SIEMENS

Data sheet

6ES7211-1AE31-0XB0

SIMATIC S7-1200, CPU 1211C, compact CPU, DC/DC/DC, onboard I/O: 6 DI 24 V DC; 4 DO 24 V DC; 2 AI 0-10 V DC, Power supply: DC 20.4-28.8V DC, Program/data memory 30 KB



General information	
Product type designation	CPU 1211C DC/DC/DC
Engineering with	
Programming package	STEP 7 V11 SP2 or higher
Supply voltage	
Rated value (DC)	
● 24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Load voltage L+	
Rated value (DC)	24 V
 permissible range, lower limit (DC) 	20.4 V
 permissible range, upper limit (DC) 	28.8 V
Input current	
Current consumption (rated value)	300 mA; Typical
Current consumption, max.	0.9 A; 24 V DC
Inrush current, max.	12 A; at 28.8 V DC

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	
,	Dermissible range: 20 4)/to 29 9)/
● 24 V	Permissible range: 20.4V to 28.8V
Power loss	
Power loss, typ.	8 W
Memory	
Work memory	
• integrated	30 kbyte
expandable	No
Load memory	
• integrated	1 Mbyte
Backup	
• present	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
ОВ	
• 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.	4 kbyte; Size of bit memory address area
Address area I/O address area	
• Inputs	1 024 byte
·	1 024 byte
Outputs Process image	1 02-1 Dyle
	1 kbyte
Inputs, adjustable	
Outputs, adjustable	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 communication modules, 1 signal board

Plantware clock (real-time) Yes	Time of day	
Backup time Deviation per day, max. Bigital inputs Of digital inputs Of digital inputs Of which inputs usable for technological functions Source/sink input Per taled value (DC) Of signal "1" Of s		
Digital Inputs Number of 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) • for signal "0" • for signal "1" Input current • or signal "1", typ. Input delay (for rated value of input voltage) for standard inputs — at "0" to "1", max. 12.8 ms for interrupt inputs — parameterizable — of which high-speed outputs • of which provided externally Limitation of inductive shutdown voltage to Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. • on lamp load, max.	Hardware clock (real-time)	Yes
Number of 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. • each value (DC) • for signal "0" • for signal "1" • for signal "4" • for signal "4", typ. Input delay (for rated value of input voltage) for standard inputs — at "0" to "1", max. • at "0" to "1", max. for interrupt inputs — parameterizable — parameterizable for technological functions — parameterizable • since thenological functions — parameterizable • shelieded, max. • unshielded, max. • of which high-speed outputs • with resistive load, max. • whith resistive load, max. • with resistive load, max. • with resistive load, max. • on lamp load, max. • of which igh-speed outputs • with resistive load, max. • on lamp load, max. • on lamp load, max.	Backup time	480 h; Typical
Number of 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. for signal "0" of ro signal "1" of ro signal "1" of ro signal "1", typ. Input delay (for rated value of input voltage) for standard inputs — at "0" to "1", min. — at "0" to "1", max. for interrupt inputs — parameterizable or parameterizable for technological functions — parameterizable of single phase: 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length Number of digital outputs of which high-speed outputs A (100 kHz Pulse Train Output No; to be provided externally Limitation of inductive shutdown voltage to with resistive load, max. on lamp load, max.	 Deviation per day, max. 	±60 s/month at 25 °C
• of which inputs usable for technological functions Source/sink input Number of digital outputs • of which inputs usable for technological functions - up to 40 °C, max. • Pated value (DC) • For signal 10" • For signal 11"	Digital inputs	
functions Source/sink input Number of simultaneously controllable inputs all mounting positions — up to 40 °C, max. 6 Input voltage • Rated value (DC) 24 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 delay (for rated value of input voltage) for standard inputs — parameterizable 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four — at "0" to "1", min. 0.2 ms — at "0" to "1", max. 12.8 ms for interrupt inputs — parameterizable Yes for technological functions - parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. 500 m; 50 m for technological functions: No Digital outputs Number of digital outputs 4 • of which high-speed outputs 4: 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to 4: 48 V) Switching capacity of the outputs • with resistive load, max. 0.5 M • with resistive load, max. 0.5 M • on lamp load, max. 0.5 M	Number of digital inputs	6; Integrated
Source/sink input Yes	 of which inputs usable for technological 	3; HSC (High Speed Counting)
Number of simultaneously controllable inputs all mounting positions — up to 40 °C, max. Input vollage Rated value (DC)	functions	
all mounting positions up to 40 °C, max. Input voltage • Rated value (DC) • for signal "0" • for signal "1" • for signal "1" • for signal "1", typ. Input current • for signal "1", typ. Input delay (for rated value of input voltage) for standard inputs parameterizable at "0" to "1", min at "0" to "1", max. Interrupt inputs parameterizable for technological functions parameterizable for technological functions parameterizable sincle phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. • unshielded, max. • unshielded, max. • of which high-speed outputs A; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to with resistive load, max. • with resistive load, max. • with resistive load, max. • on lamp load, max.	Source/sink input	Yes
- up to 40 °C, max. Input voltage • Rated value (DC) • for signal "0" • for signal "1" • for signal "1" • for signal "1", typ. • for signal "1", typ. • for signal "1", typ. Input delay (for rated value of input voltage) for standard inputs - parameterizable - at "0" to "1", min at "0" to "1", max. for interrupt inputs - parameterizable for technological functions - parameterizable \$ Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. • unshielded, max. • unshielded, max. • of which high-speed outputs Possibutions - the control of th	Number of simultaneously controllable inputs	
Input voltage Rated value (DC) for signal "0" for signal "1" Typ. Input current for signal "1", typ. Input delay (for rated value of input voltage) for standard inputs - parameterizable - at "0" to "1", max. - at "0" to "1", max. for interrupt inputs - parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length shielded, max. unshielded, max. 10 for which high-speed outputs A (100 kHz Pulse Train Output Short-circuit protection Limitation of inductive shutdown voltage to with resistive load, max. o no lamp load, max. with resistive load, max. with resistive load, max. with resistive load, max. O 5 A S V DC at 1 mA 5 V DC at 2.5 mA Input 1 mA Input current 1 mA I	all mounting positions	
Rated value (DC) for signal "0" for signal "1" 15 V DC at 2.5 mA Input current for signal "1", typ. Input delay (for rated value of input voltage) for standard inputs parameterizable nut "0" to "1", min. nut "0" to "1", max. for interrupt inputs parameterizable Yes for technological functions parameterizable Single phase: 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length shielded, max. unshielded, max. of which high-speed outputs Nomber of digital outputs how to be provided externally Limitation of inductive shutdown voltage to with resistive load, max. on lamp load, max. on lamp load, max. on lamp load, max. O 5 A 5 W O Cat 2.5 mA I ma	— up to 40 °C, max.	6
• for signal "0" • for signal "1" Input current • for signal "1", typ. Input delay (for rated value of input voltage) for standard inputs - parameterizable - at "0" to "1", min at "0" to "1", max. for interrupt inputs - parameterizable Yes for technological functions - parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. • unshielded, max. 500 m; 50 m for technological functions: Number of digital outputs A to with high-speed outputs Short-circuit protection Limitation of inductive shutdown voltage to • with resistive load, max. • on lamp load, max. • on lamp load, max. • SV DC at 1 mA 15 V DC at 2.5 mA ImpA 15 V DC at 2.5 mA 1 ma	Input voltage	
• for signal "1" • for signal "1", typ. Input current • for signal "1", typ. 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 Yes for technological functions — parameterizable • shielded, max. • unshielded, max. • of which high-speed outputs Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to • with resistive load, max. • on lamp load, max. • on lamp load, max. • on lamp load, max. • 1 mA 1 ma	Rated value (DC)	24 V
Input current • for signal "1", typ. Input delay (for rated value of input voltage) for standard inputs — parameterizable — at "0" to "1", min. — at "0" to "1", max. Input delay (for rated value of input voltage) ### Cable length • shielded, max. • unshielded, max. • of which high-speed outputs Number of digital outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. • 1 mA 1 expansion of set ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms, 6.4 ms, and 12.8 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms, 6.4 ms, selectable in groups of four 1 expansion of set ms, 3.2 ms, 6.4 ms, and 12.8 ms, selectable of set ms, 3.2 ms, 6.4 ms, and 12.8 ms, selectable of set ms, 3.2 ms, 6.4 ms, selectable of set ms,	• for signal "0"	5 V DC at 1 mA
• for signal "1", typ. 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 • single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. • unshielded, max. Digital outputs Number of digital outputs • of which high-speed outputs Short-circuit protection Limitation of inductive shutdown voltage to with resistive load, max. • on lamp load, max. 0.5 M sms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four 0.2 ms 12.8 ms 12.8 ms	• for signal "1"	15 V DC 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. for interrupt inputs — parameterizable Single phase: 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length — shielded, max. — unshielded, max. Soo m; 50 m for technological functions — unshielded, max. Soo m; 50 m for technological functions Outputs Number of digital outputs 4 — of which high-speed outputs Short-circuit protection Limitation of inductive shutdown voltage to with resistive load, max. Outputs With resistive load, max. Output Output With resistive load, max.	Input current	
for standard inputs — parameterizable — at "0" to "1", min. — at "0" to "1", max. — at "0" to "1", max. for interrupt inputs — parameterizable Yes for technological functions — parameterizable • shielded, max. • unshielded, max. • of which high-speed outputs Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to Sungle phase: 3 @ 100 kHz, differential: 3 @ 80 kHz 500 m; 50 m for technological functions 300 m; for technological functions: No	● for signal "1", typ.	1 mA
parameterizable at "0" to "1", min at "0" to "1", max parameterizable parameterizable parameterizable parameterizable parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length shielded, max unshielded, max unshielded, max unshielded, max of which high-speed outputs of which high-speed outputs Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to with resistive load, max unampload, max on lamp load, max.	Input delay (for rated value of input voltage)	
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 Single phase: 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. • unshielded, max. 100 m; for technological functions: No Digital outputs Number of digital outputs Ves 4; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to with resistive load, max. • on lamp load, max. 5 W	for standard inputs	
- at "0" to "1", max. for interrupt inputs - parameterizable for technological functions - parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. • unshielded, max. 12.8 ms 500 m; 50 m for technological functions 300 m; for technological functions Number of digital outputs • of which high-speed outputs Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to with resistive load, max. • on lamp load, max. 500 m; 50 m for technological functions: No	— parameterizable	
for interrupt inputs — parameterizable for technological functions — parameterizable Single phase: 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. • unshielded, max. 500 m; 50 m for technological functions • unshielded, max. 300 m; for technological functions: No Digital outputs Number of digital outputs • of which high-speed outputs Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 5 W	— at "0" to "1", min.	0.2 ms
parameterizable Yes for technological functions parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 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 ● of which high-speed outputs Short-circuit protection Limitation of inductive shutdown voltage to ■ with resistive load, max. ● on lamp load, max. ■ on lamp load, max.	— at "0" to "1", max.	12.8 ms
for technological functions — parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. • unshielded, max. 300 m; 50 m for technological functions 300 m; for technological functions: No Digital outputs Number of digital outputs • of which high-speed outputs Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 500 m; 50 m for technological functions 4 4; 100 kHz Pulse Train Output No; to be provided externally L+ (-48 V) Switching capacity of the outputs • with resistive load, max. 5 W	for interrupt inputs	
— parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length ● shielded, max. 500 m; 50 m for technological functions 300 m; for technological functions: No Digital outputs Number of digital outputs 4; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs ● with resistive load, max. 0.5 A ● on lamp load, max. 5 W	— parameterizable	Yes
Cable length • shielded, max. • unshielded, max. 500 m; 50 m for technological functions 300 m; for technological functions: No Digital outputs Number of digital outputs • of which high-speed outputs Short-circuit protection Limitation of inductive shutdown voltage to Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 500 m; 50 m for technological functions 4 Characteristics and support shutdows: 500 m; 50 m for technological functions 4 Characteristics and support shutdows: 500 m; 50 m for technological functions 4 Characteristics and support shutdows: 500 m; 50 m for technological functions: A Characteristics and support shutdows: 500 m; 50 m for technological functions: 4 Characteristics and support shutdows: 500 m; 50 m for technological functions: A Characteristics and support shutdows: 500 m; 50 m for technological functions: 4 Characteristics and support shutdows: 500 m; 50 m for technological functions: 4 Characteristics and support shutdows: 500 m; 50 m for technological functions: 600 m; 50 m for technological functions: 900 m for technological functions: 900 m for te	for technological functions	
 shielded, max. unshielded, max. 300 m; 50 m for technological functions: No Digital outputs of which high-speed outputs Short-circuit protection Limitation of inductive shutdown voltage to Switching capacity of the outputs with resistive load, max. on lamp load, max. 500 m; 50 m for technological functions: No 4 4; 100 kHz Pulse Train Output No; to be provided externally L+ (-48 V) Switching capacity of the outputs with resistive load, max. 5 W 	— parameterizable	Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz
 unshielded, max. Digital outputs Number of digital outputs of which high-speed outputs Short-circuit protection Limitation of inductive shutdown voltage to Switching capacity of the outputs with resistive load, max. on lamp load, max. 300 m; for technological functions: No 4 Visit Pulse Train Output No; to be provided externally L+ (-48 V) Switching capacity of the outputs on lamp load, max. 5 W 	Cable length	
Digital outputs Number of digital outputs of which high-speed outputs Short-circuit protection Limitation of inductive shutdown voltage to with resistive load, max. on lamp load, max.	• shielded, max.	500 m; 50 m for technological functions
Number of digital outputs 4 ● of which high-speed outputs 4; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs ● with resistive load, max. 0.5 A ● on lamp load, max. 5 W	• unshielded, max.	300 m; for technological functions: No
of which high-speed outputs 4; 100 kHz Pulse Train Output No; to be provided externally Limitation of inductive shutdown voltage to Switching capacity of the outputs with resistive load, max. on lamp load, max. 5 W	Digital outputs	
Short-circuit protection Limitation of inductive shutdown voltage to Switching capacity of the outputs with resistive load, max. on lamp load, max. 5 W	Number of digital outputs	4
Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 5 W	 of which high-speed outputs 	4; 100 kHz Pulse Train Output
Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 5 W	Short-circuit protection	No; to be provided externally
 with resistive load, max. on lamp load, max. 5 W 	Limitation of inductive shutdown voltage to	L+ (-48 V)
• on lamp load, max. 5 W	Switching capacity of the outputs	
	with resistive load, max.	0.5 A
Output voltage	• on lamp load, max.	5 W
	Output voltage	

• for signal "0", max.	0.1 V; with 10 kOhm load
• for signal "1", min.	20 V
Output current	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	0.1 mA
Output delay with resistive load	
• "0" to "1", max.	1 μs
• "1" to "0", max.	5 μs
Switching frequency	
of the pulse outputs, with resistive load, max.	100 kHz
Relay outputs	
Number of relay outputs	0
Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
Analog inputs	2
Number of analog inputs	2
Input ranges	Yes
Voltage Input ranges (rated values) veltages	165
Input ranges (rated values), voltages	Yes
• 0 to +10 V	
• Input resistance (0 to 10 V)	≥100k ohms
Cable length	100 m; twisted and shielded
• shielded, max.	100 III, twisted and sinelded
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), 	10 bit
max.	
• 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	
PROFINET IO Controller	Yes
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIBUS	Yes
AS-Interface	Yes
Protocols (Ethernet)	
• TCP/IP	Yes
Open IE communication	
• TCP/IP	Yes
• ISO-on-TCP (RFC1006)	Yes
• UDP	Yes
Web server	
• supported	Yes
 User-defined websites 	Yes
Further protocols	
• MODBUS	Yes
O	
Communication functions S7 communication	
• supported	Yes
	Yes
• as server	
• as client	Yes
Test commissioning functions	
Status/control	
Status/control variable	Yes
• Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	
• Forcing	Yes
Diagnostic buffer	
• present	Yes
Integrated Functions	
Number of counters	3
Counting frequency (counter) max.	100 kHz
Frequency measurement	Yes
controlled positioning	Yes

Number of alarm inputs	4
Number of pulse outputs	4
Limit frequency (pulse)	100 kHz
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	Yes
between the channels	No
 between the channels, in groups of 	1
Damaia ilala wata shaladiffanona	
Permissible potential difference between different circuits	500 V DC between 24 V DC and 5 V DC
between different circuits	300 V DC between 24 V DC and 3 V DC
EMC	
Interference immunity against conducted variable distu	rbance induced by high-frequency fields
 Interference immunity against high-frequency 	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	
Degree of protection acc. to EN 60529	
• IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
Marine approval	Yes
Ambient conditions	
Free fall	
● Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-20 °C
• max.	60 °C
 horizontal installation, min. 	-20 °C
horizontal installation, min.horizontal installation, max.	

• vertical installation, min.	-20 °C	
• vertical installation, max.	50 °C	
Ambient temperature during storage/transportation		
• min.	-40 °C	
• max.	70 °C	
Air pressure acc. to IEC 60068-2-13		
Operation, min.	795 hPa	
Operation, max.	1 080 hPa	
• Storage/transport, min.	660 hPa	
 Storage/transport, max. 	1 080 hPa	
Altitude during operation relating to sea level		
Installation altitude, min.	-1 000 m	
 Installation altitude, max. 	2 000 m	
Relative humidity		
Operation, max.	95 %; no condensation	
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	
Pollutant concentrations		
• SO2 at RH < 60% without condensation	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	
Configuration		
Programming		
Programming language	To a second seco	
— LAD	Yes	
— FBD	Yes	
— SCL	Yes	
Cycle time monitoring		
• adjustable	Yes	
Dimensions		
Width	90 mm	
Height	100 mm	
Depth	75 mm	
Weights		
Weight, approx.	370 g	
last modified:	11/13/2019	