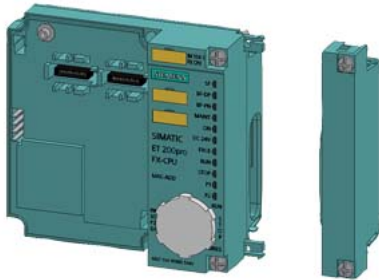


SIMATIC DP, IM154-8FX PN/DP CPU f. ET200 PRO, 1.5 MB work memory, Int. PROFINET interface, Int. PROFIBUS DP master/slave interface Degree of protection IP65/67, Micro Memory Card and Connection module required



| General information   |   |
|---|---|
| HW functional status  | 01  |
| Firmware version  | V3.2  |
| Product function  |   |
| • Isochronous mode  | Yes; Via PROFIBUS DP or PROFINET interface  |
| Engineering with  |   |
| • Programming package                                       | As of STEP 7 V5.5 with HSP 222 + Distributed Safety V5.4 SP4                        |
| Supply voltage  |   |
| Rated value (DC)  | 24 V  |
| external protection for power supply lines (recommendation) | MCB 24 V DC / 16 A with tripping characteristic Type B and C (see ET 200pro manual) |
| Load voltage L+   |   |
| • Rated value (DC)  | 24 V  |
| • permissible range, lower limit (DC)                       | 20.4 V  |
| • permissible range, upper limit (DC)                       | 28.8 V  |
| • Reverse polarity protection                               | Yes   |
| Input current   |   |
| Current consumption, typ.                                   | 350 mA  |
| Current consumption (in no-load operation), typ.            | 250 mA; Typical, current consumption for CPU in STOP state                          |
| Inrush current, typ.  | 2 A   |
| I <sup>2</sup> t  | 0.25 A <sup>2</sup> ·s; Typical   |
| Power loss  |   |
| Power loss, typ.  | 8.5 W   |
| Memory  |   |
| Work memory   |   |
| • integrated  | 1 536 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.                         | 0.16 μs   |

**CPU-blocks**

|   |   |
|---|---|
| Number of blocks (total)                                  | 1 024; (DBs, FCs, FBs); the maximum number of loadable blocks can be reduced by the MMC used. |
| <b>DB</b>   |   |
| • Number, max.  | 1 024; Number range: 1 to 16000   |
| • Size, max.  | 64 kbyte  |
| <b>FB</b>   |   |
| • Number, max.  | 1 024; Number range: 0 to 7999  |
| • Size, max.  | 64 kbyte  |
| <b>FC</b>   |   |
| • Number, max.  | 1 024; Number range: 0 to 7999  |
| • Size, max.  | 64 kbyte  |
| <b>OB</b>   |   |
| • Size, max.  | 64 kbyte  |
| • Number of free cycle OBs                                | 1; OB 1   |
| • Number of time alarm OBs                                | 1; OB 10  |
| • Number of delay alarm OBs                               | 2; OB 20, 21  |
| • Number of cyclic interrupt OBs                          | 4; OB 32, 33, 34, 35  |
| • Number of process alarm OBs                             | 1; OB 40  |
| • Number of DPV1 alarm OBs                                | 3; OB 55, 56, 57  |
| • Number of isochronous mode OBs                          | 1; OB 61  |
| • Number of startup OBs                                   | 1; OB 100   |
| • Number of asynchronous error OBs                        | 6; OB 80, 82, 83, 85, 86, 87 (OB83 only for centralized I/O and PROFINET IO)                  |
| • Number of synchronous error OBs                         | 2; OB 121, 122  |
| <b>Nesting depth</b>                                      |   |
| • per priority class                                      | 16  |
| • additional within an error OB                           | 4   |
| <b>Counters, timers and their retentivity</b>             |   |
| <b>S7 counter</b>   |   |
| • Number  | 256   |
| <b>Retentivity</b>  |   |
| — adjustable  | Yes   |
| — lower limit   | 0   |
| — upper limit   | 255   |
| — preset  | Z 0 to Z 7  |
| <b>Counting range</b>                                     |   |
| — adjustable  | Yes   |
| — lower limit   | 0   |
| — upper limit   | 999   |
| <b>IEC counter</b>  |   |
| • present   | Yes   |
| • Type  | SFB   |
| • Number  | Unlimited (limited only by RAM capacity)  |
| <b>S7 times</b>   |   |
| • Number  | 256   |
| <b>Retentivity</b>  |   |
| — adjustable  | Yes   |
| — lower limit   | 0   |
| — upper limit   | 255   |
| — preset  | No retentivity  |
| <b>Time range</b>   |   |
| — lower limit   | 10 ms   |
| — upper limit   | 9 990 s   |
| <b>IEC timer</b>  |   |
| • present   | Yes   |
| • Type  | SFB   |
| • Number  | Unlimited (limited only by RAM capacity)  |
| <b>Data areas and their retentivity</b>                   |   |
| Retentive data area (incl. timers, counters, flags), max. | 128 kbyte   |
| <b>Flag</b>   |   |
| • Size, max.  | 2 048 byte  |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Retentivity available</li> <li>• Retentivity preset</li> <li>• Number of clock memories</li> </ul>   | Yes; MB 0 to MB 2 047<br>MB 0 to MB 15<br>8  |
| <b>Data blocks</b>  |  |
| <ul style="list-style-type: none"> <li>• Retentivity adjustable</li> <li>• Retentivity preset</li> </ul>  | Yes; via non-retain property on DB<br>Yes  |
| <b>Local data</b>   |  |
| <ul style="list-style-type: none"> <li>• per priority class, max.</li> </ul>  | 32 768 byte; Max. 2048 bytes per block   |
| <b>Address area</b>   |  |
| <b>I/O address area</b>   |  |
| <ul style="list-style-type: none"> <li>• Inputs</li> <li>• Outputs</li> </ul>   | 2 048 byte<br>2 048 byte   |
| of which distributed  |  |
| <ul style="list-style-type: none"> <li>— Inputs</li> <li>— Outputs</li> </ul>   | 2 048 byte<br>2 048 byte   |
| <b>Process image</b>  |  |
| <ul style="list-style-type: none"> <li>• Inputs, adjustable</li> <li>• Outputs, adjustable</li> <li>• Inputs, default</li> <li>• Outputs, default</li> </ul>  | 2 048 byte<br>2 048 byte<br>128 byte<br>128 byte   |
| <b>Subprocess images</b>  |  |
| <ul style="list-style-type: none"> <li>• Number of subprocess images, max.</li> </ul>   | 1; With PROFINET IO, the length of the user data is limited to 1600 bytes                                  |
| <b>Digital channels</b>   |  |
| <ul style="list-style-type: none"> <li>• Inputs               <ul style="list-style-type: none"> <li>— of which central</li> </ul> </li> <li>• Outputs               <ul style="list-style-type: none"> <li>— of which central</li> </ul> </li> </ul> | 16 384<br>128<br>16 384<br>64  |
| <b>Analog channels</b>  |  |
| <ul style="list-style-type: none"> <li>• Inputs               <ul style="list-style-type: none"> <li>— of which central</li> </ul> </li> <li>• Outputs               <ul style="list-style-type: none"> <li>— of which central</li> </ul> </li> </ul> | 1 024<br>64<br>1 024<br>64   |
| <b>Hardware configuration</b>   |  |
| Integrated power supply   | No   |
| <b>Number of DP masters</b>   |  |
| <ul style="list-style-type: none"> <li>• integrated</li> </ul>  | 1  |
| <b>Rack</b>   |  |
| <ul style="list-style-type: none"> <li>• Racks, max.</li> <li>• Modules per rack, max.</li> </ul>   | 1<br>16; Expansion width max. 1 m  |
| <b>Time of day</b>  |  |
| <b>Clock</b>  |  |
| <ul style="list-style-type: none"> <li>• Hardware clock (real-time)</li> <li>• retentive and synchronizable</li> <li>• Backup time</li> <li>• Deviation per day, max.</li> </ul>  | Yes<br>Yes<br>6 wk; At 40 °C ambient temperature<br>10 s; Typ.: 2 s  |
| <b>Operating hours counter</b>  |  |
| <ul style="list-style-type: none"> <li>• Number</li> <li>• Number/Number range</li> <li>• Range of values</li> <li>• Granularity</li> <li>• retentive</li> </ul>  | 1<br>0<br>0 to 2 <sup>31</sup> hours (when using SFC 101)<br>1 h<br>Yes; Must be restarted at each restart |
| <b>Clock synchronization</b>  |  |
| <ul style="list-style-type: none"> <li>• supported</li> <li>• to MPI, master</li> <li>• to MPI, slave</li> <li>• to DP, master</li> <li>• to DP, slave</li> <li>• on Ethernet via NTP</li> </ul>  | Yes<br>Yes<br>Yes<br>Yes; With DP slave only slave clock<br>Yes<br>Yes; As client                          |
| <b>1. Interface</b>   |  |
| Interface type  | Integrated RS 485 interface  |

|   |  |
|---|--|
| Isolated  | Yes  |
| <b>Interface types</b>                                |  |
| • RS 485  | Yes  |
| • Output current of the interface, max.               | May only be used for external terminating resistor   |
| • Design of the connection                            | 2x M12 B-coded   |
| <b>Protocols</b>                                      |  |
| • MPI   | Yes  |
| • PROFIBUS DP master                                  | Yes  |
| • PROFIBUS DP slave                                   | Yes  |
| • Point-to-point connection                           | No   |
| <b>MPI</b>  |  |
| • Transmission rate, max.                             | 12 Mbit/s  |
| <b>Services</b>                                       |  |
| — PG/OP communication                                 | Yes  |
| — Routing   | Yes  |
| — Global data communication                           | Yes  |
| — S7 basic communication                              | Yes  |
| — S7 communication                                    | Yes  |
| — S7 communication, as client                         | No   |
| — S7 communication, as server                         | Yes  |
| <b>PROFIBUS DP master</b>                             |  |
| • Transmission rate, max.                             | 12 Mbit/s  |
| • Number of DP slaves, max.                           | 124  |
| <b>Services</b>                                       |  |
| — PG/OP communication                                 | Yes  |
| — Routing   | Yes  |
| — Global data communication                           | No   |
| — S7 basic communication                              | Yes; I blocks only   |
| — S7 communication                                    | Yes  |
| — S7 communication, as client                         | No   |
| — S7 communication, as server                         | Yes; Connection configured on one side only  |
| — Equidistance  | Yes  |
| — Isochronous mode                                    | Yes; OB 61 - isochronous mode is possible either on DP or PROFINET IO (not simultaneously) |
| — SYNC/FREEZE   | Yes  |
| — Activation/deactivation of DP slaves                | Yes  |
| — Direct data exchange (slave-to-slave communication) | Yes; as subscriber   |
| — DPV1  | Yes  |
| <b>Address area</b>                                   |  |
| — Inputs, max.  | 2 048 byte   |
| — Outputs, max.                                       | 2 048 byte   |
| <b>User data per DP slave</b>                         |  |
| — Inputs, max.  | 244 byte   |
| — Outputs, max.                                       | 244 byte   |
| <b>PROFIBUS DP slave</b>                              |  |
| • Transmission rate, max.                             | 12 Mbit/s  |
| • automatic baud rate search                          | Yes; only with passive interface   |
| • Address area, max.                                  | 32   |
| • User data per address area, max.                    | 32 byte  |
| <b>Services</b>                                       |  |
| — Routing   | Yes; with interface active   |
| — Global data communication                           | No   |
| — S7 basic communication                              | No   |
| — S7 communication                                    | Yes  |
| — S7 communication, as client                         | No   |
| — S7 communication, as server                         | Yes; Connection configured on one side only  |
| — Direct data exchange (slave-to-slave communication) | Yes  |
| — DPV1  | No   |
| <b>Transfer memory</b>                                |  |
| — Inputs  | 244 byte   |

|   |   |
|---|---|
| — Outputs   | 244 byte  |
| <b>2. Interface</b>   |   |
| Interface type  | PROFINET  |
| Isolated  | Yes; Galvanic isolation for P3 is implemented in IM154-8, for P1 and P2 in CM   |
| automatic detection of transmission rate                                      | Yes; 10/100 Mbit/s  |
| Autonegotiation   | Yes   |
| Autocrossing  | Yes   |
| Change of IP address at runtime, supported                                    | Yes   |
| <b>Interface types</b>  |   |
| • Number of ports   | 3   |
| • integrated switch   | Yes   |
| • Design of the connection  | Ethernet (2x M12 D-coded; 1x RJ45)  |
| <b>Protocols</b>  |   |
| • MPI   | No  |
| • PROFINET IO Controller  | Yes; Also simultaneously with IO-Device functionality   |
| • PROFINET IO Device  | Yes; Also simultaneously with IO Controller functionality   |
| • PROFINET CBA  | Yes   |
| • PROFIBUS DP master  | No  |
| • PROFIBUS DP slave   | No  |
| • Open IE communication   | Yes; Via TCP/IP, ISO on TCP, and UDP  |
| • Web server  | Yes   |
| • Media redundancy  | Yes   |
| <b>PROFINET IO Controller</b>   |   |
| • Transmission rate, max.   | 100 Mbit/s  |
| <b>Services</b>   |   |
| — PG/OP communication   | Yes   |
| — Routing   | Yes   |
| — S7 communication  | Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32   |
| — Isochronous mode  | Yes; OB 61 - isochronous mode is possible either on DP or PROFINET IO (not simultaneously)                                      |
| — IRT   | Yes   |
| — Prioritized startup   | Yes   |
| — Number of IO devices with prioritized startup, max.                         | 32  |
| — Number of connectable IO Devices, max.                                      | 128   |
| — Of which IO devices with IRT, max.  | 64  |
| — of which in line, max.  | 64  |
| — Number of IO Devices with IRT and the option "high flexibility"             | 128   |
| — of which in line, max.  | 61  |
| — Number of connectable IO Devices for RT, max.                               | 128   |
| — of which in line, max.  | 128   |
| — Activation/deactivation of IO Devices                                       | Yes   |
| — Number of IO Devices that can be simultaneously activated/deactivated, max. | 8   |
| — IO Devices changing during operation (partner ports), supported             | Yes   |
| — Number of IO Devices per tool, max.   | 8   |
| — Device replacement without swap medium                                      | Yes   |
| — Send cycles   | 250 µs, 500 µs, 1 ms; 2 ms, 4 ms (not in the case of IRT with "high flexibility" option)  |
| — Updating time   | 250 µs to 512 ms (depending on the operating mode, see "IM 154-8 CPU Interface Module" operating instructions for more details) |
| <b>Address area</b>   |   |
| — Inputs, max.  | 2 048 byte  |
| — Outputs, max.   | 2 048 byte  |
| — User data consistency, max.   | 1 024 byte  |
| <b>PROFINET IO Device</b>   |   |
| <b>Services</b>   |   |
| — PG/OP communication   | Yes   |
| — Routing   | Yes   |
| — S7 communication  | Yes; With loadable FBs, max. configurable connections: 14, max. number of instances: 32   |

|   |  |
|---|--|
| — Isochronous mode                                  | No   |
| — IRT   | Yes  |
| — PROFlenergy                                       | 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. | 2  |
| <b>Transfer memory</b>                              |  |
| — Inputs, max.                                      | 1 440 byte; Per IO Controller with shared device   |
| — Outputs, max.                                     | 1 440 byte; Per IO Controller with shared device   |
| <b>Submodules</b>                                   |  |
| — Number, max.                                      | 64   |
| — User data per submodule, max.                     | 1 024 byte   |
| <b>PROFINET CBA</b>                                 |  |
| • acyclic transmission                              | Yes  |
| • cyclic transmission                               | Yes  |
| <b>Open IE communication</b>                        |  |
| • Number of connections, max.                       | 8  |
| • Local port numbers used at the system end         | 0, 20, 21, 23, 25, 80, 102, 135, 161, 443, 8080, 34962, 34963, 34964, 65532, 65533, 65534, 65535 |
| • Keep-alive function, supported                    | Yes  |
| <b>Protocols</b>                                    |  |
| <b>Redundancy mode</b>                              |  |
| <b>Media redundancy</b>                             |  |
| — Switchover time on line break, typ.               | 200 ms; PROFINET MRP   |
| — Number of stations in the ring, max.              | 50   |
| <b>SIMATIC communication</b>                        |  |
| • S7 routing  | Yes  |
| <b>Open IE communication</b>                        |  |
| • TCP/IP  | Yes; via integrated PROFINET interface and loadable FBs  |
| — Number of connections, max.                       | 8  |
| — Data length, max.                                 | 32 768 byte; 1 460 bytes with connection type 01H; 32 768 bytes with connection type 11H         |
| — several passive connections per port, supported   | Yes  |
| • ISO-on-TCP (RFC1006)                              | Yes  |
| — Number of connections, max.                       | 8  |
| — Data length, max.                                 | 32 768 byte  |
| • UDP   | Yes  |
| — Number of connections, max.                       | 8  |
| — Data length, max.                                 | 1 472 byte   |
| <b>Web server</b>                                   |  |
| • supported   | Yes  |
| • User-defined websites                             | Yes  |
| • Number of HTTP clients                            | 5  |
| <b>communication functions / header</b>             |  |
| PG/OP communication                                 | Yes  |
| <b>Global data communication</b>                    |  |
| • supported   | Yes  |
| • Number of GD loops, max.                          | 8  |
| • Number of GD packets, max.                        | 8  |
| • Number of GD packets, transmitter, max.           | 8  |
| • Number of GD packets, receiver, max.              | 8  |
| • Size of GD packets, max.                          | 22 byte  |
| • Size of GD packet (of which consistent), max.     | 22 byte  |
| <b>S7 basic communication</b>                       |  |
| • communication function / S7 basic communication   | 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)               |
| <b>S7 communication</b>                             |  |
| • supported   | Yes  |
| • as server   | Yes  |
| • as client   | Yes; via integrated PROFINET interface and loadable FBs  |

|   |   |
|---|---|
| • User data per job, max.   | See online help of STEP 7 (shared parameters of the SFBs/FBs and of the SFCs/FCs of S7 Communication)   |
| <b>communication functions / PROFINET CBA (with set target communication load) / header</b>   |   |
| • Setpoint for the CPU communication load   | 50 %  |
| • Number of remote interconnection partners   | 32  |
| • Number of functions, master/slave   | 30  |
| • Total of all master/slave connections   | 1 000   |
| • Data length of all incoming connections master/slave, max.  | 4 000 byte  |
| • Data length of all outgoing connections master/slave, max.  | 4 000 byte  |
| • Number of device-internal and PROFIBUS interconnections   | 500   |
| • Data length of device-internal und PROFIBUS interconnections, max.  | 4 000 byte  |
| • Data length per connection, max.  | 1 400 byte  |
| <b>performance data / PROFINET CBA / remote interconnection / with acyclic transfer / header</b>  |   |
| — 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 volume / as user data for remote interconnections / in the case of acyclic transmission / with PROFINET CBA / per connection / maximum | 1 400 byte  |
| <b>performance data / PROFINET CBA / remote interconnection / with cyclic transfer / header</b>   |   |
| — Transmission frequency: Transmission interval, min.   | 1 ms  |
| — number of remote connections to input variables / with PROFINET CBA / with cyclic transfer / maximum  | 200   |
| — number of remote connections to output variables / with cyclical transfer / with PROFINET CBA / maximum                                     | 200   |
| — data volume / as user data for remote interconnections with input variables / with cyclical transfer / with PROFINET CBA / maximum          | 2 000 byte  |
| — data volume / as user data for remote interconnections with output variables / with cyclical transfer / with PROFINET CBA / maximum         | 2 000 byte  |
| — data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum              | 450 byte  |
| <b>performance data / PROFINET CBA / HMI variables via PROFINET / acyclic / header</b>  |   |
| — Number of stations that can log on for HMI variables (PN OPC/iMap)  | 3; 2x PN OPC/1x iMap  |
| — HMI variable updating   | 500 ms  |
| — Number of HMI variables   | 200   |
| — Data length of all HMI variables, max.  | 2 000 byte  |
| <b>performance data / PROFINET CBA / PROFIBUS proxy functionality / header</b>  |   |
| — supported   | Yes   |
| — Number of linked PROFIBUS devices   | 16  |
| — Data length per connection, max.  | 240 byte; Slave-dependent   |
| <b>Number of connections</b>  |   |
| • overall   | 16  |
| • usable for PG communication   | 15  |
| — reserved for PG communication   | 1   |
| — adjustable for PG communication, min.   | 1   |
| — adjustable for PG communication, max.   | 15  |
| • usable for OP communication   | 15  |
| — reserved for OP communication   | 1   |
| — adjustable for OP communication, min.   | 1   |
| — adjustable for OP communication, max.   | 15  |
| • usable for S7 basic communication   | 14  |
| — reserved for S7 basic communication   | 0   |
| — adjustable for S7 basic communication, min.   | 0   |
| — adjustable for S7 basic communication, max.   | 14  |
| • usable for routing  | X1 as MPI: max. 10; X1 as DP master: max. 24; X1 as DP slave (active): max. 14; X2 as PROFINET: 24 max. |

| S7 message functions  |   |
|---|---|
| Number of login stations for message functions, max.  | 16; Depending on the configured connections for PG/OP and S7 basic communication                    |
| Process diagnostic messages   | Yes   |
| simultaneously active Alarm-S blocks, max.  | 300   |
| Test commissioning functions  |   |
| Status block  | Yes; Up to 2 simultaneously   |
| Single step   | Yes   |
| Number of breakpoints   | 4   |
| Status/control  |   |
| <ul style="list-style-type: none"> <li>• Status/control variable</li> </ul>                     | Yes   |
| <ul style="list-style-type: none"> <li>• Variables</li> </ul>                                   | Inputs, outputs, memory bits, DB, times, counters   |
| <ul style="list-style-type: none"> <li>• Number of variables, max.</li> </ul>                   | 30  |
| <ul style="list-style-type: none"> <li>— of which status variables, max.</li> </ul>             | 30  |
| <ul style="list-style-type: none"> <li>— of which control variables, max.</li> </ul>            | 14  |
| Forcing   |   |
| <ul style="list-style-type: none"> <li>• Forcing</li> </ul>                                     | Yes   |
| <ul style="list-style-type: none"> <li>• Forcing, variables</li> </ul>                          | I/O   |
| <ul style="list-style-type: none"> <li>• Number of variables, max.</li> </ul>                   | 10  |
| Diagnostic buffer   |   |
| <ul style="list-style-type: none"> <li>• present</li> </ul>                                     | Yes   |
| <ul style="list-style-type: none"> <li>• Number of entries, max.</li> </ul>                     | 500; Only the last 100 entries are retentive at power on/off  |
| <ul style="list-style-type: none"> <li>— adjustable</li> </ul>                                  | No  |
| <ul style="list-style-type: none"> <li>— preset</li> </ul>                                      | 10  |
| Potential separation  |   |
| between backplane bus and electronics   | No  |
| between backplane bus and all other circuit components  | Yes   |
| between supply and all other circuits   | Yes   |
| Isolation   |   |
| Isolation tested with   | In general, 707 V DC (type test), Ethernet interface 1 500 V AC (for P1 and P2 on CM, for P3 on IM) |
| Degree and class of protection  |   |
| IP degree of protection   | IP65/67   |
| Standards, approvals, certificates  |   |
| CE mark   | Yes   |
| CSA approval  | No  |
| cULus   | Yes   |
| FM approval   | No  |
| RCM (formerly C-TICK)   | Yes   |
| Highest safety class achievable in safety mode  |   |
| <ul style="list-style-type: none"> <li>• Performance level according to ISO 13849-1</li> </ul>  | PLe   |
| <ul style="list-style-type: none"> <li>• SIL acc. to IEC 61508</li> </ul>                       | SIL 3   |
| configuration / header  |   |
| Configuration software  |   |
| <ul style="list-style-type: none"> <li>• STEP 7</li> </ul>                                      | Yes; V5.5 or higher   |
| configuration / programming / header  |   |
| <ul style="list-style-type: none"> <li>• Command set</li> </ul>                                 | see instruction list  |
| <ul style="list-style-type: none"> <li>• Nesting levels</li> </ul>                              | 8   |
| <ul style="list-style-type: none"> <li>• System functions (SFC)</li> </ul>                      | see instruction list  |
| <ul style="list-style-type: none"> <li>• System function blocks (SFB)</li> </ul>                | see instruction list  |
| Programming language  |   |
| <ul style="list-style-type: none"> <li>— LAD</li> </ul>   | Yes   |
| <ul style="list-style-type: none"> <li>— FBD</li> </ul>   | Yes   |
| <ul style="list-style-type: none"> <li>— STL</li> </ul>   | Yes   |
| <ul style="list-style-type: none"> <li>— SCL</li> </ul>   | Yes   |
| <ul style="list-style-type: none"> <li>— CFC</li> </ul>   | Yes   |
| <ul style="list-style-type: none"> <li>— GRAPH</li> </ul>                                       | Yes   |
| <ul style="list-style-type: none"> <li>— HiGraph®</li> </ul>                                    | Yes   |
| Know-how protection   |   |
| <ul style="list-style-type: none"> <li>• User program protection/password protection</li> </ul> | Yes   |
| <ul style="list-style-type: none"> <li>• Block encryption</li> </ul>                            | Yes; With S7 block Privacy  |



| Dimensions |  |
|------------|--|
| Width      | 135 mm   |
| Height     | 130 mm   |
| Depth      | 65 mm; 60 mm without cover for RJ45 socket; 65 mm with cover for RJ45 socket |

| Weights         |       |
|-----------------|-------|
| Weight, approx. | 720 g |

**last modified:** 9/7/2023 