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	
HW functional status	01
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	22.00000 by the filling dood.
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	
— adjustable	Yes
— lower limit	0
— upper limit	511
— 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	512
Retentivity	W
— adjustable	Yes
— lower limit	0
— upper limit	511
— preset	No retentivity
Time range	40 ma
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	Ven
• present	Yes
• Type	SFB
Number	Unlimited (limited only by RAM capacity)
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	256 kbyte
Flag	
• Size, max.	4 096 byte
	Voc: From MD 0 to MD 4 005
Retentivity available	Yes; From MB 0 to MB 4 095
 Retentivity preset 	MB 0 to MB 15

Retentivity adjustable	Yes; via non-retain property on DB
Retentivity adjustable Retentivity preset	Yes
Local data	
• per priority class, max.	32 768 byte; Max. 2048 bytes per block
Address area	
I/O address area	
Inputs	8 192 byte
Outputs	8 192 byte
of which distributed	
— Inputs	8 192 byte
— Outputs	8 192 byte
Process image • Inputs	8 192 byte
Outputs	8 192 byte
Inputs, adjustable	8 192 byte
Outputs, adjustable	8 192 byte
Inputs, default	256 byte
Outputs, default	256 byte
Subprocess images	
Number of subprocess images, max.	1
Digital channels	
• Inputs	65 536
— of which central	1 024
Outputs	65 536
— of which central	1 024
Analog channels	
• Inputs	4 096
— of which central	256
Outputs	4 096
— of which central	256
Hardware configuration	
Number of expansion units, max.	3
Number of DP masters	
• integrated	2
• via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8
• CP, PtP	8
CP, LAN Rack	10
• Racks, max.	4
Modules per rack, max.	8
Time of day	
Clock A Hardware clock (real-time)	Yes
Hardware clock (real-time)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	the clock continues at the time of day it had when power was switched
period	off
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

	V
• in AS, master	Yes
in AS, slaveon Ethernet via NTP	Yes No
	140
Digital inputs Number of digital inputs	0
	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	
Interface type	Integrated RS 485 interface
Isolated	Yes
Interface types	Vac
• RS 485	Yes
Output current of the interface, max. Protocols	200 mA
Protocols • MPI	Yes
PROFIBUS DP master	Yes
PROFIBUS DP slave	Yes; A DP slave at both interfaces simultaneously is not possible
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; Only server, configured on one side
— S7 communication, as client	No; but via CP and loadable FB
— S7 communication, as server	Yes
PROFIBUS DP master	40.18.97
Transmission rate, max. Number of DR players, may.	12 Mbit/s
Number of DP slaves, max. Services	124
— 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
— Isochronous mode	No
— SYNC/FREEZE	Yes
 Activation/deactivation of DP slaves 	Yes
Number of DP slaves that can be simultaneously estimated (deaptingted).	8
simultaneously activated/deactivated, max.	Voe: ge eubecriber
 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	
— 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	8
simultaneously activated/deactivated, max.	
Direct data exchange (slave-to-slave)	Yes; as subscriber
communication)	
— DPV1	Yes
— DPV1 Address area	
Address area — Inputs, max. — Outputs, max.	Yes
Address area — Inputs, max.	Yes 8 192 byte
Address area — Inputs, max. — Outputs, max.	Yes 8 192 byte
Address area — Inputs, max. — Outputs, max. User data per DP slave	Yes 8 192 byte 8 192 byte
Address area — Inputs, max. — Outputs, max. User data per DP slave — Inputs, max.	Yes 8 192 byte 8 192 byte 244 byte
Address area — Inputs, max. — Outputs, max. User data per DP slave — Inputs, max. — Outputs, max.	Yes 8 192 byte 8 192 byte 244 byte 244 byte The latest GSD file is available on the Internet
Address area — Inputs, max. — Outputs, max. User data per DP slave — Inputs, max. — Outputs, max. PROFIBUS DP slave • GSD file	Yes 8 192 byte 8 192 byte 244 byte 244 byte The latest GSD file is available on the Internet (http://www.siemens.com/profibus-gsd)
Address area — Inputs, max. — Outputs, max. User data per DP slave — Inputs, max. — Outputs, max. PROFIBUS DP slave • GSD file • Transmission rate, max.	Yes 8 192 byte 8 192 byte 244 byte 244 byte The latest GSD file is available on the Internet (http://www.siemens.com/profibus-gsd) 12 Mbit/s
Address area — Inputs, max. — Outputs, max. User data per DP slave — Inputs, max. — Outputs, max. PROFIBUS DP slave • GSD file	Yes 8 192 byte 8 192 byte 244 byte 244 byte The latest GSD file is available on the Internet (http://www.siemens.com/profibus-gsd) 12 Mbit/s Yes; only with passive interface
Address area — Inputs, max. — Outputs, max. User data per DP slave — Inputs, max. — Outputs, max. PROFIBUS DP slave • GSD file • Transmission rate, max.	Yes 8 192 byte 8 192 byte 244 byte 244 byte The latest GSD file is available on the Internet (http://www.siemens.com/profibus-gsd) 12 Mbit/s
Address area — Inputs, max. — Outputs, max. User data per DP slave — Inputs, max. — Outputs, max. PROFIBUS DP slave • GSD file • Transmission rate, max. • automatic baud rate search	Yes 8 192 byte 8 192 byte 244 byte 244 byte The latest GSD file is available on the Internet (http://www.siemens.com/profibus-gsd) 12 Mbit/s Yes; only with passive interface

DO IOD ' I'	V
— 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 	Yes
communication)	
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
Protocols	
PROFIsafe	No
	NO
communication functions / header	
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, transmitter, max. 	8
 Number of GD packets, receiver, max. 	8
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
• Osci data per job (of which consistent), max.	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
• Osci data per job, max.	the SFCs/FCs of S7 Communication)
S5 compatible communication	,
• supported	Yes; via CP and loadable FC
Number of connections	
	32
• overall	32 31
overall usable for PG communication	31
overall usable for PG communication reserved for PG communication	31 1
 overall usable for PG communication reserved for PG communication adjustable for PG communication, min. 	31 1 1
 overall usable for PG communication reserved for PG communication adjustable for PG communication, min. adjustable for PG communication, max. 	31 1 1 31
 overall usable for PG communication reserved for PG communication adjustable for PG communication, min. adjustable for PG communication, max. usable for OP communication 	31 1 1 31 31
 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 	31 1 1 31 31 1
 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. 	31 1 1 31 31 1
 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. adjustable for OP communication, max. 	31 1 1 31 31 1
 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. 	31 1 1 31 31 1
 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. adjustable for OP communication, max. 	31 1 1 31 31 1 1 31
 overall usable for PG communication reserved for PG communication adjustable for PG communication, min. adjustable for PG communication, max. usable for OP communication	31 1 1 31 31 1 1 1 31 31
 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. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication reserved for S7 basic communication 	31 1 1 31 31 1 1 31 30 0
 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. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, min. adjustable for S7 basic communication, max. 	31 1 1 31 31 1 1 1 31 30 0 0
 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. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, min. 	31 1 1 31 31 1 1 1 31 30 0
 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. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, min. adjustable for S7 basic communication, max. 	31 1 1 31 31 31 1 1 1 30 0 0 0 X1 as a MPI, max. 10; X1 as DP Master max. 24; X1 as DP Slave
 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. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, min. adjustable for S7 basic communication, max. 	31 1 1 31 31 31 1 1 1 31 30 0 0 0 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)
 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. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, min. adjustable for S7 basic communication, max. usable for routing 	31 1 1 31 31 31 1 1 1 31 30 0 0 0 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)
 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. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, min. adjustable for S7 basic communication, max. usable for routing 	31 1 1 31 31 31 1 1 1 31 30 0 0 0 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) max. 14
 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. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, min. adjustable for S7 basic communication, max. usable for routing 	31 1 1 31 31 31 1 1 1 31 30 0 0 0 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) max. 14
 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, min. adjustable for OP communication, max. usable for S7 basic communication reserved for S7 basic communication adjustable for S7 basic communication, min. adjustable for S7 basic communication, min. usable for routing S7 message functions Number of login stations for message functions, max. 	31 1 1 31 31 31 1 1 1 31 30 0 0 0 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) max. 14 32; Depending on the configured connections for PG/OP and S7 basic communication
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. — adjustable for OP communication, max. usable for S7 basic communication — reserved for S7 basic communication — adjustable for S7 basic communication — adjustable for S7 basic communication, min. — adjustable for S7 basic communication, max. usable for routing S7 message functions Number of login stations for message functions, max. Process diagnostic messages	31 1 1 31 31 31 1 1 1 31 30 0 0 0 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) max. 14 32; Depending on the configured connections for PG/OP and S7 basic communication Yes
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. — adjustable for OP communication, max. usable for S7 basic communication — reserved for S7 basic communication — adjustable for S7 basic communication — adjustable for S7 basic communication, min. — adjustable for S7 basic communication, max. • usable for routing S7 message functions Number of login stations for message functions, max. Process diagnostic messages simultaneously active Alarm-S blocks, max.	31 1 1 31 31 31 1 1 1 31 30 0 0 0 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) max. 14 32; Depending on the configured connections for PG/OP and S7 basic communication Yes 300
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. — adjustable for OP communication, max. usable for S7 basic communication — reserved for S7 basic communication — adjustable for S7 basic communication — adjustable for S7 basic communication, min. — adjustable for S7 basic communication, max. • usable for routing S7 message functions Number of login stations for message functions, max. Process diagnostic messages simultaneously active Alarm-S blocks, max. Test commissioning functions	31 1 1 31 31 31 1 1 1 31 30 0 0 0 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) max. 14 32; Depending on the configured connections for PG/OP and S7 basic communication Yes

SlatusControl StatusControl variables StatusControl variables, max. — of which status variables, max. — of which status variables, max. — of which control variables, max. — of which status variables, max. — of which status variables, max. — of which control variables, max. — of which control variables, max. — of which control variables, max. — Forcing Forc	Number of breakpoints	4
Variables Inputs, outputs, memory bits, DB, times, counters		
	Status/control variable	Yes
of which status variables, max of which control variables, max. 14 Forcing	Variables	Inputs, outputs, memory bits, DB, times, counters
— of which control variables, max. Forcing Forcing Forcing, variables	 Number of variables, max. 	30
Forcing For	of which status variables, max.	30
Forcing, variables Inputs, outputs		14
Forcing, variables	Forcing	
	Forcing	Yes
Piesent Yes Yes Number of entries, max. 500 No No No No No No No	 Forcing, variables 	Inputs, outputs
● Present Yes ● Number of entries, max. 500 — adjustable No ● Number of entries readable in RUN, max. 499 — adjustable Yes; From 10 to 499 — preset 10 Service data *** • can be read out Yes ***Mibient conditions *** Ambient emperature during operation *** • nin. 6 ° C • max. 60 ° C ***Onfiguration / header *** Configuration software *** • STEP 7 Lite No configuration / programming / header *** • Oronmand set see instruction list • Nesting levels 8 • System function blocks (SFD) see instruction list • System function blocks (SFB) see instruction list Programming language *** — LAD Yes — STL Yes — STL Yes — STL Yes — CFC Yes — HiGraph® <td> Number of variables, max. </td> <td>10</td>	 Number of variables, max. 	10
Number of entries, max. — adjustable — of which powerfall-proof Number of entries readable in RUN, max. — adjustable — preset 100; Only the last 100 entries are retained • Number of entries readable in RUN, max. — adjustable — preset 10 Service data • can be read out • can be read out • min. • on °C • max. 60 °C • max. 60 °C • max. 60 °C • configuration / header Configuration / header Configuration / programming / header • STEP 7 Lite • STEP 7 Lite • No configuration / programming / header • System functions (SFC) • System function sic(SFC) • System function blocks (SFB) Programming language — LAD — FBD — STL — SSL — SSL — SSL — CFC — GRAPH — SSL — HiGraph® Know-how protection • User program protection/password protection • Block encryption • Sign the struction is the second protection of the second pro	Diagnostic buffer	
adjustable	• present	Yes
- of which powerfail-proof • Number of entries readable in RUN, max. 499 - adjustable 7 yes; From 10 to 499 - preset 10 Service data • can be read out 7 yes whiblent conditions Ambient temperature during operation • min. 0 ° C • min. 0 ° C onfiguration / header Configuration software • STEP 7 Lite No No configuration / programming / header • Command set 8 see instruction list 8 • System functions (SFC) see instruction list 9 • System functions (SFC) 4 • System function blocks (SFB) 7 • Programming language - LAD 7 - FBD 7 - STL 7 - SCL 7 - GRAPH 7 - HiGraph® 7 Know-how protection • User program protection/password protection 9 • Block encryption 7 Ves Know-how protection • User program protection/password protection 9 • Block encryption 7 Ves Height 40 mm Height 125 mm Depth 130 mm Voights Weight, approx. 360 g	 Number of entries, max. 	500
Number of entries readable in RUN, max.	— adjustable	No
	— of which powerfail-proof	100; Only the last 100 entries are retained
preset 10 Service data can be read out Yes Ambient conditions Ambient temperature during operation min.	 Number of entries readable in RUN, max. 	499
Service data • can be read out which ronditions Ambient temperature during operation • min.	— adjustable	Yes; From 10 to 499
can be read out Yes Imbient conditions Ambient temperature during operation imin.	— preset	10
Ambient conditions Ambient temperature during operation • min. • max. • 60 °C configuration / header Configuration software • STEP 7 • STEP 7 Ves; STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 • STEP 7 Lite • Nesting levels • Nesting levels • System function blocks (SFB) • System function blocks (SFB) Programming language - LAD - FBD - STL - SCL - CFC - GRAPH - HiGraph® Know-how protection/password protection • Block encryption Ves Width - Height - Depth - 125 mm - Depth - Depth - 125 mm - Depth - 130 mm Veight, approx. 3 0 °C	Service data	
Ambient temperature during operation • min. • max. • 60 °C **Configuration / header **Configuration software • STEP 7 • STEP 7 **STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 • STEP 7 Lite • Command set • Nesting levels • Nesting levels • System functions (SFC) • System function blocks (SFB) **Programming language — LAD — FBD — STL — SCL — CFC — GRAPH — HiGraph® **Know-how protection • User program protection/password protection • Block encryption **Jess of the standard of the standa	can be read out	Yes
• min. • max. • softguration / header Configuration software • STEP 7 • STEP 7 • STEP 7 • STEP 7 Lite • No configuration / programming / header • Command set • Nesting levels • System functions (SFC) • see instruction list • System function blocks (SFB) Programming language — LAD — FBD — STL — SCL — STL — SCL — CFC — GRAPH — HiGraph® Know-how protection • User program protection/password protection • Block encryption Innersions Width Height Depth Wight, approx. 9 °C 60 °C FEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 **SP2 or higher with	Ambient conditions	
max. 60 °C configuration / header 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 configuration / programming / header Command set Nesting levels System functions (SFC) System function blocks (SFB) Programming language — LAD — FBD — STL — SCL — CFC — GRAPH — HiGraph® Know-how protection User program protection/password protection Slock encryption Ves; With S7 block Privacy Dimensions Weight, approx. 80 °C Wes; STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher or STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1 or higher with HSP 203 No STEP 7 V5.5 + SP1	Ambient temperature during operation	
Configuration / header Onfiguration software STEP 7 STEP 7	• min.	0 °C
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 configuration / programming / header see instruction list ● Command set see instruction list ● Nesting levels 8 ● System functions (SFC) see instruction list ● System function blocks (SFB) see instruction list Programming language Yes — FBD Yes — STL Yes — SCL Yes — CFC Yes — GRAPH Yes — HiGraph® Yes Know-how protection Yes ● Block encryption Yes Yes; With S7 block Privacy Otherstood 40 mm Height 125 mm Depth 130 mm Veights 360 g	• max.	60 °C
● STEP 7 Lite ● STEP 7 Lite No configuration / programming / header ● Command set ● Nesting levels ● System functions (SFC) ● System function blocks (SFB) Programming language — LAD — FBD — FBD — STL — SCL — CFC — GRAPH — HiGraph® Know-how protection ● User program protection/password protection ● Block encryption Width Height Depth Weight, approx. Yes, STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No No No No No No No No No See instruction list 8 8 9 see instruction list 9 ves einstruction list 9 ves einstruction list 9 ves yes FT 2 ves — LAD — FBD — Yes — STL — SCL — Yes — STL — Yes — Yes — Yes — With S7 block Privacy No No No No No No No No No N	configuration / header	
● STEP 7 Lite ● STEP 7 Lite No configuration / programming / header ● Command set ● Nesting levels ● System functions (SFC) ● System function blocks (SFB) Programming language — LAD — FBD — FBD — STL — SCL — CFC — GRAPH — HiGraph® Know-how protection ● User program protection/password protection ● Block encryption Width Height Depth Weight, approx. Yes, STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 No No No No No No No No No See instruction list 8 8 9 see instruction list 9 ves einstruction list 9 ves einstruction list 9 ves yes FT 2 ves — LAD — FBD — Yes — STL — SCL — Yes — STL — Yes — Yes — Yes — With S7 block Privacy No No No No No No No No No N	Configuration software	
Comfiguration / programming / header Command set see instruction list see instruction list system functions (SFC) see instruction list		
Command set Nesting levels System functions (SFC) see instruction list System function blocks (SFB) see instruction list Programming language	STEP 7 Lite	No
Nesting levels System functions (SFC) System function blocks (SFB) Programming language - LAD - FBD - FBD - STL - SCL - CFC - GRAPH - HiGraph® Know-how protection User program protection/password protection Block encryption Ves; With S7 block Privacy Width Height Depth Depth Weight, approx. 8 see instruction list see instruction lis	configuration / programming / header	
System functions (SFC) System function blocks (SFB) See instruction list Programming language	 Command set 	see instruction list
System function blocks (SFB) Programming language — LAD — FBD — FBD — STL — SCL — SCL — CFC — GRAPH — HiGraph® Know-how protection — User program protection/password protection — Block encryption Width Height Depth 40 mm Height Depth Veights Weight, approx. 9 see instruction list Yes Yes Yes Yes Yes Yes Yes Y		8
Programming language — LAD — FBD — Yes — STL — SCL — SCL — Yes — CFC — GRAPH — HiGraph® Know-how protection • User program protection/password protection • Block encryption Viget Width Height 125 mm Depth 130 mm Veights Weight, approx. 360 g	System functions (SFC)	see instruction list
— LAD — FBD — STL — STL — SCL — SCL — CFC — GRAPH — HiGraph® — Ves Know-how protection	 System function blocks (SFB) 	see instruction list
— FBD — STL — SCL — SCL — CFC — GRAPH — HiGraph® Know-how protection • User program protection/password protection • Block encryption Ves; With S7 block Privacy Width Height Depth 130 mm Veights Weight, approx. 7 es 40 mm 125 mm 130 mm	Programming language	
- STL Yes - SCL Yes - CFC Yes - GRAPH Yes - HiGraph® Yes Know-how protection • User program protection/password protection Yes; With S7 block Privacy Dimensions Width 40 mm Height 125 mm Depth 130 mm Veights Weight, approx. 360 g		Yes
- SCL - CFC - GRAPH - HiGraph® Yes Know-how protection • User program protection/password protection • Block encryption Yes; With S7 block Privacy Dimensions Width Height 125 mm Depth 130 mm Veights Weight, approx. 360 g		Yes
— CFC — GRAPH — HiGraph® Yes Know-how protection		Yes
— GRAPH — HiGraph® Yes Know-how protection		Yes
— HiGraph® Yes Know-how protection ■ User program protection/password protection ■ Block encryption Yes; With S7 block Privacy Dimensions Width 40 mm Height 125 mm Depth 130 mm Veights Weight, approx. 360 g		
Know-how protection ● User program protection/password protection Yes ● Block encryption Yes; With S7 block Privacy Width 40 mm Height 125 mm Depth 130 mm Veights Weight, approx. 360 g		
● User program protection/password protection ● Block encryption Yes; With S7 block Privacy Width 40 mm Height Depth 125 mm Dayth 130 mm Veights Weight, approx. 360 g		Yes
● Block encryption Yes; With S7 block Privacy Dimensions Width 40 mm Height 125 mm Depth 130 mm Veights Weight, approx. 360 g	·	
Width 40 mm Height 125 mm Depth 130 mm Veights Weight, approx. 360 g		
Width 40 mm Height 125 mm Depth 130 mm Veights Weight, approx. 360 g		Yes; With S7 block Privacy
Height 125 mm Depth 130 mm Veights Weight, approx. 360 g	Dimensions	
Depth 130 mm Veights Weight, approx. 360 g	Width	40 mm
Veights Weight, approx. 360 g	Height	125 mm
Weight, approx. 360 g	Depth	130 mm
	Weights	
	Weight, approx.	360 g
last modified: 8/24/2021 (7	-	
*** *** **	last modified:	8/24/2021 🖸