SIEMENS

Data sheet

6ES7315-2FJ14-0AB0

SIMATIC S7-300 CPU315F-2 PN/DP, CENTRAL PROCESSING UNIT WITH 512 KBYTE WORKING MEMORY, 1. INTERFACE MPI/DP 12MBIT/S, 2. INTERFACE ETHERNET PROFINET, WITH 2 PORT SWITCH, MICRO MEMORY CARD NECESSARY



Figure similar

General information	
Hardware product version	01
Firmware version	V3.2
Engineering with	
Programming package	STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4
Supply voltage	
Rated value (DC)	
• 24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
external protection for power supply lines (recommendation)	2 A min.
Mains buffering	
Mains/voltage failure stored energy time	5 ms
• Repeat rate, min.	1 s
Input current	
Current consumption (rated value)	750 mA

Inrush current, typ. 4 A Ift 1 A²-s Power loss Power loss, typ. 4.65 W Memory Work memory • integrated 512 kbyte • expandable No • Size of retentive memory for retentive data blocks 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. 0.12 µs for floating point arithmetic, typ. 0.45 µs CPU-blocks	Current consumption (in no-load operation), typ.	150 mA
Power loss, typ. 4.65 W Memory Work memory integrated expandable Size of retentive memory for retentive data blocks Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present expresent exit output for five during the foregramming type. CPU processing times for bit operations, typ. for word operations, typ. for fived point arithmetic, typ. for floating point arithmetic, typ. 0.45 µs CPU-blocks		4 A
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Work memory • integrated		4.65 W
Work memory • integrated	Marram	
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 Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data CPU processing times for bit operations, typ. 0.05 μs for word operations, typ. for fixed point arithmetic, typ. 0.12 μs for floating point arithmetic, typ. 0.45 μs 		Yes
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programming), min. Backup • present • without battery CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. CPU-blocks		
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CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. CPU-blocks CPU-blocks	• present	Yes; Guaranteed by MMC (maintenance-free)
for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. 0.05 μs 0.09 μs 0.12 μs 0.45 μs	without battery	Yes; Program and data
for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. 0.45 μs CPU-blocks	CPU processing times	
for fixed point arithmetic, typ. for floating point arithmetic, typ. 0.12 μs 0.45 μs CPU-blocks		0.05 μs
for floating point arithmetic, typ. 0.45 μs CPU-blocks	for word operations, typ.	0.09 μs
CPU-blocks	for fixed point arithmetic, typ.	0.12 μs
	for floating point arithmetic, typ.	0.45 μs
Number of blocks (total) 1 024: (DBs. FCs. FBs): the maximum number of loadable blocks	CPU-blocks	
can be reduced by the MMC used.	Number of blocks (total)	1 024; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.
DB	DB	
• Number, max. 1 024; Number range: 1 to 16000	Number, max.	1 024; Number range: 1 to 16000
• Size, max. 64 kbyte	• Size, max.	64 kbyte
FB	FB	
• Number, max. 1 024; Number range: 0 to 7999	Number, max.	1 024; Number range: 0 to 7999
• Size, max. 64 kbyte	• Size, max.	64 kbyte
FC	FC	
• Number, max. 1 024; Number range: 0 to 7999	Number, max.	1 024; Number range: 0 to 7999
• Size, max. 64 kbyte	• Size, max.	64 kbyte
ОВ	ОВ	
• Size, max. 64 kbyte	• Size, max.	64 kbyte
• Number of free cycle OBs 1; OB 1	 Number of free cycle OBs 	1; OB 1
• Number of time alarm OBs 1; OB 10	 Number of time alarm OBs 	1; OB 10
• Number of delay alarm OBs 2; OB 20, 21	Number of delay alarm OBs	2; OB 20, 21

 Number of cyclic interrupt OBs 	4; OB 32, 33, 34, 35
 Number of process alarm OBs 	1; OB 40
 Number of DPV1 alarm OBs 	3; OB 55, 56, 57
 Number of isochronous mode OBs 	1; OB 61
 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	
per priority class	16
 additional within an error OB 	4

Counters, timers and their retentivity	
S7 counter	
Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255
— preset	Z 0 to Z 7
Counting range	
— can be set	Yes
— lower limit	0
— upper limit	999
IEC counter	
Number	Unlimited (limited only by RAM capacity)
S7 times	
Number	256
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	255
— preset	No retentivity
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes
• Туре	SFB
Number	Unlimited (limited only by RAM capacity)

Data areas and their retentivity	
retentive data area in total	All, 128 KB max.
Flag	

Number, max.	2 048 byte
Retentivity available	Yes; MB 0 to MB 2047
Retentivity preset	MB 0 to MB 15
Number of clock memories	8; 1 memory byte
Data blocks	o,
Number, max.	1 023; Number range: 1 to 16000
• Size, max.	64 kbyte
Retentivity adjustable	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	1.00
• per priority class, max.	32 768 byte; Max. 2048 bytes per block
per priority class, max.	32 7 00 Byte, Max. 2040 Bytes per blook
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 period 	Clock continues to run with the time at which the power failure occurred
Operating hours counter	
• Number	1
Number/Number range	0
Range of values	0 to 2^31 hours (when using SFC 101)
Granularity	1 hour
• 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 RS 485 interfaces	1
Number of RS 422 interfaces	0
1. Interface	
Interface type	Integrated RS 485 interface
Physics	RS 485
Isolated	Yes
Power supply to interface (15 to 30 V DC), max.	200 mA
Functionality	
• 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
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	Yes; I blocks only
— S7 communication	Yes
— S7 communication, as client	No
— S7 communication, as server	Yes
— Equidistance	Yes
— Isochronous mode	Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO
— SYNC/FREEZE	Yes
 Activation/deactivation of DP slaves 	Yes

	•
 Number of DP slaves that can be simultaneously activated/deactivated, max. 	8
 — Direct data exchange (slave-to-slave communication) 	Yes; As subscriber
— DPV1	Yes
Address area	
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
User data per DP slave	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
— Outputs, max. DP slave	244 byte
	12 Mbit/s
Transmission rate, max.	Yes; only with passive interface
automatic baud rate search	
Address area, max.	32
User data per address area, max.	32 byte
Services	
— PG/OP communication	Yes
— Routing	Yes; Only with active interface
 Global data communication 	No
 S7 basic communication 	No
— S7 communication	Yes
 S7 communication, as client 	No
 S7 communication, as server 	Yes; Connection configured on one side only
 — Direct data exchange (slave-to-slave communication) 	Yes
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
2. Interface	
Interface type	PROFINET
Physics	Ethernet RJ45
Isolated	Yes
automatic detection of transmission rate	Yes; 10/100 Mbit/s
Autonegotiation	Yes
Autocrossing	Yes
Change of IP address at runtime, supported	Yes
Interface types	
Number of ports	2
• integrated switch	Yes
Media redundancy	

• supported	Yes
 Switchover time on line break, typ. 	200 ms; PROFINET MRP
 Number of stations in the ring, max. 	50
Functionality	
• 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
— Number of HTTP clients	5
PROFINET IO Controller	
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
— Open IE communication	Yes; Via TCP/IP, ISO on TCP, and UDP
— 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
/I //, -	

 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	details)
— Inputs, max.	2 kbyte
— Outputs, max.	2 kbyte
— User data consistency, max.	1 024 byte
PROFINET IO Device	1 024 byte
Services	
— PG/OP communication	Yes
	Yes
— Routing	
— S7 communication	Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32
— Isochronous mode	No
— Open IE communication	Yes; Via TCP/IP, ISO on TCP, and UDP
— IRT	Yes
— PROFlenergy	Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device
— Shared device	Yes
 Number of IO Controllers with shared device, max. 	2
Transfer memory	
— Inputs, max.	1 440 byte; Per IO Controller with shared device
— Outputs, max.	1 440 byte; Per IO Controller with shared device
Submodules	
— Number, max.	64
— User data per submodule, max.	1 024 byte
PROFINET CBA	
acyclic transmission	Yes
cyclic transmission	Yes
Open IE communication	
Number of connections, max.	8
 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	
Open IE communication	
• TCP/IP	
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	
Number of connections, max.	8
— Data length, max.	1 472 byte

PG/OP communication Pess Data record routing Yes Global data communication * supported Number of GD loops, max. Number of GD packets, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, receiver, max. Size of GD packets, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Size of GD packets, receiver, max. Size of GD packets, max. Size of GD packets, max. Size of GD packets, receiver, max. Size of GD packets, receiver, max. Size of GD packets, max. Size of GD packets, receiver, max. Size of GD packets, max.	Isochronous mode		
PG/OP communication PG/OP communication PG/OP communication Psignature record routing Psignature	Isochronous operation (application synchronized up	Yes; Via PROFIBUS DP or PROFINET interface	
PG/OP communication Pess Data record routing Yes Global data communication * supported Number of GD loops, max. Number of GD packets, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, receiver, max. Size of GD packets, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Size of GD packets, receiver, max. Size of GD packets, max. Size of GD packets, max. Size of GD packets, receiver, max. Size of GD packets, receiver, max. Size of GD packets, max. Size of GD packets, receiver, max. Size of GD packets, max.	to terminal)		
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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. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Yes size of GD packet (of which consistent), max. Yes User data per job, max. User data per job (of which consistent), max. Yes To byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) To communication Supported Supported Yes as client Yes See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication) St compatible communication St compatible communication Supported Yes; via CP and loadable FC Open IE communication TCP/IP Yes; via integrated PROFINET interface and loadable FBs	Global data communication		
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Size of GD packet (of which consistent), max. 22 byte 75 basic communication supported User data per job, max. User data per job (of which consistent), max. 76 byte 6 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) 75 communication supported Syes 1 as server 1 yes 2 as client 1 Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB 1 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) Stompatible communication 1 supported 2 Yes; via CP and loadable FC Open IE communication TCP/IP Yes; via integrated PROFINET interface and loadable FBs	 Number of GD packets, receiver, max. 	8	
S7 basic communication • supported • User data per job, max. • 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 • as server • as client • 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 integrated PROFINET interface and loadable FB or via CP and loadable FB Tyes; via CP and loadable FC Open IE communication • supported Yes; via integrated PROFINET interface and loadable FB	Size of GD packets, max.	22 byte	
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X_PUT or X_GET as server) S7 communication • supported • as server • as client • 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 integrated PROFINET interface and loadable FB Yes; via CP and loadable FC Open IE communication • TCP/IP Yes; via integrated PROFINET interface and loadable FBs	 User data per job, max. 	76 byte	
 supported as server 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 Open IE communication TCP/IP Yes; via integrated PROFINET interface and loadable FBs 	• User data per job (of which consistent), max.		
 as server 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 Open IE communication TCP/IP Yes; via integrated PROFINET interface and loadable FBs 	S7 communication		
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 ves; via CP and loadable FC Open IE communication TCP/IP Yes; via integrated PROFINET interface and loadable FBs	• supported	Yes	
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 Open IE communication • TCP/IP Yes; via integrated PROFINET interface and loadable FBs	• as server	Yes	
and of the SFCs/FCs of S7 Communication) S5 compatible communication • supported Yes; via CP and loadable FC Open IE communication • TCP/IP Yes; via integrated PROFINET interface and loadable FBs	• as client		
 supported Yes; via CP and loadable FC Open IE communication TCP/IP Yes; via integrated PROFINET interface and loadable FBs 	User data per job, max.		
Open IE communication • TCP/IP Yes; via integrated PROFINET interface and loadable FBs	S5 compatible communication		
TCP/IP Yes; via integrated PROFINET interface and loadable FBs	• supported	Yes; via CP and loadable FC	
	Open IE communication		
Vac: via integrated DDOEINET interface and leadable EDa	• TCP/IP	Yes; via integrated PROFINET interface and loadable FBs	
● ODP	• UDP	Yes; via integrated PROFINET interface and loadable FBs	
Web server			

• supported	Yes; only read function
Number of HTTP clients	5
User-defined websites	Yes
PROFINET CBA (at set setpoint communication load)	
Setpoint for the CPU communication load	50 %
 Number of remote interconnection partners 	32
 Number of functions, master/slave 	30
 Total of all master/slave connections 	1 000
 Data length of all incoming connections master/slave, max. 	4 000 byte
 Data length of all outgoing connections master/slave, max. 	4 000 byte
 Number of device-internal and PROFIBUS interconnections 	500
 Data length of device-internal und PROFIBUS interconnections, max. 	4 000 byte
 Data length per connection, max. 	1 400 byte
Remote interconnections with acyclic transmission	
 — Sampling frequency: Sampling time, min. 	500 ms
 Number of incoming interconnections 	100
 Number of outgoing interconnections 	100
 Data length of all incoming interconnections, max. 	2 000 byte
 Data length of all outgoing interconnections, max. 	2 000 byte
 Data length per connection, max. 	1 400 byte
Remote interconnections with cyclic transmission	
 Transmission frequency: Transmission interval, min. 	10 ms
 Number of incoming interconnections 	200
 Number of outgoing interconnections 	200
 Data length of all incoming interconnections, max. 	2 000 byte
 Data length of all outgoing interconnections, max. 	2 000 byte
 Data length per connection, max. 	450 byte
HMI variables via PROFINET (acyclic)	
 Number of stations that can log on for HMI variables (PN OPC/iMap) 	3; 2x PN OPC/1x iMap
— HMI variable updating	500 ms
 Number of HMI variables 	200
 Data length of all HMI variables, max. 	2 000 byte
PROFIBUS proxy functionality	

 — supported — Number of linked PROFIBUS devices — Data length per connection, max. Number of connections ● overall ● usable for PG communication — reserved for PG communication, min. — adjustable for PG communication, min. — adjustable for PG communication, max. ● usable for OP communication — adjustable for OP communication — reserved for OP communication — adjustable for OP communication — adjustable for OP communication, min. — adjustable for OP communication, max. 15 — adjustable for OP communication, min. — adjustable for OP communication, max. 15 		
 — Data length per connection, max. Number of connections ● overall ● usable for PG communication — reserved for PG communication — adjustable for PG communication, min. — adjustable for PG communication, max. ● usable for OP communication — reserved for OP communication — adjustable for OP communication, min. 		
Number of connections • overall • usable for PG communication — reserved for PG communication — adjustable for PG communication, min. — adjustable for PG communication, max. 15 • usable for OP communication — reserved for OP communication — adjustable for OP communication 10 — adjustable for OP communication 11 — adjustable for OP communication 12 13 14 15 15 16 17 18 18 18 18 18 18 18 18 18		
 overall usable for PG communication reserved for PG communication adjustable for PG communication, min. adjustable for PG communication, max. usable for OP communication reserved for OP communication adjustable for OP communication adjustable for OP communication, min. 		
 usable for PG communication reserved for PG communication adjustable for PG communication, min. adjustable for PG communication, max. usable for OP communication reserved for OP communication adjustable for OP communication adjustable for OP communication, min. 		
 reserved for PG communication adjustable for PG communication, min. adjustable for PG communication, max. usable for OP communication reserved for OP communication adjustable for OP communication adjustable for OP communication, min. 		
 — adjustable for PG communication, min. — adjustable for PG communication, max. • usable for OP communication — reserved for OP communication — adjustable for OP communication, min. 15 — reserved for OP communication — adjustable for OP communication, min. 1 		
 — adjustable for PG communication, max. • usable for OP communication — reserved for OP communication — adjustable for OP communication, min. 		
 usable for OP communication reserved for OP communication adjustable for OP communication, min. 		
 reserved for OP communication adjustable for OP communication, min. 		
— adjustable for OP communication, min.		
adjustable for C. Communication, min.		
— adjustable for Communication, max.		
• usable for S7 basic communication 14		
— reserved for S7 basic communication 0		
— adjustable for S7 basic communication, 0		
min.		
— adjustable for S7 basic communication,max.		
• usable for S7 communication 14		
— reserved for S7 communication 0		
— adjustable for S7 communication, min.		
— adjustable for S7 communication, max.		
• total number of instances, max. 32		
• usable for routing X1 as MPI: max. 10; X1 as DP master: max. 24; X1 as DP slav (active): max. 14; X2 as PROFINET: 24 max.		
S7 message functions		
Number of login stations for message functions, max. 16; Depending on the configured connections for PG/OP and S basic communication		
Process diagnostic messages Yes		
simultaneously active Alarm-S blocks, max. 300		
Test commissioning functions		
Status block Yes; Up to 2 simultaneously		
Single step Yes		
Number of breakpoints 4		
Status/control		
Status/control variable Yes		
Status/control variable Yes		
 Status/control variable Variables Yes Inputs, outputs, memory bits, DB, times, counters 		
 Status/control variable Variables Number of variables, max. Yes Inputs, outputs, memory bits, DB, times, counters 30 		

• Forcing	Yes	
Forcing, variables	Inputs, outputs	
Number of variables, max.	10	
Diagnostic buffer		
• present	Yes	
Number of entries, max.	500	
— adjustable	No	
of which powerfail-proof	100	
Number of entries readable in RUN, max.	499	
— can be set	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	Too, vo.o or riighter	
Command set	see instruction list	
Nesting levels	8	
System functions (SFC)	see instruction list	
System function blocks (SFB)	see instruction list	
Programming language		
— LAD	Yes	
— FBD	Yes	
— STL	Yes	
— SCL	Yes	
— CFC	Yes	
— GRAPH	Yes	
— HiGraph®	Yes	
Know-how protection		
User program protection/password protection	Yes	
Block encryption	Yes; With S7 block Privacy	
Dimensions		
Width	40 mm	
Height	125 mm	
Depth	130 mm	

Weights	
Weight, approx.	340 g
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