

OFFICIAL MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

6ES7314-6CH04-0AB0

Siemens official documentation for the exact article number.

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Selected official Siemens pages follow this cover.

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



General information	
HW functional status	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)	Yes
• 24 V DC	
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	
— Rated value (DC)	24 V

— Reverse polarity protection	Yes
Digital outputs	
— Rated value (DC)	24 V
— Reverse polarity protection	No
Input current	
Current consumption (rated value)	880 mA
Current consumption (in no-load operation), typ.	150 mA
Inrush current, typ.	5 A
I^2t	0.7 A ² ·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.	13 W
Memory	
Work memory	
• integrated	192 kbyte
• expandable	No
• Size of retentive memory for retentive data blocks	64 kbyte
Load memory	
• Plug-in (MMC)	Yes
• Plug-in (MMC), max.	8 Mbyte
• Data management on MMC (after last programming), min.	10 y
Backup	
• present	Yes; Guaranteed by MMC (maintenance-free)
• without battery	Yes; Program and data
CPU processing times	
for bit operations, typ.	0.06 μs
for word operations, typ.	0.12 μs
for fixed point arithmetic, typ.	0.16 μs
for floating point arithmetic, typ.	0.59 μs
CPU-blocks	
Number of blocks (total)	1 024; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.
DB	
• Number, max.	1 024; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	

• Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
• Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
• Description	see instruction list
• Size, max.	64 kbyte
• Number of free cycle OBs	1; OB 1
• Number of time alarm OBs	1; OB 10
• Number of delay alarm OBs	2; OB 20, 21
• Number of cyclic interrupt OBs	4; OB 32, 33, 34, 35
• Number of process alarm OBs	1; OB 40
• Number of DPV1 alarm OBs	3; OB 55, 56, 57
• Number of startup OBs	1; OB 100
• Number of asynchronous error OBs	5; OB 80, 82, 85, 86, 87
• Number of synchronous error OBs	2; OB 121, 122
Nesting depth	
• per priority class	16
• additional within an error OB	4
Counters, timers and their retentivity	
S7 counter	
• Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255
— preset	Z 0 to Z 7
Counting range	
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
S7 times	
• Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255

— preset	No retentivity
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	
retentive data area in total	All, max. 64 KB
Flag	
• Number, max.	256 byte
• Retentivity available	Yes; MB 0 to MB 255
• Retentivity preset	MB 0 to MB 15
• Number of clock memories	8; 1 memory byte
Data blocks	
• Retentivity adjustable	Yes; via non-retain property on DB
• Retentivity preset	Yes
Local data	
• per priority class, max.	32 kbyte; Max. 2048 bytes per block
Address area	
I/O address area	
• Inputs	2 048 byte
• Outputs	2 048 byte
of which distributed	
— Inputs	2 003 byte
— Outputs	2 010 byte
Process image	
• Inputs	2 048 byte
• Outputs	2 048 byte
• Inputs, adjustable	2 048 byte
• Outputs, adjustable	2 048 byte
• Inputs, default	128 byte
• Outputs, default	128 byte
Default addresses of the integrated channels	
— Digital inputs	124.0 to 126.7
— Digital outputs	124.0 to 125.7
— Analog inputs	752 to 761
— Analog outputs	752 to 755
Digital channels	
• Inputs	16 048