6ES7317-2FK14-0AB0

Data sheet



SIMATIC S7-300 CPU317F-2 PN/DP, Central processing unit with 1.5 MB work memory, 1st interface MPI/DP 12 Mbit/s, 2nd interface Ethernet PROFINET, with 2-port switch, Micro Memory Card required

General information	
HW functional status	01
Firmware version	V3.2
Product function	
 Isochronous mode 	Yes; Via 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)	20.4 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)	750 mA
Current consumption (in no-load operation), typ.	150 mA
Inrush current, typ.	4 A
l²t	1 A ² ·s
Power loss	
Power loss, typ.	4.65 W
Memory	
Work memory	
integrated	1 536 kbyte
expandable	No
Load memory	
Plug-in (MMC)	Yes
Plug-in (MMC), max.	8 Mbyte
Data management on MMC (after last	10 y
programming), min.	
Backup	Voc: Cuaranteed by MMC (maintenance free)
• present	Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data
without battery	res, Frogram and data
CPU processing times	
for bit operations, typ.	0.025 μs
for word operations, typ.	0.03 μs
for fixed point arithmetic, typ.	0.04 µs
for floating point arithmetic, typ.	0.16 µs
CPU-blocks	

Number of blocks (total)	2 048; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.
DB	
Number, max.	2 048; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
Number, max.	2 048; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
Number, max.	2 048; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
• Size, max.	64 kbyte
Number of free cycle OBs	1; OB 1
Number of time alarm OBs	1; OB 10
Number of delay alarm OBs	2; OB 20, 21
Number of cyclic interrupt OBs	4; OB 32, 33, 34, 35
Number of process alarm OBs	1; OB 40
Number of DPV1 alarm OBs	3; OB 55, 56, 57
Number of isochronous mode OBs	1; OB 61 - isochronous mode is possible either on DP or PROFINET IO (not simultaneously)
Number of startup OBs Number of seventhronous error OBs	1; OB 100 6: OB 80, 82, 83, 85, 86, 87 (OB83 only for PROFINET IO)
Number of asynchronous error OBsNumber of synchronous error OBs	6; OB 80, 82, 83, 85, 86, 87 (OB83 only for PROFINET IO) 2; OB 121, 122
Nesting depth	2, 00 121, 122
per priority class	16
additional within an error OB	4
Counters, timers and their retentivity	•
S7 counter	F40
Number Potentinity	512
Retentivity	Vee
— adjustable	Yes 0
— lower limit	511
— upper limit	
— preset	Z 0 to Z 7
Counting range	Yes
— adjustable — lower limit	0
	999
— upper limit IEC counter	999
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
S7 times	Offill little dolly by TANI capacity)
• Number	512
Retentivity	J.E
— adjustable	Yes
— lower limit	0
— upper limit	511
— preset	No retentivity
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max. Flag	256 kbyte
• Size, max.	4 096 byte
Retentivity available	Yes; From MB 0 to MB 4 095
Retentivity available Retentivity preset	MB 0 to MB 15
Number of clock memories	8; 1 memory byte
- Hamber of Glock Highlights	o, i momory byto

Data blanks	
Data blocks	Voca via non rotain proporti an DD
Retentivity adjustable Potentivity procest	Yes; via non-retain property on DB
Retentivity preset Local data	Yes
per priority class, max.	32 768 byte; Max. 2048 bytes per block
Address area	32 700 byte, Max. 2040 bytes per block
I/O address area	0.4001.1
• Inputs	8 192 byte
Outputs Authority to disconnection	8 192 byte
of which distributed	9 102 hyto
— Inputs	8 192 byte
— Outputs Process image	8 192 byte
• Inputs	8 192 byte
Outputs	8 192 byte
Inputs, adjustable	8 192 byte
Outputs, adjustable	8 192 byte
Inputs, default	256 byte
Outputs, default	256 byte
Subprocess images	
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 expansion units, max.	3
Number of DP masters	
• integrated	1
• via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, PtP	8
• CP, LAN	10
Rack	4
Racks, max.Modules per rack, max.	4 8
	0
Time of day	
Clock	V
Hardware clock (real-time)	Yes
retentive and synchronizable	Yes
Backup time Deviction part day, resy.	6 wk; At 40 °C ambient temperature
Deviation per day, max. Popular of the clock following POWER ON.	10 s; Typ.: 2 s
Behavior of the clock following POWER-ON Pohavior of the clock following expire of backup	Clock continues running after POWER OFF
Behavior of the clock following expiry of backup To girls described.	the clock continues at the time of day it had when power was switched
period	off
period Operating hours counter	Off
Operating hours counter • Number	οπ 4
Operating hours counter • Number	
Operating hours counter Number Number/Number range	4 0 to 3
Operating hours counter Number Number/Number range Range of values	4
Operating hours counter Number Number/Number range	4 0 to 3 0 to 2^31 hours (when using SFC 101) 1 h
Operating hours counter Number Number/Number range Range of values Granularity retentive	4 0 to 3 0 to 2^31 hours (when using SFC 101)
Operating hours counter Number Number range Range of values Granularity	4 0 to 3 0 to 2^31 hours (when using SFC 101) 1 h
Operating hours counter Number Number/Number range Range of values Granularity retentive Clock synchronization	4 0 to 3 0 to 2^31 hours (when using SFC 101) 1 h Yes; Must be restarted at each restart
Operating hours counter Number Number/Number range Range of values Granularity retentive Clock synchronization supported	4 0 to 3 0 to 2^31 hours (when using SFC 101) 1 h Yes; Must be restarted at each restart Yes

• to DP, slave	Yes
● in AS, master	Yes
• in AS, slave	Yes
on Ethernet via NTP	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
Interfaces	
Number of industrial Ethernet interfaces	1
Number of PROFINET interfaces	1
Number of RS 485 interfaces	1
Number of RS 422 interfaces	0
1. Interface	
Interface type	Integrated RS 485 interface
Isolated	Yes
Interface types	
• RS 485	Yes
Output current of the interface, max.	200 mA
Protocols	V
MPI DECERTIS DE master	Yes Yes
PROFIBUS DP masterPROFIBUS DP slave	Yes
Profibus DP stave Point-to-point connection	No
MPI	110
Transmission rate, max.	12 Mbit/s
Services	
— PG/OP communication	Yes
— Routing	Yes
 Global data communication 	Yes
 — S7 basic communication 	Yes
— S7 communication	Yes
 S7 communication, as client 	No; but via CP and loadable FB
— S7 communication, as server	Yes
PROFIBUS DP master	12 Mhit/o
Transmission rate, max. Number of DR slaves, max.	12 Mbit/s
Number of DP slaves, max. Services	124
— PG/OP communication	Yes
— Routing	Yes
Global data communication	No
— S7 basic communication	Yes; I blocks only
— S7 communication	Yes
 S7 communication, as client 	No
 S7 communication, as server 	Yes
— Equidistance	Yes
— Isochronous mode	Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO
— SYNC/FREEZE	Yes
Activation/deactivation of DP slaves	Yes
 Number of DP slaves that can be simultaneously activated/deactivated, max. 	8
Direct data exchange (slave-to-slave)	Yes; as subscriber
communication)	
— DPV1	Yes
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
User data per DP slave	

Inpute may	244 byta
— Inputs, max.	244 byte 244 byte
— Outputs, max. PROFIBUS DP slave	Z 11 Dyle
Transmission rate, max.	12 Mbit/s
automatic baud rate search	Yes; only with passive interface
Address area, max.	32
User data per address area, max.	32 byte
Services Services	02 %).0
— PG/OP communication	Yes
— Routing	Yes; Only with active interface
Global data communication	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
2. 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
• integrated switch	1 05
Protocols	
Protocols • MPI	No
Protocols • MPI • PROFINET IO Controller	No Yes; Also simultaneously with IO-Device functionality
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max.	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services — PG/OP communication	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes 100 Mbit/s Yes
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services — PG/OP communication — Routing	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes Yes
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services — PG/OP communication	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes 100 Mbit/s Yes
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services — PG/OP communication — Routing	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes Yes Yes Yes Yes Yes; with loadable FBs, max. configurable connections: 16, max.
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes Yes Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services — PG/OP communication — Routing — S7 communication	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes 100 Mbit/s Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes
Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server • Media redundancy PROFINET IO Controller • Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — Shared device	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes 100 Mbit/s Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes 100 Mbit/s Yes Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup,	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes 100 Mbit/s Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max.	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes Yes Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes Yes Yes Yes Yes
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max. — Number of connectable IO Devices, max.	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes 100 Mbit/s Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes Yes 32
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max. — Number of connectable IO Devices, max. — Of which IO devices with IRT, max.	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes 100 Mbit/s Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes Yes 32 128 64
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max. — Number of connectable IO Devices, max. — Of which IO devices with IRT, max. — of which in line, max.	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes 100 Mbit/s Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes Yes Yes Yes 32 128 64 64
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode — IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max. — Of which IO devices with IRT, max. — of which in line, max. — Number of IO Devices with IRT and the option	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes 100 Mbit/s Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes Yes 32 128 64
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max. — Of which IO devices with IRT, max. — of which in line, max. — Number of IO Devices with IRT and the option "high flexibility"	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes 100 Mbit/s Yes Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes Yes 32 128 64 64 64 128
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max. — Number of connectable IO Devices, max. — Of which IO devices with IRT, max. — of which in line, max. — Number of IO Devices with IRT and the option "high flexibility" — of which in line, max.	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes Yes Yes Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes 32 128 64 64 64 128
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max. — Of which IO devices with IRT, max. — of which in line, max. — Number of IO Devices with IRT and the option "high flexibility"	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes 100 Mbit/s Yes Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes Yes 32 128 64 64 64 128
Protocols MPI PROFINET IO Controller PROFINET IO Device PROFINET CBA PROFIBUS DP master PROFIBUS DP slave Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Routing — S7 communication — Isochronous mode IRT — Shared device — Prioritized startup — Number of IO devices with prioritized startup, max. — Number of connectable IO Devices, max. — Of which IO devices with IRT, max. — of which in line, max. — Number of IO Devices with IRT and the option "high flexibility" — of which in line, max. — Number of connectable IO Devices for RT,	No Yes; Also simultaneously with IO-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes Yes Yes Yes Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32 Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO Yes Yes Yes 32 128 64 64 64 128

- Activation/deactivation of IO Devices - Number of IO Devices that can be simultaneously activated/deactivated, max IO Devices changing during operation (partner ports), supported - Number of IO Devices per tool, max Device replacement without swap medium - Send cycles - Updating lime - Send cycles - Updating lime - Send cycles - Injust, max Updating lime - Injust, max Outputs, max Outputs, max User data consistency, max PROFINET IO Devices - PG/OP communication - Routing - S' communication - Routing - S' Communication - Injust, max Injust, max Injust, max Injust, max Injust, max Injust, max PROFIner of IO Controllers with shared device, wax No Traisler memory - Injust, max User data per submodule, max Outputs, max User data per submodule, max Injust, max		
simultaneously activated/deactivated in max. — IO Devices changing during operation (partner ports), supported Ports), supported Number of IO Devices per tool, max. — Device replacement without swap medium — Send cycles — Updating time — Send cycles — Updating time — ProCPO communication — Routing — S7 communication — ProCPO communication — ProCPO communication — Inputs, max. — Updating time —		
		8
ports), supported Number of IOD evices per tool, max. Device replacement without swap medium Send cycles Updating time Device replacement without swap medium Send cycles Updating time 250 us 50 us, 1 ms, 2 ms, 4 ms (not in the case of IRT with "high flexibility" option) 250 us 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. Outputs, max. Outputs, max. User data consistency, max. PROFINET Device Services PCPOID communication Yes PROFINET OB PROFINET OB PROFINET of connections, max. User data per submodule, max. 1440 byte; Per IO Controller with shared device No cyclic transmission Ves Ves PROFINET CBA Submodules Number of connections, max. User data per submodule, max. 164 User data per submodule, max. 176 per ID controller with shared device Number of connections, max. 160 Number of connections, max. No college in function, supported Nes PROFINET CBA Nes Ves Ves PROFINET CBA Submodules Number of connections, max. Outputs, max. 164 176 yes Protocols PROFISE CBA Number of connections, max. No college in function, supported No college in function, supported No college in function, supported Nes Number of connections, max. No college in function, supported Nes Number of connections, max. No college in function, supported No college in function,		V
- Number of IO Devices per tool, max Device replacement without swap medium - Send cycles - Send cycles - Send cycles - Updating time - 250 us 10 sc 12 ms. 2 ms. 4 ms (not in the case of IRT with "high flexibility" option) - 250 us 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 Outputs, max User data consistency, max PROFINET IO Device - Senrices - PGOP communication - Routing - S7 communication - Routing - S7 communication - IRT - PROFlenergy - Shared device - Number of IO Controllers with shared device, max User data for submit shared device, max User data for submit shared device, max User data per submodule, max User data per sub		res
Device replacement without swap medium Send cycles Send cycles Updating time		8
- Send cycles - Updating time - Updating time - 250 us to 512 ms (depending on the case of IRT with "high flexibility" option) - 250 us to 512 ms (depending on the operating mode, see Manual "S7-300 CPU 31xC and CPU 31x, technical Data" for more details) - Inputs, max Updr data consistency, max User data consistency, max User data consistency, max Updr data consistency, max Updr data consistency, max PROFINET IO Device - Services - PSOP communication - Routing - S7 communication - Isochronous mode - IRT - PROFInerary - Shared device - Number of Instances: 32 - Numbe	·	
Bexhility* opion) Address area	·	
Address area Inputs, max. Outputs, max. Out	— Seria Cycles	
Address area	— Updating time	
- Inputs, max		
Outputs, max User data consistency, max User data per submodule, max.	Address area	
PROFINET IO Device Services - PC/OP communication - Routing - S7 communication - IRT - PROFlenergy - Isochronous mode - IRT - PROFlenergy - Shared device - Number of Io Controllers with shared device, - Max Shared device - Number of Io Controllers with shared device, - Max Transfer memory - Inputs, max Outputs, max User data per submodule, max User data per submodule, max User data per submodule, max Local port numbers used at the system end - Ves - Cyclic transmission - Ves - Cyclic transmission - Number of connections, max Local port numbers used at the system end - Keep-alive function, supported - Keep-alive function, supported - SPOCFisale - Redundancy mode - Media redundancy - Switchover time on line break, typ Number of stations in the ring, max Data length for connection type 01H, max Data length for connection type 11H, max Several passive connections per port supported - Number of connections, max Data length, max.	— Inputs, max.	8 kbyte
PROFINET IO Device Services - PG/OP communication - Routing - Sor communication - Routing - Sor communication - Routing - Sor communication - Isochronous mode - IRT - PROFlenergy - PROFlenergy - PROFlenergy - Shared device - Number of IO Controllers with shared device, max. Transfer memory - Inputs, max User data per submodule, max Local port numbers used at the system end - Keep-alive function, supported - Number of connections, max User data per submodule, subm	·	8 kbyte
Services - PG/OP communication - Routing - S7 communication - IRT - PROFlenergy - PROFlenergy - Stared device - Number of Io Controllers with shared device, max. Transfer memory - Inputs, max Unputs, max Unputs, max Unumber, max Use data per submodule, max Use submodule, max Use data per submodule, max Use submodule, max Use data per submodule, max.	 User data consistency, max. 	1 024 byte
- PG/OP communication - Routing - Strommunication - Isochronous mode - IRT - Isochronous mode - IRT - PROFlenergy - Shared device - Number of IO Controllers with shared device, max. Transfer memory - Inputs, max User data per submodule, max Local port numbers used at the system end - Number of connections, max Local port numbers used at the system end - Keep-alive function, supported - Submodure of Connections, max User data per submodule, max Ves - Subtchover time on line break, typ Subtchover time on line break, typ Number of stations in the ring, max. Open IE communication - TOPIP - Number of connection type of UH, max Data length for connection type of UH, max Data length for connection type 1H, max Data length for connection type 1H, max Supported - ISO-on-TCP (RFC1006) - Number of connections, max Data length,	PROFINET IO Device	
Routing Yes, with loadable FBs, max. configurable connections: 16, max. number of instances: 32 - Isochronous mode - IRT Yes - PROFlenergy Yes, With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device - Shared device - Number of IO Controllers with shared device, max. Transfer memory - Inputs, max Outputs, max Outputs, max User data per submodule, max Local port numbers used at the system end - Number of connections, max Local port numbers used at the system end - Number of connection, supported - Keep-alive function, supported - Svitchover time on line break, typ Number of stations in the ring, max Data length for connection type 11H, max Several passive connections per port, supported - ISO-on-TCP (RFC1006) - Number of connections, max Data length, max.	Services	
- S7 communication - S7 communication - Isochronous mode - IRT - PROFlenergy - Yes - Shared device - Number of IO Controllers with shared device, max. Transfer memory - Inputs, max Outputs. max Uutputs. max Uutputs. max Uutputs. max Uutput stransmission - eyclic transmission - eyclic transmission - ves - Number of connections, max Local port numbers used at the system end - Keep-alive function, supported - Keep-alive function, supported - Number of stations in the ring, max Data length for connection type 01H, max Data length for connections, max Data length, for connections, per port, supported - ISO-on-TCP (RFC1006) - Number of connections, max Data length, for connections, per port, supported - ISO-on-TCP (RFC1006) - Number of connections, max Data length, for connections, per port, supported - ISO-on-TCP (RFC1006) - Number of connections, max Data length, max Data len	— PG/OP communication	Yes
Isochronous mode IRT PROFlenergy Shared device Number of IO Controllers with shared device, Ramax Shared memory Inputs, max Unputs, max Unput	S .	
- Isochronous mode - IRT - PROFlenergy - Shared device - Number of IO Controllers with shared device, max. Transfer memory - Inputs, max Outputs, max User data per submodule, max. PROFINET CBA - a cyclic transmission - e cyclic transmission - Ves - Number of connections, max Local port numbers used at the system end - Keep-alive function, supported - Media redundancy - Switchover time on line break, typ Number of stations in the ring, max Data length for connections, max Data length, max.	— S7 communication	
- IRT - PROFlenergy - Shared device - Number of IO Controllers with shared device, max Outputs, max Outputs, max Outputs, max Number, max User data per submodule, max PROFINET CIBA - exyclic transmission - cyclic transmission - oyolic transmission - Number of connections, max Local port numbers used at the system end - Keep-alive function, supported - Number of connections, max Switchover time on line break, typ Number of connections, max Data length for connection type 01H, max Data length for connections per port, supported - ISO-on-TOP (RFC1006) - Number of connections, max Data length, max Data length, max Data length, for connections per port, supported - Number of connections, max Data length, for connections per port, supported - Number of connections, max Data length, max Data length, for connection type 01H, max Several passive connections, max Data length, for connection type 01H, max Data length, max Data length, max Data length, max Data length, max Data len		
- PROFlenergy - Shared device - Number of IO Controllers with shared device, max Outputs, m		
From the profit of the profit		
- Shared device - Number of IO Controllers with shared device, max. Transfer memory - Inputs, max Outputs, max Outputs, max User data per submodule, max. PROFINET CBA - a cyclic transmission - cyclic transmission - Number of connections, max Local port numbers used at the system end - Keep-allive function, supported PROFISafe Redundancy mode Media redundancy - Switchover time on line break, typ Number of connections, max Data length for connection type 01H, max Data length for connections, pax Data length for connections, pax Data length for connections per port, supported PIDP - Number of connections, max Data length for connections, max Data length for connections, max Data length, max Data length or connections, max Data length or connections, max	— PROFienergy	
- Number of IO Controllers with shared device, max. Transfer memory - Inputs, max Outputs, max. 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device Submodules - Number, max User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission • Cyclic transmission • Number of connections, max. • Local port numbers used at the system end • Keep-alive function, supported • Keep-alive function, supported PROFISAfe Redundancy mode Media redundancy - Switchover time on line break, typ Number of stations in the ring, max. Data length for connection type 01H, max Data length for connection type 11H, max several passive connections, max Data length for connections per port, supported • ISO-on-TCP (RFC1006) - Number of connections, max Data length, max Data length connections, max Data length, max Data length connections, max Data length connections, max Data length connections, max Data length connections, max Data length connectio	— Shared device	
Transfer memory - Inputs, max Outputs, max Outputs, max Number, max User data per submodule, max Open IE communication - Number of connections, max Local port numbers used at the system end - Copen IE communication - Number of connections, max Number of connections, supported - Switchover time on line break, typ Number of stations in the ring, max Data length for connection type 01H, max Data length for connection type 1H, max Data length for connections per port, supported - ISO-on-TCP (RFC1006) - Number of connections, max Data length, max Data length max Dat		
Transfer memory Inputs, max. Uptquts, max. Uptquts, max. User data per submodule, max. User data per submodule	•	_
- Inputs, max Outputs, max Outputs, max Outputs, max Number, max User data per submodule, max User data per submodule, max User data per submodule, max Experimental of the submodule of t		
- Outputs, max. Submodules - Number, max User data per submodule, max. PROFINET CBA • acyclic transmission • Cyclic transmission • Number of connections, max. • Local port numbers used at the system end • Cyclic transmission • Neep-alive function, supported Proficeds Profisafe Redundancy mode Media redundancy - Switchover time on line break, typ Number of stations in the ring, max. Open IE communication • TCP/IP - Number of stations, max Data length for connection, type 01H, max Data length for connection, per port, supported • ISO-on-TCP (RFC1006) - Number of connections, max Data length, max		1 440 byte: Per IO Controller with shared device
Submodules - Number, max User data per submodule, max. 1 024 byte PROFINET CBA • acyclic transmission • cyclic transmission • oyclic transmission • Number of connections, max. • Local port numbers used at the system end • (20, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 • Keep-alive function, supported PROFisafe Redundancy mode Media redundancy - Switchover time on line break, typ Number of stations in the ring, max. Open IE communication • TCP/IP - Number of connection type 01H, max Data length for connection type 11H, max Several passive connections per port, supported • ISO-on-TCP (RFC1006) - Number of connections, max Data length, max. Data length, max. - Data length l	•	
— User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission • Open IE communication • Number of connections, max. • Local port numbers used at the system end • Keep-alive function, supported Protocols PROFISafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length for connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — Data length, max. • Soveral passive connections, max. — If the soveral passive connections passive connections, max. — If the soveral passive connections passive connecti	, .	
PROFINET CBA • acyclic transmission • cyclic transmission • cyclic transmission Open IE communication • Number of connections, max. • Local port numbers used at the system end • Keep-alive function, supported Protocots PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP Number of connections, max. — Data length for connection type 01H, max. — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. UDP — Number of connections, max. — Data length, max. — Data length max. — Data length max. — Data length max. — Data length, max. — Data length max.	— Number, max.	64
PROFINET CBA • acyclic transmission • cyclic transmission • cyclic transmission Open IE communication • Number of connections, max. • Local port numbers used at the system end • Keep-alive function, supported Protocots PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP Number of connections, max. — Data length for connection type 01H, max. — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. UDP — Number of connections, max. — Data length, max. — Data length max. — Data length max. — Data length max. — Data length, max. — Data length max.	— User data per submodule, max.	1 024 byte
 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end 65532, 65533, 65534, 65535 Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. Data length, max. So 2768 byte Yes; via integrated PROFINET interface and loadable FBs Yes via integrated PROFINET interface and loadable FBs Yes So 768 byte Yes; via integrated PROFINET interface and loadable FBs Hordinary integrated PROFINET interface and loadable FBs Yes Signature integrated PROFINET interface and loadable FBs Hordinary integrated PROFINET interface and loadable FBs H		,
Open IE communication Number of connections, max. Local port numbers used at the system end Schötzle, 65532, 65533, 65534, 65535 Keep-alive function, supported Protocols PROFIsafe Redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. Data length, max. Data length, max. Supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. Data length, max. Supported Ves; via integrated PROFINET interface and loadable FBs Yes; via integrated PROFINET interface and loadable FBs Yes; via integrated PROFINET interface and loadable FBs Yes; via integrated PROFINET interface and loadable FBs Alabel PROFINET interface and loadable FBs Alabel PROFINET interface and loadable FBs Yes; via integrated PROFINET interface and loadable FBs Alabel PROFINET Alabel		
 Number of connections, max. Local port numbers used at the system end Q. 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Keep-alive function, supported Yes Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. Data length, max. Data length, max. Data length, max. UDP Number of connections, max. 16 Yes; via integrated PROFINET interface and loadable FBs Yes Ves Ves via integrated PROFINET interface and loadable FBs 16 17 18 18 19 10 <li< td=""><td> acyclic transmission </td><td>Yes</td></li<>	 acyclic transmission 	Yes
Local port numbers used at the system end (0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 (8) Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. — Data length, max. — Data length, max. — Data length, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Syes, via integrated PROFINET interface and loadable FBs — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Syes, via integrated PROFINET interface and loadable FBs — Number of connections, max. — Data length, max. • UDP — Syes, via integrated PROFINET interface and loadable FBs — Data length, max. • UDP — Syes, via integrated PROFINET interface and loadable FBs — Data length, max. • UDP — Syes, via integrated PROFINET interface and loadable FBs — Data length, max. • UDP — Syes, via integrated PROFINET interface and loadable FBs — Data length, max. • UDP — Syes, via integrated PROFINET interface and loadable FBs — Obstate of Connections, max. — Data length, max. • UDP — Syes, via integrated PROFINET interface and loadable FBs — Obstate of Connections, max. — Data length, max. • USP — Syes via integrated PROFINET interface and loadable FBs — Obstate of Connections, max. — Data length, max. • USP — Syes via integrated PROFINET interface and loadable FBs — Syes via integrated PROFINET interface and loadable FBs — Syes via integrated PROFINET interface and loadable FBs — Syes via integrated PROFINET interface and loadable FBs — Syes via integrated PROFINET interface and loadable FBs — Syes via integrated P		
Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication TCP/IP Ves; via integrated PROFINET interface and loadable FBs — Number of connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. Ves; via integrated PROFINET interface and loadable FBs Number of connections, max. — Data length, max. 16 — Number of connections, max. — Data length, max. 16 — Number of connections, max. — Data length, max. 16 — Supported — Number of connections, max. — Data length, max. 16 — Supported — Ves — Supported — Supported — Supported — Ves — Ves — Ves — Ves — Supported — Ves — Ves — Ves — Supported — Ves — Supported — Ves — Supported — Ves	cyclic transmission	
Protocols PROFIsafe Yes Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. 50 Open IE communication ● TCP/IP Yes; via integrated PROFINET interface and loadable FBs — Number of connection type 01H, max. — Data length for connection type 11H, max. — Data length for connections per port, supported ● ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. ■ UDP — Number of connections, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ Data length, max. ■ User-defined websites ■ User-defined websites	cyclic transmission Open IE communication	Yes
PROFIsafe PROFIsafe PROFIsafe PROFIsafe PRofloadia redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Data length for connection type 01H, max. — Data length for connections per port, supported ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. — Data length, max. — Data length, max. — Several passive connections per port, supported ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. — Data length, max. UDP — Number of connections, max. — Data length, max. UDP — Number of connections, max. — Data length, max. UDP — Number of connections, max. — Data length, max. USP (Several passive connections) Iso-on-TCP (RFC1006) — Number of connections, max. — Data length, max. UDP — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. USP (Several passive connections) — Number of connections, max. — Data length, max. — USP (Several passive connections) — Number of connections, max. — Data length, max. — USP (Several passive connections) — USP (Se	 cyclic transmission Open IE communication Number of connections, max. 	Yes 16
PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Data length, max. • USP — Number of connections, max. — Post length max. • USP — Number of connections, max. — Post length max. • USP — Number of connections, max. — Post length max. • USP — Number of connections, max. — Post length max. • USP — Number of connections max. — Post length max. • USP — Number of connections max. — Post length max. • USP — Number of connections max. — Post length max. • USP — Number of connections max. — Post len	 cyclic transmission Open IE communication Number of connections, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964,
Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. • Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Supported • Supported • Supported • Supported • Supported • User-defined websites	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535
Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Syes; via integrated PROFINET interface and loadable FBs — Number of connections, max. — Data length, max. • UDP — Syes; via integrated PROFINET interface and loadable FBs — Number of connections, max. — Data length, max. 16 1 472 byte Web server • supported • User-defined websites Yes	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535
- Switchover time on line break, typ Number of stations in the ring, max. Open IE communication TCP/IP - Number of connections, max Data length for connection type 01H, max Data length for connection type 11H, max several passive connections per port, supported ISO-on-TCP (RFC1006) - Number of connections, max Data length, max. UDP - Number of connections, max Data length, max. UDP - Number of connections, max Data length, max Several passive connections per port, supported - Number of connections, max Data length, max Several passive and loadable FBs - Number of connections, max Data length, max Several passive and loadable FBs - Number of connections, max Data length, max Passive and loadable FBs - Number of connections, max Data length, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loadable FBs - Number of connections, max Passive and loa	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes
 Number of stations in the ring, max. Open IE communication ◆ TCP/IP	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes
Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. Data length, max. Data length, max. It 460 byte Yes Yes Yes Yes Yes Yes Yes Y	cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes
 TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — Several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. — Data length max. — Yes — Supported — Ves — Ves — Ves — Ves — User-defined websites — Yes — Ves — Ves	cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes
 Number of connections, max. Data length for connection type 01H, max. Data length for connection type 11H, max. Several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. UDP Number of connections, max. UDP Augustian integrated PROFINET interface and loadable FBs Yes; via integrated PROFINET interface and loadable FBs 16 Yes; via integrated PROFINET interface and loadable FBs 16 Data length, max. 1472 byte Web server Supported User-defined websites Yes 	cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ.	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP
 Data length for connection type 01H, max. Data length for connection type 11H, max. several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. Data length, max. Wes; via integrated PROFINET interface and loadable FBs Wes; via integrated PROFINET interface and loadable FBs 16 Number of connections, max. Data length, max. 1472 byte Web server supported User-defined websites Yes 	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP
 Data length for connection type 11H, max. several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. UDP Number of connections, max. Data length, max. 16 Number of connections, max. Data length, max. 16 Data length, max. 1472 byte Web server supported User-defined websites Yes 	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50
 — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. — Ves; via integrated PROFINET interface and loadable FBs — 1 472 byte Web server • supported • Supported • User-defined websites Yes 	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs
supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. Number of connections, max. 16 Number of connections, max. 16 Number of connections, max. 16 Data length, max. 16 1472 byte Web server Supported User-defined websites Yes	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16
ISO-on-TCP (RFC1006)	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte
 Number of connections, max. Data length, max. UDP Number of connections, max. Number of connections, max. Data length, max. 16 Data length, max. 1472 byte Web server supported User-defined websites Yes 	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connection type 11H, max. several passive connections per port, 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte
 Data length, max. UDP	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connection type 11H, max. several passive connections per port, supported 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes
 UDP	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connection type 11H, max. several passive connections per port, supported ISO-on-TCP (RFC1006) 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes Yes; via integrated PROFINET interface and loadable FBs
 — Number of connections, max. — Data length, max. 1 472 byte Web server • supported • User-defined websites Yes 	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported ISO-on-TCP (RFC1006) — Number of connections, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes Yes; via integrated PROFINET interface and loadable FBs 16
— Data length, max. 1 472 byte Web server ● supported Yes ● User-defined websites Yes	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte
Web server • supported • User-defined websites Yes	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes Yes Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs
 supported User-defined websites Yes 	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes Yes Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16
• User-defined websites Yes	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. Data length, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes Yes Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16
	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. Data length, max. 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 12 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 1472 byte
Number of HTTP clients 5	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connection type 11H, max. several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. Data length, max. Web server supported 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes Yes 200 ms; PROFINET MRP 50 Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 1472 byte Yes
	 cyclic transmission Open IE communication Number of connections, max. Local port numbers used at the system end Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. Data length, max. Web server supported User-defined websites 	Yes 16 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 Yes Yes Yes Yes; via integrated PROFINET interface and loadable FBs 16 1 460 byte 32 768 byte Yes Yes; via integrated PROFINET interface and loadable FBs 16 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 1472 byte Yes Yes

communication functions / header	
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 GD packets, max. 	22 byte
Size of GD packet (of which consistent), max.	22 byte
S7 basic communication	V
• supported	Yes
User data per job, max.User data per job (of which consistent), max.	76 byte 76 byte: 76 bytes (with X. SEND or X. BCV): 64 bytes (with X. BLIT or
• Oser data per job (or which consistent), max.	76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
S7 communication	
supported	Yes
• as server	Yes
• as client	Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB
 User data per job, max. 	See online help of STEP 7 (shared parameters of the SFBs/FBs and of
• Oser data per job, max.	the SFCs/FCs of S7 Communication)
S5 compatible communication	
supported	Yes; via CP and loadable FC
communication functions / PROFINET CBA (with set target c	
Setpoint for the CPU communication load	50 %
 number of remote connection partners / with PROFINET CBA 	32
 number of technological functions / with PROFINET CBA / for master or slave 	30
 number of connections / with PROFINET CBA / for master or slave / total 	1 000
 data volume / of the input variables / with PROFINET CBA / for master or slave 	4 000 byte
 data volume / of the output variables / with PROFINET CBA / for master or slave 	4 000 byte
 number of internal and PROFIBUS interconnections / with PROFINET CBA / maximum 	500
 data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave 	4 000 byte
data volume / with PROFINET CBA / per connection / maximum	1 400 byte
performance data / PROFINET CBA / remote interconne	ction / with acyclic transfer / header
 update time / of the remote interconnections / in the case of acyclic transmission / with PROFINET CBA 	500 ms
 number of remote connections to input variables / in the case of acyclic transmission / with PROFINET CBA / maximum 	100
 number of remote connections to output variables / in the case of acyclic transmission / with PROFINET CBA / maximum 	100
 data volume / as user data for remote interconnections with input variables / in the case of acyclic transmission / with PROFINET CBA 	2 000 byte
 data volume / as user data for remote interconnections with output variables / in the case of acyclic transmission / with PROFINET CBA 	2 000 byte
— data volume / as user data for remote interconnections / in the case of acyclic transmission / with PROFINET CBA / per connection / maximum	1 400 byte
performance data / PROFINET CBA / remote interconne	
 update time / of the remote interconnections / with cyclical transfer / with PROFINET CBA 	10 ms
mumber of remote connections to input	200
— number of femote connections to input	200

variables / with PROFINET CBA / with cyclic transfer / maximum	
— number of remote connections to output variables / with cyclical transfer / with PROFINET CBA / maximum	200
— data volume / as user data for remote interconnections with input variables / with cyclical transfer / with PROFINET CBA / maximum	2 000 byte
 data volume / as user data for remote interconnections with output variables / with cyclical transfer / with PROFINET CBA / maximum 	2 000 byte
 data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum 	450 byte
performance data / PROFINET CBA / HMI variables via I	PROFINET / acvclic / header
 number of connectable HMI stations / for HMI variables / in the case of acyclic transmission / with PROFINET CBA 	3; 2x PN OPC/1x iMap
 update time / of the HMI variables / in the case of acyclic transmission / with PROFINET CBA 	500 ms
 number of HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum 	200
 data volume / as user data for HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum 	2 000 byte
performance data / PROFINET CBA / PROFIBUS proxy	functionality / header
— product function / with PROFINET CBA / PROFIBUS proxy functionality	Yes
 number of coupled PROFIBUS devices / with PROFIBUS functionality 	16
 data volume / with PROFIBUS proxy functionality / with PROFINET CBA / per 	240 byte; Slave-dependent
connection / maximum	
Number of connections	20
overallusable for PG communication	32 31
reserved for PG communication	
adjustable for PG communication, min.	1
- adjustable for PG communication, max. - adjustable for PG communication, max.	31
usable for OP communication	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 PROFINET: 24 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
simultaneously active Alarm-S blocks, max.	300
Test commissioning functions	
Status block	Yes; Up to 2 simultaneously
Single step	Yes
Number of breakpoints	4
Status/control	
Status/control variable	Yes
Variables	Inputs, outputs, memory bits, DB, times, counters
Number of variables, max.	30

of which status variables, may	30
— of which status variables, max.	14
— of which control variables, max. Forcing	14
• Forcing	Yes
Forcing, variables	Inputs, outputs
Number of variables, max.	10
Diagnostic buffer	10
• present	Yes
Number of entries, max.	500
— adjustable	No
— of which powerfail-proof	100; Only the last 100 entries are retained
 Number of entries readable in RUN, max. 	499
— adjustable	Yes; From 10 to 499
— preset	10
Service data	
• can be read out	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	60 °C
configuration / header	
Configuration software	
• STEP 7	Yes; V5.5 or higher
configuration / programming / header	3
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	
User program protection/password protection	Yes
Block encryption	Yes; With S7 block Privacy
Dimensions	
Width	40 mm
Height	125 mm
Depth	130 mm
Weights	
Weight, approx.	340 g
last modified:	4/1/2022 🖸