## SIEMENS

## Data sheet

## 6ES7212-1HE40-0XB0



SIMATIC S7-1200, CPU 1212C, compact CPU, DC/DC/relay, onboard I/O: 8 DI 24 V DC; 6 DO relay 2 A; 2 AI 0-10 V DC, power supply: DC 20.4-28.8 V DC, program/data memory 100 KB

General information	
Product type designation	CPU 1212C DC/DC/relay
Firmware version	V4.6
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V18 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
<ul> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
<ul> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
Input current	
Current consumption (rated value)	400 mA; CPU only
Current consumption, max.	1 200 mA; CPU with all expansion modules
Inrush current, max.	12 A; at 28.8 V
l²t	0.8 A <sup>2</sup> ·s
Output current	
for backplane bus (5 V DC), max.	1 000 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.	9 W
Memory	
Work memory	
integrated	100 kbyte
Load memory	
<ul> <li>integrated</li> </ul>	2 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), max.	14 kbyte
Flag	
• Size, max.	4 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
<ul> <li>Outputs, adjustable</li> </ul>	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 comm. modules, 1 signal board, 2 signal modules
Time of day	
Clock	
Hardware clock (real-time)	Yes
Backup time	480 h; Typical
Deviation per day, max.	±60 s/month at 25 °C
Digital inputs	
Number of digital inputs	8; 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.	8
Input voltage	
Rated value (DC)	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	Ver
— parameterizable	Yes
for technological functions — parameterizable	Single phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz
Cable length	
<ul> <li>shielded, max.</li> </ul>	500 m; 50 m for technological functions
• unshielded, max.	300 m; for technological functions: No
Digital outputs	
Number of digital outputs	6; 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	
Number of relay outputs	
	6
Number of operating cycles, max.	o mechanically 10 million, at rated load voltage 100 000

e shielded may	500 m
• 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), max.</li> </ul>	10 bit
<ul> <li>Integration time, parameterizable</li> </ul>	Yes
Conversion time (per channel)	625 µs
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
1. Interface	
Interface type	PROFINET
Isolated	Yes
automatic detection of transmission rate	Yes
Autonegotiation	Yes
Autocrossing	Yes
Interface types	
• RJ 45 (Ethernet)	Yes
Number of ports	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	
Transmission rate, max.	100 Mbit/s
Services	
- PG/OP communication	Yes; encryption with TLS V1.3 pre-selected
<ul> <li>— Isochronous mode</li> </ul>	No
— IRT	No
- PROFlenergy	No
— Prioritized startup	Yes
<ul> <li>— Number of IO devices with prioritized startup, max.</li> </ul>	16
- Number of connectable IO Devices, max.	16
<ul> <li>— Number of connectable IO Devices for RT, max.</li> </ul>	16
— of which in line, max.	16
<ul> <li>Activation/deactivation of IO Devices</li> </ul>	Yes
<ul> <li>Number of IO Devices that can be simultaneously</li> </ul>	8
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.
PROFINET IO Device	
Services	
— PG/OP communication	Yes; encryption with TLS V1.3 pre-selected
— Isochronous mode	No
— IRT	No

<b>DDOElenera</b>	Voo
- PROFlenergy	Yes
- Shared device	Yes
<ul> <li>Number of IO Controllers with shared device, max.</li> </ul>	2
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIsafe	No
PROFIBUS	Yes; CM 1243-5 (master) or CM 1242-5 (slave) required
	Yes; OPC UA Server
AS-Interface	Yes; CM 1243-2 required
Protocols (Ethernet)	Y.
• TCP/IP	Yes
• DHCP	No
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
Redundancy mode	
Media redundancy	No
- MRP	No
- MRPD	No
SIMATIC communication	Vez
• S7 routing	Yes
Open IE communication	
• TCP/IP	Yes
— Data length, max.	8 kbyte
• ISO-on-TCP (RFC1006)	Yes
— Data length, max.	8 kbyte
• UDP	Yes
— Data length, max.	1 472 byte
Web server	
• supported	Yes
User-defined websites	Yes
OPC UA	
Runtime license required	Yes; "Basic" license required
OPC UA Server	Yes; data access (read, write, subscribe), method call, runtime license required
— Application authentication	Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256
— User authentication	"anonymous" or by user name & password
<ul> <li>— Number of sessions, max.</li> </ul>	10
<ul> <li>Number of subscriptions per session, max.</li> </ul>	5
— Sampling interval, min.	100 ms
— Publishing interval, min.	200 ms
<ul> <li>Number of server methods, max.</li> </ul>	20
<ul> <li>Number of monitored items, recommended max.</li> </ul>	1 000
<ul> <li>Number of server interfaces, max.</li> </ul>	2
<ul> <li>— Number of nodes for user-defined server interfaces, max.</li> </ul>	2 000
Further protocols	
MODBUS	Yes
communication functions / header	
S7 communication	
supported	Yes
• as server	Yes
• as client	Yes
<ul> <li>User data per job, max.</li> </ul>	See online help (S7 communication, user data size)
Number of connections	
• overall	PG Connections: 4 reserved / 4 max; HMI Connections: 12 reserved / 18 max; S7 Connections: 8 reserved / 14 max; Open User Connections: 8 reserved / 14 max; Web Connections: 2 reserved / 30 max; OPC UA Connections: 0 reserved / 10 max; Total Connections: 34 reserved / 64 max
Test commissioning functions	
Status/control	
Status/control variable	Yes

Floring         Ves           • Foring         Yes           • Deprotein balance         Yes           • Intering the periods         Size balance           • Multiple of configurable Traces         2           • Multiple of configurable Traces         Size balance           • Multiple period main traces         Ves           • Multiple period main traces         Up to 4 with Size 1222           • Deconfigurable of period main traces         Ves           • Protein apperaton digalance dipcot	Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
• Foreing         Yes           Deparents         Yes           • Foreint         Yes           • Number of configurable Traces         2           • Memory size per traces         2 ////////////////////////////////////		
Descent buffer         Second           • recent         Yes           Traces         2           • Munobe of configurable Traces, max.         52 Mayle           Descents         52 Mayle           Interruptional particle fraction LED         Yes           • REAR OLE D         Yes           • Marting to fact of configurable Traces, max.         50 Mayle           • REAR OLE D         Yes           • Maynes of counters         6           • Counter for counters         9           • Counter for counters         9           • Counter for dam inputs         Yes           Number of pastic - controlled positioning axes, max.         8           Number of pastic cightal inputs         4           Potential separation         90 Mayle           • Potential separation cightal inputs         500V AC for 1 minute           • Counter for controller         No           • Counter for controller         No           • Counter for controller         Yes		Yes
• yearYea• Instance2• Memory size part tace, max.512 kbyteInterrupt of configuration information512 kbyteDiagnostic indicators LEDYea• RUNS TO FLEDYea• Potential separation cightal inputs	· · · · · · · · · · · · · · · · · · ·	
Trace         2           • Number of canopic state per trace, max.         512 kityle           Interruptical proteite states information         512 kityle           • RENOR TOP LED         Yes           • Counter         5           • Counter         Yes           • Number of counters         5           • Counter         Yes           • Number of counters         5           • Counter         Yes           • Number of counters         Yes           • Potential separation         Yes           • Potential separation digital inputs         5           • Edverem the channels , in groups of         1           • Potential separation digital inputs         S           • Edverem the channels , in groups of         2           Edverem the channels , in groups of <td< td=""><td></td><td>Vac</td></td<>		Vac
• Number of configurable Traces         2           • Memory size per trace, max.         512 kbyte           Interrupt/diagnostics/status information            Despetisis indication LED         Yes           • RUNS TO LED         Yes           • MAINT IED         Yes           • MAINT IED         Yes           • Counter         6           • Counters         0           • Counters         0           • Number of counters         0           • Counter frequency measurement         Yes           • Transmonter         Yes           • Number of positioning axes, max.         8           • Number of positioning axes is puse-direction interface         Up to 4 wth SB 1222           • Plot controller         Yes           • Number of positioning axes is puse-direction interface         Up to 4 wth SB 1222           • Plot controller         Yes           • Potential separation digital inputs         5000 AC for 1 minute           • Potential separation digital inputs         5000 AC for 1 minute           • between the channels, in groups of         2           • Evidence immunity asplant dicharge of static olicitation         Yes           • Interference immunity asplant dicharges         8 kV		
Herrup Sci Springer Sci		2
Intervents/disputs/cstable information           Disposition indication LED           • RUNSTOP LED         Yes           • RUNSTOP LED         Yes           • MAINT LED         Yes           • Counter         6           • Counting frequency, max.         100 HHz           Frequency measurement         Yes           • Counter of positioning axes, max.         8           Number of position controlled positioning axes, max.         8           Position approxement         Yes           Number of position controlled positioning axes, max.         8           Position approxement         Yes           Number of position controlled positioning axes, max.         4           Position approxement         Yes           Number of position position position space         10           Position approxements         6           • Position approxements         800V AC for 1 minute           • Detention approxements         No           • Detention approxements         No           • Detention approxements		
Depresents indication LED           • RUNSTOP LED         Yes           • ERROR LED         Yes           • MANT LED         Yes           • MANT LED         Yes           • May and Expendent Constructions         6           • Counting frequency, max.         100 MHz           • Frequency measurement         Yes           • Number of counters         6           • Counting frequency, max.         100 MHz           • Frequency measurement         Yes           • Number of adams         8           Number of patien-controlled positioning axes, max.         8           • Number of adams inputs         4           Potential separation digital inputs         500V AC for 1 minute           • Detersterial separation digital inputs         500V AC for 1 minute           • Detersterial separation digital inputs         500V AC for 1 minute           • Detersterial separation digital inputs         500V AC for 1 minute           • Detersterial separation digital inputs         500V AC for 1 minute           • Detersterial separation digital inputs         500V AC for 1 minute           • Detersterial separation digital inputs         500V AC for 1 minute           • Detersterial separation digital inputs         500V AC for 1 minute           • Inteff		512 NUYIC
• RUNSTOP LED     Yes       • ERROR LED     Yes       • MANT LED     Yes       Integrated Functions     6       • Counter     6       • Counters     6       • Counters     7       • Counters     7       • Counters     8       • Counters     9       • Detremain space     9       • Potential separation     9       • Detremain inputs     5000 AC for 1 minute       • Detremain separation     9       • Detremain expansit discharge of static		
• FRROR LED     Yes       Integrated Functions     6       • Counting frequency, max.     100 H4z       • Proguency measurement     Yes       • controlled positioning axes, max.     8       • Number of positioning axes, max.     8       • Number of positioning axes, max.     8       • Number of positioning axes, max.     8       • Positioning axes and subs-direction infertice     Up to 4 with SB 1222       • Potomballs separation digital inputs     4       • Potential separation digital inputs     500V AC for 1 minute       • Potential separation digital inputs     500V AC for 1 minute       • Potential separation digital inputs     500V AC for 1 minute       • Potential separation digital inputs     500V AC for 1 minute       • Potential separation digital inputs     500V AC for 1 minute       • Evence the channels, in groups of     1       • Potential separation digital inputs     500V AC for 1 minute       • Evence the channels, in groups of     2       • Potential separation digital inputs     500V AC for 1 minute       • Evence the channels, in groups of     2       • Evence the channels, in groups of     2       • Evence the channels, in groups of     2       • Interference immunity to adale discharge of static election/or     Yes       • Interference immunity adale discharge of static ele	5	Vac
MINT LED         Yes           Integrated Functions         6           Counting Foquency, max.         100 MHz           Frequency measurement         Yes           controlled positioning axes, max.         8           Number of positioning axes valued-direction interface         Up to 4 with SB 1222           Public ontroller         Yes           Number of positioning axes valued-direction interface         Up to 4 with SB 1222           Public ontroller         Yes           Number of positioning axes, max.         8           Positial separation digital inputs         500V AC for 1 minute           • External separation digital outputs         500V AC for 1 minute           • between the channels in groups of         2           External separation digital outputs         No           • between the channels in groups of         2           External separation digital outputs         Yes           • Interference immunity against discharge of static electricity         Yes           • Interference immunity against discharge of static electricity         Yes           • Interference immunity against discharge		
Integrated Functions         Counter           Counter         6           • Counter of counters         6           • Counting frequency, max.         100 kHz           Prequency measurement         Yes           controlled positioning area via pulse-direction interface         Up to 4 with SB 1222           PIO controller         Yes           Number of position-garaces via pulse-direction interface         Up to 4 with SB 1222           PIO controller         Yes           Number of position-garaces via pulse-direction interface         Up to 4 with SB 1222           PIO controller         Yes           Number of position-garaces via pulse-direction interface         Up to 4 with SB 1222           PIO controller         Yes           Number of position-garaces via pulse-direction interface         Up to 4 with SB 1222           PIO controller         Yes           • Potential separation digital npuls         500V AC for 1 minute           • between the channels, in groups of         1           • Detential separation digital outputs         Relays           • between the channels, in groups of         2           EMC            Interference immunity against discharge of static electronity            • Interference immunity against discharge		
Counter     6       • Number of counters     6       • Counting frequency, max.     100 kHz       Frequency measurement.     Yes       Number of position-goarse via pulse-direction interface     Up to 4 wth SB 1222       PUD controller     Yes       Number of position-goarse via pulse-direction interface     Up to 4 wth SB 1222       PD controller     Yes       Number of atam inputs     4       Potential separation digital inputs     500V AC for 1 minute       • Detential separation digital outputs     500V AC for 1 minute       • Detential separation digital outputs     500V AC for 1 minute       • Detential separation digital outputs     600V AC for 1 minute       • Detential separation digital outputs     8       • Detential separation digital outputs     Relays       • between the channels, in groups of     2 <b>EffC</b> Interference immunity against discharge of static electricity       • Interference immunity against discharge     8 kV       • Interference immunity on supply lines acc: to IEC 6 f1000- 4-5       • Interference immunity on supply lines acc: to IEC 6 f1000- 4-5       • Interference immunity on supply lines acc: to IEC 6 f1000- 4-5       • Interference immunity on supply lines acc: to IEC 6 f1000- 4-5       • Interference immunity on supply lines acc: to IEC 6 f1000- 4-5       • Interference immunity on supply lines		
• Number of counters     6       • Counting frequency, max.     100 H/z       Frequency, measurement.     Yes       controlled positioning axes, and     8       Number of positioning axes via pulse-direction interface     Up to 4 with SB 1222       PIO controller     Yes       Number of positioning axes, and     4       Potential separation digital inputs     500V AC for 1 minute       • Detential separation digital inputs     500V AC for 1 minute       • Detential separation digital outputs     Relays.       • Potential separation digital outputs     Relays.       • Detential separation digital outputs     Relays.       • Detential separation digital outputs     Relays.       • Detential separation digital outputs     Relays.       • Interference immunity against discharge of static electricity     •       • Interference immunity against discharge of static electricity     •       • Interference immunity on supply lines acc. to IEC 6 f1000- 4-5     Yes       • Interference immunity on supply lines acc. to IEC 6 f1000- 4-5     Yes       • Interference immunity against conducted variable dicturbance intorference thy high-frequency fields     Yes       • Interference immunity against conducted variable dicturbance intorference thy high-frequency fields     Yes       • Interference immunity against conducted variable dicturbance intorecement by high-frequency fields     Yes		
• Counting frequency, max.         100 kHz           Frequency measurement         Yes           Number of position-controlled positioning axes, max.         8           Number of position-controlled positioning axes, max.         4           Potential separation digital inputs         500V AC for 1 minute           • between the channels, in groups of         1           Potential separation digital outputs         Relays           • between the channels, in groups of         2           EMC         Interference immunity against discharge of static electricity           • Interference immunity against discharge of static electricity         Yes           • Test voltage a controll discharge         8 kV           • Interference immunity on supply lines acc. to IEC 61000- 42         Yes           • Interference immunity on supply lines		0
Frequency measurement     Yes       controlled positioning axes, max.     8       Number of position controlled positioning axes, max.     8       Number of positioning axes via pulse-direction interface     Up to 4 with SB 1222       PID controller     Yes       Number of positioning axes via pulse-direction interface     Up to 4 with SB 1222       PID controller     Yes       Number of position controller     Yes       Potential separation digital inputs     500V AC for 1 minute       • Detential separation digital outputs     Folential separation digital outputs       • Potential separation digital outputs     Relays       • between the channels, in groups of     2       EMC     Interference immunity against discharge of static electricity       • Interference immunity against discharge of static electricity     8 kV       • Test vollage at an discharge     6 kV       Interference immunity on supply lines acc. to IEC 61000-42     Yes       • Interference immunity on supply lines acc. to IEC 61000-42     Yes       • Interference immunity against challes acc. to IEC 61000-42     Yes       • Interference immunity against challes acc. to IEC 61000-42     Yes       • Interference immunity against challes acc. to IEC 61000-42     Yes       • Interference immunity against challes acc. to IEC 61000-45     Yes       • Interference immunity against challes acc. t		
controlled position-orticled positioning aces, max.     8       Number of position-orticled positioning aces, max.     8       Number of positioning aces via pulse-direction interface     Up to 4 with SB 1222       PID controller     Yes       Number of positioning aces via pulse-direction interface     Up to 4 with SB 1222       PID controller     Yes       Potential separation digital inputs     500V AC for 1 minute       • Potential separation digital inputs     500V AC for 1 minute       • between the channels, in groups of     1       • Potential separation digital outputs     Relays       • between the channels, in groups of     2       EAC     Interference immunity against discharge of static electricity       • Interference immunity against discharge of static     8 kV       - Test voltage at a contact discharge     8 kV       - Test voltage at a contact discharge     8 kV       • Interference immunity against voltage scc. to IEC 61000- 4-4     Yes       • Interference immunity on supply lines acc. to IEC 61000- 4-5     Yes       • Interference immunity against voltage surget     Yes    <		
Number of positioning axes, max.         8           Number of positioning axes, va pulse-direction interface         Up to 4 with SB 1222           PID controller         Yes.           Number of alarm inputs         4           Potential separation digital inputs         500V AC for 1 minute                 • between the channels, in groups of                 • Potential separation digital outputs               Federatial separation digital outputs                 • Potential separation digital outputs               Federatial separation digital outputs                 • Potential separation digital outputs               Relays                 • between the channels, in groups of               2                 • between the channels               Potential separation digital outputs                 • Interference immunity against discharge of static electricity               electricity acc. to IEC 6 1000-42                 • Interference immunity on supply lines acc. to IEC 6 1000-               Yes                 • Interference immunity against conducted variable disturbance induced by high-frequency fields                 • Interference immunity against conducted variable disturbacconduced by high-frequency fields <t< td=""><td></td><td></td></t<>		
Number of positioning axes via pulse-direction interface         Up to 4 with SB 1222           PID controller         Yes           Number of alarm inputs         4           Potential separation digital inputs         500V AC for 1 minute           • Potential separation digital inputs         500V AC for 1 minute           • between the channels, in groups of         1           Potential separation digital outputs         Relays           • between the channels, in groups of         2           • therefreence immunity against discharge of static electricity         Ves           • Interference immunity against discharge of static electricity         Yes           - Test voltage at or discharge         8 kV           • Interference immunity on supply lines acc. to IEC 61000-424         Yes           • Interference immunity on supply lines acc. to IEC 61000-424         Yes           • Interference immunity against voltage surge         Yes           • Interference immunity against voltage surge         Yes           • Interference immunity against voltage surge         Yes           • Interference immunity againsthigh-frequency radiation         Yes		
PID controller     Yes       Number of alarm inputs     4       Potential separation digital inputs     500V AC for 1 minute       • Detential separation digital inputs     500V AC for 1 minute       • Detential separation digital inputs     500V AC for 1 minute       • Detential separation digital outputs     Relays       • Detential separation digital outputs     Relays       • Detential separation digital outputs     Relays       • between the channels, in groups of     2       EMC     Interference immunity against discharge of static electricity       • Interference immunity against discharge of static     Yes       • electricity acc. In ECE 61000-4:2     Yes       - Test voltage at an discharge     8 kV       - Test voltage at acticat discharge     6 kV       Interference immunity against discharge of testic for the forence     Yes       • Interference immunity on supply lines acc. to IEC 61000- 44     Yes       • Interference immunity against conducted variable disturbance induced by high-frequency fields     Yes       • Interference immunity against bight-frequency radiation     Yes       • Interference immunity against bight-frequency r		
Number of alarm inputs     4       Potential separation digital inputs     500V AC for 1 minute       • Potential separation digital inputs     500V AC for 1 minute       • Potential separation digital outputs     1       Potential separation digital outputs     Relays       • Potential separation digital outputs     Relays       • Potential separation digital outputs     Relays       • between the channels, in groups of     2       EMC     EMC       Interference immunity against discharge of static electricity     Yes       • Interference immunity against discharge of static electricity     Yes       • Interference immunity to cable-borne interference     6 k/V       Interference immunity on supply lines acc. to IEC 6 1000-42     Yes       • Interference immunity on supply lines acc. to IEC 6 1000-44     Yes       • Interference immunity on supply lines acc. to IEC 6 1000-44     Yes       • Interference immunity on supply lines acc. to IEC 6 1000-44     Yes       • Interference immunity against conducted variable disturbance induced by high-frequency fields     Yes       • Interference immunity against inductive variable disturbance induced by high-frequency fields     Yes       • Interference immunity against inductive variable disturbance induced by high-frequency fields     Yes       • Interference immunity against inductive variable disturbance induced by high-frequency fields     Yes <tr< td=""><td></td><td></td></tr<>		
Potential separation           Potential separation digital inputs           • Potential separation digital inputs           • between the channels, in groups of           • Potential separation digital outputs           • Potential separation digital outputs           • between the channels           • interference immunity against discharge of static           • Interference immunity on supply lines acc. to IEC 61000-42           • Interference immunity on supply lines acc. to IEC 61000-44           • Interference immunity against voltage surge           • Interference immunity against voltage surge           • Interference immunity against voltage surge           • Interference immunity against voltage surge      <		
Potential separation digital inputs       500V AC for 1 minute <ul> <li>Potential separation digital inputs</li> <li>S00V AC for 1 minute</li> <li>Potential separation digital outputs</li> <li>Potential separation digital outputs</li> <li>Relays</li> <li>between the channels</li> <li>No</li> <li>between the channels</li> <li>No</li> <li>between the channels</li> <li>Interference immunity against discharge of static electricity</li> <li>Interference immunity against discharge</li> <li>KV</li> <li>Test voltage at discharge</li> <li>KV</li> <li>Interference immunity on supply lines ac: to IEC 61000-44</li> <li>Interference immunity on supply lines ac: to IEC 61000-44</li> <li>Interference immunity on supply lines ac: to IEC 61000-44</li> <li>Interference immunity on supply lines ac: to IEC 61000-44</li> <li>Interference immunity on supply lines ac: to IEC 61000-45</li> <li>Interference immunity on supply lines ac: to IEC 61000-45</li> <li>Interference immunity on supply lines ac: to IEC 61000-45</li> <li>Interference immunity on supply lines ac: to IEC 61000-45</li> <li>Interference immunity against tigh-frequency radiation ac: to IEC 61000-45</li> <li>Interference immunity against high-frequency radiation ac: to IEC 61000-45</li> <li>Interference immunity against high-frequency radiation ac: to IEC 61000-46</li> <li>Emission of radio interference ac: to EN 55 011</li> <li>Interference ac: to EN 55 011&lt;</li></ul>		4
• Potential separation digital inputs     500V AC for 1 minute       • between the channels, in groups of     1       Potential separation digital outputs     Relays       • between the channels     No       • between the channels, in groups of     2       EMC     Interference immunity against discharge of static electricity       • Interference immunity against discharge of static electronity     • No       • Interference immunity against discharge     8 kV       - Test voltage at air discharge     8 kV       • Test voltage at air discharge     8 kV       • Interference immunity to supply lines acc. to IEC 61000- 4.4     Yes       • Interference immunity on supply lines acc. to IEC 61000- 4.4     Yes       • Interference immunity on supply lines acc. to IEC 61000- 4.5     Yes       Interference immunity against toitage surge     Yes       • Interference immunity against toitage according to Prove the By high-frequency fields     Yes       • Interference immunity against toitage according to Prove the By high-frequency fields     Yes       • Interference immunity against toitage according to Prove the By high-frequency fields     Yes       • Interference immunity against toitage     Yes		
between the channels, in groups of Potential separation digital outputs Potential separation Potential Po		
Potential separation digital outputs       Relays <ul> <li>Potential separation digital outputs</li> <li>Detween the channels</li> <li>Detween the channels, in groups of</li> <li>2</li> </ul> EMC           Interference immunity against discharge of static electricity acc. to IEC 61000-4-2         Yes           - Test voltage at an discharge         8 kV           - Test voltage at an discharge         6 kV           Interference immunity on supply lines acc. to IEC 61000- 44         Yes           • Interference immunity on supply lines acc. to IEC 61000- 44         Yes           • Interference immunity against discharge         KV           Interference immunity against voltage surge         File           • Interference immunity against voltage surge         Yes           • Interference immunity against voltage surge         Yes           • Interference immunity against high-frequency relation acc. to IEC 61000- 4-5         Yes           Interference immunity against toge surge         Yes           • Interference immunity against toge surge         Yes           Interference immunity against toge toge surge         Yes           Interference immunity against toge toge surge         Yes           Interference immunity against toge toge toge toge toge toge toge tog	· • •	
• Potential separation digital outputs     Relays       • between the channels     No       • between the channels, in groups of     2       EMC     Interference immunity against discharge of static electricity       • Interference immunity against discharge of static electricity     Yes       • Interference immunity actic tiles 60100-4.2     Yes       — Test voltage at air discharge     8 kV       — Test voltage at contact discharge     6 kV       Interference immunity to cable-borne interference        • Interference immunity on supply lines acc. to IEC 61000- 4.4     Yes       • Interference immunity against disturbance induced variable disturbance induced by high-frequency fields       • Interference immunity against high-frequency radiation acc. to IEC 61000-4     Yes       • Interference immunity against high-frequency radiation acc. to IEC 61000-4     Yes       • Interference immunity against high-frequency radiation acc. to IEC 61000-4     Yes       • Interference immunity against high-frequency radiation acc. to IEC 61000-4     Yes       • Limit class A, for use in industrial areas     Yes; Group 1       • Limit class B, for use in industrial areas     Yes; Group 1       • Limit class A for use in industrial areas     Yes; Group 1       • Limit class A for use in industrial areas     Yes; Group 1       • Limit class A for use in industrial areas     Yes; Group 1       • Degree and c		1
• between the channels     No       • between the channels, in groups of     2       EMC     Interference immunity against discharge of static electricity       • Interference immunity against discharge of static electricity     Yes       - Test voltage at an discharge     8 kV       - Test voltage at an discharge     6 kV       Interference immunity to cable-borne interference     6 kV       • Interference immunity on supply lines acc. to IEC 61000-44     Yes       • Interference immunity on supply lines acc. to IEC 61000-44     Yes       • Interference immunity against voltage surge     Yes       • Interference immunity against ingh-frequency radiation acc. to IEC 61000-45     Yes       • Interference immunity against high-frequency radiation acc. to IEC 61000-45     Yes       • Interference immunity against high-frequency radiation acc. to IEC 61000-45     Yes       • Interference immunity against high-frequency radiation acc. to IEC 61000-45     Yes       • Interference immunity against high-frequency radiation acc. to IEC 61000-45     Yes       • Interference immunity against high-frequency radiation acc. to IEC 61000-46     Yes       • Limit class A, for use in industrial areas     Yes; Group 1       • Limit class B, for use in industrial areas     Yes; Group 1       • Limit class G protection     IP20       Standards, approvals, certificates     Yes       • Lus     Yes </td <td></td> <td>Delaur</td>		Delaur
• between the channels, in groups of       2         Interference immunity against discharge of static electricity       • Interference immunity against discharge of static electricity         • Interference immunity against discharge of static electricity acc. to IEC 61000-4-2       Yes         - Test voltage at ontact discharge       8 kV         - Test voltage at contact discharge       6 kV         Interference immunity to cable-borne interference       •         • Interference immunity on supply lines acc. to IEC 61000-4-4       Yes         - 4.4       •         • Interference immunity against discharge surge       •         • Interference immunity against voltage surge       •         • Interference immunity against high-frequency radiation acc. to IEC 61000-4-4       Yes         -4.5       •         Interference immunity against high-frequency radiation acc. to IEC 61000-4-5       Yes         • Interference immunity against high-frequency radiation acc. to IEC 61000-4-5       Yes         • Interference immunity against high-frequency radiation acc. to IEC 61000-4-5       Yes         • Limit class A, for use in industrial areas       Yes; Group 1         • Limit class B, for use in residential areas       Yes; When appropriate measures are used to ensure compliance with the limits for Class a provals, certificates         • Limit class A, for use in residential areas       Yes; When	· • •	
EMC         Interference immunity against discharge of static electricity         • Interference immunity against discharge         electricity acc. to IEC 61000-4-2         — Test voltage at air discharge         8 kV         — Test voltage at contact discharge         6 kV         Interference immunity to cable-borne interference         • Interference immunity on supply lines acc. to IEC 61000- 4-4         • Interference immunity on signal cables acc. to IEC 61000- 4-4         • Interference immunity against voltage surge         • Interference immunity against conducted variable disturbance induced by high-frequency fields         • Interference immunity against conducted variable disturbance induced by high-frequency fields         • Interference immunity against high-frequency radiation acc to IEC 61000-4-6         Emission of radio interference acc. to EN 55 011         • Limit class A, for use in inclustrial areas       Yes; Group 1         • Limit class B, for use in residential areas       Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011         • Degree and class of protection       IP20         Standards, approvals       Yes         • CE mark       Yes         • CLus       Yes         • FM approval       Yes         FM approval       Yes <td></td> <td></td>		
Interference immunity against discharge of static electricity         Yes           - Test voltage at air discharge         8 kV           - Interference immunity to cable-borne interference         6 kV           Interference immunity on supply lines acc. to IEC 61000- 4.4         Yes           - Interference immunity against voltage surge         Yes           - Interference immunity against bigh-frequency radiation acc. to IEC 61000-4.6         Yes           - Interference immunity against high-frequency radiation acc. to IEC 61000-4.6         Yes           Emission of radio interference acc. to EN 55 011         Yes           - Limit class A, for use in industrial areas         Yes; Group 1           - Limit class A, for use in industrial areas         Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011           Degree and class of protection         IP20           Standards, approvals, certificates         Yes           CE mark         Yes           UL approval         Yes           FM approval		2
• Interference immunity against discharge of static electricity acc. to IEC 61000-4-2       Yes         - Test voltage at air discharge       8 kV         • Test voltage at contact discharge       6 kV         Interference immunity to cable-borne interference       Yes         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes         • Interference immunity against voltage surge       Yes         • Interference immunity against conducted variable disturbance induced by high-frequency fields       Interference immunity against conducted variable disturbance induced by high-frequency fields         • Interference immunity against high-frequency radiation acc. to IEC 61000-4-6       Yes         Emission of radio interference acc. to EN 55 011       Yes; Group 1         • Limit class A, for use in industrial areas       Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011         Degree and class of protection       IP20         Standards, approvals, cortificates       Yes         CE mark       Yes         UL approval       Yes		
electricity acc: to IEC 61000-4-2 - Test voltage at air discharge 8 kV - Test voltage at contact discharge 8 kV Interference immunity to cable-borne interference • Interference immunity on supply lines acc. to IEC 61000- 4-4 • Interference immunity on signal cables acc. to IEC 61000- 4-4 Interference immunity against voltage surge • Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against conducted variable disturbance induced by high-frequency fields • Interference immunity against high-frequency radiation acc. to IEC 61000-45 Interference acc. to EN 55 011 • Limit 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 • Limit class A, for use in residential areas Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011 • Limit class A, for use in residential areas Yes; Group 1 Yes • Limit class A, for use in residential areas Yes; Group 1 Yes • Limit class A, for use in residential areas Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011 • Limit class A, for use in residential areas Yes • Class B according to EN 55011 • Limit class A, cortificates • CE mark Yes • CE mark Yes • Ref (formerty C-TICK) Yes • KC approval Yes • Capproval Yes • C		Vez
- Test voltage at air discharge8 kV- Test voltage at contact discharge6 kVInterference immunity to cable-borne interference6 kVInterference immunity on supply lines acc. to IEC 61000-Yes4.4- Interference immunity on supply lines acc. to IEC 61000-Yes4.4- Interference immunity against voltage surgeYes• Interference immunity against voltage surge- Yes• Interference immunity against conducted variable disturbance induced by high-frequency fields- Yes• Interference immunity against tigh-frequency radiation acc. to IEC 61000-4-6Yes• Interference immunity against bigh-frequency radiation acc. to IEC 61000-4-8Yes• Limit class A, for use in industrial areas • Limit class B, for use in industrial areas • Limit class B, for use in industrial areas • Limit class B, for use in residential areas • Yes; Group 1Yes• Limit class A, for use in industrial areas • Limit class B, for use in residential areas • Limit class B, for use in residential areas • Yes; Group 1IP degree of protection• Limit class A, for use in industrial areas • Limit class B, for use in residential areas • Yes; Group 1Yes• Limit class B, for use in residential areas • Limit class B, approvals, certificatesYes• CE mark • UL approval • CE markYes• CE mark • UL approval • CHUK)Yes• FM approval • Yes• FM approval • FM ap		res
Test voltage at contact discharge       6 kV         Interference immunity to cable-borne interference	-	8 kV
Interference immunity to cable-borne interference         • Interference immunity on supply lines acc. to IEC 61000- 4-4         • Interference immunity on signal cables acc. to IEC 61000- 4-4         Interference immunity against voltage surge         • Interference immunity against voltage surge         • Interference immunity against conducted variable disturbance induced by high-frequency fields         • Interference immunity against high-frequency radiation acc. to IEC 61000-4-6         Emission of radio interference acc. to EN 55 011         • Limit class A, for use in industrial areas         • Limit class B, for use in residential areas         Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011         Degree and class of protection         IP degree of protection         IP 20         Standards, approvals, certificates         CE mark       Yes         UL approval       Yes         eUlus       Yes         FM approval       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes	— Test voltage at contact discharge	6 kV
Interference immunity on supply lines acc. to IEC 61000- 4-4     Interference immunity on signal cables acc. to IEC 61000- 4-4     Interference immunity against voltage surge     Interference immunity against voltage surge     Interference immunity against conducted variable disturbance induced by high-frequency fields     Interference immunity against conducted variable disturbance induced by high-frequency fields     Interference immunity against high-frequency radiation acc. to IEC 61000- 4-5     Interference immunity against conducted variable disturbance induced by high-frequency fields     Interference immunity against high-frequency radiation acc. to IEC 61000-4-6     Emission of radio interference acc. to EN 55 011     I Limit class A, for use in industrial areas     Yes; Group 1     Ves; 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     IP degree of protection     IP degree of protection     IP degree of protection     IVes     Ves     Ves     Ves     Ves     CE mark     Ves     Ves     Ves     FM approval     Yes     FM approval     Yes     KC approval     Yes		
4-4       • Interference immunity on signal cables acc. to IEC 61000-       Yes         4-4       • Interference immunity against voltage surge       • Interference immunity on supply lines acc. to IEC 61000-       Yes         4-5       • Interference immunity against conducted variable disturbance induced by high-frequency fields       Yes         Interference immunity against conducted variable disturbance induced by high-frequency fields       Yes         Interference immunity against high-frequency radiation acc. to IEC 61000-4.6       Yes         Emission of radio interference acc. to EN 55 011       Yes         • Limit class A, for use in industrial areas       Yes; Group 1         • Limit class of protection       IP degree of protection         IP degree of protection       IP20         Standards, approvals, certificates       Yes         CE mark       Yes         UL approval       Yes         eUlus       Yes         FM approval       Yes         RCM (formerly C-TICK)       Yes         RCM (formerly C-TICK)       Yes	·	Yes
4-4         Interference immunity against voltage surge         • Interference immunity on supply lines acc. to IEC 61000- 4-5         Interference immunity against conducted variable disturbance induced by high-frequency fields         • Interference immunity against conducted variable disturbance induced by high-frequency fields         • Interference immunity against high-frequency radiation acc. to IEC 61000-4-6       Yes         Emission of radio interference acc. to EN 55 011       • Limit class A, for use in industrial areas         • Limit class B, for use in residential areas       Yes; Group 1         • Limit class of protection       Yes; When appropriate measures are used to ensure compliance with the limits for class B according to EN 55011         Degree and class of protection       IP20         Standards, approvals, certificates       Yes         CE mark       Yes         UL approval       Yes         FM approval       Yes         FM approval       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes		
Interference immunity against voltage surge         • Interference immunity on supply lines acc. to IEC 61000- 4-5         Interference immunity against conducted variable disturbance induced by high-frequency fields         • Interference immunity against high-frequency radiation acc. to IEC 61000-4-6         Emission of radio interference acc. to EN 55 011         • Limit class A, for use in industrial areas         Yes; Group 1         • Limit class B, for use in residential areas         Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011         Degree and class of protection         IP degree of protection         IP degree of protection         UL approval       Yes         CE mark       Yes         UL approval       Yes         FM approval       Yes         FM approval       Yes         FM approval       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes		Yes
Interference immunity on supply lines acc. to IEC 61000- 4-5         Yes           Interference immunity against conducted variable disturbance induced by high-frequency fields         Yes           Interference immunity against high-frequency radiation acc. to IEC 61000-4-6         Yes           Emission of radio interference acc. to EN 55 011         Yes           Limit class A, for use in industrial areas         Yes; Group 1           Limit class B, for use in residential areas         Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011           Degree and class of protection         IP20           Standards, approvals, certificates         Yes           CE mark         Yes           UL approval         Yes           FM approval         Yes           FM approval         Yes           RCM (formerly C-TICK)         Yes           KC approval         Yes		
4-5       Interference immunity against conducted variable disturbance induced by high-frequency fields         • Interference immunity against conducted variable disturbance induced by high-frequency fields       Yes         • Interference immunity against high-frequency radiation acc. to IEC 61000-4-6       Yes         Emission of radio interference acc. to EN 55 011       Yes; Group 1         • Limit class A, for use in industrial areas       Yes; Group 1         • Limit class B, for use in residential areas       Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011         Degree and class of protection       IP20         Standards, approvals, certificates       Yes         CE mark       Yes         UL approval       Yes         cULus       Yes         FM approval       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes		Vee
Interference immunity against conducted variable disturbance induced by high-frequency fields <ul> <li>Interference immunity against high-frequency radiation acc. to IEC 61000-4-6</li> <li>Emission of radio interference acc. to EN 55 011</li> <li>Limit class A, for use in industrial areas</li> <li>Limit class B, for use in residential areas</li> <li>Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011</li> </ul> <ul> <li>Degree and class of protection</li> <li>IP degree of protection</li> <li>IP20</li> </ul> <ul> <li>Standards, approvals, certificates</li> <li>CE mark</li> <li>Yes</li> <li>Ves</li> <li>UL approval</li> <li>Yes</li> <li>Yes</li> <li>RCM (formerly C-TICK)</li> <li>Yes</li> <li>Kc approval</li> <li>Yes</li> </ul>		res
• Interference immunity against high-frequency radiation acc. to IEC 61000-4-6YesEmission of radio interference acc. to EN 55 011•• Limit class A, for use in industrial areas • Limit class B, for use in residential areas • Limit class B, for use in residential areas • Class B according to EN 55011Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011Degree and class of protection IP degree of protectionIP20Standards, approvals, certificatesYesCE mark UL approval cULusYesVesYesRCM (formerly C-TICK) KC approvalYesYesYesKC approval KC approvalYes		ced by high-frequency fields
acc. to IEC 61000-4-6         Emission of radio interference acc. to EN 55 011 <ul> <li>Limit class A, for use in industrial areas</li> <li>Yes; Group 1</li> <li>Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011</li> </ul> Degree and class of protection         IP degree of protection         IP degree of protection         CE mark         UL approval         CLUUS         Yes         FM approval         Yes         RCM (formerly C-TICK)         KC approval         Yes		
• Limit class A, for use in industrial areasYes; Group 1 Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011Degree and class of protectionIP20IP degree of protectionIP20Standards, approvals, certificatesCE markYesUL approvalYescULusYesFM approvalYesRCM (formerly C-TICK)YesKC approvalYesKC approvalYes		
• Limit class B, for use in residential areasYes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011Degree and class of protectionIP20IP degree of protectionIP20Standards, approvals, certificatesYesCE markYesUL approvalYescULusYesFM approvalYesRCM (formerly C-TICK)YesKC approvalYesYesYes	Emission of radio interference acc. to EN 55 011	
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	<ul> <li>Limit class A, for use in industrial areas</li> </ul>	Yes; Group 1
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	• Limit class B, for use in residential areas	
Standards, approvals, certificates         CE mark       Yes         UL approval       Yes         cULus       Yes         FM approval       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes	Degree and class of protection	
CE markYesUL approvalYescULusYesFM approvalYesRCM (formerly C-TICK)YesKC approvalYes	IP degree of protection	IP20
UL approval     Yes       cULus     Yes       FM approval     Yes       RCM (formerly C-TICK)     Yes       KC approval     Yes	Standards, approvals, certificates	
cULus     Yes       FM approval     Yes       RCM (formerly C-TICK)     Yes       KC approval     Yes	CE mark	Yes
FM approvalYesRCM (formerly C-TICK)YesKC approvalYes	UL approval	Yes
RCM (formerly C-TICK)     Yes       KC approval     Yes	cULus	Yes
KC approval Yes	FM approval	Yes
	RCM (formerly C-TICK)	Yes
Marine approval 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	
• min.	-20 °C
• max.	60 °C; Number of simultaneously activated inputs or outputs 4 or 3 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 8 or 6 at 55 °C horizontal or 45 °C vertical
<ul> <li>horizontal installation, min.</li> </ul>	-20 °C
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
<ul> <li>vertical installation, min.</li> </ul>	-20 °C
<ul> <li>vertical installation, max.</li> </ul>	50 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
• Operation, min.	795 hPa
<ul> <li>Operation, max.</li> </ul>	1 080 hPa
Storage/transport, min.	660 hPa
Storage/transport, max.	1 080 hPa
Altitude during operation relating to sea level	
<ul> <li>Installation altitude, min.</li> </ul>	-1 000 m
Installation altitude, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
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/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) 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	
• SO2 at RH < 60% without condensation	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
configuration / header	
configuration / programming / header	
Programming language	
— LAD	Yes
— FBD	Yes
— SCL	Yes
Know-how protection	
User program protection/password protection	Yes
Copy protection	Yes
Block protection	Yes
Access protection	Vec
protection of confidential configuration data     Protection lovel: Write protection	Yes
Protection level: Write protection	Yes
Protection level: Read/write protection     Protection level: Complete protection	Yes
Protection level: Complete protection programming / cycle time monitoring / header	Yes
adjustable	Yes
Dimensions	
	90 mm
Width	
Height	100 mm
Depth Weights	75 mm
	295 a
Weight, approx.	385 g
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