



\*\*\* spare part \*\*\* SIMATIC S7-1500F, CPU 1513F-1 PN, central processing unit with work memory 450 KB for program and 1.5 MB for data, 1st interface: PROFINET IRT with 2-port switch, 40 ns bit performance, SIMATIC Memory Card required

| General information                                      |  |
|--|--|
| Product type designation                                 | CPU 1513F-1 PN   |
| HW functional status                                     | FS03   |
| 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 500 µs (distributed) and 1 ms (central)          |
| Engineering with   |  |
| • STEP 7 TIA Portal configurable/integrated from version | V17 (FW V2.9) / V15 (FW V2.5) or higher; with older TIA Portal versions configurable as 6ES7513-1FL01-0AB0 |
| Configuration control                                    |  |
| via dataset  | Yes  |
| Display  |  |
| Screen diagonal [cm]                                     | 3.45 cm  |
| Control elements   |  |
| Number of keys   | 8  |
| Mode buttons   | 2  |
| 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)                        | 0.7 A  |
| Current consumption, max.                                | 0.95 A   |
| Inrush current, max.                                     | 1.9 A; Rated value   |
| I <sup>2</sup> t   | 0.02 A <sup>2</sup> ·s   |
| Power  |  |
| Infeed power to the backplane bus                        | 10 W   |
| Power consumption from the backplane bus (balanced)      | 5.5 W  |
| Power loss   |  |
| Power loss, typ.   | 5.7 W  |
| Memory   |  |
| Number of slots for SIMATIC memory card                  | 1  |
| SIMATIC memory card required                             | Yes  |
| Work memory  |  |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>integrated (for program)</li> </ul>                   | 450 kbyte   |
| <ul style="list-style-type: none"> <li>integrated (for data)</li> </ul>                      | 1.5 Mbyte   |
| <b>Load memory</b>   |   |
| <ul style="list-style-type: none"> <li>Plug-in (SIMATIC Memory Card), max.</li> </ul>        | 32 Gbyte  |
| <b>Backup</b>  |   |
| <ul style="list-style-type: none"> <li>maintenance-free</li> </ul>                           | Yes   |
| <b>CPU processing times</b>  |   |
| for bit operations, typ.   | 40 ns   |
| for word operations, typ.  | 48 ns   |
| for fixed point arithmetic, typ.   | 64 ns   |
| for floating point arithmetic, typ.  | 256 ns  |
| <b>CPU-blocks</b>  |   |
| Number of elements (total)   | 4 000; Blocks (OB, FB, FC, DB) and UDTs   |
| <b>DB</b>  |   |
| <ul style="list-style-type: none"> <li>Number range</li> </ul>                               | 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 |
| <ul style="list-style-type: none"> <li>Size, max.</li> </ul>                                 | 1.5 Mbyte; For DBs with absolute addressing, the max. size is 64 KB   |
| <b>FB</b>  |   |
| <ul style="list-style-type: none"> <li>Number range</li> </ul>                               | 0 ... 65 535  |
| <ul style="list-style-type: none"> <li>Size, max.</li> </ul>                                 | 450 kbyte   |
| <b>FC</b>  |   |
| <ul style="list-style-type: none"> <li>Number range</li> </ul>                               | 0 ... 65 535  |
| <ul style="list-style-type: none"> <li>Size, max.</li> </ul>                                 | 450 kbyte   |
| <b>OB</b>  |   |
| <ul style="list-style-type: none"> <li>Size, max.</li> </ul>                                 | 450 kbyte   |
| <ul style="list-style-type: none"> <li>Number of free cycle OBs</li> </ul>                   | 100   |
| <ul style="list-style-type: none"> <li>Number of time alarm OBs</li> </ul>                   | 20  |
| <ul style="list-style-type: none"> <li>Number of delay alarm OBs</li> </ul>                  | 20  |
| <ul style="list-style-type: none"> <li>Number of cyclic interrupt OBs</li> </ul>             | 20; With minimum OB 3x cycle of 500 µs  |
| <ul style="list-style-type: none"> <li>Number of process alarm OBs</li> </ul>                | 50  |
| <ul style="list-style-type: none"> <li>Number of DPV1 alarm OBs</li> </ul>                   | 3   |
| <ul style="list-style-type: none"> <li>Number of isochronous mode OBs</li> </ul>             | 2   |
| <ul style="list-style-type: none"> <li>Number of technology synchronous alarm OBs</li> </ul> | 2   |
| <ul style="list-style-type: none"> <li>Number of startup OBs</li> </ul>                      | 100   |
| <ul style="list-style-type: none"> <li>Number of asynchronous error OBs</li> </ul>           | 4   |
| <ul style="list-style-type: none"> <li>Number of synchronous error OBs</li> </ul>            | 2   |
| <ul style="list-style-type: none"> <li>Number of diagnostic alarm OBs</li> </ul>             | 1   |
| <b>Nesting depth</b>   |   |
| <ul style="list-style-type: none"> <li>per priority class</li> </ul>                         | 24; Up to 8 possible for F-blocks   |
| <b>Counters, timers and their retentivity</b>  |   |
| <b>S7 counter</b>  |   |
| <ul style="list-style-type: none"> <li>Number</li> </ul>                                     | 2 048   |
| Retentivity  |   |
| — adjustable   | Yes   |
| <b>IEC counter</b>   |   |
| <ul style="list-style-type: none"> <li>Number</li> </ul>                                     | Any (only limited by the main memory)   |
| Retentivity  |   |
| — adjustable   | Yes   |
| <b>S7 times</b>  |   |
| <ul style="list-style-type: none"> <li>Number</li> </ul>                                     | 2 048   |
| Retentivity  |   |
| — adjustable   | Yes   |
| <b>IEC timer</b>   |   |
| <ul style="list-style-type: none"> <li>Number</li> </ul>                                     | Any (only limited by the main memory)   |
| Retentivity  |   |
| — adjustable   | Yes   |
| <b>Data areas and their retentivity</b>  |   |
| Retentive data area (incl. timers, counters, flags), max.                                    | 128 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 88 KB                            |
| Extended retentive data area (incl. timers, counters, flags), max.                           | 1.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF  |
| <b>Flag</b>  |   |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Size, max.</li> </ul>                        | 16 kbyte  |
| <ul style="list-style-type: none"> <li>• Number of clock memories</li> </ul>          | 8; 8 clock memory bit, grouped into one clock memory byte   |
| <b>Data blocks</b>  |   |
| <ul style="list-style-type: none"> <li>• Retentivity adjustable</li> </ul>            | Yes   |
| <ul style="list-style-type: none"> <li>• Retentivity preset</li> </ul>                | No  |
| <b>Local data</b>   |   |
| <ul style="list-style-type: none"> <li>• per priority class, max.</li> </ul>          | 64 kbyte; max. 16 KB per block  |
| <b>Address area</b>   |   |
| Number of IO modules  | 2 048; max. number of modules / submodules  |
| <b>I/O address area</b>   |   |
| <ul style="list-style-type: none"> <li>• Inputs</li> </ul>                            | 32 kbyte; All inputs are in the process image   |
| <ul style="list-style-type: none"> <li>• Outputs</li> </ul>                           | 32 kbyte; All outputs are in the process image  |
| <b>per integrated IO subsystem</b>  |   |
| — Inputs (volume)   | 8 kbyte   |
| — Outputs (volume)  | 8 kbyte   |
| <b>per CM/CP</b>  |   |
| — Inputs (volume)   | 8 kbyte   |
| — Outputs (volume)  | 8 kbyte   |
| <b>Subprocess images</b>  |   |
| <ul style="list-style-type: none"> <li>• Number of subprocess images, max.</li> </ul> | 32  |
| <b>Hardware configuration</b>   |   |
| Number of distributed IO systems  | 32; 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) |
| <b>Number of DP masters</b>   |   |
| <ul style="list-style-type: none"> <li>• Via CM</li> </ul>                            | 6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total  |
| <b>Number of IO Controllers</b>   |   |
| <ul style="list-style-type: none"> <li>• integrated</li> </ul>                        | 1   |
| <ul style="list-style-type: none"> <li>• Via CM</li> </ul>                            | 6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total  |
| <b>Rack</b>   |   |
| <ul style="list-style-type: none"> <li>• Modules per rack, max.</li> </ul>            | 32; CPU + 31 modules  |
| <ul style="list-style-type: none"> <li>• Number of lines, max.</li> </ul>             | 1   |
| <b>PtP CM</b>   |   |
| <ul style="list-style-type: none"> <li>• Number of PtP CMs</li> </ul>                 | the number of connectable PtP CMs is only limited by the number of available slots  |
| <b>Time of day</b>  |   |
| <b>Clock</b>  |   |
| <ul style="list-style-type: none"> <li>• Type</li> </ul>                              | Hardware clock  |
| <ul style="list-style-type: none"> <li>• Backup time</li> </ul>                       | 6 wk; At 40 °C ambient temperature, typically   |
| <ul style="list-style-type: none"> <li>• Deviation per day, max.</li> </ul>           | 10 s; Typ.: 2 s   |
| <b>Operating hours counter</b>  |   |
| <ul style="list-style-type: none"> <li>• Number</li> </ul>                            | 16  |
| <b>Clock synchronization</b>  |   |
| <ul style="list-style-type: none"> <li>• supported</li> </ul>                         | Yes   |
| <ul style="list-style-type: none"> <li>• in AS, master</li> </ul>                     | Yes   |
| <ul style="list-style-type: none"> <li>• in AS, device</li> </ul>                     | Yes   |
| <ul style="list-style-type: none"> <li>• on Ethernet via NTP</li> </ul>               | Yes   |
| <b>Interfaces</b>   |   |
| Number of PROFINET interfaces   | 1   |
| <b>1. Interface</b>   |   |
| <b>Interface types</b>  |   |
| <ul style="list-style-type: none"> <li>• RJ 45 (Ethernet)</li> </ul>                  | Yes; X1   |
| <ul style="list-style-type: none"> <li>• Number of ports</li> </ul>                   | 2   |
| <ul style="list-style-type: none"> <li>• integrated switch</li> </ul>                 | Yes   |
| <b>Protocols</b>  |   |
| <ul style="list-style-type: none"> <li>• IP protocol</li> </ul>                       | Yes; IPv4   |
| <ul style="list-style-type: none"> <li>• PROFINET IO Controller</li> </ul>            | Yes   |
| <ul style="list-style-type: none"> <li>• PROFINET IO Device</li> </ul>                | Yes   |
| <ul style="list-style-type: none"> <li>• SIMATIC communication</li> </ul>             | Yes   |
| <ul style="list-style-type: none"> <li>• Open IE communication</li> </ul>             | Yes; Optionally also encrypted  |
| <ul style="list-style-type: none"> <li>• Web server</li> </ul>                        | Yes   |

|   |  |
|---|--|
| • Media redundancy  | Yes; MRP Automanager according to IEC 62439-2 Edition 2.0  |
| <b>PROFINET IO Controller</b>   |  |
| <b>Services</b>   |  |
| — PG/OP communication   | Yes  |
| — Isochronous mode  | Yes  |
| — Direct data exchange  | Yes; Requirement: IRT and isochronous mode (MRPD optional)   |
| — IRT   | Yes  |
| — PROFInergy  | Yes; per user program  |
| — Prioritized startup   | Yes; Max. 32 PROFINET devices  |
| — Number of connectable IO Devices, max.                                      | 128; In total, up to 512 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, max.                               | 128  |
| — of which in line, max.  | 128  |
| — Number of IO Devices that can be simultaneously activated/deactivated, max. | 8; 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 share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data |
| <b>Update time for IRT</b>  |  |
| — for send cycle of 250 µs  | 250 µs to 4 ms; Note: In the case of IRT with isochronous mode, the minimum update time of 500 µs of the isochronous OB is decisive                                    |
| — 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 cycles                          | Update time = set "odd" send clock (any multiple of 125 µs: 375 µs, 625 µs ... 3 875 µs)   |
| <b>Update time for RT</b>   |  |
| — 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   |
| <b>PROFINET IO Device</b>   |  |
| <b>Services</b>   |  |
| — PG/OP communication   | Yes  |
| — Isochronous mode  | No   |
| — IRT   | Yes  |
| — PROFInergy  | 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  |
| <b>Interface types</b>  |  |
| <b>RJ 45 (Ethernet)</b>   |  |
| • 100 Mbps  | Yes  |
| • Autonegotiation   | Yes  |
| • Autocrossing  | Yes  |
| • Industrial Ethernet status LED  | Yes  |
| <b>Protocols</b>  |  |
| PROFIsafe   | Yes; V2.4 / V2.6   |
| <b>Number of connections</b>  |  |
| • Number of connections, max.   | 128; via integrated interfaces of the CPU and connected CPs / CMs  |
| • Number of connections reserved for ES/HMI/web                               | 10   |
| • Number of connections via integrated interfaces                             | 88   |
| • Number of S7 routing paths  | 16   |
| <b>Redundancy mode</b>  |  |
| • H-Sync forwarding   | Yes  |
| <b>Media redundancy</b>   |  |
| — Media redundancy  | Yes; only via 1st interface (X1)   |

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| — 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         | Yes; encryption with TLS V1.3 pre-selected         |
| • S7 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; Max. 5 multicast circuits         |
| • DHCP  | Yes                                    |
| • DNS   | Yes                                    |
| • SNMP  | Yes                                    |
| • DCP   | Yes                                    |
| • LLDP  | Yes                                    |
| • Encryption                                      | Yes; Optional                          |

#### Web server

|         |                              |
|---------|------------------------------|
| • HTTP  | Yes; Standard and user pages |
| • HTTPS | Yes; Standard and user pages |

#### OPC UA

|  |   |
|--|---|
| • Runtime license required   | Yes   |
| • 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.  | 4   |
| — Number of nodes of the client interfaces, recommended max.   | 1 000   |
| — Number of elements for one call of OPC-UA_NodeGetHandleList/OPC-UA_ReadList/OPC-UA_WriteList, 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 OPC-UA_MethodCall, max.                                       | 100   |
| — Number of inputs/outputs when calling OPC-UA_MethodCall, max.  | 20  |
| • OPC UA Server  | Yes; Data access (read, write, subscribe), method call, custom address space    |
| — Application authentication   | Yes   |
| — Security policies  | Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 |
| — User authentication  | "anonymous" or by user name & password  |
| — GDS support (certificate management)   | Yes   |
| — Number of sessions, max.   | 32  |
| — Number of accessible variables, max.   | 50 000  |

|   |   |
|---|---|
| — Number of registerable nodes, max.                                  | 10 000  |
| — Number of subscriptions per session, max.                           | 20  |
| — Sampling interval, min.   | 100 ms  |
| — Publishing interval, min.   | 500 ms  |
| — Number of server methods, max.                                      | 20  |
| — Number of inputs/outputs per server method, max.                    | 20  |
| — Number of monitored items, recommended max.                         | 1 000; for 1 s sampling interval and 1 s send interval  |
| — 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 interfaces, max.            | 1 000   |
| • Alarms and Conditions   | Yes   |
| <b>Further protocols</b>  |   |
| • MODBUS  | Yes; MODBUS TCP   |
| <b>Isochronous mode</b>   |   |
| Equidistance  | Yes   |
| <b>S7 message functions</b>   |   |
| Number of login stations for message functions, max.                  | 32  |
| Program alarms  | Yes   |
| Number of configurable program messages, max.                         | 5 000; Program messages are generated by the "Program_Alarm" block, ProDiag or GRAPH  |
| Number of loadable program messages in RUN, max.                      | 2 500   |
| Number of simultaneously active program alarms                        |   |
| • Number of program alarms  | 600   |
| • Number of alarms for system diagnostics                             | 100   |
| • Number of alarms for motion technology objects                      | 80  |
| <b>Test commissioning functions</b>                                   |   |
| Joint commission (Team Engineering)                                   | Yes; Parallel online access possible for up to 5 engineering systems  |
| Status block  | Yes; Up to 8 simultaneously (in total across all ES clients)  |
| Single step   | No  |
| Number of breakpoints   | 8   |
| <b>Status/control</b>   |   |
| • Status/control variable   | Yes; without fail-safe  |
| • Variables   | inputs/outputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters   |
| • Number of variables, max.   |   |
| — of which status variables, max.                                     | 200; per job  |
| — of which control variables, max.                                    | 200; per job  |
| <b>Forcing</b>  |   |
| • Forcing   | Yes; without fail-safe  |
| • Forcing, variables  | peripheral inputs/outputs (without fail-safe)   |
| • Number of variables, max.   | 200   |
| <b>Diagnostic buffer</b>  |   |
| • present   | Yes   |
| • Number of entries, max.   | 1 000   |
| — of which powerfail-proof  | 500   |
| <b>Traces</b>   |   |
| • Number of configurable Traces                                       | 4; Up to 512 KB of data per trace are possible  |
| <b>Interrupts/diagnostics/status information</b>                      |   |
| <b>Diagnostics indication LED</b>                                     |   |
| • RUN/STOP LED  | Yes   |
| • ERROR LED   | Yes   |
| • MAINT LED   | Yes   |
| • STOP ACTIVE LED   | Yes   |
| • Connection display LINK TX/RX                                       | Yes   |
| <b>Supported technology objects</b>                                   |   |
| Motion Control  | Yes; Note: The number of technology objects affects the cycle time of the PLC program; selection guide via the TIA Selection Tool |
| • Number of available Motion Control resources for technology objects | 800   |
| • Required Motion Control resources                                   |   |
| — per speed-controlled axis   | 40  |

|  |  |
|--|--|
| — 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 cycle of 4 ms (typical value)       | 5  |
| — Number of positioning axes at motion control cycle of 8 ms (typical value)       | 10   |
| 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  |
| <b>Standards, approvals, certificates</b>  |  |
| Highest safety class achievable in safety mode                                     |  |
| ● Performance level according to ISO 13849-1                                       | PLe  |
| ● SIL acc. to IEC 61508  | SIL 3  |
| Probability of failure (for service life of 20 years and repair time of 100 hours) |  |
| — Low demand mode: PFDavg in accordance with SIL3                                  | < 2.00E-05   |
| — High demand/continuous mode: PFH in accordance with SIL3                         | < 1.00E-09   |
| <b>Ambient conditions</b>  |  |
| Ambient temperature during operation   |  |
| ● horizontal installation, min.  | -25 °C; No condensation  |
| ● horizontal installation, max.  | 60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off |
| ● vertical installation, min.  | -25 °C; No condensation  |
| ● 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                             |
| <b>configuration / header</b>  |  |
| configuration / programming / header   |  |
| Programming language   |  |
| — LAD  | Yes; incl. failsafe  |
| — FBD  | Yes; incl. failsafe  |
| — STL  | Yes  |
| — SCL  | Yes  |
| — GRAPH  | Yes  |
| Know-how protection  |  |
| ● User program protection/password protection                                      | Yes  |
| ● Copy protection  | Yes  |
| ● Block protection   | Yes  |
| Access protection  |  |
| ● Password for display   | Yes  |
| ● Protection level: Write protection   | Yes; Specific write protection both for Standard and for Failsafe                                  |
| ● Protection level: Read/write protection  | Yes  |
| ● Protection level: Write protection for Failsafe                                  | Yes  |
| ● Protection level: Complete protection  | Yes  |
| programming / cycle time monitoring / header                                       |  |
| ● lower limit  | adjustable minimum cycle time  |
| ● upper limit  | adjustable maximum cycle time  |
| <b>Dimensions</b>  |  |
| Width  | 35 mm  |

|                 |        |
|-----------------|--------|
| Height          | 147 mm |
| Depth           | 129 mm |
| <b>Weights</b>  |        |
| Weight, approx. | 405 g  |

| <b>Classifications</b> |        |                |                       |
|------------------------|--------|----------------|-----------------------|
|                        |        | <b>Version</b> | <b>Classification</b> |
|                        | eClass | 14             | 27-24-22-07           |
|                        | eClass | 12             | 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**

|                                 |                             |              |
|---------------------------------|-----------------------------|--------------|
| <b>General Product Approval</b> | <b>Maritime application</b> | <b>other</b> |
|---------------------------------|-----------------------------|--------------|



[Confirmation](#)



**Environment**

[Environmental Confirmations](#)

last modified:

12/8/2024