SIEMENS

Data sheet

6AG1317-2EK14-2AY0



spare part SIPLUS S7-300 CPU 317-2PN/DP based on 6ES7317-2EK14-0AB0 with conformal coating, -25...+70 °C, central processing unit with 1 MB work memory, 1st interface MPI/DP 12 Mbps, 2nd interface Ethernet PROFINET, with 2-port switch, Micro Memory Card required

Figure similar

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|---|--|
| General information | |
| Product type designation | CPU 317-2 PN/DP |
| Product function | |
| Isochronous mode | Yes; Via PROFIBUS DP or PROFINET interface |
| Engineering with | |
| Programming package | STEP 7 V5.5 or higher |
| Supply voltage | |
| Rated value (DC) | 24 V; A power supply according to EN 50155 shall be used |
| 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 | |
| Mains/voltage failure stored energy time | 5 ms |
| Repeat rate, min. | 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 ² t | 1 A ² ·s |
| Power loss | |
| Power loss, typ. | 4.65 W |
| Memory | |
| Work memory | |
| • integrated | 1 024 kbyte |
| expandable | No |
| Load memory | |
| • Plug-in (MMC) | Yes |
| Plug-in (MMC), max. | 8 Mbyte |
| Data management on MMC (after last programming), min. | 10 a |
| 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. CPU-blocks | 0.16 μs |

| Number of blocks (total) | 2.049: (DDa ECa EDa); the maximum number of leadable blocks can be |
|---|---|
| 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 |
| 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 |
| Number of isochronous mode OBs | 1; OB 61 - isochronous mode is possible either on DP or PROFINET IO (not |
| | simultaneously) |
| 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 |
| Nesting depth | |
| per priority class | 16 |
| additional within an error OB | 4 |
| Counters, timers and their retentivity | |
| S7 counter | |
| Number | 512 |
| Retentivity | |
| — adjustable | Yes |
| — preset | Z 0 to Z 7 |
| Counting range | |
| — adjustable | Yes |
| — lower limit | 0 |
| — upper limit | 999 |
| IEC counter | |
| • present | Yes |
| • Type | SFB |
| • Number | Unlimited (limited only by RAM capacity) |
| S7 times | |
| • Number | 512 |
| Retentivity | v |
| — adjustable | Yes |
| — preset | No retentivity |
| Time range | |
| — lower limit | 10 ms |
| — upper limit | 9 990 s |
| IEC timer | V |
| • present | Yes |
| • Type | SFB |
| Number | Unlimited (limited only by RAM capacity) |
| Data areas and their retentivity | |
| Retentive data area (incl. timers, counters, flags), max. | 256 kbyte |
| Flag | |
| • Size, 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 | |

| Potontivity adjustable | Voc: via non ratain proporty on DP | | |
|---|--|--|--|
| Retentivity adjustable | Yes; via non-retain property on DB | | |
| Retentivity preset Local data | Yes | | |
| per priority class, max. | 32 768 byte; Max. 2048 bytes per block | | |
| Address area | 32 700 byte, Max. 2040 bytes per block | | |
| | | | |
| I/O address area | 9 102 byte | | |
| • Inputs | 8 192 byte | | |
| Outputs | 8 192 byte | | |
| of which distributed | 0.400 h.ta | | |
| — Inputs | 8 192 byte | | |
| — Outputs | 8 192 byte | | |
| Process image | 0.400 h.t. | | |
| • Inputs | 8 192 byte | | |
| Outputs | 8 192 byte | | |
| Inputs, adjustable Outputs, adjustable | 8 192 byte | | |
| Outputs, adjustable | 8 192 byte | | |
| • Inputs, default | 256 byte | | |
| Outputs, default | 256 byte | | |
| Subprocess images | 4. With PROFINET IO the Latter Country of th | | |
| Number of subprocess images, max. | 1; With PROFINET IO, the length of the user data is limited to 1600 bytes | | |
| Digital channels | 2 | | |
| • 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 | 1 | | |
| • via CP | 4 | | |
| | | | |
| Number of operable FMs and CPs (recommended) | | | |
| Number of operable FMs and CPs (recommended) • FM | 8 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP | 8 8 | | |
| Number of operable FMs and CPs (recommended) • FM | | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack | 8 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN | 8 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. | 8 10 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. | 8 10 4 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. | 8 10 4 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day | 8 10 4 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock | 8 10 4 8 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) | 8 10 4 8 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable | 8 10 4 8 Yes Yes | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time | 8 10 4 8 Yes Yes Yes 6 wk; At 40 °C ambient temperature | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. | 8 10 4 8 Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON | 8 10 4 8 Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period | 8 10 4 8 Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period Operating hours counter | 8 10 4 8 Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period Operating hours counter • Number | 8 10 4 8 Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 4 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period Operating hours counter • Number • Number/Number range | Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 4 0 to 3 | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period Operating hours counter • Number • Number/Number range • Range of values | Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 4 0 to 3 0 to 2^31 hours (when using SFC 101) | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period Operating hours counter • Number • Number/Number range • Range of values • Granularity | Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 4 0 to 3 0 to 2^31 hours (when using SFC 101) 1 h | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period Operating hours counter • Number • Number/Number range • Range of values • Granularity • retentive | Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 4 0 to 3 0 to 2^31 hours (when using SFC 101) 1 h | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period Operating hours counter • Number • Number • Number/Number range • Range of values • Granularity • retentive Clock synchronization | Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 4 0 to 3 0 to 2^31 hours (when using SFC 101) 1 h Yes; Must be restarted at each restart | | |
| Number of operable FMs and CPs (recommended) • FM • CP, PtP • CP, LAN Rack • Racks, max. • Modules per rack, max. Time of day Clock • Hardware clock (real-time) • retentive and synchronizable • Backup time • Deviation per day, max. • Behavior of the clock following POWER-ON • Behavior of the clock following expiry of backup period Operating hours counter • Number • Number/Number range • Range of values • Granularity • retentive Clock synchronization • supported | Yes Yes 6 wk; At 40 °C ambient temperature 10 s; Typ.: 2 s Clock continues running after POWER OFF the clock continues at the time of day it had when power was switched off 4 0 to 3 0 to 2^31 hours (when using SFC 101) 1 h Yes; Must be restarted at each restart | | |

| a to DP master | Vac: With DP clave only clave clock |
|---|---|
| to DP, masteron DP, device | Yes; With DP slave only slave clock Yes |
| • in AS, master | Yes |
| • in AS, device | Yes |
| on Ethernet via NTP | Yes; As client |
| Digital inputs | 100,710 0110110 |
| Number of digital inputs | 0 |
| Digital outputs | |
| Number of digital outputs | 0 |
| Analog inputs | |
| Number of analog inputs | 0 |
| Interfaces | |
| Number of PROFINET interfaces | 1; 2 ports (switch) RJ45 |
| Number of RS 485 interfaces | 1; Combined MPI / PROFIBUS DP |
| Number of RS 422 interfaces | 0 |
| 1. Interface | |
| Interface type | Integrated RS 485 interface |
| Isolated | Yes |
| Interface types | |
| • RS 485 | Yes |
| Output current of the interface, max. | 200 mA |
| Protocols | |
| • MPI | Yes |
| PROFIBUS DP master | Yes |
| PROFIBUS DP device | Yes |
| Point-to-point connection | No |
| MPI | 12 Mbit/a |
| Transmission rate, max. Services | 12 Mbit/s |
| Services — 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 |
| PROFIBUS DP master | |
| Transmission rate, max. | 12 Mbit/s |
| • max. number of DP devices | 124 |
| Services | |
| — 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 devices max. number of DP devices that can be activated/deactivated at the same time | Yes 8 |
| Direct data exchange (slave-to-slave communication) | Yes; as subscriber |
| — DPV1 | Yes |
| Address area | |
| — Inputs, max. | 8 kbyte |
| — Outputs, max. | 8 kbyte |
| User data per DP device | |

| lanuta may | O44 byta |
|---|---|
| — Inputs, max. | 244 byte |
| — Outputs, max. 1st interface / PROFIBUS DP device / header | 244 byte |
| | 12 Mbit/s |
| Transmission rate, max. automatic bound rate control | |
| automatic baud rate search Address area may | Yes; only with passive interface |
| Address area, max. Hear data pay address area, may. | 32 |
| User data per address area, max. | 32 byte |
| Services | V |
| — 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 |
| Transfer memory | |
| — Inputs | 244 byte |
| — Imputs — Outputs | 244 byte |
| · | 244 byte |
| 2. Interface | DDOCINET |
| Interface type | PROFINET |
| Isolated | Yes |
| automatic detection of transmission rate | Yes; 10/100 Mbit/s |
| Autonegotiation | Yes |
| Autocrossing | Yes |
| Change of IP address at runtime, supported | Yes |
| Interface types | v. |
| • RJ 45 (Ethernet) | Yes |
| Number of ports | 2 |
| • integrated switch | Yes |
| Protocols | |
| • 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 device | No |
| Open IE communication | Yes; Via TCP/IP, ISO on TCP, and UDP |
| Web server | Yes |
| Media redundancy | Yes |
| PROFINET IO Controller | |
| Transmission rate, max. | 100 Mbit/s |
| Services | |
| 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 |
| — 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 |
| | |

| - Criterion in rise, risk Activation/deactivation of 10 Devices - Number of 10 Devices hat can be similarineously software of the production of 10 periods by the state of the production of 10 periods of 10 per | of which is the constant | 400 |
|--|--|--|
| - Number of IO Devices that can be simultaneously advisited/decideated, max IO Devices changing during operation (partner portis), supported - Number of IO Devices per tool, max Device replacement without away medium - Send cycles - Updating time - Send cycles - Updating time - Send cycles - Updating time - Upd | — of which in line, max. | 128 |
| activated/decidental, max. — IO Devices dranging during geranton (partner ports), supported Ports), supported Ports), supported Ports, suppor | | |
| Ports), supported Number of 10 Devices per tool, max. Device replacement without swap medium Send cycles Updating time 250 us 501 µs.1 ms; 2 ms, 4 ms (not in the case of IRT with "high flexibility" option) Address ares Inputs, max. Updating time 8 kbyfe Updating time 8 kbyfe Updating time 8 kbyfe Updating time 8 kbyfe PosiCP communication Routing PROFILET TO Device Services PROFILET TO Service To Services PROFILET TO Device To Service To Ser | · | 8 |
| - Number of 10 Devices per fool, max Device reglacement without awap medium - Send cycles - Outputing time - 250 us 50 µs.1 ms; 2 ms. 4 ms (not in the case of IRT with "high fiexibility" oxidon") - Updating time - 250 us 50 12 ms (depending on the operating mode, see Manual "57-300 CPU 31x Cand CPU 31x Lechnical Data" for more details) - Imputs, max Outputs, max User data consistency, max PGFOP communication - PROFIP Communication - PROFIP Communication - PROFIP Communication - PROFIP Communication - IRT - PROFIP Communication - IRT - PROFIP Controllers with shared device, max - PROFIP Controllers with shared device, max - Transfer memory - Imputs, max Outputs, m | | Yes |
| - Device reglacement without swap medium - Send cycles - Send cycles - Updating time - 200 us, 500 µs.1 ms; 2 ms, 4 ms; not in the case of IRT with "high flexibility" option) - 200 us to 512 ms (depending on the operating mode, see Manual "S7-300 CPU stxC and CPU 31x, technical Data" for more details) Address area - Inputs, max Outputs, max Outputs, max PROFINET IC Device - Services - PGOP communication - Yes - PGOP communication - Yes - PGOP communication - Yes, with loadable FBs, max. configurable connections: 16, max. number of instances: 32 - Isochronous mode - IRT - PROFILENT - PROFIL | | |
| - Send cycles - Updating time - 250 us to 512 ms (depending on the operating mode, see Manual "57-300 CPU 31x Cand CPU 31x Lechnical Idea (Put 31x Cand CPU 31x Lechnical Data" for more details) Address area - Iniquis, max Outputs, max Outputs, max User data consistency, max. PROFINET ID Dewice Services - PG(OP communication - Routing - S7 communication - PROFID PROFIDE (Put 31x Lechnical Data" for more details) - PROFID PROFID Profit | • | |
| - Updating time 250 js to 512 ms (depending on the operating mode, see Manual *\$7.300 CPU 31x0 and CPU 31x, technical Data *for more details) Address area - Inputs, max. 8 kbyte | · | |
| Address area | — Send cycles | |
| - Inputs, max | — Updating time | |
| - Outputs, max - User data consistency, max. 1 024 byte PROFINET IO Device Services - PGIOP communication Yes - Routing Yes - St communication Yes - Routing Yes - St communication Yes, with loadable FBs, max. configurable connections: 16, max. number of instances: 32 - Isochronous mode No - IRT Yes - PROFienergy Yes, With SFB 73 / 74 prepared for loadable PROFienergy standard FB for I-Device Yes - Shared device Yes - Shared device Yes - Number of IO Controllers with shared device, max. 2 Transfer memory - Inputs, max. 1 440 byte; Per IO Controller with shared device - Number, max. 64 - Outputs, max. 1 440 byte; Per IO Controller with shared device - Number, max. 64 - Outputs, max. 1 1 024 byte - Number of connections, max. 1 1 024 byte - PROFINET CBA - apyclic transmission Yes - Output numbers used at the system end 0, 20, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 - Keep-allive function, supported Yes - Number of connections, max. 50 - Number of connections, max. 50 - Number of connections, max. 50 - Open IE communication - Number of connections, max. 50 - Self-tover time on line break, typ. 50 - Self-tover time on line break, typ. 50 - Number of connections, max. 50 - Open IE communication - TOP/IP - Number of connection per port, supported - Self-tover time on line break, typ. 50 - Number of connection per port, supported - Self-tover time on line break, typ. 79 - Number of connection per port, supported - Self-tover time on line break, typ. 79 - Number of connections, max. 50 - Open IE communication - TOP/IP - Number of connections, max. 50 - Open IE communication - TOP/IP - Number of connections, max. 50 - Open IE communication - TOP/IP - Number of connections, max. 50 - Open IE communication - TOP/IP - Number of connections, max. 50 - Open IE communication - TOP/IP - Number of connections, max. 50 - Open IE communication - TOP/IP - Number of connections, max. 50 - Open IE communication - TOP/IP - Number of connections, max. 50 - Open IE communication - TOP/IP - Num | Address area | |
| PROFINET IO Dece Services - PG/OP communication Yes - Routing Yes, with loadable FBs, max. configurable connections: 16, max. number of instances; 32 - Isochronous mode No - IRT Yes - RPG/Flenergy 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. Transfer memory - Inputs, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Shared device Yes - Number, max. 1 440 byte; Per IO Controller with shared device - Number, max. 1 440 byte; Per IO Controller with shared device - Number of atlangable passible connections, max. 1 1024 byte - PROFINET CBA - acyclic transmission Yes - cyclic transmis | — Inputs, max. | 8 kbyte |
| Services PROCIP communication PROUTING PROCIPE communication Proc | — Outputs, max. | 8 kbyte |
| Services | — User data consistency, max. | 1 024 byte |
| PGIOP communication Routing S7 communication Yes S8, with loadable F8s, max. configurable connections: 16, max, number of instances: 32 Isochronous mode No IRT PROFlenergy Yes System device Number of 10 Controllers with shared device, max. Transfer memory Injust, max. Outputs, max. Submodules No Ves Nother, max. Submodules No Ves Nother C8A Outputs, max. 1440 byte; Per IO Controller with shared device Number of to Controllers with shared device. Number, max. Submodules No Noutputs, max. 1440 byte; Per IO Controller with shared device Submodules Noutputs, max. 164 1024 byte PROFINET C8A Outputs aransiesion Ves Outputs aransiesion Ves Outputs aransiesion Ves Open IE communication No Number of connections, max. Local port numbers used at the system end October 10 Controller with shared device October 10 Cont | PROFINET IO Device | |
| Routing Yes with loadable FBs, max. configurable connections: 16, max. number of instances. 32 - Isochronous mode No - IRT Yes - PROFlenergy Period Proflemency Period Proflemency Standard FB for I-Device - Shared device Yes - Number of IO Controllers with shared device, max Shared memory - Inputs, max Outputs, max Outputs, max Outputs, max User data per submodute, max User data per submodute, max User data per submodute, max Ves - explicit transmission Yes - cyclic transmission Yes - Colar port numbers used at the system end - output numbers used at the system end - Outputs max submodute, max Colar port numbers used at the system end - Proflectors - Proflectors - Redundancy Media redundancy - Switchover time on line break, typ Number of stansions in the ring, max Open IE communication - TCP/IP - Number of connections, max Data length for connection type 01H, max several passive connections per port, supported - Proflect Descriptions - Number of connections, max Data length for connection type 01H, max several passive connections per port, supported - Number of connections, max Data length for connection type 01H, max several passive connections per port, supported - Number of connections, max Data length, max Supported | Services | |
| Routing Yes with loadable FBs, max. configurable connections: 16, max. number of instances. 32 - Isochronous mode No - IRT Yes - PROFlenergy Period Proflemency Period Proflemency Standard FB for I-Device - Shared device Yes - Number of IO Controllers with shared device, max Shared memory - Inputs, max Outputs, max Outputs, max Outputs, max User data per submodute, max User data per submodute, max User data per submodute, max Ves - explicit transmission Yes - cyclic transmission Yes - Colar port numbers used at the system end - output numbers used at the system end - Outputs max submodute, max Colar port numbers used at the system end - Proflectors - Proflectors - Redundancy Media redundancy - Switchover time on line break, typ Number of stansions in the ring, max Open IE communication - TCP/IP - Number of connections, max Data length for connection type 01H, max several passive connections per port, supported - Proflect Descriptions - Number of connections, max Data length for connection type 01H, max several passive connections per port, supported - Number of connections, max Data length for connection type 01H, max several passive connections per port, supported - Number of connections, max Data length, max Supported | — PG/OP communication | Yes |
| - S7 communication | | |
| Instances: 32 Instances: 32 IRT PROFlenergy PROFlenergy Pres: With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I Device — Shared device — Number of IO Controllers with shared device, max. 2 Transfer memory — Inputs, max. — Inputs, max. — Outputs, max. — Outputs, max. — Vese data per submodule, max. 1 440 byte; Per IO Controller with shared device — Number, max. — User data per submodule, max. PROFINET CBA • acyclic transmission • ves - cyclic transmission • ves - cyclic transmission • Ves - cyclic transmission • Number of connections, max. - Local port numbers used at the system end 0, 20, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65533 • Keep-alive function, supported PROFisate Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection bye 01H, max. — Data length for connection bye 11H, max. — Several passive connections per port, supported • ISO-cn-TCP (RFC1006) — Number of connections, max. — Data length, more connections, per port, supported • Ves; via integrated PROFINET interface and loadable FBs 16 17 CP/IP — Number of connections, max. — Several passive connections per port, supported • Ves; via integrated PROFINET interface and loadable FBs 16 17 CP/IP — Number of connections, max. — Several passive connections, max. — Several passive connections, max. — Data length, max. — Several passive connections, max. — Data length, max. — Several passive connections, max. — Data length, max. — Data length, max. — Several passive connections, max. — Data length, max. — Several passive connections, max. — Data length, max. — Several passive connections, max. — Data length, max. — Several passive connections, max. — Data length, max. — Several passive connections, max. — Several passi | Ü | |
| IRT PROFlenergy Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I-Device Shared device Number of IO Controllers with shared device, max Inputs, max Inputs, max Inputs, max User data per submodule, max User | | |
| PROFlenergy Shared device Shared device Shared device Number of IO Controllers with shared device, max. 1 440 byte; Per IO Controller with shared device Submodules Number, max. 1 440 byte; Per IO Controller with shared device 1 440 byte; Per IO Controller with shared with shared d | — Isochronous mode | No |
| — Shared device — Number of IO Controllers with shared device, max. Transfer memory — Inputs, max. — Outputs, max. — Outputs, max. — Outputs, max. — Outputs, max. — User data per submodule, max. — User data per submodule, max. — User data per submodule, max. — Output shared device — Number, max. — User data per submodule, max. — User data per submodule, max. — User data per submodule, max. — Outputs shared device — Number of connections, max. — Coal port numbers used at the system end — (a) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (a) Coal port numbers used at the system end — (a) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (b) Coal port numbers used at the system end — (a) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (b) Coal port numbers used at the system end — (a) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (b) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (c) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (b) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (c) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (c) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (c) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 — (c) Coal, 21, 25, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65533, 65534, 65535 — (c) Coal, 21, 22, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65533, 65533, 65534, 65535 — (c) Coal, 21, 22, 80, 102, 135, 161, 8080, 34962, 34963, 34964, 65532, 65533, 65533, 65533, 65534, 65535 — (c) Coal, 21, 22, 23, 28, 28, 28, 28, 28, 28, 28, 28, 28, 28 | — IRT | Yes |
| - Shared device | | Yes; With SFB 73 / 74 prepared for loadable PROFlenergy standard FB for I- |
| - Number of IO Controllers with shared device, max. Transfer memory - Inputs, max Outputs, max. 1 440 byte; Per IO Controller with shared device Outputs, max. 1 440 byte; Per IO Controller with shared device - Number, max. 4 User data per submodule, max. 1 024 byte PROFINET CBA • acyclic transmission • Cyclic transmission • Number of connections, max. • Local port numbers used at the system end • (Cyclic transmission) • Number of connections, supported • (Cyclic transmission) • No Redundancy mode Media redundancy - Switchover time on line break, typ Number of stations in the ring, max. Dopen IE communication • TCP/IP - Number of stations in the ring, max Data length for connection type 11H, max Data length for connection type 11H, max Data length for connections per port, supported • ISO-on-TCP (RFC1006) - Number of connections, max Data length, max Data length max. | — Shared device | |
| Transfer memory Inputs, max. Inputs, max. Inputs, max. Industry max. Insurance of the properties | | |
| - Inputs, max. 1440 byte; Per IO Controller with shared device Outputs, max. 1440 byte; Per IO Controller with shared device Submodules - Number, max. 64 1024 byte PROFINET CBA 1024 byte PROFINET Interface and loadable FBS 1024 byte PROFINET CBA 1024 b | | - |
| Submodules - Number, max User data per submodule, max Open IE communication - Oycilic transmission | • | 1.440 byte: Per IO Controller with shared device |
| Submodules - Number, max User data per submodule, max. PROFINET CBA • acyclic transmission • cyclic transmission • cyclic transmission • Number of connections, max. • Local port numbers used at the system end • Local port numbers used at the system end • Keep-alive function, supported • Keep-alive function, supported PROFISER PROFISER Redundancy mode Media redundancy - Switchover time on line break, typ Number of stations in the ring, max. Open IE communication • TCP/IP Nonumber of connections, max Data length for connection type 01H, max Data length for connection type 11H, max several passive connections per port, supported • ISO-on-TCP (RFC1006) - Number of connections, max Data length, max. UDP - Number of connections, max Data length, max. | • | • |
| - Number, max User data per submodule, max. - User data per submodule, max. 1 024 byte PROFINET CBA • acyclic transmission • Cyclic transmission • Cyclic transmission • Number of connections, max. • Local port numbers used at the system end • Cyclic transmission • Number of connections, max. • Local port numbers used at the system end • Cyclic transmission • Number of connections, max. • Local port numbers used at the system end • Cyclic transmission • Number of stations supported • Keep-alive function, supported • Keep-alive function, supported PROFIsafe No Redundancy mode Media redundancy - Switchover time on line break, typ Number of stations in the ring, max. 50 Open IE communication • TCP/IP - Number of connections, max Data length for connection type 01H, max Data length for connection type 11H, max several passive connections per port, supported • ISO-on-TCP (RFC1006) - Number of connections, max Data length, max. • UDP - Number of connections, max Data length, max. | | 1 440 byte, i el 10 contioller with shared device |
| - User data per submodule, max. 1 024 byte PROFINET CBA • acyclic transmission Yes Open IE communication • Number of connections, max. 16 • Local port numbers used at the system end 65534, 65535 • Keep-alive function, supported Yes Protocols PROFIsafe No Redundancy mode Media redundancy - Switchover time on line break, typ. 200 ms; PROFINET MRP - Number of stations in the ring, max. 50 Open IE communication • TCP/IP - Number of connections, max. 16 - Data length for connection type 01H, max. 22 768 byte - Several passive connections per port, supported • ISO-on-TCP (RFC1006) - Number of connections, max. 16 - Data length, max. 32 768 byte - Number of connections, max. 16 - Data length, max. 32 768 byte - Number of connections, max. 16 - Data length, max. 32 768 byte - Number of connections, max. 16 - Data length, max. 32 768 byte - Ves; via integrated PROFINET interface and loadable FBs - Number of connections, max. 16 - Data length, max. 32 768 byte - Ves; via integrated PROFINET interface and loadable FBs - Number of connections, max. 16 - Data length, max. 32 768 byte - Ves; via integrated PROFINET interface and loadable FBs - Number of connections, max. 16 - Data length, max. 1472 byte Web server - supported | | CA |
| PROFINET CBA • acyclic transmission • cyclic transmission Open IE communication • Keep-alive function, in the ring, max. - Switchover time on line break, typ Number of connections, max. - Data length for connection type 01H, max Data length for connections per port, supported • ISO-on-TCP (RFC1006) - Number of connections, max Data length, max. • UDP - Number of connections, max Data length, max Data length length, max Data length length | , | |
| acyclic transmission cyclic transmission Pes Open IE communication Number of connections, max. Local port numbers used at the system end d. Exemplies function, supported Protocols PROFIsafe No Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. Several passive connections, max. Data length, max. Several passive connections, max. House of connections, max. A Several passive connections, max. Several passive connections, max. House of connections, max. Several passive connections, max. House of connections, max. < | | 1 024 byte |
| vyclic transmission Open IE communication Number of connections, max. Auction of the properties of the | | V |
| Open IE communication Number of connections, max. Local port numbers used at the system end Starting Frotocols PROFIsafe Redundancy mode Media redundancy Switchover time on line break, typ. Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max. Data length for connections per port, supported SiSO-on-TCP (RFC1006) Number of connections, max. Data length, max length search and search and search and s | • | |
| Number of connections, max. 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 Protocots PROFIsafe No Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. 50 Open IE communication TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. UDP — Ves; via integrated PROFINET interface and loadable FBs I6 — Number of connections, max. — 16 — Sye; via integrated PROFINET interface and loadable FBs I6 — Number of connections, max. — Data length, max. UDP — Ves; via integrated PROFINET interface and loadable FBs — Number of connections, max. — 16 — Data length, max. UDP — Number of connections, max. — 16 — Data length, max. UDP — Number of connections, max. — 16 — Data length, max. UDP — Number of connections, max. — 16 — Data length, max. UDP — Number of connections, max. — 16 — Data length, max. UDP — Number of connections, max. — 1472 byte Web server • supported | , | res |
| Local port numbers used at the system end (| | 10 |
| Keep-alive function, supported Protocols PROFIsafe Redundancy mode Media redundancy - Switchover time on line break, typ Number of stations in the ring, max. Open IE communication TCP/IP Number of connections, max Data length for connection type 01H, max several passive connections per port, supported ISO-on-TCP (RFC1006) - Number of connections, max Data length, max. | | |
| PROFIsafe No Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. — Data length, max. 16 — Data length, max. • UDP — Yes; via integrated PROFINET interface and loadable FBs — Number of connections, max. 16 — Data length, max. • UDP — Yes; via integrated PROFINET interface and loadable FBs — Number of connections, max. 16 — Data length, max. • UDP — Yes; via integrated PROFINET interface and loadable FBs — Number of connections, max. 16 — Data length, max. 16 — Data length, max. 172 byte | Local port numbers used at the system end | |
| PROFIsafe Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. — Data length, max. 16 — Data length, max. 16 — Number of connections, max. 16 — Data length, max. • UDP — Yes; via integrated PROFINET interface and loadable FBs — Number of connections, max. 16 — Data length, max. • UDP — Yes; via integrated PROFINET interface and loadable FBs — Number of connections, max. 16 — Data length, max. 16 — Data length, max. 172 byte Web server • supported | Keep-alive function, supported | Yes |
| Redundancy mode Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. — Data length, max. — Data length, max. — Data length, max. — Data length, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. 16 — Data length, max. 16 — Data length, max. 17 Yes | Protocols | |
| Media redundancy — Switchover time on line break, typ. — Number of stations in the ring, max. Open IE communication • TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. — Data length, max. — Data length, max. — Data length, max. — Data length, max. • UDP — Number of connections, max. — Data length, max. • UDP — Ves; via integrated PROFINET interface and loadable FBs — Number of connections, max. — Data length, max. 16 — Data length, max. 16 — Data length, max. 17 18 19 19 19 10 10 10 10 10 10 10 | PROFIsafe | No |
| - Switchover time on line break, typ Number of stations in the ring, max. Open IE communication TCP/IP - Number of connections, max Data length for connection type 01H, max Data length for connections per port, supported ISO-on-TCP (RFC1006) - Number of connections, max Data length, max Supported - Supported - Yes | Redundancy mode | |
| — Number of stations in the ring, max. Deepen IE communication TCP/IP — Number of connections, max. — Data length for connection type 01H, max. — Data length for connection type 11H, max. — several passive connections per port, supported ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. — Data length, max. ■ UDP — Number of connections, max. — Data length, max. ■ Data length, max. ■ Data length, max. ■ System of connections, max. — Data length, max. ■ Data length, max. ■ System of connections, max. — Data length, max. ■ 1472 byte Web server ■ supported Yes Yes | Media redundancy | |
| Open IE communication TCP/IP Number of connections, max. Data length for connection type 01H, max. Several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. Data length, max. Several passive connections per port, supported Yes ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Yes; via integrated PROFINET interface and loadable FBs Yes; via integrated PROFINET interface and loadable FBs 16 Number of connections, max. 16 Yes; via integrated PROFINET interface and loadable FBs 16 Number of connections, max. 16 Yes; via integrated PROFINET interface and loadable FBs 1472 byte | — Switchover time on line break, typ. | 200 ms; PROFINET MRP |
| Open IE communication TCP/IP Yes; via integrated PROFINET interface and loadable FBs Number of connections, max. Data length for connection type 01H, max. Data length for connection type 11H, max. Several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Yes; via integrated PROFINET interface and loadable FBs A byte Yes; via integrated PROFINET interface and loadable FBs 16 Yes; via integrated PROFINET interface and loadable FBs 16 Number of connections, max. 16 Data length, max. 16 Yes; via integrated PROFINET interface and loadable FBs 1472 byte | Number of stations in the ring, max. | 50 |
| TCP/IP Number of connections, max. Data length for connection type 01H, max. Data length for connection type 11H, max. Say 768 byte ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. Data length, max. UDP Number of connections, max. Data length, max. 16 Number of connections, max. Yes; via integrated PROFINET interface and loadable FBs 1472 byte Web server supported Yes | | |
| Number of connections, max. Data length for connection type 01H, max. Data length for connection type 11H, max. Several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. Data length, max. Data length, max. Number of connections, max. Yes | · | Yes; via integrated PROFINET interface and loadable FBs |
| Data length for connection type 01H, max. Data length for connection type 11H, max. several passive connections per port, supported ISO-on-TCP (RFC1006) Number of connections, max. Data length, max. UDP Number of connections, max. UDP Number of connections, max. A Number of connections, max. Data length, max. UDP Wes; via integrated PROFINET interface and loadable FBs Number of connections, max. Data length, max. 1472 byte Web server supported Yes | | • |
| — Data length for connection type 11H, max. — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. • UDP — Number of connections, max. • UDP — Number of connections, max. — Data length, max. 16 — Yes; via integrated PROFINET interface and loadable FBs — Number of connections, max. — Data length, max. 1 472 byte Web server • supported Yes | | |
| — several passive connections per port, supported • ISO-on-TCP (RFC1006) — Number of connections, max. — Data length, max. • UDP — Number of connections, max. • UDP — Number of connections, max. — Data length, max. — Data length, max. — Data length, max. • Supported Yes Yes Yes | | · |
| ISO-on-TCP (RFC1006) | | • |
| — Number of connections, max. — Data length, max. ◆ UDP — Ves; via integrated PROFINET interface and loadable FBs — Number of connections, max. — Data length, max. 16 — Data length, max. 16 Web server ◆ supported Yes | | |
| — Data length, max. ■ UDP — Number of connections, max. — Data length, max. Meb server ■ supported Yes 32 768 byte Yes; via integrated PROFINET interface and loadable FBs 16 1 472 byte Yes | • | - |
| VDP Yes; via integrated PROFINET interface and loadable FBs Number of connections, max. Data length, max. 1472 byte Web server supported Yes | | |
| — Number of connections, max. — Data length, max. 1 472 byte Web server supported Yes | - | · |
| — Data length, max. 1 472 byte Web server ● supported Yes | | |
| Web server ◆ supported Yes | | |
| • supported Yes | — Data length, max. | 1 472 byte |
| | Web server | |
| ◆ User-defined websites Yes | supported | Yes |
| | User-defined websites | Yes |

| Number of HTTP clients | 5 |
|--|--|
| communication functions / header | |
| PG/OP communication | Yes |
| Data record routing | Yes |
| Global data communication | 165 |
| • supported | Yes |
| | 8 |
| Number of GD loops, max. Number of GD paylete may. | |
| 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 |
| S5 compatible communication | SFCs/FCs of S7 Communication) |
| supported | Yes; via CP and loadable FC |
| communication functions / PROFINET CBA (with set target commu | · |
| · · · | · |
| Setpoint for the CPU communication load | 50 % |
| Number of remote interconnection partners | 32 |
| number of master/device functions | 30 |
| total of all master/device connections | 1 000 |
| data length of all incoming master/device connections, max. | 4 000 byte |
| data length of all outgoing master/device connections, 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 |
| performance data / PROFINET CBA / remote interconnection / | / with acyclic transfer / header |
| — Sampling interval, 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 or all outgoing increasing, max. — Data length per connection, max. | 1 400 byte |
| performance data / PROFINET CBA / remote interconnection / | |
| — Transmission frequency: Transmission interval, min. | 10 ms |
| — Number of incoming interconnections | 200 |
| - | |
| Number of outgoing interconnections Pote length of all incoming interconnections may | 200 2,000 byte |
| 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 |
| performance data / PROFINET CBA / HMI variables via PROF | |
| 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 |
| performance data / PROFINET CBA / PROFIBUS proxy function | onality / header |
| — supported | Yes |
| Number of linked PROFIBUS devices | 16 |

| Data length per connection, max. | 240 byte; Slave-dependent |
|--|--|
| 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 |
| 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. | 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 |
| | 400 |
| — adjustable | Yes; From 10 to 499 |
| — adjustable — preset | |
| • | Yes; From 10 to 499 |
| — preset Service data • can be read out | Yes; From 10 to 499 |
| — preset Service data • can be read out Isolation | Yes; From 10 to 499 10 Yes |
| — preset Service data • can be read out Isolation Isolation tested with | Yes; From 10 to 499 |
| — preset Service data • can be read out Isolation Isolation tested with Standards, approvals, certificates | Yes; From 10 to 499 10 Yes 500 V AC for 1 minute |
| — preset Service data | Yes; From 10 to 499 10 Yes 500 V AC for 1 minute Yes |
| — preset Service data • can be read out Isolation Isolation tested with Standards, approvals, certificates CE mark UL approval | Yes; From 10 to 499 10 Yes 500 V AC for 1 minute Yes Yes |
| — preset Service data • can be read out Isolation Isolation tested with Standards, approvals, certificates CE mark UL approval RCM (formerly C-TICK) | Yes; From 10 to 499 10 Yes 500 V AC for 1 minute Yes Yes Yes |
| — preset Service data | Yes; From 10 to 499 10 Yes 500 V AC for 1 minute Yes Yes Yes Yes Yes |
| — preset Service data • can be read out Isolation Isolation tested with Standards, approvals, certificates CE mark UL approval RCM (formerly C-TICK) KC approval EAC (formerly Gost-R) | Yes; From 10 to 499 10 Yes 500 V AC for 1 minute Yes Yes Yes |
| — preset Service data | Yes; From 10 to 499 10 Yes 500 V AC for 1 minute Yes Yes Yes Yes Yes |

| Railway application | | | |
|---|---|-----------------------------|-------------------------------|
| • EN 50155 | Yes; Sections 4, 5 and 12; no fu | urther agreements apply; | T1, Category 1, Clas |
| | A/B, EN 50155:2007 | | |
| mbient conditions | | | |
| Ambient temperature during operation | 05 °C Ti- | | |
| • min. | -25 °C; = Tmin | | 75 90 (T4) |
| max. | 60 °C; = Tmax; the rated temperature range of -25 +55 °C (T1) applies fo the use on railway vehicles according to EN50155 | | |
| Altitude during operation relating to sea level | | | |
| Installation altitude above sea level, max. | 5 000 m | | |
| Ambient air temperature-barometric pressure-altitude | Tmin Tmax at 1 140 hPa 7 - 10 K) at 795 hPa 658 hPa (| +2 000 m +3 500 m) // | |
| Deleting by midity | at 658 hPa 540 hPa (+3 500 | m +5 000 m) | |
| Relative humidity • With condensation, tested in accordance with IEC 60068- | 100 %; RH incl. condensation/fi | roet (no commissioning u | inder condensation |
| 2-38, max. | conditions) | rost (no commissioning d | macr condensation |
| Resistance | | | |
| Use in stationary industrial systems | | | |
| to biologically active substances according to EN 60721-3-3 | Yes; Class 3B2 mold, fungus an Class 3B3 on request | nd dry rot spores (with th | e exception of fauna) |
| to chemically active substances according to EN 60721-3-3 | Yes; Class 3C4 (RH < 75 %) indegree 3); * | cl. salt spray acc. to EN 6 | 60068-2-52 (severity |
| — to mechanically active substances according to EN 60721-3-3 | Yes; Class 3S4 incl. sand, dust | * | |
| Use on land craft, rail vehicles and special-purpose vehicles | | | |
| to biologically active substances according to EN 60721-3-5 | Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna) Class 5B3 on request | | |
| to chemically active substances according to EN 60721-3-5 | Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155 (ST2); * | | |
| to mechanically active substances according to EN 60721-3-5 | Yes; Class 5S3 incl. sand, dust; * | | |
| 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! | | |
| onfiguration / header | | | |
| Configuration software | | | |
| • STEP 7 | Yes; V5.5 or higher | | |
| configuration / programming / header | | | |
| 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 | | |
| imensions | | | |
| | 10 | | |
| Width | 40 mm | | |
| Height | 125 mm | | |
| Death | 130 mm | | |
| Depth | | | |
| · | | | |
| /eights | | | |
| Weight, approx. | 340 g | | |
| Veights Weight, approx. | | Varsion | Classification |
| Veights Weight, approx. | 340 g | Version | Classification |
| Veights | | Version 14 | Classification 27-24-22-07 |

| eClass | 9.1 | 27-24-22-07 |
|--------|-----|-------------|
| eClass | 9 | 27-24-22-07 |
| eClass | 8 | 27-24-22-07 |
| eClass | 7.1 | 27-24-22-07 |
| eClass | 6 | 27-24-22-07 |
| ETIM | 9 | EC000236 |
| ETIM | 8 | EC000236 |
| ETIM | 7 | EC000236 |
| IDEA | 4 | 3565 |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

General Product Approval

Manufacturer Declara-tion Miscellaneous

Declaration of Conformity





EMV

For use in hazardous locations

<u>KC</u>



CCC-Ex

last modified:

12/8/2024