6ES7517-3AP00-0AB0

Data sheet



SIMATIC S7-1500, CPU 1517-3 PN/DP, Central processing unit with work memory 2 MB for Program and 8 MB for data, 1st interface: PROFINET IRT with 2-port switch, 2nd interface: PROFINET RT, 3rd interface: PROFIBUS, 2 ns bit performance, SIMATIC Memory Card required

| General information | |
|--|--|
| Product type designation | CPU 1517-3 PN/DP |
| HW functional status | FS10 |
| Firmware version | V2.9 |
| Product function | |
| I&M data | Yes; I&M0 to I&M3 |
| Isochronous mode | Yes; Distributed and central; with minimum OB 6x cycle of 250 μs (distributed) and 1 ms (central) |
| Engineering with | |
| STEP 7 TIA Portal configurable/integrated from version | V17 (FW V2.9) / V13 Update 3 (FW V1.6) or higher |
| Configuration control | |
| via dataset | Yes |
| Display | |
| Screen diagonal [cm] | 6.1 cm |
| Control elements | |
| Number of keys | 6 |
| Mode selector switch | 1 |
| Supply voltage | |
| Rated value (DC) | 24 V |
| permissible range, lower limit (DC) | 19.2 V |
| permissible range, upper limit (DC) | 28.8 V |
| Reverse polarity protection | Yes |
| Mains buffering | |
| Mains/voltage failure stored energy time | 5 ms |
| Repeat rate, min. | 1/s |
| Input current | |
| Current consumption (rated value) | 1.55 A |
| Inrush current, max. | 2.4 A; Rated value |
| l²t | 0.02 A ² ·s |
| Power | |
| Infeed power to the backplane bus | 12 W |
| Power consumption from the backplane bus (balanced) | 30 W |
| Power loss | |
| Power loss, typ. | 24 W |
| Memory | |
| Number of slots for SIMATIC memory card | 1 |
| SIMATIC memory card required | Yes |
| Work memory | |
| integrated (for program) | 2 Mbyte |
| | |

| • integrated (for data) | 8 Mbyte |
|--|---|
| Load memory | |
| Plug-in (SIMATIC Memory Card), max. | 32 Gbyte |
| Backup | |
| maintenance-free | Yes |
| CPU processing times | |
| for bit operations, typ. | 2 ns |
| for word operations, typ. | 3 ns |
| for fixed point arithmetic, typ. | 3 ns |
| for floating point arithmetic, typ. | 12 ns |
| CPU-blocks | |
| Number of elements (total) | 12 000; Blocks (OB, FB, FC, DB) and UDTs |
| DB | |
| Number range | 1 60 999; subdivided into: number range that can be used by the user: 1 59 999, and number range of DBs created via SFC 86: 60 000 60 999 |
| • Size, max. | 8 Mbyte; For DBs with absolute addressing, the max. size is 64 KB |
| FB | |
| Number range | 0 65 535 |
| • Size, max. | 1 Mbyte |
| FC | |
| Number range | 0 65 535 |
| • Size, max. | 1 Mbyte |
| OB | 4 Mb. 4- |
| Size, max. Number of free puels OBs | 1 Mbyte |
| Number of free cycle OBs | 100 |
| Number of time alarm OBs | 20 |
| Number of delay alarm OBs | 20 |
| Number of cyclic interrupt OBs | 20; with minimum OB 3x cycle of 100 μs |
| Number of process alarm OBs Number of DDV4 plants OBs | 50 |
| Number of DPV1 alarm OBs Number of incohorage made OBs | 3 |
| Number of technology synchronous plarm ORs | 3 2 |
| Number of technology synchronous alarm OBs Number of stortup OBs | 100 |
| Number of startup OBsNumber of asynchronous error OBs | 4 |
| Number of asynchronous error OBs | 2 |
| Number of synchronous error OBs Number of diagnostic alarm OBs | 1 |
| Nesting depth | • |
| per priority class | 24 |
| Counters, timers and their retentivity | 27 |
| | |
| S7 counter | 0.040 |
| Number Potontivity | 2 048 |
| Retentivity | Yes |
| — adjustable IEC counter | 163 |
| Number | Any (only limited by the main memory) |
| Retentivity | Any tony minico by the main memory |
| — adjustable | Yes |
| S7 times | |
| • Number | 2 048 |
| Retentivity | |
| — adjustable | Yes |
| IEC timer | |
| Number | Any (only limited by the main memory) |
| Retentivity | |
| — adjustable | Yes |
| Data areas and their retentivity | |
| Retentive data area (incl. timers, counters, flags), max. | 768 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 700 KB |
| Extended retentive data area (incl. timers, counters, flags), | 8 Mbyte; When using PS 6 0W 24/48/60 V DC HF |
| max. | |
| Flag | |
| • Size, max. | 16 kbyte |
| Number of clock memories | 8; 8 clock memory bit, grouped into one clock memory byte |

| Data blocks | |
|--|--|
| Retentivity adjustable | Yes |
| Retentivity preset | No |
| Local data | |
| per priority class, max. | 64 kbyte; max. 16 KB per block |
| Address area | |
| Number of IO modules | 16 384; max. number of modules / submodules |
| I/O address area | |
| • Inputs | 32 kbyte; All inputs are in the process image |
| Outputs | 32 kbyte; All outputs are in the process image |
| per integrated IO subsystem | |
| — Inputs (volume) | 32 kbyte; Max. 32 KB via X1; max. 8 KB via X2 or X3 |
| — Outputs (volume) | 32 kbyte; Max. 32 KB via X1; max. 8 KB via X2 or X3 |
| per CM/CP | |
| — Inputs (volume) | 8 kbyte |
| — Outputs (volume) | 8 kbyte |
| Subprocess images • Number of subprocess images, max. | 32 |
| | 32 |
| Hardware configuration | CALA distributed I/O system in the second in the little in the second in |
| Number of distributed IO systems | 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) |
| Number of DP masters | |
| • integrated | 1 |
| • Via CM | 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total |
| Number of IO Controllers | |
| integrated | 2 |
| • Via CM | 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total |
| Rack | De Iliserted III total |
| Modules per rack, max. | 32; CPU + 31 modules |
| Number of lines, max. | 1 |
| PtP CM | |
| Number of PtP CMs | the number of connectable PtP CMs is only limited by the number of available slots |
| Time of day | |
| Clock | |
| • Type | Hardware clock |
| Backup time | 6 wk; At 40 °C ambient temperature, typically |
| Deviation per day, max. | 10 s; Typ.: 2 s |
| Operating hours counter | |
| Number | 16 |
| Clock synchronization | |
| • supported | Yes |
| • to DP, master | Yes |
| • in AS, master | Yes |
| • in AS, slave | Yes |
| on Ethernet via NTP | Yes |
| Interfaces | |
| Number of PROFINIC interfaces | 2 |
| Number of PROFIBUS interfaces | 1 |
| 1. Interface | |
| Interface types | Voc. V4 |
| RJ 45 (Ethernet) Number of ports | Yes; X1 |
| Number of portsintegrated switch | Yes |
| | 100 |
| Protocols | |
| Protocols • IP protocol | Yes: IPv4 |
| Protocols • IP protocol • PROFINET IO Controller | Yes; IPv4 Yes |
| IP protocol | |
| IP protocolPROFINET IO Controller | Yes |

| • Web server | Yes |
|---|--|
| Media redundancy | Yes |
| PROFINET IO Controller | |
| Services | V. |
| — PG/OP communication | Yes |
| — Isochronous mode | Yes |
| Direct data exchange | Yes; Requirement: IRT and isochronous mode (MRPD optional) |
| — IRT | Yes |
| — PROFlenergy | Yes; per user program |
| — Prioritized startup | Yes; Max. 32 PROFINET devices |
| — Number of connectable IO Devices, max. | 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET |
| — Of which IO devices with IRT, max. | 64 |
| Number of connectable IO Devices for RT, | 512 |
| max. — of which in line, max. | 512 |
| Number of IO Devices that can be | 8; in total across all interfaces |
| simultaneously activated/deactivated, max. | o, in total across all interfaces |
| Number of IO Devices per tool, max. | 8 |
| — Updating times | The minimum value of the update time also depends on communication |
| - F 9 | share set for PROFINET IO, on the number of IO devices, and on the |
| | quantity of configured user data |
| Update time for IRT | |
| — for send cycle of 250 μs | 250 μs to 4 ms |
| — for send cycle of 500 μs | 500 μs to 8 ms |
| — for send cycle of 1 ms | 1 ms to 16 ms |
| — for send cycle of 2 ms | 2 ms to 32 ms |
| — for send cycle of 4 ms | 4 ms to 64 ms |
| With IRT and parameterization of "odd" send | Update time = set "odd" send clock (any multiple of 125 μs: 375 μs, 625 |
| cycles | μs 3 875 μs) |
| Update time for RT | 050 1 400 |
| — for send cycle of 250 μs | 250 µs to 128 ms |
| — for send cycle of 500 μs | 500 μs to 256 ms |
| — for send cycle of 1 ms | 1 ms to 512 ms |
| — for send cycle of 2 ms | 2 ms to 512 ms |
| — for send cycle of 4 ms | 4 ms to 512 ms |
| PROFINET IO Device | |
| Services — PG/OP communication | Von |
| | Yes |
| — Isochronous mode — IRT | No Voc |
| | Yes |
| — PROFlenergy | Yes; per user program |
| — Shared device | Yes |
| Number of IO Controllers with shared device, max. | 4 |
| activation/deactivation of I-devices | Yes; per user program |
| Asset management record | Yes; per user program |
| 2. Interface | 1 00, per user program |
| | |
| Interface types | Voc. V2 |
| RJ 45 (Ethernet) Number of parts | Yes; X2 |
| Number of ports integrated quitable | 1 |
| • integrated switch | No |
| Protocols • IP protocol | Voe: IDv/ |
| IP protocol PROFINET IO Controller | Yes; IPv4 |
| PROFINET IO Controller PROFINET IO Dovice | Yes |
| PROFINET IO Device SIMATIC communication | Yes |
| SIMATIC communication Open IF communication | Yes Voc Ontionally also appropriated |
| Open IE communication | Yes; Optionally also encrypted |
| Web server | Yes |
| Media redundancy | No |
| PROFINET IO Controller | |
| Services | |
| — PG/OP communication | Yes |
| Isochronous mode | No |
| Direct data exchange | No |

| - IRT - PROFilenergy - Prioritized startup - Number of connectable IO Devices, max. - Number of connectable IO Devices, max. - Number of thich in ins., max of which in ins., max of which in ins., max of which in ins., max which | | |
|--|---|--|
| - Prioritized startup - Number of connectable IO Devices, max Number of connectable IO Devices for RT, max Of which in line, max Number of 10 Devices that can be simultaneously activated/deactivated, max Updating fines - Number of 10 Devices per tool, max Updating fines - FROFINET IO Devices - Prof. Pr | | |
| Number of connectable IO Devices, max. Number of connectable IO Devices for RT, max. Number of connectable IO Devices for RT, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Updating times Updating times Updating times Very Interface Ver | 3, | |
| Number of connectable IO Devices for RT, max of which in line, max Number of IO Devices that can be simultaneously activated/deactivated, max Number of IO Devices per tool, max Updating times Updating times Updating times The max of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data Update time for RT for send cycle of 1 ms PROFINET IO Device Services PGOP communication Isochronous mode IRT FROFIneory PROFINET IO Device Number of IO Controllers with shared device, max activation/deactivation of I-devices Asset device Number of IO Controllers with shared device, max activation/deactivation of I-devices Asset haragement record PROFIBUS DP stave Number of ports Number of ports PROFIBUS DP master PROFIBUS DP mas | • | |
| max. — Number of I/O Devices per tool, max. — Number of I/O Devices per tool, max. — Number of I/O Devices per tool, max. — Updating times Update time for RT — to 1 send cycle of 1 ms PROFINET I/O Devices Services — PG/OP communication — Isochronous mode — Isochronous mode — Isochronous mode — Isochronous mode — Number of I/O Controllers with shared device, max. — activation/deachvation of Ir-devices — Asset management record — Yes; per user program — Number of I/O Controllers with shared device, max. — activation/deachvation of I-devices — Asset management record — Yes; per user program — Yes; per | | AS-i, PROFIBUS or PROFINET |
| - Number of I/O Devices that can be simultaneously advisade/dachavted max Number of I/O Devices per tool, max Updating times - Updating times - Update time for RT - for send cycle of 1 ms - row row send cycle of 1 ms - row | • | 128 |
| simultaneously advisated/deachvated, max. - Number of IO Devices per tool, max. - Updating times The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data Update time for RT - for send cycle of 1 ms PGOFINET IO Device Services - PGIOP communication - Isochronous mode - IRT - Isochronous mode - IRT - PROFlenergy - Prioritized startup - Shared device - Number of IO Controllers with shared device, max activation/deachvation of I-devices - Asset management record Interface types - RS 485 - Number of ports - PROFIBUS DP master - PROFIBUS DP master - PROFIBUS DP master - PROFIBUS DP master - Number of ports - PROFIBUS DP slave - SIMATIC communication - Yes - PROFIBUS DP slave - SIMATIC communication - Yes - PROFIBUS DP slave - Number of ports- Interface types - Isochronous mode - Requisitance - Isochronous mode - Requisitance - Isochronous mode - Activation/deactivation of DP slaves - Interface types RJ 45 (Ethernet) - Number of connections, max Number of connections was integrated interfaces - PROFIBUS DP slaves - Activation/deactivation of DP slaves - Ves - Ves - Activation/deactivation of DP slaves - Ves - Ves | — of which in line, max. | 128 |
| - Number of IO Devices per tool, max. - Update time for RT - For send cycle of 1 ms - PROFINET IO Device Services - PGOP communication - Isochronous mode - Number of IO Octrollers with shared device, max a citvation/deactivation of I-devices - RS et Mass - RS 45 - Number of ports - PROFIBUS DP master - Number of Do connections, max Number of Do connections of DP slaves - Number of Do connections and DP slaves - RS 45 - Number of DP slaves, max Number of DP slaves - Number of DP slaves, max Number of DP slaves - Activation/deactivation of DP slaves - RS 45 - Number of DP slaves, max Activation/deactivation of DP slaves - PGOP Communication - PGOP Slaves, max Number of DP slaves by Se - PGOP communication - PGOP communication - PGOP communication - Yes - PGOP communication - Yes - PGOP communication - Yes - Activation/deactivation of DP slaves - Number of connections wax Number of connections reserved for ES/HMIlweb - Number of connections vas integrated interfaces - Number of connections reserved for ES/HMIlweb - Number of connections vas integrated interfaces - Number of connections vas integrated interfaces - Number of connections vas integrated interfaces - Number of connections vas | | 8; in total across all interfaces |
| | | |
| Share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data Update time for RT — for send cycle of 1 ms PROFINET IO Device Services — PGIOP communication — Isochronous mode — Isochronous mode — IRT — No — PROFlenergy — Prioritized startup — No — Shared device — Number of IO Controllers with shared device, max. — a culvation/deactivation of I devices — Yes, per user program — Asset management record Interface Interface Interface types — RS 485 — Number of ports — PROFIBUS DP master — PROFIBUS DP stave — PROFIBUS DP stave — PROFIBUS DP stave — PROFIBUS DP master — PRO | • | |
| Update time for RT — for send cycle of 1 ms PROFINET IO Device Services — PGC/P communication — lsccbronous mode — No — lsccbronous mode — No — IRT — No — PROFlenergy — Prioritized startup — Profice of the startup — Profice of the startup — Shared device — Number of IO Controllers with shared device, max. — activation/descluvation of I devices — Asset management record 3. Interface Interface types — RS 485 — Number of ports — 1 Profices — PROFIBUS DP master — Number of connections, max. — Number of ports — PGG/P communication — Equidistance — PGG/P communication — Equidistance — Services — PGG/P communication — Equidistance — However the startus LED — PGG/P communication — Equidistance — Activation/descluvation of DP slaves — Activation/descluvation of DP slaves — No — Autonegotiation — PGG/P startus — No — Number of connections, max. — 12 Mbit/s PROFIGUS No Number of connections max. — Notation max. | — Updating times | share set for PROFINET IO, on the number of IO devices, and on the |
| PROFINET IO Device Services - PC/OP communication - Isochronous mode - INT - INT - PROFlenergy - Prioritized startup No - Shared device - Number of IO Controllers with shared device, max activation/deactivation of I-devices - Asset management record - Asset management record - Asset management record - Start Asset management record - Asset management record - Asset management record - Start Asset management record | Update time for RT | quality of collingation accordance |
| Services - PG/OP communication - Isochronous mode - IRT - No - IRT - PROFlenergy - Prioritized startup - No - Shared device - Mumber of IO Controllers with shared device, max activation/deactivation of I-devices - Asset management record - Startorface Interface types - RS 485 - Number of ports - PROFIBUS DP master - PROFIBUS DP slave - SIMATIC communication - PROFIBUS DP slave - SIMATIC communication - Yes - PROFIBUS DP master - Number of concections, max Number of DP slaves, max Number of DP slaves, max Services - PG/OP communication - Equidistance - Services - PG/OP communication - Equidistance - Activation/deactivation of DP slaves - Activation/deactivation of DP slaves - Activation/deactivation of DP slaves - Autoreopolation - | — for send cycle of 1 ms | 1 ms to 512 ms |
| | PROFINET IO Device | |
| Isochronous mode IRT | Services | |
| - IRT - PROFlenergy - Prioritized startup - Shared device - Number of IO Controllers with shared device, max activation/deactivation of I-devices - Asset management record 3. Interface Interface types - R3 485 - Namber of ports - PROFIBUS DP master - PROFIBUS DP master - Number of connections, max Number of DP slaves, max Number of DP slaves, max R4 FROFIBUS OP recommunication - Equidistance - Ligidistance - L | — PG/OP communication | Yes |
| PROFIlenergy Prioritized startup Shared device and the startup | — Isochronous mode | No |
| - Prioritized startup - Shared device - Number of IO Controllers with shared device, max activation/deactivation of I-devices - Asset management record 3. Interface Interface types - RS 485 - Number of ports - PROFIBUS DP master - PROFIBUS DP master - PROFIBUS DP master - PROFIBUS DP slave - SIMATIC communication PROFIBUS DP master - Number of connections, max Number of DP slaves, max Number of DP slaves, max PG/OP communication Services - PG/OP communication - Equidistance - Activation/deactivation of DP slaves - Autocrossing - Industrial Ethernet status LED - Autocrossing - Industrial Ethernet status LED - PROFIBUS - Number of connections, max Number of connections - Autocrossing - Industrial Ethernet status LED - PROFIBUS - Transmission rate, max Number of connections - Number of connections was reparted interfaces - Number of connections was reparted interfaces - Number of connections was reparted interfaces - Number of connections - Number of connections was reparted interfaces - Number of connections - Number of connections was reparted interfaces - Number of connections was reparted interfaces - Number of connections was reparted interfaces - Number of connections - Number of connec | — IRT | No |
| Shared device | | Yes; per user program |
| | • | |
| max. — activation/deactivation of I-devices — Asset management record 3. Interface Interface types RS 485 Number of ports PROFIBUS DP master PROFIBUS DP slave SIMATIC communication PROFIBUS DP master Number of connections, max. Number of Designer PROFIBUS DP master Number of Designer Number of Designer PROFIBUS DP master Number of Designer Number of Designer PROFIBUS DP master Number of Designer Number of Connections, max. Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections reserved for ES/HMI/web Number of Connections reserved for ES/HMI/web Number of S' routing paths Number of S' routing paths Redundancy mode H-Sync forwarding Media redundancy | — Shared device | Yes |
| | • | 4 |
| - Asset management record Yes; per user program 3. Interface types RS 485 RS 485 Number of ports PROFIBUS DP master PROFIBUS DP slave SIMATIC communication PROFIBUS DP master Number of connections, max. Number of DP slaves, max. ASI, FROFIBUS or PROFIBUS DP interface PROFIBUS OF master Number of DP slaves, max. ASI, PROFIBUS or PROFINET Services PGOP communication Yes PROFIBUS or PROFINET Services PGOP communication Yes Asi, PROFIBUS or PROFINET Services PROFIBUS or PROFIBUS or PROFINET Services PROFIBUS or PROFIBUS or PROFIBUS or PROFINET Services PROFIBUS or PRO | | Voc. nor upor program |
| Interface types • RS 485 • Number of ports 1 Protocols • PROFIBUS DP master • PROFIBUS DP slave • No • SIMATIC communication • PROFIBUS DP master • Number of connections, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • Number of DP slaves, max. • PG/OP communication • Yes • Equidistance • Yes • Lactivation/deactivation of DP slaves Interface types RJ 45 (Ethemet) • 100 Mbps • Autocrossing • Autocrossing • Industrial Ethernet status LED • Yes • Autocrossing • Industrial Ethernet status LED • Yes RS 485 • Transmission rate, max. Protocols PROFisafe No Number of connections, max. • Number of connections reserved for ES/HMII/web • Number of S7 routing paths Redundancy mode • H-Sync forwarding Media redundancy | | |
| Interface types RS 485 Number of ports Protocois PROFIBUS DP master PROFIBUS DP slave No SIMATIC communication PROFIBUS DP master Number of DP slaves, max. Number of DP slaves, max. Services PGOP communication PGOP com | - | i co, pei uoei piogiaili |
| RS 485 Number of ports Number of ports PROFIBUS DP master PROFIBUS DP slave SIMATIC communication PROFIBUS DP master Number of connections, max. Number of connections, max. Number of DP slaves, max. PGPOP communication Services PROFIBUS DP master Number of DP slaves, max. Number of DP slaves, max. Requisitance PGOP communication Pes PGUP communication Pes Pes PROFIBUS or PROFIBUS DP interface Pes PeroFiBUS or PROFIBUS DP interface PeroFiBUS DP interface Pes PET PROFIBUS DP interface Pes PET PROFIBUS DP interface Pes PET PROFIBUS DP interface Pes PeroFiBUS DP interface Pes PET PROFIBUS DP interface Pes PeroFiBUS DP interface Pes PET PROFIBUS DP interface Pes PET PROFIBUS DP interface Pes PET PROFIBUS DP interface PEROFIBUS DP interface Pes PET PROFIBUS DP interface PET PROFIBUS DP inter | | |
| Protocols PROFIBUS DP master PROFIBUS DP slave PROFIBUS DP slave PROFIBUS DP master SIMATIC communication PROFIBUS DP master No SIMATIC communication PROFIBUS DP master Number of connections, max. Number of DP slaves, max. PROFIBUS DP slaves, max. 48; for the integrated PROFIBUS DP interface 125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET PEquidistance Pequidistance Pess Hoterface types Activation/deactivation of DP slaves Profibus Profibu | ** | Voc. V2 |
| Protocols PROFIBUS DP master PROFIBUS DP slave SIMATIC communication PROFIBUS DP master Number of connections, max. Number of DP slaves, max. Number of DP slaves, max. PROFIBUS or PROFIBUS or PROFIBUS or PROFINET Services Profices Profices Profices Profices Profices Services Profices Profices Profices Profices Services Profices Profices Services Profices Profices Services Profices Profices Services Services Profices Services Services Profices Services Se | | |
| PROFIBUS DP master PROFIBUS DP slave SIMATIC communication PROFIBUS DP master No SIMATIC communication PROFIBUS DP master Number of connections, max. Number of DP slaves, max. Number of DP slaves, max. 48; for the integrated PROFIBUS DP interface 125; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Services PG/OP communication Pess PG/OP communication Pess PG-QP communication Pess Pess Pasteriace types RJ 45 (Ethernet) No Mubps Autonegotiation Autocrossing Industrial Ethernet status LED Pess PROFISafe No Number of connections Number of connections Number of connections Number of connections reserved for ES/HMI/web Number of connections reserved for ES/HMI/web Number of Sonnections vaintegrated interfaces Number of Sonnections reserved for ES/HMI/web Number of Sonnections vaintegrated interfaces Number of Sonnections reserved for ES/HMI/web Number of Sonnections vaintegrated interfaces Number of Sonnections reserved for ES/HMI/web Number of Sonnections vaintegrated interfaces Number of Sonnections reserved for ES/HMI/web Number of Sonnections reserved for ES/HMI/web Number of Sonnections vaintegrated interfaces Number of Sonnections reserved for ES/HMI/web Number of Sonnections vaintegrated interfaces Number of Sonnections reserved for ES/HMI/web Number of Sonnections vaintegrated interfaces Number of Sonnections reserved for ES/HMI/web Number of Sonnections vaintegrated interfaces Number of Sonnections vaintegrated in | | 1 |
| PROFIBUS DP slave SIMATIC communication PROFIBUS DP master Number of connections, max. Number of DP slaves, max. Number of DP slaves, max. PG/OP communication Equidistance Services PG/OP communication Fequidistance Services PG/OP communication Fequidistance Services PG/OP communication Fequidistance Services PG/OP communication Fequidistance Services Pes Services Services Pes Services Pes Services Services Pes Services | | Von |
| SIMATIC communication PROFIBUS DP master Number of connections, max. Number of DP slaves, max. Number of DP slaves, max. Number of DP slaves, max. PG/OP communication Pequidistance Services - PG/OP communication Pequidistance Services - Rudicitance Pequidistance Pequidistanc | | |
| PROFIBUS DP master Number of connections, max. Number of DP slaves, max. PG/OP communication Equidistance Services PS 45 (Ethernet) Industrial Ethernet status LED Ps 445 (Transmission rate, max. Protocols PROFISIA No Number of connections, max. Number of connections, max. Number of connections reserved for ES/HMII/web Number of sonnections reserved for ES/HMII/web Number of SP routing paths PROFIBUS OP PROFIBUS DP interface 125, In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET Yes Ps 45-i, PROFIBUS or PROFINET Yes Ps 45-i, PROFIBUS OF PROFINET AS-i, PROFIBUS or PROFINET Yes Ps 45-i, Intotal, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS Profibus Profibu | | |
| Number of connections, max. Number of DP slaves, max. Number of DP slaves, max. Number of DP slaves, max. Number of DP slaves, max. Number of DP slaves, max. Number of DP slaves, max. Number of DP slaves, max. Number of connections, max. Number of connections, max. Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections reserved for ES/HMI/web Number of SP routing paths Nection SP ROFIBUS Nection 1 1 2 Mbit/s Number of SP Routing paths No Number of SP Routing connections are supported via PROFIBUS Redundancy mode Nections reserved for SP Routing Connections are supported via PROFIBUS Redundancy mode Nections reserved for SP Routing Connections are supported via PROFIBUS | | 165 |
| Number of DP slaves, max. Services - PG/OP communication | | 48: for the integrated PROFIBLIS DP interface |
| AS-I, PROFIBUS or PROFINET Services — PG/OP communication Yes — Equidistance Yes — Isochronous mode Yes — Activation/deactivation of DP slaves Yes Interface types RJ 45 (Ethernet) • 100 Mbps Yes • Autonegotiation Yes • Autocrossing Yes • Industrial Ethernet status LED Yes RS 485 • Transmission rate, max. 12 Mbit/s Protocols PROFIsafe No Number of connections, max. • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths Redundancy mode • H-Sync forwarding Media redundancy Yes | | |
| PG/OP communication Equidistance Isochronous mode Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) 100 Mbps Autoregotiation Autocrossing Autocrossing Autocrossing Autocrossing Autocrossing Autocrossing Industrial Ethernet status LED RS 485 Transmission rate, max Transmission rate, max It Mbit/s Protocols PPOFIsafe Number of connections, max Number of connections, max Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Yes Mcdia redundancy Yes Activation/deactivation of DP slaves Yes Yes Activation/deactivation of DP slaves Activation/deactivation of DP slaves Yes Activation/deactivation of DP slaves Yes Activation of DP slaves Yes Activation of DP slaves Activa | • Number of Dr. Slaves, max. | |
| - Equidistance - Isochronous mode - Activation/deactivation of DP slaves Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Autoreossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols POFIsafe No Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths Redundancy mode • H-Sync forwarding Media redundancy Yes Yes Yes Yes No No No No No No Redundancy mode Yes Yes Yes Yes | Services | |
| Isochronous mode Yes Activation/deactivation of DP slaves Yes Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED Yes RS 485 • Transmission rate, max. Protocols PROFIsafe No Number of connections, max. • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths Redundancy mode • H-Sync forwarding Media redundancy Yes Yes Yes Yes Yes Yes Yes Ye | — PG/OP communication | Yes |
| | — Equidistance | Yes |
| Interface types RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe No Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths Redundancy mode • H-Sync forwarding Media redundancy Yes Yes Yes Yes Yes Yes Yes Ye | Isochronous mode | Yes |
| RJ 45 (Ethernet) • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe No Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths Redundancy mode • H-Sync forwarding Media redundancy Yes Yes Yes Yes 12 Mbit/s No No No No 228 320; via integrated interfaces of the CPU and connected CPs / CMs 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Redundancy mode • H-Sync forwarding Media redundancy | Activation/deactivation of DP slaves | Yes |
| • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths Redundancy mode • H-Sync forwarding Media redundancy Yes Yes Yes Yes No No No Redundancy mode • H-Sync forwarding Yes Media redundancy | Interface types | |
| • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED RS 485 • Transmission rate, max. Protocols PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths Redundancy mode • H-Sync forwarding Media redundancy Yes Yes Yes Yes No No No Redundancy mode • H-Sync forwarding Yes Media redundancy | RJ 45 (Ethernet) | |
| Autonegotiation Autocrossing Industrial Ethernet status LED Yes RS 485 Transmission rate, max. PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths H-Sync forwarding Media redundancy Yes | | Yes |
| Autocrossing Industrial Ethernet status LED Yes RS 485 Transmission rate, max. Mbit/s Protocols PROFIsafe No Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Author of S7 routing paths Yes Redundancy mode H-Sync forwarding Media redundancy | • | Yes |
| Industrial Ethernet status LED RS 485 Transmission rate, max. Mbit/s Protocols PROFIsafe No Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy | | Yes |
| ◆ Transmission rate, max. Protocols PROFIsafe Number of connections ◆ Number of connections, max. ◆ Number of connections reserved for ES/HMI/web ◆ Number of connections via integrated interfaces ◆ Number of S7 routing paths Redundancy mode ◆ H-Sync forwarding Media redundancy | _ | Yes |
| PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy No No No 320; via integrated interfaces of the CPU and connected CPs / CMs 10 288 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Yes | RS 485 | |
| PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of s7 routing paths Redundancy mode H-Sync forwarding Media redundancy No No 320; via integrated interfaces of the CPU and connected CPs / CMs 10 288 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Yes Media redundancy | Transmission rate, max. | 12 Mbit/s |
| Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy Mumber of connections, max. 320; via integrated interfaces of the CPU and connected CPs / CMs 10 288 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Yes Media redundancy | Protocols | |
| Number of connections, max. Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy 320; via integrated interfaces of the CPU and connected CPs / CMs 288 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Yes | PROFIsafe | No |
| Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy 10 288 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Yes Media redundancy | Number of connections | |
| Number of connections reserved for ES/HMI/web Number of connections via integrated interfaces Number of S7 routing paths Redundancy mode H-Sync forwarding Media redundancy 10 288 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Yes Media redundancy | Number of connections, max. | 320; via integrated interfaces of the CPU and connected CPs / CMs |
| Number of S7 routing paths 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Redundancy mode H-Sync forwarding Media redundancy Yes | Number of connections reserved for ES/HMI/web | |
| Number of S7 routing paths 64; in total, only 16 S7-Routing connections are supported via PROFIBUS Redundancy mode H-Sync forwarding Media redundancy Yes | Number of connections via integrated interfaces | 288 |
| PROFIBUS Redundancy mode • H-Sync forwarding Media redundancy Yes | | 64; in total, only 16 S7-Routing connections are supported via |
| ◆ H-Sync forwarding Yes Media redundancy | | |
| Media redundancy | | |
| · | | Yes |
| — Media redundancy only via 1st interface (X1) | | |
| media redundancy | — Media redundancy | only via 1st interface (X1) |

| — MRP | Yes; MRP Automanager according to IEC 62439-2 Edition 2.0, MRP Manager; MRP Client |
|--|--|
| MRP interconnection, supported | Yes; as MRP ring node according to IEC 62439-2 Edition 3.0 |
| — MRPD | Yes; Requirement: IRT |
| — Switchover time on line break, typ. | 200 ms; For MRP, bumpless for MRPD |
| — Number of stations in the ring, max. | 50 |
| SIMATIC communication • PG/OP communication | Voc: openintion with TLC V/1.2 pro-coloated |
| S7 routing | Yes; encryption with TLS V1.3 pre-selected Yes |
| Data record routing | Yes |
| S7 communication, as server | Yes |
| S7 communication, as client | Yes |
| User data per job, max. | See online help (S7 communication, user data size) |
| Open IE communication | |
| • TCP/IP | Yes |
| — Data length, max. | 64 kbyte |
| several passive connections per port, supported | Yes |
| • ISO-on-TCP (RFC1006) | Yes |
| — Data length, max. | 64 kbyte |
| • UDP | Yes |
| — Data length, max. | 2 kbyte; 1 472 bytes for UDP broadcast |
| — UDP multicast | Yes; 128 multicast circuits (of which max. 5 via X1) |
| • DHCP | Yes |
| • DNS | Yes |
| • SNMP | Yes |
| • DCP | Yes |
| • LLDP | Yes Voc. Ontional |
| Encryption Web server | Yes; Optional |
| HTTP | Yes; Standard and user pages |
| • HTTPS | Yes; Standard and user pages Yes; Standard and user pages |
| OPC UA | roo, otanidata ana door pagoo |
| Runtime license required | Yes; "Large" license required |
| OPC UA Client | Yes |
| Application authentication | Yes |
| — Security policies | Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 |
| User authentication | "anonymous" or by user name & password |
| Number of connections, max. | 40 |
| number of nodes of the client interfaces, recommended max. | 5 000 |
| Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/O max. | 300 |
| Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. | 20 |
| Number of elements for one call of OPC_UA_MethodGetHandleList, max. | 100 |
| number of simultaneous calls of the client instructions for session management, per connection, max. | 1 |
| — number of simultaneous calls of the client instructions for data access, per connection, max. | 5 |
| Number of registerable nodes, max. | 5 000 |
| Number of registerable method calls of | 100 |
| OPC_UA_MethodCall, max. — Number of inputs/outputs when calling | 20 |
| OPC_UA_MethodCall, max. OPC UA Server | Yes; Data access (read, write, subscribe), method call, custom address |
| Application (I. C. C. | space |
| Application authentication | Yes Available acquity policies None Posic129Pos15 Posic256Pos15 |
| — Security policies | Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 |
| — User authentication— GDS support (certificate management) | "anonymous" or by user name & password Yes |
| | 100 |
| Number of sessions, max. | 64 |

| Number of accessible variables, max. | 200 000 |
|---|--|
| Number of registerable nodes, max. | 50 000 |
| Number of subscriptions per session, max. | 20 |
| — Sampling interval, min. | 10 ms |
| · - | |
| — Publishing interval, min. | 10 ms |
| Number of server methods, max. | 100 |
| Number of inputs/outputs per server method, | 20 |
| max. | |
| number of monitored items, recommended | 10 000; for 1 s sampling interval and 1 s send interval |
| max. | |
| Number of server interfaces, max. | 10 of each "Server interfaces" / "Companion specification" type and 20 |
| | of the type "Reference namespace" |
| Number of nodes for user-defined server | 30 000 |
| interfaces, max. | |
| Alarms and Conditions | Yes |
| Number of program alarms | 400 |
| Number of alarms for system diagnostics | 200 |
| Further protocols | |
| MODBUS | Yes; MODBUS TCP |
| | , |
| Isochronous mode | |
| Equidistance | Yes |
| S7 message functions | |
| Number of login stations for message functions, max. | 64 |
| Program alarms | Yes |
| • | |
| Number of configurable program messages, max. | 10 000; Program messages are generated by the "Program_Alarm" block, ProDiag or GRAPH |
| N. J. Cl. J.J. | |
| Number of loadable program messages in RUN, max. | 5 000 |
| Number of simultaneously active program alarms | |
| Number of program alarms | 2 000 |
| Number of alarms for system diagnostics | 1 000 |
| Number of alarms for motion technology objects | 480 |
| Test commissioning functions | |
| | Vac Devellal artira access passible for up to 40 ancincaring quetoms |
| Joint commission (Team Engineering) | Yes; Parallel online access possible for up to 10 engineering systems |
| Status block | Yes; Up to 16 simultaneously (in total across all ES clients) |
| Single step | No |
| Number of breakpoints | 20 |
| Status/control | |
| Status/control variable | Yes |
| Variables | Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters |
| Number of variables, max. | inputer outpute, memory bite, 220, aloundated in 63, almost, countries |
| — of which status variables, max. | 200; pariah |
| • | 200; per job |
| — of which control variables, max. | 200; per job |
| Forcing | |
| Forcing, variables | Peripheral inputs/outputs |
| Number of variables, max. | 200 |
| Diagnostic buffer | |
| • present | Yes |
| • | |
| Number of entries. max. | 3 200 |
| Number of entries, max. — of which powerfail-proof | |
| — of which powerfail-proof | 3 200 1 000 |
| — of which powerfail-proof Traces | 1 000 |
| — of which powerfail-proof Traces Number of configurable Traces | |
| — of which powerfail-proof Traces | 1 000 |
| — of which powerfail-proof Traces Number of configurable Traces | 1 000 |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information | 1 000 |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED | 1 000 8; Up to 512 KB of data per trace are possible |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes Yes |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED • Connection display LINK TX/RX | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes Yes Yes Yes |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED • Connection display LINK TX/RX | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes Yes Yes Yes Yes Yes Yes Yes Y |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED • Connection display LINK TX/RX Supported technology objects | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes Yes Yes Yes |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED • Connection display LINK TX/RX Supported technology objects Motion Control • Number of available Motion Control resources for | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes Yes Yes Yes Yes Yes Yes Yes Y |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED • Connection display LINK TX/RX Supported technology objects Motion Control • Number of available Motion Control resources for technology objects | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes Yes Yes Yes Yes Yes Yes Yes Y |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED • Connection display LINK TX/RX Supported technology objects Motion Control • Number of available Motion Control resources for | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes Yes Yes Yes Yes Yes Yes Yes Y |
| — of which powerfail-proof Traces • Number of configurable Traces Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • ERROR LED • MAINT LED • Connection display LINK TX/RX Supported technology objects Motion Control • Number of available Motion Control resources for technology objects | 1 000 8; Up to 512 KB of data per trace are possible Yes Yes Yes Yes Yes Yes Yes Yes Yes Y |

| — per positioning axis | 80 |
|---|--|
| — per synchronous axis | 160 |
| — per external encoder | 80 |
| — per output cam | 20 |
| — per cam track | 160 |
| — per probe | 40 |
| Positioning axis | |
| Number of positioning axes at motion control | 70 |
| cycle of 4 ms (typical value) | |
| Number of positioning axes at motion control | 128 |
| cycle of 8 ms (typical value) | |
| Controller | |
| PID_Compact | Yes; Universal PID controller with integrated optimization |
| PID_3Step | Yes; PID controller with integrated optimization for valves |
| PID-Temp | Yes; PID controller with integrated optimization for temperature |
| Counting and measuring | |
| High-speed counter | Yes |
| Ambient conditions | |
| Ambient temperature during operation | |
| horizontal installation, min. | 0 °C |
| horizontal installation, max. | 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the |
| | display is switched off |
| vertical installation, min. | 0 °C |
| vertical installation, max. | 40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the |
| | display is switched off |
| Ambient temperature during storage/transportation | |
| ● min. | -40 °C |
| • max. | 70 °C |
| Altitude during operation relating to sea level | |
| Installation altitude above sea level, max. | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual |
| | |
| configuration / header | |
| configuration / header configuration / programming / header | |
| | |
| configuration / programming / header | Yes |
| configuration / programming / header Programming language | Yes Yes |
| configuration / programming / header Programming language — LAD | |
| configuration / programming / header Programming language — LAD — FBD | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL | Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL | Yes Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH | Yes Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection | Yes Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection | Yes Yes Yes Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection | Yes Yes Yes Yes Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection | Yes Yes Yes Yes Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection | Yes Yes Yes Yes Yes Yes Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data | Yes Yes Yes Yes Yes Yes Yes Yes Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • lower limit | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • lower limit • upper limit Dimensions | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • lower limit • upper limit Dimensions Width | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • lower limit • upper limit Dimensions Width Height | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • lower limit • upper limit Dimensions Width Height Depth | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • lower limit • upper limit Dimensions Width Height Depth Weights | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • lower limit • upper limit Dimensions Width Height Depth | Yes |
| configuration / programming / header Programming language — LAD — FBD — STL — SCL — GRAPH Know-how protection • User program protection/password protection • Copy protection • Block protection Access protection • protection of confidential configuration data • Password for display • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection programming / cycle time monitoring / header • lower limit • upper limit Dimensions Width Height Depth Weights | Yes |