

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS SIMATIC S7

6ES7513-1AL01-0AB0

CPU 1513-1 PN CONTROLLER

Used with the applicable SIMATIC S7-1500 controllers configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official product documentation

*** Spare part *** SIMATIC S7-1500, CPU 1513-1 PN, central processing unit with work memory 300 KB for program and 1.5 MB for data, 1st interface: PROFINET IRT with 2-port switch, 40 ns bit performance, SIMATIC Memory Card required



General information	
Product type designation	CPU 1513-1 PN
HW functional status	FS03
Firmware version	V2.5
Engineering with	
• STEP 7 TIA Portal configurable/integrated as of version	V15 (FW V2.5) / V13 SP1 Update 4 (FW V1.8) or higher
Configuration control	
via dataset	Yes
Display	
Screen diagonal [cm]	3.45 cm
Control elements	
Number of keys	6
Mode selector switch	1
Supply voltage	
Type of supply voltage	24 V DC
permissible range, lower limit (DC)	19.2 V

permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Mains buffering	
• Mains/voltage failure stored energy time	5 ms
• Repeat rate, min.	1/s
Input current	
Current consumption (rated value)	0.7 A
Inrush current, max.	1.9 A; Rated value
I^2t	0.02 A ² ·s
Power	
Infeed power to the backplane bus	10 W
Power consumption from the backplane bus (balanced)	5.5 W
Power loss	
Power loss, typ.	5.7 W
Memory	
Number of slots for SIMATIC memory card	1
SIMATIC memory card required	Yes
Work memory	
• integrated (for program)	300 kbyte
• integrated (for data)	1.5 Mbyte
Load memory	
• Plug-in (SIMATIC Memory Card), max.	32 Gbyte
Backup	
• maintenance-free	Yes
CPU processing times	
for bit operations, typ.	40 ns
for word operations, typ.	48 ns
for fixed point arithmetic, typ.	64 ns
for floating point arithmetic, typ.	256 ns
CPU-blocks	
Number of elements (total)	2 000; Blocks (OB, FB, FC, DB) and UDTs
DB	
• Number range	1 ... 60 999; subdivided into: number range that can be used by the user: 1 ... 59 999, and number range of DBs created via SFC 86: 60 000 ... 60 999
• Size, max.	1.5 Mbyte; For non-optimized block accesses, the max. size of the DB is 64 KB
FB	
• Number range	0 ... 65 535
• Size, max.	300 kbyte