SIEMENS

Data sheet

6ES7315-2FJ14-0AB0



SIMATIC S7-300 CPU315F-2 PN/DP, Central processing unit with 512 KB work memory, 1st interface MPI/DP 12 Mbit/s, 2nd interface Ethernet PROFINET, with 2-port switch, Micro Memory Card required

Figure simila

Firmware version Product function Isochronous mode Programming package STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4 Supply voltage Rated value (DC) permissible range, lower limit (DC) external protection for power supply lines (recommendation) Mains buffering Mains/voltage failure stored energy time Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Insub current, typ. Power loss Power loss, typ. Memory Work memory V3.2 V3.2 V3.2 V3.2 V3.2 V4. V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 SP4 V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.4 SP4 V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.4 SP4 V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.4 SP4 V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.4 SP4 V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.4 SP4 V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.4 SP4 V5.5 or higher, Distributed Safety V5.4 SP4 V5.4 V Packety V5.4 SP4 V6.5 V V6.5 V Memory V6.5 W V6.5 V Memory V6.5 V V6.5 V V6.5 V Memory V6.6 V V6.6 V V6.6 V V6.7 V V6.7 V V6.7 V V6.8 V V6.9 V	
● Isochronous mode Engineering with ● Programming package STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4 Supply voltage Rated value (DC) permissible range, lower limit (DC) external protection for power supply lines (recommendation) Mains buffering ● Mains/voltage failure stored energy time ● Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. I²t Power loss Power loss, typ. Memory	
Engineering with Programming package SIEP 7 V5.5 or higher, Distributed Safety V5.4 SP4 Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) external protection for power supply lines (recommendation) Mains buffering Mains/voltage failure stored energy time Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It a I A²-s Power loss Power loss, typ. Memory	
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Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) external protection for power supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It is 1 A²-s Power loss Power loss, typ. 4.65 W Memory	
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) external protection for power supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. I²t 1 A²-s Power loss Power loss, typ. 4.65 W Memory	
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permissible range, upper limit (DC) external protection for power supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It is 1 A²·s Power loss Power loss, typ. 4.65 W Memory	
external protection for power supply lines (recommendation) Mains buffering • Mains/voltage failure stored energy time • Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It is 1 A²·s Power loss Power loss, typ. 4.65 W Memory	
(recommendation) 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 I²t 1 A²⋅s Power loss Power loss, typ. 4.65 W Memory	
 Mains/voltage failure stored energy time Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It A It A²·s Power loss Power loss, typ. 4.65 W Memory 	
● Repeat rate, min. Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. I²t Power loss Power loss, typ. 4.65 W Memory	
Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. It It It It It It It It It I	
Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. I²t 1 A²-s Power loss Power loss, typ. 4.65 W Memory	
Current consumption (in no-load operation), typ. Inrush current, typ. I²t 1 A²·s Power loss Power loss, typ. 4.65 W Memory	
Inrush current, typ.	
l²t 1 A²-s Power loss Power loss, typ. 4.65 W Memory	
Power loss Power loss, typ. 4.65 W Memory	
Power loss, typ. 4.65 W Memory	
Memory	
Work memory	
Working	
• integrated 512 kbyte	
• expandable No	
Load memory	
• Plug-in (MMC) Yes	
● Plug-in (MMC), max. 8 Mbyte	
 Data management on MMC (after last programming), min. 	
Backup	
• present Yes; Guaranteed by MMC (maintenance-free)	
• without battery Yes; Program and data	
CPU processing times	
for bit operations, typ. 0.05 μs	
for word operations, typ. 0.09 µs	

for fixed point arithmetic, typ.	0.12 μs
for floating point arithmetic, typ.	0.45 μs
CPU-blocks	5o po
Number of blocks (total)	1 024; (DBs, FCs, FBs); the maximum number of loadable blocks can
(1000)	be reduced by the MMC used.
DB	
Number, max.	1 024; Number range: 1 to 16000
Size, max.	64 kbyte
FB	
Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
• Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	G4 khuta
Size, max. Number of free evels OPs	64 kbyte
 Number of free cycle OBs Number of time alarm OBs 	1; OB 1 1; OB 10
Number of delay alarm OBs Number of qualic interrupt OBs	2; OB 20, 21
Number of cyclic interrupt OBs Number of process glasm OBs	4; OB 32, 33, 34, 35
Number of DRV4 plarm OBs	1; OB 40
Number of DPV1 alarm OBsNumber of isochronous mode OBs	3; OB 55, 56, 57
	1; OB 61
Number of startup OBs	1; OB 100
Number of asynchronous error OBs	6; OB 80, 82, 83, 85, 86, 87 (OB83 only for PROFINET IO)
Number of synchronous error OBs	2; OB 121, 122
Nesting depth	40
per priority class additional within an array OB	16
 additional within an error OB 	4
Counters, timers and their retentivity	
S7 counter	250
S7 counter • Number	256
S7 counter • Number Retentivity	
S7 counter • Number Retentivity — adjustable	Yes
S7 counter ● Number Retentivity — adjustable — lower limit	Yes 0
S7 counter • Number Retentivity — adjustable — lower limit — upper limit	Yes 0 255
S7 counter • Number Retentivity — adjustable — lower limit — upper limit — preset	Yes 0
S7 counter Number Retentivity — adjustable — lower limit — upper limit — preset Counting range	Yes 0 255 Z 0 to Z 7
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable	Yes 0 255 Z 0 to Z 7
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit	Yes 0 255 Z 0 to Z 7 Yes 0
S7 counter Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit — upper limit	Yes 0 255 Z 0 to Z 7
S7 counter Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit — upper limit — upper limit	Yes 0 255 Z 0 to Z 7 Yes 0 999
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit — upper limit — upper limit FC counter ● present	Yes 0 255 Z 0 to Z 7 Yes 0 999
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit — upper limit — upper limit — upper limit FIEC counter ● present ● Type	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB
S7 counter Number Retentivity adjustable lower limit upper limit preset Counting range adjustable lower limit upper limit rupper limit Type Number	Yes 0 255 Z 0 to Z 7 Yes 0 999
S7 counter Number Retentivity adjustable lower limit upper limit preset Counting range adjustable lower limit upper limit upper limit Type Number Number	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity)
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit — upper limit IEC counter ● present ● Type ● Number S7 times ● Number	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB
S7 counter Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit — upper limit IEC counter • present • Type • Number S7 times • Number Retentivity	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity)
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter ● present ● Type ● Number S7 times ● Number Retentivity — adjustable	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes
S7 counter Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter • present • Type • Number S7 times • Number Retentivity — adjustable — lower limit	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes 0
S7 counter Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter • present • Type • Number S7 times • Number Retentivity — adjustable — lower limit — upper limit	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes 0 255
S7 counter Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter • present • Type • Number S7 times • Number Retentivity — adjustable — lower limit — upper limit — upper limit — upper limit — preset	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes 0
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter ● present ● Type ● Number S7 times ● Number Retentivity — adjustable — lower limit — upper limit — upper limit — upper limit — reset Time range	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes 0 255 No retentivity
S7 counter Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter • present • Type • Number S7 times • Number Retentivity — adjustable — lower limit — upper limit — upper limit — upper limit — preset Time range — lower limit	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes 0 255 No retentivity
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter ● present ● Type ● Number S7 times ● Number Retentivity — adjustable — lower limit — upper limit — upper limit — upper limit — upper limit — preset Time range — lower limit — upper limit	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes 0 255 No retentivity
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter ● present ● Type ● Number S7 times ● Number Retentivity — adjustable — lower limit — upper limit — upper limit — upper limit — upper limit — preset Time range — lower limit — upper limit	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes 0 255 No retentivity 10 ms 9 990 s
S7 counter ● Number Retentivity — adjustable — lower limit — upper limit — preset Counting range — adjustable — lower limit — upper limit IEC counter ● present ● Type ● Number S7 times ● Number Retentivity — adjustable — lower limit — upper limit — upper limit — upper limit — upper limit — preset Time range — lower limit — upper limit	Yes 0 255 Z 0 to Z 7 Yes 0 999 Yes SFB Unlimited (limited only by RAM capacity) 256 Yes 0 255 No retentivity

Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	128 kbyte
Flag	•
• Size, max.	2 048 byte
Retentivity available	Yes; MB 0 to MB 2 047
Retentivity preset	MB 0 to MB 15
 Number of clock memories 	8; 1 memory byte
Data blocks	
 Retentivity adjustable 	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	
per priority class, max.	32 768 byte; Max. 2048 bytes per block
Address area	
I/O address area	
• Inputs	2 048 byte
Outputs	2 048 byte
of which distributed	
— Inputs	2 048 byte
— Outputs	2 048 byte
Process image	
• Inputs	2 048 byte
Outputs	2 048 byte
Inputs, adjustable	2 048 byte
 Outputs, adjustable 	2 048 byte
Inputs, default	128 byte
Outputs, default	128 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	16 384
— of which central	1 024
Outputs	16 384
— of which central	1 024
Analog channels	
• Inputs	1 024
— of which central	256
Outputs	1 024
— 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	
• Racks, max.	4
Modules per rack, max.	8
Time of day	
Clock	
Hardware clock (real-time)	Yes
retentive and synchronizable	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
Behavior of the clock following expiry of backup	Clock continues to run with the time at which the power failure occurred
period	Clock continues to full with the time at which the power failure occurred
Operating hours counter	
Number	1
 Range of values 	0 to 2^31 hours (when using SFC 101)
 Granularity 	1 h
retentive	Yes; Must be restarted at each restart
Clock synchronization	
supported	Yes
• to MPI, master	Yes
• to MPI, slave	Yes
to DP, master	Yes; With DP slave only slave clock
• to DP, slave	Yes
• in AS, master	Yes
• in AS, slave	Yes
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	
• MPI	Yes
 PROFIBUS DP master 	Yes
 PROFIBUS DP slave 	Yes
Point-to-point connection	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
Number of DP slaves, max.	124
Services	
— PG/OP communication	Yes
— Routing	Yes
 Global data communication 	No

- S7 basic communication - S7 communication - S7 communication, as client - S7 communication, as server - Equidistance - Isochronous mode - SYNC/FREEZE - Activation/deactivation of DP slaves - Number of DP slaves that can be simultaneously activated/deactivated, max Direct data exchange (slave-to-slave communication) - DPV1 Yes No Yes Yes Yes Yes Yes Yes Yes Ye	y on
 S7 communication, as client S7 communication, as server Equidistance Isochronous mode Yes; OB 61; isochronous mode can only be used alternatively PROFIBUS DP or PROFINET IO SYNC/FREEZE Activation/deactivation of DP slaves Number of DP slaves that can be simultaneously activated/deactivated, max. Direct data exchange (slave-to-slave communication) DPV1 No Yes Yes Yes Yes Yes Yes Yes Yes 	y on
 — S7 communication, as server — Equidistance — Isochronous mode — SYNC/FREEZE — Activation/deactivation of DP slaves — Number of DP slaves that can be simultaneously activated/deactivated, max. — Direct data exchange (slave-to-slave communication) — DPV1 Yes Yes Yes Yes Yes Yes; as subscriber Yes 	/ on
 Equidistance Isochronous mode Yes; OB 61; isochronous mode can only be used alternatively PROFIBUS DP or PROFINET IO SYNC/FREEZE Activation/deactivation of DP slaves Number of DP slaves that can be simultaneously activated/deactivated, max. Direct data exchange (slave-to-slave communication) DPV1 Yes Yes Yes Yes; as subscriber Yes 	y on
— Isochronous mode — SYNC/FREEZE — Activation/deactivation of DP slaves — Number of DP slaves that can be simultaneously activated/deactivated, max. — Direct data exchange (slave-to-slave communication) — DPV1 Yes; OB 61; isochronous mode can only be used alternatively PROFIBUS DP or PROFINET IO Yes Yes Yes Yes Yes Yes; as subscriber	y on
 — Isochronous mode — SYNC/FREEZE — Activation/deactivation of DP slaves — Number of DP slaves that can be simultaneously activated/deactivated, max. — Direct data exchange (slave-to-slave communication) — DPV1 Yes; OB 61; isochronous mode can only be used alternatively PROFIBUS DP or PROFINET IO Yes Yes Yes Yes Yes; as subscriber Yes 	y on
 — SYNC/FREEZE — Activation/deactivation of DP slaves — Number of DP slaves that can be simultaneously activated/deactivated, max. — Direct data exchange (slave-to-slave communication) — DPV1 Yes Yes Yes Yes 	
 — Activation/deactivation of DP slaves — Number of DP slaves that can be simultaneously activated/deactivated, max. — Direct data exchange (slave-to-slave communication) — DPV1 Yes Yes Yes 	
 Number of DP slaves that can be simultaneously activated/deactivated, max. Direct data exchange (slave-to-slave communication) DPV1 8 Yes; as subscriber Yes 	
simultaneously activated/deactivated, max. — Direct data exchange (slave-to-slave communication) — DPV1 Yes Yes; as subscriber Yes	
communication) — DPV1 Yes	
— DPV1 Yes	
A	
Address area	
— Inputs, max. 2 kbyte	
— Outputs, max. 2 kbyte	
User data per DP slave	
— Inputs, max. 244 byte	
— Outputs, max. 244 byte	
PROFIBUS DP slave	
• 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	
— PG/OP communication Yes	
— Routing Yes; Only with active interface	
·	
— S7 basic communication No	
— S7 communication Yes	
— S7 communication, as client	
— S7 communication, as server Yes; Connection configured on one side only	
— Direct data exchange (slave-to-slave communication)Yes	
— 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	
·	
Autoregotiation Yes	
Autocrossing Yes	
Change of IP address at runtime, supported Yes	
Interface types	
• RJ 45 (Ethernet)	
• Number of ports 2	
• integrated switch Yes	
Protocols	
• MPI No	
PROFINET IO Controller Yes; Also simultaneously with IO-Device functionality	
PROFINET IO Device Yes; Also simultaneously with IO Controller functionality	
PROFINET CBA Yes	
PROFIBUS DP master No	
PROFIBUS DP slave No	
Open IE communication Yes; Via TCP/IP, ISO on TCP, and UDP	
Web server Yes; only read function	

Media redundancy	Yes
ROFINET IO Controller	100 NH H
Transmission rate, max.	100 Mbit/s
Services	
— PG/OP communication	Yes
— Routing	Yes
— S7 communication	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32
— Isochronous mode	Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO
— IRT	Yes
— Shared device	Yes
 Prioritized startup 	Yes
 Number of IO devices with prioritized startup, max. 	32
 Number of connectable IO Devices, max. 	128
 Of which IO devices with IRT, max. 	64
— of which in line, max.	64
 Number of IO Devices with IRT and the option "high flexibility" 	128
— of which in line, max.	61
 Number of connectable IO Devices for RT, max. 	128
— of which in line, max.	128
 Activation/deactivation of IO Devices 	Yes
 Number of IO Devices that can be simultaneously activated/deactivated, max. 	8
 — IO Devices changing during operation (partner ports), supported 	Yes
 Number of IO Devices per tool, max. 	8
 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	$250~\mu s$ 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.	2 kbyte
— Outputs, max.	2 kbyte
— User data consistency, max.	1 024 byte
ROFINET IO Device	
Services	
— PG/OP communication	Yes
— Routing	Yes
— S7 communication	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32
— Isochronous mode	No
— IRT	Yes
— PROFlenergy	Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard F for I-Device
— Shared device	Yes
Number of IO Controllers with shared device,	2
max.	
max. Transfer memory	
	1 440 byte; Per IO Controller with shared device
Transfer memory	
Transfer memory — Inputs, max.	1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared device
Transfer memory — Inputs, max. — Outputs, max. Submodules	1 440 byte; Per IO Controller with shared device
Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max.	1 440 byte; Per IO Controller with shared device 64
Transfer memory — Inputs, max. — Outputs, max. Submodules	1 440 byte; Per IO Controller with shared device
Transfer memory — Inputs, max. — Outputs, max. Submodules — Number, max. — User data per submodule, max.	1 440 byte; Per IO Controller with shared device 64

Open IE communication	
Number of connections, max.	8
 Number of connections, max. 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
Keep-alive function, supported	Yes
Protocols	
Redundancy mode	
Media redundancy	
— Switchover time on line break, typ.	200 ms; PROFINET MRP
Number of stations in the ring, max.	50
Open IE communication	
• TCP/IP	Yes; via integrated PROFINET interface and loadable FBs
 Number of connections, max. 	8
 Data length for connection type 01H, max. 	1 460 byte
 Data length for connection type 11H, max. 	32 768 byte
 several passive connections per port, supported 	Yes
• ISO-on-TCP (RFC1006)	Yes; via integrated PROFINET interface and loadable FBs
 Number of connections, max. 	8
— Data length, max.	32 768 byte
• UDP	Yes; via integrated PROFINET interface and loadable FBs
 Number of connections, max. 	8
— Data length, max.	1 472 byte
Web server	
supported	Yes; only read function
 User-defined websites 	Yes
 Number of HTTP clients 	5
Communication functions	
PG/OP communication	Yes
Data record routing	Yes
Global data communication	
supported	Yes
 Number of GD loops, max. 	8
 Number of GD packets, max. 	8
Number of GD packets, max.Number of GD packets, transmitter, max.	8 8
 Number of GD packets, transmitter, max. 	8
Number of GD packets, transmitter, max.Number of GD packets, receiver, max.	8 8
 Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. 	8 8 22 byte
 Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. 	8 8 22 byte
 Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. S7 basic communication 	8 8 22 byte 22 byte
 Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. S7 basic communication supported 	8 8 22 byte 22 byte Yes
 Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. S7 basic communication supported User data per job, max. 	8 8 22 byte 22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or
 Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. S7 basic communication supported User data per job, max. User data per job (of which consistent), max. 	8 8 22 byte 22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or
 Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. S7 basic communication supported User data per job, max. User data per job (of which consistent), max. 	8 8 22 byte 22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
 Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. S7 basic communication supported User data per job, max. User data per job (of which consistent), max. S7 communication supported 	8 8 22 byte 22 byte Yes 76 byte 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
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1 to tess diagnostic incosages	Process diagnostic messages	
	Frocess diagnostic messages	1 03

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, max.	30
 of which control variables, max. 	14
Forcing	
Forcing	Yes
Forcing, variables	Inputs, outputs
Number of variables, max.	10
Diagnostic buffer	
• present	Yes
Number of entries, max.	500
•	
— adjustable	No 100
— of which powerfail-proof	
Number of entries readable in RUN, max.	499
— adjustable	Yes
— preset	10
Service data	
can be read out	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0°C
• max.	60 °C
Configuration	
Configuration software	
• STEP 7	Yes; V5.5 or higher
Programming	
Command set	see instruction list
Nesting levels	8
System functions (SFC)	see instruction list
• System functions (SFB)	see instruction list
Programming language	See Ilisti detion list
	Voc
— 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	
	340 g
Weight, approx.	340 g
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