Siemens 6ES7313-5BG04-0AB0 SIMATIC S7-300 CPU 313C



Siemens 6ES7313-5BG04-0AB0 is the SIMATIC S7-300 CPU 313C for local machine control with built-in analogue and discrete signals.

Technical Specifications

Product Identity	
Manufacturer	Siemens AG
Complete order number	6ES7313-5BG04-0AB0
Product family	SIMATIC S7-300
CPU designation	CPU 313C
Functional Configuration	
Communications	MPI
Signal arrangement	24 DI, 16 DO, 4 AI, 2 AO and 1 Pt100
Housing (W × H × D)	120 × 125 × 130 mm
Performance & Power	
Integrated work memory	128 KB
Rated supply	24 V DC
Permissible supply range	19.2–28.8 V DC
Environment	
Operating ambient temperature	0–60 °C, subject to the mounting conditions of the system

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Compatibility & Selection Guide

Configure this order variant as CPU 313C in the S7-300 hardware project. Siemens lists STEP 7 V5.5 SP1 or V5.3 SP2 with HSP 203 for its engineering environment. An applicable SIMATIC Micro Memory Card is required for load memory.

Wiring & Installation

Two 40-pin front connectors. Keep the CPU supply within 19.2–28.8 V DC. Use the documented SIMATIC S7-300 mounting and connection procedures for the installed rack.

Frequently Asked Questions

How large a Micro Memory Card can 6ES7313-5BG04-0AB0 use?

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

How much retentive data can 6ES7313-5BG04-0AB0 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 6ES7313-5BG04-0AB0 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 6ES7313-5BG04-0AB0 keep time without power?

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

How many S7-300 racks can 6ES7313-5BG04-0AB0 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 6ES7313-5BG04-0AB0 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 6ES7313-5BG04-0AB0?

The configurable allocation for PG communication is 1 to 7 connections.

Which startup organization block can 6ES7313-5BG04-0AB0 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 6ES7313-5BG04-0AB0



SIMATIC S7-300, CPU 313C, COMPACT CPU WITH MPI, 24 DI/16 DO, 4AI, 2AO 1 PT100, 3 FAST COUNTERS (30 KHZ), INTEGRATED 24V DC POWER SUPPLY, 128 KBYTE WORKING MEMORY, FRONT CONNECTOR (2 X 40PIN) AND MICRO MEMORY CARD REQUIRED

General information	
Hardware product version	01
Firmware version	V3.3
Engineering with	
• Programming package	STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203
Supply voltage	
Rated value (DC)	
• 24 V DC	Yes
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
Digital inputs	
Load voltage L+	
— Rated value (DC)	24 V

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