

Spare part SIPLUS S7-1200 CPU 1211C AC/DC/relay -25...+70 °C with conformal coating based on 6ES7211-1BD30-0XB0 .
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 25 KB

General information	
Product type designation	CPU 1211C AC/DC/relay
Engineering with	
<ul style="list-style-type: none"> Programming package 	STEP 7 Basic V10.5
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
Current consumption, max.	180 mA at 120 V AC; 90 mA at 240 V AC
Inrush current, max.	20 A; at 264 V
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	
<ul style="list-style-type: none"> 24 V 	Permissible range: 20.4V to 28.8V
Power loss	
Power loss, typ.	10 W
Memory	
Work memory	
<ul style="list-style-type: none"> integrated expandable 	25 kbyte No
Load memory	
<ul style="list-style-type: none"> integrated 	1 Mbyte; Load memory expandable using SIEMENS Memory Card

<ul style="list-style-type: none"> • Plug-in (SIMATIC Memory Card), max. 	24 Mbyte; with SIEMENS Memory Card
Backup	
<ul style="list-style-type: none"> • present 	Yes; Entire project maintenance-free in the integral EEPROM
<ul style="list-style-type: none"> • without battery 	Yes
CPU processing times	
for bit operations, typ.	0.1 µs; / Operation
for word operations, typ.	12 µs; / Operation
for floating point arithmetic, typ.	18 µs; / Operation
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	
<ul style="list-style-type: none"> • Number, max. 	Limited only by RAM for code
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	2 048 byte
Flag	
<ul style="list-style-type: none"> • Number, max. 	4 kbyte; Size of bit memory address area
Address area	
I/O address area	
<ul style="list-style-type: none"> • Inputs 	1 024 byte
<ul style="list-style-type: none"> • Outputs 	1 024 byte
Process image	
<ul style="list-style-type: none"> • Inputs, adjustable 	1 kbyte
<ul style="list-style-type: none"> • Outputs, adjustable 	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 communication modules, no signal board can be used
Time of day	
Clock	
<ul style="list-style-type: none"> • Hardware clock (real-time) 	Yes
<ul style="list-style-type: none"> • Backup time 	240 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; > +60 °C Number of simultaneously controllable inputs and outputs max. 50 %
<ul style="list-style-type: none"> • of which inputs usable for technological functions 	3; HSC (High Speed Counting)
Source/sink input	Yes
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 counter/technological functions	
— parameterizable	Single phase : 3 @ 100 kHz, differential: 3 @ 80 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; Relay; > +60 °C Number of simultaneously controllable inputs and outputs max. 50%
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.
<ul style="list-style-type: none"> • "1" to "0", max. 	10 ms; max.
Parallel switching of two outputs	
<ul style="list-style-type: none"> • for uprating 	No
Switching frequency	
<ul style="list-style-type: none"> • of the pulse outputs, with resistive load, max. 	1 Hz
Relay outputs	
<ul style="list-style-type: none"> • Number of relay outputs 	4
<ul style="list-style-type: none"> • Number of operating cycles, max. 	mechanically 10 million, at rated load voltage 100 000
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	500 m
<ul style="list-style-type: none"> • unshielded, max. 	150 m
Analog inputs	
Number of analog inputs	2; > +60 °C Number of simultaneously controllable inputs and outputs max. 50%
<ul style="list-style-type: none"> • For voltage/current measurement 	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
Analog outputs	
Number of analog outputs	0
Cable length	
• shielded, max.	100 m; shielded, twisted pair
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
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
1. Interface	
Interface type	PROFINET
Physics	Ethernet
Isolated	Yes
automatic detection of transmission rate	Yes
Autonegotiation	Yes
Autocrossing	Yes
Protocols	
Supports protocol for PROFINET IO	No
PROFIBUS	No
AS-Interface	No
Protocols (Ethernet)	
• TCP/IP	Yes
Open IE communication	
• TCP/IP	Yes
• ISO-on-TCP (RFC1006)	Yes
Web server	
• User-defined websites	Yes
Further protocols	
• MODBUS	No

Communication functions	
S7 communication	
• supported	Yes
• as server	Yes
Web server	
• supported	Yes
Number of connections	
• overall	15; dynamically
Test commissioning functions	
Status/control	
• Status/control variable	Yes
• Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	
• Forcing	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	No; 500V AC for 1 minute
• between the channels, in groups of	1
Potential separation digital outputs	
• Potential separation digital outputs	Yes; 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	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	
• 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
Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• horizontal installation, min.	-25 °C; = Tmin
• horizontal installation, max.	70 °C; = Tmax; > +60 °C Number of simultaneously controllable inputs and outputs max. 50%; no signal board can be used
• vertical installation, min.	-25 °C; = Tmin
• vertical installation, max.	45 °C; = Tmax
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Altitude during operation relating to sea level	
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 080 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)
Relative humidity	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost permitted (no commissioning in bedewed state)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	2 g (m/s ²) wall mounting, 1 g (m/s ²) DIN rail
• Operation, tested according to IEC 60068-2-6	Yes
Shock testing	

- 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

— 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 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!

Configuration

Programming

Programming language

— LAD

Yes

— FBD

Yes

Cycle time monitoring

- adjustable

Yes

Dimensions

Width

90 mm

Height

100 mm

Depth

75 mm

Weights

Weight, approx.

420 g

last modified:

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