

SIPLUS S7-1200 CPU 1211C AC/DC/relay for medial exposure with conformal coating based on 6ES7211-1BE31-0XB0 . compact CPU, AC/DC/relay, onboard I/O: 6 DI 24 V DC 4 DO relay 0.5A 2 AI 0-10 V DC Power supply: 85-264V AC @ 47-63 Hz, Program/data memory 30 KB



Figure similar

| General information | |
|--|--------------------------------------|
| Product type designation | CPU 1211C AC/DC/relay |
| Engineering with | |
| <ul style="list-style-type: none"> Programming package | STEP 7 V11 SP2 or higher |
| Supply voltage | |
| Rated value (AC) | |
| <ul style="list-style-type: none"> 120 V AC 230 V AC | Yes Yes |
| permissible range, lower limit (AC) | 85 V |
| permissible range, upper limit (AC) | 264 V |
| Line frequency | |
| <ul style="list-style-type: none"> permissible range, lower limit permissible range, upper limit | 47 Hz 63 Hz |
| Input current | |
| Current consumption (rated value) | 60 mA at 120 V AC; 30 mA at 240 V AC |
| Inrush current, max. | 20 A; at 264 V |

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| Output current | |
| for backplane bus (5 V DC), max. | 750 mA; Max. 5 V DC for SM and CM |
| Encoder supply | |
| 24 V encoder supply | |
| • 24 V | Permissible range: 20.4V to 28.8V |
| Power loss | |
| Power loss, typ. | 10 W |
| Memory | |
| Work memory | |
| • integrated | 30 kbyte |
| • expandable | No |
| Load memory | |
| • integrated | 1 Mbyte |
| Backup | |
| • present | Yes; maintenance-free |
| • without battery | Yes |
| CPU processing times | |
| for bit operations, typ. | 0.085 µs; / instruction |
| for word operations, typ. | 1.7 µs; / instruction |
| for floating point arithmetic, typ. | 2.5 µs; / instruction |
| CPU-blocks | |
| 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 |
| OB | |
| • Number, max. | Limited only by RAM for code |
| Data areas and their retentivity | |
| Retentive data area (incl. timers, counters, flags), max. | 10 kbyte |
| Flag | |
| • Number, max. | 4 kbyte; Size of bit memory address area |
| Address area | |
| I/O address area | |
| • Inputs | 1 024 byte |
| • Outputs | 1 024 byte |
| Process image | |
| • Inputs, adjustable | 1 kbyte |
| • Outputs, adjustable | 1 kbyte |
| Hardware configuration | |
| Number of modules per system, max. | 3 communication modules, 1 signal board |

| Time of day | |
|--|--|
| Clock | |
| <ul style="list-style-type: none"> • Hardware clock (real-time) | Yes |
| <ul style="list-style-type: none"> • Backup time | 480 h; Typical |
| <ul style="list-style-type: none"> • Deviation per day, max. | ±60 s/month at 25 °C |
| Digital inputs | |
| Number of digital inputs | 6; Integrated |
| <ul style="list-style-type: none"> • of which inputs usable for technological functions | 3; HSC (High Speed Counting) |
| Source/sink input | Yes |
| Number of simultaneously controllable inputs | |
| all mounting positions | |
| — up to 40 °C, max. | 6 |
| Input voltage | |
| <ul style="list-style-type: none"> • Rated value (DC) | 24 V |
| <ul style="list-style-type: none"> • for signal "0" | 5 V DC at 1 mA |
| <ul style="list-style-type: none"> • for signal "1" | 15 V DC at 2.5 mA |
| Input current | |
| <ul style="list-style-type: none"> • for signal "1", typ. | 1 mA |
| Input delay (for rated value of input voltage) | |
| 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 | Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz |
| Cable length | |
| <ul style="list-style-type: none"> • shielded, max. | 500 m; 50 m for technological functions |
| <ul style="list-style-type: none"> • unshielded, max. | 300 m; For technological functions: No |
| Digital outputs | |
| Number of digital outputs | 4; Relays |
| Short-circuit protection | No; to be provided externally |
| Switching capacity of the outputs | |
| <ul style="list-style-type: none"> • with resistive load, max. | 2 A |
| <ul style="list-style-type: none"> • on lamp load, max. | 30 W with DC, 200 W with AC |
| Output delay with resistive load | |
| <ul style="list-style-type: none"> • "0" to "1", max. | 10 ms; max. |

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| • "1" to "0", max. | 10 ms; max. |
| Switching frequency | |
| • of the pulse outputs, with resistive load, max. | 1 Hz |
| Relay outputs | |
| • Number of relay outputs | 4 |
| • Number of operating cycles, max. | mechanically 10 million, at rated load voltage 100 000 |
| Cable length | |
| • shielded, max. | 500 m |
| • unshielded, max. | 150 m |

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| Analog inputs | |
| 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 |

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| Analog outputs | |
| Number of analog outputs | 0 |

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| Analog value generation for the inputs | |
| 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 |

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| Encoder | |
| Connectable encoders | |
| • 2-wire sensor | Yes |

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| 1. Interface | |
| Interface type | PROFINET |
| Physics | Ethernet |
| Isolated | Yes |
| automatic detection of transmission rate | Yes |
| Autonegotiation | Yes |
| Autocrossing | Yes |
| Protocols | |
| • PROFINET IO Controller | Yes |

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| Protocols | |
| Supports protocol for PROFINET IO | Yes |

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| PROFIBUS | Yes |
| AS-Interface | Yes |
| Protocols (Ethernet) | |
| • TCP/IP | Yes |
| Open IE communication | |
| • TCP/IP | Yes |
| • ISO-on-TCP (RFC1006) | Yes |
| • UDP | Yes |
| Web server | |
| • supported | Yes |
| • User-defined websites | Yes |
| Further protocols | |
| • MODBUS | Yes |
| Communication functions | |
| S7 communication | |
| • supported | Yes |
| • as server | Yes |
| • as client | Yes |
| Test commissioning functions | |
| Status/control | |
| • Status/control variable | Yes |
| • Variables | Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters |
| Forcing | |
| • Forcing | Yes |
| Diagnostic buffer | |
| • present | Yes |
| Integrated Functions | |
| Number of counters | 3 |
| Counting frequency (counter) max. | 100 kHz |
| Frequency measurement | Yes |
| controlled positioning | Yes |
| PID controller | Yes |
| Number of alarm inputs | 4 |
| Potential separation | |
| Potential separation digital inputs | |
| • Potential separation digital inputs | 500V AC for 1 minute |
| • between the channels, in groups of | 1 |
| Potential separation digital outputs | |
| • Potential separation digital outputs | Relays |
| • between the channels | No |

- between the channels, in groups of

1

Permissible potential difference

between different circuits

500 V DC between 24 V DC and 5 V DC

EMC

Interference immunity against discharge of static electricity

- Interference immunity against discharge of static electricity acc. to IEC 61000-4-2
 - 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

- on the 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

Degree and class of protection

Degree of protection acc. to EN 60529

- IP20 Yes

Standards, approvals, certificates

| | |
|-----------------------|-----|
| CE mark | Yes |
| UL approval | Yes |
| cULus | Yes |
| FM approval | Yes |
| RCM (formerly C-TICK) | Yes |

Ambient conditions

Free fall

- Fall height, max. 0.3 m; five times, in product package

Ambient temperature during operation

- min. -20 °C; = Tmin; Startup @ 0 °C
- max. 60 °C; = Tmax
- horizontal installation, min. -20 °C; = Tmin; Startup @ 0 °C
- horizontal installation, max. 60 °C; = Tmax
- vertical installation, min. -20 °C; = Tmin; Startup @ 0 °C

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|--|---|
| <ul style="list-style-type: none"> vertical installation, max. | 50 °C; = Tmax |
| <ul style="list-style-type: none"> At cold restart, min. | 0 °C |
| Ambient temperature during storage/transportation | |
| <ul style="list-style-type: none"> min. | -40 °C |
| <ul style="list-style-type: none"> max. | 70 °C |
| Altitude during operation relating to sea level | |
| <ul style="list-style-type: none"> Installation altitude above sea level, max. | 2 000 m |
| <ul style="list-style-type: none"> 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); above 2 000 m max. 132 V AC |
| Relative humidity | |
| <ul style="list-style-type: none"> With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) |
| Vibrations | |
| <ul style="list-style-type: none"> Vibration resistance during operation acc. to IEC 60068-2-6 | 2 g (m/s ²) wall mounting, 1 g (m/s ²) DIN rail |
| <ul style="list-style-type: none"> Operation, tested according to IEC 60068-2-6 | Yes |
| Shock testing | |
| <ul style="list-style-type: none"> tested according to IEC 60068-2-27 | Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms |
| Resistance | |
| Use in stationary industrial systems | |
| <ul style="list-style-type: none"> — 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 |
| <ul style="list-style-type: none"> — to chemically active substances according to EN 60721-3-3 | Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * |
| <ul style="list-style-type: none"> — to mechanically active substances according to EN 60721-3-3 | Yes; Class 3S4 incl. sand, dust, * |
| Use on ships/at sea | |
| <ul style="list-style-type: none"> — to biologically active substances according to EN 60721-3-6 | Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request |
| <ul style="list-style-type: none"> — 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); * |
| <ul style="list-style-type: none"> — to mechanically active substances according to EN 60721-3-6 | Yes; Class 6S3 incl. sand, dust, * |
| Remark | |
| <ul style="list-style-type: none"> — Note regarding classification of environmental conditions acc. to EN 60721 | * The supplied plug covers must remain in place over the unused interfaces during operation! |
| Configuration | |
| Programming | |
| Programming language | |
| <ul style="list-style-type: none"> — LAD | Yes |
| <ul style="list-style-type: none"> — FBD | Yes |

— SCL

Yes

Cycle time monitoring

- adjustable

Yes

Dimensions

Width

90 mm

Height

100 mm

Depth

75 mm

Weights

Weight, approx.

420 g

last modified:

07/29/2018