



Product data sheet
6ES7314-1AE04-0AB0

SIMATIC S7-300, CPU 314 CPU WITH INTEGRATED 24 V DC POWER SUPPLY 24 KBYTE WORKING MEMORY AVAILABLE IN EXCHANGE ONLY! SUCCESSOR: 6ES7314-1AF10-0AB0. COMPATABILITY NOTES SEE SERVICE&SUPPORT ENTRY ID 14845044

Power supply
Input voltage

Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V

Input current

Rated value at 24 V DC	1000 mA
Inrush current, max.	8 A

Current consumption/ power loss

Power loss, max.	8 W
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Memory
Work memory

integrated	24 Kibyte ; 24 KB/8 K instructions RAM (integrated); 1 instruction means 3 bytes on average
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Load memory

expandable FEPRM	Yes ; Flash-EPRM
expandable FEPRM, max.	4 Mbyte
integrated RAM, max.	40 Kibyte

Backup

present	Yes
with battery	Yes ; all blocks
without battery	Yes ; 4 KB: bit memory, counter, times and data

CPU/ blocks
DB

Number, max.	127
Size, max.	8 Kibyte

FB

Number, max.	128
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Size, max.	8 Kibyte
FC	
Number, max.	128
Size, max.	8 Kibyte
OB	
Size, max.	8 Kibyte
Number of free cycle OBs	1 ; OB 1
Number of time alarm OBs	1 ; OB 10
Number of watchdog interrupts	1 ; OB 35
Number of process alarm OBs	1 ; OB 40
Number of startup OBs	1 ; OB 100
Nesting depth	
per priority class	8
CPU/ processing times	
for bit operations, min.	0.3 μ s
for bit operations, max.	0.6 μ s
for word operations, min.	1 μ s
for fixed point arithmetic, min.	2 μ s
for floating point arithmetic, min.	50 μ s
for timer/counter operations, min.	12 μ s
Times/counters and their retentivity	
S7 counter	
Number	64
of which retentive with battery	
can be set	Yes
lower limit	0
upper limit	63
of which retentive without battery	
can be set	Yes
lower limit	0
upper limit	63
Counting range	
lower limit	1
upper limit	999
S7 times	

Number	128
of which retentive with battery	
can be set	Yes
lower limit	0
upper limit	127
of which retentive without battery	
can be set	Yes
lower limit	0
upper limit	127
Time range	
lower limit	10 ms
upper limit	9990 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 2047 (M 0.0 to M 255.7, adjustable)
of which retentive without battery	0 to 2047 (M 0.0 to M 255.7, adjustable)
Address area	
I/O address area	
Inputs	512 byte
Outputs	512 byte
Process image	
Inputs	128 byte
Outputs	128 byte
Digital channels	
Inputs	1024
Outputs	1024
Analog channels	
Inputs	256
Outputs	128
Addressing volume	
Outputs	122 byte
Inputs	122 byte
Hardware configuration	

Connectable programming devices/PCs	PGs/PCs with STEP 7 connectable via MPI interface
Modules per rack, max.	32
Number of modules per DP slave interface, max.	16
Number of DP masters integrated	0
via CP	1 ; CP 342-5
Number of operable FMs and CPs (recommended)	
FM	4
CP, point-to-point	2
CP, LAN	1
Time of day Clock	
Hardware clock (real-time clock)	Yes
Communication functions	
PG/OP communication	Yes
Global data communication supported	Yes
S7 basic communication supported	Yes
S7 communication supported	Yes
as server	Yes
S5-compatible communication supported	Yes ; via loadable blocks
Standard communication (FMS) supported	Yes ; via loadable blocks
Number of connections	
of which dynamic	8
of which static	4
MPI	
Cable length, max.	9100 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)
1st interface	
Functionality	
MPI	Yes

MPI

Services

PG/OP communication	Yes
Global data communication	Yes
S7 basic communication	Yes
S7 communication	Yes
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 speeds, max.	187.5 kbit/s
CPU/ programming	
Programming language	
STEP 7	Yes ; V5.0, V5.0 SP1
LAD	Yes
FBD	Yes
STL	Yes
SCL	Yes
GRAPH	Yes
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
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User program protection/password protection	Yes
Software libraries	
Process diagnostics	Yes
Software controller	Yes ; depending on the required memory space and the resulting execution time
System functions (SFC)	Interrupt and error processing, copy data, clock functions, diagnostic functions, module parameterization, operating mode transitions
System function blocks (SFB)	1
Cycle time monitoring	
lower limit	1 ms

upper limit	6000 ms
can be set	Yes
preset	150 ms
Dimensions and weight	
Dimensions and weight	
Width	80 mm
Height	125 mm
Depth	130 mm
Weight	
Weight, approx.	530 g ; Memory card 16 g
Status	Apr 26, 2010