6ES7315-2AH14-0AB0

Data sheet



SIMATIC S7-300, CPU 315-2DP Central processing unit with MPI Integr. power supply 24 V DC Work memory 256 KB 2nd interface DP master/slave Micro Memory Card required

General information	
Product type designation	CPU 315-2 DP
HW functional status	01
Firmware version	V3.3
Product function	
• Isochronous mode	Yes
Engineering with	
 Programming package 	STEP 7 V5.5 + SP1 or higher or STEP 7 V5.2 + SP1 or higher with HSP 218
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)	850 mA
Current consumption (in no-load operation), typ.	150 mA
Inrush current, typ.	3.5 A
l²t	1 A ² ·s
Power loss	
Power loss, typ.	4.5 W
Memory	
Work memory	
• integrated	256 kbyte
expandable	No
Load memory	
• Plug-in (MMC)	Yes
Plug-in (MMC), max.	8 Mbyte
 Data management on MMC (after last programming), min. 	10 a
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

CPU-blocks	
Number of blocks (total)	1 024; (DBs, FCs, FBs); the maximum number of loadable blocks can be
	reduced by the MMC used.
DB Niverban reserv	4.004 Northern 2000 4 to 40000
Number, max.	1 024; Number range: 1 to 16000
• Size, max.	64 kbyte
Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	,u
Number, max.	1 024; 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 Number of DRV4 clares OBs	1; OB 40
Number of DPV1 alarm OBs Number of isochronous mode OBs	3; OB 55, 56, 57
Number of isochronous mode OBsNumber of startup OBs	1; OB 61 1; OB 100
Number of startup OBs Number of asynchronous error OBs	5; OB 80, 82, 85, 86, 87
Number of synchronous error OBs	2; OB 121, 122
Nesting depth	2,00 121, 122
per priority class	16
additional within an error OB	4
ounters, timers and their retentivity	
S7 counter	
Number	256
Retentivity	
— adjustable	Yes
— preset	Z 0 to Z 7
Counting range	
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
S7 times	
Number Petentivity	256
Retentivity	Yes
— adjustable — preset	Yes No retentivity
— preset Time range	No foliality
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
ata 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	

Actionary Control Co	Retentivity adjustable	Yes; via non-retain property on DB
Per priority class, max. 32 kbyte; Max. 2 KB per block		
No address area		32 kbyte: Max. 2 KB per block
Process image	<u> </u>	
of which distributed ── Inputs		2 048 byte
of which distributed - Inputs 2 048 byte - Outputs 2 2 048 byte Process image • Inputs 2 048 byte • Outputs 2 2 048 byte • Outputs 3 2 048 byte • Outputs 4 2 048 byte • Outputs, adjustable 2 048 byte • Outputs, adjustable 2 2 048 byte • Outputs, adjustable 3 2 2 048 byte • Outputs, adjustable 1 28 byte • Outputs, default 1 28 byte • Outputs default 1 28 byte • Outputs 1 28 byte • Outputs 1 28 byte • Outputs 1 1 024 • Ou		
Process image	·	
Process image	— Inputs	2 048 byte
	— Outputs	2 048 byte
Outputs Inputs, adjustable Outputs, adjustable Outputs, adjustable Outputs, default Inputs, default Outputs, default Outputs, default Outputs, default Outputs, default Inputs Inputs Outputs	Process image	
	• Inputs	2 048 byte
Outputs, adjustable Inputs, default	Outputs	2 048 byte
	 Inputs, adjustable 	2 048 byte
Outputs, default Subprocess images	Outputs, adjustable	2 048 byte
Number of subprocess images, max. Digital channels	 Inputs, default 	128 byte
Number of subprocess images, max. □ Digital channels □ Inputs □ of which central □ Outputs □ of which central □ of expansion units, max. □ Number of of expansion units, max. □ of expansion units, ma	Outputs, default	128 byte
Inputs	-	
Inputs	The state of the s	1
- 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 • 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. 4 • Modules per rack, max. 8 Time of day Clock • Hardware clock (real-time) Yes • retentive and synchronizable Yes • Backup time • Deviation per day, max. 10 s; Typ: 2 s • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period the clock continues at the time of day it had when power was switched off	Digital channels	
● Outputs	• Inputs	16 384
Of which central 1 024		
Analog channels Inputs Of which central Outputs Outputs Of which central Outputs Of which central Outputs Out	Outputs	16 384
 Inputs Inputs Of which central Outputs Outputs Of which central 256 Hardware configuration Number of expansion units, max. Number of DP masters integrated via CP Number of operable FMs and CPs (recommended) FM CP, PtP CP, LAN CP, LAN 10 Racks Racks, max. Modules per rack, max. Modules per rack, max. Modules per rack, max. Eardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period the clock continues at the time of day it had when power was switched off 		1 024
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Outputs Of which central Outputs Of which central Outputs Out		
Hardware configuration Number of expansion units, max. Number of DP masters integrated via CP Number of operable FMs and CPs (recommended) FM CP, PtP CP, LAN 10 Rack Racks, max. Modules per rack, max. Modules per rack, max. Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Behavior of the clock following POWER-ON Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period Number of ay 1 1 256 8 8 4 4 4 4 4 4 4 6 8 8 7 8 8 7 8 8 7 8 8 7 8 8		
Number of expansion units, max. Number of DP masters integrated via CP 4 Number of operable FMs and CPs (recommended) FM CP, PtP 8 CP, LAN 10 Rack Racks, max. Modules per rack, max. Modules per rack, max. Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period Number of expansion units, max. 3 A 4 4 4 4 4 6 6 8 7 8 7 8 6 8 7 8 8 7 8 7 8 8 7 8 7 8 7 8 7 8 8	·	
Number of expansion units, max. Number of DP masters integrated via CP Number of operable FMs and CPs (recommended) FM CP, PtP 8 CP, LAN 10 Rack Racks, max. Modules per rack, max. Modules per rack, max. Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period 1 1 1 1 1 1 1 1 1 1 1 1 1		256
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 integrated via CP Number of operable FMs and CPs (recommended) FM CP, PtP CP, LAN Time of day Clock Hardware clock (real-time) retentive and synchronizable Backup time Backup time Deviation per day, max. Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period Integrated 4 4 8 10 8 Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 		3
via CP Number of operable FMs and CPs (recommended) FM		
Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN 10 Rack • Racks, max. • Modules per rack, max. • Modules per rack, max. • Modules per rack, max. • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period **Backup time of day the clock following at the time of day it had when power was switched off	-	
FM CP, PtP 8 CP, LAN 10 Rack Racks, max. Modules per rack, max. Modules per rack, max. Yes Image: Clock Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period Backup period Backup time Clock continues running after POWER OFF The clock continues at the time of day it had when power was switched off		4
CP, PtP CP, LAN Rack Racks, max. Modules per rack, max. Modules per rack, max. Modules per rack, max. Yes Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period Page 8 10 Racks 4 Wes 8 Wes Clock Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF The clock continues at the time of day it had when power was switched off		0
CP, LAN Rack Racks, max. Modules per rack, max.		
Racks, max. • Racks, max. • Modules per rack, max. 10		
 Racks, max. Modules per rack, max. 8 Time of day Clock Hardware clock (real-time) retentive and synchronizable Backup time Deviation per day, max. Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period Racks, max. Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 		10
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 Behavior of the clock following POWER-ON Behavior of the clock following expiry of backup period Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 		
Behavior of the clock following expiry of backup period the clock continues at the time of day it had when power was switched off		
Operating hours counter	Operating hours counter	The state of the s
• Number 1		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
• to MPI, master Yes		
• on MPI, device Yes		

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• to DP, master	Yes; With DP slave only slave clock
• on DP, device	Yes
• in AS, master	Yes
• in AS, device	No
Digital inputs	
Number of digital inputs	0
Digital outputs	
Number of digital outputs	0
Analog inputs	
Number of analog inputs	0
Interfaces	
Number of PROFINET interfaces	0
Number of RS 485 interfaces	2; MPI and PROFIBUS DP
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 device 	No
Point-to-point connection	No
MPI	
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; Only server, configured on one side
 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 device 	Yes
Point-to-point connection	No
PROFIBUS DP master	
 Transmission rate, max. 	12 Mbit/s
• max. number of DP devices	124; Per station
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
 S7 communication, as server 	Yes
— Equidistance	Yes
— Equidistance— Isochronous mode	Yes; OB 61
·	

activation/deactivation of DP devices	Yes
 max. number of DP devices that can be activated/deactivated at the same time 	8
	V
— DPV1	Yes
Address area	0.0401
— Inputs, max.	2 048 byte
— Outputs, max.	2 048 byte
User data per DP device	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
2nd interface / PROFIBUS DP device / header	
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; 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
 Direct data exchange (slave-to-slave 	Yes
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
Protocols	
PROFIsafe	No
PROFIsafe communication functions / header	No
1 11 1	No Yes
communication functions / header	
communication functions / header PG/OP communication	Yes
communication functions / header PG/OP communication Data record routing	Yes
PG/OP communication Data record routing Global data communication	Yes Yes
communication functions / header PG/OP communication Data record routing Global data communication • supported	Yes Yes Yes
communication functions / header PG/OP communication Data record routing Global data communication • supported • Number of GD loops, max.	Yes Yes Yes 8
communication functions / header PG/OP communication Data record routing Global data communication • supported • Number of GD loops, max. • Number of GD packets, max.	Yes Yes Yes 8 8
communication functions / header PG/OP communication Data record routing Global data communication • supported • Number of GD loops, max. • Number of GD packets, max. • Number of GD packets, transmitter, max.	Yes Yes Yes 8 8 8
communication functions / header PG/OP communication Data record routing 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 Yes Yes 8 8 8 8
communication functions / header PG/OP communication Data record routing 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 Yes Yes 8 8 8 8 22 byte
communication functions / header PG/OP communication Data record routing 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 Yes Yes 8 8 8 8 22 byte
communication functions / header PG/OP communication Data record routing 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 Yes Yes 8 8 8 8 8 22 byte 22 byte
communication functions / header PG/OP communication Data record routing 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	Yes Yes Yes 8 8 8 8 22 byte 22 byte Yes Yes Yes Yes
communication functions / header PG/OP communication Data record routing 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 Yes Yes 8 8 8 8 8 22 byte 22 byte
communication functions / header PG/OP communication Data record routing 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 Yes Yes 8 8 8 8 22 byte 22 byte Yes Yes Yes Yes Yes Yes Yes Y
communication functions / header PG/OP communication Data record routing 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 Yes Yes 8 8 8 8 22 byte 22 byte Yes Yes Yes Yes Yes Yes Yes Y
communication functions / header PG/OP communication Data record routing 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 Yes 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 Data record routing 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 Yes 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 Data record routing 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 • user data per job (of which consistent), max.	Yes Yes 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 Data record routing 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 Yes 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 Yes Yes Ye
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communication functions / header PG/OP communication Data record routing 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.	Yes Yes Yes 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 Yes Yes Ye
communication functions / header PG/OP communication Data record routing 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 Yes Yes Yes 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 Yes Yes Ye
communication functions / header PG/OP communication Data record routing 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 Yes Yes Yes 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 Yes Yes Ye
communication functions / header PG/OP communication Data record routing 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 Number of connections	Yes Yes Yes Yes 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 Yes Yes Ye
Communication functions / header PG/OP communication Data record routing 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 Number of connections • overall	Yes Yes Yes Yes 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 240 byte; as server Yes; via CP and loadable FC
Communication functions / header PG/OP communication Data record routing 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. 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 Number of connections • overall • usable for PG communication	Yes Yes Yes Yes 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 240 byte; as server Yes; via CP and loadable FC

 adjustable for PG communication, max. 	15
 usable for OP communication 	15
 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
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.	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
	30
— of which control variables, max.	
— of which control variables, max.	14
Forcing	V
• 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; Only the last 100 entries are retained
 Number of entries readable in RUN, max. 	
— adjustable	Yes; From 10 to 499
— preset	10
Service data	
• can be read out	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	60 °C
configuration / header	
Configuration software	
STEP 7	Yes; V5.2 SP1 or higher with HW update
configuration / programming / header	1.50, TO.E OF TOT HIGHOF WHITTITY appeals
Command set	see instruction list
	see instruction list 8
Nesting levels System functions (SEC)	
System functions (SFC) System function blocks (SFR)	see instruction list
System function blocks (SFB)	see instruction list
Programming language	V
— 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.	290 g

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