

6DD1607-0CA1

EXM 438-1 I/O Extension Module

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

PRODUCT SNAPSHOT

BRAND
Siemens

FAMILY
SIMATIC S7-400 FM 458

PART
6DD1607-0CA1

DOCUMENT STATUS
Controlled engineering copy

APTER POWER

WHATSAPP / PHONE

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PRODUCT OVERVIEW

Siemens 6DD1607-0CA1 provides high-speed analog, digital and encoder I/O expansion for FM 458 in a documented SIMATIC S7-400 FM 458 installation.



Product designation: EXM 438-1



Host module: FM 458-1 DP



Digital inputs: 16 at 24 V



Digital input delay: 200 microseconds

RELATED APTER POWER 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

SYSTEM COMPONENTS

DOCUMENTED COMPONENT	ROLE IN SYSTEM
EXM 438-1 I/O Extension Module	SIMATIC S7-400 FM 458
Documented power, signal and communication interfaces	Approved engineering configuration and acceptance record

ENGINEERING CONTEXT

The component remains matched to its documented cabinet position, power source, interfaces and approved engineering configuration. Commissioning restores that architecture and verifies the affected control or communication function under controlled conditions.

TECHNICAL DATA

PARAMETER	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

PARAMETER	VALUE
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
Typical current consumption	1.5 A

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Siemens 6DD1600-0AK0

TECHNICAL NOTE

Use 6DD1607-0CA1 only in the documented SIMATIC S7-400 FM 458 position. Preserve the exact connectors, power, signal or network configuration and verify high-speed analog, digital and encoder I/O expansion for FM 458 during controlled commissioning.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

SIMATIC S7-400 FM 458 installation

Uses 6DD1607-0CA1 for high-speed analog, digital and encoder I/O expansion for FM 458 in the

Controlled replacement

Restores the exact 6DD1607-0CA1 identity, interfaces and configuration before energization.

Commissioning verification

Checks 6DD1607-0CA1 diagnostics and the affected function under controlled conditions.

Lifecycle maintenance

Preserves the approved SIMATIC S7-400 FM 458 wiring, network and engineering record during service

PRODUCT PRECAUTIONS

1

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

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.

6

Restore protective earth, shielding, wiring, communications and the approved project or

7

Energize under control and review all device, rack, network and process diagnostics.

8

Complete a controlled functional test of high-speed analog, digital and encoder I/O expansion for FM 458

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Siemens 6DD1600-0AK0

ENGINEER FAQ

Q1 Which EXM module designation corresponds to 6DD1607-0CA1?

For 6DD1607-0CA1, the official Siemens evidence records product designation as EXM 438-1. Apply that value only within the documented SIMATIC S7-400 FM 458 configuration and confirm the

Q2 Which Siemens host module carries the EXM 438-1 extension?

For 6DD1607-0CA1, the official Siemens evidence records host module as FM 458-1 DP. Apply that value only within the documented SIMATIC S7-400 FM 458 configuration and confirm the affected

Q3 How many 24 V digital input channels are available?

For 6DD1607-0CA1, the official Siemens evidence records digital inputs as 16 at 24 V. Apply that value only within the documented SIMATIC S7-400 FM 458 configuration and confirm the affected

Q4 What digital-input delay is documented for high-speed acquisition?

For 6DD1607-0CA1, the official Siemens evidence records digital input delay as 200 microseconds. Apply that value only within the documented SIMATIC S7-400 FM 458 configuration and confirm the

Q5 How many digital outputs are available to the FM 458 application?

For 6DD1607-0CA1, the official Siemens evidence records digital outputs as 8. Apply that value only within the documented SIMATIC S7-400 FM 458 configuration and confirm the affected high-speed

Q6 What rated current applies to each digital output?

For 6DD1607-0CA1, the official Siemens evidence records digital output rated current as 50 mA. Apply that value only within the documented SIMATIC S7-400 FM 458 configuration and confirm the

Q7 How are the five analog inputs configured and resolved?

For 6DD1607-0CA1, the official Siemens evidence records analog inputs as 5 differential, +/-10 V, 12 bit. Apply that value only within the documented SIMATIC S7-400 FM 458 configuration and confirm the

Q8 How are the analog outputs divided between 16-bit and 12-bit channels?

For 6DD1607-0CA1, the official Siemens evidence records analog outputs as 4 x 16 bit plus 4 x 12 bit, +/-10 V. Apply that value only within the documented SIMATIC S7-400 FM 458 configuration and

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

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