

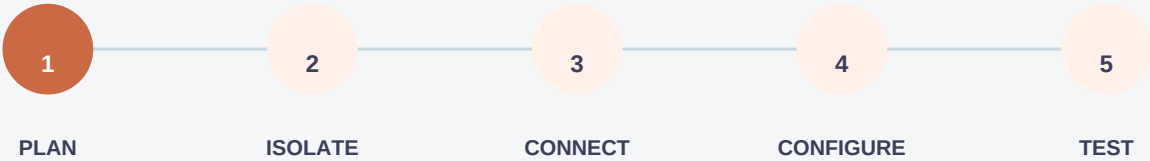
6DD1607-0CA1

EXM 438-1 I/O Extension Module

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Siemens 6DD1607-0CA1 is the exm 438-1 i/o extension module for SIMATIC S7-400 FM 458. It provides high-speed analog, digital and encoder I/O expansion for FM 458 in the documented installation.

INSTALLATION IDENTITY	REQUIRED VALUE
Complete model	6DD1607-0CA1
Manufacturer	Siemens
System family	SIMATIC S7-400 FM 458
Record scope	Installation, application and verification



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01 PRE-INSTALLATION PLAN

- 1

Confirm the complete 6DD1607-0CA1 marking and the documented EXM 438-1 I/O Extension Module execution.
- 2

Place the machine, controller and affected process in the approved maintenance state.
- 3

Isolate all hazardous energy and prove the safe state before disconnecting hardware.
- 4

Record the installed position, every terminal or port, and the active engineering configuration.
- 5

Verify the exact electrical, interface and environmental limits in the manufacturer evidence.

MATCHED HARDWARE

- Siemens 6DD1607-0CA1 with complete article identity
- Matched SIMATIC S7-400 FM 458 host or connected equipment
- Documented power, signal and communication interfaces
- Approved configuration, diagnostics and acceptance record

INSTALLATION CONTROL RECORD

CONTROL ITEM	REQUIRED RECORD
Identity	6DD1607-0CA1 recorded
Physical interface	Installed terminals, ports and signal paths matched to the as-found record
Configuration	Approved hardware and engineering configuration restored
Functional proof	Controlled test confirms high-speed analog, digital and encoder I/O expansion for FM 458

02 WIRING & INTERFACE CHECKS

CHECK ITEM	REQUIRED VALUE
Product designation	EXM 438-1
Host module	FM 458-1 DP
Digital inputs	16 at 24 V
Digital input delay	200 microseconds
Digital outputs	8
Digital output rated current	50 mA
Analog inputs	5 differential, +/-10 V, 12 bit
Analog outputs	4 x 16 bit plus 4 x 12 bit, +/-10 V
16-bit output conversion	2 microseconds
12-bit output conversion	4 microseconds
Analog input conversion	45 microseconds
Encoder interfaces	Up to 12 encoders
Module supply	5 V DC plus external 24 V DC

RELATED PRODUCT PAGES

1 Siemens 6DD1682-0CC0

2 Siemens 6DD1662-0AB0

3 Siemens 6DD1611-0AG0

4 Siemens 6DD1607-0AA2

5 Siemens 6DD1842-0AA1

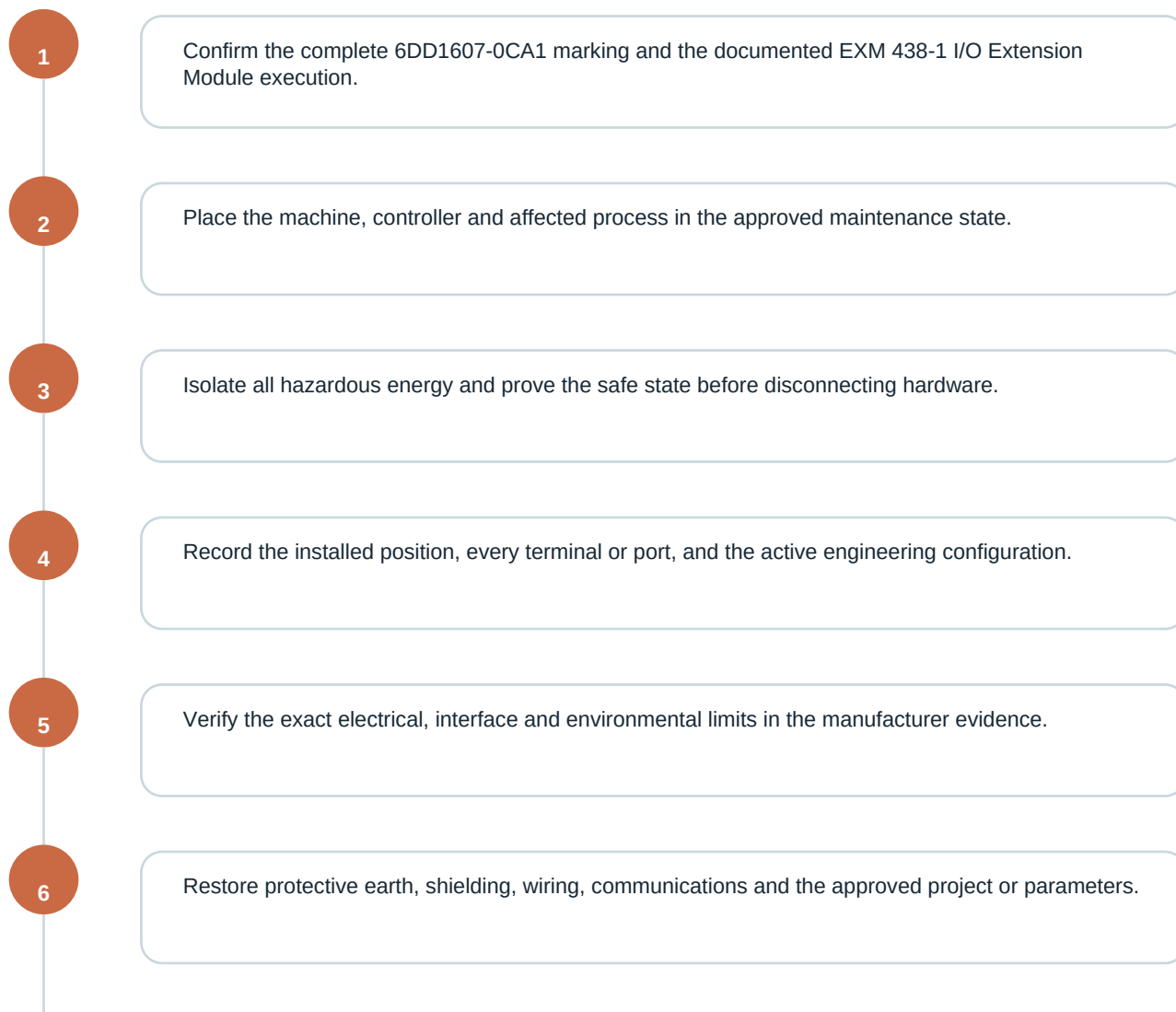
6 Siemens 6DD1660-0AE0

7 Siemens 6DD1600-0AK0

FIELD NOTE

Confirm 6DD1607-0CA1, its exact SIMATIC S7-400 FM 458 host, power source, installed position, interfaces, configuration, diagnostics and controlled acceptance evidence before release.

03 COMMISSIONING WORKFLOW



COMMISSIONING ACCEPTANCE EVIDENCE

EVIDENCE ITEM	ACCEPTANCE CONDITION
Identity	6DD1607-0CA1
Physical interface	Installed terminals, ports and signal paths matched to the as-found record
Configuration	Approved hardware and engineering configuration restored
Functional proof	Controlled test confirms high-speed analog, digital and encoder I/O expansion for FM 458

04 RETURN-TO-SERVICE RECORD

- ☐ Verify the exact electrical, interface and environmental limits in the manufacturer evidence.
- ☐ Restore protective earth, shielding, wiring, communications and the approved project or parameters.
- ☐ Energize under control and review all device, rack, network and process diagnostics.
- ☐ Complete a controlled functional test of high-speed analog, digital and encoder I/O expansion for FM 458 before release.

VERIFICATION RECORD

PRODUCT IDENTITY	6DD1607-0CA1
INSTALLED POSITION	Documented SIMATIC S7-400 FM 458 position
VERIFICATION METHOD	Controlled inspection and functional test
RELEASE RECORD	Final diagnostic state retained before service

FUNCTIONAL ACCEPTANCE CHECKLIST

- ☐ Verify the exact electrical, interface and environmental limits in the manufacturer evidence.
- ☐ Restore protective earth, shielding, wiring, communications and the approved project or parameters.
- ☐ Energize under control and review all device, rack, network and process diagnostics.
- ☐ Complete a controlled functional test of high-speed analog, digital and encoder I/O expansion for FM 458 before release.

SOURCE IDENTIFIERS

Siemens ST 400 catalog and exact Industry Mall record for 6DD1607-0CA1 | Official manufacturer evidence verified 28 September 2026