



SIMATIC S7-300, CPU 317T-3 PN/DP, CENTRAL PROCESSING UNIT FOR PLC AND TECHNOLOGY, 1024 KBYTE WORKING MEMORY, 1. INTERFACE MPI/DP 12MBIT/S, 2. INTERFACE DP(DRIVE), 3. INTERFACE ETHERNET PROFINET WITH 2 PORT SWITCH, INTEGRATED I/O FOR TECHNOLOGY, FRONT CONNECTOR (1 X 40PIN) AND MICRO MEMORY CARD MIN. 8 MB NECESSARY

### Product type designation

### General information

Hardware product version	01
Firmware version	CPU: V3.2; integrated technology V4.1.5

### 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.

Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	Yes

Digital outputs	
Load voltage L+	
— Rated value (DC)	24 V; 2L+
— Reverse polarity protection	No; 2L+

### Input current

Current consumption (rated value)	1 050 mA
Current consumption (in no-load operation), typ.	230 mA
Inrush current, typ.	6.5 A
$I^2t$	1 A <sup>2</sup> ·s

### Power losses

Power loss, typ.	7.5 W
<b>Memory</b>	
<b>Work memory</b>	
<ul style="list-style-type: none"> <li>• Integrated</li> </ul>	1 024 kbyte
<ul style="list-style-type: none"> <li>• expandable</li> </ul>	No
<ul style="list-style-type: none"> <li>• Size of retentive memory for retentive data blocks</li> </ul>	256 kbyte
<b>Load memory</b>	
<ul style="list-style-type: none"> <li>• pluggable (MMC)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• pluggable (MMC), max.</li> </ul>	8 Mbyte
<ul style="list-style-type: none"> <li>• Data management on MMC (after last programming), min.</li> </ul>	10 y
<b>Backup</b>	
<ul style="list-style-type: none"> <li>• present</li> </ul>	Yes; Guaranteed by MMC (maintenance-free)
<ul style="list-style-type: none"> <li>• without battery</li> </ul>	Yes; Program and data
<b>CPU processing times</b>	
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
<b>CPU-blocks</b>	
Number of blocks (total)	2 048; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.
<b>DB</b>	
<ul style="list-style-type: none"> <li>• Number, max.</li> </ul>	2 048; Number range: 1 to 16000
<ul style="list-style-type: none"> <li>• Size, max.</li> </ul>	64 kbyte
<b>FB</b>	
<ul style="list-style-type: none"> <li>• Number, max.</li> </ul>	2 048; Number range: 0 to 7999
<ul style="list-style-type: none"> <li>• Size, max.</li> </ul>	64 kbyte
<b>FC</b>	
<ul style="list-style-type: none"> <li>• Number, max.</li> </ul>	2 048; Number range: 0 to 7999
<ul style="list-style-type: none"> <li>• Size, max.</li> </ul>	64 kbyte
<b>OB</b>	
<ul style="list-style-type: none"> <li>• Description</li> </ul>	see instruction list
<ul style="list-style-type: none"> <li>• Size, max.</li> </ul>	64 kbyte
<ul style="list-style-type: none"> <li>• Number of free cycle OBs</li> </ul>	1; OB 1
<ul style="list-style-type: none"> <li>• Number of time alarm OBs</li> </ul>	1; OB 10
<ul style="list-style-type: none"> <li>• Number of delay alarm OBs</li> </ul>	2; OB 20, 21
<ul style="list-style-type: none"> <li>• Number of time interrupt OBs</li> </ul>	4; OB 32, 33, 34, 35
<ul style="list-style-type: none"> <li>• Number of process alarm OBs</li> </ul>	1; OB 40
<ul style="list-style-type: none"> <li>• Number of DPV1 alarm OBs</li> </ul>	3; OB 55, 56, 57

• Number isochronous mode OBs	1; OB 61 - isochronous mode is possible either on DP or PROFINET IO (not simultaneously)
• Number of technology synchronous alarm OBs	1; OB 65
• Number of startup OBs	1; OB 100
• Number of asynchronous error OBs	6; OB 80, 82, 83, 85, 86, 87 (OB83 only for PROFINET IO)
• Number of synchronous error OBs	2; OB 121, 122
<b>Nesting depth</b>	
• per priority class	16
• additional within an error OB	4
<b>Counters, timers and their retentivity</b>	
<b>S7 counter</b>	
• Number	512
<b>Retentivity</b>	
— can be set	Yes
— lower limit	0
— upper limit	511
— preset	Z 0 to Z 7
<b>Counting range</b>	
— can be set	Yes
— lower limit	0
— upper limit	999
<b>IEC counter</b>	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
<b>S7 times</b>	
• Number	512
<b>Retentivity</b>	
— can be set	Yes
— lower limit	0
— upper limit	511
— preset	No retentivity
<b>Time range</b>	
— lower limit	10 ms
— upper limit	9 990 s
<b>IEC timer</b>	
• present	Yes
• Type	SFB
• Number	Unlimited (limited only by RAM capacity)
<b>Data areas and their retentivity</b>	
Total retentive data area	All, max. 256 KB

Flag	
• Number, max.	4 096 byte
• Retentivity available	Yes; From MB 0 to MB 4095
• Retentivity preset	MB 0 to MB 15
• Number of clock memories	8; 1 memory byte
Data blocks	
• Number, max.	2 048; 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.	32 768 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
Default addresses of the integrated channels	
— Digital inputs	66
— Digital outputs	66
Subprocess images	
• Number of subprocess images, max.	1; With PROFINET IO, the length of the user data is limited to 1600 bytes
Digital channels	
• Inputs	65 536
— Inputs, of which central	256
• Outputs	65 536
— Outputs, of which central	256
Analog channels	
• Inputs	4 096
— Inputs, of which central	64
• Outputs	4 096

— Outputs, of which central

64

## Hardware configuration

Expansion devices, max.	0
<b>Number of DP masters</b>	
• Integrated	2; 1 DP and 1 DP (drive)
• Via CP	2; for DP
<b>Number of operable FMs and CPs (recommended)</b>	
• FM	8
• CP, point-to-point	8
• CP, LAN	8
<b>Rack</b>	
• Racks, max.	1
• Modules per rack, max.	8

## Time of day

<b>Clock</b>	
• 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 period	Clock continues to run with the time at which the power failure occurred
<b>Operating hours counter</b>	
• Number	4
• Number/Number range	0 to 3
• Range of values	0 to 2 <sup>31</sup> hours (when using SFC 101)
• Granularity	1 hour
• retentive	Yes; Must be restarted at each restart
<b>Clock synchronization</b>	
• supported	Yes
• to MPI, master	Yes
• to MPI, slave	Yes
• to DP, master	Yes
• to DP, slave	Yes; Only time-of-day slave
• in AS, master	Yes
• in AS, slave	Yes
• on Ethernet via NTP	Yes; As client

## Digital inputs

Number of digital inputs	4
• of which, inputs usable for technological functions	4

Input characteristic curve in accordance with IEC 61131, type 1	Yes
<b>horizontal installation</b>	
— up to 40 °C, max.	4
— up to 60 °C, max.	4
<b>vertical installation</b>	
— up to 40 °C, max.	4
<b>Input voltage</b>	
• Rated value (DC)	24 V
• for signal "0"	-3 to +5V
<b>Input current</b>	
• for signal "1", typ.	7 mA
<b>for counter/technological functions</b>	
— at "0" to "1", max.	10 µs; Typical
— at "1" to "0", max.	10 µs; Typical
<b>Cable length</b>	
• shielded, max.	1 000 m
<b>Digital outputs</b>	
Number of digital outputs	8
• of which high-speed outputs	8
Functions	For technology functions, e.g. high-speed cam switch signals
short-circuit protection	Yes
• Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	48 V
Controlling a digital input	No
<b>Switching capacity of the outputs</b>	
• on lamp load, max.	5 W
<b>Load resistance range</b>	
• lower limit	48 Ω
• upper limit	4 kΩ
<b>Output voltage</b>	
• for signal "0", max.	3 V; (2L+)
• for signal "1", min.	Rated voltage -2.5 V
<b>Output current</b>	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range for 0 to 60 °C, min.	5 mA
• for signal "1" permissible range for 0 to 60 °C, max.	0.6 A
• for signal "0" residual current, max.	0.3 mA
<b>Parallel switching of 2 outputs</b>	
• for increased power	No

• for redundant control of a load	No
<b>Switching frequency</b>	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.2 Hz; to IEC 947-5-1, DC-13
• on lamp load, max.	100 Hz
<b>horizontal installation</b>	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	3 A
<b>all other mounting positions</b>	
— up to 40 °C, max.	4 A
<b>Integrated high-speed cams</b>	
• Switching accuracy, (+/-)	70 µs
<b>Cable length</b>	
• shielded, max.	1 000 m
<b>Analog inputs</b>	
Number of analog inputs	0
<b>Analog outputs</b>	
Number of analog outputs	0
<b>Connectable encoders</b>	
• 2-wire sensor	No
<b>Interfaces</b>	
Number of RS 422 interfaces	0
Number of other interfaces	0
<b>1st interface</b>	
Interface type	Integrated RS 485 interface
Physics	RS 485
Isolated	Yes
Power supply to interface (15 to 30 V DC), max.	200 mA
<b>Functionality</b>	
• MPI	Yes
• DP master	Yes
• DP slave	Yes
• Point-to-point connection	No
<b>MPI</b>	
• Transmission rate, max.	12 Mbit/s
<b>Services</b>	
— PG/OP communication	Yes
— Routing	Yes
— Global data communication	Yes
— S7 basic communication	Yes

— S7 communication	Yes
— S7 communication, as client	No; but via CP and loadable FB
— S7 communication, as server	Yes
<b>DP master</b>	
• Transmission rate, max.	12 Mbit/s
• Number of DP slaves, max.	124
<b>Services</b>	
— PG/OP communication	Yes
— Routing	Yes
— Global data communication	No
— S7 basic communication	Yes; I blocks only
— S7 communication	Yes
— S7 communication, as client	No
— S7 communication, as server	Yes
— Equidistance mode support	Yes
— Isochronous mode	Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO
— 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
<b>Address area</b>	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
<b>User data per DP slave</b>	
— Inputs, max.	244 byte
— Outputs, max.	244 byte
<b>DP slave</b>	
• 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
<b>Services</b>	
— PG/OP communication	Yes
— Routing	Yes; Only with active interface
— Global data communication	No
— S7 basic communication	No
— S7 communication	Yes
— S7 communication, as client	No



— S7 communication, as server	Yes; Connection configured on one side only
— Direct data exchange (slave-to-slave communication)	Yes
— DPV1	No
<b>Transfer memory</b>	
— Inputs	244 byte
— Outputs	244 byte

## 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

<b>Functionality</b>	
• MPI	No
• DP master	Yes; DP(DRIVE)-Master
• DP slave	No
• Point-to-point connection	No

<b>DP master</b>	
• Transmission rate, max.	12 Mbit/s
• Number of DP slaves, max.	64

<b>Services</b>	
— PG/OP communication	No
— Routing	No
— Global data communication	No
— S7 basic communication	No
— S7 communication	No
— Equidistance mode support	Yes
— Isochronous mode	Yes
— SYNC/FREEZE	No
— Activation/deactivation of DP slaves	Yes
— DPV1	No

<b>Address area</b>	
— Inputs, max.	1 024 byte
— Outputs, max.	1 024 byte

<b>User data per DP slave</b>	
— Inputs, max.	244 byte
— Outputs, max.	244 byte

<b>DP slave</b>	
• GSD file	<a href="http://support.automation.siemens.com">http://support.automation.siemens.com</a> in Product Support area
• Transmission rate, max.	12 Mbit/s

## 3rd interface

Interface type	PROFINET
Physics	Ethernet RJ45
Isolated	Yes
Integrated switch	Yes
Number of ports	2
Automatic detection of transmission speed	Yes; 10/100 Mbit/s
Autonegotiation	Yes
Autocrossing	Yes
Change of IP address at runtime, supported	Yes
<b>Media redundancy</b>	
<ul style="list-style-type: none"> <li>• supported</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Switchover time on line break, typically</li> </ul>	200 ms; PROFINET MRP
<ul style="list-style-type: none"> <li>• Number of stations in the ring, max.</li> </ul>	50
<b>Functionality</b>	
<ul style="list-style-type: none"> <li>• MPI</li> </ul>	No
<ul style="list-style-type: none"> <li>• DP master</li> </ul>	No
<ul style="list-style-type: none"> <li>• DP slave</li> </ul>	No
<ul style="list-style-type: none"> <li>• PROFINET IO Controller</li> </ul>	Yes; Also simultaneously with IO-Device functionality
<ul style="list-style-type: none"> <li>• PROFINET IO Device</li> </ul>	Yes; Also simultaneously with IO Controller functionality
<ul style="list-style-type: none"> <li>• Open IE communication</li> </ul>	Yes; Via TCP/IP, ISO on TCP, and UDP
<ul style="list-style-type: none"> <li>• Web server</li> </ul>	Yes
<ul style="list-style-type: none"> <li>— Number of HTTP clients</li> </ul>	5
<b>PROFINET IO Controller</b>	
<ul style="list-style-type: none"> <li>• Transmission rate, max.</li> </ul>	100 Mbit/s
<ul style="list-style-type: none"> <li>• Number of connectable IO devices, max.</li> </ul>	128
<ul style="list-style-type: none"> <li>• Max. number of connectable IO devices for RT</li> </ul>	128
<ul style="list-style-type: none"> <li>— of which in line, max.</li> </ul>	128
<ul style="list-style-type: none"> <li>• Number of IO Devices with IRT and the option "high performance", max.</li> </ul>	64
<ul style="list-style-type: none"> <li>— of which in line, max.</li> </ul>	64
<ul style="list-style-type: none"> <li>• Shared device</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Prioritized startup</li> </ul>	Yes
<ul style="list-style-type: none"> <li>— Number of IO Devices, max.</li> </ul>	32
<ul style="list-style-type: none"> <li>• Activation/deactivation of IO Devices</li> </ul>	Yes
<ul style="list-style-type: none"> <li>— Maximum number of IO devices that can be activated/deactivated at the same time.</li> </ul>	8
<ul style="list-style-type: none"> <li>• IO Devices changing during operation (partner ports), supported</li> </ul>	Yes
<ul style="list-style-type: none"> <li>— Max. number of IO devices per tool</li> </ul>	8
<ul style="list-style-type: none"> <li>• Device replacement without swap medium</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Send cycles</li> </ul>	250 µs, 500 µs, 1 ms, 2 ms, 4 ms

<ul style="list-style-type: none"> <li>Updating time</li> </ul>	250 µs to 512 ms (depending on the operating mode, see Manual "S7-300 CPU 31xC and CPU 31x, Technical Data" for more details)
<b>Services</b>	
— PG/OP communication	Yes
— Routing	Yes
— S7 communication	Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32
— Isochronous mode	Yes; OB 61; isochronous mode can only be used alternatively on PROFIBUS DP or PROFINET IO
— Open IE communication	Yes; Via TCP/IP, ISO on TCP, and UDP
<b>Address area</b>	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
— User data consistency, max.	1 024 byte
<b>PROFINET IO Device</b>	
<b>Services</b>	
— PG/OP communication	Yes
— Routing	Yes
— S7 communication	Yes; with loadable FBs, max. configurable connections: 16, max. number of instances: 32
— Isochronous mode	No
— Open IE communication	Yes; Via TCP/IP, ISO on TCP, and UDP
— IRT	Yes
— PROFlenergy	Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device
— Shared device	Yes
— Number of IO controllers with shared device, max.	2
<b>Transfer memory</b>	
— Inputs, max.	1 440 byte; Per IO Controller with shared device
— Outputs, max.	1 440 byte; Per IO Controller with shared device
<b>Submodules</b>	
— Number, max.	64
— User data per submodule, max.	1 024 byte
<b>Open IE communication</b>	
<ul style="list-style-type: none"> <li>Number of connections, max.</li> </ul>	16
<ul style="list-style-type: none"> <li>Local port numbers used at the system end</li> </ul>	0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535
<ul style="list-style-type: none"> <li>Keep-alive function, supported</li> </ul>	Yes
<b>Isochronous mode</b>	
Isochronous operation (application synchronized up to terminal)	Yes; Via PROFIBUS DP or PROFINET interface

## Communication functions

PG/OP communication	Yes
Data record routing	Yes
<b>Global data communication</b>	
<ul style="list-style-type: none"> <li>supported</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Number of GD loops, max.</li> </ul>	8
<ul style="list-style-type: none"> <li>Number of GD packets, max.</li> </ul>	8
<ul style="list-style-type: none"> <li>Number of GD packets, transmitter, max.</li> </ul>	8
<ul style="list-style-type: none"> <li>Number of GD packets, receiver, max.</li> </ul>	8
<ul style="list-style-type: none"> <li>Size of GD packets, max.</li> </ul>	22 byte
<ul style="list-style-type: none"> <li>Size of GD packet (of which consistent), max.</li> </ul>	22 byte
<b>S7 basic communication</b>	
<ul style="list-style-type: none"> <li>supported</li> </ul>	Yes
<ul style="list-style-type: none"> <li>User data per job, max.</li> </ul>	76 byte
<ul style="list-style-type: none"> <li>User data per job (of which consistent), max.</li> </ul>	76 byte; 76 bytes (with X_SEND or X_RCV); 64 bytes (with X_PUT or X_GET as server)
<b>S7 communication</b>	
<ul style="list-style-type: none"> <li>supported</li> </ul>	Yes
<ul style="list-style-type: none"> <li>as server</li> </ul>	Yes
<ul style="list-style-type: none"> <li>As client</li> </ul>	Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB
<ul style="list-style-type: none"> <li>User data per job, max.</li> </ul>	See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)
<b>S5-compatible communication</b>	
<ul style="list-style-type: none"> <li>supported</li> </ul>	Yes; via CP and loadable FC
<b>Open IE communication</b>	
<ul style="list-style-type: none"> <li>TCP/IP <ul style="list-style-type: none"> <li>Number of connections, max.</li> <li>Data length for connection type 01H, max.</li> <li>Data length for connection type 11H, max.</li> <li>Several passive connections per port, supported</li> </ul> </li> <li>ISO-on-TCP (RFC1006) <ul style="list-style-type: none"> <li>Number of connections, max.</li> <li>Data length, max.</li> </ul> </li> <li>UDP <ul style="list-style-type: none"> <li>Number of connections, max.</li> <li>Data length, max.</li> </ul> </li> </ul>	<p>Yes; via integrated PROFINET interface and loadable FBs</p> <p>16</p> <p>1 460 byte</p> <p>32 768 byte</p> <p>Yes</p> <p>Yes; via integrated PROFINET interface and loadable FBs</p> <p>16</p> <p>32 768 byte</p> <p>Yes; via integrated PROFINET interface and loadable FBs</p> <p>16</p> <p>1 472 byte</p>
<b>Web server</b>	
<ul style="list-style-type: none"> <li>supported</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Number of HTTP clients</li> </ul>	5
<ul style="list-style-type: none"> <li>User-defined websites</li> </ul>	Yes

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 S7 communication	16
— reserved for S7 communication	0
— Adjustable for S7 communication, min.	0
— Adjustable for S7 communication, max.	16
• Max. total number of instances	32
• usable for routing	X1 as MPI: max. 10; X1 as DP master: max. 24; X1 as DP slave (active): max. 14; X2 as PROFINET: 24 max.

S7 message functions	
Number of login stations for message functions, max.	32; 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; without continuation
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	
• Forcing	Yes
• Force, variables	Inputs, outputs
• Number of variables, max.	10

<b>Diagnostic buffer</b>	
• 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.	499
— can be set	Yes; From 10 to 499
— preset	10
<b>Service data</b>	
• Can be read out	Yes
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
• Alarms	No
<b>Diagnostic messages</b>	
• Diagnostic functions	No
<b>Diagnostics indication LED</b>	
• Status indicator digital output (green)	Yes
• Status indicator digital input (green)	Yes
<b>Galvanic isolation</b>	
<b>Galvanic isolation digital inputs</b>	
• between the channels and the backplane bus	Yes
<b>Galvanic isolation digital outputs</b>	
• between the channels and the backplane bus	Yes
<b>Permissible potential difference</b>	
between different circuits	75V DC/60V AC
<b>Isolation</b>	
Isolation checked with	500 V DC
<b>Ambient conditions</b>	
<b>Ambient temperature in operation</b>	
• Min.	0 °C
• max.	60 °C
<b>Configuration</b>	
<b>Configuration software</b>	
• STEP 7	Yes
<b>programming</b>	
• Command set	see instruction list
• Nesting levels	8
• System functions (SFC)	see instruction list
• System function blocks (SFB)	see instruction list
<b>Programming language</b>	

— 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	120 mm
Height	125 mm
Depth	130 mm

#### Weights

Weight, approx.	640 g
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**last modified:** 12.03.2015