Siemens 6DD1681-0AG2

SB70 Interface Module

The SB70 adapts eight SIMATIC TDC or FM 458-1 DP digital outputs to plant signal levels through electrically isolating changeover relays.

Job objective

Replace, install or verify the exact module without changing unrelated wiring, configuration, dimensions, weight or other stored product data.

Safe-work boundary

Identify Match the complete model and every suffix or secondary code.	**Isolate** Apply the plant-approved electrical and process isolation procedure.
Preserve Back up configuration and photograph all connections.	**Control** Use ESD protection and revision-controlled documentation.

Required evidence before work

Nameplate photo; slot/rack record; connector map; project backup where applicable; fault history; approved acceptance procedure.

Verification focus

- Siemens
- 6DD1681-0AG2
- Eight relay output channels
- NO, NC and common terminals

Readiness checklist

Exact identity	Siemens 6DD1681-0AG2 matches the work order and physical unit
System position	Rack, slot and functional assignment are recorded
Configuration	Parameters, firmware or project data are backed up when applicable
Connections	Every cable, terminal, jumper and shield is labeled
Condition	Connector, board and packaging condition are inspected
Test plan	Expected states and acceptance evidence are agreed

Interface preparation

Controller-side connector	X1 ribbon connector
Plant-side terminals	X2, two 12-pole groups
Contact arrangement	NO, NC and common for each channel
Supply terminals	X3: 1P and 1M
Test access	X5: 1P(+) and 1M(G)
Interface cable	SC62

Interface acceptance record

- Controller-side connector: X1 ribbon connector
- Plant-side terminals: X2, two 12-pole groups
- Contact arrangement: NO, NC and common for each channel
- Supply terminals: X3: 1P and 1M

03 / INSTALLATION SEQUENCE

Controlled replacement workflow

1	Confirm isolation and absence of hazardous energy
2	Compare old and replacement identities and revisions
3	Photograph and label all connections
4	Remove the existing module using ESD-safe handling
5	Inspect slot, connector, grounding and cooling path
6	Install the exact replacement without forcing connectors
7	Restore cables, jumpers and settings from the controlled record
8	Perform a final visual and continuity check before energization

STOP POINT

Do not energize if the model, slot, connector orientation, grounding, jumper state or documented system assignment is unresolved.

Configuration control

- Contact terminals: 8 NO, 8 NC and 8 common terminals
- X3 supply: +24 V at 1P; 0 V at 1M
- Diagnostics: LED displays and X5 test socket
- Protection: PTC thermistor downstream of controller-side supply

Staged return to service

Stage	Action	Acceptance
Stage 1	Visual inspection and isolation release	Expected controlled result
Stage 2	Apply control power under observation	Expected controlled result
Stage 3	Confirm module recognition or status	Expected controlled result
Stage 4	Verify communication and affected signal paths	Expected controlled result
Stage 5	Exercise the documented function	Expected controlled result
Stage 6	Archive measured results and as-left configuration	Expected controlled result

Product-specific acceptance focus

1

Use the specified SC62 cable and check ribbon orientation.

2

Do not bridge the relay isolation with unintended commons or test leads.

3

Compare LED indication with measured contact operation on all channels.

4

Document the final contact assignment and functional-test result.

Release evidence

- Use the specified SC62 cable and check ribbon orientation.
- Do not bridge the relay isolation with unintended commons or test leads.
- Compare LED indication with measured contact operation on all channels.
- Document the final contact assignment and functional-test result.

Fault isolation and final record

1	Unexpected state: stop and capture evidence
2	Recheck identity, power, slot and connectors
3	Compare configuration and revision records
4	Test surrounding system before condemning the module
5	Restore a safe state and document the outcome

Apter Power handover record

Model identity	Keep the complete Siemens model code and every suffix in purchasing, installation and acceptance records.
Verification boundary	Confirm the physical nameplate, installed position and revision-controlled project documents before field work.
Apter Power support	Use the contact details and Apter Power website links in this document for product and sourcing support.

Related Apter Power products	Exact product page
Siemens 6ES5928-3UB21	View Siemens 6ES5928-3UB21
Siemens 6ES5734-1BD20	View Siemens 6ES5734-1BD20
Siemens 6DD1611-0AD0	View Siemens 6DD1611-0AD0
Siemens 6DS1211-8AA	View Siemens 6DS1211-8AA

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Source and identity trace

- Exact identity: Siemens 6DD1681-0AG2
- Siemens Interface Modules for SIMATIC TDC / FM 458-1DP, Product Information 04/2024, A5E53479401-AA, section 3.4
- Siemens SIMADYN D Hardware, Edition 06/2002, SB70 technical data