

SIMATIC S7-300, CPU 313C COMPACT CPU WITH MPI, 24 DI/16 DO, 4AI, 2AO 1 PT100, 3 FAST COUNTERS (30 KHZ), INTEGRATED 24V DC POWER SUPPLY, 32 KBYTE WORKING MEMORY, FRONT CONNECTOR (2 X 40PIN) AND MICRO MEMORY CARD REQUIRED

General information	
HW functional status	01
Firmware version	V2.0.0
Engineering with	
<ul style="list-style-type: none"> <li>Programming package</li> </ul>	STEP 7 V5.2 SP1 or higher
Supply voltage	
Rated value (DC)	Yes
<ul style="list-style-type: none"> <li>24 V DC</li> </ul>	
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Load voltage L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
<ul style="list-style-type: none"> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
Input current	
Current consumption (rated value)	700 mA
Current consumption (in no-load operation), typ.	150 mA
Inrush current, typ.	11 A
Power loss	
Power loss, typ.	14 W
Memory	
Work memory	
<ul style="list-style-type: none"> <li>integrated</li> </ul>	32 kbyte; For program and data
<ul style="list-style-type: none"> <li>expandable</li> </ul>	No
Load memory	
<ul style="list-style-type: none"> <li>Plug-in (MMC)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Plug-in (MMC), max.</li> </ul>	8 Mbyte
<ul style="list-style-type: none"> <li>Data management on MMC (after last programming), min.</li> </ul>	10 y
Backup	
<ul style="list-style-type: none"> <li>present</li> </ul>	Yes; Guaranteed by MMC (maintenance-free)
<ul style="list-style-type: none"> <li>without battery</li> </ul>	Yes; Program and data

CPU processing times	
for bit operations, typ.	0.1 $\mu$ s
for bit operations, max.	0.2 $\mu$ s
for word operations, typ.	0.2 $\mu$ s
for fixed point arithmetic, typ.	2 $\mu$ s
for floating point arithmetic, typ.	3 $\mu$ s

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; Number range: 1 to 511
• Size, max.	16 kbyte

FB	
• Number, max.	512; Number range: 0 to 2047
• Size, max.	16 kbyte

FC	
• Number, max.	512; Number range: 0 to 2047
• Size, max.	16 kbyte

OB	
• Number, max.	see instruction list
• Size, max.	16 kbyte
• Number of free cycle OBs	1; OB 1
• Number of time alarm OBs	1; OB 10
• Number of delay alarm OBs	1; OB 20
• Number of cyclic interrupt OBs	1; OB 35
• Number of process alarm OBs	1; OB 40
• Number of startup OBs	1; OB 100
• Number of asynchronous error OBs	1; OB 80
• Number of synchronous error OBs	2; OB 121, 122

Nesting depth	
• per priority class	8
• additional within an error OB	4

### Counters, timers and their retentivity

S7 counter	
• Number	256

Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	256

Counting range	
— lower limit	0

— upper limit	999
<b>IEC counter</b>	
• present	Yes
• Type	SFB
<b>S7 times</b>	
• Number	256
<b>Retentivity</b>	
— adjustable	Yes
— lower limit	0
— upper limit	256
— preset	No retentivity
<b>Time range</b>	
— lower limit	10 ms
— upper limit	9 990 s
<b>IEC timer</b>	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
<b>Data areas and their retentivity</b>	
retentive data area in total	all
<b>Flag</b>	
• 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
<b>Data blocks</b>	
• Retentivity adjustable	No
• Retentivity preset	Yes
<b>Local data</b>	
• per priority class, max.	510 byte
<b>Address area</b>	
<b>I/O address area</b>	
• Inputs	1 kbyte
• Outputs	1 kbyte
<b>Process image</b>	
• Inputs	128 byte
• Outputs	128 byte
<b>Default addresses of the integrated channels</b>	
— Digital inputs	124.0 to 126.7
— Digital outputs	124.0 to 125.7
— Analog inputs	752 to 761