Data sheet

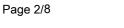


SIPLUS S7-1200 CPU 1215C AC/DC/relay for medial exposure with conformal coating based on 6ES7215-1BG40-0XB0 . compact CPU, AC/DC/relay, onboard I/O: 14 DI 24 V DC 10 DO relay 2 A 2 AI 0-10 V DC 2 AO 0-20 mA DC Power supply: 85-264V AC @ 47-63 Hz, Program/data memory 125 KB

General information	
Product type designation	CPU 1215C AC/DC/relay
Firmware version	V4.1
Engineering with	
Programming package	STEP 7 V13 SP1 or higher
Supply voltage	
Rated value (AC)	
• 120 V AC	Yes
• 230 V AC	Yes
permissible range, lower limit (AC)	85 V
permissible range, upper limit (AC)	265 V
Line frequency	
 permissible range, lower limit 	47 Hz
• permissible range, upper limit	63 Hz
Input current	
Current consumption (rated value)	100 mA at 120 V AC; 50 mA at 240 V AC
Current consumption, max.	300 mA at 120 V AC; 150 mA at 240 V AC
Inrush current, max.	20 A; at 264 V

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=	
Encoder supply	
24 V encoder supply	00.44.00.01/
• 24 V	20.4 to 28.8V
Power loss	
Power loss, typ.	12 W
Memory	
Work memory	
• integrated	125 kbyte
• expandable	No
Load memory	
• integrated	4 Mbyte
 Plug-in (SIMATIC Memory Card), max. 	with SIMATIC memory card
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	
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
	addressable blocks ranges from 1 to 65535. There is no
Number of blocks (total)	addressable blocks ranges from 1 to 65535. There is no
Number of blocks (total) OB	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used
Number of blocks (total) OB Number, max.	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used
Number of blocks (total) OB • Number, max. Data areas and their retentivity	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code
Number of blocks (total) OB Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags),	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code
Number of blocks (total) OB • Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max.	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code
Number of blocks (total) OB Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code 10 kbyte
Number of blocks (total) OB Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag Number, max.	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code 10 kbyte
Number of blocks (total) OB • Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag • Number, max. Address area	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code 10 kbyte
Number of blocks (total) OB Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag Number, max. Address area Process image	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area
Number of blocks (total) OB Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag Number, max. Address area Process image Inputs, adjustable	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area
Number of blocks (total) OB Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag Number, max. Address area Process image Inputs, adjustable Outputs, adjustable	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area
Number of blocks (total) OB Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag Number, max. Address area Process image Inputs, adjustable Outputs, adjustable Hardware configuration	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area 1 kbyte 1 kbyte
Number of blocks (total) OB Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag Number, max. Address area Process image Inputs, adjustable Outputs, adjustable Hardware configuration Number of modules per system, max.	addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area 1 kbyte 1 kbyte



6AG1215-1BG40-4XB0



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Backup time	480 h; Typical
Deviation per day, max.	±60 s/month at 25 °C

Number of digital inputs ● of which inputs usable for technological functions Source/sink input Yes Number of simultaneously controllable inputs all mounting positions — up to 40 °C, max. Input voltage ● Rated value (DC) ● for signal "0" ● for signal "1" Input delay (for rated value of input voltage) for standard inputs	Digital inputs	
of which inputs usable for technological functions Source/sink input Number of simultaneously controllable inputs all mounting positions — up to 40 °C, max. Input voltage Rated value (DC) of r signal °0" of r signal °0" of r signal °1" of r si		14: Integrated
functions SourceSink input Number of simultaneously controllable inputs all mounting positions — up to 40 °C, max. Input voltage • Rated value (DC) • for signal "0" • for signal "1" 15 V DC at 1 mA • for signal "1" Input delay (for rated value of input voltage) for standard inputs — parameterizable — parameterizable — at "0" to "1", min. — at "0" to "1", max. for interrupt inputs — parameterizable For technological functions — parameterizable for technological functions — parameterizable • shielded, max. • unshielded, max. •		
Number of simultaneously controllable inputs all mounting positions — up to 40 °C, max. Input voltage • Rated value (DC) • for signal "0" • for signal "0" • for signal "1" Input delay (for rated value of input voltage) for standard inputs — parameterizable — at "0" to "1", min. — at "0" to "1", max. — at "0" to "1", max. for interrupt inputs — parameterizable *Yes **One tenhological functions — parameterizable **One technological functions — parameterizable **One technological functions **One technological f	-	, (5 1 6)
all mounting positions - up to 40 °C, max. 14 Input voltage • Rated value (DC) 24 V • for signal "0" 5 V DC at 1 mA • for signal "1" 15 V DC at 2.5 mA Input delay (for rated value of input voltage) for standard inputs - parameterizable Yes: 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 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 • shielded, max. 500 m; 50 m for technological functions: No Digital outputs Number of digital outputs 10; Relays Switching capacity of the outputs • with resistive load, max. 30 W with DC, 200 VV with AC Output delay with resistive load • "0" to "1", max. 10 ms; max. • "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 • Number of perating cycles, max. mechanically 10 million, at rated load voltage 100 000	Source/sink input	Yes
	Number of simultaneously controllable inputs	
Input voltage • Rated value (DC) • for signal "0" • for signal "1" parameterizable — parameterizable — parameterizable — at "0" to "1", min. — at "0" to "1", max. for interrupt inputs — parameterizable Yes for technological functions — parameterizable • shielded, max. • unshielded, max. • unshielded, max. • unshielded, max. • on lamp load, max. • o''' to "1", max. • "10" to "0", max. Switching capacity of the outputs • with resistive load • "0" to "1", max. • o'' to "0", max. • of the pulse outputs, with resistive load, max. • o''' to "0", max. Switching frequency • of the pulse outputs, with resistive load, max. • Number of relay outputs • Number of perating cycles, max. 10 mechanically 10 million, at rated load voltage 100 000	all mounting positions	
Rated value (DC) for signal "0" for signal "1" 15 V DC at 2.5 mA Input delay (for rated value of input voltage) for standard inputs	— up to 40 °C, max.	14
For signal "0"	Input voltage	
for signal "1"	Rated value (DC)	24 V
Input delay (for rated value of input voltage) for standard inputs	● for signal "0"	5 V DC at 1 mA
for standard inputs	• for signal "1"	15 V DC at 2.5 mA
Personance experiments and 12.8 ms, selectable in groups of four - at "0" to "1", min at "0" to "1", max. 12.8 ms for interrupt inputs - parameterizable Personance experiments at 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz. Cable length Shielded, max. Unshielded,	Input delay (for rated value of input voltage)	
selectable in groups of four - at "0" to "1", min at "0" to "1", max. for interrupt inputs - parameterizable 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 • shielded, max. • unshielded, max. • unshielded, max. Sou m; 50 m for technological functions: No Digital outputs Number of digital outputs 10; Relays Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. 10 ms; max. • "1" to "0", max. 10 ms; max. 10 ms; max. Switching frequency • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	for standard inputs	
selectable in groups of four - at "0" to "1", min at "0" to "1", max. 12.8 ms for interrupt inputs - parameterizable 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 • shielded, max. • unshielded, max. 100 m; 50 m for technological functions Number of digital outputs 10; Relays Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 10 ms; max. • "1" to "0", max. 10 ms; max. Switching frequency • of the pulse outputs, with resistive load, max. 10 ms; max. Number of relay outputs, with resistive load, max. 10 ms; max. 10 ms; max. 10 ms; max. 10 ms; max. Mild The pulse outputs, with resistive load, max. 10 ms; max. 11 Hz Relay outputs Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	— parameterizable	Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 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 • shielded, max. 500 m; 50 m for technological functions • unshielded, max. 300 m; for technological functions: No Digital outputs Number of digital outputs 10; Relays Switching capacity of the outputs • with resistive load, max. 2 A • on lamp load, max. 30 W with DC, 200 W with AC Output delay with resistive load • "0" to "1", max. 10 ms; max. • "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 • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	·	selectable in groups of four
for interrupt inputs — parameterizable 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 • shielded, max. • unshielded, max. 500 m; 50 m for technological functions • unshielded, max. 500 m; 50 m for technological functions 300 m; for technological functions: No Digital outputs Number of digital outputs 10; Relays Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. 10 ms; max. • "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 • Number of relay outputs • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	— at "0" to "1", min.	0.2 ms
reparameterizable yes for technological functions	— at "0" to "1", max.	12.8 ms
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 • shielded, max. • unshielded, max. 100 m; 50 m for technological functions 300 m; for technological functions: No Digital outputs Number of digital outputs 10; Relays Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. 10 ms; max. • "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 • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	for interrupt inputs	
Parameterizable Yes; Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz Cable length • shielded, max. • unshielded, max. 10; Relays Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 10 ms; max. • "1" to "0", max. • of the pulse outputs, with resistive load, max. Switching frequency • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs Number of elay outputs 10 Number of operating cycles, max. 10 Number of operating cycles, max. 10 Mechanically 10 million, at rated load voltage 100 000	— parameterizable	Yes
Cable length • shielded, max. • unshielded, max. • unshielded, max. • unshielded, max. • unshielded, max. 500 m; 50 m for technological functions: No Digital outputs Number of digital outputs 10; Relays Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. • "0" to "1", max. • "1" to "0", max. 10 ms; max. 10 ms; max. Switching frequency • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs • Number of relay outputs • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	for technological functions	
Cable length • shielded, max. • unshielded, max. 300 m; for technological functions: No Digital outputs Number of digital outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. • "0" to "1", max. • "1" to "0", max. • "1" to "0", max. Switching frequency • of the pulse outputs, with resistive load, max. • Number of relay outputs • Number of operating cycles, max. 10 ms; max. 11 Hz Relay outputs Number of operating cycles, max. Mechanically 10 million, at rated load voltage 100 000	— parameterizable	Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at
shielded, max. unshielded, max. Origital outputs Number of digital outputs 10; Relays 2 A on lamp load, max. 2 A on lamp load, max. 10 ms; max. 10 ms; max. 10 ms; max. Number of relay outputs, with resistive load, max. 11 Hz Relay outputs Number of operating cycles, max. Number of operating cycles, max. Number of operating cycles, max. Number of max. Solutions 10 ms; max. 11 Hz Rehaves Number of operating cycles, max. Number of operating cycles, max. Number of operating cycles, max.		80 kHz & 3 at 30 kHz
unshielded, max. 300 m; for technological functions: No Digital outputs Number of digital outputs Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. 10 ms; max. • "1" to "0", max. Switching frequency • of the pulse outputs, with resistive load, max. • Number of relay outputs • Number of operating cycles, max. 300 m; for technological functions: No 10; Relays 2 A 30 W with DC, 200 W with AC 10 ms; max. 10 ms; max. 11 Hz Relayoutputs • Number of relay outputs • Number of operating cycles, max. 10 ms; max. 11 Hz Relayoutputs • Number of operating cycles, max. 10 ms; max.	Cable length	
Digital outputs Number of digital outputs Switching capacity of the outputs • with resistive load, max. • on lamp load, max. Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 10 ms; max. Switching frequency • of the pulse outputs, with resistive load, max. • Number of relay outputs • Number of operating cycles, max. 10; Relays 10; Relays 10 ms; max. 11 ms; max. 12 ms; max. 13 ms; max. 14 ms; max. 15 ms; max. 16 ms; max. 17 ms; max. 18 mechanically 10 million, at rated load voltage 100 000	• shielded, max.	500 m; 50 m for technological functions
Number of digital outputs Switching capacity of the outputs with resistive load, max. on lamp load, max. "0" to "1", max. "1" to "0", max. "1" to "0", max. In ms; max. The pulse outputs, with resistive load, max. In ms; max. In max. In ms; max. In max. In ms; max. In max. In max. In ms; max. In max. In ms; max. In max. In max. In ms; max. In max. In max. In max. In ms; max. In	• unshielded, max.	300 m; for technological functions: No
Number of digital outputs Switching capacity of the outputs with resistive load, max. on lamp load, max. "0" to "1", max. "1" to "0", max. "1" to "0", max. In ms; max. The pulse outputs, with resistive load, max. In ms; max. In max. In ms; max. In max. In ms; max. In max. In max. In ms; max. In max. In ms; max. In max. In max. In ms; max. In max. In max. In max. In ms; max. In	Digital outputs	
 with resistive load, max. on lamp load, max. 30 W with DC, 200 W with AC Output delay with resistive load "0" to "1", max. "1" to "0", max. Switching frequency of the pulse outputs, with resistive load, max. Relay outputs Number of relay outputs Number of operating cycles, max. 10 mechanically 10 million, at rated load voltage 100 000 		10; Relays
on lamp load, max. Output delay with resistive load "0" to "1", max. "1" to "0", max. Switching frequency of the pulse outputs, with resistive load, max. Relay outputs Number of relay outputs Number of operating cycles, max. 30 W with DC, 200 W with AC 10 ms; max. 11 ms; max. 11 Hz 12 The companies of the pulse outputs, with resistive load, max. 11 Hz 12 The companies of the pulse outputs outputs Number of operating cycles, max. 13 W with DC, 200 W with AC 14 Description: 15 Description: 16 Description: 17 Description: 18 Description: 18 Description: 19 Description: 10 Descr	Switching capacity of the outputs	
Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 10 ms; max. 10 ms; max. Switching frequency • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs • Number of relay outputs • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	• with resistive load, max.	2 A
 "0" to "1", max. "1" to "0", max. Switching frequency of the pulse outputs, with resistive load, max. 1 Hz Relay outputs Number of relay outputs Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000 	● on lamp load, max.	30 W with DC, 200 W with AC
 "1" to "0", max. Switching frequency of the pulse outputs, with resistive load, max. Relay outputs Number of relay outputs Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000 	Output delay with resistive load	
Switching frequency • of the pulse outputs, with resistive load, max. Relay outputs • Number of relay outputs • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	• "0" to "1", max.	10 ms; max.
of the pulse outputs, with resistive load, max. Relay outputs Number of relay outputs Number of operating cycles, max. 1 Hz 10 mechanically 10 million, at rated load voltage 100 000	• "1" to "0", max.	10 ms; max.
Relay outputs • Number of relay outputs • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	Switching frequency	
 Number of relay outputs Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000 	• of the pulse outputs, with resistive load, max.	1 Hz
• Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000	Relay outputs	
	Number of relay outputs	10
Cable length	 Number of operating cycles, max. 	mechanically 10 million, at rated load voltage 100 000
	Cable length	





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• shielded, max.	500 m
• unshielded, max.	150 m

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
Analog outputs	
Number of analog outputs	2

Analog outputs	
Number of analog outputs	2
Output ranges, current	
• 0 to 20 mA	Yes

Analog	value	generation	for the	inputs

Integration and	conversion	time/reso	lution per	r channel

Resolution with overrange (bit including sign), max.
 Integration time, parameterizable
 Conversion time (per channel)
 10 bit
 Yes
 625 µs

Analog value generation for the outputs

Integration and conversion time/resolution per channel

• Resolution with overrange (bit including sign), max.

10 bit

Yes

Encoder

Connectable encoders

• 2-wire sensor

1. Interface	
Interface type	PROFINET
Isolated	Yes
automatic detection of transmission rate	Yes
Autonegotiation	Yes
Autocrossing	Yes
Interface types	
• RJ 45 (Ethernet)	Yes
Protocols	
PROFINET IO Controller	Yes
PROFINET IO Device	Yes; Also simultaneously with IO-Device functionality
PROFINET IO Controller	



Transmission rate, max.	100 Mbit/s
Services	
— Number of connectable IO Devices, max.	16
PROFINET IO Device	
Services	
— Shared device	Yes
 Number of IO Controllers with shared 	2
device, max.	
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIBUS	Yes; CM 1243-5 required
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
Number of connections	
• overall	16; dynamically
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
Traces	
Number of configurable Traces	2; Up to 512 KB of data per trace are possible



Integrated Functions	
Number of counters	6
Counting frequency (counter) max.	100 kHz
Frequency measurement	Yes
controlled positioning	Yes
Number of position-controlled positioning axes, max.	8
Number of positioning axes via pulse-direction	Up to 4 with SB 1222
interface	
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	2
EMC	
Interference immunity against discharge of static electric	city
 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 distur	bance 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	
IP degree of protection	IP20
Ambient conditions	



Free fall	
● Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-20 °C; = Tmin (incl. condensation/frost); start-up @ 0 °C
• max.	60 °C; Number of simultaneously activated inputs or outputs 7 or 5 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 45 °C vertical
At cold restart, min.	0 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Altitude during operation relating to sea level	
 Installation altitude above sea level, max. 	2 000 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); above 2 000 m max. 132 V AC
Relative humidity	
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Vibrations	
 Vibration resistance during operation acc. to IEC 60068-2-6 	2 g (m/s²) wall mounting, 1 g (m/s²) 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	
Coolants and lubricants	
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air
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 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
 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); *



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Yes; Class 6S3 incl. sand, dust; * — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology Yes; Class 3 (excluding trichlorethylene) - Against chemically active substances acc. to EN 60654-4 Yes; Level GX group A/B (excluding trichlorethylene; harmful gas — Environmental conditions for process, concentrations up to the limits of EN 60721-3-3 class 3C4 measuring and control systems acc. to permissible); level LC3 (salt spray) and level LB3 (oil) ANSI/ISA-71.04 Remark * The supplied plug covers must remain in place over the unused - Note regarding classification of interfaces during operation! environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating Yes; Class 2 for high reliability • Coatings for printed circuit board assemblies acc. to EN 61086 Yes; Type 1 protection • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Yes; Discoloration of coating possible during service life Amendment 7 Yes; Conformal coating, Class A Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

Assemblies according to it 0-00-000A	
Configuration	
Programming	
Programming language	
— LAD	Yes
— FBD	Yes
— SCL	Yes
Cycle time monitoring	
adjustable	Yes
Dimensions	
Width	130 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	550 g
last modified:	10/13/2020



Subject to change without notice

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