Siemens 6ES7314-6EH04-0AB0 SIMATIC S7-300 CPU 314C-2 PN/DP



Siemens 6ES7314-6EH04-0AB0 is the SIMATIC S7-300 CPU 314C-2 PN/DP. The 314C-2 PN/DP combines local digital and analog I/O with a two-port PROFINET Ethernet switch and an MPI/DP port. It can bring local machine channels and networked devices into the same S7-300 station.

Technical Specifications

Product Identity	
Manufacturer	Siemens AG
Complete order number	6ES7314-6EH04-0AB0
Product family	SIMATIC S7-300
CPU designation	CPU 314C-2 PN/DP
Data-sheet revision baseline	Hardware 01 / firmware V3.3
Housing (W × H × D)	120 × 125 × 130 mm
Approximate weight	730 g
Functional Configuration	
Communications	Combined MPI/DP and PROFINET Ethernet with a two-port switch
Signal arrangement	24 DI, 16 DO, 4 AI, 2 AO and 1 Pt100
High-speed counters	4 counters, up to 60 kHz
Engineering software	STEP 7 V5.5 or later with HSP 191
Performance & Power	
Integrated work memory	192 KB
Rated supply	24 V DC
Permissible supply range	19.2–28.8 V DC
Rated current	850 mA
Typical no-load current	190 mA
Typical inrush current	5 A
Typical power loss	14 W
Typical bit operation	0.06 µs
Typical floating-point operation	0.59 µs
Environment	
Horizontal mounting	0 to 60 °C
Vertical mounting	0 to 40 °C

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Compatibility & Selection Guide

Engineering baseline. Configure the exact CPU 314C-2 PN/DP hardware entry with STEP 7 V5.5 or later with HSP 191. Network selection. Use the combined interface for the project's MPI or DP network and the Ethernet ports for the configured PROFINET IO connection.

Wiring & Installation Reference

CPU supply (24 V DC), MPI / PROFIBUS DP (Combined RS-485), PROFINET (2 × RJ45 ports), Local field I/O (Front connector). The CPU expects 19.2–28.8 V DC. Siemens recommends a type C breaker rated at least 2 A or type B rated at least 4 A. Its typical inrush current is 5 A. Two 40-pin front connectors. Verify polarity on the 24 V DC L+ load supply before power is applied. The onboard digital output supply has no reverse-polarity protection.

Frequently Asked Questions

How large a Micro Memory Card can 6ES7314-6EH04-0AB0 use?

It accepts a SIMATIC Micro Memory Card up to 8 MB as load memory.

How much retentive data can 6ES7314-6EH04-0AB0 preserve on a power interruption?

The maximum retentive data area is 64 KB. Allocate the values that must survive a power interruption within that limit.

How many diagnostic events can 6ES7314-6EH04-0AB0 retain for fault finding?

The diagnostic buffer has up to 500 entries, with the last 100 entries retained after power loss.

How long does the real-time clock of 6ES7314-6EH04-0AB0 keep time without power?

Clock backup time is six weeks at an ambient temperature of 40 °C.

How many S7-300 racks can 6ES7314-6EH04-0AB0 address in one local assembly?

The configuration supports up to four racks in total, including the central rack.

What block-count limit should a project migration to 6ES7314-6EH04-0AB0 allow for?

The CPU supports up to 1,024 DBs, FCs and FBs combined. The selected memory card can reduce the number that can actually be loaded.

How many connections can be allocated to programming devices on 6ES7314-6EH04-0AB0?

The configurable allocation for PG communication is 1 to 11 connections.

Which startup organization block can 6ES7314-6EH04-0AB0 execute?

Startup logic runs in OB 100. The CPU supports one startup organization block.

Source: Siemens exact-order datasheet. Selected manufacturer page follows.

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Data sheet 6ES7314-6EH04-0AB0



SIMATIC S7-300, CPU 314C-2PN/DP Compact CPU with 192 KB work memory, 24 DI/16 DO, 4 AI, 2 AO, 1 Pt100, 4 high-speed counters (60 kHz), 1st interface MPI/DP 12 Mbit/s, 2nd interface Ethernet PROFINET, with 2-port switch, Integr. power supply 24 V DC, Front connector (2x 40-pole) and Micro Memory Card required

General information	
HW functional status	01
Firmware version	V3.3
Product function	
• Isochronous mode	Yes; For PROFINET only
Engineering with	
• Programming package	STEP 7 V5.5 or higher with HSP 191
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
external protection for power supply lines (recommendation)	Miniature circuit breaker, type C; min. 2 A; miniature circuit breaker type B, min. 4 A
Mains buffering	
• Mains/voltage failure stored energy time	5 ms
• Repeat rate, min.	1 s
Load voltage L+	
Digital inputs	
— load voltage / at digital input / at DC / rated value	24 V
— Reverse polarity protection	Yes
Digital outputs	
— Rated value (DC)	24 V
— Reverse polarity protection	No
Input current	
Current consumption (rated value)	850 mA
Current consumption (in no-load operation), typ.	190 mA
Inrush current, typ.	5 A
I^2t	0.7 $A^2 \cdot s$
Digital inputs	
• from load voltage L+ (without load), max.	80 mA
Digital outputs	
• from load voltage L+, max.	50 mA
Power loss	
Power loss, typ.	14 W
Memory	
Work memory	
• integrated	192 kbyte
• expandable	No
Load memory	
• Plug-in (MMC)	Yes

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