

6ES7417-4HL04-0AB0

SIMATIC S7-400H CPU 417H Central Processing Unit

Siemens 6ES7417-4HL04-0AB0 is a SIMATIC S7-400H CPU 417H central processing unit with 20 MB work memory. It provides MPI/DP, PROFIBUS DP and two synchronization-module interfaces for

PRODUCT SNAPSHOT

BRAND
Siemens

FAMILY
SIMATIC S7-400H

PART
6ES7417-4HL04-0AB0

DOCUMENT STATUS
Controlled engineering copy

APTER POWER

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PRODUCT OVERVIEW

Siemens 6ES7417-4HL04-0AB0 provides redundant CPU execution and partner synchronization in a SIMATIC S7-400H station in a documented SIMATIC S7-400H installation.



CPU 417H for S7-400H



20 MB work memory



MPI/DP and PROFIBUS DP interfaces



Two synchronization-module interfaces

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1

Siemens 6RY1803-0DB02

2

Siemens 6SL3200-0SP06-0AA0

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Siemens 6SL3985-6TM00-0AA0

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Siemens 6SL3120-2TE21-8AD0

5

Siemens 6SE7041-8EK85-0LA0

6

Siemens 6SE7035-1EJ84-1JC2

7

Siemens 6SE7090-0XX84-1CE0

8

Siemens 6SE7031-7HG84-1JC2

9

Siemens 6SE7031-7HG84-1JC1

SYSTEM COMPONENTS

DOCUMENTED COMPONENT	ROLE IN SYSTEM
Proximity probe	Matched extension cable
Proximator Sensor	AISI 4140 target

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	PARAMETER	VALUE
Product designation	CPU 417H for SIMATIC S7-400H	Integrated work memory	20 MB
Integrated interfaces	4	Program memory share	10 MB
Interface 1	MPI / PROFIBUS DP	Data memory share	10 MB
Interface 2	PROFIBUS DP	System role	Redundant S7-400H central processing unit
Synchronization interfaces	2, for synchronization modules	Lifecycle note	Discontinued replacement part without a named successor

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8 Siemens 6SE7031-7HG84-1JC2

9 Siemens 6SE7031-7HG84-1JC1

TECHNICAL NOTE

Install 6ES7417-4HL04-0AB0 only in the documented SIMATIC S7-400H position and preserve its exact wiring, interfaces and configuration. After controlled energization, verify diagnostics and redundant CPU execution and partner synchronization in a SIMATIC S7-400H station before service release.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Redundant process control

Executes the approved S7-400H project with a synchronized partner CPU.

High-availability PLC replacement

Restores a documented CPU 417H position without altering the validated architecture.

PROFIBUS plant communication

Coordinates configured DP nodes through the two documented bus interfaces.

H-system commissioning

Verifies partner synchronization, diagnostics and controlled process response.

PRODUCT PRECAUTIONS

1

Confirm the complete 6ES7417-4HL04-0AB0 marking and the documented SIMATIC S7-400H CPU 417H

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 redundant CPU execution and partner synchronization in a SIMATIC

RELATED APTER POWER PAGES

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ENGINEER FAQ

Q1 Why must the exact product designation value be confirmed when commissioning 6ES7417-4HL04-0AB0?

The official exact-article record identifies 6ES7417-4HL04-0AB0 as CPU 417H for SIMATIC S7-400H; match the full marking before installation.

Q2 How should the documented integrated interfaces for 6ES7417-4HL04-0AB0 affect the installed communication architecture?

For 6ES7417-4HL04-0AB0, the official exact-article evidence specifies integrated interfaces as 4. Record the installed condition and test the affected function before release.

Q3 What interface 1 for 6ES7417-4HL04-0AB0 affect the installed communication architecture?

For 6ES7417-4HL04-0AB0, the official exact-article evidence specifies interface 1 as MPI / PROFIBUS DP. Record the installed condition and test the affected function before release.

Q4 Where does the interface 2 for 6ES7417-4HL04-0AB0 affect the installed communication architecture?

For 6ES7417-4HL04-0AB0, the official exact-article evidence specifies interface 2 as PROFIBUS DP. Record the installed condition and test the affected function before release.

Q5 Which synchronization interfaces for 6ES7417-4HL04-0AB0 affect the installed communication architecture?

For 6ES7417-4HL04-0AB0, the official exact-article evidence specifies synchronization interfaces as 2, for synchronization modules. Record the installed condition and test the affected function before release.

Q6 What configuration detail must be preserved for 6ES7417-4HL04-0AB0 regarding integrated work memory?

For 6ES7417-4HL04-0AB0, the official exact-article evidence specifies integrated work memory as 20 MB. Record the installed condition and test the affected function before release.

Q7 How should the saved project must be preserved for 6ES7417-4HL04-0AB0 regarding program memory share?

For 6ES7417-4HL04-0AB0, the official exact-article evidence specifies program memory share as 10 MB. Record the installed condition and test the affected function before release.

Q8 Which software constraint must be preserved for 6ES7417-4HL04-0AB0 regarding data memory share?

For 6ES7417-4HL04-0AB0, the official exact-article evidence specifies data memory share as 10 MB. Record the installed condition and test the affected function before release.

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SOURCE Siemens SiePortal exact-article record for 6ES7417-4HL04-0AB0 | Official manufacturer evidence verified 28 September 2026

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