SIEMENS

Data sheet

6AG1215-1BG40-4XB0

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 100 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

Encoder supply	
24 V encoder supply	
• 24 V	20.4 to 28.8V
Power loss	
Power loss Power loss, typ.	12 W
	12 **
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	
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),	10 kbyte
max.	
Flag	
• Number, max.	8 kbyte; Size of bit memory address area
Address area	
Process image	
 Inputs, adjustable 	1 kbyte
• Outputs, adjustable	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 comm. modules, 1 signal board, 8 signal modules
Time of day	
Clock	
 Hardware clock (real-time) 	Yes

Backup time	480 h; Typical
 Deviation per day, max. 	±60 s/month at 25 °C
Digital inputs	14: Interneted
Number of digital inputs	14; Integrated
 of which inputs usable for technological functions 	6; HSC (High Speed Counting)
Source/sink input	Yes
Number of simultaneously controllable inputs	
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; 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	10: Delaur
Number of digital outputs	10; Relays
Switching capacity of the outputs	2 A
• with resistive load, max.	
• on lamp load, max.	30 W with DC, 200 W with AC
Output delay with resistive load	10
• "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 	10
Number of operating cycles, max.	mechanically 10 million, at rated load voltage 100 000
Cable length	

• 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
Output ranges, current	
• 0 to 20 mA	Yes
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
 Resolution with overrange (bit including sign), 	10 bit
max.	
 Integration time, parameterizable 	Yes
 Conversion time (per channel) 	625 µs
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
 Resolution with overrange (bit including sign), 	10 bit
max.	
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	
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 device, max. 	2
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	

Contribution of equation (counter) max. 100 kHz Frequency measurement Yes controlled positioning axes, max. 8 Number of positioning axes via pulse-direction interface Up to 4 with SB 1222 FilD controller Yes Number of positioning axes via pulse-direction interface Up to 4 with SB 1222 FilD controller Yes Number of positioning axes via pulse-direction interface 1 FilD controller Yes Number of positioning axes via pulse-direction 4 Potential separation digital inputs 500V AC for 1 minute • between the channels, in groups of 1 Potential separation digital outputs Relays • between the channels No • between the channels No • between the channels Ves - Test voltage at air discharge of static electricity Yes - Test voltage at air discharge of static electricity Freference immunity against discharge of kV Interference immunity on signal cables acc. to IEC 6 1000-42 Yes • Interference immunity on signal cables acc. to IEC 6 1000-44 Yes • Interference immunit	Number of counters	6
Frequency measurement Yes controlled positioning axes, max. 8 Number of position-controlled positioning axes, max. 8 Number of positioning axes via pulse-direction interface Up 6 4 with SB 1222 PID controller Yes Number of positioning axes via pulse-direction interface Vp 6 4 with SB 1222 PID controller Yes Number of alarm inputs 4 Potential separation digital inputs 500V AC for 1 minute • Potential separation digital outputs Relays • Potential separation digital outputs 8 • Potential separation digital outputs 1 • Potential separation digital outputs Relays • between the channels, in groups of 2 Potential separation digital outputs Yes • heterference immunity against discharge of static electricity Yes • Interference immunity against discharge of static electricity Yes • Interference immunity against discharge Yes • Interference immunity against discharge Yes • Interference immunity against discharge Yes • Interference immunity against discharge <td></td> <td></td>		
controlled positioning Yes Number of position-controlled positioning axes, max. 8 Number of positions gaxes via pulse-direction interface Up to 4 with SB 1222 Pite controller Yes Number of alarm inputs 4 Potential separation digital inputs 500V AC for 1 minute • Potential separation digital outputs Folential separation digital outputs • Potential separation digital outputs Relays • Potential separation digital outputs Relays • Potential separation digital outputs Relays • Potential separation digital outputs No • Determents, in groups of 2 EMC Yes Interference immunity against discharge of static electricity Yes • Interference immunity against discharge of static electricity Yes • Interference immunity on supply lines acc. to IEC 61000-4-2 Yes • 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 on signal cables acc. to IEC 61000-4-4 Yes • Interference immunity against high-frequency radiation acc.		Yes
Number of positioning axes via pulse-direction interface Up to 4 with SB 1222 PID controller Yes Number of alarm inputs 4 Potential separation digital inputs 500V AC for 1 minute • Potential separation digital outputs 500V AC for 1 minute • Potential separation digital outputs Foldential separation digital outputs • Potential separation digital outputs Relays • Potential separation digital outputs Relays • between the channels, in groups of 2 Potential separation digital outputs Relays • between the channels, in groups of 2 Potential separation digital outputs Relays • between the channels, in groups of 2 Potential separation digital outputs Relays • between the channels, in groups of 2 Potential separation digital outputs Relays • between the channels, in groups of 4 Interference immunity against discharge of static electricity ac. to IEC 61000-4-2 Yes • Test voltage at air discharge 8 kV • Interference immunity on supply lines acc. to IEC 61000-4-5 Yes		Yes
Number of positioning axes via pulse-direction interface Up to 4 with SB 1222 PID controller Yes Number of alarm inputs 4 Potential separation digital inputs 500V AC for 1 minute • Potential separation digital outputs 500V AC for 1 minute • Potential separation digital outputs Foldential separation digital outputs • Potential separation digital outputs Relays • Potential separation digital outputs Relays • between the channels, in groups of 2 Potential separation digital outputs Relays • between the channels, in groups of 2 Potential separation digital outputs Relays • between the channels, in groups of 2 PID PID • Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 Yes • Interference immunity on supply lines acc. to IEC 61000-4-4 Yes • Interference immunity on supply lines acc. to IEC 61000-4-5 Yes • Interference immunity against conducted variable disturbance induced by high-frequency fields Yes • Interference immunity against conducted variable disturbance induced by high-frequency fields Yes		8
PID controller Yes Number of alarm inputs 4 Potential separation digital inputs 500V AC for 1 minute Potential separation digital inputs 500V AC for 1 minute • between the channels, in groups of 1 Potential separation digital outputs Relays • Potential separation digital outputs Relays • between the channels, in groups of 2 • Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 Yes • Interference immunity on signal cables acc. to IEC 61000-4-2 8 kV • Test voltage at air discharge Yes • Interference immunity on signal cables acc. to IEC 61000-4-4 Yes • Interference immunity against toitage surge Yes • Interference immunity against toitage surge Yes • Interference immunity against ingh-frequency fields Yes Interference immunity a	· · · · · · · · · · · · · · · · · · ·	Up to 4 with SB 1222
Aurobe of alarm inputs 4 Potential separation 500V AC for 1 minute Potential separation digital inputs 500V AC for 1 minute • between the channels, in groups of 1 Potential separation digital outputs Relays • between the channels, in groups of 2 Potential separation digital outputs No • between the channels No • between the channels No • between the channels No • Interference immunity against discharge of static electricity Yes - Test voltage at in discharge 8 kV - Test voltage at contact discharge 6 kV Interference immunity on signal cables acc. to IEC 61000-4.5 Yes Interference immunity against voltage surge Yes • on the supply lines acc. to IEC 61000-4.5 Yes Interference immunity against voltage surge Yes • Interference immunity against high-frequency radiation acc. to IEC 61000-4.6 Yes	interface	
Potential separation digital inputs 500V AC for 1 minute • Potential separation digital inputs 500V AC for 1 minute • between the channels, in groups of 1 Potential separation digital outputs Relays • Potential separation digital outputs Relays • between the channels No • between the channels, in groups of 2 EMC Yes Interference immunity against discharge of static electricity Yes • Interference immunity against discharge 8 kV - Test voltage at air discharge 8 kV - Test voltage at contact discharge 6 kV Interference immunity on signal cables acc. to IEC 6 1000-4-4 Yes • Interference immunity on signal cables acc. to IEC 6 1000-4-4 Yes • Interference immunity against voltage surge on the supply lines acc. to EC 6 1000-4-5 Yes Interference immunity against conducted variable disturbute cincluced by high-frequency fields Interference immunity against high-frequency radiation acc. to IEC 6 1000-4-8 Yes Emission of radio interference acc. to EN 55 011 Yes Yes Interference immunity against individial areas Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 5	PID controller	Yes
Potential separation digital inputs 500V AC for 1 minute • Potential separation digital outputs 500V AC for 1 minute • Potential separation digital outputs Relays • Potential separation digital outputs Relays • between the channels, in groups of 2 • Dotential separation digital outputs Relays • between the channels, in groups of 2 EMC Interference immunity against discharge of static electricity • Interference immunity against discharge Yes • Test voltage at air discharge 8 kV • Test voltage at air discharge 6 kV Interference immunity on supply lines acc. to IEC 61000-4-4 Yes • Interference immunity on supply lines acc. to IEC 61000-4-4 Yes • Interference immunity against voltage surge • on the supply lines acc. to IEC 61000-4-5 • Interference immunity against voltage surge • on the supply lines acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Yes Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 Yes; Group 1 Emission of radio interference acc. to EN 55 011 Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011 D	Number of alarm inputs	4
• Potential separation digital inputs 500V AC for 1 minute • between the channels, in groups of 1 Potential separation digital outputs Relays • between the channels No • between the channels, in groups of 2 EMC Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 • Interference immunity on supply lines acc. to IEC 61000-4-2 Yes • Test voltage at air discharge 8 kV • Test voltage at contact discharge 6 kV Interference immunity on supply lines acc. to IEC 61000-4-4 Yes • Interference immunity on supply lines acc. to IEC 61000-4-4 Yes • Interference immunity against colduced surable discurate Yes • Interference immunity against colduced surable discurate Yes • Interference immunity against colduced variable discurate Yes • Interference immunity against colduced variable discurate Yes • Interference immunity against colduced variable discurate Yes • Interference immunity against ingh-frequency Yes • Interference immunity against conduced variable discurate Yes • Interference immunity against ingh-frequency Yes Interference immunity against i	Potential separation	
between the channels, in groups of 1 Potential separation digital outputs Potential separation digital disturber output disturber output digital disturber output digital events Potential separation digital conducted variable disturber output digital outputs Potential separation digital areas Perison of radio interference acc. to EN 55 011 Potential class A, for use in residential areas Perison of radio interference acc. to EN 55 011 Potential class A for use in residential areas Perison of radio interference acc. to EN 55 011 Potential class A for use in residential areas Perison of radio interference acc. to EN 55 011 Potential class A for use in residential areas Per	Potential separation digital inputs	
Potential separation digital outputs Relays Potential separation digital outputs Relays No 2 ENEW 2 Interference immunity against discharge of static electricity Yes 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 6 kV Interference immunity on supply lines acc. to IEC 61000-4-4 Yes Interference immunity on supply lines acc. to IEC 61000-4-5 Yes Interference immunity on signal cables acc. to IEC 61000-4-6 Yes Interference immunity against voltage surge • on the supply lines acc. to IEC 61000-4-5 Yes Interference immunity against voltage surge • on the supply lines acc. to IEC 61000-4-6 Yes Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 Yes Yes Interference immunity against bigh-frequency radiation acc. to IEC 61000-4-6 Yes Yes Interference immunity against conducted variable disturbure inducted by high-frequency fields Interference immunity against high-frequency fields Interference immunity against on the field	 Potential separation digital inputs 	500V AC for 1 minute
• Potential separation digital outputs Relays • between the channels No • between the channels, in groups of 2 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 ontact discharge 6 kV Interference immunity to cable-borne interference Ves • Interference immunity on signal cables acc. to IEC 61000-4-4 Yes • Interference immunity on signal cables acc. to IEC 61000-4-5 Yes • Interference immunity against voltage surge Ves • on the supply lines acc. to IEC 61000-4-5 Yes • Interference immunity against conducted variable disturtance induced by high-frequency fields Interference immunity against conducted variable disturtance • Interference immunity against high-frequency radiation acc. to IEC 6100-4-5 Yes • Interference immunity against stop against high-frequency fields Ves • 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 of protection acc. t	 between the channels, in groups of 	1
• between the channels No • between the channels, in groups of 2 ENC Interference immunity against discharge of static electricity • Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 Yes • Interference immunity to cable-borne interference 8 kV • - Test voltage at contact discharge 6 kV Interference immunity to cable-borne interference Yes • 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 • Interference immunity against notlated variable distut-ance induced by high-frequency fields Interference immunity against high-frequency • Interference immunity against tonducted variable distut-ance induced by high-frequency fields Interference immunity against stop forection • Interference immunity against stop forection Yes; Group 1 • Limit class A, for use in industrial 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 Yes Interference inc. to EN 60529 Yes • IP20 Yes	Potential separation digital outputs	
• between the channels, in groups of 2 ENC 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 Ves • 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 on signal cables acc. to IEC 61000-4-4 Yes • Interference immunity against voltage surge Yes • on the supply lines acc. to IEC 61000-4-5 Yes Interference immunity against conducted variable disturbance induced by high-frequency fields Yes • Interference immunity against toolucted variable disturbance induced by high-frequency fields Yes • Interference immunity against toolucted variable disturbance induced by high-frequency fields Yes • Interference immunity against toolucted variable disturbance induced by high-frequency fields Yes; Group 1 • 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 of protection acc. to EN 60529 <td< td=""><td> Potential separation digital outputs </td><td>Relays</td></td<>	 Potential separation digital outputs 	Relays
Enclose instruction of group of the 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 ontact discharge 6 kV Interference immunity on cable-borne interference • Interference immunity on signal cables 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 • on the supply lines acc. to IEC 61000-4-5 Yes Yes Interference immunity against totlage surge • on the supply lines acc. to IEC 61000-4-5 Yes Interference immunity against conducted variable disturbance induced by high-frequency fields • Interference inmunity against conducted variable disturbance induced by high-frequency fields • Interference immunity against high-frequency radiation acc. to IEC 61000-4-5 Yes Emission of radio interference acc. to EN 55 011 • Exist Class A, for use in industrial 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 Yes Yes Degree of protection acc. to EN 60529 Yes Standards, approv	 between the channels 	No
Interference immunity against discharge of static electricity Yes • Interference immunity against discharge Yes - Test voltage at air discharge 8 kV - Test voltage at air discharge 6 kV Interference immunity to cable-borne interference 6 kV 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 Yes • on the supply lines acc. to IEC 61000-4-5 Yes Interference immunity against voltage surge Yes • Interference immunity against voltage surge Yes Interference immunity against nonducted variable disturbance induced by high-frequency fields Yes • Interference immunity against areas Yes; Group 1 • Limit class A, for use in industrial 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 Yes	 between the channels, in groups of 	2
Interference immunity against discharge of static electricity Yes • 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 6 kV 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 Yes • on the supply lines acc. to IEC 61000-4-5 Yes Interference immunity against voltage surge Yes • Interference immunity against voltage surge Yes • Interference immunity against voltage surge Yes Interference immunity against voltage surge Yes Interference immunity against voltage surge Yes • Interference immunity against voltage surge Yes Interference immunity against nonducted variable disturbance induced by high-frequency fields Yes • Interference immunity against areas Yes; Group 1 • Limit class A, for use in industrial areas Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011 Degree and class	EMC	
Interference immunity against voltage surge Interference immunity against voltage surge Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against ingh-frequency radiation acc. to EC 61000-4-5 Yes Interference immunity against voltage surge Interference immunity against voltage surge Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against conducted variable disturbance induced by high-frequency fields Interference acc. to EN 55 011 Limit class A, for use in industrial areas Ves; Group 1 Ves; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011 Degree of protection acc. to EN 60529 IP20 Yes 		city
- Test voltage at air discharge8 kV- Test voltage at contact discharge6 kVInterference immunity to cable-borne interferenceYes- Interference immunity on supply lines acc. to IEC 61000-4-4Yes- Interference immunity on signal cables acc. to IEC 61000-4-4Yes- Interference immunity against voltage surgeYes- on the supply lines acc. to IEC 61000-4-5YesInterference immunity against conducted variable disturbance induced by high-frequency fields- Interference immunity against conducted variable disturbanceYesInterference immunity against tobs 5011Yes- Interference immunity against high-frequency radiation acc. to IEC 61000-4-6Yes; Group 1- Limit class A, for use in industrial areas - Limit class B, for use in residential areasYes; Group 1 Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011Degree of protection acc. to EN 60529 - IP20YesStandards, approvals, certificatesYes	 Interference immunity against discharge of 	Yes
— Test voltage at contact discharge 6 kV Interference immunity to cable-borne interference Yes • Interference immunity on supply lines acc. to IEC 61000-4-4 Yes • Interference immunity against voltage surge Yes • on the supply lines acc. to IEC 61000-4-5 Yes Interference immunity against voltage surge Yes • Interference immunity against conducted variable disturbance induced by high-frequency fields Yes • Interference immunity against conducted variable disturbance induced by high-frequency fields Yes • Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 Yes; Group 1 • 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 Yes Degree of protection acc. to EN 60529 Yes • IP20 Yes	static electricity acc. to IEC 61000-4-2	
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 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 • 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 Yes Degree of protection acc. to EN 60529 • IP20 Yes	— Test voltage at air discharge	8 kV
• Interference immunity on supply lines acc. to IEC 61000-4-4Yes• Interference immunity on signal cables acc. to IEC 61000-4-4YesInterference immunity against voltage surge• on the supply lines acc. to IEC 61000-4-5Yes• on the supply lines acc. to IEC 61000-4-5YesInterference immunity against conducted variable disturce induced by high-frequency fields• Interference immunity against conducted variable disturce induced by high-frequency fields• Interference immunity against high-frequency radiation acc. to IEC 61000-4-6YesEmission of radio interference acc. to EN 55 011• Sind Cass A, for use in industrial areas ves; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011Degree and class of protection Degree of protection acc. to EN 60529 • IP20YesStandards, approvals, certificatesYes	— Test voltage at contact discharge	6 kV
IEC 61000-4-4YesInterference immunity on signal cables acc. to IEC 61000-4-4YesInterference immunity against voltage surge• on the supply lines acc. to IEC 61000-4-5YesInterference immunity against conducted variable disturance induced by high-frequency fields• Interference immunity against conducted variable disturance• Interference immunity against conducted variable disturation acc. to IEC 61000-4-6YesEmission of radio interference acc. to EN 55 011Yes; Group 1• Limit class A, for use in industrial areasYes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011Degree and class of protectionYesDegree of protection acc. to EN 60529 • IP20Yes	Interference immunity to cable-borne interference	
IEC 61000-4-4 Interference immunity against voltage surge on the supply lines acc. to IEC 61000-4-5 Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Limit class A, for use in industrial areas Limit class B, for use in residential areas Ves; Group 1 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		Yes
 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 Emission of radio interference acc. to EN 55 011 Limit class A, for use in industrial areas 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 		Yes
Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Limit class A, for use in industrial areas Limit class B, for use in residential areas Ves; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011 Degree and class of protection IP20 Yes Yes Standards, approvals, certificates Yes	Interference immunity against voltage surge	
 Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Limit class A, for use in industrial areas Limit class B, for use in residential areas Ves; Group 1 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 	 on the supply lines acc. to IEC 61000-4-5 	Yes
radiation acc. to IEC 61000-4-6 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 Person Protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates	Interference immunity against conducted variable distur	bance induced by high-frequency fields
 Limit class A, for use in industrial areas 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 		Yes
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	Emission of radio interference acc. to EN 55 011	
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	• Limit class A, for use in industrial areas	Yes; Group 1
Degree of protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates	 Limit class B, for use in residential areas 	
• IP20 Yes Standards, approvals, certificates	Degree and class of protection	
Standards, approvals, certificates	Degree of protection acc. to EN 60529	
	• IP20	Yes
	Standards, approvals, certificates	
		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; 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
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
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); *

 to mechanically active substances 	Yes; Class 6S3 incl. sand, dust; *
according to EN 60721-3-6	
Remark	
 — Note regarding classification of 	* The supplied plug covers must remain in place over the unused
environmental conditions acc. to EN 60721	interfaces during operation!
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:	07/29/2018