SIEMENS

Data sheet

6ES7317-2AK14-0AB0



SIMATIC S7-300, CPU 317-2 DP, Central processing unit with 1 MB work memory, 1st interface MPI/DP 12 Mbit/s, 2nd interface DP master/slave Micro Memory Card required

General information	
Firmware version	V3.3
Engineering with	
 Programming package 	STEP 7 as of V5.5 + SP1 or STEP 7 V5.2 + SP1 or higher with HSP 202
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	
 Mains/voltage failure stored energy time 	5 ms
Repeat rate, min.	1 s
Input current	
Current consumption (rated value)	870 mA
Current consumption (in no-load operation), typ.	120 mA
Inrush current, typ.	4 A
l²t	1 A ^{2.} s
Power loss	
Power loss, typ.	4.5 W
Memory	
Work memory	
 integrated 	1 024 kbyte
expandable	No
Load memory	
• Plug-in (MMC)	Yes
 Plug-in (MMC), max. 	8 Mbyte
 Data management on MMC (after last programming), min. 	10 y
Backup	
• present	Yes; Guaranteed by MMC (maintenance-free)
without battery	Yes; Program and data
CPU processing times	
for bit operations, typ.	0.025 µs
for word operations, typ.	0.03 µs
for fixed point arithmetic, typ.	0.04 µs
for floating point arithmetic, typ.	0.16 µs

CPU-blocks	
Number of blocks (total)	2 048; (DBs, FCs, FBs); the maximum number of loadable blocks can
	be reduced by the MMC used.
DB	
Number, max.	2 048; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
• Number, max.	2 048; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
• Number, max.	2 048; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
• Number, max.	see instruction list
• Size, max.	64 kbyte
 Number of free cycle OBs 	1; OB 1
 Number of time alarm OBs 	1; OB 10
 Number of delay alarm OBs 	2; OB 20, 21
Number of cyclic interrupt OBs	4; OB 32, 33, 34, 35
Number of process alarm OBs	1; OB 40
Number of DPV1 alarm OBs	3; OB 55, 56, 57
 Number of isochronous mode OBs 	1; OB 61
 Number of startup OBs 	1; OB 100
 Number of asynchronous error OBs 	5; OB 80, 82, 85, 86, 87
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	512
Retentivity	012
— adjustable	Yes
— lower limit	0
— upper limit	511
	Z 0 to Z 7
— preset Counting range	201027
— lower limit	0
— upper limit	999
IEC counter	333
	Yes
• present	SFB
TypeNumber	Unlimited (limited only by RAM capacity)
S7 times • Number	512
	512
Retentivity	Vac
— adjustable	Yes
— lower limit	0
— upper limit	511
— preset	No retentivity
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes
• Туре	SFB
Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	

Flag - 00% • Size, max. 4.06% byle • Retentivity available Yee; From MB 0 to MB 4 005 • Retentivity preset MB 0 to MB 15 • Retentivity available Yee; Via non-retain property on DB • Retentivity preset Yee • Retentivity preset Yee • Retentivity preset Yee • Retentivity available Yee; Via non-retain property on DB • Retentivity area Yee • Coll data 100 dathes presented • Outputs 8 192 byle • Which distributed 8 192 byle • Outputs 9 192 byle • Outputs <	Retentive data area (incl. timers, counters, flags), max.	_ 256 kbyte
• Regen max, 4.096 byte • Retentivity preset MB 0 to MB 4 005 • Retentivity preset MB 0 to MB 15 • Retentivity adjustable Yes; Via non-retain property on DB • Retentivity adjustable Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Retentivity preset Yes; Via non-retain property on DB • Inputs 8 192 byte • Inputs 8 192 byte • Outputs, adjustable 8 192 byte • Outputs 6 536 of which c		
• Resentivity available Yes, From MB 0 to MB 4 095 • Resentivity reset MB 0 to MB 15 • Data backs **** • Retentivity djutstable Yes, Via non-retain property on DB • Retentivity djutstable Yes • Retentivity available Yes • Retentivity djutstable \$2 788 byte, Max. 2048 bytes per block Address area • • Inputs \$1 192 byte • Outputs \$6 5 35 - of which central 1 24 • Outputs \$6 5 36		4 096 hvte
• Retentivity preset MIB 0 to MB 15 • Number of dock memories 8, 1 memory byle Data blocks Yes; via non-retain property on DB • Retentivity adjustable Yes • Per prindry class, max. 208 byles, Max. 2048 byles per block Address area • • Or puts 8 192 byte • Outputs 8 192 byte • Outputs, adjustable 8 192 byte • Outputs 6 536 - of which central 1024 • Outputs 4096 - of which central 26 • Outputs 4096 - of which centra		
• Number of clock memories 8; 1 memory byte Data blocks • Retentivity adjustable Yes: Via non-retain property on DB • Retentivity preset Yes • Coal data 27.08 byte; Max. 2048 bytes per block Address area 8 192 byte • Outputs 6 536 • Outputs 6 536 • of which central 1024 • Inputs 6 536 • of which central 286 • Outputs 6 536 • of which central 286 <tr< td=""><td></td><td></td></tr<>		
Data blocks Ves • Retentivity preset Yes • Inclusion Yes • Per priority class, max. 32 788 byte, Max, 2048 bytes per block Address area 1 • Inputs 8 192 byte • Uod drives area 1 • Inputs 8 192 byte • Uod drives area 1 • Inputs 8 192 byte • Uod drives area 1 • Inputs 8 192 byte • Outputs 8 192 byte • Uotputs 1024 • Uotputs 10		
Retentivity adjustable Retentivity preset Retentive preset Retentivity preset Retentive preset		o, i memory byte
• Retentivity preset Yes Local data • per profity class, max. 32 768 byte; Max. 2048 bytes per block Address area • 100 address area • O address area • 192 byte • Outputs 8 192 byte • Process image • 192 byte • Inputs, adjustable 8 192 byte • Outputs, adjustable 1024 • Outputs, adjustable 1024 • Outputs, adjustable 1024 • Outputs, adjustable 1024 • Outputs 65 536 - of which central 1024 • Outputs 4096 - of which central 1024<		Voc: via non ratain property on DP
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Outputs of which distributed Inputs Input		
of which distributed 8 192 byte - Inputs 8 192 byte Process image 8 192 byte • Inputs 8 192 byte • Outputs 8 192 byte • Outputs, adjustable 8 192 byte • Number of subprocess images, max. 1 Digital channels 65 536 - of which central 1024 • Outputs 65 536 - of which central 1024 • Inputs 4 096 - of which central 256 • Outputs 4 096 - of which central 256 • Inputs 4 096 - of which central 256 • Number of Demasters • • integrated 2 • via CP 4 Number of Demasters • • integrated 2 • CP, IAN 8 •		
Inputs 8 192 byte Outputs 8 192 byte Process image • Inputs 8 192 byte • Outputs, adjustable 8 192 byte • Outputs 1024 • Outputs 65 536 of which central 1024 Analog channets 1 • Inputs 4 096 - of which central 256 • Outputs 4 096 - of which central 256 • Outputs 4 096 - of which central 256 • Number of opension units, max. 3 Number of opension units, max. 3 • Integrated 2 • via CP		8 192 byte
— Outputs 8 192 byte Process image 8 • Inputs 8 192 byte • Outputs 8 192 byte • Inputs, adjustable 8 192 byte • Outputs, adjustable 8 192 byte • Inputs, default 256 byte • Outputs, adjustable 8 192 byte • Outputs, default 256 byte • Supprocess images, max. 1 • Digital channels 65 536 — of which central 1024 • Outputs 65 536 — of which central 1024 • Outputs 4096 — of which central 256 • Inputs 4 096 — of which central 256 • Outputs 4 096 — of which central 256 • Outputs 3 Number of DP masters 1 • Inputs 4 096 — of which central 256 • Variation 1 Number of DP masters 1 • Initegrated 2 • via CP 4 • Vais CP 4 • Vais CP 8 • CP, PiP 8 • CP, PiP 8 • CP, PiP 8 • CP, PiP		
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 Inputs, default 256 byte Outputs, default 256 byte Subprocess images Number of subprocess images, max. 1 Digital channels of which central 1024 Outputs 65 536 - of which central 1024 Context and the central 1024 Outputs - of which central 256 Outputs - of which central 256 Hardware configuration Number of central tents 256 Vandber of operable FMs and CPs (recommended) FFM CP, LAN Racks, max. Racks, max. Racks, max. Racks, max. Racks, max. Plardware clock (real-time) Yes retentive and synchronizable Yes Rackup time Behavior of the clock following POWER-ON Clock continues trunning after POWER OFF 	 Inputs, adjustable 	8 192 byte
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 Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup Clock continues running after POWER OFF Clock continues to run with the time at which the power failure occurred 	Backup time	6 wk; At 40 °C ambient temperature
Behavior of the clock following expiry of backup Clock continues to run with the time at which the power failure occurred	 Deviation per day, max. 	10 s; Typ.: 2 s
	 Behavior of the clock following POWER-ON 	Clock continues running after POWER OFF
period		Clock continues to run with the time at which the power failure occurred
	period	

Operating hours counter	
Number	4
 Number/Number range 	0 to 3
 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 	No
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	0
Number of PROFINET interfaces	0
Number of RS 485 interfaces	2; Combined MPI / PROFIBUS DP and PROFIBUS DP
Number of RS 422 interfaces	0
1. Interface	
	Integrated RS 485 interface
Interface type	Integrated RS 485 interface Yes
Interface type Isolated	Integrated RS 485 interface Yes
Interface type Isolated Interface types	Yes
Interface type Isolated Interface types • RS 485	Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max.	Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols	Yes Yes 200 mA
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI	Yes Yes 200 mA Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master	Yes Yes 200 mA Yes Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection	Yes Yes 200 mA Yes Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max.	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services - PG/OP communication - Routing	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 communication - S7 communication, as client	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication, as client — S7 communication, as server	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication, as client — S7 communication, as server PROFIBUS DP master	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server PROFIBUS DP master • Transmission rate, max.	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 communication - S7 communication - S7 communication, as client - S7 communication, as server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max.	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 communication - S7 communication - S7 communication, as client - S7 communication, as server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max. Services	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max. Services — PG/OP communication	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 communication - S7 communication - S7 communication - S7 communication, as client - S7 communication, as server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max. Services	Yes Yes 200 mA Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Interface type Isolated Interface types • RS 485 • Output current of the interface, max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection MPI • Transmission rate, max. Services — PG/OP communication — Routing — Global data communication — S7 basic communication — S7 communication — S7 communication — S7 communication, as client — S7 communication, as server PROFIBUS DP master • Transmission rate, max. • Number of DP slaves, max. Services — PG/OP communication — Routing — PG/OP communication — Routing	Yes Yes 200 mA Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No 12 Mbit/s Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

— S7 communication	Yes; Only server, configured on one side
 — S7 communication, as client 	No
 — S7 communication, as server 	Yes
— Equidistance	Yes
— Isochronous mode	No
- 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.	8 kbyte
— Outputs, max.	8 kbyte
User data per DP slave	0 KUYIC
— 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
 — Global data communication 	No
 — S7 basic communication 	No
— S7 communication	Yes; Only server, configured on one side
 — S7 communication, as client 	No
 — S7 communication, as server 	Yes; Connection configured on one side only
 — Direct data exchange (slave-to-slave 	Yes
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
2. Interface	
Interface type	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; A DP slave at both interfaces simultaneously is not possible
 Point-to-point connection 	No
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	
	Yes; I blocks only
- S7 communication	Yes; Only server, configured on one side
— S7 communication, as client	No; but via CP and loadable FB
— S7 communication, as server	Yes

— Equidistance	Yes
— Isochronous mode	Yes; OB 61
— 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.	8 192 byte
— Outputs, max.	8 192 byte
User data per DP slave	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
PROFIBUS DP slave	244 Dylc
GSD file	The latest GSD file is available on the Internet
	(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	52 byte
	Vec
— PG/OP communication	Yes
- Routing	Yes; Only with active interface
— Global data communication	No
— S7 basic communication	No
— S7 communication	Yes; Only server, configured on one side
 — S7 communication, as client 	No; but via CP and loadable FB
 — S7 communication, as server 	Yes
 — Direct data exchange (slave-to-slave communication) 	Yes
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
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.	8
Number of GD packets, receiver, max.	8 20 http:
Size of GD packets, max.	22 byte
Size of GD packet (of which consistent), max.	22 byte
S7 basic communication	
• 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_GET as server)
S7 communication	
 supported 	Yes
• as server	Yes
• as client	Yes; 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	
	Very via CD and leadable EC
 supported 	Yes; via CP and loadable FC

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
 — reserved for S7 basic communication 	0
— adjustable for S7 basic communication, min.	0
— adjustable for S7 basic communication, max.	30
usable for routing	X1 as a 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)
67 magazara functiona	max. 14
S7 message functions	32; Depending on the configured connections for PG/OP and S7 basic
Number of login stations for message functions, max.	communication
Process diagnostic messages	Yes
simultaneously active Alarm-S blocks, max.	300
Test commissioning functions	
Status block	Yes; Up to 2 simultaneously
Single step	Yes
Number of breakpoints	4
Status/control	
Status/control variable	Yes
Variables	Inputs, outputs, memory bits, DB, times, counters
Number of variables, max.	30
— of which status variables, max.	30
— of which control variables, max.	14
Forcing	N
Forcing	Yes
Forcing, variables	Inputs, outputs
Number of variables, max.	10
Diagnostic buffer	Vee
present	Yes
Number of entries, max.	500
— adjustable	No
— of which powerfail-proof	100; Only the last 100 entries are retained
Number of entries readable in RUN, max.	499 Xaai Fram 40 to 400
— adjustable	Yes; From 10 to 499 10
— preset Service data	
	Voo
can be read out	Yes
Ambient conditions	
Ambient temperature during operation	0.90
• min.	0 °C 60 °C
• max.	
Configuration	
Configuration software	
• STEP 7	Yes; STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203
• STEP 7 Lite	No
Programming	
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
height	125 11111
Depth	130 mm
Depth	