

Siemens 6ES7313-1AD03-0AB0 Manual

Brand	Siemens
Product Series	Siemens
Product Type	-

Description

6ES7313-1AD03-0AB0

*** SPARE PART*** SIMATIC S7-300, CPU 313 CPU WITH
INTEGRATED 24V DC POWER SUPPLY 12 KBYTE WORKING
MEMORY

Supply voltage

Rated value (DC)

- 24 V DC Yes

permissible range, lower limit (DC) 20.4 V

permissible range, upper limit (DC) 28.8 V

Input current

Inrush current, typ. 8 A

Power loss

Power loss, typ. 8 W

Memory

Work memory

- integrated 12 kbyte; 12 KB / 4K instructions RAM (integrated)

Load memory

- expandable FEPRM Yes; Flash-EPRM
- expandable FEPRM, max. 4 Mbyte
- integrated RAM, max. 20 kbyte

Backup

- with battery Yes; all blocks
- without battery Yes; 72 bytes: memory bits, times, counters, data

CPU processing times

for bit operations, typ. 0.6 μ s

for bit operations, max. 1.2 μ s

for word operations, typ. 2 μ s

for fixed point arithmetic, typ. 3 μ s

for floating point arithmetic, typ. 60 μ s

for timer/counter operations, typ. 15 μ s

CPU-blocks

DB

- Number, max. 127
- Size, max. 8 kbyte

FB

- Number, max. 128
- Size, max. 8 kbyte

FC

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- Number, max. 128
- Size, max. 8 kbyte

OB

- Description see instruction list
- Size, max. 8 kbyte
- Number of free cycle OBs 1; OB 1
- Number of time alarm OBs 1; OB 10
- Number of cyclic interrupt OBs 1; OB 35
- Number of process alarm OBs 1; OB 40
- Number of startup OBs 1; OB 100

Nesting depth

- per priority class 8

Counters, timers and their retentivity

S7 counter

- Number 64

of which retentive with battery

— can be set Yes

— lower limit 0

— upper limit 35

of which retentive without battery

— can be set Yes

— lower limit 0

— upper limit 35

Counting range

— lower limit 1

— upper limit 999

S7 times

- Number 128

of which retentive with battery

— adjustable Yes

— lower limit 0

— upper limit 35

Time range

— lower limit 10 ms

— upper limit 9 990 s

Data areas and their retentivity

Flag

- Number, max. 256 byte
- Retentivity available Yes; MB 0 to MB 255
- of which retentive with battery 0 to 576 (M 0.0 to M 71.7, adjustable)
- of which retentive without battery 0 to 576 (M 0.0 to M 71.7, adjustable)

Address area

I/O address area

- Inputs 128 kbyte
- Outputs 128 kbyte

Process image

- Inputs 32 byte
- Outputs 32 byte

Digital channels

- Inputs 256

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- Outputs 256

Analog channels

- Inputs 64
- Outputs 32

Addressing volume

- Inputs 64 byte
- Outputs 64 byte

Hardware configuration

Number of expansion units, max. 0

connectable programming devices/PGs/PCs with STEP 7 connectable via MPI interface

Number of modules per DP slave interface, max. 8

Number of DP masters

- via CP 1; CP 342-5

Rack

- Racks, max. 1
- Modules per rack, max. 8

Time of day

Clock

- Software clock Yes

Interfaces

MPI

- Cable length, max. 9 100 m; without repeaters: 50 m; with 2 repeaters: 1100 m; with 10 repeaters in series: 9100 m; via fiber optic cable: 23.8 km (with 16 star hubs or OLMs)

1. Interface

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Functionality

- MPI Yes

MPI

- Number of nodes, max. 32; 32 nodes on MPI bus; PG/PC, OP, additional S7-300/400, C7; per CPU max. 4 static and 4 dynamic connections
- Transmission rate, max. 187.5 kbit/s

Services

- PG/OP communication Yes
- Global data communication Yes
- S7 basic communication Yes
- S7 communication Yes
- S7 communication, as server Yes

Communication functions

PG/OP communication Yes

S7 communication

- supported Yes
- as server Yes

Number of connections

- overall
 - of which dynamic 4
 - of which static 4

Configuration

Configuration software

- STEP 7 Yes; V5.0

Programming

- Command set Binary logic operations, bracketed operations, result allocation, saving, counting, loading, transferring, comparing, shifting, rotating, complementation, calling blocks, fixed point arithmetic, floating point arithmetic, jump functions
- Nesting levels 8
- Program organization Linear, structured
- System functions (SFC) Interrupt and error processing, copy data, clock functions, diagnostic functions, module parameterization, operating mode transitions
- System function blocks (SFB) Yes

Programming language

— SCL Yes; Optional

Know-how protection

- User program protection/password protection Yes

Cycle time monitoring

- lower limit 1 ms
- upper limit 6 000 ms
- adjustable Yes
- preset 150 ms

Dimensions

Width 80 mm

Height 125 mm

Depth 130 mm

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Weight, approx. 530 g; Memory card 16 g