

6ES7417-5HT06-0AB0

SIMATIC S7-400H CPU 417-5H PN/DP

Siemens 6ES7417-5HT06-0AB0 is a SIMATIC S7-400H CPU 417-5H PN/DP for S7-400H and S7-400F/FH systems. It provides 32 MB integrated work memory and five interfaces for MPI/DP,

PRODUCT SNAPSHOT

BRAND
Siemens

FAMILY
Siemens SIMATIC S7-400H and

PART
6ES7417-5HT06-0AB0

DOCUMENT STATUS
Controlled engineering copy

APTER POWER

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PRODUCT OVERVIEW

Siemens 6ES7417-5HT06-0AB0 provides redundant and fail-safe control execution, communications and synchronization in an S7-400H or S7-400F/FH station for a documented Siemens SIMATIC S7-400H and



CPU 417-5H PN/DP for S7-400H



32 MB integrated work memory



MPI/DP, DP and PROFINET interfaces



Two synchronization-module interfaces

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9

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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 network or control function under controlled conditions.

TECHNICAL DATA

PARAMETER	VALUE
Product type	CPU 417-5H PN/DP
System compatibility	SIMATIC S7-400H and S7-400F/FH
Hardware functional status	1
Firmware version	V6.0
Integrated interfaces	5
Interface arrangement	1 x MPI/DP, 1 x DP, 1 x PN, 2 x synchronization module
Integrated work memory	32 MB
Program work memory	16 MB
Data work memory	16 MB
Programming package	STEP 7 V5.5 SP2 with HF1 or later

PARAMETER	VALUE
CiR synchronization time, basic load	60 ms
Power supply	Via SIMATIC system power supply
Backplane current at 5 V DC, typical	1.6 A
Backplane current at 5 V DC, maximum	1.9 A
Backplane current at 24 V DC, maximum	150 mA per DP interface
Interface current at 5 V DC, maximum	90 mA per DP interface
Typical power loss	7.5 W
Expandable FEPRM load memory	Up to 64 MB with Flash memory card
Integrated RAM load memory	1 MB maximum
Battery-backed data	All data

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TECHNICAL NOTE

Install 6ES7417-5HT06-0AB0 only in the documented Siemens SIMATIC S7-400H and S7-400F/FH position and preserve its exact wiring, interfaces and configuration. After controlled energization, verify diagnostics and redundant and fail-safe control execution, communications and synchronization in an S7-400H or S7-400F/FH station before service release.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Redundant process control

Executes the documented S7-400H user program with matched partner-CPU synchronization.

Fail-safe automation station

Supports the approved S7-400F/FH hardware and safety-project architecture.

PROFINET and PROFIBUS integration

Coordinates PN, MPI/DP and DP communications from one redundant CPU.

H-system CPU replacement

Preserves memory card, rack configuration, synchronization paths and controlled restart records.

PRODUCT PRECAUTIONS

1

Confirm the exact 6ES7417-5HT06-0AB0 marking and documented SIMATIC S7-400H CPU 417-5H PN/DP

2

Place the controller, network and affected process in the approved maintenance state.

3

Isolate power and field interfaces; prove the safe state before disconnecting hardware.

4

Record every port, terminal, module position, configuration file and active diagnostic.

5

Verify the exact supply, interface and environmental limits in the Siemens data sheet.

6

Restore grounding, shielding, network or backplane interfaces and the approved configuration.

7

Energize under control and review all device, link, rack and system diagnostics.

8

Complete a controlled functional test of redundant and fail-safe control execution, communications and

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ENGINEER FAQ

Q1 In which S7-400H and S7-400F/FH systems is Siemens 6ES7417-5HT06-0AB0 used?

6ES7417-5HT06-0AB0 is the CPU 417-5H PN/DP for SIMATIC S7-400H and S7-400F/FH redundant or fail-safe stations.

Q2 How is the 32 MB work memory divided inside 6ES7417-5HT06-0AB0?

The integrated work memory is divided into 16 MB for program data and 16 MB for user data.

Q3 Which MPI/DP, PROFIBUS DP, PROFINET and synchronization interfaces must be reconnected to 6ES7417-5HT06-0AB0?

The CPU provides one MPI/DP interface, one PROFIBUS DP interface, one PROFINET interface and two interfaces for synchronization modules.

Q4 Which STEP 7 version supports 6ES7417-5HT06-0AB0?

The exact Siemens data sheet specifies STEP 7 V5.5 SP2 with HF1 or later.

Q5 What 5 V backplane and 24 V DP-interface loads must the rack support for 6ES7417-5HT06-0AB0?

Allow for 1.6 A typical and 1.9 A maximum from the 5 V DC backplane, plus up to 150 mA from 24 V DC for each DP interface.

Q6 Which Flash memory-card expansion is available for 6ES7417-5HT06-0AB0?

The CPU supports a Flash memory card for expandable FEPROM load memory up to 64 MB; verify the installed card and saved project before replacement.

Q7 How must battery-backed data be preserved before removing 6ES7417-5HT06-0AB0?

The data sheet identifies battery backup for all data; verify battery condition and preserve the project, diagnostics and station parameters before removing the CPU.

Q8 How are both synchronization paths and redundancy diagnostics verified after installing 6ES7417-5HT06-0AB0?

Restore the approved hardware configuration, reconnect both synchronization paths and communication interfaces, then verify pair synchronization, redundancy diagnostics and controlled process

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SOURCE Siemens Data Sheet 6ES7417-5HT06-0AB0, dated 28 January 2026 | Siemens official exact-article data sheet, verified 28 September 2026

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