Data sheet

SIMATIC S7-300, CPU 317F-2DP, Central processing unit with 1.5 MB work memory, 1st interface MPI/DP 12 Mbit/s, 2nd interface DP master/slave Micro Memory Card required Can be used with software package S7 Distributed Safety V5.2 SP1 or higher



| General information | |
|---|--|
| HW functional status | 01 |
| Firmware version | V3.3 |
| Engineering with | |
| Programming package | STEP 7 V5.5 + SP1 or higher or STEP 7 V5.2 + SP1 or higher with HSP 202 + Distributed Safety |
| 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 power supply lines (recommendation) | 2 A min. |
| Input current | |
| Current consumption (rated value) | 870 mA |
| Current consumption (in no-load operation), typ. | 120 mA |
| Inrush current, typ. | 4 A |
| l²t | 1 A ² ·s |

| Power loss | |
|---|---|
| Power loss, typ. | 4.5 W |
| Memory | |
| Work memory | |
| • integrated | 1 536 kbyte |
| • expandable | No |
| Size of retentive memory for retentive data blocks | 256 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. | 0.025 μs |
| for word operations, typ. | 0.03 µs |
| for fixed point arithmetic, typ. | 0.04 μs |
| for floating point arithmetic, typ. | 0.16 μs |
| CPU-blocks | |
| Number of blocks (total) | 2 048; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used. |
| DB | |
| Number, max. | 2 048; Number range: 1 to 16000 |
| • Size, max. | 64 kbyte |
| FB | |
| Number, max. | 2 048; Number range: 0 to 7999 |
| • Size, max. | 64 kbyte |
| FC | |
| Number, max. | 2 048; Number range: 0 to 7999 |
| • Size, max. | 64 kbyte |
| ОВ | |
| 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 cyclic interrupt OBs | 4; OB 32, 33, 34, 35 |
| Number of process alarm OBs | 1; OB 40 |
| | |

| Number of DPV1 alarm OBs | 3; OB 55, 56, 57 |
|--|--------------------------|
| Number of isochronous mode OBs | 1; OB 61 |
| Number of startup OBs | 1; OB 100 |
| Number of asynchronous error OBs | 5; OB 80, 82, 85, 86, 87 |
| Number of synchronous error OBs | 2; OB 121, 122 |
| Nesting depth | |
| • per priority class | 16 |
| additional within an error OB | 4 |
| | |

| Counters, timers and their retentivity | |
|--|--|
| S7 counter | |
| • Number | 512 |
| Retentivity | |
| — adjustable | Yes |
| — lower limit | 0 |
| — upper limit | 511 |
| — preset | Z 0 to Z 7 |
| Counting range | |
| — lower limit | 0 |
| — upper limit | 999 |
| IEC counter | |
| • present | Yes |
| • Type | SFB |
| • Number | Unlimited (limited only by RAM capacity) |
| S7 times | |
| Number | 512 |
| Retentivity | |
| — adjustable | Yes |
| — lower limit | 0 |
| — upper limit | 511 |
| — 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 | |
|----------------------------------|------------------|
| retentive data area in total | All, max. 256 KB |
| Flag | |
| • Number, max. | 4 096 byte |

| Retentivity available | Yes; From MB 0 to MB 4 095 |
|---|--|
| Retentivity preset | MB 0 to MB 15 |
| Number of clock memories | 8; 1 memory byte |
| Data blocks | |
| 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 | 1 024 byte |
| Outputs, default | 1 024 byte |
| Subprocess images | |
| Number of subprocess images, max. | 1 |
| Digital channels | |
| • Inputs | 65 536 |
| — of which central | 1 024 |
| Outputs | 65 536 |
| — of which central | 1 024 |
| Analog channels | |
| • Inputs | 4 096 |
| — of which central | 256 |
| • Outputs | 4 096 |
| — of which central | 256 |
| Hardware configuration | |
| Number of expansion units, max. | 3 |
| Number of DP masters | |
| • integrated | 2 |
| • via CP | 4 |
| Number of operable FMs and CPs (recommended) | |
| • FM | 8 |

| • CP, PtP | 8 |
|---|--|
| • CP, LAN | 10 |
| Rack | |
| • Racks, max. | 4 |
| Modules per rack, max. | 8 |
| | |
| Time of day | |
| Clock | V |
| 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 |
| Operating hours counter | |
| Number | 4 |
| Number/Number range | 0 to 3 |
| Range of values | 0 to 2^31 hours (when using SFC 101) |
| Granularity | 1 h |
| • retentive | Yes; Must be restarted at each restart |
| Clock synchronization | |
| • supported | Yes |
| ● to MPI, master | Yes |
| ● to MPI, slave | Yes |
| • to DP, master | Yes; With DP slave only slave clock |
| • to DP, slave | Yes |
| • in AS, master | Yes |
| • in AS, slave | Yes |
| on Ethernet via NTP | No |
| | |
| Digital inputs | |
| 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 industrial Ethernet interfaces | 0 |
| Number of PROFINET interfaces | 0 |

| rated RS 485 interface 85 nA A DP slave at both interfaces simultaneously is not possible bit/s |
|---|
| nA A DP slave at both interfaces simultaneously is not possible |
| nA A DP slave at both interfaces simultaneously is not possible |
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| A DP slave at both interfaces simultaneously is not possible |
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| bit/s |
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| Only server, configured on one side |
| ut via CP and loadable FB |
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| bit/s |
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| I blocks only |
| Only server, configured on one side |
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| As subscriber |
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| Address area - Inputs, max Outputs, max |
|--|
| - Outputs, max. User data per DP slave Inputs, max Outputs, max |
| User data per DP slave |
| Inputs, max Outputs, max Outputs, max Outputs, max Outputs, max Outputs, max Outputs, max Outputs praise Transmission rate, max automatic baud rate search Address area, max Outputs per address area, max Outputs |
| - Outputs, max. PROFIBUS DP slave 1 Transmission rate, max. 1 automatic baud rate search Address area, max. 2 User data per address area, max. 2 User data per address area, max. 3 2 byte Services - PG/OP communication Routing - Global data communication - S7 basic communication - S7 communication - S7 communication - S7 communication, as client - S7 communication, as server - Direct data exchange (slave-to-slave communication) - DPV1 Transfer memory - Inputs - Outputs 2 44 byte 2 Interface Physics - RS 485 Isolated Protocols No No PROFIBUS DP master - PROFIBUS DP slave - Point-to-point connection No No No Persont interface simultaneously is not possible Posint-to-point connection No No Pess, Only with passive interface Yes; only with passive interface Yes; only with passive interface Yes; only with passive interface Yes Output passive interface Yes Only with passive interface Yes Only passive interface Yes Only passive interface Yes |
| PROFIBUS DP slave Transmission rate, max. automatic baud rate search Address area, max. User data per address area, max. Peg/OP communication Routing Routin |
| Transmission rate, max. automatic baud rate search Address area, max. User data per address area, max. Perocess PG/OP communication Sorvices PG/OP communication No Sorvices Sorvices PG/OP communication No Sorvices Sorvices Porest data exchange (slave-to-slave communication) DPV1 No Poptol No Transfer memory Inputs Duty Sorvices Solated Physics Solated Power supply to interface (15 to 30 V DC), max. Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection No PSes: Only with passive interface Yes; Only with passive interface No Yes Only with passive interface Yes Only with active interface No No Interface No Interface No Interface No Interface No Interface |
| automatic baud rate search Address area, max. User data per address area, max. 2 byte Services - PG/OP communication Routing - Global data communication - S7 basic communication - S7 communication, as client - S7 communication, as server - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs - Outputs 244 byte - Outputs 244 byte 2. Interface Interface type Physics RS 485 Isolated - Yes Power supply to interface (15 to 30 V DC), max. Protocols - MPI - PROFIBUS DP master - PROFIBUS DP slave - Point-to-point connection - S2 communication - No - No - S7 communication - No - No - S7 communication - No - S7 communication - No - No - S7 communication - No - S7 communication - No - No - S7 communication - No - No - S7 communication - No - S7 communication - No - No - S7 communication - No |
| Address area, max. User data per address area, max. 22 byte Services - PG/OP communication Yes - Routing Yes; Only with active interface - Global data communication No - S7 basic communication Yes; Only server, configured on one side - S7 communication, as client No - S7 communication, as server Yes; Connection configured on one side only - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs 244 byte - Outputs 244 byte 2. Interface Interface type Integrated RS 485 interface Physics RS 485 Isolated Yes Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection No |
| User data per address area, max. Services - PG/OP communication - Routing - Global data communication - S7 basic communication - S7 communication, as client - S7 communication, as server - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs - Outputs 244 byte 2. Interface Interface type - Physics - RS 485 - Solution - S8 S8 S8 - Power supply to interface (15 to 30 V DC), max Protocols MPI - PROFIBUS DP master - PROFIBUS DP slave - Point-to-point connection - Yes - Output sont interfaces simultaneously is not possible - Point-to-point connection - Yes - Output sont interfaces simultaneously is not possible - Point-to-point connection - Yes - Point-to-point connection - Yes - Point-to-point connection - Yes - Point-to-point connection |
| Services - PG/OP communication Yes - Routing Yes; Only with active interface - Global data communication No - S7 basic communication No - S7 communication Yes; Only server, configured on one side - S7 communication, as client No - S7 communication, as server Yes; Connection configured on one side only - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs 244 byte - Outputs 244 byte 2. Interface Interface type Integrated RS 485 interface Physics RS 485 Isolated Yes Power supply to interface (15 to 30 V DC), max. 200 mA Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection No |
| PG/OP communication PG/OP communication PRouting PGIobal data communication PS7 basic communication PS7 communication, as client PS7 communication, as server PS8; Connection configured on one side only PS8; Connection configured on one side PS8; Conlection conf |
| Routing Yes; Only with active interface Global data communication No S7 basic communication Yes; Only server, configured on one side S7 communication, as client No S7 communication, as server Yes; Connection configured on one side only Direct data exchange (slave-to-slave communication) DPV1 No Transfer memory Inputs 244 byte Outputs 244 byte 2. Interface Interface type Integrated RS 485 interface Physics RS 485 Isolated Yes Power supply to interface (15 to 30 V DC), max. 200 mA Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection No |
| - Global data communication - S7 basic communication No - S7 communication - S7 communication - S7 communication - S7 communication, as client - S7 communication, as client - S7 communication, as server - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs - Outputs 244 byte 2. Interface Interface type Interface type Interface type Physics RS 485 Isolated - Yes Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection No |
| - Global data communication - S7 basic communication No - S7 communication - S7 communication - S7 communication, as client - S7 communication, as server - S7 communication, as server - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs - Outputs 244 byte 2. Interface Interface type Interface type Physics RS 485 Isolated - Yes Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection No |
| - S7 communication - S7 communication, as client - S7 communication, as client No - S7 communication, as server - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs - Outputs 244 byte 2. Interface Interface type Physics RS 485 Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection Yes; Only server, configured on one side No No Yes; Connection configured on one side No No Yes; Connection configured on one side No No Yes; Connection configured on one side No No Yes Connection configured on one side No No Yes Connection configured on one side No No No Yes 244 byte 244 byte 244 byte 244 byte 244 byte 244 byte 247 byte 248 binterface Procedure No No No Protocols PROFIBUS DP master Yes PROFIBUS DP slave Point-to-point connection No |
| - S7 communication - S7 communication, as client - S7 communication, as server - S7 communication, as server - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs - Outputs 244 byte 2. Interface Interface type Interface type Physics RS 485 Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection No Yes; Connection configured on one side No Yes; Connection configured on one side No Yes; Connection configured on one side No |
| — S7 communication, as server — Direct data exchange (slave-to-slave communication) — DPV1 No Transfer memory — Inputs — Outputs 244 byte 2. Interface Interface type Interface type Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection Yes; Connection configured on one side only Yes Yes; Connection configured on one side only Yes Yes Yes Yes Interface AND Yes Ves Yes Yes Yes A DP slave at both interfaces simultaneously is not possible No No |
| - S7 communication, as server - Direct data exchange (slave-to-slave communication) - DPV1 No Transfer memory - Inputs - Outputs 244 byte - Outputs 2. Interface Interface type Interface type Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection Yes Yes Connection configured on one side only Yes Yes Local Connection configured on one side only Yes Interface (15 to 30 V DC) No Yes Yes Yes Yes Yes Yes A DP slave at both interfaces simultaneously is not possible No No |
| Direct data exchange (slave-to-slave communication) DPV1 No Transfer memory Inputs 244 byte Outputs 244 byte 2. Interface Interface type Integrated RS 485 interface Physics RS 485 Isolated Yes Power supply to interface (15 to 30 V DC), max. 200 mA Protocols MPI No PROFIBUS DP master PROFIBUS DP slave Point-to-point connection No |
| communication) — DPV1 No Transfer memory — Inputs 244 byte — Outputs 244 byte 2. Interface Interface type Integrated RS 485 interface Physics RS 485 Isolated Yes Power supply to interface (15 to 30 V DC), max. 200 mA Protocols • MPI No • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection No |
| Transfer memory — Inputs — Outputs 244 byte 244 byte 245 byte 246 byte 247 byte 248 byte 249 byte 249 byte 249 byte 249 byte 240 byte 240 byte 241 byte 241 byte 242 byte 241 byte 242 byte 243 byte 244 byte 245 byte 246 byte 247 byte RS 485 interface RS 485 RS |
| - Inputs - Outputs 244 byte 2. Interface Interface type Integrated RS 485 interface Physics RS 485 Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection 244 byte 244 byte Integrated RS 485 interface RS 485 RS 485 Yes Pos Pos Pos Pos Pos Pos Pos P |
| Outputs |
| Interface type Interface type Physics RS 485 Isolated Power supply to interface (15 to 30 V DC), max. Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection Integrated RS 485 interface RS 485 Ves Yes Yes Yes Yes Yes Yes Yes |
| Interface type Physics RS 485 Isolated Power supply to interface (15 to 30 V DC), max. Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection Integrated RS 485 interface RS 485 Yes Yes Yes Yes A DP slave at both interfaces simultaneously is not possible No |
| Interface type Physics RS 485 Isolated Power supply to interface (15 to 30 V DC), max. Protocols MPI PROFIBUS DP master PROFIBUS DP slave Point-to-point connection Integrated RS 485 interface RS 485 Yes Yes Yes Yes Yes Yes Yes Ye |
| Physics RS 485 Isolated Yes Power supply to interface (15 to 30 V DC), max. 200 mA Protocols • MPI No • PROFIBUS DP master Yes • PROFIBUS DP slave Yes; A DP slave at both interfaces simultaneously is not possible • Point-to-point connection |
| Isolated Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection Yes Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No |
| Power supply to interface (15 to 30 V DC), max. Protocols • MPI • PROFIBUS DP master • PROFIBUS DP slave • Point-to-point connection No 200 mA No Yes Yes Yes; A DP slave at both interfaces simultaneously is not possible No |
| Protocols |
| MPI PROFIBUS DP master PROFIBUS DP slave PROFIBUS DP slave Point-to-point connection No |
| PROFIBUS DP master PROFIBUS DP slave Point-to-point connection Yes Yes; A DP slave at both interfaces simultaneously is not possible No |
| PROFIBUS DP slave Point-to-point connection Yes; A DP slave at both interfaces simultaneously is not possible No |
| • Point-to-point connection No |
| |
| |
| PROFIBUS DP master |
| • Transmission rate, max. 12 Mbit/s |
| Number of DP slaves, max. 124 |
| Services |
| DO/OD : (: Voo |
| — PG/OP communication— RoutingYesYes |

| Global data communication | No |
|--|--|
| — S7 basic communication | Yes; I blocks only |
| — S7 communication | Yes; Only server, configured on one side |
| — S7 communication, as client | No; but via CP and loadable FB |
| — S7 communication, as server | Yes |
| — Equidistance | Yes |
| — Isochronous mode | Yes; OB 61 |
| — SYNC/FREEZE | Yes |
| Activation/deactivation of DP slaves | Yes |
| Number of DP slaves that can be | 8 |
| simultaneously activated/deactivated, max. | |
| Direct data exchange (slave-to-slave | Yes; As subscriber |
| communication) | Yes |
| — DPV1 | 165 |
| Address area | 8 192 byte |
| — Inputs, max. | 8 192 byte |
| — Outputs, max. | 6 192 Dyte |
| User data per DP slave | 244 byte |
| — Inputs, max. | 244 byte |
| — Outputs, max. PROFIBUS DP slave | 244 byte |
| • GSD file | The latest GSD file is available on the Internet |
| • GSD life | (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 | |
| 0. 200.0 00 | No |
| — S7 communication | No Yes; Only server, configured on one side |
| | |
| — S7 communication | Yes; Only server, configured on one side |
| — S7 communication— S7 communication, as client | Yes; Only server, configured on one side No; but via CP and loadable FB |
| — S7 communication — S7 communication, as client — S7 communication, as server — Direct data exchange (slave-to-slave) | Yes; Only server, configured on one side No; but via CP and loadable FB Yes |
| — S7 communication — S7 communication, as client — S7 communication, as server — Direct data exchange (slave-to-slave communication) | Yes; Only server, configured on one side No; but via CP and loadable FB Yes Yes |
| — S7 communication — S7 communication, as client — S7 communication, as server — Direct data exchange (slave-to-slave communication) — DPV1 | Yes; Only server, configured on one side No; but via CP and loadable FB Yes Yes |
| — S7 communication — S7 communication, as client — S7 communication, as server — Direct data exchange (slave-to-slave communication) — DPV1 Transfer memory | Yes; Only server, configured on one side No; but via CP and loadable FB Yes Yes No |

| 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 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 |
| 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 routing | X1 as a MPI, max. 10; X1 as DP Master max. 24; X1 as DP Slave (active) max. 14; X2 as DP Master max. 24; X2 as DP Slave (active) max. 14 |

| 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 |
| 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; Only the last 100 entries are retained |
| Number of entries readable in RUN, max. | 499 |
| — adjustable | Yes; From 10 to 499 |
| — preset | 10 |
| Service data | |
| • can be read out | Yes |
| Ambient conditions | |
| Ambient temperature during operation | |
| • min. | 0 °C |
| • max. | 60 °C |
| Configuration | |
| Configuration software | |
| • STEP 7 | Yes; STEP 7 V5.5 + SP1 or higher or STEP 7 V5.3 + SP2 or higher with HSP 203 |
| • STEP 7 Lite | No |
| Programming | |
| Command set | see instruction list |
| Nesting levels | 8 |
| y | |

| 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. | 360 g |
| last modified: | 12/08/2018 |