

OFFICIAL MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

6ES7318-3FL00-0AB0

Siemens official documentation for the exact article number.

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Figure similar

*** SPARE PART*** SIMATIC S7-300 CPU319F-3 PN/DP, CENTRAL PROCESSING UNIT WITH 1400 KBYTE WORKING MEMORY, 1. INTERFACE MPI/DP 12MBIT/S, 2. INTERFACE DP-MASTER/SLAVE, 3. INTERFACE ETHERNET PROFINET, MICRO MEMORY CARD NECESSARY FOR USE WITH SOFTWARE OPTION S7 DISTRIBUTED SAFETY V5.4 SP3 OR HIGHER

General information	
Hardware product version	03
Firmware version	V2.8
Engineering with	
• Programming package	STEP 7 V5.4 + SP5 or higher or STEP 7 V5.4 + SP4 or higher with HSP 186, S7 Distributed Safety V5.4 SP4 or higher
Supply voltage	
Rated value (DC)	Yes
• 24 V DC	
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)	1 050 mA
Current consumption (in no-load operation), typ.	400 mA
Inrush current, typ.	4 A

I _q	1.2 A ² ·s
Power loss	
Power loss, typ.	14 W
Memory	
Work memory	
• integrated	1 400 kbyte
• expandable	No
• Size of retentive memory for retentive data blocks	700 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.	0.01 µs
for word operations, typ.	0.02 µs
for fixed point arithmetic, typ.	0.02 µs
for floating point arithmetic, typ.	0.04 µs
CPU-blocks	
Number of blocks (total)	4 096; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.
DB	
• Number, max.	4 096; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
• Number, max.	4 096; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
• Number, max.	4 096; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
• 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 (OB 35: smallest settable clock pulse = 500 µs)

• Number of process alarm OBs	1; OB 40
• Number of DPV1 alarm OBs	3; OB 55, 56, 57
• Number of isochronous mode OBs	1; OB 61
• Number of startup OBs	1; OB 100
• Number of asynchronous error OBs	6; OB 80, 82, 83, 85, 86, 87 (OB83 only for PROFINET IO)
• 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	2 048
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	2 047
— preset	Z 0 to Z 7
Counting range	
— can be set	Yes
— lower limit	0
— upper limit	999
IEC counter	
• Number	Unlimited (limited only by RAM capacity)
S7 times	
• Number	2 048
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	2 047
— 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. 700 KB
Flag	
• Number, max.	8 192 byte

• Retentivity available	Yes; from MB 0 to MB 8191
• Retentivity preset	MB 0 to MB 15
• Number of clock memories	8; 1 memory byte
Data blocks	
• Number, max.	4 096; Number range: 1 to 16000
• Size, max.	64 kbyte
• Retentivity adjustable	Yes; via non-retain property on DB
• Retentivity preset	Yes
Local data	
• per priority class, max.	32 768 byte; Max. 2048 bytes per block
Address area	
I/O address area	
• Inputs	8 192 byte
• Outputs	8 192 byte
of which distributed	
— Inputs	8 192 byte
— Outputs	8 192 byte
Process image	
• Inputs	8 192 byte
• Outputs	8 192 byte
• Inputs, adjustable	8 192 byte
• Outputs, adjustable	8 192 byte
• Inputs, default	1 024 byte
• Outputs, default	1 024 byte
Subprocess images	
• Number of subprocess images, max.	1
Digital channels	
• Inputs	65 536
— of which central	1 024
• Outputs	65 536
— of which central	1 024
Analog channels	
• Inputs	4 096
— of which central	256
• Outputs	4 096
— of which central	256
Hardware configuration	
Number of DP masters	
• integrated	2
• via CP	4
Number of operable FMs and CPs (recommended)	