SIEMENS

Data sheet

6ES7215-1BG40-0XB0



SIMATIC S7-1200, CPU 1215C, COMPACT CPU, AC/DC/RELAY, 2 PROFINET PORT, ONBOARD I/O: 14 DI 24V DC; 10 DO RELAY 2A, 2 AI 0-10V DC, 2 AO 0-20MA DC, POWER SUPPLY: AC 85 -264 V AC AT 47 - 63 HZ, PROGRAM/DATA MEMORY: 100 KB

General information	
Engineering with	
 Programming package 	STEP 7 V13 SP1 or higher
Display	
with display	No
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 frequency range, lower limit 	47 Hz
• permissible frequency 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
Power losses	
Power loss, typ.	12 W
Memory	
Type of memory	EEPROM
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
• without battery	100
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 in total (incl. times, counters,	10 kbyte
flags), max.	
Flag	
• Number, max.	8 kbyte; Size of bit memory 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
T	
Time of day Clock	
Hardware clock (real-time clock)	Yes
Deviation per day, max.	+/- 60 s/month at 25 °C
	480 h; Typical
Backup time	
Digital inputs	
Number of digital inputs	14; Integrated
• of which, inputs usable for technological	6; HSC (High Speed Counting)
functions	
integrated channels (DI)	14
m/p-reading	Yes
Number of simultaneously controllable inputs	
all mounting positions	

Input voltage • Relet value (DC) 2 V • for signal "0" 5 V DC at 1 mA • for signal "1", typ. 1 mA Input current • for signal "1", typ. 1 mA Input dealy (for rated value of input voltage) for standard inputs Ves; 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	— up to 40 °C, max.	14
Instruction 5 V DC at 1 mA if or signal "1" 15 VDC at 2.5 mA Input dealy (for rated value of input voltage) 1 mA Input dealy (for rated value of input voltage) 1 mA Input dealy (for rated value of input voltage) 1 mA Input dealy (for rated value of input voltage) 1 mA Input dealy (for rated value of input voltage) 1 selectable in groups of four - Parameterizable selectable in groups of four - at "0" to "1", max. 0.2 ms - at "0" to "1", max. 12.8 ms for interrupt inputs 2 - Parameterizable Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz Cable length 500 m; 50 m for technological functions • Unshielded, max. 500 m; 50 m for technological functions Yes 10 regrameterizable Ves 10 shitching capacity of the outputs 10 regrameterizable Yes 10 ms; max. Yes 10 ms; max. Yes 10 ms; max. Yes 10 ms; max. Yes 10 ms; max. <t< td=""><td>Input voltage</td><td></td></t<>	Input voltage	
ior signal "1" 15 VDC at 2.5 mA Input current 1 mA Input delay (for rated value of input voltage) 1 mA for signal "1", typ. 1 mA Input delay (for rated value of input voltage) 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. - at "0" to "1", max. - at "0" to "1", max. 12.8 ms for counter/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. 300 m; 50 m for technological functions • Unshielded, max. 300 m; 50 m for technological functions Number of digital outputs 10; Relays integrated channels (DO) 10 shielded, max. 2 A • on lamp load, max. 2 A • on lamp load, max. 10 ms; max. • "1" to "0", max. 10 ms; max. • "1" to "0", max. 10 ms; max. • or to r1", max. 10 ms; max. • for to "1", max. 10 ms; max. • of the pulse outputs, integrated 10 • Number of re	Rated value (DC)	24 V
Input current 1 mA Input delay (for rated value of input voltage) 1 mA for standard inputs Ves; 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. 0.2 ms - Parameterizable Yes for counterrupt inputs - - Parameterizable Yes for counterritechnological functions - - Parameterizable Yes: Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz Cable length 500 m; 50 m for technological functions • shielded, max. 500 m; 50 m for technological functions • Unshielded, max. 300 with Z & 3 at 30 kHz Object outputs - Number of digital outputs 10; Relays integrated channels (DO) 10 shirt-circuit protection No; to be provided externally Switching capacity of the outputs - • on lamp load, max. 2 A • on lamp load, max. 10 ms; max. • "0" to "n", max. 10 ms; max. Switching frequency	● for signal "0"	5 V DC at 1 mA
• for signal "1", typ. 1 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 counter/lechnological 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 • Unshielded, max. 300 m; For technological functions for idigital outputs 10; Relays Number of digital outputs 10 No; to be provided externally Switching capacity of the outputs 2 A • on lamp load, max. 2 A • on lamp load, max. 10 ms; max. • "0" to "1", max. 10 ms; max. • "1" to "0", max. 1 Hz Felay outputs 10 ms; max. •	● for signal "1"	15 VDC at 2.5 mA
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. - 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", max. - at "0" to "1", max. - Parameterizable Yes for counter/technological functions - Parameterizable Yes for counter/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. 500 m; 50 m for technological functions • Unshielded, max. 500 m; 50 m for technological functions Number of digital outputs 10; Relays integrated channels (DO) 10 shirthing capacity of the outputs 2 A • on lamp load, max. 2 A • on lamp load, max. 30 W with DC, 200 W with AC Output delay with resistive load 10 • "0" to "1", max. 1 H	Input current	
for standard inputs	● for signal "1", typ.	1 mA
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 counter/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; Relays integrated channels (DO) 10 short-circuit protection No; to be provided externally Switching capacity of the outputs 2 A • with resistive load, max. 30 W with DC, 200 W with AC Output delay with resistive load - • "i" to "0", max. 10 ms; max. • of the pulse outputs, integrated 10 • Number of relay outputs 10 • of the pulse outputs, integrated 10 • Number of relay outputs 10 • or "to "t" to "0", max. 500 m • or	Input delay (for rated value of input voltage)	
selectable in groups of four at "0" to "1", max. at "0" to "1", max. 12.8 ms for interrupt inputs Parameterizable Yes for counter/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 Yes: Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz Cable length 500 m; 50 m for technological functions · Unshielded, max. 500 m; 50 m for technological functions · Unshielded, max. 500 m; 50 m for technological functions reference 10; Relays integrated channels (DO) 10 short-circuit protection No; to be provided externally Switching capacity of the outputs 2 A • with resistive load, max. 2 A • on tamp load, max. 10 ms; max. • "o" to ",", max. 10 ms; max. • "o" to ",", max. 10 ms; max. • "o" to ",", max. 10 • on tamp load, max. 10 • on tamp load, max. 10 • on the pulse outputs, i	for standard inputs	
	— Parameterizable	
for interrupt inputs Parameterizable Yes for counter/technological functions Parameterizable Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz & 3 at 30 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, Relays Number of digital outputs 10 integrated channels (DO) 10 shot-circuit protection No; to be provided externally 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 "t", max. 10 ms; max. • "0" to "t", max. 10 ms; max. • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs • Number of relay outputs, integrated 10 • Number of relay outputs, integrated 10 • Number of relay outputs, max. mechanically 10 million, at rated load voltage 100,000 Cable le	— at "0" to "1", min.	0.2 ms
	— at "0" to "1", max.	12.8 ms
for counter/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 500 m; 50 m for technological functions • shielded, max. 500 m; 50 m for technological functions • Unshielded, max. 300 m; For technological functions • Unshielded, max. 300 m; For technological functions • Unshielded, max. 10; Relays integrated channels (DO) 10 short-circuit protection No; to be provided externally Switching capacity of the outputs 2 A • on lamp load, max. 2 A • on lamp load, max. 10 ms; max. • "0" to "1", max. 10 ms; max. • "0" to "1", max. 10 ms; max. • "0" to "1", max. 10 ms; max. • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs 10 • Number of relay outputs, integrated 10 • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100,000 Cable length 500 m • Number of operating cycles, max. 500 m • Unshielded, max. 500 m •	for interrupt inputs	
— ParameterizableYes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHzCable length• shielded, max.500 m; 50 m for technological functions• Unshielded, max.300 m; For technological functions: NoDigital outputs10; RelaysNumber of digital outputs10integrated channels (DO)10short-circuit protectionNo; to be provided externallySwitching capacity of the outputs2 A• with resistive load, max.2 A• on lamp load, max.10 ms; max.• "0" to "1", max.10 ms; max.• "0" to "1", max.10 ms; max.• "0" to "1", max.10 ms; max.• of the pulse outputs, with resistive load, max.1 HzRelay outputs10• Number of relay outputs, integrated10• Number of operating cycles, max.10• Number of operating cycles, max.10• Unshielded, max.500 m• Unshielded, max.500 m• Unshielded, max.150 m	— Parameterizable	Yes
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; Relays Number of digital outputs 10; Relays integrated channels (DO) 10 short-circuit protection No; to be provided externally Switching capacity of the outputs 2 A • with resistive load, max. 2 A • on lamp load, max. 30 W with DC, 200 W with AC Output delay with resistive load	for counter/technological functions	
• shielded, max. 500 m; 50 m for technological functions • Unshielded, max. 300 m; For technological functions: No Digital outputs 10; Relays Integrated channels (DO) 10 short-circuit protection No; to be provided externally Switching capacity of the outputs 2 A • with resistive load, max. 2 A • on lamp load, max. 30 W with DC, 200 W with AC Output delay with resistive load 0 ms; max. • "0" to "1", max. 10 ms; max. • The pulse outputs, with resistive load, max. 1 Hz Relay outputs 10 • Number of relay outputs, integrated 10 • Number of operating cycles, max. 10 • Number of operating cycles, max. 500 m • shielded, max. 500 m • Unshielded, max. 150 m	— Parameterizable	
• Unshielded, max. 300 m; For technological functions: No Digital outputs 10; Relays Number of digital outputs 10; Relays integrated channels (DO) 10 short-circuit protection No; to be provided externally Switching capacity of the outputs 2 A • with resistive load, max. 2 A • on lamp load, max. 300 W with DC, 200 W with AC Output delay with resistive load 10 ms; max. • "0" to "1", max. 10 ms; max. • "0" to "1", max. 10 ms; max. • "0" to "1", max. 10 ms; max. • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs 10 • Number of relay outputs, integrated 10 • Number of relay outputs 10 • Number of nelay outputs 500 m • shielded, max. 500 m • Unshielded, max. 500 m	Cable length	
Digital outputs 10; Relays Number of digital outputs 10 integrated channels (DO) 10 short-circuit protection No; to be provided externally 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. • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs • • Number of relay outputs, integrated 10 • Number of relay outputs 10 • Number of poperating cycles, max. mechanically 10 million, at rated load voltage 100,000 Cable length • shielded, max. 500 m • Unshielded, max. 150 m	• shielded, max.	500 m; 50 m for technological functions
Number of digital outputs 10; Relays integrated channels (DO) 10 short-circuit protection No; to be provided externally 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. • "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 10 • Number of relay outputs, integrated 10 • Number of prelay outputs, integrated 10 • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100,000 Cable length \$500 m • shielded, max. 500 m • Unshielded, max. 150 m	 Unshielded, max. 	300 m; For technological functions: No
Number of digital outputs 10; Relays integrated channels (DO) 10 short-circuit protection No; to be provided externally 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. • "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 10 • Number of relay outputs, integrated 10 • Number of prelay outputs, integrated 10 • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100,000 Cable length \$500 m • shielded, max. 500 m • Unshielded, max. 150 m	Digital outputs	
short-circuit protection No; to be provided externally Switching capacity of the outputs 2 A • with resistive load, max. 2 A • on lamp load, max. 30 W with DC, 200 W with AC Output delay with resistive load		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	integrated channels (DO)	10
• with resistive load, max.2 A• on lamp load, max.30 W with DC, 200 W with ACOutput delay with resistive load• "0" to "1", max.10 ms; max.• "0" to "0", max.10 ms; max.• "1" to "0", max.10 ms; max.Switching frequency• of the pulse outputs, with resistive load, max.1 HzRelay outputs10• Number of relay outputs, integrated10• Number of relay outputs10• Number of operating cycles, max.mechanically 10 million, at rated load voltage 100,000Cable length500 m• shielded, max.150 m	short-circuit protection	No; to be provided externally
• on lamp load, max. 30 W with DC, 200 W with AC Output delay with resistive load 10 ms; max. • "0" to "1", max. 10 ms; max. • "1" to "0", max. 10 ms; max. Switching frequency 10 ms; max. • of the pulse outputs, with resistive load, max. 1 Hz Relay outputs 10 • Number of relay outputs, integrated 10 • Number of relay outputs 10 • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100,000 Cable length 500 m • Shielded, max. 500 m • Unshielded, max. 150 m	Switching capacity of the outputs	
Output delay with resistive load • "0" to "1", max. • "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, integrated • Number of relay outputs • Number of operating cycles, max. • Mumber of operating cycles, max. • Shielded, max. • Shielded, max. • Unshielded, max. • Unshielded, max.	 with resistive load, max. 	2 A
• "0" to "1", max.10 ms; max.• "1" to "0", max.10 ms; max.Switching frequency10 ms; max.• of the pulse outputs, with resistive load, max.1 HzRelay outputs10• Number of relay outputs, integrated10• Number of relay outputs10• Number of operating cycles, max.mechanically 10 million, at rated load voltage 100,000Cable length500 m• shielded, max.500 m• Unshielded, max.150 m	 on lamp load, max. 	30 W with DC, 200 W with AC
• "1" to "0", max.10 ms; max.Switching frequency1 Hz• of the pulse outputs, with resistive load, max.1 HzRelay outputs1 0• Number of relay outputs, integrated10• Number of relay outputs10• Number of operating cycles, max.mechanically 10 million, at rated load voltage 100,000Cable length500 m• Shielded, max.500 m• Unshielded, max.500 m	Output delay with resistive load	
Switching frequency of the pulse outputs, with resistive load, max. Hz Relay outputs 10 Number of relay outputs Number of relay outputs Number of operating cycles, max. mechanically 10 million, at rated load voltage 100,000 Cable length 500 m Unshielded, max. 150 m Analog inputs Analog inputs 	● "0" to "1", max.	10 ms; max.
 of the pulse outputs, with resistive load, max. Relay outputs Number of relay outputs, integrated Number of relay outputs Number of operating cycles, max. Cable length Shielded, max. Unshielded, max. S00 m 150 m 	• "1" to "0", max.	10 ms; max.
Relay outputs • Number of relay outputs, integrated 10 • Number of relay outputs 10 • Number of operating cycles, max. mechanically 10 million, at rated load voltage 100,000 Cable length 500 m • Shielded, max. 500 m • Unshielded, max. 150 m	Switching frequency	
 Number of relay outputs, integrated Number of relay outputs Number of operating cycles, max. Number of operating cycles, max. Shielded, max. Unshielded, max. To m 	 of the pulse outputs, with resistive load, max. 	1 Hz
 Number of relay outputs Number of operating cycles, max. Cable length Shielded, max. Unshielded, max. 500 m 150 m 	Relay outputs	
 Number of operating cycles, max. mechanically 10 million, at rated load voltage 100,000 Cable length shielded, max. Unshielded, max. Analog inputs 	 Number of relay outputs, integrated 	10
Cable length • shielded, max. • Unshielded, max. 150 m	 Number of relay outputs 	10
shielded, max. 500 m Unshielded, max. 150 m Analog inputs	 Number of operating cycles, max. 	mechanically 10 million, at rated load voltage 100,000
Unshielded, max. Analog inputs	Cable length	
Analog inputs	• shielded, max.	500 m
	• Unshielded, max.	150 m
Number of analog inputs 2		
	Analog inputs	

Integrated channels (AI)	2; 0 to 10 V
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
• Shieldeu, max.	
Analog outputs	
Number of analog outputs	2
Integrated channels (AO)	2; 0 to 20 mA
Output ranges, current	
• 0 to 20 mA	Yes
Cable length	
• shielded, max.	100 m; shielded, twisted pair
Analog value creation	
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
Encoder Connectable encoders	
	Yes
• 2-wire sensor	
1st interface	
Interface type	PROFINET
Physics	Ethernet
Isolated	Yes
Automatic detection of transmission speed	Yes
Autonegotiation	Yes
Autocrossing	Yes
Functionality	
PROFINET IO Device	Yes
PROFINET IO Controller	Yes
PROFINET IO Controller	
 Transmission rate, max. 	100 Mbit/s
 Number of connectable IO devices, max. 	16
Prioritized startup	
— Number of IO Devices, max.	16
PROFINET IO Device	
Services	
00110003	

— Shared device	Yes
— Number of IO controllers with shared	2
device, max.	-
Communication functions	
S7 communication	
 supported 	Yes
• as server	Yes
• As client	Yes
Open IE communication	
• TCP/IP	Yes
• ISO-on-TCP (RFC1006)	Yes
• UDP	Yes
Web server	
supported	Yes
 User-defined websites 	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
Counter frequency (counter) max.	100 kHz
Frequency meter	Yes
controlled positioning	Yes
PID controller	Yes
Number of alarm inputs	4
Galvanic isolation	
Galvanic isolation digital inputs	
 Galvanic isolation digital inputs 	500V AC for 1 minute
 between the channels, in groups of 	1
Galvanic isolation digital outputs	
 Galvanic isolation digital outputs 	Relays

 between the channels
--

• between the channels, in groups of

No 2

Permissible potential difference

between different circuits

500 V DC between 24 V DC and 5 V DC

EMC	
Interference immunity against discharge of static electri	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 lines acc. to IEC 61000-4-4 	Yes
Surge immunity	
 on the supply lines acc. to IEC 61000-4-5 	Yes
Immunity against conducted interference induced by high	gh-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 to EN 60529	
• IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
FM approval	Yes
Marine approval	
Marine approval	Yes
Ambient conditions	
Free fall	
 Drop height, max. (in packaging) 	0.3 m; five times, in dispatch package
Ambient temperature in operation	
• Min.	-20 °C

last modified:	12.03.2015
Weight, approx.	550 g
Weights	
-	
Depth	75 mm
Height	100 mm
Dimensions Width	130 mm
• can be set	Yes
Cycle time monitoring	
— FBD — SCL	Yes
— FBD	Yes
	Yes
programming Programming language	
Pollutant concentrations — SO2 at RH < 60% without condensation	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
	value), duration 11 ms
 checked according to IEC 60068-2-27 	Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak
Shock test	
 Operation, checked according to IEC 60068-2- 6 	Yes
Vibrations	2G wall mounting, 1G DIN rail
Vibrations	
°C	
Permissible range (without condensation) at 25	95 %
• Operation, max.	95 %; no condensation
Relative humidity	
Permissible operating height	-1000 to 2000 m
Storage/transport, max.	1 080 hPa
 Storage/transport, min. 	660 hPa
Air pressure acc. to IEC 60068-2-13	
• max.	70 °C
• Min.	-40 °C
Storage/transport temperature	
 vertical installation, max. 	50 °C
 vertical installation, min. 	-20 °C
 horizontal installation, max. 	60 °C
 horizontal installation, min. 	10 at 55 °C horizontal or 45 °C vertical -20 °C
	5 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or
● max.	60 °C; Number of simultaneously activated inputs or outputs 7 or