Data sheet 6ES7315-2AG10-0AB0



Spare part SIMATIC S7-300, CPU 315-2DP Central processing unit with MPI Integr. power supply 24 V DC Work memory 128 KB 2nd interface DP master/slave Micro Memory Card required

Rated value (DC)	General information	
Engineering with Programming package Supply Voltage Rated value (DC) permissible range, lower limit (DC) external protection for power supply lines (recommendation) Input current Current consumption (rated value) Current consumption (in no-load operation), typ. Incursh current, typ. Power loss Pourent Load memory Power loss Po	HW functional status	
◆ Programming package STEP 7 V5.2 + SP1 or higher with HW update Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 28.8 V external protection for power supply lines (recommendation) 2 A min. (recommendation) 2 A min. Durrent consumption (rated value) 0.8 A Current consumption (in no-load operation), typ. 60 mA Inrush current, typ. 2.5 A Power loss Power loss, typ. Vowr loss, typ. 2.5 W Momory 2.5 W Work memory 128 kbyte; For program and data • expandable No Load memory Plug-in (MMC), max. • Plug-in (MMC), max. 8 Mbyte • Data management on MMC (after last programming), min. 8 Mbyte Backup • present Yes; Guaranteed by MMC (maintenance-free) • without battery Yes; Program and data CPU processing times 0.1 μs for bit operations, typ. 0.2 μs for fixed point arithmetic, typ. 2 μs for fixed point arithmetic, typ. 3 μs CPU-blocks	Firmware version	V2.6
Rated value (DC) 24 V permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V external protection for power supply lines (recommendation) prut current Current consumption (rated value) 0.8 A Current consumption (in no-load operation), typ. 60 mA Inrush current, typ. 2.5 A Pt 0.5 A²-s Power loss, typ. 2.5 W Memory Work memory Work memory • integrated 128 kbyte; For program and data • expandable No Load memory • Plug-in (MMC), max. 8 Mbyte • Data management on MMC (after last programming), min. Backup • present Yes; Guaranteed by MMC (maintenance-free) • without battery PU processing times for bit operations, typ. 0.2 µs for bit operations, typ. 0.2 µs for floating point arithmetic, typ. 2 µs for floating point arithmetic, typ. 3 µs Number of blocks (total) 10 V4 Number of blocks (total) 10 V4 Number of blocks (total) 10 V4 PU processing time available to the programming on the maximum number of load 10 V4 10 V4 10 V4 10 V5 10 V5 10 V4 10 V5 10 V6 10 V6 10 V6 10 V7	Engineering with	
Rated value (DC)	Programming package	STEP 7 V5.2 + SP1 or higher with HW update
permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V external protection for power supply lines (recommendation) nput current Current consumption (rated value) 0.8 A 60 mA Inrush current, typ. 2.5 A 1t 0.5 A²-s Power loss Power loss, typ. Work memory integrated expandable expandable No Load memory Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery Presgram and data exprogramming), min. Backup present without battery Program and data Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data Yes; Program and data Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data Yes; Guaranteed by min (maintenance-free) Yes; Program and data Yes; Guaranteed by min (maintenance-free) Yes; Program and data Yes; Guaranteed by min (maintenance-free) Yes; Program and data Yes; Guaranteed by min (maintenance-free) Yes; Program and data Programming, min. Backup Processing times for bit operations, typ. 0.1 µs 0.2 µs for fixed point arithmetic, typ. 2 µs for fixed point arithmetic, typ. 3 µs PUL-blocks Number of blocks (total) 1024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	Supply voltage	
permissible range, upper limit (DC) external protection for power supply lines (recommendation) put current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Power loss Power loss, typ. integrated expandable Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present ewithout battery Person (step on the mitherite, typ. Person (step on tarithmetic, typ. O.1 µs for floating point arithmetic, typ. Inrush (plus, FCs, FBs OBs, SDBs); the maximum number of load Power loss, typ. 28.8 V 28.8 V 28.8 V 29.8 A 80. mA 10.5 A²-s 2.5 W 2.5 W 2.5 W 2.5 W 2.5 W 2.6 W 2.7 W 2.8 R 2.9 R 3.8 R 2.9 R 3.9 R 5.9 R	Rated value (DC)	24 V
external protection for power supply lines (recommendation) nput current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Power loss Power loss, typ. Work memory integrated expandable Load memory Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup epresent ewithout battery Present ewithout battery Present ewithout battery Present ewithout battery Present ewithout battery Pup-for kord operations, typ. for floating point arithmetic, typ. for floating point arithmetic, typ. Pub-blocks Number of blocks (total) A min. A min	permissible range, lower limit (DC)	20.4 V
(recommendation) nput current Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Power loss Power loss, typ. 2.5 W Memory Work memory • integrated • expandable Load memory • Plug-in (MMC) • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • without battery • present • without battery Tyes, "Guaranteed by MMC (maintenance-free) Yes; Program and data Power loss, typ. 0.1 µs for floating point arithmetic, typ. 10 ys Pug-blocks Number of blocks (total) 10 24; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	permissible range, upper limit (DC)	28.8 V
Current consumption (rated value) Current consumption (in no-load operation), typ. Inrush current, typ. Power loss Power loss, typ. 2.5 W Memory Work memory • integrated • expandable Load memory • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • without battery Present • without battery CPU processing times for bit operations, typ. 0.1 µs for word operations, typ. for fixed point arithmetic, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. CPU-blocks Number of blocks (total) 10 y 80 MA 90 MA		2 A min.
Current consumption (in no-load operation), typ. Inrush current, typ. 2.5 A 12t 0.5 A ² ·s Power loss Power loss, typ. 2.5 W Memory Work memory • integrated • expandable Load memory • Plug-in (MMC), max. • Data management on MMC (after last programming), min. Backup • present • without battery Processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. PUB-blocks Number of blocks (total) 60 mA 2.5 A 2.5 A 9.5 A	nput current	
Inrush current, typ. If t	Current consumption (rated value)	0.8 A
Power loss Power loss, typ. Memory Work memory integrated expandable Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup epresent ewithout battery Processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. for floating point arithmetic, typ. Power loss Sevent substitute of Sevent Seve	Current consumption (in no-load operation), typ.	60 mA
Power loss, typ. Power loss, typ. 2.5 W Memory Work memory integrated expandable Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery Present without battery Processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. Power loss, typ. The program and data 2.5 W 2.5 W 2.5 W 2.6 W 2.7 W 3.7 W 4.7 W 4.7 W 4.7 W 5.7 W 5.7 W 6.7	Inrush current, typ.	2.5 A
Power loss, typ. Memory Work memory integrated expandable Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery Processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. Plug-in (MMC) Yes 8 Mbyte 10 y 9 Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data Programming 10.1 µs 10.2 µs 10.2 µs 10.2 µs 10.3 µs Publocks Number of blocks (total) 1024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	l²t	0.5 A ² ·s
Work memory integrated expandable Load memory Plug-in (MMC) Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present present processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. The second of t	Power loss	
Work memory	Power loss, typ.	2.5 W
 integrated expandable No Load memory Plug-in (MMC) Plug-in (MMC), max. 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. for word operations, typ. for fixed point arithmetic, typ. gus gus CPU-blocks Number of blocks (total) 1024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load 	Memory	
 expandable No Load memory Plug-in (MMC) Plug-in (MMC), max. Plug-in (MMC), max. Data management on MMC (after last programming), min. Backup present without battery without battery Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data CPU processing times for bit operations, typ. 0.1 µs for word operations, typ. 0.2 µs for fixed point arithmetic, typ. guaranteed by MMC (maintenance-free) Yes; Program and data 	Work memory	
Load memory ● Plug-in (MMC) ● Plug-in (MMC), max. ● Data management on MMC (after last programming), min. Backup ● present ● without battery Plug-in (MMC), max. ● Data management on MMC (after last programming), min. Present ● without battery Pres; Guaranteed by MMC (maintenance-free) Yes; Program and data Programming O.1 μs for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. D.2 μs for floating point arithmetic, typ. The program is a substitute of the program is a substitute of the programming of the progr	integrated	128 kbyte; For program and data
 Plug-in (MMC) 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. 0.1 µs 0.2 µs for fixed point arithmetic, typ. guaranteed by MMC (maintenance-free) Yes; Program and data CPU processing times 10.2 µs 3 µs CPU-blocks Number of blocks (total) Yes 9 Ups 9 Ups 1024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load 	• expandable	No
 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. 0.1 μs for word operations, typ. for fixed point arithmetic, typ. 2 μs for floating point arithmetic, typ. 3 μs CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load 	Load memory	
 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. 0.1 μs for word operations, typ. 0.2 μs for fixed point arithmetic, typ. 2 μs for floating point arithmetic, typ. 3 μs CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load 	Plug-in (MMC)	Yes
programming), min. Backup • present • without battery Program and data Processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. DPU-blocks Number of blocks (total) Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data O.1 μs O.2 μs 2 μs 3 μs DPU-blocks Number of blocks (total)	Plug-in (MMC), max.	8 Mbyte
 present without battery Yes; Guaranteed by MMC (maintenance-free) Yes; Program and data CPU processing times for bit operations, typ. 0.1 μs for word operations, typ. for fixed point arithmetic, typ. 2 μs for floating point arithmetic, typ. 3 μs CPU-blocks Number of blocks (total) Yes; Guaranteed by MMC (maintenance-free) Yes; Guaranteed by MMC (maintenance-free) yes; Program and data 	,	10 y
◆ without battery Yes; Program and data CPU processing times for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. 2 μs for floating point arithmetic, typ. 3 μs CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	Backup	
for bit operations, typ. for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. 2 μs for floating point arithmetic, typ. 2 μs The probability of the point arithmetic, typ. 2 μs 3 μs CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of loads	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. 2 μs 3 μs CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	without battery	Yes; Program and data
for word operations, typ. for fixed point arithmetic, typ. for floating point arithmetic, typ. 2 μs 3 μs CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	CPU processing times	
for fixed point arithmetic, typ. for floating point arithmetic, typ. 2 μs 3 μs CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	for bit operations, typ.	0.1 μs
for floating point arithmetic, typ. 3 μs CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	for word operations, typ.	0.2 μs
CPU-blocks Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	for fixed point arithmetic, typ.	2 µs
Number of blocks (total) 1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of load	for floating point arithmetic, typ.	3 µs
	CPU-blocks	
blocks can be reduced by the MINIC being used.	Number of blocks (total)	1 024; (DBs, FCs, FBs OBs, SDBs); the maximum number of loadable blocks can be reduced by the MMC being used.

Number, max.	1 023; Number band: 1 to 1023
	1 023, Number band. 1 to 1023
• Size, max.	10 kbyte
• Number, max.	1 024; Number range: 0 to 2047
	16 kbyte
• Size, max.	16 kbyte
Number, max.	1.024: Number range: 0 to 2047
	1 024; Number range: 0 to 2047
• Size, max.	16 kbyte
	16 khyta
Size, max. Number of free guele ORs.	16 kbyte
Number of free cycle OBs Number of time clarm OBs	1; OB 1
Number of time alarm OBs	1; OB 10
Number of delay alarm OBs	1; OB 20
Number of cyclic interrupt OBs	1; OB 35
Number of process alarm OBs	1; OB 40
Number of DPV1 alarm OBs	3; OB 55, 56, 57
Number of startup OBs	1; OB 100
Number of asynchronous error OBs	1; OB 80
Number of synchronous error OBs	2; OB 121, 122
Nesting depth	
• per priority class	8
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	8
Counting range	
— adjustable	Yes
— lower limit	0
— upper limit	999
IEC counter	
present	Yes
• Type	SFB
 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
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	128 kbyte
Flag	<u> </u>
• Size, max.	2 048 byte
Retentivity available	Yes; MB 0 to MB 2 047
Retentivity available Retentivity preset	MB 0 to MB 15
Number of clock memories	8; 1 memory byte
Data blocks	c, monory byto
Data blooks	

Retentivity adjustable	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	
 per priority class, max. 	1 024 byte; per block max. 510
Address area	
I/O address area	
Inputs	2 kbyte
Outputs	2 kbyte
of which distributed	
— Inputs	2 kbyte
— Outputs	2 kbyte
Process image	
• Inputs	128 byte
Outputs	128 byte
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
	230
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
Operating hours counter	
Number	1
Number/Number range	0
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
	Yes Yes
• to MPI, master	Yes
to MPI, masterto MPI, slave	Yes Yes
to MPI, masterto MPI, slaveto DP, master	Yes Yes; With DP slave only slave clock
to MPI, masterto MPI, slaveto DP, masterto DP, slave	Yes Yes; With DP slave only slave clock Yes
 to MPI, master to MPI, slave to DP, master to DP, slave in AS, master 	Yes Yes Yes; With DP slave only slave clock Yes Yes
 to MPI, master to MPI, slave to DP, master to DP, slave in AS, master in AS, slave 	Yes Yes Yes; With DP slave only slave clock Yes Yes No
 to MPI, master to MPI, slave to DP, master to DP, slave in AS, master in AS, slave on Ethernet via NTP 	Yes Yes Yes; With DP slave only slave clock Yes Yes
 to MPI, master to MPI, slave to DP, master to DP, slave in AS, master in AS, slave 	Yes Yes Yes; With DP slave only slave clock Yes Yes No

Digital outputs	
integrated channels (DO)	0
Analog inputs	
integrated channels (AI)	0
Analog outputs	
integrated channels (AO)	0
Interfaces	
Number of industrial Ethernet interfaces	0
Number of PROFINET interfaces	0
Number of RS 485 interfaces	1
Number of RS 422 interfaces	0
1. Interface	
Interface type	Integrated RS 485 interface
Isolated	No
Interface types	
• RS 485	Yes
Output current of the interface, max.	200 mA
Protocols	
• MPI	Yes
 PROFIBUS DP master 	No
 PROFIBUS DP slave 	No
Point-to-point connection	No
MPI	
 Number of connections 	16
 Transmission rate, max. 	187.5 kbit/s
Services	
 PG/OP communication 	Yes
— Routing	Yes
 Global data communication 	Yes
 — S7 basic communication 	Yes
— S7 communication	Yes
 — S7 communication, as client 	No
 — S7 communication, as server 	Yes
2. Interface	
Interface type	Integrated RS 485 interface
Isolated	Yes
Interface types	
• RS 485	Yes
Output current of the interface, max.	200 mA
Protocols	
• MPI	No
 PROFIBUS DP master 	Yes
 PROFIBUS DP slave 	Yes
Point-to-point connection	No
PROFIBUS DP master	
Number of connections, max.	16
 Transmission rate, max. 	12 Mbit/s
 Number of DP slaves, max. 	124; Per station
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
— SYNC/FREEZE	Yes
	

— DPV1	Yes
Address area	
— Inputs, max.	2 048 byte
— Outputs, max.	2 048 byte
User data per DP slave	.,
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	
Number of connections	16
GSD file	The latest GSD file is available at: http://www.siemens.com/profibus-gsd
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; with interface active
Global data communication	No
S7 basic communication	No
— S7 communication	Yes
S7 communication, as client	No
— S7 communication, as server	Yes
Direct data exchange (slave-to-slave)	Yes
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
Protocols	
PROFIsafe	No
communication functions / header	
	Yes
communication functions / header	Yes
communication functions / header PG/OP communication	Yes
communication functions / header PG/OP communication Global data communication	
communication functions / header PG/OP communication Global data communication • supported	Yes
communication functions / header PG/OP communication Global data communication • supported • Number of GD loops, max.	Yes 8
communication functions / header PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, max.	Yes 8 8
communication functions / header PG/OP communication Global data communication • supported • Number of GD loops, max. • Number of GD packets, max. • Number of GD packets, transmitter, max.	Yes 8 8 8
communication functions / header PG/OP communication 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.	Yes 8 8 8 8 8
communication functions / header PG/OP communication 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, max.	Yes 8 8 8 8 8 22 byte
communication functions / header PG/OP communication 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, max. • Size of GD packet (of which consistent), max.	Yes 8 8 8 8 8 22 byte
communication functions / header PG/OP communication 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, max. • Size of GD packet (of which consistent), max. S7 basic communication • supported • User data per job, max.	Yes 8 8 8 8 8 22 byte 22 byte
communication functions / header PG/OP communication 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, max. • Size of GD packet (of which consistent), max. S7 basic communication • supported	Yes 8 8 8 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
communication functions / header PG/OP communication 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, 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.	Yes 8 8 8 8 8 8 8 22 byte 22 byte Yes 76 byte
communication functions / header PG/OP communication 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, 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.	Yes 8 8 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)
communication functions / header PG/OP communication 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, 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	Yes 8 8 8 8 22 byte 22 byte Yes 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
communication functions / header PG/OP communication 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, 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	Yes 8 8 8 8 22 byte 22 byte Yes 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes
communication functions / header PG/OP communication 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, 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 • as server • as client	Yes 8 8 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) Yes Yes Yes; Via CP and loadable FB
communication functions / header PG/OP communication 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, 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 • as server • as client • User data per job, max.	Yes 8 8 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) Yes Yes Yes Yes Yes; Via CP and loadable FB 180 byte; With PUT/GET
communication functions / header PG/OP communication 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. • 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 • as server • as client • User data per job, max. • User data per job (of which consistent), max.	Yes 8 8 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) Yes Yes Yes; Via CP and loadable FB
communication functions / header PG/OP communication 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, 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 • as server • as client • User data per job, max. • User data per job (of which consistent), max. S5 compatible communication	Yes 8 8 8 8 22 byte 22 byte Yes 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes Yes Yes; Via CP and loadable FB 180 byte; With PUT/GET 64 byte; as server
communication functions / header PG/OP communication 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, 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 • as server • as client • User data per job, max. • User data per job (of which consistent), max. S5 compatible communication • supported	Yes 8 8 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) Yes Yes Yes Yes Yes; Via CP and loadable FB 180 byte; With PUT/GET
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PG/OP communication 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, max. Size of GD packets, max. Size of GD packet (of which consistent), max. Stasic communication supported User data per job, max. User data per job (of which consistent), max. S7 communication supported as server as client User data per job (of which consistent), max. S5 compatible communication supported Number of connections overall usable for PG communication — reserved for PG communication, min.	Yes 8 8 8 8 22 byte 22 byte Yes 76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) Yes Yes Yes Yes; Via CP and loadable FB 180 byte; With PUT/GET 64 byte; as server Yes; via CP and loadable FC
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	4
— reserved for OP communication	1
 adjustable for OP communication, min. 	1
 adjustable for OP communication, max. 	15
 usable for S7 basic communication 	12
 reserved for S7 basic communication 	0
 adjustable for S7 basic communication, min. 	0
 adjustable for S7 basic communication, max. 	12
usable for routing	4
S7 message functions	
Number of login stations for message functions, max.	16; Depending on the configured connections for PG/OP and S7 basic communication
Process diagnostic messages	Yes
simultaneously active Alarm-S blocks, max.	40
Test commissioning functions	
Status block	Yes
Single step	Yes
Number of breakpoints	2
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	17
• Forcing	Yes
Forcing, variables	Inputs, outputs
Number of variables, max.	10
Diagnostic buffer	10
-	Yes
present	
Number of entries, max.	100
— adjustable	No
configuration / header	
Configuration software	
• STEP 7	Yes; V5.2 SP1 or higher with HW update
configuration / programming / header	
 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
Dimensions	
Width	40 mm
Height	125 mm
Depth	130 mm
Weights	
Weight, approx.	290 g
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