## SIEMENS

## Data sheet

## 6ES7318-3EL01-0AB0



SIMATIC S7-300 CPU 319-3 PN/DP, Central processing unit with 2 MB work memory, 1st interface MPI/DP 12 Mbit/s, 2nd interface DP master/slave 3rd 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 2nd PROFIBUS DP or PROFINET interface
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V5.5 or higher
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
external protection for power supply lines (recommendation)	2 A min.
Mains buffering	
<ul> <li>Mains/voltage failure stored energy time</li> </ul>	5 ms
Repeat rate, min.	1 s
Input current	
Current consumption (rated value)	1 250 mA
Current consumption (in no-load operation), typ.	500 mA
Inrush current, typ.	4 A
<sup>2</sup> t	1.2 A <sup>2</sup> ·s
Power loss	
Power loss, typ.	14 W
Memory	
Work memory	
• integrated	2 048 kbyte
expandable	No
Load memory	
• Plug-in (MMC)	Yes
<ul> <li>Plug-in (MMC), max.</li> </ul>	8 Mbyte
<ul> <li>Data management on MMC (after last programming), min.</li> </ul>	10 у
Backup	
present	Yes
without battery	Yes
CPU processing times	
for bit operations, typ.	0.004 µs
for word operations, typ.	0.01 µs
for fixed point arithmetic, typ.	0.01 µs

for floating point arithmetic typ	0.04 us
for floating point arithmetic, typ.	0.04 µs
CPU-blocks	
Number of blocks (total)	4 096; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.
DB	
Number, max.	4 096; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
● Number, max.	4 096; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
• Number, max.	4 096; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
• Size, max.	64 kbyte
Number of free cycle OBs	1; OB 1
<ul> <li>Number of time alarm OBs</li> </ul>	1; OB 10
<ul> <li>Number of delay alarm OBs</li> </ul>	2; OB 20, 21
<ul> <li>Number of cyclic interrupt OBs</li> </ul>	4; OB 32, 33, 34, 35 (OB 35: smallest settable clock pulse = 500 $\mu s)$
<ul> <li>Number of process alarm OBs</li> </ul>	1; OB 40
<ul> <li>Number of DPV1 alarm OBs</li> </ul>	3; OB 55, 56, 57
<ul> <li>Number of isochronous mode OBs</li> </ul>	1; OB 61
<ul> <li>Number of startup OBs</li> </ul>	1; OB 100
<ul> <li>Number of asynchronous error OBs</li> </ul>	6; OB 80, 82, 83, 85, 86, 87 (OB83 only for PROFINET IO)
Number of synchronous error OBs	2; OB 121, 122
Nesting depth	
per priority class	16
<ul> <li>additional within an error OB</li> </ul>	4
Counters, timers and their retentivity	
S7 counter	
Number	2 048
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	2 047
— preset	Z 0 to Z 7
Counting range	Y.
— adjustable	Yes
— lower limit	0
— upper limit	999
IEC counter	No.
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
S7 times	2.049
Number     Potentivity	2 048
Retentivity	Voc
— adjustable — lower limit	Yes
	0 2 047
— upper limit — preset	
— 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.	700 kbyte

Flag	
• Size, max.	8 192 byte
Retentivity available	Yes: From MB 0 to MB 8 191
Retentivity preset	MB 0 to MB 15
Number of clock memories	8; 1 memory byte
Data blocks	o, Thenory byte
Retentivity adjustable	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	103
per priority class, max.	32 768 byte; Max. 2048 bytes per block
	32 700 byte, Max. 2040 bytes per block
Address area	
I/O address area	0.400 h.t.
Inputs	8 192 byte
Outputs	8 192 byte
of which distributed	0.4001.4
— Inputs	8 192 byte
— Outputs	8 192 byte
Process image	0.4001
• Inputs	8 192 byte
• Outputs	8 192 byte
<ul> <li>Inputs, adjustable</li> </ul>	8 192 byte
<ul> <li>Outputs, adjustable</li> </ul>	8 192 byte
<ul> <li>Inputs, default</li> </ul>	256 byte
Outputs, default	256 byte
Subprocess images	
<ul> <li>Number of subprocess images, max.</li> </ul>	1; With PROFINET IO, the length of the user data is limited to 1600
Divited shows als	bytes
Digital channels	05 500
• Inputs	65 536
— of which central	1 024
Outputs	65 536
— of which central	1 024
Analog channels	4.000
Inputs	4 096
— of which central	256
• Outputs	4 096
— of which central	256
Hardware configuration	
Number of DP masters	
<ul> <li>integrated</li> </ul>	2
• via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, PtP	8
• CP, LAN	10
Rack	
• Racks, max.	4
<ul> <li>Modules per rack, max.</li> </ul>	8
Time of day	
Clock	
<ul> <li>Hardware clock (real-time)</li> </ul>	Yes
<ul> <li>retentive and synchronizable</li> </ul>	Yes
Backup time	6 wk; At 40 °C ambient temperature
• Deviation per day, max.	10 s; Typ.: 2 s
Behavior of the clock following POWER-ON	Clock continues running after POWER OFF
<ul> <li>Behavior of the clock following expiry of backup</li> </ul>	the clock continues at the time of day it had when power was switched
period	off
Operating hours counter	
Number	4
<ul> <li>Number/Number range</li> </ul>	0 to 3

Dance of unline	
Range of values	0 to 2^31 hours (when using SFC 101)
Granularity	1 h
retentive	Yes; Must be restarted at each restart
Clock synchronization	Yes
• supported	Yes
• to MPI, master	
• to MPI, slave	Yes
• to DP, master	Yes; With DP slave only slave clock
• to DP, slave	Yes
• in AS, master	Yes
• in AS, slave	Yes
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; 2 ports (switch) RJ45
Number of PROFINET interfaces	1; 2 ports (switch) RJ45
Number of RS 485 interfaces	2; Combined MPI / PROFIBUS DP and PROFIBUS DP
Number of RS 422 interfaces	0
1. Interface	
Interface type	Integrated RS 485 interface
Isolated	Yes
Interface types	
• RS 485	Yes
<ul> <li>Output current of the interface, max.</li> </ul>	150 mA
Protocols	
• MPI	Yes
PROFIBUS DP master	Yes
PROFIBUS DP slave	Yes; A DP slave at both interfaces simultaneously is not possible
<ul> <li>Point-to-point connection</li> </ul>	No
MPI	
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	
Transmission rate, max.	12 Mbit/s
<ul> <li>Number of DP slaves, max.</li> </ul>	124
Services	
— 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	No

	Vee
- SYNC/FREEZE	Yes
<ul> <li>Activation/deactivation of DP slaves</li> </ul>	Yes
<ul> <li>— Number of DP slaves that can be simultaneously activated/deactivated, max.</li> </ul>	8
<ul> <li>— Direct data exchange (slave-to-slave communication)</li> </ul>	Yes; as subscriber
— DPV1	Yes
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
User data per DP slave	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	2++ 5/10
Transmission rate, max.	12 Mbit/s
automatic baud rate search	Yes; only with passive interface
	32
Address area, max.	
User data per address area, max.	32 byte
Services	Ver
— PG/OP communication	Yes
— Routing	Yes; with interface active
<ul> <li>Global data communication</li> </ul>	No
<ul> <li>— S7 basic communication</li> </ul>	No
— S7 communication	Yes
<ul> <li>— S7 communication, as client</li> </ul>	No
- S7 communication, as server	Yes; Connection configured on one side only
<ul> <li>— Direct data exchange (slave-to-slave communication)</li> </ul>	Yes
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Inputs	211 6910
— Outputs	244 byte
— Outputs	
Outputs 2. Interface	244 byte
— Outputs 2. Interface Interface type Isolated	244 byte Integrated RS 485 interface
Outputs 2. Interface Interface type	244 byte Integrated RS 485 interface
- Outputs 2. Interface Interface type Isolated Interface types • RS 485	244 byte Integrated RS 485 interface Yes
- Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max.	244 byte Integrated RS 485 interface Yes Yes
- Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols	244 byte Integrated RS 485 interface Yes Yes 200 mA
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI	244 byte Integrated RS 485 interface Yes Yes 200 mA No
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller	244 byte Integrated RS 485 interface Yes Yes 200 mA No No
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device	244 byte  Integrated RS 485 interface Yes Yes 200 mA No
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA	244 byte    Integrated RS 485 interface  Yes  Yes  200 mA  No
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master	244 byte  Integrated RS 485 interface Yes Yes 200 mA No No No No No No No Yes
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         No         No         No         No         Yes         Yes         Yes         No         No         Yes
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         No         Yes         Yes         Yes         Yes         Yes         Yes         No         No         Yes         Yes         Yes         Yes; A DP slave at both interfaces simultaneously is not possible         No
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         No         No         No         No         Yes         Yes         Yes         No         No         Yes
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server PROFIBUS DP master	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         No         Yes         Yes         Yes         Yes         Yes         No         No     <
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server PROFIBUS DP master • Transmission rate, max.	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         Yes         Yes         Yes         Yes         Yes         Yes         Yes         No         No         No         No         Yes; A DP slave at both interfaces simultaneously is not possible         No         No         12 Mbit/s
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max.	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         No         Yes         Yes         Yes         Yes         Yes         No         No     <
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server PROFIBUS DP master • Transmission rate, max.	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         Yes         Yes         Yes         Yes         Yes         Yes         Yes         No         No         No         No         Yes; A DP slave at both interfaces simultaneously is not possible         No         No         12 Mbit/s
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Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max. Services	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         Yes         Yes         Integrated RS 485 interface         Yes         Yes         Yes         No         No         No         No         Yes; A DP slave at both interfaces simultaneously is not possible         No         No         12 Mbit/s         124
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max. Services PG/OP communication	244 byte  Integrated RS 485 interface Yes  Yes  Yes 200 mA  No No No No No No Yes Yes; A DP slave at both interfaces simultaneously is not possible No No Yes Yes; A DP slave at both interfaces simultaneously is not possible No No Yes
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max. Services - PG/OP communication - Routing	244 byte  Integrated RS 485 interface Yes  Yes 200 mA  No No No No No No Yes Yes; A DP slave at both interfaces simultaneously is not possible No No Yes Yes; A DP slave at both interfaces simultaneously is not possible No Yes Yes Yes Yes Yes Yes Yes Yes Yes
Outputs 2. Interface Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFINET IO Controller • PROFINET IO Device • PROFINET CBA • PROFIBUS DP master • PROFIBUS DP master • PROFIBUS DP slave • Open IE communication • Web server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max. Services - PG/OP communication - Routing - Global data communication	244 byte Integrated RS 485 interface Yes Yes Ves No No No No No Yes Yes; A DP slave at both interfaces simultaneously is not possible No No Yes; A DP slave at both interfaces simultaneously is not possible No No No No No
<ul> <li>– Outputs</li> <li>2. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>Interface types <ul> <li>RS 485</li> <li>Output current of the interface, max.</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> </ul> </li> <li>PROFIBUS DP master <ul> <li>Transmission rate, max.</li> <li>Number of DP slaves, max.</li> </ul> </li> <li>Services <ul> <li>PG/OP communication</li> <li>Routing</li> <li>Global data communication</li> <li>S7 basic communication</li> <li>S7 communication</li> </ul> </li> </ul>	244 byte         Integrated RS 485 interface         Yes         Yes         200 mA         No         No         No         No         Yes; A DP slave at both interfaces simultaneously is not possible         No         No         Yes; A DP slave at both interfaces simultaneously is not possible         No         Yes; A DP slave at both interfaces simultaneously is not possible         No         Yes         Yes         Yes         Yes         No         No         No         Yes         Yes
<ul> <li>– Outputs</li> <li>2. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>Interface types <ul> <li>RS 485</li> <li>Output current of the interface, max.</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> </ul> </li> <li>PROFIBUS DP master <ul> <li>Transmission rate, max.</li> <li>Number of DP slaves, max.</li> </ul> </li> <li>Services <ul> <li>PG/OP communication</li> <li>Routing</li> <li>Global data communication</li> <li>S7 communication</li> <li>S7 communication</li> <li>S7 communication, as client</li> </ul> </li> </ul>	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         No         Yes         Yes         12 Mbit/s         124         Yes         Yes         No         Yes         Yes         No
<ul> <li>– Outputs</li> <li>2. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>Interface types <ul> <li>RS 485</li> <li>Output current of the interface, max.</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> </ul> </li> <li>PROFIBUS DP master <ul> <li>Transmission rate, max.</li> <li>Number of DP slaves, max.</li> </ul> </li> <li>Services <ul> <li>PG/OP communication</li> <li>Routing</li> <li>Global data communication</li> <li>S7 basic communication</li> <li>S7 communication, as client</li> <li>S7 communication, as server</li> </ul> </li> </ul>	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         No         Yes; A DP slave at both interfaces simultaneously is not possible         No         No         No         No         Yes; A DP slave at both interfaces simultaneously is not possible         No         Yes         Yes         Yes         No         No         No         Yes         Yes; I blocks only         Yes; No         Yes; Connection configured on one side only
<ul> <li>– Outputs</li> <li>2. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>Interface types <ul> <li>RS 485</li> <li>Output current of the interface, max.</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> </ul> </li> <li>PROFIBUS DP master <ul> <li>Transmission rate, max.</li> <li>Number of DP slaves, max.</li> </ul> </li> <li>Services <ul> <li>PG/OP communication</li> <li>Routing</li> <li>Global data communication</li> <li>S7 communication</li> <li>S7 communication</li> <li>S7 communication, as client</li> </ul> </li> </ul>	244 byte         Integrated RS 485 interface         Yes         200 mA         No         No         No         No         No         No         Yes         Yes         12 Mbit/s         124         Yes         Yes         No         Yes         Yes         No

	Yes
<ul> <li>— SYNC/FREEZE</li> <li>— Activation/deactivation of DP slaves</li> </ul>	
— Activation/deactivation of DP staves     — Number of DP staves that can be	Yes 8
simultaneously activated/deactivated, max.	0
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	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	
GSD file	The latest GSD file is available at: http://www.siemens.com/profibus-gsd
<ul> <li>Transmission rate, max.</li> </ul>	12 Mbit/s
<ul> <li>automatic baud rate search</li> </ul>	Yes; only with passive interface
<ul> <li>Address area, max.</li> </ul>	32
<ul> <li>User data per address area, max.</li> </ul>	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; with interface active
<ul> <li>Global data communication</li> </ul>	No
<ul> <li>— S7 basic communication</li> </ul>	No
<ul> <li>— S7 communication</li> </ul>	Yes
<ul> <li>— S7 communication, as client</li> </ul>	No
<ul> <li>— S7 communication, as server</li> </ul>	Yes; Connection configured on one side only
<ul> <li>— Direct data exchange (slave-to-slave</li> </ul>	Yes
communication)	
— DPV1	No
Transfer memory	
-	
— Inputs	244 byte
— Inputs — Outputs	244 byte 244 byte
<ul><li>— Inputs</li><li>— Outputs</li><li>3. Interface</li></ul>	244 byte
Inputs Outputs 3. Interface Interface type	244 byte PROFINET
Inputs Outputs 3. Interface Interface type Isolated	244 byte PROFINET Yes
— Inputs     — Outputs 3. Interface Interface type Isolated automatic detection of transmission rate	244 byte PROFINET Yes Yes; 10/100 Mbit/s
— Inputs     — Outputs  3. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes
— Inputs     — Outputs  3. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes
<ul> <li>Inputs</li> <li>Outputs</li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes
<ul> <li>Inputs</li> <li>Outputs</li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type <ul> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> </ul> </li> </ul></li></ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type <ul> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> </ul> </li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes 2
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type <ul> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type <ul> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type <ul> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> </ul> </li> </ul>	244 byte  PROFINET  Yes  Yes; 10/100 Mbit/s  Yes  Yes  Yes  Yes  No
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type <ul> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> </ul> </li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes No Yes; Also simultaneously with 1-Device functionality
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type <ul> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> </ul> </li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes No Yes No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> </ul> </li>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type <ul> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> </ul> </li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes No No Second Structure St
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>Outputs</li> </ul> <li>3. Interface <ul> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> </ul> </li>	244 byte         PROFINET         Yes         Yes; 10/100 Mbit/s         Yes         Yes         Yes         Yes         Yes         Yes         Yes         Yes         Yes         No         Yes; Also simultaneously with I-Device functionality         Yes; Also simultaneously with IO Controller functionality         Yes         No
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> </ul></li>	244 byte         PROFINET         Yes         Yes; 10/100 Mbit/s         Yes         Yes; Also simultaneously with I-Device functionality         Yes; Also simultaneously with IO Controller functionality         Yes         No         No         No         Yes; Via TCP/IP, ISO on TCP, and UDP
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> </ul></li>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Ves Ves Solution Yes Solution No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality Yes; No No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> </ul>	244 byte         PROFINET         Yes         Yes; 10/100 Mbit/s         Yes         No         Yes; Also simultaneously with I-Device functionality         Yes; Also simultaneously with IO Controller functionality         Yes         No         No         No         Yes; Via TCP/IP, ISO on TCP, and UDP
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes No No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> <li>PROFINET IO Controller <ul> <li>Transmission rate, max.</li> </ul> </li>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes Ves Ves Solution Yes Solution No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality Yes; No No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> <li>PROFINET IO Controller <ul> <li>Transmission rate, max.</li> <li>Services</li> </ul> </li>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Xes No No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes 100 Mbit/s
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> <li>PROFINET IO Controller <ul> <li>Transmission rate, max.</li> <li>Services</li> <li>— PG/OP communication</li> </ul> </li>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes No No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality Yes; Also simultaneously with IO Controller functionality Yes; No No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>PROFINET CBA</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> <li>PROFINET IO Controller <ul> <li>Transmission rate, max.</li> </ul> </li> </ul>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes No No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality Yes No No No No No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes Yes
<ul> <li>Inputs <ul> <li>Outputs</li> </ul> </li> <li>3. Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Change of IP address at runtime, supported</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> <li>Protocols <ul> <li>MPI</li> <li>PROFINET IO Controller</li> <li>PROFIBUS DP master</li> <li>PROFIBUS DP slave</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> <li>PROFINET IO Controller <ul> <li>Transmission rate, max.</li> <li>Services</li> <li>— PG/OP communication</li> </ul> </li>	244 byte PROFINET Yes Yes; 10/100 Mbit/s Yes Yes Yes Yes Yes Yes Yes No No Yes; Also simultaneously with I-Device functionality Yes; Also simultaneously with IO Controller functionality Yes; Also simultaneously with IO Controller functionality Yes; No No No No Yes; Via TCP/IP, ISO on TCP, and UDP Yes Yes Yes

— Isochronous mode	Yes; OB 61 - isochronous mode is possible either on DP or PROFINET IO (not simultaneously)
— Shared device	Yes
— Prioritized startup	Yes
<ul> <li>— Number of IO devices with prioritized startup, max.</li> </ul>	32
<ul> <li>— Number of connectable IO Devices, max.</li> </ul>	256
<ul> <li>— Of which IO devices with IRT, max.</li> </ul>	64
— of which in line, max.	64
<ul> <li>— Number of IO Devices with IRT and the option "high flexibility"</li> </ul>	256
— of which in line, max.	61
<ul> <li>— Number of connectable IO Devices for RT, max.</li> </ul>	256
— of which in line, max.	256
<ul> <li>Activation/deactivation of IO Devices</li> </ul>	Yes
<ul> <li>— Number of IO Devices that can be simultaneously activated/deactivated, max.</li> </ul>	8
<ul> <li>— IO Devices changing during operation (partner ports), supported</li> </ul>	Yes
<ul> <li>— Number of IO Devices per tool, max.</li> </ul>	8
- Device replacement without swap medium	Yes
— Send cycles	250 $\mu s,$ 500 $\mu s,$ 1 ms; 2 ms, 4 ms (not in the case of IRT with "high flexibility" option)
— Updating time	250 μs to 512 ms (depending on the operating mode, see Manual "S7- 300 CPU 31xC and CPU 31x, technical Data" for more details)
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
— User data consistency, max.	1 024 byte
PROFINET IO Device	
Services	
— PG/OP communication	Yes
— Routing	Yes
— S7 communication	Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32
<ul> <li>— Isochronous mode</li> </ul>	No
— IRT	Yes
— PROFlenergy	Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device
— Shared device	Yes
<ul> <li>— Number of IO Controllers with shared device,</li> </ul>	2
max.	
Transfer memory	
— Inputs, max.	1 440 byte; Per IO Controller with shared device
— Outputs, max.	1 440 byte; Per IO Controller with shared device
Submodules	
— Number, max.	64
— User data per submodule, max.	1 024 byte
PROFINET CBA	
acyclic transmission	Yes
cyclic transmission	Yes
Open IE communication	
<ul> <li>Number of connections, max.</li> </ul>	32
<ul> <li>Local port numbers used at the system end</li> </ul>	0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535
Keep-alive function, supported Protocols	Yes
PROFIsafe	No
Redundancy mode	
Media redundancy	
— Switchover time on line break, typ.	200 ms; PROFINET MRP
<ul> <li>— Switchover time of time break, typ.</li> <li>— Number of stations in the ring, max.</li> </ul>	50
Number of stations in the filly, max.	

	Open IE communication	
- Number of connections, max.     2     - Data length for connection type 11H, max.     1400 byte     - special     - base length for connection type 11H, max.     2785 byte     - special     - base to connections, max.     22     - Data length for connections, max.     22     - Data length for connections, max.     22     - Data length for connections, max.     22     - Data length max.     - Data length for connections, max.     22     - Data length max.     - Data length for connections, max.     32     - Data length, max.     - Data length, ma	-	Yes: via integrated PROFINET interface and loadable EBs
Data length of connection type 11H, max.     32 768 byte		
supported     ilSo-ar-CP (RFC1006)     Ves; via integrated PROFINET interface and loadable FBs     - Number of connections, max.     32     27 68 byte     Ves; via integrated PROFINET interface and loadable FBs     - UDP     Ves; via integrated PROFINET interface and loadable FBs     - UDP     Ves; via integrated PROFINET interface and loadable FBs     - UDP     Ves     ves via integrated PROFINET interface and loadable FBs     - UDP     Ves     Ves     ves via integrated PROFINET interface and loadable FBs     ves via integrated PROFINET interface and loadable FB     ves via integrated PROFINET interface and loadable FB     ves via integrated PROFINET interface and loadable FB     ves via integrated PROFINET interface and loadable FB or via CP and loadable pright, max.     ves via integrated PROFINET interface and loadable FB or via CP and loadable FB     ves via integrated PROFINET interface and loadable FB or via CP and loadable FB     ves via integrated PROFINET interface and loadable FB or via CP and loadable FB     ves via integrated PROFINET interface and loadable FB or via CP and loadable FB     ves via integrated PROFINET interface and loadable FB or via CP and loadable FB     ves via integrated PROFINET interface and loadable FB or via CP and loadable FB     ves via integrated PROFINET interface and lo		
• Science CPC (REC1066)         Yes; via integrated PROFINET interface and loadable FBs              · Number of connections, max.              22 766 byte              Ves; via integrated PROFINET interface and loadable FBs              · Uniter of connections, max.              22               22 766 byte              Ves; via integrated PROFINET interface and loadable FBs              · Use of connections, max.              22                 - Data length, max.              1472 byte              Ves; via integrated PROFINET interface and loadable FBs              Ves; via integrated PROFINET interface and loadable FBs                • Supported vebsites              Ves              Ves              Ves                • Number of HTTP cleins              Ves              Ves              Ves                • Routher of CD loops, max.              8             • Number of CD packets; transmitter, max, top of CD packets; tork ves on top of ST basic communication               Ves               Ves                 • Size of CD packets; tork vesset, max, top top tof top of which consistent), max, top top top top of top of top of top on top on sistent), max, top top top top of top on top on sistent, max, top top top top top of top top top on top		
Data kength, max.	ISO-on-TCP (RFC1006)	Yes; via integrated PROFINET interface and loadable FBs
• UDPYes, via integrated PROFINET interface and loadable FBs• Number of connections, max.32• Data length, max.1472 byte• supportedYes• SupportedYes• SupportedYes• Number of HTP2 clents5communication functions / headerYesPGOP CommunicationYesObtain record routingYesObtain record routingYesObtain record routingYes• Number of GD loops, max.8• Number of GD packets, max.8• Number of GD packets, max.8• Number of GD packets, receiver, max.8• State continuication22 byte• State of Do packets, receiver, max.8• State of Do packets, receiver, max.8• State of Do packets, receiver, max.76 byte• State of Do packets, receiver, max.76 byte• State continuicationYes• State of Do packets, max.76 byte; 75 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_RCV); 64 bytes (With States); 65 or of communication• SupportedYes• State of CPU communication is with PROFINET CBA (with set trace); 65 or Granuinication; 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_RCV); 64 bytes (with X_SEND or X_RCV); 64 bytes (wit		
Aumber of connections, max.         32         1472 byte         1472 byte	— Data length, max.	32 768 byte
Data kength, max.     Data kength, max.     Data kength, max.     Data kength, max.     Star kend for HTTP clents     Star kend for UHTP clents     Star kend for     Sta	• UDP	Yes; via integrated PROFINET interface and loadable FBs
Web server       • supported       Yes         • Supported       Yes         • Number of HTTP clients       5         • Communication functions / header       Yes         • PG/OP communication       Yes         • Supported       Yes         • Number of GD packets, max.       8         • Size of GD packets, max.       8         • Size of GD packets, max.       8         • Size of GD packets, max.       22 byte         Size of GD packet (of which consistent), max.       22 byte         Size of GD packet (of which consistent), max.       76 byte         • User data per job, max.       76 byte         • User data per job, max.       76 byte         • supported       Yes         • supported       Yes         • so clent       Ioadable FB         • User data per job, max.       57 communication         • Size ontime help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of ST Communication (stable FB         • supported       Yes: via (CP and loadable FB         • supported       Yes: via (CP and loadable FC	<ul> <li>Number of connections, max.</li> </ul>	32
Supported Yes     Ves	— Data length, max.	1 472 byte
User data per job, max.     Supported     Supported	Web server	
• Number of HTTP clients         5           communication functions / header         Yes           Data record routing         Yes           Global data communication         Yes           • supported         Yes           • Number of GD pockets, max.         8           • Number of GD packets, max.         8           • Number of GD packets, max.         8           • Number of GD packets, max.         8           • Size of GD packets, receiver, max.         8           • Size of GD packets, receiver, max.         8           • Size of GD packets, receiver, max.         22 byte           • Size of GD packets, receiver, max.         76           • supported         Yes           • Size of GD packets, receiver, max.         76 byte           • Size of GD packets, max.         76 byte           • Size of GD packets, max.         76 byte           • supported         Yes           • supported         Yes           • supported         Yes           • as client         Yes           • as client         Yes           • as client         Yes           • umber of techonological functions / PROFINET CBA (with set target communication load // header           • supported	supported	Yes
communication functions / header         PC/CPC communication       Yes         Global data communication       Yes         • Number of GD pops, max.       8         • Number of GD packets, max.       8         • Number of GD packets, receiver, max.       8         • Size of GD packets, receiver, max.       8         • Size of GD packets, receiver, max.       22 byte         Size of GD packets, max.       22 byte         Size of GD packets, max.       76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_CCV); 64 bytes (with X_OCV); 64 bytes (with X_OCV); 64 bytes (with X_PUT or X_CCV); 64 bytes (with CONSINCE); 65 communication         • supported       Yes; via (Pagnated PROFINET interface and loadable FB or via CP and loadable FB         • upber of lob, max.       See online helpip of STEP 7 (shared pa	<ul> <li>User-defined websites</li> </ul>	
PG/OP communication         Yes           Data record routing         Yes           Global data communication         Yes           • supported         Yes           • Number of GD poakets, max.         8           • Number of GD packets, max.         8           • Number of GD packets, max.         8           • Stare of GD packets, max.         22 byte           • Size of GD packets, max.         22 byte           Size of GD packets, max.         22 byte           Size of GD packets, max.         22 byte           • Supported         Yes           • User data per job, max.         76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_CET as server)           S7 communication         Yes           • supported         Yes           • as clent         Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB           • use data per job, max.         See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFC/FCs of S7 Communication           • supported         Yes; via CP and loadable FC           • supported         Yes; via CP and loadable FC           • number of inchological functions / with PROFINET CBA / tor master or slave         3000           • number of otherological functions / with PROFINET CBA / for master or slave         300		5
Data record routing         Yes           Global data communication         •           • supported         Yes           • Number of GD packets, transmitter, max.         8           • Number of GD packets, treasmitter, max.         8           • Size of GD packets, treasmitter, max.         8           • Size of GD packets, treasmitter, max.         8           • Size of GD packet (d which consistent), max.         22 byte           Size of GD packet (d which consistent), max.         22 byte           • Supported         Yes           • user data per job (of which consistent), max.         76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_RCV); 64 bytes (with X_PUT or X_RCV); 64 bytes (with X_PUT or Yes, via integrated PROFINET Interface and loadable FB or via CP and loadable FB           • supported         Yes           • as server         Yes           • as erver         Yes           • user data per job, max.         See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFC/FCs of S7 Communication)           S5 compatible communication         Yes; via CP and loadable FC           • unmber of technological functions / with PROFINET CBA (with set target communication load) / header           • setpoint for the CPU communication load         20 %           • number of technological functions / with PROFINET CBA / for master or slave	communication functions / header	
Global data communication       Yes         • Number of GD pope, 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         ST basic communication       Yes         • User data per job, max.       76 byte         • User data per job, max.       76 byte         • Supported       Yes         • as server       Yes         • as client       Yes         • User data per job, max.       76 byte         • User data per job, max.       76 byte         • User data per job, max.       76 byte         • User data per job, max.       Sec online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of ST Communication)         St compatible communication       9         • User data per job, max.       Sec online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of ST Communication)         St compatible communication       9         • supported       Yes: via CP and loadable FC         communication functions / With PROFINET CBA (with Rec	PG/OP communication	Yes
• supported     Yes       • Number of GD loops, max.     8       • Number of GD packets, max.     8       • Number of GD packets, transmitter, max.     8       • Size of GD packets, transmitter, max.     8       • Size of GD packets, receiver, max.     8       • Size of GD packets, transmitter, max.     8       • Size of GD packets, max.     22 byte       • Size of GD packet (of which consistent), max.     22 byte       • User data per job, max.     76 byte       • User data per job (of which consistent), max.     76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_CY); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_Step; 76 bytes (with X_SEND or X_RCV); 64 bytes (with CP and X_RCV); 64 bytes (with X_SEND or X_RCV); 64 bytes (with PACINET CBA (with wet attract communication load 1) or X_SEND or X_RCV (with wet attract or X_RCV); 64 bytes (with PCONC (WIT WEND); With PROFINET CBA (with weta	Data record routing	Yes
Number of GD loops, max.     Number of GD packets, max.     Number of GD packets, transmitter, max.     Number of GD packets, transmitter, max.     Number of GD packets, transmitter, max.     Size of GD packet, of which consistent), max.     Size of GD packet of the consistent of the consistent of the second of the se	Global data communication	
• Number of GD packets, max.     8       • Number of GD packets, transmitter, max.     8       • Number of GD packets, receiver, max.     8       • Size of GD packets, receiver, max.     22 byte       • Size of GD packets, max.     22 byte       • User data per job, max.     76 byte       • User data per job (of which consistent), max.     76 byte       • User data per job (of which consistent), max.     76 byte       • user oftal aper job (of which consistent), max.     76 byte       • user oftal aper job (of which consistent), max.     76 byte       • user oftal aper job (of which consistent), max.     76 byte       • user oftal aper job (of which consistent), max.     76 byte       • supported     Yes       • as server     Yes       • as server     Yes       • user data per job, max.     See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication       St compatible communication functions / PROFINET CBA (with set target communication load) / header       • supported     Yes; via CP and loadable FC       communication functions / PROFINET CBA (for master or slave     3000       • number of technological functions / with PROFINET CBA / for master or slave		
• Number of GD packets, transmitter, max.       8         • Number of GD packets, receiver, max.       8         • Size of GD packets, max.       22 byte         • Size of GD packets, max.       22 byte         • Size of GD packets (of which consistent), max.       22 byte         ST basic communication       76 byte         • User data per job (of which consistent), max.       76 byte, 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_CGTT as server)         ST communication       Ves         • supported       Yes         • as client       Yes         • as client       Yes (at a per job, max.         • User data per job, max.       Stee online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         Stee online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)       Stee online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         Stee online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)       Stee online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         Stee online to connections / with PROFINET CBA (with set target communication load) / header       20 %         • number of tennological functions / with PROFINET       50         CBA / for master or slave       3000		
• 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       Yes         • user data per job, max.       76 byte         • User data per job (of 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       Yes         • supported       Yes         • supported       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 the SFDs/FBs and of the CPU communication load         • User data per job, max.       See online help of STEP 7 (shared parameters of the SFBs/FBS and of the SFDs/FBS and of the CPU communication load         • User data per job, max.       See online help of STEP 7 (shared parameters of the SFBs/FBS and of the SFDs/FBS and of the CPU communication load         • Stepoint for the CPU communication load       20 %         • number of remote connection partners / with PROFINET       3 000         • number of connections / With PROFINET CBA / for master or slave       24 000 byte         • number of internal and PROFINET CBA / for master o		
<ul> <li>Size of GD packets, max.</li> <li>22 byte</li> <li>22 byte</li> <li>23 byte</li> <li>25 basic communication</li> <li>supported</li> <li>Ves</li> <li>User data per job (of which consistent), max.</li> <li>76 byte</li> <li>76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)</li> <li>S7 communication</li> <li>Supported</li> <li>Ves</li> <li>as a server</li> <li>Ves</li> <li>as server</li> <li>Ves</li> <li>as a server</li> <li>Ves</li> <li>as a client</li> <li>Ves; via integrated PROFINET interface and loadable FB or via CP and loadable FB</li> <li>User data per job, max.</li> <li>See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)</li> <li>S5 compatible communication load</li> <li>supported</li> <li>Yes; via CP and loadable FC</li> <li>communication functions / PROFINET CBA (with set target communication load) / header</li> <li>Setpoint for the CPU communication load</li> <li>of master or slave</li> <li>oumber of tende connection partners / with PROFINET CBA / for master or slave</li> <li>ourber of slave / total</li> <li>otal volume / of the input variables / with PROFINET CBA / for master or slave</li> <li>ourber of nemet or</li></ul>		
• Size of GD packet (of which consistent), max.         22 byte           ST basic communication         Yes           • supported         Yes           • User data per job (of which consistent), max.         76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)           ST communication         Yes           • supported         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 the SFCs/FCs or S7 Communication)           SS compatible communication         Yes; via CP and loadable FC           communication functions / PROFINET CBA (with set target communication load) / header         20 %           • supported         Yes; via CP and loadable FC           communication functions / PROFINET CBA (with PROFINET CBA (with PROFINET CBA (with PROFINET CBA / for master or slave         20 %           • number of connections / with PROFINET CBA / for master or slave         3000           • number of connections / with PROFINET CBA / for master or slave         24 000 byte           • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave         3000           • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave         4000 byte           • data volume / of the output		
S7 basic communication       Yes         • supported       Yes         • User data per job, max.       76 byte         • User data per job (of which consistent), max.       76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_CET 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 the SFCs/FCs of S7 Communication)         S5 compatible communication       *         • supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header       20 %         • number of remote connection partners / with PROFINET CBA / for master or slave       3 000         • number of connections / with PROFINET CBA / for master or slave       3 000         • data volume / of the input variables / with PROFINET CBA / for master or slave       1 000         • number of Internal and PROFINET CBA / for master or slave       1 000         • data volume / of the output variables / with PROFINET CBA / for master or slave       1 000         • data volume / of Internal and PROFINET CBA / for master or slave       1 000         • data volume / of t		
• supported       Yes         • User data per job, max.       76 byte         • User data per job (of which consistent), max.       76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_CGT as server)         S7 communication       Yes         • supported       Yes         • as clent       Yes via integrated PROFINET interface and loadable FB or via CP and loadable FB         • Juser data per job, max.       See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         S5 compatible communication       Ves; via CP and loadable FC         • Supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load)       20 %         • number of remote connection partners / with PROFINET CBA       3000         • number of technological functions / with PROFINET CBA / for master or slave       3000         • data volume / of the input variables / with PROFINET CBA / for master or slave       4000 byte         • data volume / of the output variables / with PROFINET CBA / for master or slave       1000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / f		22 Dyte
• User data per job, max.       76 byte         • User data per job (of 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       Yes         • 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 the SFCs/FCs of S7 Communication)         S5 compatible communication       See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         S5 compatible communication       Ves; via CP and loadable FC         • supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header       20 %         • number of rende connection partners / with PROFINET CBA for master or slave       3000         • number of connections / with PROFINET CBA / for master or slave       3 000         • data volume / of the output variables / with PROFINET CBA / for master or slave       1 000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / of internal and PROFIBUS interconnection / with PROFINET CBA / per connections / with PROFINET CBA / per connection / with PROFINET CBA / per connection /		Vee
• User data per job (of 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         • supported       Yes         • as client       Ves; 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 the SFCs/FCs of S7 Communication)         S5 compatible communication       See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         • supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header       20 %         • supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header       32         • Setpoint for the CPU communication load       20 %         • number of remote connection partners / with PROFINET CBA / for master or slave       3 000         • number of technological functions / with PROFINET CBA / for master or slave       3 000         • data volume / of the output variables / with PROFINET CBA / for master or slave       1 000         • data volume / of the output variables / with PROFINET CBA / for master or slave       1 000         • unmber of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave		
S7 communication       X_GET as server)         • supported       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 the SFCs/FCs of S7 Communication)         S5 compatible communication       See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         S5 compatible communication functions / PROFINET CBA (with set target communication load) / header       Setpoint for the CPU communication load         • supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header       20 %         • number of remote connection partners / with       32         PROFINET CBA       3000         • number of connections / with PROFINET       50         CBA / for master or slave       3000         • number of internal and PROFINET CBA / for master or slave       4000 byte         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1000         • number of internal and PROFINET CBA / for master or slave       1400 byte         • data volume / of the ORFINET CBA / for master or slave       1400 byte		
• 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 the SFCs/FCs of S7 Communication)         S5 compatible communication       see online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         S5 compatible communication functions / PROFINET CBA (with set target communication load) / header       Set online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         S5 compatible communication functions / PROFINET CBA (with set target communication load) / header       Set online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         Stepoint for the CPU communication load       20 %         • number of remote connection partners / with PROFINET CBA / for master or slave       32         • number of technological functions / with PROFINET CBA / for master or slave       3 000         • number of connections / with PROFINET CBA / for master or slave       3 000         • data volume / of the output variables / with PROFINET CBA / for master or slave       24 000 byte         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 000         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 b	• User data per job (or which consistent), max.	
• 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 the SFCs/FCs of S7 Communication)         S5 compatible communication       supported         • supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header       20 %         • number of remote connection partners / with PROFINET CBA       32         • number of technological functions / with PROFINET CBA / for master or slave       3 000         • number of onnections / with PROFINET CBA / for master or slave / total       3 000         • data volume / of the input variables / with PROFINET CBA / for master or slave       3 000         • data volume / of the output variables / with PROFINET CBA / for master or slave       24 000 byte         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 000         • number of internal and PROFIBUS interconnections / with PROFINET CBA / per connection / ata volume / of internal and PROFIBUS interconnections / with PROFINET CBA / per connection       1 400 byte         • data volume / with PROFINET CBA / per connection       1 400 byte	S7 communication	
• 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 the SFCs/FCs of S7 Communication)         S5 compatible communication          • supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header       20 %         • number of remote connection partners / with PROFINET CBA / for master or slave       32         • number of technological functions / with PROFINET CBA / for master or slave       3 000         • number of onections / with PROFINET CBA / for master or slave       3 000         • data volume / of the input variables / with PROFINET CBA / for master or slave       24 000 byte         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 000         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 000         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / with PROFINET CBA / per connection slave       1 400 byte	supported	Yes
Ioadable FB       See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)         S5 compatible communication       supported         • supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header       20 %         • number of remote connection partners / with PROFINET CBA       32         • number of remote connections / with PROFINET CBA / for master or slave       50         • number of connections / with PROFINET CBA / for master or slave       3 000         • data volume / of the input variables / with PROFINET CBA / for master or slave       24 000 byte         • data volume / of the output variables / with PROFINET CBA / for master or slave       1 000         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / with PROFINET CBA / per connection / maximum       1 400 byte	• as server	Yes
S5 compatible communication <ul> <li>supported</li> <li>Yes; via CP and loadable FC</li> </ul> communication functions / PROFINET CBA (with set target communication load) / header               Setpoint for the CPU communication load <li>20 %</li> <li>number of remote connection partners / with PROFINET CBA</li> <li>number of technological functions / with PROFINET</li> <li>CBA / for master or slave</li> <li>number of connections / with PROFINET CBA / for master or slave / total</li> <li>data volume / of the input variables / with PROFINET CBA / for master or slave</li> <li>data volume / of the output variables / with PROFINET CBA / for master or slave</li> <li>data volume / of the output variables / with PROFINET CBA / for master or slave</li> <li>1 000</li> 24 000 byte           e number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave         1 000           otata volume / of internal and PROFIBUS interconnections / with PROFINET CBA / per connection slave         8 000 byte           otata volume / with PROFINET CBA / per connection         1 400 byte		loadable FB
• supported       Yes; via CP and loadable FC         communication functions / PROFINET CBA (with set target communication load) / header         • Setpoint for the CPU communication load       20 %         • number of remote connection partners / with PROFINET CBA       32         • number of technological functions / with PROFINET CBA / for master or slave       50         • number of connections / with PROFINET CBA / for master or slave / total       3 000         • data volume / of the input variables / with PROFINET CBA / for master or slave       24 000 byte         • data volume / of the output variables / with PROFINET CBA / for master or slave       24 000 byte         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 400 byte         • data volume / with PROFINET CBA / per connection / maximum       1 400 byte	User data per job, max.	
communication functions / PROFINET CBA (with set target communication load) / header         • Setpoint for the CPU communication load       20 %         • number of remote connection partners / with       32         PROFINET CBA       32         • number of technological functions / with PROFINET CBA / for master or slave       50         • number of connections / with PROFINET CBA / for master or slave / total       3 000         • data volume / of the input variables / with PROFINET CBA / for master or slave       24 000 byte         • data volume / of the output variables / with PROFINET CBA / for master or slave       1 000         • number of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / per connection / with acyclic transfer / header       1 400 byte	S5 compatible communication	
<ul> <li>Setpoint for the CPU communication load</li> <li>number of remote connection partners / with PROFINET CBA</li> <li>number of technological functions / with PROFINET CBA / for master or slave</li> <li>number of connections / with PROFINET CBA / for master or slave / total</li> <li>data volume / of the input variables / with PROFINET CBA / for master or slave</li> <li>data volume / of the output variables / with PROFINET CBA / for master or slave</li> <li>data volume / of the output variables / with PROFINET CBA / for master or slave</li> <li>data volume / of the output variables / with PROFINET CBA / for master or slave</li> <li>data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave</li> <li>data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave</li> <li>data volume / with PROFINET CBA / for master or slave</li> <li>data volume / with PROFINET CBA / per connection / maximum</li> <li>performance data / PROFINET CBA / remote interconnection / with acyclic transfer / header</li> </ul>		
• number of remote connection partners / with PROFINET CBA32• number of technological functions / with PROFINET CBA / for master or slave50• number of connections / with PROFINET CBA / for master or slave / total3 000• data volume / of the input variables / with PROFINET CBA / for master or slave24 000 byte• data volume / of the output variables / with PROFINET CBA / for master or slave24 000 byte• data volume / of the output variables / with PROFINET CBA / for master or slave1 000• data volume / of the output variables / with PROFINET CBA / for master or slave1 000• data volume / of the output variables / with PROFINET CBA / for master or slave1 000• data volume / of the output variables / with PROFINET CBA / maximum8 000 byte• data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave1 400 byte• data volume / with PROFINET CBA / per connection / maximum1 400 byte	· · · · · · · · · · · · · · · · · · ·	·
PROFINET CBA       • number of technological functions / with PROFINET       50         CBA / for master or slave       • number of connections / with PROFINET CBA / for master or slave / total       3 000         • data volume / of the input variables / with PROFINET CBA / for master or slave       24 000 byte         • data volume / of the output variables / with PROFINET CBA / for master or slave       24 000 byte         • data volume / of the output variables / with PROFINET CBA / for master or slave       1 000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       1 000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / with PROFINET CBA / for master or slave       1 000         • data volume / with PROFINET CBA / for master or slave       1 000         • data volume / with PROFINET CBA / for master or slave       1 000         • data volume / with PROFINET CBA / for master or slave       1 400 byte         • data volume / with PROFINET CBA / per connection / with acyclic transfer / header       1 400 byte		
CBA / for master or slave <ul> <li>number of connections / with PROFINET CBA / for master or slave / total</li> <li>data volume / of the input variables / with PROFINET CBA / for master or slave</li> <li>data volume / of the output variables / with PROFINET CBA / for master or slave</li> <li>data volume / of the output variables / with PROFINET CBA / for master or slave</li> <li>number of internal and PROFIBUS interconnections / with PROFINET CBA / maximum</li> <li>data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave</li> <li>otata volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave</li> <li>otata volume / with PROFINET CBA / for master or slave</li> <li>otata volume / with PROFINET CBA / per connection / with acyclic transfer / header</li> </ul>	PROFINET CBA	
master or slave / total24 000 byte• data volume / of the input variables / with PROFINET CBA / for master or slave24 000 byte• data volume / of the output variables / with PROFINET CBA / for master or slave24 000 byte• number of internal and PROFIBUS interconnections / with PROFINET CBA / maximum1 000• data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave8 000 byte• data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave8 000 byte• data volume / with PROFINET CBA / per connection / maximum1 400 byte	CBA / for master or slave	
PROFINET CBA / for master or slave       444 volume / of the output variables / with       24 000 byte         PROFINET CBA / for master or slave       1000         • number of internal and PROFIBUS interconnections / with PROFINET CBA / maximum       1 000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / maximum       1 000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / with PROFINET CBA / for master or slave       1 400 byte         • data volume / with PROFINET CBA / per connection / with acyclic transfer / header       1 400 byte	master or slave / total	
PROFINET CBA / for master or slave       1000         • number of internal and PROFIBUS interconnections / with PROFINET CBA / maximum       1000         • data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave       8 000 byte         • data volume / with PROFINET CBA / per connection / with acyclic transfer / header         performance data / PROFINET CBA / remote interconnection / with acyclic transfer / header	<ul> <li>data volume / of the input variables / with PROFINET CBA / for master or slave</li> </ul>	24 000 byte
<ul> <li>/ with PROFINET CBA / maximum</li> <li>data volume / of internal and PROFIBUS interconnections / with PROFINET CBA / for master or slave</li> <li>data volume / with PROFINET CBA / per connection / maximum</li> <li>performance data / PROFINET CBA / remote interconnection / with acyclic transfer / header</li> </ul>	•	24 000 byte
interconnections / with PROFINET CBA / for master or slave • data volume / with PROFINET CBA / per connection / maximum performance data / PROFINET CBA / remote interconnection / with acyclic transfer / header	/ with PROFINET CBA / maximum	
/ maximum performance data / PROFINET CBA / remote interconnection / with acyclic transfer / header	interconnections / with PROFINET CBA / for master or	8 000 byte
	/ maximum	
— update time / of the remote interconnections / 200 ms		
	<ul> <li>— update time / of the remote interconnections /</li> </ul>	200 ms

in the case of acyclic transmission / with PROFINET CBA	
<ul> <li>number of remote connections to input variables / in the case of acyclic transmission / with PROFINET CBA / maximum</li> </ul>	100
<ul> <li>number of remote connections to output variables / in the case of acyclic transmission / with PROFINET CBA / maximum</li> </ul>	100
<ul> <li>data volume / as user data for remote interconnections with input variables / in the case of acyclic transmission / with PROFINET CBA</li> </ul>	3 200 byte
<ul> <li>data volume / as user data for remote interconnections with output variables / in the case of acyclic transmission / with PROFINET CBA</li> </ul>	3 200 byte
<ul> <li>data volume / as user data for remote interconnections / in the case of acyclic transmission / with PROFINET CBA / per connection / maximum</li> </ul>	1 400 byte
performance data / PROFINET CBA / remote interconne	ction / with cyclic transfer / header
<ul> <li>update time / of the remote interconnections / with cyclical transfer / with PROFINET CBA</li> </ul>	1 ms
<ul> <li>number of remote connections to input variables / with PROFINET CBA / with cyclic transfer / maximum</li> </ul>	300
<ul> <li>number of remote connections to output variables / with cyclical transfer / with PROFINET CBA / maximum</li> </ul>	300
<ul> <li>data volume / as user data for remote interconnections with input variables / with cyclical transfer / with PROFINET CBA / maximum</li> </ul>	4 800 byte
<ul> <li>data volume / as user data for remote interconnections with output variables / with cyclical transfer / with PROFINET CBA / maximum</li> </ul>	4 800 byte
<ul> <li>data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum</li> </ul>	450 byte
performance data / PROFINET CBA / HMI variables via I	PROFINET / acyclic / header
<ul> <li>— number of connectable HMI stations / for HMI variables / in the case of acyclic transmission / with PROFINET CBA</li> </ul>	3; 2x PN OPC/1x iMap
<ul> <li>— update time / of the HMI variables / in the case of acyclic transmission / with PROFINET CBA</li> </ul>	500 ms
<ul> <li>number of HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum</li> </ul>	600
<ul> <li>— data volume / as user data for HMI variables / in the case of acyclic transmission / with PROFINET CBA / maximum</li> </ul>	9 600 byte
performance data / PROFINET CBA / PROFIBUS proxy	functionality / header
<ul> <li>product function / with PROFINET CBA / PROFIBUS proxy functionality</li> </ul>	Yes
<ul> <li>number of coupled PROFIBUS devices / with PROFIBUS functionality</li> </ul>	32
<ul> <li>data volume / with PROFIBUS proxy functionality / with PROFINET CBA / per connection / maximum</li> </ul>	240 byte; Slave-dependent
Number of connections	
• overall	32
usable for PG communication	31
- reserved for PG communication	1
— adjustable for PG communication, min.	1
— 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

<ul> <li>reserved for S7 basic communication</li> </ul>	0
<ul> <li>adjustable for S7 basic communication, min.</li> </ul>	0
<ul> <li>— adjustable for S7 basic communication, max.</li> </ul>	30
<ul> <li>usable for S7 communication</li> </ul>	16
<ul> <li>reserved for S7 communication</li> </ul>	0
<ul> <li>adjustable for S7 communication, min.</li> </ul>	0
<ul> <li>— adjustable for S7 communication, max.</li> </ul>	16
<ul> <li>total number of instances, max.</li> </ul>	32
<ul> <li>usable for routing</li> </ul>	X1 as MPI: max. 10; X1 as DP master: max. 24; X1 as DP slave (active): max. 14; X2 as DP master: max. 24; X2 as DP slave (active): max. 14; X3 as PROFINET: 48 max.
S7 message functions	
Number of login stations for message functions, max.	32; Depending on the configured connections for PG/OP and S7 basic

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	
<ul> <li>Status/control variable</li> </ul>	Yes
Variables	Inputs, outputs, memory bits, DB, times, counters
<ul> <li>Number of variables, max.</li> </ul>	30
<ul> <li>— of which status variables, max.</li> </ul>	30
— of which control variables, max.	14
Forcing	
Forcing	Yes
<ul> <li>Forcing, variables</li> </ul>	Inputs, outputs
<ul> <li>Number of variables, max.</li> </ul>	10
Diagnostic buffer	
• present	Yes
<ul> <li>Number of entries, max.</li> </ul>	500
— adjustable	No
— of which powerfail-proof	100
<ul> <li>Number of entries readable in RUN, max.</li> </ul>	499
— adjustable	Yes; From 10 to 499
— preset	10
Service data	
• can be read out	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0°0
• max.	0° 00
configuration / header	
Configuration software	
• STEP 7	Yes; V5.5 or higher
configuration / programming / header	
Command set	see instruction list
Nesting levels	8
<ul> <li>System functions (SFC)</li> </ul>	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	
<ul> <li>User program protection/password protection</li> </ul>	Yes
<ul> <li>Block encryption</li> </ul>	Yes; With S7 block Privacy
Dimensions	
Width	120 mm
Height	125 mm
Depth	130 mm
Weights	
Weight, approx.	1 250 g

last modified:

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