## **SIEMENS**

## Data sheet

## 6ES7214-1HE30-0XB0

\*\*\*Spare part\*\*\* SIMATIC S7-1200, CPU 1214C, compact CPU, DC/DC/relay, onboard I/O: 14 DI 24 V DC; 10 DO relay 2 A; 2 AI 0-10 V DC, Power supply: AC 20.4-28.8 V DC, Program/data memory 50 KB



General information	
Product type designation	CPU 1214C DC/DC/relay
Engineering with	
Programming package	STEP 7 V10.5 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
<ul> <li>permissible range, lower limit (DC)</li> </ul>	5 V
• permissible range, upper limit (DC)	250 V
Input current	
Current consumption (rated value)	500 mA; Typical
Current consumption, max.	1.2 A; 24 V DC
Inrush current, max.	12 A; at 28.8 V DC

Output current	
for backplane bus (5 V DC), max.	1 600 mA; Max. 5 V DC for SM and CM
Encoder supply	
24 V encoder supply	
• 24 V	Permissible range: 20.4V to 28.8V
Power loss	
Power loss, typ.	12 W
1 6461 1666, typ.	12 11
Memory	
Work memory	
• integrated	50 kbyte
• expandable	No
Load memory	
• integrated	2 Mbyte
<ul> <li>Plug-in (SIMATIC Memory Card), max.</li> </ul>	24 Mbyte; with SIMATIC memory card
Backup	
• present	Yes; Entire project maintenance-free in the integral EEPROM
without battery	Yes
ODII : "	
CPU processing times	0.4 up. / Operation
for bit operations, typ.	0.1 μs; / Operation
for word operations, typ.	12 µs; / Operation
for floating point arithmetic, typ.	18 μs; / Operation
CPU-blocks	
Number of blocks (total)	DBs, FCs, FBs, counters and timers. The maximum number of
	addressable blocks ranges from 1 to 65535. There is no
OB	restriction, the entire working memory can be used
ОВ	Limited and the DAM for and
Number, max.	Limited only by RAM for code
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags),	2 048 byte
max.	
Flag	
● Number, max.	8 kbyte; Size of bit memory address area
Address area	
I/O address area	
• Inputs	1 024 byte
Outputs	1 024 byte
Process image	
Inputs, adjustable	1 kbyte
Outputs, adjustable	1 kbyte
1 , ,	

Number of modules per system, max.  3 comm. modules, 1 signal board, 8 signal modules  Time of day  Clock  Hardware clock (real-time)  Backup time  Deviation per day, max.  140 s/month at 25 °C  Digital inputs  Number of digital inputs  of which inputs usable for technological functions  For the digital input of the digital input of the digital inputs  A time to signal for the digital input of the digital input of the digital inputs  Fated value (DC)  of resignal for the digital input of	Hardware configuration	
Time of day  Clock  Hardware clock (real-time) Backup time Opidation per day, max.  1460 s/month at 25 °C  Digital inputs  Number of digital inputs of which inputs usable for technological functions Source/sink input Input voltage Rated value (DC) for signal "0" for signal "1", typ. Input duely (for rated value of input voltage)  For standard inputs  — parameterizable — at "0" to "1", max.  for interrupt inputs  — parameterizable — parameterizable for technological functions — parameterizable  for technological functions  — parameterizable  shelded, max.  • she		3 comm. modules, 1 signal board, 8 signal modules
Clock  Hardware clock (real-time) Backup time Chevitation per day, max.  Persistion per day, max.  With inputs Figure 14: Integrated Figure 15: Children 15: Chil		
Hardware clock (real-time) Backup time Deviation per day, max.  140 h; Typical 150 s/month at 25 °C  141 integrated F; HSC (High Speed Counting) Find to real-time to receive the control of the counting of		
Backup time Deviation per day, max.  240 h; Typical 60 s/month at 25 °C   Digital inputs  Number of digital inputs of which inputs usable for technological functions  Source/sink input Input voltage Rated value (DC) of or signal "0" of signal "1" of or signal "1" of or signal "1" of or signal "1" of or signal "1", typ. Input delay (for rated value of input voltage)  for standard inputs  — parameterizable — at "0" to "1", max.  for interrupt inputs  — parameterizable — parameterizable  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz.  Cable length  • shielded, max. • on lamp load, max. • on lamp load, max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load • "0" to "1", max.  Output delay with resistive load		
• Deviation per day, max.   ±60 s/month at 25 °C    Digital inputs	·	
Digital inputs  Number of digital inputs  of which inputs usable for technological functions  Sources/sink input  Pes  Rated value (DC)  of resignal "0"  of resignal "1"  for signal "1"  of resignal "1", typ.  Input delay (for rated value of input voltage)  for standard inputs  — parameterizable — at "0" to "1", max.  for interrupt inputs  — parameterizable  prarameterizable  for technological functions — parameterizable  for technological functions  — parameterizable  selectable in groups of four  0.2 ms  12.8 ms  for interrupt inputs  — parameterizable  for technological functions  — parameterizable  selectable in groups of four  0.2 ms  12.8 ms  for interrupt inputs  — parameterizable  yes  for technological functions  — parameterizable  shielded, max.  500 m; 50 m for technological functions  • with resistive load, max.  10; Relays  No; to be provided externally  Switching capacity of the outputs  • with resistive load, max.  • on lamp load, max.  10 ms; max.  10 ms; max.  10 ms; max.	·	
Number of digital inputs  of which inputs usable for technological functions  Source/sink input  Pessource/sink input  Pessource/sin	<ul> <li>Deviation per day, max.</li> </ul>	±60 s/month at 25 °C
of which inputs usable for technological functions  Source/sink input Input voltage      Rated value (DC)     of ro signal "0"     of ro signal "1"     of ro signal "1", typ. Input current     of ro signal "1", typ. Input delay (for rated value of input voltage)  for standard inputs	Digital inputs	
functions  Source/sink input input voltage  Rated value (DC) for signal "0" for signal "1" for signal "1", typ.  Imput current  for signal "1", typ.  Imput 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", max.  12.8 ms for interrupt inputs  parameterizable for technological functions  parameterizable Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz, 3 at 30 kHz  Cable length  shielded, max. for interrupt inputs  shielded, max. for interrupt inputs  parameterizable Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz, 3 at 30 kHz  Cable length for technological functions  unshielded, max. for interrupt inputs  shielded, max. for interrupt inputs  shielde	Number of digital inputs	14; Integrated
Input voltage  • Rated value (DC) • for signal "0" • for signal "1" 15 V DC at 1 mA  • 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 "4", max.  for interrupt inputs  — parameterizable  for technological functions — parameterizable  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz.  Cable length • shielded, max. • unshielded, max.  Short-circuit protection  Switching capacity of the outputs  • with resistive load, max. • on lamp load, max.  • on lamp load, max.  • "0" to "1", max.  10 ms; max.	-	6; HSC (High Speed Counting)
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.  Input echnological functions  — parameterizable  Yes  for technological functions  — parameterizable  Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz  Cable length  shielded, max.  For interrupt inputs  Objeital outputs  Number of digital outputs  No; to be provided externally  Switching capacity of the outputs  with resistive load, max.  on lamp load, max.  on la	Source/sink input	Yes
for signal "0"	Input voltage	
• for signal "1"	Rated value (DC)	24 V
Input current  • for signal "1", typ.	• 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 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 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  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.	● for signal "1"	15 V DC at 2.5 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. — at "0" to "1", max.  12.8 ms  for interrupt inputs  — parameterizable  Yes  for technological functions  — parameterizable  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.  500 m; 50 m for technological functions: No  Digital outputs  Number of digital outputs  No; to be provided externally  Switching capacity of the outputs  • with resistive load, max.  • on lamp load, max.  • on lamp load, max.  • "0" to "1", max.  10 ms; max.	Input current	
for standard inputs  — parameterizable  — at "0" to "1", min. — at "0" to "1", max.  for interrupt inputs — parameterizable  — parameterizable  Yes  for technological functions — parameterizable  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.  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  300 m; 50 m for technological functions  aus in the companies of the control of th	● for signal "1", typ.	1 mA
- 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  0.2 ms  - at "0" to "1", min.  - at "0" to "1", max.  12.8 ms  for interrupt inputs  - parameterizable  Yes  for technological functions  - parameterizable  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  Short-circuit protection  No; to be provided externally  Switching capacity of the outputs  • with resistive load, max.  • on lamp load, max.  2 A  • on lamp load, max.  10 ms; 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  Yes  for technological functions  - parameterizable  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  No  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  8 at 30 kHz  Cable length  • shielded, max.  500 m; 50 m for technological functions  No  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  8 at 30 kHz  Cable length  • shielded, max.  500 m; 50 m for technological functions  No  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  8 at 30 kHz  Cable length  • shielded, max.  500 m; 50 m for technological functions  No  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  8 at 30 kHz  2 at 30 kHz  300 m; For technological functions  No  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  8 at 30 kHz  2 at 30 kHz  300 m; For technological functions  No  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  8 at 30 kHz  2 at 30 kHz  300 m; For technological functions  No  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  8 at 30 kHz  2 at 30 kHz  300 m; For technological functions  No  Single phase: 3 at 100 kHz & 3 at 30 kHz  8 at 30 kHz  9 at 30 kHz  8 at 30 kHz  8 at 30 kHz  8 at 30 kHz  8 at 30 kHz  9 at	for standard inputs	
— at "0" to "1", max.  for interrupt inputs  — parameterizable  for technological functions  — parameterizable  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.  10 m; For technological functions: No  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz  at 30 m; For technological functions: No  Digital outputs  Number of digital outputs  10; Relays  Short-circuit protection  No; to be provided externally  Switching capacity of the outputs  with resistive load, max.  on lamp load, max.  10 ms; max.	— parameterizable	
for interrupt inputs  — parameterizable  for technological functions  — parameterizable  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  Short-circuit protection  No; to be provided externally  Switching capacity of the outputs  • with resistive load, max.  • on lamp load, max.  • on lamp load, max.  10 ms; max.  10 ms; max.	— at "0" to "1", min.	0.2 ms
- parameterizable for technological functions - parameterizable 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 Short-circuit protection No; to be provided externally  Switching capacity of the 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.  10 ms; max.	— at "0" to "1", max.	12.8 ms
for technological functions  — parameterizable  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.  Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz  For technological functions  No m; 50 m for technological functions: No  Digital outputs  Number of digital outputs  10; Relays  Short-circuit protection  No; to be provided externally  Switching capacity of the 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.  10 ms; max.	for interrupt inputs	
— parameterizable  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  300 m; For technological functions: No  Digital outputs  Number of digital outputs  10; Relays  Short-circuit protection  No; to be provided externally  Switching capacity of the 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.  10 ms; max.	— parameterizable	Yes
& 3 at 30 kHz  Cable length  ● shielded, max.  • unshielded, max.  Soo m; 50 m for technological functions 300 m; For technological functions: No  Digital outputs  Number of digital outputs  10; Relays  Short-circuit protection  No; to be provided externally  Switching capacity of the 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.  10 ms; max.	for technological functions	
<ul> <li>shielded, max.</li> <li>unshielded, max.</li> <li>300 m; 50 m for technological functions: No</li> </ul> Digital outputs Number of digital outputs <ul> <li>10; Relays</li> </ul> Short-circuit protection <ul> <li>No; to be provided externally</li> </ul> Switching capacity of the outputs <ul> <li>with resistive load, max.</li> <li>on lamp load, max.</li> <li>on lamp load, max.</li> </ul> Output delay with resistive load <ul> <li>"0" to "1", max.</li> </ul> 10 ms; max. 10 ms; max.	— parameterizable	Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz
<ul> <li>unshielded, max.</li> <li>300 m; For technological functions: No</li> <li>Digital outputs</li> <li>Number of digital outputs</li> <li>Short-circuit protection</li> <li>Switching capacity of the outputs</li> <li>with resistive load, max.</li> <li>on lamp load, max.</li> <li>Output delay with resistive load</li> <li>"0" to "1", max.</li> <li>300 m; For technological functions: No</li> <li>No; to be provided externally</li> <li>2 A</li> <li>30 W with DC, 200 W with AC</li> <li>Output delay with resistive load</li> <li>"0" to "1", max.</li> <li>10 ms; max.</li> </ul>	Cable length	
Digital outputs  Number of digital outputs  Short-circuit protection  No; to be provided externally  Switching capacity of the outputs  • with resistive load, max.  • on lamp load, max.  Output delay with resistive load  • "0" to "1", max.  10 ms; max.	• shielded, max.	500 m; 50 m for technological functions
Number of digital outputs  10; Relays  Short-circuit protection  No; to be provided externally  with resistive load, max.  on lamp load, max.  Output delay with resistive load  "0" to "1", max.  10; Relays  No; to be provided externally  2 A  30 W with DC, 200 W with AC	• unshielded, max.	300 m; For technological functions: No
Number of digital outputs  10; Relays  Short-circuit protection  No; to be provided externally  with resistive load, max.  on lamp load, max.  Output delay with resistive load  "0" to "1", max.  10; Relays  No; to be provided externally  2 A  30 W with DC, 200 W with AC	Digital outputs	
Switching capacity of the outputs  • with resistive load, max.  • on lamp load, max.  Output delay with resistive load  • "0" to "1", max.  2 A  30 W with DC, 200 W with AC  10 ms; max.		10; Relays
<ul> <li>with resistive load, max.</li> <li>on lamp load, max.</li> <li>Output delay with resistive load</li> <li>"0" to "1", max.</li> <li>10 ms; max.</li> </ul>	Short-circuit protection	No; to be provided externally
<ul> <li>on lamp load, max.</li> <li>Output delay with resistive load</li> <li>"0" to "1", max.</li> <li>10 ms; max.</li> </ul>	Switching capacity of the outputs	
Output delay with resistive load  • "0" to "1", max.  10 ms; max.	• with resistive load, max.	2 A
Output delay with resistive load  • "0" to "1", max.  10 ms; max.	• on lamp load, max.	30 W with DC, 200 W with AC
• "0" to "1", max. 10 ms; max.	·	
• "1" to "0", 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
<ul> <li>Number of operating cycles, max.</li> </ul>	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	0
Cable length	
• shielded, max.	100 m; shielded, twisted pair
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
<ul> <li>Resolution with overrange (bit including sign),</li> </ul>	10 bit
max.	
<ul> <li>Integration time, parameterizable</li> </ul>	Yes
<ul><li>Conversion time (per channel)</li></ul>	625 µs
incoder	
Connectable encoders	
• 2-wire sensor	Yes
. 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	No
PROFIBUS	No
AS-Interface	No
Protocols (Ethernet)	
• TCP/IP	Yes
Open IE communication	
• TCP/IP	Yes
• ISO-on-TCP (RFC1006)	Yes
Web server	
User-defined websites	Yes
Further protocols	
• MODBUS	No
Communication functions	
S7 communication	
<ul><li>supported</li></ul>	Yes
• as server	Yes
Web server	
• supported	Yes
Number of connections	
• overall	15; dynamically
Test commissioning functions	
Status/control	
Status/control variable	Yes
<ul><li>Variables</li></ul>	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	Countries of the countr
• Forcing	Yes
. oromig	
Integrated Functions	
Number of counters	6
Counting frequency (counter) max.	100 kHz
Frequency measurement	Yes
controlled positioning	Yes
PID controller	Yes Yes
	Yes
PID controller  Number of alarm inputs  Potential separation	Yes Yes
PID controller  Number of alarm inputs	Yes Yes
PID controller  Number of alarm inputs  Potential separation	Yes Yes
PID controller  Number of alarm inputs  Potential separation  Potential separation digital inputs	Yes Yes 4
PID controller  Number of alarm inputs  Potential separation  Potential separation digital inputs  • Potential separation digital inputs	Yes Yes 4
PID controller  Number of alarm inputs  Potential separation  Potential separation digital inputs  • Potential separation digital inputs  • between the channels, in groups of	Yes Yes 4
PID controller  Number of alarm inputs  Potential separation  Potential separation digital inputs  • Potential separation digital inputs  • between the channels, in groups of  Potential separation digital outputs	Yes Yes 4  No 1

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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	Yes	
static electricity acc. to IEC 61000-4-2		
<ul> <li>Test voltage at air discharge</li> </ul>	8 kV	
<ul> <li>Test voltage at contact discharge</li> </ul>	6 kV	
Interference immunity to cable-borne interference		
<ul> <li>Interference immunity on supply lines acc. to IEC 61000-4-4</li> </ul>	Yes	
<ul> <li>Interference immunity on signal cables acc. to IEC 61000-4-4</li> </ul>	Yes	
Interference immunity against voltage surge		
• on the supply lines acc. to IEC 61000-4-5	Yes	
Interference immunity against conducted variable distur	bance induced by high-frequency fields	
<ul> <li>Interference immunity against high-frequency radiation acc. to IEC 61000-4-6</li> </ul>	Yes	
Emission of radio interference acc. to EN 55 011		
Limit class A, for use in industrial areas	Yes; Group 1	
<ul> <li>Limit class B, for use in residential areas</li> </ul>	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		
Standards, approvals, certificates		
Standards, approvals, certificates  CE mark	Yes	
	Yes Yes	
CE mark		
CE mark cULus	Yes	
CE mark cULus FM approval RCM (formerly C-TICK)	Yes Yes	
CE mark cULus FM approval	Yes Yes	
CE mark cULus FM approval RCM (formerly C-TICK)  Ambient conditions	Yes Yes	
CE mark cULus FM approval RCM (formerly C-TICK)  Ambient conditions Free fall	Yes Yes Yes	
CE mark  cULus  FM approval  RCM (formerly C-TICK)  Ambient conditions  Free fall  • Fall height, max.	Yes Yes Yes	
CE mark  cULus  FM approval  RCM (formerly C-TICK)  Ambient conditions  Free fall  • Fall height, max.  Ambient temperature during operation	Yes Yes Yes  O.3 m; five times, in product package	
CE mark  cULus  FM approval  RCM (formerly C-TICK)  Ambient conditions  Free fall  • Fall height, max.  Ambient temperature during operation  • min.	Yes Yes Yes  O.3 m; five times, in product package	
CE mark  cULus  FM approval  RCM (formerly C-TICK)  Ambient conditions  Free fall  • Fall height, max.  Ambient temperature during operation  • min.  • max.	Yes Yes Yes  O.3 m; five times, in product package  0 °C 55 °C	
CE mark cULus FM approval RCM (formerly C-TICK)  Ambient conditions Free fall  • Fall height, max.  Ambient temperature during operation  • min.  • max.  • horizontal installation, min.	Yes Yes Yes  0.3 m; five times, in product package  0 °C 55 °C 0 °C	
CE mark cULus FM approval RCM (formerly C-TICK)  Ambient conditions Free fall • Fall height, max.  Ambient temperature during operation • min. • max. • horizontal installation, min. • horizontal installation, max.	Yes Yes Yes  0.3 m; five times, in product package  0 °C 55 °C 0 °C 55 °C	

permissible temperature change	5°C to 55°C, 3°C / minute
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
<ul> <li>Installation altitude, max.</li> </ul>	2 000 m
Relative humidity	
Operation, max.	95 %; no condensation
Vibrations	
<ul> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> </ul>	2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail
<ul> <li>Operation, tested according to IEC 60068-2-6</li> </ul>	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	
<ul> <li>SO2 at RH &lt; 60% without condensation</li> </ul>	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
Configuration	
Programming	
Programming language	
— LAD	Yes
— FBD	Yes
— SCL	Yes
Cycle time monitoring	
adjustable	Yes
Dimensions	
Width	110 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	435 g
last modified:	06/15/2018