## SIEMENS

## Data sheet

## 6ES7318-3FL01-0AB0



SIMATIC S7-300 CPU319F-3 PN/DP, Central processing unit with 2.5 MB work memory, 1st interface MPI/DP 12 Mbit/s, 2nd interface DP master/slave 3rd interface Ethernet PROFINET, Micro Memory Card required

Firmware version     V3.2       Product function     • Isochronous mode       • Isochronous mode     Yes; Via 2nd PROFIBUS DP or PROFINET interface       Engineering with     •       • Programming package     STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4       Supply voltage     Rated value (DC)       Parmissible range, lower limit (DC)     19.2 V       permissible range, lower supply lines (recommendation)     2.4 With the second secon	General information	
• Isochronous mode     Yes; Via 2nd PROFIBUS DP or PROFINET interface       Engineering with     •       • Programming package     STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4       Supply voltage     •       Rated value (DC)     24 V       permissible range, lower limit (DC)     19.2 V       permissible range, upper limit (DC)     28.8 V       external protection for power supply lines (recommendation)     2 A min.       Mains buffering     •       • Mains/voltage failure stored energy time     5 ms       • Repeat rate, min.     1 s       Input current     Current consumption (rated value)       Current consumption (ran no-load operation), typ.     500 mA       Inrush current, typ.     4 A       IP     1.2 A* s       Power loss, typ.     14 W       Memory     •       • Integrated     2 560 kbyte       • expandable     No       Lad memory     •       • Plug-in (MMC), max.     8 Mbyte       • Data management on MMC (after last programming), min.     8 Mbyte       • Data management on MMC (after last programming), min.     10 y       Backup     Yes       • present     Yes       • without battery     Yes       • PU poresions, typ.     0.004 µs	Firmware version	V3.2
Engineering with       An an antipackage         Programming package       STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4         Supply voltage       24 V         Rated value (DC)       19.2 V         permissible range, uxper limit (DC)       28.8 V         external protection for power supply lines (recommendation)       2 A min.         Mains buffering       5 ms         • Mains/voltage failure stored energy time • Repeat rate, min.       1 s         Input current       2 S0 mA         Current consumption (rated value)       1 250 mA         Current consumption (in no-load operation), typ.       500 mA         Innush current, typ.       4 A         P       1.2 A* s         Power loss       9         Power loss       9         • integrated       2 560 kbyte         • expandable       No         Load memory       9         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       Yes         • present       Yes         • without battery       Yes         • Plug-cressing times       0.004 µs	Product function	
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Supply voltage         Rated value (DC)       24 V         permissible range, lower limit (DC)       19.2 V         permissible range, upper limit (DC)       28.8 V         external protection for power supply lines (recommendation)       2 A min.         Mains buffering       5 ms         • Repeat rate, min.       1 s         Input current       1 250 mA         Current consumption (rated value)       1 250 mA         Current consumption (in no-load operation), typ.       500 mA         Inrush current, typ.       4 A         Pt       1.2 A*-s         Power loss, typ.       14 W         Memory       •         • Integrated       2 560 kbyte         • expandable       No         Load memory       •         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       • present       Yes         • without battery       Yes         • without battery       Yes         • programming), min.       0.004 µs	Engineering with	
Rated value (DC)       24 V         permissible range, lower limit (DC)       19.2 V         permissible range, upper limit (DC)       28.8 V         external protection for power supply lines (recommendation)       2 A min.         Mains buffering       5 ms         • Mains/voltage failure stored energy time       5 ms         • Repeat rate, min.       1 s         Input current       1         Current consumption (rated value)       1 250 mA         Inrush current, typ.       4 A         Irt       1.2 A²-s         Power loss       9         Power loss, typ.       14 W         Memory       •         • integrated       2 560 kbyte         • expandable       No         Load memory       •         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       •         • present       Yes         • without battery       Yes         • processing times       6 rol bit operations, typ.	<ul> <li>Programming package</li> </ul>	STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4
permissible range, lower limit (DC)         19.2 V           permissible range, upper limit (DC)         28.8 V           external protection for power supply lines (recommendation)         2 A min.           Mains buffering         2 A min.           • Mains/voltage failure stored energy time         5 ms           • Repeat rate, min.         1 s           Input current         1 s           Current consumption (rated value)         1 250 mA           Current consumption (in no-load operation), typ.         500 mA           Inrush current, typ.         4 A           Pt         1.2 A*s           Power loss         Power loss, typ.           Power loss, typ.         14 W           Memory         • integrated           • expandable         No           Load memory         • Plug-in (MMC), max.           • Plug-in (MMC), max.         8 Mbyte           • Data management on MMC (after last programming), min.         10 y           Backup         • present         Yes           • without battery         Yes           • Otdu precessing times         for bit operations, typ.	Supply voltage	
permissible range, upper limit (DC)     28.8 V       external protection for power supply lines (recommendation)     2 A min.       Mains buffering     5 ms       • Mains/voltage failure stored energy time     5 ms       • Repeat rate, min.     1 s       Input current     1 s50 mA       Current consumption (rated value)     1 250 mA       Current consumption (in no-load operation), typ.     500 mA       Inrush current, typ.     4 A       Pt     1.2 A*-s       Power loss     9       Power loss, typ.     14 W       Memory     9       Uota memory     1 S60 kbyte       • expandable     No       Load memory     9       • Plug-in (MMC), max.     8 Mbyte       • Data management on MMC (after last programming), min.     10 y       Backup     Yes       • present     Yes       • without battery     Yes       CPU processing times     0.004 µs	Rated value (DC)	24 V
external protection for power supply lines (recommendation)       2 A min.         Mains buffering       5 ms         • Repeat rate, min.       1 s         Input current       1 s         Current consumption (rated value)       1 250 mA         Current consumption (in no-load operation), typ.       500 mA         Inrush current, typ.       4 A         I*t       1.2 A*.s         Power loss       Power loss, typ.         Power loss, typ.       14 W         Memory       2 560 kbyte         • expandable       No         Load memory       •         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       •       Yes         • without battery       Yes         CPU processing times       0.004 µs	permissible range, lower limit (DC)	19.2 V
(recommendation)         Mains buffering         • Mains/voltage failure stored energy time       5 ms         • Repeat rate, min.       1 s         Input current       1 250 mA         Current consumption (rated value)       1 250 mA         Current consumption (in no-load operation), typ.       500 mA         Inrush current, typ.       4 A         I*t       1, 2*s         Power loss       Power loss         Power loss, typ.       14 W         Memory       •         • integrated       2 560 kbyte         • expandable       No         Load memory       •         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       •         • present       Yes         • without battery       Yes         CPU processing times       0.004 µs	permissible range, upper limit (DC)	28.8 V
<ul> <li>Mains/voltage failure stored energy time</li> <li>Repeat rate, min.</li> <li>1 s</li> <li>Input current</li> <li>Current consumption (rated value)</li> <li>1 250 mA</li> <li>Current consumption (in no-load operation), typ.</li> <li>500 mA</li> <li>Inrush current, typ.</li> <li>4 A</li> <li>IPt</li> <li>1.2 A<sup>2</sup>-s</li> <li>Power loss</li> <li>Power loss, typ.</li> <li>14 W</li> <li>Memory</li> <li>work memory</li> <li>integrated</li> <li>expandable</li> <li>No</li> <li>Load memory</li> <li>Plug-in (MMC), max.</li> <li>Backup</li> <li>present</li> <li>yersent</li> <li>yersent</li> <li>without battery</li> <li>Yes</li> <li>CPU processing times</li> <li>for bit operations, typ.</li> <li>0.004 μs</li> </ul>		2 A min.
• Repeat rate, min.       1 s         Input current       Current consumption (rated value)       1 250 mA         Current consumption (in no-load operation), typ.       500 mA         Inrush current, typ.       4 A         IPt       1.2 A* s         Power loss          Power loss, typ.       14 W         Memory          Work memory          • integrated       2 560 kbyte         • expandable       No         Load memory       Yes         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       Yes         • present       Yes         • without battery       Yes         CPU processing times       0.004 µs	Mains buffering	
Input current         Current consumption (rated value)       1 250 mA         Current consumption (in no-load operation), typ.       500 mA         Inrush current, typ.       4 A         It       1.2 A²-s         Power loss          Power loss, typ.       14 W         Memory          Work memory          • integrated       2 560 kbyte         • expandable       No         Load memory          • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup          • present       Yes         • without battery       Yes         CPU processing times       0.004 µs	<ul> <li>Mains/voltage failure stored energy time</li> </ul>	5 ms
Current consumption (rated value)       1 250 mA         Current consumption (in no-load operation), typ.       500 mA         Inrush current, typ.       4 A         I <sup>P</sup> t       1.2 A <sup>2</sup> ·s         Power loss          Power loss, typ.       14 W         Memory          • integrated       2 560 kbyte         • expandable       No         Load memory          • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup          • present       Yes         • without battery       Yes         CPU processing times       0.004 µs	Repeat rate, min.	1 s
Current consumption (in no-load operation), typ.       500 mA         Inrush current, typ.       4 A         I²t       1.2 A² ·s         Power loss          Power loss, typ.       14 W         Memory          Work memory       2 560 kbyte         • expandable       No         Load memory          • Plug-in (MMC)       Yes         • Data management on MMC (after last programming), min.       10 y         Backup       • present       Yes         • without battery       Yes         CPU processing times       0.004 µs	Input current	
Inrush current, typ.       4 A         I²t       1.2 A²-s         Power loss          Power loss, typ.       14 W         Memory          Work memory          • integrated       2 560 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         • without battery       Yes         CPU processing times       0.004 µs	Current consumption (rated value)	1 250 mA
Pt       1.2 A²-s         Power loss       14 W         Memory       14 W         Work memory       2 560 kbyte         • integrated       2 560 kbyte         • expandable       No         Load memory       Plug-in (MMC)         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       • present         • present       Yes         • processing times       0.004 μs	Current consumption (in no-load operation), typ.	500 mA
Power loss         Power loss, typ.       14 W         Memory          Work memory       2 560 kbyte         • integrated       2 560 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       Yes         • present       Yes         • without battery       Yes         • Dotoperations, typ.       0.004 µs	Inrush current, typ.	4 A
Power loss, typ.       14 W         Memory       Work memory         • integrated       2 560 kbyte         • expandable       No         Load memory       Plug-in (MMC)         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       • present         • without battery       Yes         • Dprocessing times       0.004 μs	²t	1.2 A <sup>2</sup> ·s
Memory         Work memory         • integrated       2 560 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       Yes         • present       Yes         • without battery       Yes         CPU processing times       0.004 μs	Power loss	
Work memory         • integrated       2 560 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         • without battery       Yes         CPU processing times       0.004 µs	Power loss, typ.	14 W
• integrated2 560 kbyte• expandableNoLoad memory• Plug-in (MMC)Yes• Plug-in (MMC), max.8 Mbyte• Data management on MMC (after last programming), min.10 yBackup• presentYes• without batteryYesCPU processing times0.004 μs	Memory	
• 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         • without battery       Yes         CPU processing times       0.004 μs	Work memory	
Load memory       Yes         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       ves         • present       Yes         • without battery       Yes         CPU processing times       0.004 μs	<ul> <li>integrated</li> </ul>	2 560 kbyte
• Plug-in (MMC)       Yes         • Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       10 y         • present       Yes         • without battery       Yes         CPU processing times       0.004 μs	expandable	No
• Plug-in (MMC), max.       8 Mbyte         • Data management on MMC (after last programming), min.       10 y         Backup       10 y         • present       Yes         • without battery       Yes         CPU processing times       0.004 μs	Load memory	
• Data management on MMC (after last programming), min.       10 y         Backup       • present         • present       Yes         • without battery       Yes         CPU processing times       0.004 μs	<ul> <li>Plug-in (MMC)</li> </ul>	Yes
programming), min.     Backup       • present     Yes       • without battery     Yes       CPU processing times     0.004 μs	<ul> <li>Plug-in (MMC), max.</li> </ul>	8 Mbyte
• present     Yes       • without battery     Yes       CPU processing times        for bit operations, typ.     0.004 μs		10 у
• without battery Yes CPU processing times for bit operations, typ. 0.004 µs	Backup	
CPU processing times       for bit operations, typ.       0.004 µs	• present	Yes
for bit operations, typ. 0.004 µs	<ul> <li>without battery</li> </ul>	Yes
	CPU processing times	
for word operations, typ. 0.01 µs	for bit operations, typ.	0.004 µs
	for word operations, typ.	0.01 µs
for fixed point arithmetic, typ. 0.01 µs	for fixed point arithmetic, typ.	0.01 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	
<ul> <li>Number, max.</li> </ul>	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
<ul> <li>Number of free cycle OBs</li> </ul>	1; OB 1
<ul> <li>Number of time alarm OBs</li> </ul>	1; OB 10
<ul> <li>Number of delay alarm OBs</li> </ul>	2; OB 20, 21
<ul> <li>Number of cyclic interrupt OBs</li> </ul>	4; OB 32, 33, 34, 35 (OB 35: smallest settable clock pulse = 500 $\mu s)$
<ul> <li>Number of process alarm OBs</li> </ul>	1; OB 40
<ul> <li>Number of DPV1 alarm OBs</li> </ul>	3; OB 55, 56, 57
<ul> <li>Number of isochronous mode OBs</li> </ul>	1; OB 61
<ul> <li>Number of startup OBs</li> </ul>	1; OB 100
<ul> <li>Number of asynchronous error OBs</li> </ul>	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	0.040
Number	2 048
Retentivity — adjustable	Yes
— lower limit	0
— upper limit	2 047
— preset	Z 0 to Z 7
Counting range	
Counting range — adjustable	Yes
— adjustable	Yes 0
— adjustable — lower limit	Yes 0 999
— adjustable	0
— adjustable — lower limit — upper limit	0
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>IEC counter</li> </ul>	0 999
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>IEC counter</li> <li>present</li> </ul>	0 999 Yes
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>IEC counter</li> <li>present</li> <li>Type</li> </ul>	0 999 Yes SFB
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul>	0 999 Yes SFB
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times	0 999 Yes SFB Unlimited (limited only by RAM capacity)
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul>	0 999 Yes SFB Unlimited (limited only by RAM capacity)
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity <ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul>	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0 2 047
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity <ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>preset</li> </ul>	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity <ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>preset</li> </ul> Time range	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0 2 047 No retentivity
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity <ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>preset</li> </ul> Time range <ul> <li>lower limit</li> </ul>	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0 2 047 No retentivity 10 ms
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity <ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>preset</li> </ul> Time range <ul> <li>lower limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> </ul>	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0 2 047 No retentivity
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity <ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>preset</li> </ul> Time range <ul> <li>lower limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>lower limit</li> </ul> IEC timer	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0 2 047 No retentivity 10 ms 9 990 s
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity <ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>preset</li> </ul> Time range <ul> <li>lower limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>preset</li> </ul> Iter time range <ul> <li>lower limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> </ul> IEC timer <ul> <li>present</li> </ul>	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0 2 047 No retentivity 10 ms 9 990 s
<ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> </ul> IEC counter <ul> <li>present</li> <li>Type</li> <li>Number</li> </ul> S7 times <ul> <li>Number</li> </ul> Retentivity <ul> <li>adjustable</li> <li>lower limit</li> <li>upper limit</li> <li>preset</li> </ul> Time range <ul> <li>lower limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>upper limit</li> <li>lower limit</li> </ul> IEC timer	0 999 Yes SFB Unlimited (limited only by RAM capacity) 2 048 Yes 0 2 047 No retentivity 10 ms 9 990 s

Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	700 kbyte
Flag	
• Size, max.	8 192 byte
<ul> <li>Retentivity available</li> </ul>	Yes; From MB 0 to MB 8 191
Retentivity preset	MB 0 to MB 15
<ul> <li>Number of clock memories</li> </ul>	8; 1 memory byte
Data blocks	
<ul> <li>Retentivity adjustable</li> </ul>	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	
<ul> <li>per priority class, max.</li> </ul>	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
<ul> <li>Inputs, adjustable</li> </ul>	8 192 byte
Outputs, adjustable	8 192 byte
Inputs, default	1 024 byte
Outputs, default	1 024 byte
Subprocess images	10210310
Number of subprocess images, max.	1; With PROFINET IO, the length of the user data is limited to 1600
	bytes
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)	
• FM	8
• CP, PtP	8
• CP, LAN	10
Rack	
Racks, max.	4
<ul> <li>Modules per rack, max.</li> </ul>	8
Time of day	
Clock	Ver
Hardware clock (real-time)	Yes
<ul> <li>retentive and synchronizable</li> </ul>	Yes
Backup time	6 wk; At 40 °C ambient temperature
<ul> <li>Deviation per day, max.</li> </ul>	10 s; Typ.: 2 s
<ul> <li>Behavior of the clock following POWER-ON</li> <li>Behavior of the clock following expiry of backup</li> </ul>	Clock continues running after POWER OFF Clock continues to run with the time at which the power failure occurred

period	
Operating hours counter	
• Number	4
Number/Number range	0 to 3
Range of values	0 to 2^31 hours (when using SFC 101)
Granularity	1 h
retentive	Yes; Must be restarted at each restart
Clock synchronization	
supported	Yes
• to MPI, master	Yes
● to MPI, slave	Yes
• to DP, master	Yes; With DP slave only slave clock
● to DP, slave	Yes
• in AS, master	Yes
• in AS, slave	Yes
<ul> <li>on Ethernet via NTP</li> </ul>	Yes; As client
Digital inputs	
Number of digital inputs	0
Digital outputs	
Number of digital outputs	0
Analog inputs	·
Number of analog inputs	0
Analog outputs	
Number of analog outputs	0
	0
Interfaces	1
Number of industrial Ethernet interfaces	1
Number of PROFINET interfaces	1
Number of RS 485 interfaces	2
Number of RS 422 interfaces	0
1. Interface	Integrated DC 405 interface
1. Interface Interface type	Integrated RS 485 interface
1. Interface Interface type Isolated	Integrated RS 485 interface Yes
1. Interface         Interface type         Isolated         Interface types	Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485	Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.	Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols	Yes Yes 150 mA
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI	Yes Yes 150 mA Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master	Yes Yes 150 mA Yes Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection	Yes Yes 150 mA Yes Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services	Yes Yes 150 mA Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         — PG/OP communication	Yes Yes 150 mA Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         - PG/OP communication         - Routing	Yes Yes 150 mA Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         — PG/OP communication	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         — PG/OP communication         — Routing         — Global data communication	Yes Yes 150 mA Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         — PG/OP communication         — Routing         — Global data communication         — S7 basic communication         — S7 communication	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         — PG/OP communication         — Routing         — Global data communication         — S7 basic communication         — S7 communication         — S7 communication         — S7 communication, as client	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         — PG/OP communication         — Routing         — Global data communication         — S7 basic communication         — S7 communication	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes No; but via CP and loadable FB
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         - PG/OP communication         - Routing         - Global data communication         - S7 basic communication         - S7 communication, as client         - S7 communication, as server	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes No; but via CP and loadable FB
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         — PG/OP communication         — Routing         — Global data communication         — S7 basic communication         — S7 communication, as client         — S7 communication, as server         PROFIBUS DP master	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         — PG/OP communication         — Routing         — Global data communication         — S7 basic communication         — S7 communication, as client         — S7 communication, as server         PROFIBUS DP master         • Transmission rate, max.	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         - PG/OP communication         - Routing         - Global data communication         - S7 basic communication         - S7 communication         - S7 communication         - S7 communication, as client         - S7 communication, as server         PROFIBUS DP master         • Transmission rate, max.         • Number of DP slaves, max.	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         - PG/OP communication         - Routing         - Global data communication         - S7 basic communication         - S7 communication         - S7 communication         - S7 communication         - S7 communication, as client         - S7 communication, as server         PROFIBUS DP master         • Transmission rate, max.         • Number of DP slaves, max.         Services	Yes Yes 150 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
1. Interface         Interface type         Isolated         Interface types         • RS 485         • Output current of the interface, max.         Protocols         • MPI         • PROFIBUS DP master         • PROFIBUS DP slave         • Point-to-point connection         MPI         • Transmission rate, max.         Services         - PG/OP communication         - Routing         - Global data communication         - S7 basic communication         - S7 communication         - S7 communication, as client         - S7 communication, as server         PROFIBUS DP master         • Transmission rate, max.         • Number of DP slaves, max.         • Number of DP slaves, max.         Services         - PG/OP communication	Yes Yes 150 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

<ul> <li>— S7 basic communication</li> </ul>	Yes; I blocks only
— S7 communication	Yes
<ul> <li>— S7 communication, as client</li> </ul>	No
<ul> <li>— S7 communication, as server</li> </ul>	Yes
— Equidistance	Yes
<ul> <li>— Isochronous mode</li> </ul>	No
- SYNC/FREEZE	Yes
<ul> <li>Activation/deactivation of DP slaves</li> </ul>	Yes
<ul> <li>— Number of DP slaves that can be</li> </ul>	8
simultaneously activated/deactivated, max.	
— Direct data exchange (slave-to-slave	Yes; as subscriber
communication)	N
- DPV1	Yes
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
User data per DP slave	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	
<ul> <li>Transmission rate, max.</li> </ul>	12 Mbit/s
<ul> <li>automatic baud rate search</li> </ul>	Yes; only with passive interface
<ul> <li>Address area, max.</li> </ul>	32
<ul> <li>User data per address area, max.</li> </ul>	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; with interface active
<ul> <li>— Global data communication</li> </ul>	No
<ul> <li>— S7 basic communication</li> </ul>	No
— S7 communication	Yes
<ul> <li>— S7 communication, as client</li> </ul>	No
<ul> <li>— S7 communication, as server</li> </ul>	Yes; Connection configured on one side only
<ul> <li>— Direct data exchange (slave-to-slave</li> </ul>	Yes
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
2. Interface	
Interface type	Integrated RS 485 interface
Isolated	Yes
Interface types	
• RS 485	Yes
<ul> <li>Output current of the interface, max.</li> </ul>	200 mA
Protocols	
• MPI	No
<ul> <li>PROFINET IO Controller</li> </ul>	No
PROFINET IO Device	No
PROFINET CBA	No
<ul> <li>PROFIBUS DP master</li> </ul>	Yes
PROFIBUS DP slave	Yes; A DP slave at both interfaces simultaneously is not possible
Open IE communication	No
Web server	No
PROFIBUS DP master	
Transmission rate, max.	12 Mbit/s
Number of DP slaves, max.	124
Number of DP slaves, max.	
<ul> <li>Number of DP slaves, max.</li> <li>Services</li> </ul>	124

<ul> <li>— Global data communication</li> </ul>	No
<ul> <li>— S7 basic communication</li> </ul>	Yes; I blocks only
— S7 communication	Yes
- S7 communication, as client	No
— S7 communication, as server	Yes; Connection configured on one side only
— Equidistance	Yes
— Isochronous mode	Yes; OB 61 - isochronous mode is possible either on DP or PROFINET
	IO (not simultaneously)
- SYNC/FREEZE	Yes
<ul> <li>Activation/deactivation of DP slaves</li> </ul>	Yes
<ul> <li>— Number of DP slaves that can be</li> </ul>	8
simultaneously activated/deactivated, max.	
Direct data exchange (slave-to-slave	Yes; as subscriber
communication)	Vee
— DPV1	Yes
Address area	0 khuda
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
User data per DP slave	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	
• GSD file	The latest GSD file is available at: http://www.siemens.com/profibus-gsd
<ul> <li>Transmission rate, max.</li> </ul>	12 Mbit/s
<ul> <li>automatic baud rate search</li> </ul>	Yes; only with passive interface
<ul> <li>Address area, max.</li> </ul>	32
<ul> <li>User data per address area, max.</li> </ul>	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; with interface active
<ul> <li>— Global data communication</li> </ul>	No
— S7 basic communication	No
— S7 communication	Yes
- S7 communication, as client	No
- S7 communication, as server	Yes; Connection configured on one side only
— Direct data exchange (slave-to-slave	Yes
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
3. Interface	
Interface type	PROFINET
Isolated	Yes
automatic detection of transmission rate	Yes; 10/100 Mbit/s
Autonegotiation	Yes
Autocrossing	Yes
Change of IP address at runtime, supported	Yes
Interface types	
RJ 45 (Ethernet)	Yes
Number of ports	2
integrated switch	Yes
Protocols	
• MPI	No
PROFINET IO Controller	Yes; Also simultaneously with I-Device functionality
PROFINET IO Controller     PROFINET IO Device	Yes; Also simultaneously with IO Controller functionality
PROFINET NO DEvice     PROFINET CBA	Yes
PROFIBUS DP master	No
PROFIBUS DP master     PROFIBUS DP slave	No
- FROTIDUS DE SIQVE	

Open IE communication	Yes; Via TCP/IP, ISO on TCP, and UDP
Web server	Yes
Media redundancy	Yes
PROFINET IO Controller	103
Transmission rate, max.	100 Mbit/s
Services	
— PG/OP communication	Yes
- Routing	Yes
- S7 communication	Yes; with loadable FBs, max. configurable connections: 16, max.
	number of instances: 32
— Isochronous mode	Yes; OB 61 - isochronous mode is possible either on DP or PROFINET IO (not simultaneously)
— Shared device	Yes
— Prioritized startup	Yes
<ul> <li>Number of IO devices with prioritized startup, max.</li> </ul>	32
<ul> <li>Number of connectable IO Devices, max.</li> </ul>	256
— Of which IO devices with IRT, max.	64
— of which in line, max.	64
<ul> <li>— Number of IO Devices with IRT and the option "high flexibility"</li> </ul>	256
— of which in line, max.	61
<ul> <li>— Number of connectable IO Devices for RT,</li> </ul>	256
max.	200
— of which in line, max.	256
<ul> <li>Activation/deactivation of IO Devices</li> </ul>	Yes
<ul> <li>Number of IO Devices that can be simultaneously activated/deactivated, max.</li> </ul>	8
<ul> <li>— IO Devices changing during operation (partner ports), supported</li> </ul>	Yes
<ul> <li>— Number of IO Devices per tool, max.</li> </ul>	8
<ul> <li>Device replacement without swap medium</li> </ul>	Yes
— Send cycles	250 $\mu s,$ 500 $\mu s,$ 1 ms; 2 ms, 4 ms (not in the case of IRT with "high flexibility" option)
— Updating time	250 μs to 512 ms (depending on the operating mode, see Manual "S7- 300 CPU 31xC and CPU 31x, technical Data" for more details)
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
— User data consistency, max.	1 024 byte
PROFINET IO Device	
Services	
— PG/OP communication	Yes
— Routing	Yes
— S7 communication	Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32
— Isochronous mode	No
— IRT	Yes
— PROFlenergy	Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device
— Shared device	Yes
— Number of IO Controllers with shared device,	2
max.	
Transfer memory	
— Inputs, max.	1 440 byte; Per IO Controller with shared device
— Outputs, max.	1 440 byte; Per IO Controller with shared device
Submodules	
— Number, max.	64
— User data per submodule, max.	1 024 byte
PROFINET CBA	
acyclic transmission	Yes

	Yes
cyclic transmission     Open IE communication	100
Number of connections, max.	32
<ul> <li>Local port numbers used at the system end</li> </ul>	0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964,
<ul> <li>Keep-alive function, supported</li> </ul>	65532, 65533, 65534, 65535 Yes
Protocols	
Redundancy mode	
Media redundancy	
— Switchover time on line break, typ.	200 ms; PROFINET MRP
— Number of stations in the ring, max.	50
Open IE communication	
• TCP/IP	Yes; via integrated PROFINET interface and loadable FBs
- Number of connections, max.	32
<ul> <li>Data length for connection type 01H, max.</li> </ul>	1 460 byte
<ul> <li>Data length for connection type 11H, max.</li> </ul>	32 768 byte
<ul> <li>ISO-on-TCP (RFC1006)</li> </ul>	Yes; via integrated PROFINET interface and loadable FBs
<ul> <li>Number of connections, max.</li> </ul>	32
— Data length, max.	32 768 byte
• UDP	Yes; via integrated PROFINET interface and loadable FBs
<ul> <li>— Number of connections, max.</li> </ul>	32
— Data length, max.	1 472 byte
Web server	
<ul> <li>supported</li> </ul>	Yes
<ul> <li>User-defined websites</li> </ul>	Yes
<ul> <li>Number of HTTP clients</li> </ul>	5
Communication functions	
PG/OP communication	Yes
Data record routing	Yes
Global data communication	
supported	Yes
Number of GD loops, max.	8
Number of GD packets, max.	8
Number of GD packets, transmitter, max.	8
Number of GD packets, receiver, max.	8
Size of (21) nackets may	177 DV/TA
<ul> <li>Size of GD packets, max.</li> <li>Size of GD packet (of which consistent) max</li> </ul>	22 byte
• Size of GD packet (of which consistent), max.	22 byte 22 byte
• Size of GD packet (of which consistent), max. S7 basic communication	22 byte
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication</li> <li>supported</li> </ul>	22 byte Yes
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> </ul> </li> </ul>	22 byte Yes 76 byte
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication</li> <li>supported</li> </ul>	22 byte Yes
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication</li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> <li>S5 compatible communication</li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> <li>S5 compatible communication <ul> <li>supported</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> <li>S5 compatible communication <ul> <li>supported</li> <li>supported</li> </ul> </li> <li>PROFINET CBA (at set setpoint communication load)</li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication) Yes; via CP and loadable FC
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> <li>S5 compatible communication <ul> <li>supported</li> </ul> </li> <li>PROFINET CBA (at set setpoint communication load) <ul> <li>Setpoint for the CPU communication load</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication) Yes; via CP and loadable FC 20 %
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> <li>S5 compatible communication <ul> <li>supported</li> </ul> </li> <li>PROFINET CBA (at set setpoint communication load) <ul> <li>Setpoint for the CPU communication load</li> <li>Number of remote interconnection partners</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication) Yes; via CP and loadable FC 20 % 32
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> <li>S5 compatible communication <ul> <li>supported</li> </ul> </li> <li>PROFINET CBA (at set setpoint communication load)</li> <li>Setpoint for the CPU communication load</li> <li>Number of remote interconnection partners</li> <li>Number of functions, master/slave</li> <li>Total of all master/slave connections</li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication) Yes; via CP and loadable FC 20 % 32 50
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> <li>S5 compatible communication <ul> <li>supported</li> </ul> </li> <li>PROFINET CBA (at set setpoint communication load) <ul> <li>Setpoint for the CPU communication load</li> <li>Number of remote interconnection partners</li> <li>Number of functions, master/slave</li> </ul> </li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication) Yes; via CP and loadable FC 20 % 32 50 3 000
<ul> <li>Size of GD packet (of which consistent), max.</li> <li>S7 basic communication <ul> <li>supported</li> <li>User data per job, max.</li> <li>User data per job (of which consistent), max.</li> </ul> </li> <li>S7 communication <ul> <li>supported</li> <li>as server</li> <li>as client</li> <li>User data per job, max.</li> </ul> </li> <li>S5 compatible communication <ul> <li>supported</li> </ul> </li> <li>PROFINET CBA (at set setpoint communication load)</li> <li>Setpoint for the CPU communication load</li> <li>Number of remote interconnection partners</li> <li>Number of functions, master/slave</li> <li>Total of all master/slave connections</li> <li>Data length of all incoming connections</li> </ul>	22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication) Yes; via CP and loadable FC 20 % 32 50 3 000

master/slave, max.	
Number of device-internal and PROFIBUS	1 000
interconnections	
<ul> <li>Data length of device-internal und PROFIBUS interconnections, max.</li> </ul>	8 000 byte
<ul> <li>Data length per connection, max.</li> </ul>	1 400 byte
Remote interconnections with acyclic transmission	
— Sampling interval, min.	200 ms
<ul> <li>— Number of incoming interconnections</li> </ul>	100
<ul> <li>— Number of outgoing interconnections</li> </ul>	100
<ul> <li>Data length of all incoming interconnections, max.</li> </ul>	3 200 byte
<ul> <li>Data length of all outgoing interconnections, max.</li> </ul>	3 200 byte
<ul> <li>— Data length per connection, max.</li> </ul>	1 400 byte
Remote interconnections with cyclic transmission	
<ul> <li>Transmission frequency: Transmission interval, min.</li> </ul>	1 ms
<ul> <li>— Number of incoming interconnections</li> </ul>	300
<ul> <li>— Number of outgoing interconnections</li> </ul>	300
<ul> <li>Data length of all incoming interconnections, max.</li> </ul>	4 800 byte
<ul> <li>Data length of all outgoing interconnections, max.</li> </ul>	4 800 byte
<ul> <li>— Data length per connection, max.</li> </ul>	450 byte
HMI variables via PROFINET (acyclic)	
<ul> <li>— Number of stations that can log on for HMI variables (PN OPC/iMap)</li> </ul>	3; 2x PN OPC/1x iMap
<ul> <li>— HMI variable updating</li> </ul>	500 ms
<ul> <li>— Number of HMI variables</li> </ul>	600
<ul> <li>— Data length of all HMI variables, max.</li> </ul>	9 600 byte
PROFIBUS proxy functionality	
— supported	Yes
<ul> <li>— Number of linked PROFIBUS devices</li> </ul>	32
— Data length per connection, max.	240 byte; Slave-dependent
Number of connections	
overall	32
<ul> <li>usable for PG communication</li> </ul>	31
- reserved for PG communication	1
<ul> <li>— adjustable for PG communication, min.</li> </ul>	1
<ul> <li>adjustable for PG communication, max.</li> </ul>	31
<ul> <li>usable for OP communication</li> </ul>	31
— reserved for OP communication	1
— adjustable for OP communication, min.	1
— adjustable for OP communication, max.	31
usable for S7 basic communication	30
- reserved for S7 basic communication	0
— adjustable for S7 basic communication, min.	0
— adjustable for S7 basic communication, max.	30
usable for S7 communication	16
- reserved for S7 communication	0
— adjustable for S7 communication, min.	0
— adjustable for S7 communication, max.	16
total number of instances, max.	32
usable for routing	X1 as MPI: max. 10; X1 as DP master: max. 24; X1 as DP slave (active): max. 14; X2 as DP master: max. 24; X2 as DP slave (active): max. 14; X3 as PROFINET: 48 max.
S7 message functions	
Number of login stations for message functions, max.	32; Depending on the configured connections for PG/OP and S7 basic communication
Process diagnostic messages	Yes
r roosoo alagnoolio moosageo	100

Test commissioning functions       Yes, Up to 2 simultaneously         Status block       Yes, Up to 2 simultaneously         Single step       Yes         Number of breakpoints       4         Status doubted       Yes         • Variables       Inputs, outputs, memory bits, DB, times, counters         • Variables       Inputs, outputs, memory bits, DB, times, counters         • Orichig       Yes         • Forcing       Yes         • Forcing, variables, max.       14         • Forcing       Yes         • Number of entries, max.       10         • Build out anables, max.       10         • Forcing       Yes         • Number of entries, max.       500         - adjustable       No         - of which powerfail-proof       100         - adjustable       Yes         - adjustable       Yes         - and barband control variables, max.       60° C         - adjustable       Yes         - adjustable       Yes         - adjustable       Yes         - adjustable       Yes         - preset       0 °C         Configuration software       See instruction list         • System function blocks (SFB)	simultaneously active Alarm-S blocks, max.	300
Status block     Yes: Up to 2 simultaneously       Single step     Yes       Number of variables     4       StatusControl variables     Inputs, outputs, memory bits, DB, times, counters       • Variables     Inputs, outputs, memory bits, DB, times, counters       • Variables     Inputs, outputs, memory bits, DB, times, counters       • of which status variables, max.     30       - of which control variables, max.     14       Forcing     * Forcing, variables       • Forcing, variables     Inputs, outputs       • Forcing, variables     Inputs, outputs       • Aumber of entries, max.     500       - of which powerfail-proof     100       • Number of entries, readable in RUN, max.     499       - adjustable     Yes, From 10 to 499       adjustable     Yes       - Starte     0 °C       adjustable     Yes       adjustable     Yes <td></td> <td></td>		
Brige step         Yes           Mumber of breakpoints         4           Statuscontrol         4           Statuscontrol variables         Inputs, outputs, memory bits, DB, times, counters           • Variables         Inputs, outputs, memory bits, DB, times, counters           • Annher of variables, max.         30           - of which control variables, max.         14           Forcing         Inputs, outputs           • Forcing, variables, max.         10           • Annher of variables, max.         10           Diagnostic buffer         Yes           • Forcing, variables, max.         10           • Annher of variables, max.         500           • Annher of variables, max.         500           • Present         500           - adjustable         Yes           • Instructure         Yes           • Analystable         Yes           - adjustable         Yes           - adjustable         Yes           • Annhert memperature during operation         10           • inin.         0 °C           Configuration software         9           • STEP 7         Yes, Yo5.5 or higher           Frogramming ianguage         Yes           -		Yes: Up to 2 simultaneously
Number of breakpoints         4           Statuscontrol         -           Statuscontrol variables         Inputs. outputs, memory bits, DB, times, counters           • Variables         Inputs. outputs, memory bits, DB, times, counters           • Variables         30           - of which status variables, max.         30           - of which control variables, max.         14           Forcing         Yes           • Forcing, variables         Inputs, outputs           • Forcing, variables, max.         10           Dispansite burdler         -           • Present         Yes           • Number of entriles, max.         500           of which powerfail-proof         100           • Number of entriles, readule in RUN, max.         499           - adjustable         Yes; From 10 to 499           - preset         10           Service data         -           • nink         0°C           Configuration         -           Configuration software         -           • STEP 7         Yes; V5.5 or higher           Programming         -           • System functions blocks (SFD)         see instruction list           • System functions blocks (SFD)         see		
Statuscontrol <ul> <li>Statuscontrol variable</li> <li>Variables</li> <li>Number of variables, max.</li> <li>and which status variables, max.</li> <li>Forcing</li> <li>Forcing, variables</li> <li>Number of variables, max.</li> <li>Biognostic buffer</li> <li>Present</li> <li>Anneter of variables, max.</li> <li>Diagnostic buffer</li> <li>Present</li> <li>Anneter of variables, max.</li> <li>Diagnostic buffer</li> <li>Present</li> <li>Anneter of entries, max.</li> <li>Control</li> <li>Number of entries, max.</li> <li>Control</li> <li>Number of entries, max.</li> <li>Control</li> <li>Number of entries readable in RUN, max.</li> <li>Applicatible</li> <li>Yes, From 10 to 499</li> <li>and yastable</li> <li>Strive data</li> <li>Configuration of entries readable in RUN, max.</li> <li>O "C"</li> <li>max.</li> <li>O "C"</li> <li>Configuration solvere</li> <li>STEP 7</li> <li>Yes, V5.5 or higher</li> <li>Frogramming language</li> <li>- LAD</li> <li>Yes</li> <li>System function tolooks (SFB)</li> <li>see instruction list</li> <li>System function tolooks (SFB)</li> <li>See instruction list</li> <li>System function sprate</li> <li>Set 1</li> <li>Yes</li> <li>Know-how protection/password</li></ul>		
• Situation of Variable     Yes       • Variables     Inputs, outputs, memory bits, DB, times, counters       • of which status variables, max.     30       - of which status variables, max.     30       • Forcing     Yes       • Forcing, variables     Inputs, outputs       • Forcing, variables, max.     10       • Forcing, variables, max.     10       • Earcing, variables, max.     10       • Forcing     Yes       • Number of entites, max.     500       - adjustable     No       - adjustable     No       - adjustable     100       • Runce of entites, readable in RUN, max.     499       - adjustable     Yes       - adjustable     Yes       - adjustable     0°C       - adjustable     0°C       • max.     60°C       Configuration     O°C       • max.     60°C       Configuration     Configuration       • TEP 7     Yes, V5.5 or higher       Programming     See instruction list       • System function locks (SFB)     see instruction list       • System functions (SFC)     see instruc		
• VariablesInputs, outputs, memory bits, DB, times, counters• Number of variables, max.30- of which control variables, max.14• ForcingInputs, outputs• Forcing, variables, max.10• Forcing, variables, max.10• Number of variables, max.10• Number of variables, max.10• Number of variables, max.500• Number of variables, max.500• adjustableNo- adjustableNo- adjustableYes• Number of entries, max.500- adjustableYes• number of entries readable in RUN, max.499- adjustableYes• max.0 °C• adjustableYesAmbient temperature during operation0 °C• min.0 °C• min.0 °C• max.60 °C• ording useration500• STEP 7Yes; V5.5 or higherProgrammingYes• Programming isourceYes• Programming isourceYes• Continued set8• System function softwareYes• StEP 7Yes• Programming isourceYes• Contrant set8• System function blocks (SFB)see instruction list• System function blocks (SFB)see instruction list• System function blocks (SFB)Yes• Contrant setYes• Contrant setYes• Stock encryptionYes• DerationY		Yes
• Number of variables, max.     30       - of which satulas variables, max.     30       - of which control variables, max.     30       • Forcing     Yes       • Forcing, variables, max.     10       Diagnostic buffer     Yes       • present     Yes       • Number of entries, max.     500       - adjustable     No       - of which powerfail proof     100       • Number of entries, max.     500       - adjustable     No       - of which powerfail proof     100       • Number of entries readable in RUN, max.     499       - adjustable     Yes. From 10 to 499       - preset     10       Service data     Ves       • nam.     60 °C       Configuration     O°C       Configuration software     See instruction list       • System function blocks (SFB)     See instruction list       • System function software     Yes       - CFC     Yes       - SC		
of which status variables, max.         30           of which control variables, max.         14           Forcing         Yes           Forcing, variables         Non           Forcing, variables, max.         10           Diagnostic buffer         Yes           present         Yes           of which powerfail-proof         100           of which powerfail-proof         100           of which powerfail-proof         100		
of which control variables, max.         14           Forcing         Yes           - Forcing, variables, max.         10           Diagnostic buffer         Yes           - adjustable max.         500           - adjustable max.         500           - adjustable max.         500           - adjustable max.         600           - adjustable max.         700           - adjustable max.         600           - adjustable max.         700           - adjustable max.         80°C           Configuration software         80°C           - STEP 7         Yes Yos 50 mighter           Programming language         700           - Asting function block (SFB)         see instruction list           Nesting levels         8           System function block (SFB)         see instruction list		
Forcing     Yes          • Forcing, variables     Inputs, outputs          • Number of variables, max.       10       Diagnostic buffer       •          • present       Yes          • noresent       Yes          • or which powerfail-proof       100          • Nome of entries, max.       500           - of which powerfail-proof       100            No           adjustable       Yes, From 10 to 499           - adjustable or entries readable in RUN, max.       499           - adjustable or entries readable in Quertain and the second of the secon	-	
• Forcing,Yes• Forcing, variables, max.10Diagnostic bufferYes• presentYes• Number of entries, max.500- a djustableNo- of which powerfal-proof100• Number of entries readable in RUN, max.499- a djustableYes, From 10 to 499- a preset10Service dataYes- and which powerfallYes- and which powerfallYes- and which powerfallYes- and which powerfall0 °C- and we can dutYes- and ne read dutYes- min.0 °C- min.0 °C- min.0 °C- max.60 °CConfiguration software		17
• Forcing, variables, max.         Inputs, outputs           • Number of variables, max.         10           • Disgnastic buffer         Yes           • Number of entries, max.         500           - adjustable         No           - of which powerfail-proof         100           • Number of entries readable in RUN, max.         499           - adjustable         Yes; From 10 to 499           - preset         10           • can be read out         Yes           Ambient emperature during operation         ************************************		Yes
• Number of variables, max.         10           Diagnostic buffer         •           • present         Yes           • Number of entries, max.         500           adjustable         No           adjustable         No           adjustable         100           - Number of entries readable in RUN, max.         499           adjustable         Yes; From 10 to 499           preset         10           Stervice data         -           • and be read out         Yes           Ambient conditions         -           Ambient conditions         -           Configuration Software         -           • STE P 7         Yes; V5.5 or higher           Programming         -           • STE P 7         Yes; V5.5 or higher           Programming         -           • String levels         8           • System function blocks (SFD)         see instruction list           • System function slocks (SFB)         see instruction list           • System function slocks (SFB)         yes           LD         Yes           - SCL         Yes           - SCL         Yes           - GRAPH	-	
Diagnostic buffer         Yes           • present         Yes           • Number of entries, max.         500           adjustable         No           of which powerfail-proof         100           • Number of entries readable in RUN, max.         499           adjustable         Yes, From 10 to 499           preset         10           Service data         Yes           • can be read out         Yes           Ambient conditions         Ambient conditions           Ambient conditions         0 °C           Configuration software         0 °C           • strEP 7         Yes; V5.5 or higher           • Configuration software         see instruction list           • Nesting levels         8           • System function blocks (SFB)         see instruction list           • System function blocks (SFB)         see instruction list           • System function blocks (SFB)         see instruction list           • System function blocks (SFB)         yes           FBD         Yes           - SCL         Yes           - SCR         Yes           - GRAPH         Yes           - HiGraph0         Yes           Know-how pro	-	
<ul> <li>present</li> <li>Yes</li> <li>Number of entries, max.</li> <li>500</li> <li>Number of entries, max.</li> <li>500</li> <li>Number of entries, max.</li> <li>Solutable</li> <li>- of which powerfall-proof</li> <li>Number of entries readable in RUN, max.</li> <li>499</li> <li>- adjustable</li> <li>- preset</li> <li>10</li> <li>Senice data</li> <li>- ab eread out</li> <li>Yes. From 10 to 499</li> <li>- preset</li> <li>Context and the conditions</li> <li>Ambient conditions</li> <li>Ambient conditions</li> <li>Ambient conditions</li> <li>Ambient conditions</li> <li>O °C</li> <li>of °C</li> <li>of °C</li> <li>of °C</li> <li>of °C</li> <li>of °C</li> <li>of °C</li> <li>Configuration software</li> <li>STEP 7</li> <li>Yes: V5.5 or higher</li> <li>Programming</li> <li>Command set</li> <li>see instruction list</li> <li>System function (SFC)</li> <li>see instruction list</li> <li>System functions (SFC)</li> <li>see instruction list</li> <li>System functions (SFC)</li> <li>see instruction list</li> <li>System functions (SFC)</li> <li>see instruction list</li> <li>System function software</li> <li>- CC</li> <li>- STL</li> <li>Yes</li> <li>- STL</li> <li>Yes</li> <li>- STL</li> <li>Yes</li> <li>- SCL</li> <li>Yes</li> <li>- SCL</li> <li>Yes</li> <li>- SCL</li> <li>Yes</li> <li>- SRAPH</li> <li>Yes</li> <li>- STL</li> <li>- HiGraph®</li> <li>Yes</li> <li>- Block encryption</li> <li>Yes</li> <li>- Block encryption</li> <li>Yes</li> <li>- Block encryption</li> <li>Yes</li> <li>- Site mn</li> <li>- bepth</li> <li>130 mm</li> <li>Weight, approx.</li> <li>1250 g</li> </ul>		10
• Number of entries, max.500 adjustableNo of which powerfail-proof100• Number of entries readable in RUN, max.499 adjustableYes; From 10 to 499 preset10Service datYes adjustableYes adjustableO °C adjustableSee instruction list odjustableSee instruction list AdjustableSee instruction list AdjustableYes adjustable </td <td>-</td> <td>Vec</td>	-	Vec
• Number of entries readable in RUN, max.         499	-	
adjustableYes; From 10 to 499 preset10Service dataYes can be read outYesAmbient conditions0 °CAmbient temperature during operation0 °C• min.0 °C• max.60 °CConfiguration		
Service data     • can be read out     Yes       Ambient conditions     • min.     0 °C       • min.     0 °C       • max.     60 °C       Configuration     • C       • orgramming     • STEP 7       • STEP 7     Yes; V5.5 or higher       Programming     • See instruction list       • Nesting levels     8       • System function blocks (SFB)     see instruction list       • System function blocks (SFB)     see instruction list       • System function blocks (SFB)     see instruction list       • CAD     Yes       - LAD     Yes       - STL     Yes       - STL     Yes       - SCL     Yes       - GRAPH     Yes       - HiGrapN®     Yes       Know-how protection     Yes       • Block encryption     Yes; With S7 block Privacy       Dimensions     120 mm       Width     120 mm       Height     130 mm       Weights     Weight, approx.	-	
• can be read out       Yes         Ambient conditions       • min.         • min.       0 °C         • max.       60 °C         Configuration       • Configuration software         • STEP 7       Yes; V5.5 or higher         Programming       • enax.         • Command set       see instruction list         • Nesting levels       8         • System functions (SFC)       see instruction list         • System function blocks (SFB)       see instruction list         Programming language       -         - LAD       Yes         - STL       Yes         - SCL       Yes         - SCL       Yes         - SCL       Yes         - GRAPH       Yes         - HiGraph®       Yes         Know-how protection/password protection       Yes; With S7 block Privacy         Dimensions       120 mm         Width       120 mm         Height       130 mm         Veights       1250 g		10
Ambient conditions         Ambient temperature during operation         • min.       0 °C         • max.       60 °C         Configuration       Configuration software         • STEP 7       Yes; V5.5 or higher         Programming       see instruction list         • Nesting levels       8         • System functions (SFC)       see instruction list         • System function blocks (SFB)       see instruction list         Programming language       -         - LAD       Yes         - FBD       Yes         - SL       Yes         - SCL       Yes         - CFC       Yes         - GRAPH       Yes         - HiGraph®       Yes         Know-how protection       Yes         • Block encryption       Yes         Width       120 mm         Height       126 mm         Depth       130 mm		Vec
Ambient temperature during operation       0 °C         • min.       0 °C         • max.       60 °C         Configuration       60 °C         Configuration software       60 °C         • STEP 7       Yes; V5.5 or higher         Programming       see instruction list         • Command set       see instruction list         • Nesting levels       8         • System function blocks (SFC)       see instruction list         • System function blocks (SFB)       see instruction list         Programming language       -         - LAD       Yes         - FBD       Yes         - SCL       Yes         - CFC       Yes         - GRAPH       Yes         - HiGraph®       Yes         Know-how protection       Yes         • Block encryption       Yes; With S7 block Privacy         Dimensions       120 mm         Width       125 mm         Depth       130 mm         Weight, approx.       1 250 g		res
• min.         0 °C           • max.         60 °C           Configuration         -           Configuration software         -           • STEP 7         Yes; V5.5 or higher           Programming         -           • Command set         see instruction list           • Nesting levels         8           • System function blocks (SFC)         see instruction list           • System function blocks (SFB)         see instruction list           • FBD         Yes           - SCL         Yes           - SCL         Yes           - GRAPH         Yes           - HiGraph®         Yes           • User program protection/password protection         Yes; With S7 block Privacy           Dimensions         125 mm		
• max.       60 °C         Configuration       Event Set Set Set Set Set Set Set Set Set Se		
Configuration software         • STEP 7       Yes; V5.5 or higher         Programming         • Command set       see instruction list         • Nesting levels       8         • System functions (SFC)       see instruction list         • System function blocks (SFB)       see instruction list         Programming language       -         - LAD       Yes         - FBD       Yes         - STL       Yes         - SCL       Yes         - CFC       Yes         - GRAPH       Yes         - HiGraph®       Yes         Width       120 mm         Height       125 mm         Depth       130 mm		
Configuration software         • STEP 7       Yes; V5.5 or higher         Programming         • Command set       see instruction list         • Nesting levels       8         • System functions (SFC)       see instruction list         • System function blocks (SFB)       see instruction list         Programming language       -         - LAD       Yes         - FBD       Yes         - STL       Yes         - SCL       Yes         - CFC       Yes         - GRAPH       Yes         - HiGraph®       Yes         Know-how protection/password protection       Yes         Vidth       120 mm         Height       125 mm         Depth       130 mm         Weight, approx.       1 250 g		60 °C
• STEP 7       Yes; V5.5 or higher         Programming         • Command set       see instruction list         • Nesting levels       8         • System functions (SFC)       see instruction list         • System function blocks (SFB)       see instruction list         Programming language       -         - LAD       Yes         - FBD       Yes         - STL       Yes         - STL       Yes         - SCL       Yes         - GRAPH       Yes         - HiGraph®       Yes         Width       120 mm         Height       125 mm         Depth       130 mm         Weight, approx.       1 250 g	Configuration	
Programming         • Command set       see instruction list         • Nesting levels       8         • System functions (SFC)       see instruction list         • System function blocks (SFB)       see instruction list         Programming language       -         - LAD       Yes         - FBD       Yes         - STL       Yes         - SCL       Yes         - SCL       Yes         - GRAPH       Yes         - HiGraph®       Yes         Width       120 mm         Height       125 mm         Depth       130 mm         Weight, approx.       1250 g		
• Command setsee instruction list• Nesting levels8• System functions (SFC)see instruction list• System function blocks (SFB)see instruction list• Programming language LADYes- FBDYes- STLYes- SCLYes- CFCYes- GRAPHYes- HiGraph®YesViser program protection/password protectionYes• Block encryptionYesVidth120 mmHeight125 mmDepthJao mmWeight, approx.1 250 g		Yes; V5.5 or higher
• Nesting levels8• System functions (SFC)see instruction list• System function blocks (SFB)see instruction list• Programming language LADYes- FBDYes- STLYes- STLYes- CFCYes- GRAPHYes- HiGraph®Yes- HiGraph®Yesblock encryptionYesVidth120 mmHeight125 mmDepthJao mmWeight, approx.1 250 g	Programming	
• System functions (SFC)see instruction list• System function blocks (SFB)see instruction listProgramming language LADYes- FBDYes- STLYes- SCLYes- CFCYes- GRAPHYes- HiGraph®YesVersYesblock encryptionYesVidth120 mmHeight125 mmDepth30 mmWeight, approx.1 250 g	<ul> <li>Command set</li> </ul>	
• System function blocks (SFB)see instruction listProgramming language LADYes- FBDYes- STLYes- SCLYes- CFCYes- GRAPHYes- HiGraph®Yesblock encryptionYes; With S7 block PrivacyDimensionsWidth120 mmHeight125 mmDepth30 mmWeight, approx.	-	8
Programming language         - LAD       Yes         - FBD       Yes         - STL       Yes         - SCL       Yes         - CFC       Yes         - GRAPH       Yes         - HiGraph®       Yes         Know-how protection       Yes; With S7 block Privacy         Dimensions       Yes; With S7 block Privacy         Width       120 mm         Height       125 mm         Depth       130 mm		see instruction list
- LADYes- FBDYes- STLYes- SCLYes- CFCYes- GRAPHYes- HiGraph®YesKnow-how protection/password protectionYes• User program protection/password protectionYes; With S7 block PrivacyDimensions120 mmWidth125 mmDepth130 mmWeight, approx.1 250 g		see instruction list
- FBDYes- STLYes- SCLYes- CFCYes- GRAPHYes- HiGraph®YesNow-how protectionYes• User program protection/password protectionYes; With S7 block Privacy• Block encryptionYes; With S7 block Privacy• Width120 mmHeight125 mm• Depth130 mmWeight, approx.1 250 g	Programming language	
STLYes SCLYes CFCYes GRAPHYes HiGraph®YesKnow-how protectionYes• User program protection/password protectionYes; With S7 block Privacy• Block encryptionYes; With S7 block PrivacyDimensions120 mmWidth125 mmDepth130 mmWeight, approx.1 250 g	— LAD	Yes
- SCLYes- CFCYes- GRAPHYes- HiGraph®YesKnow-how protection• User program protection/password protectionYes• Block encryptionYes; With S7 block PrivacyDimensionsWidth120 mmHeight125 mmDepth130 mmWeight, approx.	— FBD	Yes
- CFCYes- GRAPHYes- HiGraph®YesKnow-how protectionYes• User program protection/password protectionYes; With S7 block PrivacyDimensionsYes; With S7 block PrivacyWidth120 mmHeight125 mmDepth130 mmWeightsYes glubal S glubal		Yes
GRAPHYes HiGraph®YesKnow-how protectionYes• User program protection/password protectionYes; With S7 block Privacy• Block encryptionYes; With S7 block PrivacyDimensions120 mmWidth125 mmHeight130 mmWeights125 g	— SCL	Yes
— HiGraph®YesKnow-how protectionYes• User program protection/password protectionYes; With S7 block Privacy• Block encryptionYes; With S7 block PrivacyDimensions120 mmWidth120 mmHeight125 mmDepth130 mmWeights1250 g	— CFC	Yes
Know-how protection       Yes         • User program protection/password protection       Yes         • Block encryption       Yes; With S7 block Privacy         Dimensions       120 mm         Width       125 mm         Depth       130 mm         Weights       1 250 g	— GRAPH	Yes
• User program protection/password protectionYes• Block encryptionYes; With S7 block PrivacyDimensions120 mmWidth120 mmHeight125 mmDepth130 mmWeights125 g	— HiGraph®	Yes
• Block encryptionYes; With S7 block PrivacyDimensionsWidth120 mmHeight125 mmDepth130 mmWeightsWeight, approx.1 250 g	Know-how protection	
Dimensions       Width     120 mm       Height     125 mm       Depth     130 mm       Weights     1 250 g	<ul> <li>User program protection/password protection</li> </ul>	Yes
Width120 mmHeight125 mmDepth130 mmWeightsWeight, approx.1 250 g	<ul> <li>Block encryption</li> </ul>	Yes; With S7 block Privacy
Width120 mmHeight125 mmDepth130 mmWeightsWeight, approx.1 250 g	Dimensions	
Height     125 mm       Depth     130 mm       Weights     125 g		120 mm
Depth     130 mm       Weights     1250 g		
Weights       Weight, approx.       1 250 g		
Weight, approx. 1 250 g		
		1 250 g
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