module

INSTALLATION AND COMMISSIONING GUIDE

It provides thirty-two floating 24 VDC outputs rated at 0.5 A for an installed SIMATIC S5 compact U-periphery station.

- Provides thirty-two digital outputs
- Supports 0.5 A per output
- Uses floating 24 VDC output circuits
- Fits the documented compact U-periphery position

VERIFIED IDENTITY

Article number	6ES5451-4UA12
Module designation	SIMATIC S5 451 digital output module
Output count	32
Output supply	24 V DC
Rated output current	0.5 A per output
Electrical arrangement	Floating outputs

Official source: Siemens SIMATIC S5 U Periphery Instructions and exact Industry Mall article record
Publication: C79000-B8576-C300-06; exact MLFB product record

APPLICATION SNAPSHOT

Thirty-two-point actuator command	Commands a dense bank of discrete field loads.
Solenoid and relay output control	Switches documented 24 VDC solenoids or interposing relays.
SIMATIC S5 machine sequencing	Executes machine-output logic from the installed S5 controller.
S5 output-module replacement	Restores the exact floating-output position without changing addresses.



01 PRE-INSTALLATION PLAN

Step 1	Verify the complete 6ES5451-4UA12 marking and the assigned SIMATIC S5 compact U-periphery system position before work.
Step 2	Place the connected thirty-two-point actuator command process in the approved maintenance state.
Step 3	Isolate all applicable power and thirty-two 24 vdc output circuits field energy before disconnection.
Step 4	Record every connector, conductor, address, jumper and project identity before removal.
Step 5	Use ESD controls and protect keyed interfaces, exposed contacts and electronic assemblies.
Step 6	Confirm the installed SIMATIC S5 U-periphery rack and documented 24 VDC load supply and output commons against the approved system record.
Step 7	Restore power in a controlled sequence and review module, rack and host diagnostics.
Step 8	Prove the intended solenoid and relay output control function and retain the final acceptance result.

MATCHED HARDWARE

- SIMATIC S5 U-periphery rack
- documented 24 VDC load supply and output commons
- approved front connector and field wiring
- S5 controller project and output address map

02 WIRING & INTERFACE CHECKS

Exact model	6ES5451-4UA12
Installed system	SIMATIC S5 compact U-periphery system
Controlled signal	thirty-two 24 VDC output circuits
Connector record	Capture terminal, plug, jumper and cable identities before removal
Shield and reference	Restore only the documented as-found termination arrangement
Supply isolation	Verify all module, field and stored-energy sources are safe
Configuration record	Save addresses, ranges, parameters, software and project revision
Pre-energization gate	Complete continuity, polarity, supply and protective-device checks



03 COMMISSIONING & RETURN TO SERVICE

1 — Identity	Reconfirm 6ES5451-4UA12 and the assigned system position
2 — Mechanical	Verify seating, retaining hardware, airflow and connector protection
3 — Electrical	Verify supply, polarity, references, shields and field protection
4 — Configuration	Restore only the approved addresses, parameters and project
5 — Controlled power	Energize with the connected process in the maintenance state
6 — Diagnostics	Review module, rack, network and host diagnostic indications
7 — Function	Exercise the documented thirty-two-point actuator command function
8 — Acceptance	Record the final response and release authorization

APPLICATION-SPECIFIC TESTS

Thirty-two-point actuator command	Commands a dense bank of discrete field loads.
Solenoid and relay output control	Switches documented 24 VDC solenoids or interposing relays.
SIMATIC S5 machine sequencing	Executes machine-output logic from the installed S5 controller.
S5 output-module replacement	Restores the exact floating-output position without changing addresses.

RETURN-TO-SERVICE RECORD

Identification accepted	Complete model and installed marking verified
Connections accepted	All conductors, connectors, shields and jumpers reconciled
Configuration accepted	Addressing, parameters and project revision confirmed
Diagnostics accepted	No unexplained module, rack, network or host faults
Function accepted	Documented controlled response proved
Record retained	As-left evidence and approval stored with the maintenance record



MODEL-SPECIFIC FAQ & RELATED PRODUCTS

1	What output function identifies Siemens 6ES5451-4UA12?	It is the SIMATIC S5 451 compact-U digital output module with thirty-two floating outputs.
2	Which load supply and channel rating apply to 6ES5451-4UA12?	Use the documented 24 VDC load supply and keep each output within the published 0.5 A rating.
3	Why must all thirty-two addresses be recorded before removing 6ES5451-4UA12?	The module represents a complete 32-point bank; preserving the slot and point map prevents output-address shifts.
4	How should floating circuits be handled on 6ES5451-4UA12?	Retain the documented group supplies, commons and isolation boundaries instead of joining circuits during rewiring.
5	Which mechanical position is intended for 6ES5451-4UA12?	Install it only in the approved SIMATIC S5 compact U-periphery position with the recorded front connector.
6	What does the lifecycle record mean for 6ES5451-4UA12 service?	Siemens lists the article as discontinued and deleted without replacement, so like-for-like identity and project preservation are essential.
7	Can 6ES5451-4UA12 be replaced by a similar 451 suffix automatically?	No. Compare the full MLFB, output count, floating arrangement, voltage, current and connector assignment before any substitution.
8	What commissioning test is required for 6ES5451-4UA12?	Energize the load groups under control and exercise every addressed output while confirming the correct field load and controller indication.

RELATED PRODUCTS ON APTER POWER

01	Siemens A5E00297628	Related industrial automation product
02	Siemens A5E03915589	Related industrial automation product
03	Siemens A5E36228241	Related industrial automation product
04	Siemens A5E00282044	Related industrial automation product
05	Bently Nevada 330901 00 90 10 02 05 953416	Related industrial automation product
06	Bently Nevada 330330 080 01 00	Related industrial automation product
07	Bently Nevada 330330 070 00 00	Related industrial automation product
08	Bently Nevada 330854 080 05	Related industrial automation product

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