**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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW functional status</td>
<td>01</td>
</tr>
<tr>
<td>Firmware version</td>
<td>V3.3</td>
</tr>
</tbody>
</table>

### Engineering with

- Programming package
  - STEP 7 V5.5 + SP1 or higher or STEP 7 V5.2 + SP1 or higher with HSP 218

## Supply voltage

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated value (DC)</td>
<td>24 V DC</td>
</tr>
<tr>
<td>permissible range, lower limit (DC)</td>
<td>19.2 V</td>
</tr>
<tr>
<td>permissible range, upper limit (DC)</td>
<td>28.8 V</td>
</tr>
<tr>
<td>external protection for power supply lines (recommendation)</td>
<td>2 A min.</td>
</tr>
</tbody>
</table>

### Mains buffering

- Mains/voltage failure stored energy time
  - 5 ms
- Repeat rate, min.
  - 1 s

## Input current

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current consumption (rated value)</td>
<td>850 mA</td>
</tr>
<tr>
<td>Parameter</td>
<td>Value</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Current consumption (in no-load operation), typ.</td>
<td>150 mA</td>
</tr>
<tr>
<td>Inrush current, typ.</td>
<td>3.5 A</td>
</tr>
<tr>
<td>( I^2t )</td>
<td>1 A²·s</td>
</tr>
<tr>
<td><strong>Power loss</strong></td>
<td></td>
</tr>
<tr>
<td>Power loss, typ.</td>
<td>4.5 W</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td></td>
</tr>
<tr>
<td>Work memory</td>
<td></td>
</tr>
<tr>
<td>• integrated</td>
<td>256 kbyte</td>
</tr>
<tr>
<td>• expandable</td>
<td>No</td>
</tr>
<tr>
<td>• Size of retentive memory for retentive data blocks</td>
<td>128 kbyte</td>
</tr>
<tr>
<td>Load memory</td>
<td></td>
</tr>
<tr>
<td>• Plug-in (MMC)</td>
<td>Yes</td>
</tr>
<tr>
<td>• Plug-in (MMC), max.</td>
<td>8 Mbyte</td>
</tr>
<tr>
<td>• Data management on MMC (after last programming), min.</td>
<td>10 y</td>
</tr>
<tr>
<td>Backup</td>
<td></td>
</tr>
<tr>
<td>• present</td>
<td>Yes; Guaranteed by MMC (maintenance-free)</td>
</tr>
<tr>
<td>• without battery</td>
<td>Yes; Program and data</td>
</tr>
<tr>
<td><strong>CPU processing times</strong></td>
<td></td>
</tr>
<tr>
<td>for bit operations, typ.</td>
<td>0.05 µs</td>
</tr>
<tr>
<td>for word operations, typ.</td>
<td>0.09 µs</td>
</tr>
<tr>
<td>for fixed point arithmetic, typ.</td>
<td>0.12 µs</td>
</tr>
<tr>
<td>for floating point arithmetic, typ.</td>
<td>0.45 µs</td>
</tr>
<tr>
<td><strong>CPU-blocks</strong></td>
<td></td>
</tr>
<tr>
<td>Number of blocks (total)</td>
<td>1 024; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used.</td>
</tr>
<tr>
<td>DB</td>
<td></td>
</tr>
<tr>
<td>• Number, max.</td>
<td>1 024; Number range: 1 to 16000</td>
</tr>
<tr>
<td>• Size, max.</td>
<td>64 kbyte</td>
</tr>
<tr>
<td>FB</td>
<td></td>
</tr>
<tr>
<td>• Number, max.</td>
<td>1 024; Number range: 0 to 7999</td>
</tr>
<tr>
<td>• Size, max.</td>
<td>64 kbyte</td>
</tr>
<tr>
<td>FC</td>
<td></td>
</tr>
<tr>
<td>• Number, max.</td>
<td>1 024; Number range: 0 to 7999</td>
</tr>
<tr>
<td>• Size, max.</td>
<td>64 kbyte</td>
</tr>
<tr>
<td>OB</td>
<td></td>
</tr>
<tr>
<td>• Description</td>
<td>see instruction list</td>
</tr>
<tr>
<td>• Size, max.</td>
<td>64 kbyte</td>
</tr>
<tr>
<td>• Number of free cycle OBs</td>
<td>1; OB 1</td>
</tr>
<tr>
<td>• Number of time alarm OBs</td>
<td>1; OB 10</td>
</tr>
</tbody>
</table>
- 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: 256

**Retentivity**
- adjustable: 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**
- adjustable: 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**
<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retentive data area in total</td>
<td>All, 128 KB max.</td>
</tr>
<tr>
<td>Flag</td>
<td><strong>Number, max.</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td><strong>Retentivity available</strong> Yes; MB 0 to MB 2 047</td>
</tr>
<tr>
<td></td>
<td><strong>Retentivity preset</strong> MB 0 to MB 15</td>
</tr>
<tr>
<td></td>
<td><strong>Number of clock memories</strong> 8; 1 memory byte</td>
</tr>
<tr>
<td>Data blocks</td>
<td><strong>Retentivity adjustable</strong> Yes; via non-retain property on DB</td>
</tr>
<tr>
<td></td>
<td><strong>Retentivity preset</strong> Yes</td>
</tr>
<tr>
<td>Local data</td>
<td><strong>per priority class, max.</strong> 32 kbyte; Max. 2 KB per block</td>
</tr>
<tr>
<td>Address area</td>
<td><strong>I/O address area</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Inputs</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td><strong>Outputs</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td><strong>of which distributed</strong></td>
</tr>
<tr>
<td></td>
<td>— <strong>Inputs</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td>— <strong>Outputs</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td><strong>Process image</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Inputs</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td><strong>Outputs</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td><strong>Inputs, adjustable</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td><strong>Outputs, adjustable</strong> 2 048 byte</td>
</tr>
<tr>
<td></td>
<td><strong>Inputs, default</strong> 128 byte</td>
</tr>
<tr>
<td></td>
<td><strong>Outputs, default</strong> 128 byte</td>
</tr>
<tr>
<td>Subprocess images</td>
<td><strong>Number of subprocess images, max.</strong> 1</td>
</tr>
<tr>
<td>Digital channels</td>
<td><strong>Inputs</strong> 16 384</td>
</tr>
<tr>
<td></td>
<td>— <strong>of which central</strong> 1 024</td>
</tr>
<tr>
<td></td>
<td><strong>Outputs</strong> 16 384</td>
</tr>
<tr>
<td></td>
<td>— <strong>of which central</strong> 1 024</td>
</tr>
<tr>
<td>Analog channels</td>
<td><strong>Inputs</strong> 1 024</td>
</tr>
<tr>
<td></td>
<td>— <strong>of which central</strong> 256</td>
</tr>
<tr>
<td></td>
<td><strong>Outputs</strong> 1 024</td>
</tr>
<tr>
<td></td>
<td>— <strong>of which central</strong> 256</td>
</tr>
<tr>
<td>Hardware configuration</td>
<td><strong>Number of expansion units, max.</strong> 3</td>
</tr>
<tr>
<td></td>
<td><strong>Number of DP masters</strong></td>
</tr>
<tr>
<td></td>
<td>— <strong>integrated</strong> 1</td>
</tr>
</tbody>
</table>
### Number of operable FMs and CPs (recommended)

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM</td>
<td>8</td>
</tr>
<tr>
<td>CP, PtP</td>
<td>8</td>
</tr>
<tr>
<td>CP, LAN</td>
<td>10</td>
</tr>
</tbody>
</table>

### Rack

<table>
<thead>
<tr>
<th>Feature</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racks, max.</td>
<td>4</td>
</tr>
<tr>
<td>Modules per rack, max.</td>
<td>8</td>
</tr>
</tbody>
</table>

### Time of day

#### Clock

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware clock (real-time)</td>
<td>Yes</td>
</tr>
<tr>
<td>retentive and synchronizable</td>
<td>Yes</td>
</tr>
<tr>
<td>Backup time</td>
<td>6 wk; At 40 °C ambient temperature</td>
</tr>
<tr>
<td>Deviation per day, max.</td>
<td>10 s; Typ.: 2 s</td>
</tr>
<tr>
<td>Behavior of the clock following POWER-ON</td>
<td>Clock continues running after POWER OFF</td>
</tr>
<tr>
<td>Behavior of the clock following expiry of backup period</td>
<td>Clock continues to run with the time at which the power failure occurred</td>
</tr>
</tbody>
</table>

#### Operating hours counter

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>1</td>
</tr>
<tr>
<td>Number/Number range</td>
<td>0</td>
</tr>
<tr>
<td>Range of values</td>
<td>0 to 2^31 hours (when using SFC 101)</td>
</tr>
<tr>
<td>Granularity</td>
<td>1 h</td>
</tr>
<tr>
<td>retentive</td>
<td>Yes; Must be restarted at each restart</td>
</tr>
</tbody>
</table>

#### Clock synchronization

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>supported</td>
<td>Yes</td>
</tr>
<tr>
<td>to MPI, master</td>
<td>Yes</td>
</tr>
<tr>
<td>to MPI, slave</td>
<td>Yes</td>
</tr>
<tr>
<td>to DP, master</td>
<td>Yes; With DP slave only slave clock</td>
</tr>
<tr>
<td>to DP, slave</td>
<td>Yes</td>
</tr>
<tr>
<td>in AS, master</td>
<td>Yes</td>
</tr>
<tr>
<td>in AS, slave</td>
<td>No</td>
</tr>
</tbody>
</table>

### Digital inputs

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of digital inputs</td>
<td>0</td>
</tr>
</tbody>
</table>

### Digital outputs

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of digital outputs</td>
<td>0</td>
</tr>
</tbody>
</table>

### Analog inputs

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of analog inputs</td>
<td>0</td>
</tr>
</tbody>
</table>

### Analog outputs

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of analog outputs</td>
<td>0</td>
</tr>
</tbody>
</table>

### Interfaces

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>6ES7315-2AH14-0AB0</td>
<td></td>
</tr>
</tbody>
</table>

Subject to change without notice

© Copyright Siemens
### 1. Interface

<table>
<thead>
<tr>
<th>Interface type</th>
<th>Integrated RS 485 interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>RS 485</td>
</tr>
<tr>
<td>Isolated</td>
<td>No</td>
</tr>
<tr>
<td>Power supply to interface (15 to 30 V DC), max.</td>
<td>200 mA</td>
</tr>
</tbody>
</table>

#### Protocols

- **MPI**: Yes
- **PROFIBUS DP master**: No
- **PROFIBUS 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

### 2. Interface

<table>
<thead>
<tr>
<th>Interface type</th>
<th>Integrated RS 485 interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>RS 485</td>
</tr>
<tr>
<td>Isolated</td>
<td>Yes</td>
</tr>
<tr>
<td>Power supply to interface (15 to 30 V DC), max.</td>
<td>200 mA</td>
</tr>
</tbody>
</table>

#### Protocols

- **MPI**: No
- **PROFIBUS DP master**: Yes
- **PROFIBUS DP slave**: Yes
- **Point-to-point connection**: No

**PROFIBUS 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
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S7 basic communication</td>
<td>Yes; I blocks only</td>
</tr>
<tr>
<td>S7 communication</td>
<td>Yes; Only server, configured on one side</td>
</tr>
<tr>
<td>S7 communication, as client</td>
<td>No</td>
</tr>
<tr>
<td>S7 communication, as server</td>
<td>Yes</td>
</tr>
<tr>
<td>Equidistance</td>
<td>Yes</td>
</tr>
<tr>
<td>Isochronous mode</td>
<td>Yes; OB 61</td>
</tr>
<tr>
<td>SYNC/FREEZE</td>
<td>Yes</td>
</tr>
<tr>
<td>Activation/deactivation of DP slaves</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of DP slaves that can be</td>
<td>8</td>
</tr>
<tr>
<td>simultaneously activated/deactivated, max.</td>
<td></td>
</tr>
<tr>
<td>— DPV1</td>
<td></td>
</tr>
<tr>
<td>Address area</td>
<td></td>
</tr>
<tr>
<td>— Inputs, max.</td>
<td>2 048 byte</td>
</tr>
<tr>
<td>— Outputs, max.</td>
<td>2 048 byte</td>
</tr>
<tr>
<td>User data per DP slave</td>
<td></td>
</tr>
<tr>
<td>— Inputs, max.</td>
<td>244 byte</td>
</tr>
<tr>
<td>— Outputs, max.</td>
<td>244 byte</td>
</tr>
<tr>
<td>PROFIBUS DP slave</td>
<td></td>
</tr>
<tr>
<td>• GSD file</td>
<td>The latest GSD file is available at:</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.siemens.com/profibus-gsd">http://www.siemens.com/profibus-gsd</a></td>
</tr>
<tr>
<td>• Transmission rate, max.</td>
<td>12 Mbit/s</td>
</tr>
<tr>
<td>• automatic baud rate search</td>
<td>Yes; only with passive interface</td>
</tr>
<tr>
<td>• Address area, max.</td>
<td>32</td>
</tr>
<tr>
<td>• User data per address area, max.</td>
<td>32 byte</td>
</tr>
<tr>
<td>Services</td>
<td></td>
</tr>
<tr>
<td>— PG/OP communication</td>
<td>Yes</td>
</tr>
<tr>
<td>— Routing</td>
<td>Yes; Only with active interface</td>
</tr>
<tr>
<td>— Global data communication</td>
<td>No</td>
</tr>
<tr>
<td>— S7 basic communication</td>
<td>No</td>
</tr>
<tr>
<td>— S7 communication</td>
<td>No</td>
</tr>
<tr>
<td>— S7 communication, as client</td>
<td>Yes; Only server, configured on one side</td>
</tr>
<tr>
<td>— S7 communication, as server</td>
<td>No</td>
</tr>
<tr>
<td>— Direct data exchange (slave-to-slave</td>
<td>Yes</td>
</tr>
<tr>
<td>communication)</td>
<td></td>
</tr>
<tr>
<td>— DPV1</td>
<td></td>
</tr>
<tr>
<td>Transfer memory</td>
<td></td>
</tr>
<tr>
<td>— Inputs</td>
<td>244 byte</td>
</tr>
<tr>
<td>— Outputs</td>
<td>244 byte</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isochronous mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isochronous operation (application</td>
</tr>
<tr>
<td>synchronized up to terminal)</td>
</tr>
</tbody>
</table>
## Communication functions

<table>
<thead>
<tr>
<th>Feature</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG/OP communication</td>
<td>Yes</td>
</tr>
<tr>
<td>Data record routing</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### 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 X_GET as server)

### S7 communication
- **supported**: Yes
- **as server**: Yes
- **as client**: Yes; Via CP and loadable FB
- **User data per job, max.**: 180 byte; With PUT/GET
- **User data per job (of which consistent), max.**: 240 byte; as server

### S5 compatible communication
- **supported**: Yes; via CP and loadable FC

## Number of connections

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>overall</td>
<td>16</td>
</tr>
<tr>
<td>usable for PG communication</td>
<td>15</td>
</tr>
<tr>
<td>— reserved for PG communication</td>
<td>1</td>
</tr>
<tr>
<td>— adjustable for PG communication, min.</td>
<td>1</td>
</tr>
<tr>
<td>— adjustable for PG communication, max.</td>
<td>15</td>
</tr>
<tr>
<td>usable for OP communication</td>
<td>15</td>
</tr>
<tr>
<td>— reserved for OP communication</td>
<td>1</td>
</tr>
<tr>
<td>— adjustable for OP communication, min.</td>
<td>1</td>
</tr>
<tr>
<td>— adjustable for OP communication, max.</td>
<td>15</td>
</tr>
<tr>
<td>usable for S7 basic communication</td>
<td>12</td>
</tr>
<tr>
<td>— reserved for S7 basic communication</td>
<td>0</td>
</tr>
<tr>
<td>— adjustable for S7 basic communication,</td>
<td>0</td>
</tr>
<tr>
<td>— min.</td>
<td></td>
</tr>
<tr>
<td>— max.</td>
<td>12</td>
</tr>
</tbody>
</table>

## S7 message functions

---

6ES7315-2AH14-0AB0
Page 8/10

07/22/2019
© Copyright Siemens

Subject to change without notice
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of login stations for message functions, max.</td>
<td>16; Depending on the configured connections for PG/OP and S7 basic communication</td>
</tr>
<tr>
<td>Process diagnostic messages</td>
<td>Yes</td>
</tr>
<tr>
<td>simultaneously active Alarm-S blocks, max.</td>
<td>300</td>
</tr>
<tr>
<td><strong>Test commissioning functions</strong></td>
<td></td>
</tr>
<tr>
<td>Status block</td>
<td>Yes; Up to 2 simultaneously</td>
</tr>
<tr>
<td>Single step</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of breakpoints</td>
<td>4</td>
</tr>
<tr>
<td><strong>Status/control</strong></td>
<td></td>
</tr>
<tr>
<td>Status/control variable</td>
<td>Yes</td>
</tr>
<tr>
<td>Variables</td>
<td>Inputs, outputs, memory bits, DB, times, counters</td>
</tr>
<tr>
<td>Number of variables, max.</td>
<td>30</td>
</tr>
<tr>
<td>— of which status variables, max.</td>
<td>30</td>
</tr>
<tr>
<td>— of which control variables, max.</td>
<td>14</td>
</tr>
<tr>
<td><strong>Forcing</strong></td>
<td></td>
</tr>
<tr>
<td>Forcing</td>
<td>Yes</td>
</tr>
<tr>
<td>Forcing, variables</td>
<td>Inputs, outputs</td>
</tr>
<tr>
<td>Number of variables, max.</td>
<td>10</td>
</tr>
<tr>
<td><strong>Diagnostic buffer</strong></td>
<td></td>
</tr>
<tr>
<td>present</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of entries, max.</td>
<td>500</td>
</tr>
<tr>
<td>— adjustable</td>
<td>No</td>
</tr>
<tr>
<td>— of which powerfail-proof</td>
<td>100; Only the last 100 entries are retained</td>
</tr>
<tr>
<td>Number of entries readable in RUN, max.</td>
<td>Yes; From 10 to 499</td>
</tr>
<tr>
<td>— adjustable</td>
<td>10</td>
</tr>
<tr>
<td>— preset</td>
<td></td>
</tr>
<tr>
<td><strong>Service data</strong></td>
<td></td>
</tr>
<tr>
<td>can be read out</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Ambient conditions</strong></td>
<td></td>
</tr>
<tr>
<td>Ambient temperature during operation</td>
<td></td>
</tr>
<tr>
<td>min.</td>
<td>0 °C</td>
</tr>
<tr>
<td>max.</td>
<td>60 °C</td>
</tr>
<tr>
<td><strong>Configuration</strong></td>
<td></td>
</tr>
<tr>
<td>Configuration software</td>
<td></td>
</tr>
<tr>
<td>STEP 7</td>
<td>Yes; V5.2 SP1 or higher with HW update</td>
</tr>
<tr>
<td><strong>Programming</strong></td>
<td></td>
</tr>
<tr>
<td>Command set</td>
<td>see instruction list</td>
</tr>
<tr>
<td>Nesting levels</td>
<td>8</td>
</tr>
<tr>
<td>System functions (SFC)</td>
<td>see instruction list</td>
</tr>
<tr>
<td>System function blocks (SFB)</td>
<td>see instruction list</td>
</tr>
<tr>
<td><strong>Programming language</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>LAD</td>
<td>Yes</td>
</tr>
<tr>
<td>FBD</td>
<td>Yes</td>
</tr>
<tr>
<td>STL</td>
<td>Yes</td>
</tr>
<tr>
<td>SCL</td>
<td>Yes</td>
</tr>
<tr>
<td>CFC</td>
<td>Yes</td>
</tr>
<tr>
<td>GRAPH</td>
<td>Yes</td>
</tr>
<tr>
<td>HiGraph®</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Know-how protection**

- User program protection/password protection: Yes
- Block encryption: Yes; With S7 block Privacy

**Dimensions**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>40 mm</td>
</tr>
<tr>
<td>Height</td>
<td>125 mm</td>
</tr>
<tr>
<td>Depth</td>
<td>130 mm</td>
</tr>
</tbody>
</table>

**Weights**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight, approx.</td>
<td>290 g</td>
</tr>
</tbody>
</table>

**last modified:** 07/22/2019