## **SIEMENS**

## Data sheet

## 6ES7214-1BG40-0XB0

SIMATIC S7-1200, CPU 1214C, COMPACT CPU, AC/DC/RLY, ONBOARD I/O: 14 DI 24V DC; 10 DO RELAY 2A; 2 AI 0 - 10V DC, POWER SUPPLY: AC 85 - 264 V AC AT 47 - 63 HZ, PROGRAM/DATA MEMORY: 100 KB



General information	
Product type designation	CPU 1214C AC/DC/Relay
Firmware version	V4.2
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V14 or higher
Supply voltage	
Rated value (AC)	
• 120 V AC	Yes
• 230 V AC	Yes
permissible range, lower limit (AC)	85 V
permissible range, upper limit (AC)	264 V
Line frequency	
<ul> <li>permissible range, lower limit</li> </ul>	47 Hz
<ul> <li>permissible range, upper limit</li> </ul>	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

l²t	0.8 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	20.4 to 28.8V
Power loss	
Power loss, typ.	14 W
Memory	
Work memory	
• integrated	100 kbyte
• expandable	No
Load memory	
• integrated	4 Mbyte
• Plug-in (SIMATIC Memory Card), max.	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
	restriction, the entire working memory can be used
OB	restriction, the entire working memory can be used
• Number, max.	Limited only by RAM for code
<ul> <li>Number, max.</li> </ul>	
• Number, max. Data areas and their retentivity	Limited only by RAM for code
• Number, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags),	Limited only by RAM for code
<ul> <li>Number, max.</li> <li>Data areas and their retentivity</li> <li>Retentive data area (incl. timers, counters, flags), max.</li> </ul>	Limited only by RAM for code
<ul> <li>Number, max.</li> <li>Data areas and their retentivity</li> <li>Retentive data area (incl. timers, counters, flags), max.</li> <li>Flag</li> </ul>	Limited only by RAM for code
<ul> <li>Number, max.</li> <li>Data areas and their retentivity</li> <li>Retentive data area (incl. timers, counters, flags), max.</li> <li>Flag</li> <li>Number, max.</li> </ul>	Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area 16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2
<ul> <li>Number, max.</li> <li>Data areas and their retentivity</li> <li>Retentive data area (incl. timers, counters, flags), max.</li> <li>Flag         <ul> <li>Number, max.</li> <li>Local data</li> </ul> </li> </ul>	Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area
<ul> <li>Number, max.</li> <li>Data areas and their retentivity</li> <li>Retentive data area (incl. timers, counters, flags), max.</li> <li>Flag         <ul> <li>Number, max.</li> <li>Local data</li> </ul> </li> </ul>	Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area 16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2
<ul> <li>Number, max.</li> <li>Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Flag <ul> <li>Number, max.</li> </ul> Local data <ul> <li>per priority class, max.</li> </ul></li></ul>	Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area 16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2
<ul> <li>Number, max.</li> <li>Data areas and their retentivity         Retentive data area (incl. timers, counters, flags), max.     </li> <li>Flag         <ul> <li>Number, max.</li> <li>Local data                 <ul> <li>per priority class, max.</li> </ul> </li> </ul> </li> <li>Address area</li> </ul>	Limited only by RAM for code 10 kbyte 8 kbyte; Size of bit memory address area 16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2

<ul> <li>Out</li> </ul>	puts,	adjustable
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1 kbyte

Hardware configuration	
Number of modules per system, max.	3 comm. modules, 1 signal board, 8 signal modules
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 functions</li> </ul>	6; HSC (High Speed Counting)
Source/sink input	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	14
Input voltage	
<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 counter/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; 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	
● "0" to "1", max.	10 ms; max.

• "1" to "0", max.	10 ms; max.
Relay outputs	
<ul> <li>Number of operating cycles, max.</li> </ul>	mechanically 10 million, at rated load voltage 100 000
Cable length	
<ul> <li>shielded, max.</li> </ul>	500 m
<ul> <li>unshielded, max.</li> </ul>	150 m
Analog inputs Number of analog inputs	2
Input ranges	2
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	
Number of ports	1
<ul> <li>integrated switch</li> </ul>	No
Functionality	
PROFINET IO Controller	Yes
PROFINET IO Device	Yes
<ul> <li>SIMATIC communication</li> </ul>	Yes

Open IE communication	Yes
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
— Open IE communication	Yes
— IRT	No
— MRP	No
— MRPD	No
— PROFlenergy	No
— Prioritized startup	Yes
- Number of IO devices with prioritized	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 of IO devices and the quantity of configured user data.

Services	
— PG/OP communication	Yes
— S7 routing	Yes
— Isochronous mode	No
— Open IE communication	Yes
— 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

**PROFINET IO Device** 

AS-InterfaceYes; CM 1243-2 requiredProtocols (Ethernet)TCP/IPYes• DHCPNo• DHCPNo• DHCPYes• DCPYes• DCPYes• DCPYes• LLDPYesOpen IE communicationYes• TCP/IPYes- Data length, max.8 kbyte• ISO-on-TCP (RFC1006)Yes- Data length, max.8 kbyte• UDPYes- Data length, max.9 kbyte• DBAUYes• MODBUSYesFurther protocolsYesStormmunicationYes• SupportedYes• supportedYes• supportedYes• as clientYes• USer data per job, max.Yes• UDPYes• UDPYes• SupportedYes• supportedYes• SupportedYes• SupportedYes• USer defined websitesYes• User-defined websitesYes• US	PROFIBUS	Yes; CM 1243-5 required
Protocols (Ethernet)Yes• CP/IPYes• DCPNo• SNMPYes• DCPYes• DCPYes• DCPYes• DCPSNMP• DCPYes• DCPYes• Data length, max.8 kbyte• ISO-on-CP (REC1006)Yes• Data length, max.4 kbyte• UDP1472 byte• Data length, max.1472 byte• Data length, max.Yes• UDP1472 byte• Data length, max.Yes• MODBUSYes• MODBUSYes• MODBUSYes• MODBUSYes• MODBUSYes• SupportedYes• SupportedYes• UDPYes• Status/control variableYes• Status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingYesObiaponsito, EtherInputs/outputs, Te		
• TCP/IPYes• DHCPNo• DCPYes• DCPYes• DCPYes• DCPYes• DTPYes• Data length, max.8 kbyte• UDPYes• Data length, max.8 kbyte• UDPYes• Data length, max.1472 byte• Dup Intervention1472 byte• Dup InterventionYes• UDPYes• UDPYes• Dup InterventionYes• UDPYes• Dup InterventionYes• UDPYes• Dup InterventionYes• UDPYes• Dup InterventionYes• Dup InterventionYes• Dup InterventionYes• Dup InterventionYes• User data per job, max.See online help (S7 communication, user data size)Open IE communicationYes• User data per job, max.See online help (S7 communication, user data size)Open IE communicationYes• UDPYes• UDPYesWeb serverYes• upportedYes• upportedYes• stutiscontrol variableYes• stutiscontrol variableYes• VariablesYes• VariablesYes• VariablesYes• Data bendiffYes• VariablesYes• Data bendiffYes• Data bendiffYes• Data bendiffYes <t< td=""><td>Protocols (Ethernet)</td><td></td></t<>	Protocols (Ethernet)	
SNMPYes• DCPYes• LDPYesOpen Ecommunication*********************************	• TCP/IP	Yes
obdYesobdPYesOpen IE communicationYesopen IE communication8 kbyteobd length, max.8 kbyteobd length, max.8 kbyteobd length, max.8 kbyteobd length, max.1472 byteobd length, max.1472 byteobd length, max.Yesobd length, max.1472 byteobd length, max.Yesobd length, max.YesobserverSecontine help (S7 communication, user data size)open IE communicationYesobserverSecontine help (S7 communication, user data size)observerYesobserverYesoverallYesoverallYesoverallYesoverallYesStatus/control variableYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYesoverallYes <td>• DHCP</td> <td>No</td>	• DHCP	No
Left         Yes           Open IE communication         *           • TCP/IP            • Data length, max.         8 kbyte           • ISO-on-TCP (RFC1006)         Yes           • Data length, max.         8 kbyte           • UDP            • Data length, max.         1472 byte           • Data length, max.         Yes           • MODBUS         Yes           • Statusconton         Yes           • Loromunication         Yes           • Loromunication	• SNMP	Yes
Open IE communication           • TCP/IP           - Data length, max.         8 kbyte           • ISO-on-TCP (RFC1006)         Yes           • Data length, max.         8 kbyte           • Data length, max.         1472 byte           • UDP         -           - Data length, max.         1472 byte           Further protocols         Yes           • MODBUS         Yes           Communication functions         Yes           Softminunication         Yes           • supported         Yes           • supported         Yes           • as server         Yes           • as server         Yes           • UDP         Yes           • UDP         Yes           • UDS of tall aper job, max.         See online help (S7 communication, user data size)           Open IE communication         Yes           • UDP         Yes           • UDP         Yes           • UDP         Yes           • UDP         Yes           • Ver and websites         Yes           • Overall         Yes           • Overall         Yes           • Status/control variable         Yes	• DCP	Yes
• TCP/IP8 kbyte- Data length, max.8 kbyte• ISO-on-TCP (RFC1006)Yes- Data length, max.8 kbyte• UDP1472 byte- Data length, max.1472 byteFurther protocolsYesCommunication functionsYesS7 communicationYessupportedYes• supportedYes• as serverYes• data per job, max.See online help (S7 communication, user data size)Open El communicationYes• USP // PYes• USP // PYes• USP // PYes• USP // SYes• Verall16; dynamicatly• VerallYes• Status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, controrsForcingYes• ForcingYesDiagnostic bufferYes• presentYes• YesYes• PresentYes	• LLDP	Yes
- Data length, max.8 kbyte• ISD-on-TCP (RFC1006)Yes- Data length, max.8 kbyte• UDP- Data length, max.1472 byte- Data length, max.1472 byte• Duba length, max.Yes• MDBUSYes• Communication functionsYes• So communication functionsYes• supportedYes• supportedYes• as serverYes• as clientYes• UDPYes• UDPYes• UDPYes• UDPYes• UDPYes• UDPYes• UDPYes• UDPYes• vorallYes• vorallYes• vorallYes• vorallYes• Status/control variableYes• Status/control variableYes• Status/control variableYes• ForcingYes• ForcingYes• ForcingYes• ForcingYes• ParsentYes	Open IE communication	
• ISO-on-TCP (RC 1006)Yes- Data length, max.8 kbyte• UDP Data length, max.1472 byteFurther protocolsFurther protocolsVesCommunication functionsS7 communicationVese sa clientVesSatisfieldVessa clientVesSatisfieldVesVesVesVesVesVesVesVesVesVesVesVesVesVesVesVesVesVerVerVesVer <td< td=""><td>• TCP/IP</td><td></td></td<>	• TCP/IP	
• ISO-on-TCP (RFC1006)Yes- Data length, max.8 kbyte• UDP1- Data length, max.1472 byteFurther protocolsYes <b>Communication functions</b> YesSoftmunicationYesSoftmunicationYes( as server)Yes• as server)Yes• data per job, max.See online help (S7 communication, user data size)Open IE communicationYes• UDPYes• VerallYes• Status/control variableYes• VariablesYes• VariablesYes• ForcingYes• Data Status/control variableYes• ForcingYes• ForcingYes• Data Status/control variableYes• PresentYes	— Data length, max.	8 kbyte
- Data length, max.8 kbyte• UDP- Data length, max.1472 byteFurther protocolsFurther protocols• MODBUSYesCommunication functionsS7 communication• supportedYes• supportedYes• as clientYes• buser data per job, max.YesOpen IE communicationYes• UDPYes• UDPYes• UDPYes• UDPYes• UDPYes• buser defined websitesYes• buser defined websitesYes• overallYes• overallYes• Status/control variableYes• VariablesYes• VariablesYes• buser defined websitesYes• forcingYes• forcingYes• forcingYes• protocol bufferYes• presentYes		Yes
• UDP1472 byteFurther protocolsYesFurther protocolsYescommunicationYesS7 communicationYes• supportedYes• as serverYes• as clientYes• as clientYes• User data per job, max.See online help (S7 communication, user data size)Open IE communicationYes• UDPYes• UDPYes• UDPYes• UDPYes• USP deterYes• supportedYes• user-defined websitesYes• USPYesNumber of connectionsYes• overall16: dynamicallyTest communication functionsStatus/control• Status/control variableYes• VariablesYes• CoringYes• ForcingYes• ForcingYes• presentYes• present <t< td=""><td></td><td>8 kbyte</td></t<>		8 kbyte
Further protocols       Yes         • MODBUS       Yes         Communication       *         • supported       Yes         • as server       Yes         • as dient       Yes         • User data per job, max.       See online help (S7 communication, user data size)         Open IE communication       *         • TCP/IP       Yes         • UDP       Yes         Veb server       *         • supported       Yes         Number of connections       Yes         • overall       16; dynamically         Test commissioning functions       *         Status/control       Yes         Status/control variable       Yes         • Variables       Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters         Forcing       Yes         • Forcing       Yes         • present       Yes	-	
Further protocols       Yes         • MODBUS       Yes         Communication       *         • supported       Yes         • as server       Yes         • as dient       Yes         • User data per job, max.       See online help (S7 communication, user data size)         Open IE communication       *         • TCP/IP       Yes         • UDP       Yes         Veb server       *         • supported       Yes         Number of connections       Yes         • overall       16; dynamically         Test commissioning functions       *         Status/control       Yes         Status/control variable       Yes         • Variables       Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters         Forcing       Yes         • Forcing       Yes         • present       Yes		1 472 byte
Communication functions         S7 communication         • supported       Yes         • as server       Yes         • as client       Yes         • as client       Yes         • User data per job, max.       See online help (S7 communication, user data size)         Open IE communication       FOP/IP         • User data per job, max.       See online help (S7 communication, user data size)         Open IE communication       TCP/IP         • User data per job, max.       Yes         • UDP       Yes         • UDP       Yes         Veb server       Yes         • supported       Yes         • User-defined websites       Yes         • User-defined websites       Yes         • overall       16; dynamically         Test commissioning functions       Status/control         Status/control variable       Yes         • Variables       Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters         Forcing       Yes         Diagnostic buffer       Yes         • present       Yes		
S7 communication       Yes         • as server       Yes         • as client       Yes         • user data per job, max.       See online help (S7 communication, user data size)         Open IE communication       Yes         • TCP/IP       Yes         • UDP       Yes         • UDP       Yes         • User-defined websites       Yes         • User-defined websites       Yes         • overall       Yes         • overall       16; dynamically         Test commissioning functions         Status/control       Yes         • Status/control variable       Yes         • Variables       Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters         Forcing         • Forcing       Yes         • Diagnostic buffer       Yes         • present       Yes	• MODBUS	Yes
• supportedYes• as serverYes• as clientYes• User data per job, max.See online help (S7 communication, user data size)Open IE communicationYes• TCP/IPYes• UDPYes• UDPYes• UDPYes• User-defined websitesYes• User-defined websitesYes• overall16; dynamically• overall16; dynamically• Status/control variableYes• Status/control variableYes• CoringYes• ForcingYes• ForcingYes• ForcingYes• presentYes• presentYes	Communication functions	
ease serverYes• as serverYes• User data per job, max.See online help (S7 communication, user data size)Open IE communicationYes• TCP/IPYes• UDPYesWeb serverYes• supportedYes• supportedYes• User defined websitesYesNumber of connectionsYes• overall16; dynamicallyTest commissioning functionsYesStatus/control variableYes• Status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingYes• ForcingYesDiagnostic bufferYes• presentYes	S7 communication	
AccordYes• User data per job, max.See online help (S7 communication, user data size)Open IE communicationYes• TCP/IPYes• UDPYes• UDPYes• SupportedYes• SupportedYes• User-defined websitesYes• Number of connectionsYes• overall16; dynamically• Status/control variableYes• Status/control variableYes• Status/control variableYes• ForcingYes• ForcingYes• ForcingYes• ForcingYes• presentYes• presentYes	<ul> <li>supported</li> </ul>	Yes
• User data per job, max.       See online help (S7 communication, user data size)         Open IE communication         • TCP/IP       Yes         • UDP       Yes         Web server       Yes         • supported       Yes         • User-defined websites       Yes         Number of connections       Yes         • overall       16; dynamically         Test commissioning functions         Status/control variable       Yes         • Variables       Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters         Forcing       Yes         Forcing       Yes         • present       Yes	• as server	Yes
Open IE communication• TCP/IPYes• UDPYesWeb serverYes• supportedYes• User-defined websitesYesNumber of connectionsYes• overall16; dynamically• overallYes• status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingYes• ForcingYes•	● as client	Yes
• TCP/IPYes• UDPYesWeb serverYes• supportedYes• User-defined websitesYesNumber of connectionsYes• overall16; dynamically• overallYesStatus/controlYes• Status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingYes• ForcingYes• presentYes	<ul> <li>User data per job, max.</li> </ul>	See online help (S7 communication, user data size)
• UDPYesWeb serverYes• supportedYes• User-defined websitesYesNumber of connections16; dynamically• overall16; dynamicallyTest commissioning functionsStatus/control• Status/controlYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcing• ForcingYes• ForcingYesDiagnostic bufferYes• presentYes	Open IE communication	
Web server       • supported     Yes       • User-defined websites     Yes       Number of connections     16; dynamically       • overall     16; dynamically       Test commissioning functions       Status/control       • Status/control variable     Yes       • Variables     Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters       Forcing     Yes       • Forcing     Yes       Diagnostic buffer     Yes	• TCP/IP	Yes
• supportedYes• User-defined websitesYesNumber of connections16; dynamically• overall16; dynamicallyTest commissioning functionsStatus/control• Status/control variableYes• Status/control variableInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingYes• ForcingYes• ForcingYes• presentYes• presentYes• presentYes• PorcingYes• presentYes• PorcingYes• presentYes• PorcingYes• presentYes	• UDP	Yes
• User-defined websites     Yes       Number of connections     16; dynamically       • overall     16; dynamically         Test commissioning functions       Status/control     Yes       • Status/control variable     Yes       • Variables     Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters       Forcing     Yes       • Forcing     Yes       Diagnostic buffer     Yes	Web server	
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     Yes       • present     Yes	<ul> <li>supported</li> </ul>	Yes
• overall       16; dynamically         Test commissioning functions         Status/control         • Status/control variable       Yes         • Status/control variables       Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters         • Forcing       Yes	<ul> <li>User-defined websites</li> </ul>	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       Yes	Number of connections	
Status/control       Yes         • Variables       Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters         Forcing       Ves         • Forcing       Yes         • present       Yes	• overall	16; dynamically
• Status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingForcing• ForcingYesDiagnostic bufferYes• presentYes	Test commissioning functions	
<ul> <li>Variables</li> <li>Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters</li> <li>Forcing</li> <li>Forcing</li> <li>Yes</li> <li>Diagnostic buffer</li> <li>Present</li> <li>Yes</li> </ul>		
counters       Forcing     Yes       Diagnostic buffer     Yes		
• Forcing     Yes       Diagnostic buffer     Yes       • present     Yes	Variables	
Diagnostic buffer       • present       Yes	Forcing	
• present Yes		Yes
	Diagnostic buffer	
Traces	● present	Yes
	Traces	

<ul> <li>Number of configurable Traces</li> </ul>	2		
Memory size per trace, max.	- 512 kbyte		
· ·			
Interrupts/diagnostics/status information			
Diagnostics indication LED	Ver		
RUN/STOP LED	Yes		
• ERROR LED	Yes		
MAINT LED	Yes		
Integrated Functions			
Number of counters	6		
Counting frequency (counter) max.	100 kHz		
Frequency meter	Yes		
controlled positioning	Yes		
Number of position-controlled positioning axes, max.	8		
Number of positioning axes via pulse-direction	Up to 4 with SB 1222		
interface			
PID controller	Yes		
Number of alarm inputs	4		
Potential separation			
Potential separation digital inputs			
<ul> <li>Potential separation digital inputs</li> </ul>	500V AC for 1 minute		
<ul> <li>between the channels, in groups of</li> </ul>	1		
Potential separation digital outputs			
<ul> <li>Potential separation digital outputs</li> </ul>	Relays		
<ul> <li>between the channels</li> </ul>	No		
<ul> <li>between the channels, in groups of</li> </ul>	2		
EMC			
Interference immunity against discharge of static electric	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 can 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			
• 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		

Eimit class A, for use in industrial areas     Yes; Group 1     Yes; When appropriate measures are used to ensure compliance     with the limits for Class B according to EN 55011  Pegree and class of protection Degree of protection acc. to EN 60529     iP20     Yes Standards, approvals, certificates     CE mark     Yes UL approval     Yes CE mark     Yes UL approval     Yes CE mark     Yes UL approval     Yes CE mark     Yes CE approval     Yes CE apprexite according to IEC 60068-2-4     Yes CE apprelimity Approvexe	Emission of radio interference acc. to EN 55 011	
with the limits for Class B according to EN 55011           Degree and class of protection acc. to EN 60529           IP20         Yes           Standards, approvals, certificates         Control of the second se	<ul> <li>Limit class A, for use in industrial areas</li> </ul>	Yes; Group 1
Degree of protection acc. to EN 60529       Yes         Standards, approvals, certificates       Yes         CE mark       Yes         UL approval       Yes         CULus       Yes         CM (formerly C-TICK)       Yes         RCA poproval       Yes         Ambient conditions       Yes         Free fall       0.3 m; five times, in product package         Ambient temperature during operation       -0 a G         • min.       -20 °C         • max.       60 °C; Number of simultaneously activated inputs or outputs 7 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, 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, 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, 14 or 10 at 55 °C horizontal or 50 °C vertical installation, max.         • horizontal installation, max.       50 °C         • wertical installation, max.       50 °C         • Ambient temperature during storage/transportation       • min.         • Ope	• Limit class B, for use in residential areas	
• IP20       Yes         Standards, approvals, certificates       Yes         CE mark       Yes         UL approval       Yes         dULus       Yes         CM (formerly C-TICK)       Yes         RCM (formerly C-TICK)       Yes         Marine approval       Yes         Marine approval       Yes         Anbient conditions       Yes         Free fall       • Samparature during operation         • Fall height, max.       0.3 m; five times, in product package         Ambient temperature during operation       • O° C         • max.       60 °C; Number of simultaneously activated inputs or outputs 7 or 15 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 50 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, max.       50 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         • vertical installation, min.       -20 °C         • Nomention min.       -20 °C         • Operation, max.       50 °C         • Operation, min.       -20 °C         • Storage/transport, max.       1080 hPa         • Storage/transport, max.       1080 hPa	Degree and class of protection	
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       Ambient conditions     Yes       Free fall     • Fall height, max.       0.3 m; five times, in product package       Ambient temperature during 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, 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       • horizontal installation, min.     -20 °C       • horizontal installation, max.     60 °C       • vertical installation, max.     60 °C       • vertical installation, max.     -20 °C       • vertical installation, max.     -20 °C       • horizontal installation, max.     -20 °C       • horizontal installation, max.     -20 °C       • horizontal installation, max.     -20 °C       • vertical installation, max.     -20 °C       • persure acc. to IEC 60068-2-13     -00 °C       • Operation, min.     -95 hPa       • Operation, max.     1080 hPa <t< td=""><td>Degree of protection acc. to EN 60529</td><td></td></t<>	Degree of protection acc. to EN 60529	
CE mark       Yes         UL approval       Yes         CULus       Yes         FM approval       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes         Marine approval       Yes         Ambient conditions       Yes         Free fall       0.3 m; five times, in product package         Ambient temperature during operation       • min.         • 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 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, max.       60 °C         • vertical installation, max.       50 °C         • horizontal installation, max.       50 °C         Ambient temperature during storage/transportation       • for °C         • wertical installation, max.       50 °C         Arbient temperature during storage/transportation       • for °C         • Operation, min.       -40 °C         • Operation, max.       1080 hPa         • Storage/transport, min.       660 hPa         • Storage/transport, max. <t< td=""><td>• IP20</td><td>Yes</td></t<>	• IP20	Yes
UL approval         Yes           GULus         Yes           FM approval         Yes           RCM (formerly C-TICK)         Yes           RCM (formerly C-TICK)         Yes           Marine approval         Yes           Ambient conditions         Yes           Free fall         0.3 m; five times, in product package           Ambient temperature during operation         -20 °C           • 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, 14 or 10 at 55 °C horizontal or 45 °C vertical           • horizontal installation, min.         -20 °C           • horizontal installation, max.         60 °C           • horizontal installation, max.         60 °C           • vertical installation, max.         50 °C           • vertical installation, max.         50 °C           • vertical installation, max.         70 °C           • amax.         70 °C           Air pressure ac. to IEC 60068-2-13         -20 °C           • Operation, max.         1080 hPa           • Operation, max.         1080 hPa           • Storage/transport, max.         1080 hPa           • permissible operating height         -1000 to 2000 m </td <td>Standards, approvals, certificates</td> <td></td>	Standards, approvals, certificates	
cULus         Yes           FM approval         Yes           RCM (formerly C-TICK)         Yes           RCA approval         Yes           Marine approval         Yes           Ambient conditions         Free fall           Free fall         0.3 m; five times, in product package           Ambient temperature during operation         -20 °C           * 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, 14 or 10 at 55 °C horizontal or 45 °C vertical           * horizontal installation, min.         -20 °C           * horizontal installation, max.         60 °C.           * vertical installation, max.         50 °C           • vertical installation, max.         50 °C           * vertical installation, max.         50 °C           • vertical installation, max.         50 °C           * ore clical installation, max.         60 °C           • operation, max.         1080 hPa           • Operation, min.         75 hPa           • Operation, max.	CE mark	Yes
FM approval       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes         Marine approval       Yes         Ambient conditions       Yes         Free fall       0.3 m; five times, in product package         Ambient temperature during operation       -20 °C         • 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, 14 or 10 at 55 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, min.       -20 °C         • horizontal installation, max.       60 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         Ambient temperature during storage/transportation       -20 °C         • min.       -20 °C         • vertical installation, max.       50 °C         Ambient temperature during storage/transportation       -20 °C         • min.       -20 °C         • operation, max.       1080 hPa         • Operation, max.       1080 hPa         • Operation, max.       1080 hPa         • Storage/transport, max.       1080 hPa	UL approval	Yes
RCM (formerly C-TICK)       Yes         KC approval       Yes         Marine approval       Yes         Ambient conditions       Yes         Free fall       0.3 m; five times, in product package         Ambient temperature during operation       0.3 m; five times, in product package         Ambient temperature during operation       -20 °C         • 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, 14 or 10 at 55 °C horizontal or 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, max.       60 °C         • vertical installation, max.       50 °C         • Ambient temperature during storage/transportation       -20 °C         • min.       -20 °C         • min.       -20 °C         • pressure acc. to IEC 60068-2-13       -20 °C         • Operation, max.       1080 hPa         • Operation, max.       1080 hPa         • Storage/transport, min.       660 hPa         • Storage/transport, max.       1080 hPa <td>cULus</td> <td>Yes</td>	cULus	Yes
KC approval       Yes         Marine approval       Yes         Ambient conditions       Free fall         • Fall height, max.       0.3 m; five times, in product package         Ambient temperature during operation       -20 °C         • 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, 14 or 10 at 55 °C horizontal or 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, min.       -20 °C         • horizontal installation, max.       60 °C         • vertical installation, max.       50 °C         • Ambient temperature during storage/transportation       -40 °C         • min.       -40 °C         • max.       70 °C         Art pressure acc. to IEC 60068-2-13       -40 °C         • Operation, min.       1980 hPa         • Operation, max.       1080 hPa         • Storage/transport, min.       660 hPa         • Storage/transport, max.       1080 hPa         • permissible operating height       -10000 to 2000 m<	FM approval	Yes
Marine approval         Yes           Ambient conditions         Free fall           • Fall height, max.         0.3 m; five times, in product package           Ambient temperature during operation         -20 °C           • max.         -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, 14 or 10 at 55 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C certical           • horizontal installation, min.         -20 °C           • horizontal installation, max.         60 °C           • vertical installation, max.         60 °C           • vertical installation, max.         50 °C           • vertical installation, max.         50 °C           • Ambient temperature during storage/transportation         -20 °C           • min.         -20 °C           • max.         50 °C           Ambient temperature during storage/transportation         -20 °C           • max.         70 °C           • Ati pressure acc. to IEC 60068-2-13         -40 °C           • Operation, max.         1080 hPa           • Operation, max.         1080 hPa           • Storage/transport, min.         660 hPa           • Storage/transport, max.         1080 hPa           • permissible operating hei	RCM (formerly C-TICK)	Yes
Ambient conditions         Free fall       0.3 m; five times, in product package         Ambient temperature during operation       • min.         • 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, 14 or 10 at 55 °C horizontal or 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, max.       60 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         Ambient temperature during storage/transportation       -40 °C         • min.       -40 °C         • max.       70 °C         Arit pressure acc. to IEC 60068-2-13       -         • Operation, min.       795 hPa         • Operation, min.       1080 hPa         • Storage/transport, min.       660 hPa         • Storage/transport, max.       1080 hPa         • permissible operating height       -1000 to 2000 m         Relative humidity       -         • Operation, max.       95 %; no condensation         • Operation, tested according to IEC 60068-2-6       Yes	KC approval	Yes
Free fall       0.3 m; five times, in product package         Ambient temperature during operation       -20 °C         • 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, 14 or 10 at 55 °C horizontal or 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, min.       -20 °C         • vertical installation, max.       60 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         Ambient temperature during storage/transportation       -20 °C         • min.       -20 °C         • neax.       70 °C         Air pressure acc. to IEC 60068-2-13       -20 °C         • Operation, min.       795 hPa         • Operation, max.       1080 hPa         • Storage/transport, min.       660 hPa         • permissible operating height       -1000 to 2000 m         Relative humidity       operation, max.       95 %; no condensation         Vibrations       2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes	Marine approval	Yes
Free fall       0.3 m; five times, in product package         Ambient temperature during operation       -20 °C         • 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, 14 or 10 at 55 °C horizontal or 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, min.       -20 °C         • vertical installation, max.       60 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         Ambient temperature during storage/transportation       -20 °C         • min.       -20 °C         • neax.       70 °C         Air pressure acc. to IEC 60068-2-13       -20 °C         • Operation, min.       795 hPa         • Operation, max.       1080 hPa         • Storage/transport, min.       660 hPa         • permissible operating height       -1000 to 2000 m         Relative humidity       operation, max.       95 %; no condensation         Vibrations       2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes	Ambient conditions	
Ambient temperature during operation       -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, 14 or 10 at 55 °C horizontal or 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, max.       60 °C         • vertical installation, max.       60 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         Ambient temperature during storage/transportation       -20 °C         • min.       -20 °C         • max.       70 °C         Ambient temperature during storage/transportation       -20 °C         • max.       70 °C         Air pressure acc. to IEC 60068-2-13       -20 °C         • Operation, min.       -20 °C         • Operation, max.       1080 hPa         • Storage/transport, max.       1080 hPa         • permissible operating height       -1000 to 2000 m         Relative humidity       -0         • Operation, max.       95 %; no condensation         Vibrations       2 g (m/s°) wall mounting, 1 g (m/s°) DIN rail         • Vibrations       2 g (m/s°) wall mounting, 1 g (m/s°) DIN rail		
• 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, 14 or 10 at 55 °C horizontal or 45 °C vertical         • horizontal installation, min.       -20 °C         • horizontal installation, max.       60 °C         • vertical installation, max.       60 °C         • vertical installation, max.       50 °C         • vertical installation, max.       50 °C         Ambient temperature during storage/transportation       -20 °C         • min.       -20 °C         • max.       70 °C         Atri pressure acc. to IEC 60068-2-13       -40 °C         • Operation, min.       70 °C         • Operation, max.       1080 hPa         • Storage/transport, min.       660 hPa         • permissible operating height       -1000 to 2000 m         Relative humidity       -00 or 2000 m         • Operation, max.       95 %; no condensation         Vibrations       2 g (m/s <sup>a</sup> ) wall mounting, 1 g (m/s <sup>a</sup> ) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes	<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 45 °C vertical• horizontal installation, min20 °C• vertical installation, max.60 °C• vertical installation, max.50 °C• vertical installation, max.50 °C• vertical installation, max.50 °C• vertical installation, max.70 °C• min40 °C• max.70 °C• Operation, min.40 °C• Operation, min.660 hPa• Operation, max.1080 hPa• Operation, max.660 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1080 hPa• Storage/transport, max.1080 hPa• Operation, max.95 %; no condensation• Operation, max.2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail• Operation, tested according to IEC 60068-2-6Yes	Ambient temperature during operation	
5 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 45 °C vertical• horizontal installation, min20 °C• vertical installation, max.60 °C• vertical installation, max.50 °C• vertical installation, max.50 °C• vertical installation, max.50 °C• vertical installation, max.70 °C• min40 °C• max.70 °C• max.70 °C• Operation, min.1080 hPa• Operation, max.660 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1080 hPa• Storage/transport, max.1080 hPa• Deperation, max.1080 hPa• Operation, max.95 %; no condensationVibrations95 %; no condensation• Operation, max.95 %; no condensation• Vibrations2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes	• min.	-20 °C
Ambient installation, max.60 °C• vertical installation, max20 °C• vertical installation, max.50 °CAmbient temperature during storage/transportation	● max.	5 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or
• vertical installation, min20 °C• vertical installation, max.50 °CAmbient temperature during storage/transportation	<ul> <li>horizontal installation, min.</li> </ul>	-20 °C
• vertical installation, max.50 °CAmbient temperature during storage/transportation-• min40 °C• max.70 °CAir pressure acc. to IEC 60068-2-13-• Operation, min.795 hPa• Operation, max.1080 hPa• Operation, max.660 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1080 hPa• Operation, max.1080 hPa• Operation, max.1080 hPa• Operation, max.95 %; no condensation• Operation, max.95 %; no condensation• Operation, max.95 %; no condensation• Operation, max.92 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes	<ul> <li>horizontal installation, max.</li> </ul>	60 °C
Ambient temperature during storage/transportation• min40 °C• max.70 °CAir pressure acc. to IEC 60068-2-13• Operation, min.795 hPa• Operation, max.1 080 hPa• Operation, max.660 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPa• permissible operating height-1000 to 2000 mRelative humidity• Operation, max.95 %; no condensationVibrations• Vibrations2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes	• vertical installation, min.	-20 °C
• min40 °C• max.70 °CAir 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• Storage/transport, max.1 080 hPa• Operation, max.95 %; no condensation• Operation, max.95 %; no condensation• Operation, max.2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, max.2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail	<ul> <li>vertical installation, max.</li> </ul>	50 °C
· max.70 °CAir pressure acc. to IEC 60068-2-13795 hPa• Operation, min.795 hPa• Operation, max.1 080 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPa• permissible operating height-1000 to 2000 m• permissible operating height95 %; no condensation• Operation, max.95 %; no condensation• Operation, max.2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes	Ambient temperature during storage/transportation	
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• permissible operating height-1000 to 2000 m• Relative humidity95 %; no condensation• Operation, max.95 %; no condensation• Vibrations2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes	• min.	-40 °C
• Operation, min.795 hPa• Operation, max.1 080 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPa• permissible operating height-1000 to 2000 m• Relative humidity-1000 to 2000 m• Operation, max.95 %; no condensationVibrations2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes	• max.	70 °C
• Operation, max.1 080 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPa• permissible operating height-1000 to 2000 mRelative humidity-1000 to 2000 m• Operation, max.95 %; no condensationVibrations2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes	Air pressure acc. to IEC 60068-2-13	
• Operation, max.1 080 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPa• permissible operating height-1000 to 2000 mRelative humidity-1000 to 2000 m• Operation, max.95 %; no condensationVibrations2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes	<ul> <li>Operation, min.</li> </ul>	795 hPa
• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPa• permissible operating height-1000 to 2000 mRelative humidity• Operation, max.95 %; no condensation• Vibrations2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6Yes		1 080 hPa
<ul> <li>Storage/transport, max.</li> <li>9 permissible operating height</li> <li>1 080 hPa</li> <li>-1000 to 2000 m</li> <li>Relative humidity</li> <li>Operation, max.</li> <li>95 %; no condensation</li> <li>Vibrations</li> <li>2 g (m/s<sup>2</sup>) wall mounting, 1 g (m/s<sup>2</sup>) DIN rail</li> <li>Operation, tested according to IEC 60068-2-6</li> <li>Yes</li> </ul>		660 hPa
• permissible operating height     -1000 to 2000 m       Relative humidity     • Operation, max.       • Operation, max.     95 %; no condensation       Vibrations     2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail       • Operation, tested according to IEC 60068-2-6     Yes		1 080 hPa
Relative humidity         • Operation, max.       95 %; no condensation         Vibrations         • Vibrations       2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes	-	-1000 to 2000 m
• Operation, max.       95 %; no condensation         Vibrations       2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail         • Operation, tested according to IEC 60068-2-6       Yes		
Vibrations     2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail       • Operation, tested according to IEC 60068-2-6     Yes		95 %; no condensation
<ul> <li>Vibrations</li> <li>Operation, tested according to IEC 60068-2-6</li> <li>Yes</li> </ul>		
Operation, tested according to IEC 60068-2-6     Yes		2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail

• 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

Extended ambient conditions

Pollutant concentrations

- SO2 at RH < 60% without condensation

S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free

Configuration Programming	
Programming language	
— LAD	Yes
— FBD	Yes
— SCL	Yes
Know-how protection	
<ul> <li>User program protection/password protection</li> </ul>	Yes
Copy protection	Yes
Block protection	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.	455 g
last modified:	08/12/2017