SIEMENS

Data sheet

6ES7315-2AH14-0AB0



SIMATIC S7-300, CPU 315-2DP CPU WITH MPI INTERFACE INTEGRATED 24 V DC POWER SUPPLY 256 KBYTE WORKING MEMORY 2. INTERFACE DP-MASTER/SLAVE MICRO MEMORY CARD NECESSARY

Product	type	aesigi	nation

General information	
Hardware product version	01
Firmware version	V3.3
Engineering with	
Programming package	STEP 7 V5.5 + SP1 or higher or STEP7 V5.2 + SP1 or higher with HSP 218

Supply voltage		
Rated value (DC)		
• 24 V DC	Yes	
permissible range, lower limit (DC)	19.2 V	
permissible range, upper limit (DC)	28.8 V	
External protection for supply cables (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 losses	
Power loss, typ.	4.5 W

Memory	
Work memory	
Integrated	256 kbyte
• expandable	No
Size of retentive memory for retentive data	128 kbyte
blocks	
Load memory	
• pluggable (MMC)	Yes
pluggable (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
ODI I progogging times	
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
for floating point arithmetic, typ.	0.45 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	4 00 4 10 4 4 40000
Number, max.	1 024; Number range: 1 to 16000
• Size, max.	64 kbyte
FB	
Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
FC	
Number, max.	1 024; Number range: 0 to 7999
• Size, max.	64 kbyte
OB	
 Description 	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 time 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 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	256
Retentivity	
— can be set	Yes
— lower limit	0
— upper limit	255
— 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	256
Retentivity	
— can be set	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	
Total retentive data area	All, 128 KB max.
Flag	
Number, max.	2 048 byte
Retentivity available	Yes; MB 0 to MB 2047
Retentivity preset	MB 0 to MB 15

Number of clock memories	8; 1 memory byte
Data blocks	
• Number, max.	1 024; Number range: 1 to 16000
• Size, max.	64 kbyte
Retentivity adjustable	Yes; via non-retain property on DB
Retentivity preset	Yes
Local data	
• per priority class, max.	32 kbyte; Max. 2 KB per block
Address area	
I/O address area	
• Inputs	2 048 byte
Outputs	2 048 byte
of which, distributed	
— Inputs	2 048 byte
— Outputs	2 048 byte
Process image	
• Inputs	2 048 byte
Outputs	2 048 byte
Inputs, adjustable	2 048 byte
 Outputs, adjustable 	2 048 byte
Inputs, default	128 byte
Outputs, default	128 byte
Subprocess images	
 Number of subprocess images, max. 	1
Digital channels	
• Inputs	16 384
 Inputs, of which central 	1 024
Outputs	16 384
 Outputs, of which central 	1 024
Analog channels	
• Inputs	1 024
 Inputs, of which central 	256
Outputs	1 024
 Outputs, of which central 	256
Hardware configuration	
Expansion devices, max.	3
Number of DP masters	
Integrated	1
• Via CP	4
Number of operable FMs and CPs (recommended)	
• FM	8

• CP, point-to-point	8
• CP, LAN	10
Rack	
● Racks, max.	4
 Modules per rack, max. 	8
Time of day	
Clock	
Hardware clock (real-time clock)	Yes
 battery-backed and synchronizable 	Yes
Deviation per day, max.	10 s; Typ.: 2 s
Backup time	6 wk; At 40 °C ambient temperature
 Behavior of the clock following POWER-ON 	Clock continues running after POWER OFF
Behavior of the clock following expiry of backup	Clock continues to run with the time at which the power failure
period	occurred
Operating hours counter	
Number	1
Number/Number range	0
Range of values	0 to 2^31 hours (when using SFC 101)
Granularity	1 hour
• retentive	Yes; Must be restarted at each restart
Clock synchronization	
• supported	Yes
● to MPI, master	Yes
● to MPI, slave	Yes
• to DP, master	Yes; With DP slave only slave clock
• to DP, slave	Yes
● in AS, master	Yes
• in AS, slave	No
Digital inputs	0
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 USB interfaces	0
Number of USB interfaces (TTV)	0
Number of 20 mA interfaces (TTY) Number of RS 232 interfaces	0
Number of Ro 252 interfaces	0

Number of RS 422 interfaces	0
Number of parallel interfaces	0
Number of other interfaces	0
1st interface	
Interface type	Integrated RS 485 interface
Physics	RS 485
Isolated	No
Power supply to interface (15 to 30 V DC), max.	200 mA
Functionality	
• MPI	Yes
DP master	No
• DP slave	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
2nd interface	
Interface type	Integrated RS 485 interface
Physics	RS 485
Isolated	Yes
Power supply to interface (15 to 30 V DC), max.	200 mA
Functionality	NI.
• MPI	No
DP master	Yes
• DP slave	Yes
 Point-to-point connection 	No
DP master	
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; Only server, configured on one side
	No
— S7 communication, as client	Yes
— S7 communication, as server	Yes
Equidistance mode support	
— 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.	V
— 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
DP slave	
• 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 communication) 	Yes
— DPV1	No
Transfer memory	
— Inputs	244 byte
— Outputs	244 byte
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	Yes
Communication functions	

Ostobal data communication • supported • Number of GD loops, max. • Number of GD packets, max. • Number of GD packets, transmitter, max. • Number of GD packets, transmitter, max. • Size of GD packets, max. • Size of GD packet (of which consistent), max. • Size of GD packet (of which consistent), max. • Size of data per job, max. • User data per job (of which consistent), max. • User data per job (of which consistent), max. • Size of data per job, max. • User data per job (of which consistent), max. • User data per job (of which consistent), max. • Size of GD packet (of which consistent), max. • User data per job	PG/OP communication	Yes
Supported Number of GD loops, max. Number of GD packets, max. Number of GD packets, treativer, max. Number of GD packets, treativer, max. Size of GD packets, treativer, max. Size of GD packets, freeliver, max. Size of GD packets, freeliver, max. Size of GD packet (of which consistent), max. Size of GD pa	Data record routing	Yes
Number of GD loops, max. Number of GD packets, max. Number of GD packets, transmitter, max. Number of GD packets, transmitter, max. Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packets, max. Size of GD packets, max. Size of GD packet of which consistent), max. Puser data per job, max. User data per job (of which consistent), max. Size of GD packet of of which consistent), max. New data per job (of which consistent), max. New data per job (of which consistent), max. New data per job (of which consistent), max. New data per job, max. User data per job, max. User data per job, max. Size of GD packets, max. New data per job, max. New data per job (of which consistent), max. New data per job, max. New data per job (of which consistent), max. New data per job of which consistent, max. New data per job	Global data communication	
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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. Size of GD packets, reax. Size of Size of GD packets, reax. Size of Size of GD packets, reax. Size of Size of GD packets of GD	 Number of GD loops, max. 	8
Number of GD packets, receiver, max. Size of GD packets, max. Size of GD packets (of which consistent), max. Size of GD packet (of CP companies (of CP consistent)), max. Size of GD packet (of CP companies (of CP	 Number of GD packets, max. 	8
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S7 basic communication • supported • User data per job, max. • User data per job (of which consistent), max. • S7 communication • supported • As client • User data per job, max. • User data per job, max. • Ves • As client • User data per job, max. • User data per job, max. • User data per job (of which consistent), max. S5-compatible communication • supported • S8-compatible communication • supported • S9-compatible communication • supported • Overall • User data per job (of which consistent), max. S6-compatible communication • supported • Overall • User data per job (of which consistent), max. S6-compatible communication • supported • Overall • User data per job (of which consistent), max. S7 (or byte (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or Max or Ves (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or Max or Ves (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or Max or Ves (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S6 (or Max or Ves (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or Mith X_PUT or X_GET as server) S7 (or With X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With X_PUT or X_GET as server) S7 (or With X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With X_PUT or X_GET as server) S7 (or With Y_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With Y_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With Y_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With Y_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) S7 (or With Y_SEND or X_RCV); 64 bytes (with X_PUT or X_SEND or X_RCV); 64 bytes (with X	Size of GD packets, max.	22 byte
Supported User data per job, max. User data per job (of which consistent), max. Ves	• Size of GD packet (of which consistent), max.	22 byte
User data per job, max. User data per job (of which consistent), max. To byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server) To x_GET as server) Yes as server As client User data per job, max. User data per job (of which consistent), max. Yes; via CP and loadable FB Ves; via CP and loadable FC Number of connections overall usable for PG communication reserved for PG communication Adjustable for PG communication, min. Adjustable for OP communication reserved for OP communication adjustable for OP communication adjustable for OP communication, min. adjustable for S7 basic communication Reserved for S7 basic communication adjustable for S7 basic communication	S7 basic communication	
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min. — adjustable for S7 basic communication, max.	 Reserved for S7 basic communication 	0
max.	-	0
max.	 adjustable for S7 basic communication. 	12
S7 massage functions	· · · · · · · · · · · · · · · · · · ·	
	S7 message functions	

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 simultaneously active Alam-S blocks, max. Status block Single step Ves Number of breakpoints Status/control Status/control variable Variables Variables Number of variables, max. Of which status variables, max. In of which status variables, max. Of which status variables, max. In of which control variables, max. In of which powerfalls, max. In of which pow		
Test commissioning functions Slatus block Yes; Up to 2 simultaneously Single step Yes Number of breakpoints 4 Status/control variable Yes • Variables Inputs, outputs, memory bits, DB, times, counters • Number of variables, max. 30 — of which status variables, max. 14 Forcing • Forcing Yes • Force, variables Inputs, outputs • Number of variables, max. 10 Diagnostic buffer • present Yes • Number of entries, max. 500 — can be set — Of which powerfail-proof 100; Only the last 100 entries are retained • Number of entries readable in RUN, max. — can be set Yes; From 10 to 499 — preset 10 Service data • Can be read out Yes Ambient conditions Ambient temperature in operation • Min. 0 °C Configuration Configuration software • STEP 7 Yes; V5.2 SP1 or higher with HW update programming • Command set System function Ist • Nesting levels • System function blocks (SFB) Frogramming language		
Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max. — of which control variables, max. — of which control variables, max. — of which status variables, max. — of which control variables, max. — of variables Number of variables Number of entries, max. — can be set — of which powerfail-proof • Number of entries readable in RUN, max. — can be set — of which powerfail-proof • Number of entries readable in RUN, max. — can be set — preset Service data • Can be read out Yes Ambient conditions Ambient temperature in operation • Min. • max. — of "C configuration Configuration Configuration Configuration software • STEP 7 Yes; V5.2 SP1 or higher with HW update Programming • Command set • Nesting levels • System function blocks (SFB) • Programming language	simultaneously active Alarm-S blocks, max.	300
Status block Single step Number of breakpoints Status/control Status/control variable Variables Number of variables, max. — of which status variables, max. — of which control variables, max. — of which control variables, max. — of which control variables, max. — of which status variables, max. — of which control variables, max. — of variables Number of variables Number of entries, max. — can be set — of which powerfail-proof • Number of entries readable in RUN, max. — can be set — of which powerfail-proof • Number of entries readable in RUN, max. — can be set — preset Service data • Can be read out Yes Ambient conditions Ambient temperature in operation • Min. • max. — of "C configuration Configuration Configuration Configuration software • STEP 7 Yes; V5.2 SP1 or higher with HW update Programming • Command set • Nesting levels • System function blocks (SFB) • Programming language	Test commissioning functions	
Number of breakpoints Status/control • Status/control variable • Variables • Number of variables, max. — of which status variables, max. — of which control variables, max. 14 Forcing • Force, variables • Number of variables, max. — (an be set — Of which powerfail-proof • Number of entries readable in RUN, max. — can be set — preset Service data • Can be read out Ambient conditions Ambient temperature in operation • Min. • max. Configuration Configuration Configuration Configuration Configuration Command set • Nesting levels • System function (SFC) • System function blocks (SFB) Programming language		Yes; Up to 2 simultaneously
Status/control Status/control variable Variables Inputs, outputs, memory bits, DB, times, counters Inputs, outputs Forcing Forcing Forcing Forcing Force, variables, max. Number of variables, max. Inputs, outputs Inputs, outputs Number of variables, max. Inputs, outputs No Inputs, outputs Inputs, outputs, memory bits, DB, outputs Inputs, outputs, outputs Inputs, out	Single step	Yes
Status/control variable Variables Number of variables, max. of which status variables, max. of which control variables, max. It Forcing Forcing Force, variables Number of variables, max. It Forcing Force, variables Number of variables, max. Oliagnostic buffer present Number of entries, max. - can be set Of which powerfail-proof Number of entries readable in RUN, max. - can be set - preset Can be read out Ambient conditions Ambient temperature in operation Min. max. O °C Configuration Configuration Configuration Command set Nese instruction list Nese instruction list Sevice see instruction list Seystem function blocks (SFB) Programming language	Number of breakpoints	4
Variables Number of variables, max. of which status variables, max. of which control variables, max. Italians Forcing Forcing Forcing Force, variables Number of variables, max. Inputs, outputs Inpu	Status/control	
Number of variables, max. of which status variables, max. of which control variables, max. 14 Forcing Forcing Force, variables Number of variables, max. 10 Diagnostic buffer present No Number of entries, max. can be set Of which powerfail-proof Number of entries readable in RUN, max. can be set preset Yes; From 10 to 499 preset Can be read out Ambient conditions Ambient temperature in operation Min.	Status/control variable	Yes
- of which status variables, max of which control variables, max. 14 Forcing • Forcing • Force, variables • Number of variables, max. Diagnostic buffer • present • No • Number of entries, max. - can be set - Of which powerfail-proof • Number of entries readable in RUN, max. - can be set - preset 10 Service data • Can be read out Ambient conditions Ambient temperature in operation • Min. • max. - of Min. • max. Configuration Configuration Configuration Configuration Command set • Nesting levels • System function blocks (SFB) Programming language	 Variables 	Inputs, outputs, memory bits, DB, times, counters
- of which control variables, max. Forcing Forcing Force, variables Number of variables, max. Diagnostic buffer present No - can be set - Of which powerfail-proof Number of entries readable in RUN, max. - can be set - can be set - preset Service data Can be read out Ambient conditions Ambient temperature in operation Min. Min. To "C Configuration Configuration Configuration Configuration Configuration Configuration Configuration Configuration Force Service of the read out Service of the read out Yes Configuration Configuration Configuration Configuration Configuration Service of the read out Yes Configuration Configuration Configuration Configuration Configuration Service of the read out Yes Configuration Configuration Configuration Configuration Service of the read out Yes Ambient temperature in operation O "C Configuration Configuration Configuration Configuration Service of the read out Yes Ambient temperature in operation • Min. • O "C Configuration Configuration Configuration Configuration Service of the read out Yes Ambient temperature in operation • Nin. • Nin. • O "C Service of the last 100 entries are retained O "C Configuration • Nin. • O "C Service of the last 100 entries are retained O "C To on the last 100 entries are retained O "C To on the last 100 entries are retained O "C To on the last 100 entries are retained O "C Service of the last 100 entries are retained O "C To on the last 100 entries are retained O "C To on the last 100 entries are retained O "C To on the last 100 entries are retained O "C O "C Service of the last 100 entries are retained O "C O "C Service of the last 100 entries are retained O "C O "C Service of the last 100 entries are retained O "C O "C O "C O "C Service of the last 100 entries are retained O "C O "C Service of the last 100 entries are retained O "C O "C O "C Service of the last 100 entries are retained O "C O "	 Number of variables, max. 	30
Forcing Forcing Force, variables Number of variables, max. Present Number of entries, max. - can be set - Of which powerfail-proof Number of entries readable in RUN, max. - can be set - Present Service data Can be read out Yes Ambient conditions Ambient temperature in operation Min. - Min. - Can figuration Configuration Configuration Configuration Configuration Configuration Force Service data - Service data - Can be read out Yes Ambient temperature in operation New Min. - O °C - Configuration Configuration Configuration Configuration software - STEP 7 Yes; V5.2 SP1 or higher with HW update Programming - Command set Nesting levels See instruction list See instruction list System functions (SFC) System function blocks (SFB) Programming language	— of which status variables, max.	30
Forcing Force, variables Inputs, outputs Inputs, outputs, outputs, outputs, outputs, outputs Inputs, outputs, out	of which control variables, max.	14
Force, variables Force, variables, max. Inputs, outputs Number of variables, max. Diagnostic buffer present Present No Number of entries, max. Can be set Pof which powerfail-proof Number of entries readable in RUN, max. Can be set Present Present Present Present Ves; From 10 to 499 Present Presen	Forcing	
 Number of variables, max. Diagnostic buffer • present • present • Number of entries, max. — can be set — Of which powerfail-proof • Number of entries readable in RUN, max. — can be set — can be set — preset 100; Only the last 100 entries are retained • Number of entries readable in RUN, max. — can be set — preset 10 Service data • Can be read out • Yes Ambient conditions Ambient temperature in operation • Min. • o °C • max. 60 °C Configuration Configuration software • STEP 7 Yes; V5.2 SP1 or higher with HW update programming • Command set • Nesting levels • System functions (SFC) • System function blocks (SFB) Programming language 	• Forcing	Yes
Diagnostic buffer • present Yes • Number of entries, max. 500 — can be set No — Of which powerfail-proof 100; Only the last 100 entries are retained • Number of entries readable in RUN, max. — can be set Yes; From 10 to 499 — preset 10 Service data • Can be read out Yes Ambient conditions Ambient temperature in operation • Min. 0 °C • max. 60 °C Configuration Configuration software • STEP 7 Yes; V5.2 SP1 or higher with HW update • STEP 7 Yes; V5.2 SP1 or higher with HW update • Command set see instruction list • Nesting levels 8 • System functions (SFC) see instruction list • System function blocks (SFB) see instruction list Programming language	• Force, variables	Inputs, outputs
present represent Number of entries, max. — can be set — Of which powerfail-proof Number of entries readable in RUN, max. — can be set — preset Personal to the set of	Number of variables, max.	10
Number of entries, max. — can be set — Of which powerfail-proof Number of entries readable in RUN, max. — can be set — preset Service data • Can be read out Ambient conditions Ambient temperature in operation • Min. • max. Configuration Configuration software • STEP 7 Programming • Command set • Nesting levels • System function blocks (SFB) Programming language Solo 100; Only the last 100 entries are retained 100; Only the last 100 entries ar	Diagnostic buffer	
- can be set - Of which powerfail-proof • Number of entries readable in RUN, max can be set - preset Service data • Can be read out Ambient conditions Ambient temperature in operation • Min. • max. Configuration Configuration Configuration software • STEP 7 Programming • Command set • Nesting levels • System functions (SFC) • System function blocks (SFB) Programming language	• present	Yes
- Of which powerfail-proof ● Number of entries readable in RUN, max. - can be set	 Number of entries, max. 	500
Number of entries readable in RUN, max. — can be set — preset Service data Can be read out Yes Ambient conditions Ambient temperature in operation Min. max. Configuration Configuration Configuration software STEP 7 Yes; V5.2 SP1 or higher with HW update programming Command set Nesting levels System functions (SFC) System function blocks (SFB) Programming language	— can be set	No
	 Of which powerfail-proof 	100; Only the last 100 entries are retained
— preset Service data • Can be read out Yes Ambient conditions Ambient temperature in operation • Min. • max. 60 °C Configuration Configuration Software • STEP 7 Yes; V5.2 SP1 or higher with HW update programming • Command set • Nesting levels • System functions (SFC) • System function blocks (SFB) Programming language	 Number of entries readable in RUN, max. 	
Service data • Can be read out Yes Ambient conditions Ambient temperature in operation • Min. • max. 60 °C Configuration Configuration STEP 7 Yes; V5.2 SP1 or higher with HW update programming • Command set • Nesting levels • System functions (SFC) • System function blocks (SFB) Programming language	— can be set	Yes; From 10 to 499
Configuration Configuration Configuration O °C max. Configuration Configuration Configuration STEP 7 Yes; V5.2 SP1 or higher with HW update programming Command set Nesting levels System functions (SFC) System function blocks (SFB) Programming language Pyes Yes Yes See instruction list see instruction list see instruction list	— preset	10
Ambient conditions Ambient temperature in operation • Min. • max. 60 °C Configuration Configuration software • STEP 7 Yes; V5.2 SP1 or higher with HW update programming • Command set • Nesting levels • System functions (SFC) • System function blocks (SFB) Programming language	Service data	
Ambient temperature in operation • Min. • max. Configuration Configuration software • STEP 7 Yes; V5.2 SP1 or higher with HW update programming • Command set • Nesting levels • System functions (SFC) • System function blocks (SFB) Programming language	Can be read out	Yes
Min. max. O °C 60 °C Configuration Configuration software STEP 7 Yes; V5.2 SP1 or higher with HW update programming Command set Nesting levels System functions (SFC) System function blocks (SFB) Programming language	Ambient conditions	
 max. 60 °C Configuration Configuration software STEP 7 Yes; V5.2 SP1 or higher with HW update programming Command set Nesting levels Nesting levels System functions (SFC) System function blocks (SFB) See instruction list System function blocks (SFB) Programming language	Ambient temperature in operation	
Configuration Configuration software • STEP 7 Yes; V5.2 SP1 or higher with HW update programming • Command set • Nesting levels • System functions (SFC) • System function blocks (SFB) Programming language	• Min.	0 °C
Configuration software • STEP 7 Programming • Command set • Nesting levels • System functions (SFC) • System function blocks (SFB) Programming language Yes; V5.2 SP1 or higher with HW update See instruction list see instruction list see instruction list	• max.	60 °C
 STEP 7		
Programming Command set		
 Command set Nesting levels System functions (SFC) System function blocks (SFB) Programming language 		Yes; V5.2 SP1 or higher with HW update
 Nesting levels System functions (SFC) System function blocks (SFB) Programming language 8 see instruction list Programming language		
 System functions (SFC) see instruction list System function blocks (SFB) see instruction list Programming language 		
• System function blocks (SFB) see instruction list Programming language		
Programming language		
		see instruction list
— LAD	Programming language	
	— LAD	Yes
— FBD 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

Dimensions	
Width	40 mm
Height	125 mm
Depth	130 mm

Weights	
Weight, approx.	290 g

last modified: 12.03.2015