MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7314-1AF10-0AB0

MODULAR MPI CENTRAL PROCESSOR

Used with the applicable S7-300 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens technical documentation for 6ES7314-1AF10-0AB0

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Data sheet 6ES7314-1AF10-0AB0

SIMATIC S7-300, CPU 314 CPU WITH MPI INTERFACE INTEGRATED 24 V DC POWER SUPPLY 48 KBYTE WORKING MEMORY MICRO MEMORY CARD NECESSARY

General information	
HW functional status	01
Firmware version	V2.0.0
Engineering with	
• Programming package	STEP 7 V5.1 SP4 or higher
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
external protection for power supply lines (recommendation)	2 A min.
Input current	
Current consumption (rated value)	600 mA
Current consumption (in no-load operation), typ.	60 mA
Inrush current, typ.	2.5 A
I^2t	0.5 $A^2 \cdot s$
Power loss	
Power loss, typ.	2.5 W
Memory	
Work memory	
• integrated	48 kbyte
• expandable	No
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)
Battery	
Backup battery	
• Backup time, max.	1 008 h; At 40 °C ambient temperature

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CPU processing times	
for bit operations, typ.	0.1 µs
for bit operations, max.	0.2 µs
for word operations, typ.	0.2 µs
for fixed point arithmetic, typ.	2 µs
for floating point arithmetic, typ.	3 µs

CPU-blocks	
Number of blocks (total)	1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of loadable blocks can be reduced by the MMC being used.
DB	
• Number, max.	511; DB 0 reserved
• Size, max.	16 kbyte
FB	
• Number, max.	512; From FB 0 to FB 511
• Size, max.	16 kbyte
FC	
• Number, max.	512; from FC 0 to FC 511
• Size, max.	16 kbyte
OB	
• Number, max.	see instruction list
• Size, max.	16 kbyte
Nesting depth	
• per priority class	8
• additional within an error OB	4

Counters, timers and their retentivity	
S7 counter	
• Number	256
Retentivity	
— adjustable	Yes
— preset	Z 0 to Z 7
Counting range	
— adjustable	Yes
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
S7 times	
• Number	256
Retentivity	

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— adjustable	Yes
— 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 (incl. memory bits, times, counters)
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
Local data	
• per priority class, max.	510 byte
Address area	
I/O address area	
• Inputs	1 kbyte
• Outputs	1 kbyte
Process image	
• Inputs	128 byte
• Outputs	128 byte
Digital channels	
• Inputs	1 024
— of which central	1 024
• Outputs	1 024
— of which central	1 024
Analog channels	
• Inputs	256
— of which central	256
• Outputs	256
— of which central	256
Hardware configuration	
Number of DP masters	
• integrated	0
• via CP	4
Number of operable FMs and CPs (recommended)	

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