

Siemens  
EcoTech



SIPLUS S7-1200 CPU 1217C DC/DC/DC based on 6ES7217-1AG40-0XB0 with conformal coating -40...+70 °C . compact CPU, 2 PROFINET port onboard I/O: 10 DI 24 V DC; 4 DI RS-422/485; 6 DO 24 V DC; 0.5 A; 4 DO RS-422/485; 2 AI 0-10 V DC, 2 AO 0-20 mA power supply: DC 20.4-28.8V DC, program/data memory 150 KB 20.4-28.8V DC, program/data memory 150 KB



Figure similar

| General information                                      |                                          |
|----------------------------------------------------------|------------------------------------------|
| Product type designation                                 | CPU 1217C DC/DC/DC                       |
| based on                                                 | <a href="#">6ES7217-1AG40-0XB0</a>       |
| Engineering with                                         |                                          |
| • STEP 7 TIA Portal configurable/integrated from version | see entry ID: 109746275                  |
| Supply voltage                                           |                                          |
| Rated value (DC)                                         |                                          |
| • 24 V DC                                                | Yes                                      |
| permissible range, lower limit (DC)                      | 20.4 V                                   |
| permissible range, upper limit (DC)                      | 28.8 V                                   |
| Reverse polarity protection                              | Yes                                      |
| Load voltage L+                                          |                                          |
| • Rated value (DC)                                       | 24 V                                     |
| • permissible range, lower limit (DC)                    | 20.4 V                                   |
| • permissible range, upper limit (DC)                    | 28.8 V                                   |
| Input current                                            |                                          |
| Current consumption (rated value)                        | 600 mA; CPU only                         |
| Current consumption, max.                                | 1 600 mA; CPU with all expansion modules |
| Inrush current, max.                                     | 12 A; at 28.8 V DC                       |
| I <sup>2</sup> t                                         | 0.5 A <sup>2</sup> ·s                    |
| Output current                                           |                                          |
| for backplane bus (5 V DC), max.                         | 1 600 mA; Max. 5 V DC for SM and CM      |
| Encoder supply                                           |                                          |
| 24 V encoder supply                                      |                                          |
| • 24 V                                                   | L+ minus 4 V DC min.                     |
| Power loss                                               |                                          |
| Power loss, typ.                                         | 12 W                                     |
| Storage                                                  |                                          |
| Work memory                                              |                                          |
| • integrated                                             | 150 kbyte                                |
| Load memory                                              |                                          |
| • Integrated                                             | 4 Mbyte                                  |
| • Plug-in (SIMATIC Memory Card), max.                    | with SIMATIC memory card                 |
| Backup                                                   |                                          |
| • present                                                | Yes                                      |

|                                                           |                                                                                                                                                                     |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • maintenance-free                                        | Yes                                                                                                                                                                 |
| • without battery                                         | Yes                                                                                                                                                                 |
| <b>CPU processing times</b>                               |                                                                                                                                                                     |
| for bit operations, typ.                                  | 0.08 µs; / instruction                                                                                                                                              |
| for word operations, typ.                                 | 1.7 µs; / instruction                                                                                                                                               |
| for floating point arithmetic, typ.                       | 2.3 µs; / Operation                                                                                                                                                 |
| <b>CPU-blocks</b>                                         |                                                                                                                                                                     |
| Number of blocks (total)                                  | DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used |
| <b>OB</b>                                                 |                                                                                                                                                                     |
| • Number, max.                                            | Limited only by RAM for code                                                                                                                                        |
| <b>Data areas and their retentivity</b>                   |                                                                                                                                                                     |
| Retentive data area (incl. timers, counters, flags), max. | 14 kbyte                                                                                                                                                            |
| <b>Flag</b>                                               |                                                                                                                                                                     |
| • Size, max.                                              | 8 kbyte; Size of bit memory address area                                                                                                                            |
| <b>Local data</b>                                         |                                                                                                                                                                     |
| • per priority class, max.                                | 16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2 to 26: 6 KB                                                                                     |
| <b>Address area</b>                                       |                                                                                                                                                                     |
| <b>Process image</b>                                      |                                                                                                                                                                     |
| • Inputs, adjustable                                      | 1 kbyte                                                                                                                                                             |
| • Outputs, adjustable                                     | 1 kbyte                                                                                                                                                             |
| <b>Hardware configuration</b>                             |                                                                                                                                                                     |
| Number of modules per system, max.                        | 3 communication modules, no signal board can be used, 8 signal modules                                                                                              |
| • number of expansion boards (SB, CB, BB)                 | 0                                                                                                                                                                   |
| • number of signal modules (SM)                           | 8                                                                                                                                                                   |
| • number of communications modules (CM)                   | 3                                                                                                                                                                   |
| <b>Time of day</b>                                        |                                                                                                                                                                     |
| <b>Clock</b>                                              |                                                                                                                                                                     |
| • Hardware clock (real-time)                              | Yes                                                                                                                                                                 |
| • Backup time                                             | 480 h; Typical                                                                                                                                                      |
| • Deviation per day, max.                                 | ±60 s/month at 25 °C                                                                                                                                                |
| <b>Digital inputs</b>                                     |                                                                                                                                                                     |
| Number of digital inputs                                  | 14; Integrated                                                                                                                                                      |
| • of which inputs usable for technological functions      | 6; HSC (High Speed Counting)                                                                                                                                        |
| Sourcing/sinking input                                    | Yes                                                                                                                                                                 |
| <b>Number of simultaneously controllable inputs</b>       |                                                                                                                                                                     |
| all mounting positions                                    |                                                                                                                                                                     |
| — up to 40 °C, max.                                       | 14                                                                                                                                                                  |
| <b>Input voltage</b>                                      |                                                                                                                                                                     |
| • Rated value (DC)                                        | 24 V                                                                                                                                                                |
| • for signal "0"                                          | 5 V DC at 1 mA                                                                                                                                                      |
| • for signal "1"                                          | 15 V DC at 2.5 mA                                                                                                                                                   |
| <b>Input delay (for rated value of input voltage)</b>     |                                                                                                                                                                     |
| for standard inputs                                       |                                                                                                                                                                     |
| — parameterizable                                         | 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four                                                                            |
| — at "0" to "1", min.                                     | 0.2 ms                                                                                                                                                              |
| — at "0" to "1", max.                                     | 12.8 ms                                                                                                                                                             |
| for interrupt inputs                                      |                                                                                                                                                                     |
| — Parameterizable                                         | Yes                                                                                                                                                                 |
| for technological functions                               |                                                                                                                                                                     |
| — Parameterizable                                         | Single phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz                                                                                       |
| <b>Cable length</b>                                       |                                                                                                                                                                     |
| • shielded, max.                                          | 500 m; 50 m for technological functions                                                                                                                             |
| • unshielded, max.                                        | 300 m; for technological functions: No                                                                                                                              |
| <b>Digital outputs</b>                                    |                                                                                                                                                                     |
| Number of digital outputs                                 | 10                                                                                                                                                                  |
| • of which high-speed outputs                             | 4; 100 kHz Pulse Train Output                                                                                                                                       |

|                                                        |                             |
|--------------------------------------------------------|-----------------------------|
| Limitation of inductive shutdown voltage to            | L+ (-48 V)                  |
| Switching capacity of the outputs                      |                             |
| • with resistive load, max.                            | 0.5 A                       |
| • on lamp load, max.                                   | 5 W                         |
| Output voltage                                         |                             |
| • for signal "0", max.                                 | 0.1 V; with 10 kOhm load    |
| • for signal "1", min.                                 | 20 V                        |
| Output current                                         |                             |
| • for signal "1" rated value                           | 0.5 A                       |
| • for signal "0" residual current, max.                | 0.1 mA                      |
| Output delay with resistive load                       |                             |
| • "0" to "1", max.                                     | 1 µs                        |
| • "1" to "0", max.                                     | 5 µs                        |
| Switching frequency                                    |                             |
| • of the pulse outputs, with resistive load, max.      | 100 kHz                     |
| Relay outputs                                          |                             |
| • Number of relay outputs                              | 0                           |
| Cable length                                           |                             |
| • shielded, max.                                       | 500 m                       |
| • unshielded, max.                                     | 150 m                       |
| <b>Analog inputs</b>                                   |                             |
| Number of analog inputs                                | 2                           |
| Input ranges                                           |                             |
| • Voltage                                              | Yes                         |
| Input ranges (rated values), voltages                  |                             |
| • 0 to +10 V                                           | Yes                         |
| — Input resistance (0 to 10 V)                         | ≥100k ohms                  |
| Cable length                                           |                             |
| • shielded, max.                                       | 100 m; twisted and shielded |
| <b>Analog outputs</b>                                  |                             |
| Number of analog outputs                               | 2                           |
| Output ranges, current                                 |                             |
| • 0 to 20 mA                                           | Yes                         |
| <b>Analog value generation for the inputs</b>          |                             |
| Integration and conversion time/resolution per channel |                             |
| • Resolution with overrange (bit including sign), max. | 10 bit                      |
| • Integration time, parameterizable                    | Yes                         |
| • Conversion time (per channel)                        | 625 µs                      |
| <b>Analog value generation for the outputs</b>         |                             |
| Integration and conversion time/resolution per channel |                             |
| • Resolution with overrange (bit including sign), max. | 10 bit                      |
| <b>Encoder</b>                                         |                             |
| Connectable encoders                                   |                             |
| • 2-wire sensor                                        | Yes                         |
| <b>Interfaces</b>                                      |                             |
| Number of PROFINET interfaces                          | 1                           |
| <b>1. Interface</b>                                    |                             |
| Interface type                                         | PROFINET                    |
| Isolated                                               | Yes                         |
| automatic detection of transmission rate               | Yes                         |
| Autonegotiation                                        | Yes                         |
| Autocrossing                                           | Yes                         |
| Interface types                                        |                             |
| • RJ 45 (Ethernet)                                     | Yes                         |
| • Number of ports                                      | 2                           |
| • integrated switch                                    | Yes                         |
| Protocols                                              |                             |
| • PROFINET IO Controller                               | Yes                         |

|                                                                               |                                                                                                                                                                             |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • PROFINET IO device                                                          | Yes                                                                                                                                                                         |
| • SIMATIC communication                                                       | Yes                                                                                                                                                                         |
| • Open IE communication                                                       | Yes; Optionally also encrypted                                                                                                                                              |
| • Web server                                                                  | Yes                                                                                                                                                                         |
| • Media redundancy                                                            | Yes                                                                                                                                                                         |
| <b>PROFINET IO Controller</b>                                                 |                                                                                                                                                                             |
| • Transmission rate, max.                                                     | 100 Mbit/s                                                                                                                                                                  |
| <b>Services</b>                                                               |                                                                                                                                                                             |
| — PG/OP communication                                                         | Yes; encryption with TLS V1.3 pre-selected                                                                                                                                  |
| — Isochronous mode                                                            | No                                                                                                                                                                          |
| — IRT                                                                         | No                                                                                                                                                                          |
| — PROFINergy                                                                  | No                                                                                                                                                                          |
| — Prioritized startup                                                         | Yes                                                                                                                                                                         |
| — Number of IO devices with prioritized startup, max.                         | 16                                                                                                                                                                          |
| — Number of connectable IO Devices, max.                                      | 16                                                                                                                                                                          |
| — Number of connectable IO Devices for RT, max.                               | 16                                                                                                                                                                          |
| — of which in line, max.                                                      | 16                                                                                                                                                                          |
| — Number of IO Devices that can be simultaneously activated/deactivated, max. | 8                                                                                                                                                                           |
| — Updating time                                                               | The minimum value of the update time also depends on the communication component set for PROFINET IO, on the number of IO devices and the quantity of configured user data. |
| <b>PROFINET IO Device</b>                                                     |                                                                                                                                                                             |
| <b>Services</b>                                                               |                                                                                                                                                                             |
| — PG/OP communication                                                         | Yes; encryption with TLS V1.3 pre-selected                                                                                                                                  |
| — Isochronous mode                                                            | No                                                                                                                                                                          |
| — IRT                                                                         | No                                                                                                                                                                          |
| — Dynamic Frame Packing (DFP)                                                 | No                                                                                                                                                                          |
| — PROFINergy                                                                  | Yes                                                                                                                                                                         |
| — Prioritized startup                                                         | Yes                                                                                                                                                                         |
| — Shared device                                                               | Yes                                                                                                                                                                         |
| — Number of IO Controllers with shared device, max.                           | 2                                                                                                                                                                           |
| — Asset management record                                                     | Yes                                                                                                                                                                         |
| <b>Protocols</b>                                                              |                                                                                                                                                                             |
| Supports protocol for PROFINET IO                                             | Yes                                                                                                                                                                         |
| PROFIsafe                                                                     | No                                                                                                                                                                          |
| PROFIBUS                                                                      | Yes; CM 1243-5 (master) or CM 1242-5 (slave) required                                                                                                                       |
| OPC UA                                                                        | Yes; OPC UA Server                                                                                                                                                          |
| AS-Interface                                                                  | Yes; CM 1243-2 required                                                                                                                                                     |
| <b>Protocols (Ethernet)</b>                                                   |                                                                                                                                                                             |
| • TCP/IP                                                                      | Yes                                                                                                                                                                         |
| • DHCP                                                                        | No                                                                                                                                                                          |
| • SNMP                                                                        | Yes                                                                                                                                                                         |
| • DCP                                                                         | Yes                                                                                                                                                                         |
| • LLDP                                                                        | Yes                                                                                                                                                                         |
| <b>Redundancy mode</b>                                                        |                                                                                                                                                                             |
| • PROFINET system redundancy (S2)                                             | No                                                                                                                                                                          |
| • PROFINET system redundancy (R1)                                             | No                                                                                                                                                                          |
| <b>Media redundancy</b>                                                       |                                                                                                                                                                             |
| — MRP                                                                         | Yes; as MRP redundancy manager and/or MRP client                                                                                                                            |
| — MRP interconnection, supported                                              | No                                                                                                                                                                          |
| — MRPD                                                                        | No                                                                                                                                                                          |
| <b>SIMATIC communication</b>                                                  |                                                                                                                                                                             |
| • S7 routing                                                                  | Yes                                                                                                                                                                         |
| <b>Open IE communication</b>                                                  |                                                                                                                                                                             |
| • TCP/IP                                                                      | Yes                                                                                                                                                                         |
| — Data length, max.                                                           | 8 kbyte                                                                                                                                                                     |
| • ISO-on-TCP (RFC1006)                                                        | Yes                                                                                                                                                                         |
| — Data length, max.                                                           | 8 kbyte                                                                                                                                                                     |
| • UDP                                                                         | Yes                                                                                                                                                                         |

|                                                            |                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| — Data length, max.                                        | 1 472 byte                                                                                                                                                                                                                                                                         |
| <b>Web server</b>                                          |                                                                                                                                                                                                                                                                                    |
| • supported                                                | Yes                                                                                                                                                                                                                                                                                |
| • User-defined websites                                    | Yes                                                                                                                                                                                                                                                                                |
| <b>OPC UA</b>                                              |                                                                                                                                                                                                                                                                                    |
| • Runtime license required                                 | Yes; "Basic" license required                                                                                                                                                                                                                                                      |
| • OPC UA Server                                            | Yes; data access (read, write, subscribe), method call, runtime license required                                                                                                                                                                                                   |
| — Application authentication                               | Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256                                                                                                                                                                                                    |
| — User authentication                                      | "anonymous" or by user name & password                                                                                                                                                                                                                                             |
| — Number of sessions, max.                                 | 10                                                                                                                                                                                                                                                                                 |
| — Number of subscriptions per session, max.                | 5                                                                                                                                                                                                                                                                                  |
| — Sampling interval, min.                                  | 100 ms                                                                                                                                                                                                                                                                             |
| — Publishing interval, min.                                | 200 ms                                                                                                                                                                                                                                                                             |
| — Number of server methods, max.                           | 20                                                                                                                                                                                                                                                                                 |
| — Number of monitored items, recommended max.              | 1 000                                                                                                                                                                                                                                                                              |
| — Number of server interfaces, max.                        | 2                                                                                                                                                                                                                                                                                  |
| — Number of nodes for user-defined server interfaces, max. | 2 000                                                                                                                                                                                                                                                                              |
| <b>Further protocols</b>                                   |                                                                                                                                                                                                                                                                                    |
| • MODBUS                                                   | Yes                                                                                                                                                                                                                                                                                |
| <b>Communication functions</b>                             |                                                                                                                                                                                                                                                                                    |
| <b>S7 communication</b>                                    |                                                                                                                                                                                                                                                                                    |
| • supported                                                | Yes                                                                                                                                                                                                                                                                                |
| • as server                                                | Yes                                                                                                                                                                                                                                                                                |
| • as client                                                | Yes                                                                                                                                                                                                                                                                                |
| • User data per job, max.                                  | See online help (S7 communication, user data size)                                                                                                                                                                                                                                 |
| <b>Number of connections</b>                               |                                                                                                                                                                                                                                                                                    |
| • overall                                                  | PG Connections: 4 reserved / 4 max; HMI Connections: 12 reserved / 18 max; S7 Connections: 8 reserved / 14 max; Open User Connections: 8 reserved / 14 max; Web Connections: 2 reserved / 30 max; OPC UA Connections: 0 reserved / 10 max; Total Connections: 34 reserved / 64 max |
| <b>Test commissioning functions</b>                        |                                                                                                                                                                                                                                                                                    |
| <b>Status/control</b>                                      |                                                                                                                                                                                                                                                                                    |
| • Status/control variable                                  | Yes                                                                                                                                                                                                                                                                                |
| • Variables                                                | Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters                                                                                                                                                                                                               |
| <b>Forcing</b>                                             |                                                                                                                                                                                                                                                                                    |
| • Forcing                                                  | Yes                                                                                                                                                                                                                                                                                |
| <b>Diagnostic buffer</b>                                   |                                                                                                                                                                                                                                                                                    |
| • present                                                  | Yes                                                                                                                                                                                                                                                                                |
| <b>Traces</b>                                              |                                                                                                                                                                                                                                                                                    |
| • Number of configurable Traces                            | 2                                                                                                                                                                                                                                                                                  |
| • Memory size per trace, max.                              | 512 kbyte                                                                                                                                                                                                                                                                          |
| <b>Interrupts/diagnostics/status information</b>           |                                                                                                                                                                                                                                                                                    |
| <b>Diagnostics indication LED</b>                          |                                                                                                                                                                                                                                                                                    |
| • RUN/STOP LED                                             | Yes                                                                                                                                                                                                                                                                                |
| • ERROR LED                                                | Yes                                                                                                                                                                                                                                                                                |
| • MAINT LED                                                | Yes                                                                                                                                                                                                                                                                                |
| <b>Integrated Functions</b>                                |                                                                                                                                                                                                                                                                                    |
| <b>Counter</b>                                             |                                                                                                                                                                                                                                                                                    |
| • Number of counters                                       | 6                                                                                                                                                                                                                                                                                  |
| • Counting frequency, max.                                 | 1 MHz                                                                                                                                                                                                                                                                              |
| Frequency measurement                                      | Yes                                                                                                                                                                                                                                                                                |
| controlled positioning                                     | Yes                                                                                                                                                                                                                                                                                |
| Number of position-controlled positioning axes, max.       | 8                                                                                                                                                                                                                                                                                  |
| Number of positioning axes via pulse-direction interface   | 4; With integrated outputs                                                                                                                                                                                                                                                         |
| PID controller                                             | Yes                                                                                                                                                                                                                                                                                |
| Number of alarm inputs                                     | 4                                                                                                                                                                                                                                                                                  |
| Number of pulse outputs                                    | 4                                                                                                                                                                                                                                                                                  |
| Limit frequency (pulse)                                    | 1 MHz                                                                                                                                                                                                                                                                              |

|                                                                                               |                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Potential separation</b>                                                                   |                                                                                                                                                                                                                                                                                                                                                                             |
| Potential separation digital inputs                                                           |                                                                                                                                                                                                                                                                                                                                                                             |
| • Potential separation digital inputs                                                         | No                                                                                                                                                                                                                                                                                                                                                                          |
| • between the channels, in groups of                                                          | 1                                                                                                                                                                                                                                                                                                                                                                           |
| Potential separation digital outputs                                                          |                                                                                                                                                                                                                                                                                                                                                                             |
| • Potential separation digital outputs                                                        | Yes                                                                                                                                                                                                                                                                                                                                                                         |
| • between the channels                                                                        | No                                                                                                                                                                                                                                                                                                                                                                          |
| • between the channels, in groups of                                                          | 1                                                                                                                                                                                                                                                                                                                                                                           |
| <b>EMC</b>                                                                                    |                                                                                                                                                                                                                                                                                                                                                                             |
| Interference immunity against discharge of static electricity                                 |                                                                                                                                                                                                                                                                                                                                                                             |
| • Interference immunity against discharge of static electricity acc. to IEC 61000-4-2         | Yes                                                                                                                                                                                                                                                                                                                                                                         |
| — Test voltage at air discharge                                                               | 8 kV                                                                                                                                                                                                                                                                                                                                                                        |
| — Test voltage at contact discharge                                                           | 6 kV                                                                                                                                                                                                                                                                                                                                                                        |
| Interference immunity to cable-borne interference                                             |                                                                                                                                                                                                                                                                                                                                                                             |
| • Interference immunity on supply lines acc. to IEC 61000-4-4                                 | Yes                                                                                                                                                                                                                                                                                                                                                                         |
| • Interference immunity on signal cables acc. to IEC 61000-4-4                                | Yes                                                                                                                                                                                                                                                                                                                                                                         |
| Interference immunity against voltage surge                                                   |                                                                                                                                                                                                                                                                                                                                                                             |
| • Interference immunity on supply lines acc. to IEC 61000-4-5                                 | Yes                                                                                                                                                                                                                                                                                                                                                                         |
| Interference immunity against conducted variable disturbance induced by high-frequency fields |                                                                                                                                                                                                                                                                                                                                                                             |
| • Interference immunity against high-frequency radiation acc. to IEC 61000-4-6                | Yes                                                                                                                                                                                                                                                                                                                                                                         |
| Emission of radio interference acc. to EN 55 011                                              |                                                                                                                                                                                                                                                                                                                                                                             |
| • Limit class A, for use in industrial areas                                                  | Yes; Group 1                                                                                                                                                                                                                                                                                                                                                                |
| • Limit class B, for use in residential areas                                                 | Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011                                                                                                                                                                                                                                                              |
| <b>Degree and class of protection</b>                                                         |                                                                                                                                                                                                                                                                                                                                                                             |
| IP degree of protection                                                                       | IP20                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Standards, approvals, certificates</b>                                                     |                                                                                                                                                                                                                                                                                                                                                                             |
| Siemens Eco Profile (SEP)                                                                     | Siemens EcoTech                                                                                                                                                                                                                                                                                                                                                             |
| CE mark                                                                                       | Yes                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Ecological footprint</b>                                                                   |                                                                                                                                                                                                                                                                                                                                                                             |
| • environmental product declaration                                                           | Yes; type II acc. to ISO 14021                                                                                                                                                                                                                                                                                                                                              |
| Global warming potential                                                                      |                                                                                                                                                                                                                                                                                                                                                                             |
| — global warming potential, (total) [CO2 eq]                                                  | 143 kg                                                                                                                                                                                                                                                                                                                                                                      |
| — global warming potential, (during production) [CO2 eq]                                      | 22 kg                                                                                                                                                                                                                                                                                                                                                                       |
| — global warming potential, (during operation) [CO2 eq]                                       | 123 kg                                                                                                                                                                                                                                                                                                                                                                      |
| — global warming potential, (after end of life cycle) [CO2 eq]                                | -1.48 kg                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Ambient conditions</b>                                                                     |                                                                                                                                                                                                                                                                                                                                                                             |
| Free fall                                                                                     |                                                                                                                                                                                                                                                                                                                                                                             |
| • Fall height, max.                                                                           | 0.3 m; five times, in product package                                                                                                                                                                                                                                                                                                                                       |
| Ambient temperature during operation                                                          |                                                                                                                                                                                                                                                                                                                                                                             |
| • min.                                                                                        | -40 °C; = Tmin; Startup @ -25 °C                                                                                                                                                                                                                                                                                                                                            |
| • max.                                                                                        | 70 °C; = Tmax; Tmax > 55 °C number of simultaneously switched-on digital inputs 5, current sinking/current sourcing (no adjacent points) and 4 differential inputs with horizontal mounting position; Tmax > 55 °C number of simultaneously switched-on digital inputs 3, current sinking (no adjacent points) and 4 differential outputs with horizontal mounting position |
| • vertical installation, min.                                                                 | -40 °C; = Tmin; Startup @ -25 °C                                                                                                                                                                                                                                                                                                                                            |
| • vertical installation, max.                                                                 | 50 °C; = Tmax                                                                                                                                                                                                                                                                                                                                                               |
| 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                                                                                                                                                                                                                                                                                                                                                                     |
| • Ambient air temperature-barometric pressure-altitude                                        | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K)                                                                                                                                                                                                            |

|                                                                                                                                                                         |                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                         | at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)                                                                                                                                      |
| <b>Relative humidity</b>                                                                                                                                                |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>                                                     | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)                                                                                                 |
| <b>Vibrations</b>                                                                                                                                                       |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> </ul>                                                           | 2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail                                                                                                             |
| <ul style="list-style-type: none"> <li>Operation, tested according to IEC 60068-2-6</li> </ul>                                                                          | Yes                                                                                                                                                                                 |
| <b>Shock testing</b>                                                                                                                                                    |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>tested according to IEC 60068-2-27</li> </ul>                                                                                    | Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms                                                                                           |
| <b>Resistance</b>                                                                                                                                                       |                                                                                                                                                                                     |
| <b>Coolants and lubricants</b>                                                                                                                                          |                                                                                                                                                                                     |
| — Resistant to commercially available coolants and lubricants                                                                                                           | Yes; Incl. diesel and oil droplets in the air                                                                                                                                       |
| <b>Use in stationary industrial systems</b>                                                                                                                             |                                                                                                                                                                                     |
| — to biologically active substances according to EN 60721-3-3                                                                                                           | Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request                                                                                  |
| — to chemically active substances according to EN 60721-3-3                                                                                                             | Yes; Class 3C4 (RH < 75%) incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!  |
| — to mechanically active substances according to EN 60721-3-3                                                                                                           | Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!                                                               |
| <b>Use on ships/at sea</b>                                                                                                                                              |                                                                                                                                                                                     |
| — to biologically active substances according to EN 60721-3-6                                                                                                           | Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)                                                                                                                    |
| — to chemically active substances according to EN 60721-3-6                                                                                                             | Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *                                                                                            |
| — to mechanically active substances according to EN 60721-3-6                                                                                                           | Yes; Class 6S3 incl. sand, dust; *                                                                                                                                                  |
| <b>Usage in industrial process technology</b>                                                                                                                           |                                                                                                                                                                                     |
| — Against chemically active substances acc. to EN 60654-4                                                                                                               | Yes; Class 3 (excluding trichlorethylene)                                                                                                                                           |
| — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04                                                                            | Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) |
| <b>Remark</b>                                                                                                                                                           |                                                                                                                                                                                     |
| — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04                                                             | * The supplied plug covers must remain in place over the unused interfaces during operation!                                                                                        |
| <b>Pollutant concentrations</b>                                                                                                                                         |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>SO<sub>2</sub> at RH &lt; 60% without condensation</li> </ul>                                                                    | SO <sub>2</sub> : < 0.5 ppm; H <sub>2</sub> S: < 0.1 ppm; RH < 60 % condensation-free                                                                                               |
| <b>Conformal coating</b>                                                                                                                                                |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>Coatings for printed circuit board assemblies acc. to EN 61086</li> </ul>                                                        | Yes; Class 2 for high reliability                                                                                                                                                   |
| <ul style="list-style-type: none"> <li>Protection against fouling acc. to EN 60664-3</li> </ul>                                                                         | Yes; Type 1 protection                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>Military testing according to MIL-I-46058C, Amendment 7</li> </ul>                                                               | Yes; Discoloration of coating possible during service life                                                                                                                          |
| <ul style="list-style-type: none"> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul> | Yes; Conformal coating, Class A                                                                                                                                                     |
| <b>Configuration</b>                                                                                                                                                    |                                                                                                                                                                                     |
| <b>Programming</b>                                                                                                                                                      |                                                                                                                                                                                     |
| <b>Programming language</b>                                                                                                                                             |                                                                                                                                                                                     |
| — LAD                                                                                                                                                                   | Yes                                                                                                                                                                                 |
| — FBD                                                                                                                                                                   | Yes                                                                                                                                                                                 |
| — SCL                                                                                                                                                                   | Yes                                                                                                                                                                                 |
| <b>Know-how protection</b>                                                                                                                                              |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>User program protection/password protection</li> </ul>                                                                           | Yes                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>Copy protection</li> </ul>                                                                                                       | Yes                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>Block protection</li> </ul>                                                                                                      | Yes                                                                                                                                                                                 |
| <b>Access protection</b>                                                                                                                                                |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>protection of confidential configuration data</li> </ul>                                                                         | Yes                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>Protection level: Write protection</li> </ul>                                                                                    | Yes                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>Protection level: Read/write protection</li> </ul>                                                                               | Yes                                                                                                                                                                                 |

- Protection level: Complete protection
- User administration
- Number of users
- Number of groups
- Number of roles

Yes

Yes; device-wide

42

14

20

Cycle time monitoring

- can be set
- Yes

Dimensions

Width

150 mm

Height

100 mm

Depth

75 mm

Weights

Weight, approx.

530 g

Classifications

|        | Version | Classification |
|--------|---------|----------------|
| eClass | 16      | 27-24-22-07    |
| 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   | 10      | EC000236       |
| ETIM   | 9       | EC000236       |
| ETIM   | 8       | EC000236       |
| ETIM   | 7       | EC000236       |

Approvals / Certificates

General Product Approval



[China RoHS](#)

[China RoHS](#)



Environment



Siemens  
EcoTech



last modified: 5/21/2026