## **SIEMENS**

## Data sheet

## 6ES7214-1AG40-0XB0

SIMATIC S7-1200, CPU 1214C, compact CPU, DC/DC/DC, onboard I/O: 14 DI 24 V DC; 10 DO 24 V DC; 2 AI 0-10 V DC, Power supply: DC 20.4-28.8V DC, Program/data memory 100 KB



Figure similar

General information	
Product type designation	CPU 1214C DC/DC/DC
Firmware version	V4.4
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V16 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
Reverse polarity protection	Yes
Load voltage L+	
<ul> <li>Rated value (DC)</li> </ul>	24 V
• permissible range, lower limit (DC)	20.4 V
<ul> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
Input current	

Current consumption (rated value)	500 mA; CPU only
Current consumption, max.	1 500 mA; CPU with all expansion modules
Inrush current, max.	12 A; at 28.8 V
²t	0.5 A <sup>2</sup> ·s
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	L+ minus 4 V DC min.
Power loss	
Power loss, typ.	12 W
Memory	
Work memory	
• integrated	100 kbyte
• expandable	No
Load memory	
• integrated	4 Mbyte
<ul> <li>Plug-in (SIMATIC Memory Card), max.</li> </ul>	with SIMATIC memory card
Backup	
• present	Yes
maintenance-free	Yes
• without battery	Yes
CPU processing times	
for bit operations, typ.	0.08 µs; / instruction
for word operations, typ.	1.7 μs; / instruction
for floating point arithmetic, typ.	2.3 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
Local data	
<ul> <li>per priority class, max.</li> </ul>	16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2
	to 26: 6 KB

Address area	
Process image	
<ul> <li>Inputs, adjustable</li> </ul>	1 kbyte
• Outputs, adjustable	1 kbyte
Lardware configuration	
Hardware configuration Number of modules per system, max.	3 comm. modules, 1 signal board, 8 signal modules
Number of medulos per system, max.	o comm. moduloo, i olghar board, o olghar moduloo
Time of day	
Clock	
<ul> <li>Hardware clock (real-time)</li> </ul>	Yes
Backup time	480 h; Typical
• Deviation per day, max.	±60 s/month at 25 °C
Digital inputs	
Number of digital inputs	14; Integrated
<ul> <li>of which inputs usable for technological</li> </ul>	6; HSC (High Speed Counting)
functions	
Source/sink input	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	14
Input voltage	
<ul> <li>Rated value (DC)</li> </ul>	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	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 & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 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
<ul> <li>of which high-speed outputs</li> </ul>	4; 100 kHz Pulse Train Output
Limitation of inductive shutdown voltage to	L+ (-48 V)
č	

Switching capacity of the outputs	
<ul> <li>with resistive load, max.</li> </ul>	0.5 A
● 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
<ul> <li>for signal "0" residual current, max.</li> </ul>	0.1 mA
Output delay with resistive load	
● "0" to "1", max.	1 µs
• "1" to "0", max.	5 µs
Switching frequency	
<ul> <li>of the pulse outputs, with resistive load, max.</li> </ul>	100 kHz
Relay outputs	
<ul> <li>Number of relay outputs</li> </ul>	0
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
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
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
Interface types	
<ul> <li>Number of ports</li> </ul>	1
<ul> <li>integrated switch</li> </ul>	No
Protocols	
PROFINET IO Controller	Yes
PROFINET IO Device	Yes
<ul> <li>SIMATIC communication</li> </ul>	Yes
<ul> <li>Open IE communication</li> </ul>	Yes; Optionally also encrypted
Web server	Yes
Media redundancy	No
PROFINET IO Controller	
<ul> <li>Transmission rate, max.</li> </ul>	100 Mbit/s
Services	
— PG/OP communication	Yes
— S7 routing	Yes
— Isochronous mode	No
— IRT	No
— MRP	No
— MRPD	No
— PROFlenergy	No
— Prioritized startup	Yes
<ul> <li>— Number of IO devices with prioritized</li> </ul>	16
startup, max.	
<ul> <li>— Number of connectable IO Devices, max.</li> </ul>	16
<ul> <li>— Number of connectable IO Devices for RT,</li> </ul>	16
max.	
— of which in line, max.	16
<ul> <li>Activation/deactivation of IO Devices</li> </ul>	Yes
— Number of IO Devices that can be	8
simultaneously activated/deactivated, max.	
— Updating time	The minimum value of the update time also depends on the communication component set for PROFINET IO, on the number
PROFINET IO Device	of IO devices and the quantity of configured user data.
Services	
— PG/OP communication	Yes
	Yes
— S7 routing	

— Isochronous mode	No
— IRT	No
— MRP	No
— MRPD	No
— PROFlenergy	Yes
— Shared device	Yes
- Number of IO Controllers with shared	2
device, max.	

Protocols	
Supports protocol for PROFINET IO	Yes
PROFIBUS	Yes; CM 1243-5 (master) or CM 1242-5 (slave) required
AS-Interface	Yes; CM 1243-2 required
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	No
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
Open IE communication	
• TCP/IP	Yes
— Data length, max.	8 kbyte
<ul> <li>ISO-on-TCP (RFC1006)</li> </ul>	Yes
— Data length, max.	8 kbyte
• UDP	Yes
— Data length, max.	1 472 byte
Web server	
<ul> <li>supported</li> </ul>	Yes
<ul> <li>User-defined websites</li> </ul>	Yes
OPC UA	
<ul> <li>Runtime license required</li> </ul>	Yes; "Basic" license required
OPC UA Server	Yes; Data access (read, write, subscribe), runtime license
	required
<ul> <li>Application authentication</li> </ul>	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256
— User authentication	"anonymous" or by user name & password
	5
— Number of sessions, max.	1 000
— Number of accessible variables, max.	5
— Number of subscriptions per session, max.	5 100 ms
— Sampling interval, min.	
— Publishing interval, min.	200 ms
— Number of monitored items, max.	500
<ul> <li>Number of server interfaces, max.</li> </ul>	2

<ul> <li>— Number of nodes for user-defined server</li> </ul>	1 000
interfaces, max.	
Further protocols	
• MODBUS	Yes
Communication functions	
S7 communication	
• supported	Yes
• as server	Yes
• as client	Yes
• User data per job, max.	See online help (S7 communication, user data size)
Number of connections	
• overall	8 connections for open user communication (active or passive): TSEND_C, TRCV_C, TCON, TDISCON, TSEND and TRCV, 8 CPU/CPU connections (Client or Server) for GET/PUT data, 6 connections for dynamic assignment to GET/PUT or open user communication
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	
<ul> <li>Number of configurable Traces</li> </ul>	2
<ul> <li>Memory size per trace, max.</li> </ul>	512 kbyte
Interrupts/diagnostics/status information	
Diagnostics indication LED	
RUN/STOP LED	Yes
• ERROR LED	Yes
MAINT LED	Yes
Integrated Functions	
Number of counters	6
Counting frequency (counter) max.	100 kHz
Frequency measurement	Yes
controlled positioning	Yes
Number of position-controlled positioning axes, max.	8
Number of positioning axes via pulse-direction interface	4; With integrated outputs
PID controller	Yes

Number of alarm inputs	4
Number of pulse outputs	4
Limit frequency (pulse)	100 kHz
· · · ·	
Potential separation	
Potential separation digital inputs	
<ul> <li>Potential separation digital inputs</li> </ul>	No
<ul> <li>between the channels, in groups of</li> </ul>	1
Potential separation digital outputs	
<ul> <li>Potential separation digital outputs</li> </ul>	Yes
<ul> <li>between the channels</li> </ul>	No
<ul> <li>between the channels, in groups of</li> </ul>	1
EMC	
Interference immunity against discharge of static electri	city
<ul> <li>Interference immunity against discharge of static electricity acc. to IEC 61000-4-2</li> </ul>	Yes
— Test voltage at air discharge	8 kV
— Test voltage at contact discharge	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	
<ul> <li>Interference immunity on supply lines acc. to IEC 61000-4-5</li> </ul>	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	
<ul> <li>Limit class A, for use in industrial areas</li> </ul>	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	
IP degree of protection	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Marine approval	Yes

Free fall <ul> <li>Fall height, max.</li> <li>0.3 m; five times, in product package</li> </ul> <li>Ambient temperature during operation</li> <li>min.</li> <li>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 50 °C vertical</li> <li>horizontal installation, min.</li> <li>20 °C</li> <li>for adjacent points) at 60 °C horizontal or 50 °C vertical</li> <li>horizontal installation, max.</li> <li>60 °C</li> <li>vertical installation, max.</li> <li>50 °C</li> <li>Ambient temperature during storage/transportation</li> <li>min.</li> <li>40 °C</li> <li>max.</li> <li>70 °C</li> <li>Ambient temperature during storage/transportation</li> <li>min.</li> <li>70 °C</li> <li>Arbient temperature during storage/transportation</li> <li>max.</li> <li>Operation, min.</li> <li>Operation, max.</li> <li>180 PPa</li> <li>Operation, max.</li> <li>1000 m</li> <li>Storage/transport, min.</li> <li>1000 m</li> <li>Installation altitude, min.</li> <li>1000 m</li> <li>Installation altitude, max.</li> <li>2000 m</li> <li>Relative humidity</li> <li>Operation, max.</li> <li>2000 m</li> <li>Relative humidity</li> <li>Operation, max.</li> <li>2000 m</li> <li>Relative humidity</li> <li>Operation, max.</li> <li>2 (m/s<sup>1</sup>) wall mounting, 1 g (m/s<sup>1</sup>) DIN rail</li> <li>Vibration resistance during to JEC 60068-2-6</li> <li>Operation, tested according to IEC 60068-2-6</li> <li>Shock testing</li> <li>Itested according to IEC 60068-2-27</li> <li>Yes: IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms</li> <li>Pollutant concentrations</li> <li>Sto2 × 0.5 ppm; H2S: &lt; 0.1 ppm; RH &lt; 60% condensation-free</li>	Ambient conditions	
Ambient temperature during operation       -20 °C         • min.       60 °C; Number of simultaneously activated inputs or outputs 7 or 5 (no adjacent points) at 60 °C horizontal or 50 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, max.       60 °C         • vertical installation, max.       60 °C         • vertical installation, max.       60 °C         • vertical installation, max.       50 °C         • vertical installation, max.       70 °C         • vertical installation, max.       70 °C         • min.       -20 °C         • wertical installation, max.       70 °C         • max.       70 °C         • Operation, min.       70 °C         • Operation, min.       70 °C         • Operation, max.       1080 hPa         • Storage/transport, min.       600 hPa         • Storage/transport, max.       1080 hPa         • Installation altitude, min.       1 000 m         • Installation altitude, max.       2 000 m         Relative humidity       95 %; no condensation         • Operation, max.       95 %; no condensation         Vibration       2 g (m/s <sup>*</sup> ) wall mounting, 1 g (m/s <sup>*</sup> ) DIN rail         IEC 60068-2-6       Yes         • Operation,		
• min.     -20 °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       • horizontal installation, min.     -20 °C       • horizontal installation, max.     60 °C       • vertical installation, max.     60 °C       • vertical installation, max.     60 °C       • vertical installation, max.     50 °C       • vertical installation, max.     795 hPa       • Operation, max.     1080 hPa       • Storage/transport, min.     660 hPa       • Storage/transport, min.     1080 hPa       • Storage/transport, min.     1080 hPa       • Installation altitude, max.     2000 m       Relative humidity     2000 m       • Operation, max.     95 %; no condensation       • Vibration     95 %; no condensation       • Vibration resistance during operation acc. to IEC 60068-2-6     2 g (m/s <sup>3</sup> ) wall mounting. 1 g (m/s <sup>3</sup> ) DIN rail       • Vibration resistance during operation acc. to IEC 60068-2-6     2 g (m/s <sup>3</sup> ) wall mounting. 1 g (m/s <sup>3</sup> ) DIN rail       • Vibration resistance during operation acc.	<ul> <li>Fall height, max.</li> </ul>	0.3 m; five times, in product package
• 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 50 °C vertical, 14 or 10 at 55 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 50 °C vertical 10 at 55 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 50 °C vertical, 14 or 10 °C °C• horizontal installation, max.60 °C• vertical installation, max20 °C• vertical installation, max40 °C• or 	Ambient temperature during operation	
S (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 45 °C vertical+ horizontal installation, min.60 °C• vertical installation, max.60 °C• on rota-00 °C• nax00 °C• on rota70 °C• operation, min00 °C• operation, max.1080 Pa• obsrage/transport, max.1080 Pa• obsrage	• min.	-20 °C
Horizontal installation, max.         60 °C           • vertical installation, max.         60 °C           • vertical installation, max.         50 °C           Ambient temperature during storage/transportation         40 °C           • min.         70 °C           • max.         70 °C           • operation, min.         70 °C           • Operation, max.         1080 hPa           • Operation, max.         660 °C           • Operation, max.         1080 hPa           • Storage/transport, min.         660 hPa           • Storage/transport, max.         600 NPa           • Storage/transport, max.         1080 hPa           • Storage/transport, max.         2000 m           • Installation altitude, max.         2000 m           • Operation, max.         2000 m           • Operation, max.         95 %; no condensation           • Operation, max.         2 g (m/s <sup>®</sup> ) wall mounting, 1 g (m/s <sup>®</sup> ) DIN rail           • Operation, max.         2 g (m/s <sup>®</sup> ) wall mounting, 1 g (m/s <sup>®</sup> ) DIN rail           • Operation, tested according to IEC 60068-2-2         Yes           • Operation, tested according to IEC 60068-2-2         Yes           • Storage/transport.         Storage/transport.           • Storage/transport.         Stora IEC	● max.	5 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or
ivericial installation, min. 20 °C Ambient temperature during storage/transportation imin. 40 °C amax. 70°C Arressure acc. to IEC 60068-2-13 importation, min. 40 °C amax. 70°C Arressure acc. to IEC 60068-2-13 importation, min. 70°S hPa coperation, max. 1080 hPa storage/transport, max. 1080 hPa storage/transport, max. 1080 hPa istorage/transport, max. 1080 hPa istorage/transport, max. 1080 hPa istorage/transport, max. 1080 hPa istorage/transport, max. 1080 hPa Attivute during operation relating to sea level installation altitude, min. 1000 m installation altitude, min. 2000 m Relative humidity ioperation, max. 2000 m Relative humidity ioperation for acc. 1000 m ioperation, max. 2000 m Relative humidity ioperation, max. 2000 m Relative humidity ioperation, max. 2000 m Relative humidity ioperation, max. 2000 m Relative humidity ioperation, max. 2000 m Relative humidity ioperation for acc. 1000 m ioperation for acc. 1000 m	<ul> <li>horizontal installation, min.</li> </ul>	-20 °C
vertical installation, max.         50 °C           Ambient temperature during storage/transportation         -40 °C           • min.         -40 °C           • max.         70 °C           All pressure acc. to IEC 60068-2-13         -           • Operation, min.         79 °L           • Operation, max.         1080 hPa           • Operation, max.         660 hPa           • Storage/transport, min.         660 hPa           • Storage/transport, max.         1080 hPa           • Installation altitude, min.         -1000 m           • Installation altitude, max.         200 m           • Relative humidity         -           • Operation, max.         95 %; no condensation           • Vibration resistance during operation acc. to IEC 60068-2-6         2 g (m/s <sup>3</sup> ) wall mounting, 1 g (m/s <sup>3</sup> ) DIN rail           • Vibration resistance during to IEC 60068-2-6         Yes           • Operation, tested according to IEC 60068-2-6         Yes           • 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         -         -           • 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 c	<ul> <li>horizontal installation, max.</li> </ul>	60 °C
Ambient temperature during storage/transportation         40 °C           • max.         70 °C           Air pressure acc. to IEC 60068-2-13         •           • Operation, min.         795 hPa           • Operation, max.         1080 hPa           • Storage/transport, min.         660 hPa           • Storage/transport, max.         1080 hPa           • Storage/transport, max.         2000 m           • Installation altitude, max.         2000 m           • Installation altitude, max.         2000 m           • Operation, max.         95 %; no condensation           Vibration         -           • Operation, tested according to IEC 60068-2-6         Yes           • Operation, tested according to IEC 60068-2-6         Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak yeu), duration 11 ms           Pollutant concentrations         \$02 : < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	<ul> <li>vertical installation, min.</li> </ul>	-20 °C
• min,40 ° C• max.70 ° CAir pressure acc. to IEC 60068-2-13795 hPa• Operation, min.795 hPa• Operation, max.1080 hPa• Storage/transport, min.600 hPa• Storage/transport, max.1080 hPa• Storage/transport, max.600 hPa• Installation altitude, min.1 000 m• Installation altitude, max.2 000 m• Relative humidity2 000 m• Operation, max.95 %; no condensation• Operation, max.2 g (m/s²) wall mounting. 1 g (m/s²) DIN rail• Operation, itseld according to IEC 60068-2-6Yes• Operation, tested according to IEC 60068-2-6Yes• Operation, tested according to IEC 60068-2-7Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms• Pollutant concentrationsS02 < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	<ul> <li>vertical installation, max.</li> </ul>	50 °C
max.         70 °C           Air pressure acc, to IEC 60068-2-13         795 hPa           • Operation, min.         795 hPa           • Operation, max.         1080 hPa           • Storage/transport, max.         660 hPa           • Storage/transport, max.         1080 hPa           Altitude during operation relating to sea level         600 hPa           • Installation altitude, min.         1 000 m           • Installation altitude, max.         2 000 m           Relative humidity         95 %; no condensation           • Operation, teststance during operation acc. to IEC 60068-2-6         2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail           • Vibration resistance during operation acc. to IEC 60068-2-6         2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail           • Operation, tested according to IEC 60068-2-6         Yes           • Operation, tested according to IEC 60068-2-6         Yes           • Operation, tested according to IEC 60068-2-7         Yes           • Stock testing         So2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation free	Ambient temperature during storage/transportation	
Air pressure acc. to IEC 60068-2-13           • Operation, min.         795 hPa           • Operation, max.         1080 hPa           • Storage/transport, min.         660 hPa           • Storage/transport, max.         1080 hPa           Altitude during operation relating to sea level         1080 hPa           • Installation altitude, min.         -1 000 m           • Installation altitude, max.         2 000 m           Relative humidity         2 000 m           • Operation, max.         95 %; no condensation           Vibrations         2 g (m/s <sup>4</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail           • Operation, tested according to IEC 60068-2-6         Yes           • Operation, tested according to IEC 60068-2-6         Yes           • Nock testing         Yes           • tested according to IEC 60068-2-6         Yes           • Solock testing         Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms           Pollutant concentrations         Sol2 < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	• min.	-40 °C
• Operation, min.         795 hPa           • Operation, max.         1080 hPa           • Storage/transport, min.         660 hPa           • Storage/transport, max.         1080 hPa           Altitude during operation relating to sea level         1080 hPa           • Installation altitude, min.         -1 000 m           • Installation altitude, max.         2 000 m           Relative humidity         2 000 m           • Operation, max.         95 %; no condensation           Vibrations         2 (m/s²) wall mounting, 1 g (m/s²) DIN rail           • Vibration resistance during operation acc. to IEC 60068-2-6         Yes           • Operation, tested according to IEC 60068-2-6         Yes           • Shock testing	• max.	70 °C
• Operation, max.         1 080 hPa           • Storage/transport, min.         660 hPa           • Storage/transport, max.         1 080 hPa           • Altitude during operation relating to sea level         1 000 m           • Installation altitude, min.         1 000 m           • Installation altitude, max.         2 000 m           Relative humidity         2 000 m           • Operation, max.         95 %; no condensation           • Vibration resistance during operation acc. to IEC 60068-2-6         95 %; no condensation           • Vibration resistance during to IEC 60068-2-6         Yes           • Operation, tested according to IEC 60068-2-6         Yes           • Operation, tested according to IEC 60068-2-6         Yes           • Sock testing         -           • tested according to IEC 60068-2-6         Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms           Pollutant concentrations         So2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	Air pressure acc. to IEC 60068-2-13	
• Storage/transport, max.       660 hPa         • Storage/transport, max.       1 080 hPa         Altitude during operation relating to sea level       -1 000 m         • Installation altitude, min.       -1 000 m         • Installation altitude, max.       2 000 m         Relative humidity       0 95 %; no condensation         • Operation, max.       95 %; no condensation         Vibrations       2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail         • Vibration resistance during operation acc. to IEC 60068-2-6       2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes         • Nock testing       Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms         Pollutant concentrations       S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	• Operation, min.	795 hPa
Storage/transport, max.1 080 hPaAltitude during operation relating to sea level-1 000 m• Installation altitude, min1 000 m• Installation altitude, max.2 000 mRelative humidity95 %; no condensation• Operation, max.95 %; no condensationVibrations2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Vibration resistance during operation acc. to IEC 60068-2-62 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6YesShock testing-• tested according to IEC 60068-2-27Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 msPollutant concentrationsS02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	• Operation, max.	1 080 hPa
Altitude during operation relating to sea level <ul> <li>Installation altitude, min.</li> <li>1000 m</li> <li>Installation altitude, max.</li> <li>2000 m</li> </ul> Relative humidity       0 peration, max.       95 %; no condensation <ul> <li>Operation resistance during operation acc. to IEC 60068-2-6</li> <li>Operation, tested according to IEC 60068-2-6</li> <li>Yes</li> </ul> <ul> <li>Vibrations to IEC 60068-2-7</li> <li>Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms</li> </ul> <ul> <li>Pollutant concentrations</li> <li>SO2 at RH &lt; 60% without condensation</li> <li>S02: &lt; 0.5 ppm; H2S: &lt; 0.1 ppm; RH &lt; 60% condensation-free</li> </ul> Configuration     Yes         Programming language	<ul> <li>Storage/transport, min.</li> </ul>	660 hPa
• Installation altitude, min.       -1 000 m         • Installation altitude, max.       2 000 m         Relative humidity       95 %; no condensation         • Operation, max.       95 %; no condensation         Vibrations       2 g (m/s <sup>3</sup> ) wall mounting, 1 g (m/s <sup>3</sup> ) DIN rail         • Vibration resistance during operation acc. to IEC 60068-2-6       2 g (m/s <sup>3</sup> ) wall mounting, 1 g (m/s <sup>3</sup> ) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes         • Operation tested according to IEC 60068-2-7       Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms         Pollutant concentrations       s02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	<ul> <li>Storage/transport, max.</li> </ul>	1 080 hPa
installation altitude, max.       2 000 m         Relative humidity       95 %; no condensation         • Operation, max.       95 %; no condensation         Vibrations       2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail         • Vibration resistance during operation acc. to IEC 60068-2-6       2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes         Shock testing       Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms         Pollutant concentrations       So2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	Altitude during operation relating to sea level	
Relative humidity       95 %; no condensation         • Operation, max.       95 %; no condensation         Vibrations       2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail         • Vibration resistance during operation acc. to IEC 60068-2-6       2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes         Shock testing       Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms         Pollutant concentrations       S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	<ul> <li>Installation altitude, min.</li> </ul>	-1 000 m
• Operation, max.95 %; no condensationVibrations• Vibration resistance during operation acc. to IEC 60068-2-62 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6YesShock testing• tested according to IEC 60068-2-27Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 msPollutant concentrations• SO2 at RH < 60% without condensation	<ul> <li>Installation altitude, max.</li> </ul>	2 000 m
Vibration       2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail         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       Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms         Pollutant concentrations       S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	Relative humidity	
• Vibration resistance during operation acc. to IEC 60068-2-62 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6YesShock testingYes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms• Pollutant concentrationsS02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free	• Operation, max.	95 %; no condensation
IEC 60068-2-6 • Operation, tested according to IEC 60068-2-6 Shock testing • tested according to IEC 60068-2-27 • tested according to IEC 60068-2-27 Pollutant concentrations Pollutant concentrations • SO2 at RH < 60% without condensation S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free SO2 at RH < 60% without condensation Programming Programming language - LAD - FBD - SCL Know-how protection	Vibrations	
Shock testing       Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms         Pollutant concentrations       S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free		2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail
• tested according to IEC 60068-2-27Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 msPollutant concentrationsS02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free• SO2 at RH < 60% without condensationS02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-freeProgrammingYesProgramming languageYes- LADYes- FBDYes- SCLYesKnow-how protectionYes	<ul> <li>Operation, tested according to IEC 60068-2-6</li> </ul>	Yes
value), duration 11 ms       Pollutant concentrations       • SO2 at RH < 60% without condensation	Shock testing	
<ul> <li>SO2 at RH &lt; 60% without condensation</li> <li>SO2: &lt; 0.5 ppm; H2S: &lt; 0.1 ppm; RH &lt; 60% condensation-free</li> <li>Configuration</li> <li>Programming</li> <li>Programming language</li> <li>_ LAD</li> <li>_ FBD</li> <li>_ SCL</li> <li>Yes</li> <li>Know-how protection</li> </ul>	<ul> <li>tested according to IEC 60068-2-27</li> </ul>	
Configuration         Programming         Programming language         - LAD       Yes         - FBD       Yes         - SCL       Yes         Know-how protection       Yes	Pollutant concentrations	
Programming         Programming language         - LAD       Yes         - FBD       Yes         - SCL       Yes         Know-how protection       Yes	<ul> <li>SO2 at RH &lt; 60% without condensation</li> </ul>	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
Programming language         - LAD       Yes         - FBD       Yes         - SCL       Yes         Know-how protection       Yes	Configuration	
-LAD     Yes       -FBD     Yes       -SCL     Yes	Programming	
FBD     Yes       SCL     Yes       Know-how protection     Yes	Programming language	
- SCL Yes Know-how protection	— LAD	Yes
Know-how protection	— FBD	Yes
	— SCL	Yes
User program protection/password protection Yes	Know-how protection	
	<ul> <li>User program protection/password protection</li> </ul>	Yes

Copy protection	Yes
<ul> <li>Block protection</li> </ul>	Yes
Access protection	
<ul> <li>Protection level: Write protection</li> </ul>	Yes
<ul> <li>Protection level: Read/write protection</li> </ul>	Yes
<ul> <li>Protection level: Complete protection</li> </ul>	Yes
Cycle time monitoring	
● adjustable	Yes
Dimensions	
Width	110 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	415 g
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