

SIPLUS S7-300 CPU 315F-2PN/DP -25...+60°C with conformal coating based on 6ES7315-2FJ14-0AB0 . Central processing unit with 512 KB work memory, 1st interface MPI/DP 12Mbit/ s, 2nd interface Ethernet PROFINET, with 2-port switch, Micro Memory Card required



| General information  |  |
|--|--|
| Engineering with   |  |
| <ul style="list-style-type: none"> <li>Programming package</li> </ul>                      | STEP 7 V5.5 or higher, Distributed Safety V5.4 SP4 |
| Supply voltage   |  |
| Rated value (DC)   |  |
| <ul style="list-style-type: none"> <li>24 V DC</li> </ul>                                  | Yes  |
| permissible range, lower limit (DC)  | 20.4 V   |
| permissible range, upper limit (DC)  | 28.8 V   |
| external protection for power supply lines (recommendation)                                | 2 A min.   |
| Mains buffering  |  |
| <ul style="list-style-type: none"> <li>Mains/voltage failure stored energy time</li> </ul> | 5 ms   |
| <ul style="list-style-type: none"> <li>Repeat rate, min.</li> </ul>                        | 1 s  |
| Input current  |  |
| Current consumption (rated value)  | 750 mA   |
| Current consumption (in no-load operation), typ.   | 150 mA   |
| Inrush current, typ.   | 4 A  |
| $I^2t$   | 1 A <sup>2</sup> ·s                                |

## Power loss

|                  |        |
|------------------|--------|
| Power loss, typ. | 4.65 W |
|------------------|--------|

## Memory

### Work memory

|  |           |
|--|-----------|
| • integrated   | 512 kbyte |
| • expandable   | No        |
| • Size of retentive memory for retentive data blocks | 128 kbyte |

### 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.            | 0.05 $\mu$ s |
| for word operations, typ.           | 0.09 $\mu$ s |
| for fixed point arithmetic, typ.    | 0.12 $\mu$ s |
| for floating point arithmetic, typ. | 0.45 $\mu$ s |

## 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

|                |                                 |
|----------------|---------------------------------|
| • 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

|                                  |                      |
|----------------------------------|----------------------|
| • 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     |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Number of isochronous mode OBs</li> <li>• Number of startup OBs</li> <li>• Number of asynchronous error OBs</li> <li>• Number of synchronous error OBs</li> </ul> | 1; OB 61<br>1; OB 100<br>6; OB 80, 82, 83, 85, 86, 87 (OB83 only for PROFINET IO)<br>2; OB 121, 122 |
| <b>Nesting depth</b>   |   |
| <ul style="list-style-type: none"> <li>• per priority class</li> <li>• additional within an error OB</li> </ul>  | 16<br>4   |
| <b>Counters, timers and their retentivity</b>  |   |
| <b>S7 counter</b>  |   |
| <ul style="list-style-type: none"> <li>• Number</li> </ul>   | 256   |
| <b>Retentivity</b>   |   |
| — adjustable   | Yes   |
| — lower limit  | 0   |
| — upper limit  | 255   |
| — preset   | Z 0 to Z 7  |
| <b>Counting range</b>  |   |
| — adjustable   | Yes   |
| — lower limit  | 0   |
| — upper limit  | 999   |
| <b>IEC counter</b>   |   |
| <ul style="list-style-type: none"> <li>• present</li> <li>• Type</li> <li>• Number</li> </ul>  | Yes<br>SFB<br>Unlimited (limited only by RAM capacity)  |
| <b>S7 times</b>  |   |
| <ul style="list-style-type: none"> <li>• Number</li> </ul>   | 256   |
| <b>Retentivity</b>   |   |
| — adjustable   | Yes   |
| — lower limit  | 0   |
| — upper limit  | 255   |
| — preset   | No retentivity  |
| <b>Time range</b>  |   |
| — lower limit  | 10 ms   |
| — upper limit  | 9 990 s   |
| <b>IEC timer</b>   |   |
| <ul style="list-style-type: none"> <li>• present</li> <li>• Type</li> <li>• Number</li> </ul>  | Yes<br>SFB<br>Unlimited (limited only by RAM capacity)  |
| <b>Data areas and their retentivity</b>  |   |
| retentive data area in total   | All, 128 KB max.  |
| <b>Flag</b>  |   |
| <ul style="list-style-type: none"> <li>• Number, max.</li> </ul>   | 2 048 byte  |

|   |   |
|---|---|
| • Retentivity preset                                | MB 0 to MB 15   |
| • Number of clock memories                          | 8; 1 memory byte  |
| <b>Data blocks</b>                                  |   |
| • Retentivity adjustable                            | Yes; via non-retain property on DB  |
| • Retentivity preset                                | Yes   |
| <b>Address area</b>                                 |   |
| <b>I/O address area</b>                             |   |
| • Inputs  | 2 048 byte  |
| • Outputs   | 2 048 byte  |
| <b>Process image</b>                                |   |
| • 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  |
| <b>Subprocess images</b>                            |   |
| • Number of subprocess images, max.                 | 1; With PROFINET IO, the length of the user data is limited to 1600 bytes |
| <b>Digital channels</b>                             |   |
| • Inputs  | 16 384  |
| — of which central                                  | 1 024   |
| • Outputs   | 16 384  |
| — of which central                                  | 1 024   |
| <b>Analog channels</b>                              |   |
| • Inputs  | 1 024   |
| — of which central                                  | 256   |
| • Outputs   | 1 024   |
| — of which central                                  | 256   |
| <b>Hardware configuration</b>                       |   |
| Number of expansion units, max.                     | 3   |
| <b>Number of DP masters</b>                         |   |
| • integrated  | 1   |
| • via CP  | 4   |
| <b>Number of operable FMs and CPs (recommended)</b> |   |
| • FM  | 8   |
| • CP, PtP   | 8   |
| • CP, LAN   | 10  |
| <b>Rack</b>   |   |
| • Racks, max.                                       | 4   |
| • Modules per rack, max.                            | 8   |

| Time of day   |  |
|---|--|
| <b>Clock</b>  |  |
| • Hardware clock (real-time)                              | Yes  |
| • 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 period | Clock continues to run with the time at which the power failure occurred |
| <b>Operating hours counter</b>                            |  |
| • Number  | 1  |
| • Number/Number range                                     | 0  |
| • Range of values   | 0 to 2 <sup>31</sup> hours (when using SFC 101)                          |
| • Granularity   | 1 h  |
| • retentive   | Yes; Must be restarted at each restart                                   |
| <b>Clock synchronization</b>                              |  |
| • supported   | Yes  |
| • to MPI, master  | Yes  |
| • to MPI, slave   | Yes  |
| • in AS, master   | Yes  |
| • in AS, slave  | Yes  |
| <b>Digital inputs</b>                                     |  |
| Number of digital inputs                                  | 0  |
| <b>Digital outputs</b>                                    |  |
| Number of digital outputs                                 | 0  |
| <b>Analog inputs</b>                                      |  |
| Number of analog inputs                                   | 0  |
| <b>Analog outputs</b>                                     |  |
| Number of analog outputs                                  | 0  |
| <b>Interfaces</b>   |  |
| Number of industrial Ethernet interfaces                  | 1  |
| Number of PROFINET interfaces                             | 1  |
| Number of RS 485 interfaces                               | 1  |
| Number of RS 422 interfaces                               | 0  |
| <b>1. 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>Protocols</b>  |  |

|  |   |
|--|---|
| • MPI  | Yes   |
| • PROFIBUS DP master   | Yes   |
| • PROFIBUS 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>PROFIBUS 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   | 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.   | 2 kbyte   |
| — Outputs, max.  | 2 kbyte   |
| <b>User data per DP slave</b>  |   |
| — Inputs, max.   | 244 byte  |
| — Outputs, max.  | 244 byte  |
| <b>PROFIBUS 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                                    |

|  |   |
|--|---|
| <b>2. Interface</b>                        |   |
| Interface type                             | PROFINET  |
| Physics                                    | Ethernet RJ45   |
| Isolated                                   | Yes   |
| automatic detection of transmission rate   | Yes; 10/100 Mbit/s  |
| Autonegotiation                            | Yes   |
| Autocrossing                               | Yes   |
| Change of IP address at runtime, supported | Yes   |
| <b>Interface types</b>                     |   |
| • Number of ports                          | 2   |
| • integrated switch                        | Yes   |
| <b>Protocols</b>                           |   |
| • MPI                                      | No  |
| • PROFINET IO Controller                   | Yes; Also simultaneously with IO-Device functionality     |
| • PROFINET IO Device                       | Yes; Also simultaneously with IO Controller functionality |
| • PROFINET CBA                             | Yes   |
| • PROFIBUS DP master                       | No  |
| • PROFIBUS DP slave                        | No  |
| • Open IE communication                    | Yes; Via TCP/IP, ISO on TCP, and UDP                      |
| • Web server                               | Yes; only read function                                   |
| <b>PROFINET IO Controller</b>              |   |
| • Transmission rate, max.                  | 100 Mbit/s  |
| <b>Services</b>                            |   |

|   |   |
|---|---|
| — PG/OP communication   | Yes   |
| — Routing   | Yes   |
| — S7 communication  | Yes; With loadable FBs, max. configurable connections: 14, 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  |
| — IRT   | Yes   |
| — Shared device   | Yes   |
| — Prioritized startup   | Yes   |
| — Number of IO devices with prioritized startup, max.                         | 32  |
| — Number of connectable IO Devices, max.                                      | 128   |
| — Of which IO devices with IRT, max.  | 64  |
| — of which in line, max.  | 64  |
| — Number of IO Devices with IRT and the option "high flexibility"             | 128   |
| — of which in line, max.  | 61  |
| — Number of connectable IO Devices for RT, max.                               | 128   |
| — of which in line, max.  | 128   |
| — Activation/deactivation of IO Devices                                       | Yes   |
| — Number of IO Devices that can be simultaneously activated/deactivated, max. | 8   |
| — IO Devices changing during operation (partner ports), supported             | Yes   |
| — Number of IO Devices per tool, max.   | 8   |
| — Device replacement without swap medium                                      | Yes   |
| — Send cycles   | 250 µs, 500 µs, 1 ms; 2 ms, 4 ms (not in the case of IRT with "high flexibility" option)                                      |
| — Updating time   | 250 µs to 512 ms (depending on the operating mode, see Manual "S7-300 CPU 31xC and CPU 31x, Technical Data" for more details) |

#### Address area

|                               |            |
|-------------------------------|------------|
| — Inputs, max.                | 2 kbyte    |
| — Outputs, max.               | 2 kbyte    |
| — User data consistency, max. | 1 024 byte |

#### PROFINET IO Device

##### Services

|                       |   |
|-----------------------|---|
| — PG/OP communication | Yes   |
| — Routing             | Yes   |
| — S7 communication    | Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32 |

|   |   |
|---|---|
| — Isochronous mode                                  | No  |
| — Open IE communication                             | Yes; Via TCP/IP, ISO on TCP, and UDP  |
| — IRT   | Yes   |
| — PROFINergy  | Yes; With SFB 73 / 74 prepared for loadable PROFINergy 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>PROFINET CBA</b>                                 |   |
| • acyclic transmission                              | Yes   |
| • cyclic transmission                               | Yes   |
| <b>Open IE communication</b>                        |   |
| • Number of connections, max.                       | 8   |
| • Local port numbers used at the system end         | 0, 20, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 |
| • Keep-alive function, supported                    | Yes   |
| <b>Protocols</b>                                    |   |
| <b>Open IE communication</b>                        |   |
| • TCP/IP  | Yes; via integrated PROFINET interface and loadable FBs                                 |
| — Number of connections, max.                       | 8   |
| — Data length for connection type 01H, max.         | 1 460 byte  |
| — Data length for connection type 11H, max.         | 32 768 byte   |
| — several passive connections per port, supported   | Yes   |
| • ISO-on-TCP (RFC1006)                              | Yes; via integrated PROFINET interface and loadable FBs                                 |
| — Number of connections, max.                       | 8   |
| — Data length, max.                                 | 32 768 byte   |
| • UDP   | Yes; via integrated PROFINET interface and loadable FBs                                 |
| — Number of connections, max.                       | 8   |
| — Data length, max.                                 | 1 472 byte  |
| <b>Web server</b>                                   |   |
| • supported   | Yes; only read function   |
| • User-defined websites                             | Yes   |
| • Number of HTTP clients                            | 5   |
| <b>Media redundancy</b>                             |   |
| • Switchover time on line break, typ.               | 200 ms; PROFINET MRP  |

- Number of stations in the ring, max. 50

### Isochronous mode

Isochronous operation (application synchronized up to terminal) Yes; Via PROFIBUS DP or PROFINET interface

### Communication functions

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 X\_GET as server)

#### S7 communication

- supported Yes
- as server Yes
- as client Yes; via integrated PROFINET interface and loadable FB or via CP and loadable FB
- User data per job, max. See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)

#### S5 compatible communication

- supported Yes; via CP and loadable FC

#### PROFINET CBA (at set setpoint communication load)

- Setpoint for the CPU communication load 50 %
- Number of remote interconnection partners 32
- Number of functions, master/slave 30
- Total of all master/slave connections 1 000
- Data length of all incoming connections master/slave, max. 4 000 byte
- Data length of all outgoing connections master/slave, max. 4 000 byte
- Number of device-internal and PROFIBUS interconnections 500
- Data length of device-internal und PROFIBUS interconnections, max. 4 000 byte

|  |                           |
|--|---------------------------|
| • Data length per connection, max.                                   | 1 400 byte                |
| <b>Remote interconnections with acyclic transmission</b>             |                           |
| — Sampling frequency: Sampling time, min.                            | 500 ms                    |
| — Number of incoming interconnections                                | 100                       |
| — Number of outgoing interconnections                                | 100                       |
| — Data length of all incoming interconnections, max.                 | 2 000 byte                |
| — Data length of all outgoing interconnections, max.                 | 2 000 byte                |
| — Data length per connection, max.                                   | 1 400 byte                |
| <b>Remote interconnections with cyclic transmission</b>              |                           |
| — Transmission frequency: Transmission interval, min.                | 10 ms                     |
| — Number of incoming interconnections                                | 200                       |
| — Number of outgoing interconnections                                | 200                       |
| — Data length of all incoming interconnections, max.                 | 2 000 byte                |
| — Data length of all outgoing interconnections, max.                 | 2 000 byte                |
| — Data length per connection, max.                                   | 450 byte                  |
| <b>HMI variables via PROFINET (acyclic)</b>                          |                           |
| — Number of stations that can log on for HMI variables (PN OPC/iMap) | 3; 2x PN OPC/1x iMap      |
| — HMI variable updating  | 500 ms                    |
| — Number of HMI variables  | 200                       |
| — Data length of all HMI variables, max.                             | 2 000 byte                |
| <b>PROFIBUS proxy functionality</b>                                  |                           |
| — supported  | Yes                       |
| — Number of linked PROFIBUS devices                                  | 16                        |
| — Data length per connection, max.                                   | 240 byte; Slave-dependent |
| <b>Number of connections</b>   |                           |
| • overall  | 16                        |
| • usable for PG communication  | 15                        |
| — reserved for PG communication                                      | 1                         |
| — adjustable for PG communication, min.                              | 1                         |
| — adjustable for PG communication, max.                              | 15                        |
| • usable for OP communication  | 15                        |
| — reserved for OP communication                                      | 1                         |
| — adjustable for OP communication, min.                              | 1                         |
| — adjustable for OP communication, max.                              | 15                        |
| • usable for S7 basic communication                                  | 14                        |
| — reserved for S7 basic communication                                | 0                         |

|   |   |
|---|---|
| — adjustable for S7 basic communication, min. | 0   |
| — adjustable for S7 basic communication, max. | 14  |
| • usable for S7 communication                 | 14  |
| — reserved for S7 communication               | 0   |
| — adjustable for S7 communication, min.       | 0   |
| — adjustable for S7 communication, max.       | 14  |
| • total number of instances, max.             | 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. | 16; Depending on the configured connections for PG/OP and S7 basic communication |
| Process diagnostic messages                          | Yes  |
| simultaneously active Alarm-S blocks, max.           | 300  |

### Test commissioning functions

|                       |                             |
|-----------------------|-----------------------------|
| Status block          | Yes; Up to 2 simultaneously |
| Single step           | Yes                         |
| Number of breakpoints | 4                           |

#### Status/control

|                                    |   |
|------------------------------------|---|
| • Status/control variable          | Yes   |
| • Variables                        | Inputs, outputs, memory bits, DB, times, counters |
| • Number of variables, max.        | 30  |
| — of which status variables, max.  | 30  |
| — of which control variables, max. | 14  |

#### Forcing

|                             |                 |
|-----------------------------|-----------------|
| • Forcing                   | Yes             |
| • Forcing, variables        | Inputs, outputs |
| • Number of variables, max. | 10              |

#### Diagnostic buffer

|   |     |
|---|-----|
| • present                                 | Yes |
| • Number of entries, max.                 | 500 |
| — adjustable                              | No  |
| — of which powerfail-proof                | 100 |
| • Number of entries readable in RUN, max. | 499 |
| — adjustable                              | Yes |
| — preset                                  | 10  |

#### Service data

|                   |     |
|-------------------|-----|
| • can be read out | Yes |
|-------------------|-----|

### Standards, approvals, certificates

|   |  |
|---|--|
| CE mark   | Yes  |
| UL approval   | Yes; File E239877  |
| RCM (formerly C-TICK)   | Yes  |
| KC approval   | Yes  |
| EAC (formerly Gost-R)   | Yes  |
| <b>Use in hazardous areas</b>                                       |  |
| • ATEX  | Yes  |
| <b>Marine approval</b>  |  |
| • American Bureau of Shipping (ABS)                                 | Yes  |
| <b>Ambient conditions</b>   |  |
| <b>Ambient temperature during operation</b>                         |  |
| • min.  | -25 °C; = Tmin   |
| • max.  | 60 °C; = Tmax  |
| <b>Ambient temperature during storage/transportation</b>            |  |
| • min.  | -40 °C   |
| • max.  | 70 °C  |
| <b>Altitude during operation relating to sea level</b>              |  |
| • Installation altitude above sea level, max.                       | 2 000 m  |
| • Ambient air temperature-barometric pressure-altitude              | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)                                     |
| <b>Relative humidity</b>  |  |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)                |
| <b>Resistance</b>   |  |
| <b>Use in stationary industrial systems</b>                         |  |
| — to biologically active substances according to EN 60721-3-3       | Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request |
| — to chemically active substances according to EN 60721-3-3         | Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *           |
| — to mechanically active substances according to EN 60721-3-3       | Yes; Class 3S4 incl. sand, dust, *   |
| <b>Use on ships/at sea</b>  |  |
| — to biologically active substances according to EN 60721-3-6       | Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request                      |
| — to chemically active substances according to EN 60721-3-6         | Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *           |
| — to mechanically active substances according to EN 60721-3-6       | Yes; Class 6S3 incl. sand, dust; *   |
| <b>Usage in industrial process technology</b>                       |  |
| — Against chemically active substances acc. to EN 60654-4           | Yes; Class 3 (excluding trichlorethylene)  |

— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04

Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)

#### Remark

— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04

\* The supplied plug covers must remain in place over the unused interfaces during operation!

### Configuration

#### Configuration software

- STEP 7 Yes; V5.5 or higher

#### Programming

- Command set see instruction list
- Nesting levels 8
- System functions (SFC) see instruction list
- System function blocks (SFB) see instruction list

#### Programming language

- LAD Yes
- FBD Yes
- STL Yes
- SCL Yes
- CFC Yes
- GRAPH Yes
- HiGraph® Yes

#### Know-how protection

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

### Dimensions

|        |        |
|--------|--------|
| Width  | 40 mm  |
| Height | 125 mm |
| Depth  | 130 mm |

### Weights

Weight, approx. 340 g

**last modified:** 11/25/2019