

SIMATIC S7-300, CPU 316 CPU WITH INTEGRATED 24 V DC
POWER SUPPLY, 128 KBYTE WORKING MEMORY

Supply voltage	
Rated value (DC)	24 V
Memory	
Work memory	
• integrated	128 kbyte; 42 K instructions
Load memory	
• integrated RAM, max.	192 kbyte
• expandable RAM, max.	512 kbyte
Backup	
• present	Yes
• with battery	Yes; 128 KB: 2 years
• without battery	Yes; 4 KB: 10 years
CPU processing times	
for bit operations, typ.	0.3 ms
for word operations, typ.	1 ms
CPU-blocks	
DB	
• Number, max.	127
FB	
• Number, max.	128
FC	
• Number, max.	128
OB	
• Description	cyclic/time-driven: 1, 10, 20, 35; alarm-driven/fault: 40, 80 to 82, 85, 87, 121 to 122
Address area	
Digital channels	
• Inputs	1 024
Analog channels	
• Inputs	128
Hardware configuration	
Rack	
• Racks, max.	4; 10 m each

Time of day	
Clock	
• Hardware clock (real-time)	Yes; Resolution: 1 s
1. Interface	
Protocols	
• MPI	Yes
Communication functions	
Global data communication	
• supported	Yes
• Number of GD loops, max.	4
S7 basic communication	
• supported	Yes
• User data per job, max.	76 byte
Number of connections	
• overall	
— of which dynamic	8
— of which static	4
Configuration	
Configuration software	
• STEP 7	Yes
Programming	
Programming language	
— LAD	Yes
— FBD	Yes
— STL	Yes
— SCL	Yes; limited
— CFC	Yes; limited
— GRAPH	Yes; limited
— HiGraph®	Yes; limited
Software libraries	
— Software controller	Yes; via loadable FB
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