Data sheet

SIMATIC S7-400, CPU414F-3 PN/DP Central processing unit with: Work memory 4 MB, (2 MB code, 2 MB data), interfaces 1st interface MPI/DP 12 Mbit/s, (X1), 2nd interface Ethernet/PROFINET (X5) 3rd interface IF 964-DP plug-in (IF1)



General information	
Product type designation	CPU 414F-3 PN/DP
HW functional status	01
Firmware version	V7.0
Product function	
• Isochronous mode	Yes; Via PROFIBUS DP or PROFINET interface
Engineering with	
Programming package	STEP 7 V5.5 or higher with HSP 262
CiR - Configuration in RUN	
CiR synchronization time, basic load	100 ms
CiR synchronization time, time per I/O byte	15 µs
Supply voltage	
Rated value (DC)	
• 24 V DC	No; Power supply via system power supply
Input current	
from backplane bus 5 V DC, typ.	1.3 A
from backplane bus 5 V DC, max.	1.6 A
from backplane bus 24 V DC, max.	300 mA; 150 mA per DP interface

Power loss, typ. Power	from interfere EVIDO may	OO m A. At a call DD interfere
Power loss, typ. Power loss, max. 8 W Memory Type of memory Nork memory • integrated • integrated (for program) • integrated (for program) • integrated (for data) • expandable • expandable Load memory • expandable FEPROM • expandable FEPROM, max. • integrated RAM, max. • integrated RAM, max. • integrated RAM, max. • expandable RAM, max. • expandable RAM, max. • expandable RAM • expandable RAM, max. • expandable RAM, max. • expandable RAM, max. • bys.; with Memory Card (RAM) • expandable RAM, max. • expandable RAM, max. • expandable RAM, max. • bys.; with Memory Card (RAM) • expandable RAM, max. • bys.; with Memory Card (RAM) • expandable RAM, max. • backup • present • present • yes, all data • with battery • without battery • without battery • Backup current, typ. • Backup current, typ. • Backup current, typ. • Backup time, max. • Backup times for bit operations, typ. for bit operations, typ. for bit operations, typ. for ficating point arithmetic, typ. 8 Number, max. • Size, max. 6 000; Number range: 1 to 16000 6 4 kbyte	from interface 5 V DC, max.	90 mA; At each DP interface
Power loss, max. Memory Type of memory RAM	Power loss	
Type of memory Type of memory **integrated** **integrated (for program) **integrated (for data) **integrated (for data) **expandable (for data) **expandable EEPROM **expandable FEPROM **expandable FEPROM, max. **expandable FEPROM, max. **expandable FEPROM, max. **expandable FEPROM, max. **expandable RAM		6.5 W
Type of memory Work memory integrated integrated (for program) integrated (for program) integrated (for data) integrated FEPROM integrated FEPROM integrated RAM, max. i	Power loss, max.	8 W
wintegrated 4 Mbyte	Memory	
integrated (for program) 2 Mbyte integrated (for data) 2 Mbyte integrated (for data) 2 Mbyte expandable No expandable No expandable FEPROM Yes; with Memory Card (FLASH) expandable FEPROM, max. 64 Mbyte expandable FEPROM, max. 512 kbyte expandable RAM, max. 512 kbyte expandable RAM Yes; with Memory Card (RAM) expandable RAM, max. 64 Mbyte Backup present Yes with battery Yes; all data with battery Yes; all data without battery Backup current, typ. 180 µA; up to 40 °C Backup current, max. 850 µA Backup current, max. Dealt with in the module data manual with the secondary conditions and the factors of influence e Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. 18.75 ns for fixed point arithmetic, typ. 37.5 ns CPU-blocks DB Number, max. 6000; Number range: 1 to 16000 Expandable RAM, and separations, 12 to 16000 Expandable RAM, max. 64 kbyte	Type of memory	RAM
integrated (for program) integrated (for data) expandable No Load memory expandable FEPROM expandable FEPROM expandable FEPROM, max. foliating and the factors of influence expandable RAM, max. foliating and the factors of influence expandable RAM, max. foliating and the factors of influence expandable RAM, max. expandable RAM, max. foliating and the factors of influence expandable RAM, max. Backup expandable RAM, max. foliating and the factors of influence expandable RAM, max. foliating and the factors of influence expandable RAM, max. foliating and the factors of influence for bit operations, typ. for fixed point arithmetic, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. for floating point arithmetic, typ. for floating point arithmetic, typ. Backup books DB No No 2 Mbyte No Yes; with Memory Card (FLASH) Fest with Memory Card (RAM) Fest with Memory Card (FLASH) Fest with Memory Card	Work memory	
integrated (for data) expandable No Load memory expandable FEPROM expandable FEPROM, max. integrated RAM, max. integrated RAM, max. Expandable RAM expan	• integrated	4 Mbyte
expandable Load memory expandable FEPROM expandable FEPROM, max. eintegrated RAM, max. expandable RAM expandable RAM expandable RAM expandable RAM expandable RAM, max. foliating present expandable RAM expandable R	• integrated (for program)	2 Mbyte
Load memory • expandable FEPROM • expandable FEPROM, max. • integrated RAM, max. • expandable RAM • expandable RAM • expandable RAM • expandable RAM • expandable RAM, max. Backup • present • with battery • with battery • without battery Backup battery • Backup current, typ. • Backup current, max. • Backup time, max. • Backup time, max. • Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. 18.75 ns for floating point arithmetic, typ. 37.5 ns CPU-blocks DB • Number, max. 6 000; Number range: 1 to 16000 6 4 kbyte	• integrated (for data)	2 Mbyte
 expandable FEPROM	• expandable	No
expandable FEPROM, max. integrated RAM, max. expandable RAM expandable RAM expandable RAM, max. Backup present ves; with Memory Card (RAM) expandable RAM, max. Backup present ves; with Memory Card (RAM) expandable RAM, max. Backup present ves; all data No Battery Backup battery Backup battery Backup current, typ. Backup current, typ. Backup time, max. Backup time, max. Dealt with in the module data manual with the secondary conditions and the factors of influence Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for word operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. for floating point arithmetic, typ. Backup times for Word operations, typ. for floating point arithmetic, typ. for floating point arithmetic, typ. Backup battery 18.75 ns for floating point arithmetic, typ. 6 000; Number range: 1 to 16000 6 4 kbyte	Load memory	
 integrated RAM, max. expandable RAM expandable RAM, max. 64 Mbyte Backup present with battery without battery Backup battery Backup battery Backup current, typ. Backup current, typ. Backup current, max. Backup time, max. Backup time, max. Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. 18.75 ns for floating point arithmetic, typ. 18.75 ns CPU-blocks DB Number, max. Size, max. 6 4 kbyte for Word Operations for 16000 for Word Operations for floating point arithmetic, typ. 6 000; Number range: 1 to 16000 6 4 kbyte 	expandable FEPROM	Yes; with Memory Card (FLASH)
expandable RAM expandable RAM, max. Backup epresent evith battery ewith battery ewith battery ewithout battery Backup battery Backup battery Backup current, typ. ewith battery Backup current, max. Backup current, max. Backup current, max. Backup fine, fine	• expandable FEPROM, max.	64 Mbyte
expandable RAM, max. Backup	• integrated RAM, max.	512 kbyte
Persent • present • with battery • without battery Packup battery Backup battery • Backup current, typ. • Backup current, max. • Backup time, max. • Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. Packup battery 180 μA; up to 40 °C 850 μA Dealt with in the module data manual with the secondary conditions and the factors of influence • Feeding of external backup voltage to CPU S V DC to 15 V DC CPU processing times for bit operations, typ. 18.75 ns for word operations, typ. 18.75 ns for fixed point arithmetic, typ. 18.75 ns CPU-blocks DB • Number, max. • Size, max. 6 000; Number range: 1 to 16000	expandable RAM	Yes; with Memory Card (RAM)
 present with battery without battery Without battery Packup battery Backup battery Backup current, typ. Backup current, max. Backup time, max. Feeding of external backup voltage to CPU V DC to 15 V DC CPU processing times for bit operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. T8.75 ns for floating point arithmetic, typ. T8.75 ns T9. T5 ns T6. T5 ns T6. T6. T6. T6. T6. T6. T6. T6. T6. T6.	• expandable RAM, max.	64 Mbyte
with battery without battery Battery Backup battery Backup current, typ. Backup current, max. Backup time, max. Backup time, max. Backup time, max. Pealt with in the module data manual with the secondary conditions and the factors of influence Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. The secondary conditions and the factors of influence Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for floating point arithmetic, typ. The secondary conditions and the factors of influence Feeding of external backup voltage to CPU Solve to 15 V DC CPU blocks DB Number, max. Geomy Number range: 1 to 16000	Backup	
 without battery Backup battery Backup current, typ. Backup current, max. Backup time, max. Backup time, max. Feeding of external backup voltage to CPU V DC to 15 V DC CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. T8.75 ns for floating point arithmetic, typ. T8.75 ns CPU-blocks DB Number, max. Size, max. 6 000; Number range: 1 to 16000 64 kbyte	• present	Yes
Backup battery Backup current, typ. Backup current, max. Backup time, max. Dealt with in the module data manual with the secondary conditions and the factors of influence Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. 18.75 ns for word operations, typ. 18.75 ns for floating point arithmetic, typ. 18.75 ns CPU-blocks DB Number, max. 6 000; Number range: 1 to 16000 64 kbyte	• with battery	Yes; all data
Backup battery • Backup current, typ. • Backup current, max. • Backup time, max. • Backup time, max. • Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. CPU-blocks DB • Number, max. • Size, max. 180 μA; up to 40 °C 850 μA 18.75 μ 18.76 μ 18.76 μ 18.76 μ 18.77 μ 18.79	without battery	No
Backup battery • Backup current, typ. • Backup current, max. • Backup time, max. • Backup time, max. • Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. CPU-blocks DB • Number, max. • Size, max. 180 μA; up to 40 °C 850 μA 18.75 μ 18.76 μ 18.76 μ 18.76 μ 18.77 μ 18.79	Battery	
 Backup current, max. Backup time, max. Feeding of external backup voltage to CPU V DC to 15 V DC CPU processing times for bit operations, typ. 18.75 ns for word operations, typ. 18.75 ns for fixed point arithmetic, typ. 18.75 ns for floating point arithmetic, typ. 37.5 ns CPU-blocks DB Number, max. Size, max. 6 000; Number range: 1 to 16000 64 kbyte 		
Backup time, max. Dealt with in the module data manual with the secondary conditions and the factors of influence Feeding of external backup voltage to CPU S V DC to 15 V DC CPU processing times for bit operations, typ. 18.75 ns for word operations, typ. 18.75 ns for fixed point arithmetic, typ. 18.75 ns CPU-blocks DB Number, max. Size, max. O 000; Number range: 1 to 16000 64 kbyte	Backup current, typ.	180 μA; up to 40 °C
conditions and the factors of influence • Feeding of external backup voltage to CPU CPU processing times for bit operations, typ. for word operations, typ. 18.75 ns for fixed point arithmetic, typ. 18.75 ns for floating point arithmetic, typ. 37.5 ns CPU-blocks DB • Number, max. • Size, max. conditions and the factors of influence 5 V DC to 15 V DC 18.75 ns 18.75 ns 18.75 ns 6 000; Number range: 1 to 16000	Backup current, max.	850 μΑ
CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. CPU-blocks DB Number, max. Size, max. Number of the street of t	Backup time, max.	
for bit operations, typ. for word operations, typ. 18.75 ns for fixed point arithmetic, typ. 18.75 ns for floating point arithmetic, typ. 37.5 ns CPU-blocks DB Number, max. Size, max. 18.75 ns 6 000; Number range: 1 to 16000 64 kbyte	 Feeding of external backup voltage to CPU 	5 V DC to 15 V DC
for bit operations, typ. for word operations, typ. 18.75 ns for fixed point arithmetic, typ. 18.75 ns for floating point arithmetic, typ. 37.5 ns CPU-blocks DB Number, max. Size, max. 18.75 ns 6 000; Number range: 1 to 16000 64 kbyte	CDI I processing times	
for word operations, typ. 18.75 ns for fixed point arithmetic, typ. 18.75 ns for floating point arithmetic, typ. 37.5 ns CPU-blocks DB Number, max. Size, max. 6 000; Number range: 1 to 16000 64 kbyte		18 75 ns
for fixed point arithmetic, typ. 18.75 ns for floating point arithmetic, typ. 27.5 ns CPU-blocks DB Number, max. Size, max. 18.75 ns 6 000; Number range: 1 to 16000 64 kbyte		
for floating point arithmetic, typ. CPU-blocks DB Number, max. Size, max. 6 000; Number range: 1 to 16000 64 kbyte		
DB ◆ Number, max. 6 000; Number range: 1 to 16000 ◆ Size, max. 64 kbyte		
DB ◆ Number, max. 6 000; Number range: 1 to 16000 ◆ Size, max. 64 kbyte	CDI I blacks	
 Number, max. 6 000; Number range: 1 to 16000 Size, max. 64 kbyte 		
• Size, max. 64 kbyte		6 000; Number range: 1 to 16000
· · · · · · · · · · · · · · · · · · ·		
	·	
• Number, max. 3 000; Number range: 0 to 7999		3 000; Number range: 0 to 7999
• Size, max. 64 kbyte		



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FC	
Number, max.	3 000; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
Number, max.	see instruction list
• Size, max.	64 kbyte
 Number of free cycle OBs 	1; OB 1
 Number of time alarm OBs 	4; OB 10-13
 Number of delay alarm OBs 	4; OB 20-23
 Number of cyclic interrupt OBs 	4; OB 32, 33, 34, 35 (shortest cycle that can be set = 500 μ s)
 Number of process alarm OBs 	4; OB 40-43
 Number of DPV1 alarm OBs 	3; OB 55-57
 Number of isochronous mode OBs 	3; OB 61-63
 Number of multicomputing OBs 	1; OB 60
 Number of background OBs 	1; OB 90
 Number of startup OBs 	2; OB 100, 102
 Number of asynchronous error OBs 	9; OB 80-88
 Number of synchronous error OBs 	2; OB 121, 122
Nesting depth	
• per priority class	24
 additional within an error OB 	1

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	
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
S7 times	
Number	2 048
Retentivity	
— adjustable	Yes
— lower limit	0



— upper limit	2 047
— preset	No times retentive
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	Total working and load memory (with backup battery)
Flag	
Number, max.	8 kbyte; Size of bit memory address area
Retentivity available	Yes
 Retentivity preset 	MB 0 to MB 15
 Number of clock memories 	8; in 1 memory byte
Local data	
• adjustable, max.	16 kbyte
• preset	8 kbyte
Address area	
I/O address area	
• Inputs	8 kbyte
Outputs	8 kbyte
Process image	
● Inputs, adjustable	8 kbyte
 Outputs, adjustable 	8 kbyte
 Inputs, default 	256 byte
Outputs, default	256 byte
• consistent data, max.	244 byte
 Access to consistent data in process image 	Yes
Subprocess images	
Number of subprocess images, max.	15

Digital channels

• Inputs	65 536
— of which central	65 536

65 536 Outputs 65 536

— of which central

Analog channels	
• Inputs	4 096
— of which central	4 096

4 096 Outputs



— of which central	4 096
Hardware configuration	
Number of expansion units, max.	21
connectable OPs	63
Multicomputing	Yes; 4 CPUs max. (with UR1 or UR2)
Interface modules	
Number of connectable IMs (total), max.	6
 Number of connectable IM 460s, max. 	6
 Number of connectable IM 463s, max. 	4; IM 463-2
Number of DP masters	
• integrated	1
• via CP	10; CP 443-5 Extended
● via IM 467	4
Mixed mode IM + CP permitted	No; IM 467 cannot be used jointly with CP 443-5 Ext. or CP 443-1 in PROFINET IO mode
• via interface module	1; IF 964-DP
 Number of pluggable S5 modules (via adapter capsule in central device), max. 	6
Number of IO Controllers	
• integrated	1
• via CP	4; Max. 4 in the central controller; no mixed operation of different CP 443-1 types in PROFINET IO mode
Number of operable FMs and CPs (recommended)	
• FM	Limited by number of slots and number of connections
• CP, PtP	CP 440: Limited by number of slots; CP 441: Limited by number of slots and number of connections
PROFIBUS and Ethernet CPs	14; In total max. 10 CPs as DP master and PROFINET controller, of which up to 10 IMs or CPs as DP master and up to 4 CPs as PROFINET controller
Slots	
• required slots	2
Time of day	
Clock	
Hardware clock (real-time)	Yes
retentive and synchronizable	Yes
Resolution	1 ms
 Deviation per day (buffered), max. 	1.7 s; Power off
 Deviation per day (unbuffered), max. 	8.6 s; For power On
Operating hours counter	
• Number	16
 Number/Number range 	0 to 15
Range of values	SFCs 2, 3 and 4: 0 to 32767 hours SFC 101: 0 to 2^31 - 1 hours



Granularity	1 h
	Yes
• retentive Clock synchronization	165
• supported	Yes
	Yes
• to MPI, master	Yes
• to MPI, slave	Yes
• to DP, master	Yes
• to DP, slave	Yes
• in AS, master	
• in AS, slave	Yes
on Ethernet via NTP	Yes; As client
• to IF 964 DP	Yes
Time difference in system when synchronizing via	10
• Ethernet, max.	10 ms
• MPI, max.	200 ms
Interfaces	
Interfaces/bus type	1 x MPI/PROFIBUS DP, 1 x PROFINET (2 ports), 1 x PROFIBUS
	DP (optionally pluggable)
Number of RS 485 interfaces	1; Combined MPI / PROFIBUS DP
Number of other interfaces	1; PROFIBUS DP with IF 964-DP (plug-in option; MLFB:
	" - " '
	6ES7964-2AA04-0AB0)
1. Interface	" - " '
Interface type	" - "
	6ES7964-2AA04-0AB0)
Interface type Physics Isolated	6ES7964-2AA04-0AB0) Integrated RS 485 / PROFIBUS + MPI Yes
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max.	6ES7964-2AA04-0AB0) Integrated RS 485 / PROFIBUS + MPI
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols	6ES7964-2AA04-0AB0) Integrated RS 485 / PROFIBUS + MPI Yes 150 mA
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes Yes
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes Yes Yes Yes The diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections • Transmission rate, max.	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes Yes
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections • Transmission rate, max. Services	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes 12; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1 12 Mbit/s
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections • Transmission rate, max. Services — PG/OP communication	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes 32; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1 12 Mbit/s Yes
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections • Transmission rate, max. Services — PG/OP communication — Routing	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes 12; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1 12 Mbit/s Yes Yes
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes Yes Yes Yes Yes
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Physics Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave MPI • Number of connections • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication	Integrated RS 485 / PROFIBUS + MPI Yes 150 mA Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye



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ROFIBUS DP master	40.15
Number of connections, max.	16; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1
• Transmission rate, max.	12 Mbit/s
• Number of DP slaves, max.	32
Services	
— PG/OP communication	Yes
— Routing	Yes; S7 routing
 Global data communication 	No
 — S7 basic communication 	Yes
— S7 communication	Yes
— S7 communication, as client	Yes
— S7 communication, as server	Yes
— Equidistance	Yes
— Isochronous mode	Yes
— SYNC/FREEZE	Yes
 Activation/deactivation of DP slaves 	Yes
 — Direct data exchange (slave-to-slave communication) 	Yes
— DPV1	Yes
Address area	
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
User data per DP slave	
— User data per DP slave, max.	244 byte
— Inputs, max.	244 byte
— Outputs, max.	244 byte
— Slots, max.	244
— per slot, max.	128 byte
ROFIBUS DP slave	
Number of connections	16
• GSD file	http://support.automation.siemens.com/WW/view/en/113652
• Transmission rate, max.	12 Mbit/s
automatic baud rate search	No
• Address area, max.	32; Virtual slots
• User data per address area, max.	32 byte
— of which consistent, max.	32 byte
Services	
— PG/OP communication	Yes; with interface active
— Routing	Yes; with interface active
— Global data communication	No
— S7 basic communication	No



— S7 communication	Yes
 — S7 communication, as client 	Yes
 S7 communication, as server 	Yes
 Direct data exchange (slave-to-slave communication) 	No
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte

2. Interface	
Interface type	PROFINET
Physics	Ethernet RJ45
Isolated	Yes
automatic detection of transmission rate	Yes; Autosensing
Autonegotiation	Yes
Autocrossing	Yes
Change of IP address at runtime, supported	Yes; Assignment by higher-level IO-Controller or by the user program with SFB104 "IP_CONF"
Number of connection resources	64
Interface types	
Number of ports	2
• integrated switch	Yes
Protocols	
PROFINET IO Controller	Yes
PROFINET IO Device	Yes
• PROFINET CBA	Yes
 PROFIBUS DP master 	No
 PROFIBUS DP slave 	No
Open IE communication	Yes
Web server	Yes
Point-to-point connection	No
Media redundancy	Yes
PROFINET IO Controller	
Transmission rate, max.	100 Mbit/s
Services	
— PG/OP communication	Yes
— S7 routing	Yes
— S7 communication	Yes
— Isochronous mode	Yes; Only with IRT and the High Performance option
— Shared device	Yes
— Prioritized startup	Yes
ı	



Number of IO devices with prioritized	32
startup, max.	050
Number of connectable IO Devices, max.	256
Of which IO devices with IRT, max.	64
— of which in line, max.	64
 Number of IO Devices with IRT and the option "high flexibility" 	256
— of which in line, max.	61
 Number of connectable IO Devices for RT, max. 	256
— of which in line, max.	256
 Activation/deactivation of IO Devices 	Yes
 Number of IO Devices that can be simultaneously activated/deactivated, max. 	8
 IO Devices changing during operation (partner ports), supported 	Yes
— Number of IO Devices per tool, max.	8; 8 parallel calls of the SFC 12 "D_ACT_DP" possible per line. Max. 32 IO Devices changing during operation (partner ports) are supported
 Device replacement without swap medium 	Yes
— Send cycles	250 μs, 500 μs, 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250 μs to 4 ms in 125 μs frame
— Updating time	250 μs to 512 ms; minimum value depends on preset communication share for PROFINET IO, on the number of IO Devices and on the amount of configured user data, see PROFINET system description
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
— S7 routing	Yes
— S7 communication	Yes
— Isochronous mode	No
— IRT	Yes
— Prioritized startup	Yes
— Shared device	Yes
 Number of IO Controllers with shared device, max. 	2
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
cyclic transmission	Yes
Open IE communication	
Number of connections, max.	62
 Local port numbers used at the system end 	0, 20, 21, 25, 80, 102, 135, 161, 34962, 34963, 34964, 65532, 65533, 65534, 65535
 Keep-alive function, supported 	Yes

3. Interface	
Interface type	Pluggable interface module (IF)
Plug-in interface modules	IF 964-DP (MLFB: 6ES7964-2AA04-0AB0)
Physics	RS 485 / PROFIBUS
Isolated	Yes
Power supply to interface (15 to 30 V DC), max.	150 mA
automatic detection of transmission rate	No
Number of connection resources	16
Protocols	
• MPI	No
 PROFIBUS DP master 	Yes
 PROFIBUS DP slave 	Yes
PROFIBUS DP master	
 Number of connections, max. 	16
Transmission rate, max.	12 Mbit/s
 Number of DP slaves, max. 	96
Services	
— PG/OP communication	Yes
— Routing	Yes; S7 routing
 Global data communication 	No
 S7 basic communication 	Yes
— S7 communication	Yes
 S7 communication, as client 	Yes
 S7 communication, as server 	Yes
— Equidistance	Yes
— Isochronous mode	Yes
— SYNC/FREEZE	Yes
 Activation/deactivation of DP slaves 	Yes
Direct data exchange (slave-to-slave communication)	Yes



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— DPV0	Yes
— DI V0 — DPV1	Yes
Address area	,
— Inputs, max.	6 kbyte
— Outputs, max.	6 kbyte
User data per DP slave	C NO, IC
User data per DP slave, max.	244 byte
— Inputs, max.	244 byte
— Outputs, max.	244 byte
— Slots, max.	244
— per slot, max.	128 byte
PROFIBUS DP slave	120 0910
Number of connections	16
GSD file	http://support.automation.siemens.com/WW/view/en/113652
Transmission rate, max.	12 Mbit/s
automatic baud rate search	No
Address area, max.	32; Virtual slots
User data per address area, max.	32 byte
— of which consistent, max.	32 byte
Services	,
— PG/OP communication	Yes
— Routing	Yes; with interface active
Global data communication	No
— S7 basic communication	No
— S7 communication	Yes
 — S7 communication, as client 	Yes
— S7 communication, as server	Yes
Direct data exchange (slave-to-slave)	No
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
Protocols	
Redundancy mode	
Media redundancy	
Switchover time on line break, typ.	200 ms
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. 	62



— Data length, max.	32 kbyte
 several passive connections per port, supported 	Yes
• ISO-on-TCP (RFC1006)	Yes; Via integrated PROFINET interface or CP 443-1 Adv. and loadable FBs
Number of connections, max.	62
— Data length, max.	32 kbyte; 1 452 bytes via CP 443-1 Adv.
• UDP	Yes; via integrated PROFINET interface and loadable FBs
 Number of connections, max. 	62
— Data length, max.	1 472 byte
Web server	
• supported	Yes
 User-defined websites 	Yes
Number of HTTP clients	5

Isochronous mode	
Equidistance	Yes
Number of DP masters with isochronous mode	2
User data per isochronous slave, max.	244 byte
shortest clock pulse	1 ms; 0.5 ms without use of SFC 126, 127
max. cycle	32 ms

PG/OP communication Number of connectable OPs without message processing Number of connectable OPs with message processing Number of connectable OPs with message processing Data record routing Yes Global data communication Supported Number of GD loops, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Number of GD packets, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Size of GD packet (of which consistent), max. Tyes User data per job, max. User data per job (of which consistent), max. To byte User data per job (of which consistent), max. Tyes supported Sommunication supported Sommunication supported support	Communication functions	
processing Number of connectable OPs with message processing Data record routing Global data communication supported Number of GD loops, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Size of GD packet (of which consistent), max. yes User data per job, max. User data per job (of which consistent), max. yes ves ves ves ves ves ves ves	PG/OP communication	Yes
Number of connectable OPs with message processing Data record routing Slobal data communication Supported Number of GD loops, max. Number of GD packets, transmitter, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. State of GD packet (of which consistent), max. Yes User data per job, max. User data per job (of which consistent), max. State of GD packet (of which consistent), max. Yes User data per job (of which consistent), max. Yes supported State of GD packet (of which consistent), max. Yes user data per job (of which consistent), max. Yes supported supported supported supported supported supported supported supported State of GD; When using Alarm_S/SQ and Alarm_D/DQ Yes	 Number of connectable OPs without message 	63
Data record routing Global data communication Supported Number of GD loops, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Size of GD packet (of which consistent), max. Tyes State of GD packet (of which consistent), max. Yes Justin data per job, max. User data per job (of which consistent), max. To byte User data per job (of which consistent), max. Ves State of GD packet (of which consistent), max. Yes State of GD packet (of which consistent), max. Yes State of GD packet (of which consistent), max. Yes State of GD packet (of which consistent), max. Yes State of GD packet (of which consistent), max. Yes	processing	
Data record routing Global data communication • supported • Number of GD loops, max. • Number of GD packets, transmitter, max. • Number of GD packets, receiver, max. • Number of GD packets, receiver, max. • Size of GD packets, max. • Size of GD packet (of which consistent), max. S7 basic communication • supported • User data per job, max. • User data per job (of which consistent), max. T6 byte • User data per job (of which consistent), max. S7 communication • supported • supported • S7 communication • supported	_	63; When using Alarm_S/SQ and Alarm_D/DQ
Global data communication • supported • Number of GD loops, max. • Number of GD packets, transmitter, max. • Number of GD packets, receiver, max. • Size of GD packets, max. • Size of GD packet (of which consistent), max. • Size of GD packet (of which consistent), max. • Size of GD packet (of which consistent), max. • Supported • supported • User data per job, max. • User data per job (of which consistent), max. • Sommunication • Supported • Sommunication • Supported		
 supported Number of GD loops, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Size of GD packet (of which consistent), max. supported User data per job, max. User data per job (of which consistent), max. Ves User data per job (of which consistent), max. Variable Variable S7 communication supported supported supported supported Yes Yes as server 		Yes
 Number of GD loops, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Size of GD packet (of which consistent), max. Sapported Syphysic communication Supported User data per job, max. User data per job (of which consistent), max. Ves User data per job (of which consistent), max. Ves Syphysic communication Syphysic communicatio	Global data communication	
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 Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Solution 1 variable Solution 1 variable Solution 2 variable Solution 2 variable Solution 2 variable Solution 3 variable Solution 4 variable Solution 3 variable Solution 4 variab	Number of GD loops, max.	8
 Size of GD packets, max. Size of GD packet (of which consistent), max. S7 basic communication supported User data per job, max. User data per job (of which consistent), max. 1 variable S7 communication supported yes 1 variable S7 communication supported as server Yes Yes Yes Yes 	 Number of GD packets, transmitter, max. 	8
 Size of GD packet (of which consistent), max. S7 basic communication supported User data per job, max. User data per job (of which consistent), max. Ves User data per job (of which consistent), max. Variable S7 communication supported as server Yes Yes 	 Number of GD packets, receiver, max. 	16
S7 basic communication • supported • User data per job, max. • User data per job (of which consistent), max. S7 communication • supported • supported • supported • as server Yes	 Size of GD packets, max. 	54 byte
 supported User data per job, max. User data per job (of which consistent), max. 1 variable S7 communication supported as server Yes Yes 	• Size of GD packet (of which consistent), max.	1 variable
 User data per job, max. User data per job (of which consistent), max. S7 communication supported as server Yes Yes 	S7 basic communication	
 User data per job (of which consistent), max. S7 communication supported as server Yes 	• supported	Yes
S7 communication • supported • as server Yes	 User data per job, max. 	76 byte
 supported as server Yes Yes	 User data per job (of which consistent), max. 	1 variable
• as server Yes	S7 communication	
45 55.15.	• supported	Yes
• as client Yes	• as server	Yes
	• as client	Yes



User data per job, max.	64 kbyte
User data per job (of which consistent), max.	462 byte; 1 variable
S5 compatible communication	
• supported	Yes; Via FC AG_SEND and AG_RECV, max. via 10 CP 443-1 or 443-5
• User data per job, max.	8 kbyte
• User data per job (of which consistent), max.	240 byte
 Number of simultaneous AG-SEND/AG-RECV orders per CPU, max. 	24/24
Standard communication (FMS)	
• supported	Yes; Via CP and loadable FB
PROFINET CBA (at set setpoint communication load)	
 Setpoint for the CPU communication load 	20 %
 Number of remote interconnection partners 	32
 Number of functions, master/slave 	150
Total of all master/slave connections	4 500
 Data length of all incoming connections master/slave, max. 	45 000 byte
 Data length of all outgoing connections master/slave, max. 	45 000 byte
 Number of device-internal and PROFIBUS interconnections 	1 000
 Data length of device-internal und PROFIBUS interconnections, max. 	16 000 byte
Data length per connection, max.	2 000 byte
Remote interconnections with acyclic transmission	
— Sampling interval, min.	200 ms; Depending on preset communication load, number of interconnections and data length used
 Number of incoming interconnections 	250
 Number of outgoing interconnections 	250
 Data length of all incoming interconnections, max. 	8 000 byte
 Data length of all outgoing interconnections, max. 	8 000 byte
 Data length per connection, max. 	2 000 byte
Remote interconnections with cyclic transmission	
 Transmission frequency: Transmission interval, min. 	1 ms; Depending on preset communication load, number of interconnections and data length used
 Number of incoming interconnections 	300
 Number of outgoing interconnections 	300
 Data length of all incoming interconnections, max. 	4 800 byte
 Data length of all outgoing interconnections, max. 	4 800 byte



HMI variables via PROFINET (acyclic)	 Data length per connection, max. 	450 byte
variables (PN OPC/iMap) — HMI variable updating — Number of HMI variables — Data length of all HMI variables, max. 32 000 byte PROFIBUS proxy functionality — supported — Data length per connection, max. Number of connections • overall • usable for PG communication — adjustable for OP communication, max. • usable for OP communication — adjustable for OP communication — adjustable for S7 basic communication — adjustable for S7 communication — adjustable for S9 communicatio	HMI variables via PROFINET (acyclic)	
- Number of HMI variables - Data length of all HMI variables, max. PROFIBUS proxy functionality - supported - Data length per connection, max. Pata length per connection, max. Ves; 32 PROFIBUS slaves max. connectable - Data length per connection, max. Powerall overall usable for PG communication - adjustable for PG communication - adjustable for OP communication - adjustable for OP communication - adjustable for OP communication - adjustable for S7 basic communication - adjustable for S7		2x PN OPC/1x iMap
- Data length of all HMI variables, max. - Data length of all HMI variables, max. - Supported - Data length per connection, max. - Stave-dependent Number of connections - Overall -	 HMI variable updating 	500 ms
PROFIBUS proxy functionality — supported — Data length per connection, max. Number of connections • overall • usable for PG communication — adjustable for PG communication — adjustable for OP communication — adjustable for OP communication — adjustable for OP communication — adjustable for S7 basic communication — adjustable for S7 basic communication — reserved for S7 basic communication — adjustable for S7 basic communication — adjustable for S7 communication — adjustable	 Number of HMI variables 	1 000
supported Data length per connection, max. Number of connections • overall • usable for PG communication adjustable for PG communication adjustable for OP communication adjustable for S7 basic communication adjustable for S7 communication	 Data length of all HMI variables, max. 	32 000 byte
— Data length per connection, max. 240 byte; Slave-dependent Number of connections overall usable for PG communication — reserved for PG communication — adjustable for PG communication — adjustable for OP communication — adjustable for S7 basic communication — reserved for S7 basic communication — adjustable for S7 basic communication — adjustable for S7 communication — adjustable for S7 communication — adjustable for S7 communication — reserved for S7 communication — reserved for S7 communication — adjustable for S7 communication — reserved for S7 communication — reserved for S7 communication, max. usable for routing output 14 64 63 63 63 62 62 62 62 63 62 63 64 65 62 62 63 64 65 62 62 63 64 65 66 67 68 68 69 69 60 60 60 60 60 60 60 60	PROFIBUS proxy functionality	
Number of connections 64 ● overall 64 ● usable for PG communication 63 — reserved for PG communication, max. 0 ● usable for OP communication 63 — reserved for OP communication 1 — adjustable for OP communication, max. 0 ● usable for S7 basic communication 62 — reserved for S7 basic communication, max. 0 ● usable for S7 communication 0 — reserved for S7 communication 62 — reserved for S7 communication 0 — adjustable for S7 communication, max. 0 ● usable for routing 31 — reserved for routing 0	— supported	Yes; 32 PROFIBUS slaves max. connectable
 overall usable for PG communication reserved for PG communication adjustable for PG communication, max. usable for OP communication reserved for OP communication adjustable for OP communication adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication adjustable for S7 basic communication, max. usable for S7 communication adjustable for S7 communication adjustable for S7 communication adjustable for S7 communication reserved for S7 communication, max. usable for routing reserved for routing reserved for routing 	 Data length per connection, max. 	240 byte; Slave-dependent
 usable for PG communication reserved for PG communication adjustable for PG communication, max. usable for OP communication reserved for OP communication adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication adjustable for S7 basic communication adjustable for S7 communication, max. usable for routing reserved for routing at adjustable for routing reserved for routing at adjustable for routing reserved for routing 	Number of connections	
 reserved for PG communication adjustable for PG communication, max. usable for OP communication reserved for OP communication adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication adjustable for S7 basic communication, max. usable for S7 communication adjustable for S7 communication adjustable for S7 communication adjustable for S7 communication, max. usable for routing reserved for routing reserved for routing adjustable for routing reserved for routing 	• overall	64
- adjustable for PG communication, max. • usable for OP communication - reserved for OP communication - adjustable for OP communication, max. • usable for S7 basic communication - adjustable for S7 basic communication - adjustable for S7 basic communication - adjustable for S7 basic communication, max. • usable for S7 communication - reserved for S7 communication - adjustable for S7 communication, max. • usable for routing - reserved for routing - reserved for routing	 usable for PG communication 	63
usable for OP communication reserved for OP communication adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication adjustable for S7 basic communication, max. usable for S7 communication reserved for S7 communication adjustable for S7 communication adjustable for S7 communication reserved for S7 communication, max. usable for S7 communication adjustable for S7 communication, max. usable for S7 communication adjustable for S7 communication, max. usable for routing reserved for routing o	 reserved for PG communication 	1
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 usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, max. usable for S7 communication reserved for S7 communication adjustable for S7 communication, max. usable for routing reserved for routing reserved for routing reserved for routing 	 reserved for OP communication 	1
 reserved for S7 basic communication adjustable for S7 basic communication, max. usable for S7 communication reserved for S7 communication adjustable for S7 communication, max. usable for routing reserved for routing reserved for routing reserved for routing 	 adjustable for OP communication, max. 	0
 adjustable for S7 basic communication, max. usable for S7 communication reserved for S7 communication adjustable for S7 communication, max. usable for routing reserved for routing reserved for routing 0 	 usable for S7 basic communication 	62
max. • usable for S7 communication 62 — reserved for S7 communication 0 — adjustable for S7 communication, max. 0 • usable for routing 31 — reserved for routing 0	 reserved for S7 basic communication 	0
 usable for S7 communication reserved for S7 communication adjustable for S7 communication, max. usable for routing reserved for routing 0 	 adjustable for S7 basic communication, 	0
 — reserved for S7 communication — adjustable for S7 communication, max. ● usable for routing — reserved for routing 0 	max.	
 — adjustable for S7 communication, max. ● usable for routing — reserved for routing 0 	usable for S7 communication	62
 usable for routing reserved for routing 	 reserved for S7 communication 	0
— reserved for routing 0	 adjustable for S7 communication, max. 	0
	usable for routing	31
— adjustable for routing, max.	reserved for routing	0
	— adjustable for routing, max.	0

S7 message functions	
Number of login stations for message functions, max.	63; Max. 63 with Alarm_S/SQ and Alarm_D/DQ (OPs); max. 8 with Alarm, Alarm_8, Alarm_8P, Notify and Notify_8 (e.g. WinCC)
Symbol-related messages	Yes
SCAN procedure	Yes
Program alarms	Yes
Process diagnostic messages	Yes
simultaneously active Alarm-S blocks, max.	400; Simultaneously active alarm_S/SQ blocks or alarm_D/DQ blocks
Alarm 8-blocks	Yes
 Number of instances for alarm 8 and S7 communication blocks, max. 	1 200
• preset, max.	300
Process control messages	Yes

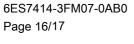


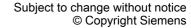
No. and the state of the state	40
Number of archives that can log on simultaneously (SFB 37 AR_SEND)	16
Number of messages	
• overall, max.	512
• in 100 ms grid, max.	128
• in 500 ms grid, max.	256
● in 1000 ms grid, max.	512
Number of additional values	
● with 100 ms grid, max.	1
● with 500, 1000 ms grid, max.	10
Test commissioning functions	
Status block	Yes; Up to 16 simultaneously
Single step	Yes
Number of breakpoints	16
Status/control	
Status/control variable	Yes; Up to 16 variable tables
Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
 Number of variables, max. 	70; Status/control
Forcing	
• Forcing	Yes
 Forcing, variables 	Inputs/outputs, bit memories, distributed I/Os
 Number of variables, max. 	256
Diagnostic buffer	
• present	Yes
Number of entries, max.	3 200
— adjustable	Yes
— preset	120
Service data	
● can be read out	Yes
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
Use in hazardous areas	
• ATEX	ATEX II 3G Ex nA IIC T4 Gc



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Ambient conditions Ambient temperature during operation 0°C • min. 60 °C • max. Configuration Configuration software • STEP 7 Yes Programming see instruction list • Command set 7 Nesting levels · Access to consistent data in process image Yes see instruction list System functions (SFC) see instruction list • System function blocks (SFB) Programming language Yes — LAD Yes — FBD Yes - STL - SCL Yes — CFC Yes — GRAPH Yes Yes - HiGraph® Number of simultaneously active SFCs - DPSYC_FR 2; SFC 11; per interface 8; SFC 12; per interface - D_ACT_DP - RD_REC 8; SFC 59; per interface 8; SFC 58; per interface - WR_REC 8; SFC 55; per interface - WR_PARM — PARM_MOD 1; SFC 57; per interface 2; SFC 56; per interface - WR_DPARM 8; SFC 13; per interface - DPNRM_DG 8; SFC 51 - RDSYSST 1; SFC 103; per interface - DP TOPOL Number of simultaneously active SFBs 8; SFB 52; per interface, but not more than 32 across all external - RDREC interfaces - WRREC 8; SFB 53; per interface, but not more than 32 across all external interfaces Know-how protection Yes • User program protection/password protection Yes; With S7 block Privacy Block encryption





Width	50 mm	
Height	290 mm	
Depth	219 mm	
Weights		
Weight, approx.	900 g	

last modified: 10/09/2020

