Data sheet 6ES7215-1AG40-0XB0





SIMATIC S7-1200, CPU 1215C, compact CPU, DC/DC/DC, 2 PROFINET ports, onboard I/O: 14 DI 24 V DC; 10 DO 24 V DC; 0.5 A; 2 AI 0-10 V DC, 2 AO 0-20 mA DC, power supply: DC 20.4-28.8 V DC, program/data memory 200 KB



Figure similar

1. William 1		
General information		
Product type designation	CPU 1215C DC/DC/DC	
Firmware version	V4.7	
Engineering with		
 Programming package 	STEP 7 V20 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+		
 Rated value (DC) 	24 V	
 permissible range, lower limit (DC) 	20.4 V	
 permissible range, upper limit (DC) 	28.8 V	
Input current		
Current consumption (rated value)	500 mA; CPU only	
Current consumption, max.	1 500 mA; CPU with all expansion modules	
Inrush current, max.	12 A; at 28.8 V DC	
I²t	0.5 A ² ·s	
Output current		
for backplane bus (5 V DC), max.	1 600 mA; Max. 5 V DC for SM and CM	
Encoder supply		
24 V encoder supply		
• 24 V	L+ minus 4 V DC min.	
Power loss		
Power loss, typ.	12 W	
Memory		
Work memory		
• integrated	200 kbyte	
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	100		
	0.09 us: / instruction		
for word 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.	8 kbyte; Size of bit memory address area		
Local data			
per priority class, max.	16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2 to 26: 6 KB		
Address area			
Process image			
Inputs, adjustable	1 kbyte		
Outputs, adjustable	1 kbyte		
Hardware configuration			
Number of modules per system, max.	3 comm. modules, 1 signal board, 8 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	14; Integrated		
 of which inputs usable for technological functions 	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			
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	0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 μs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 ms		
— at "0" to "1", min.	0.2 ms		
— at "0" to "1", max.	12.8 ms		
for interrupt inputs			
— parameterizable	Yes		
for technological functions			
— parameterizable	Single phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz		
Cable length			
shielded, max.	500 m; 50 m for technological functions		
• unshielded, max.	300 m; for technological functions: No		
Digital outputs			
Number of digital outputs	10		
of which high-speed outputs	4; 100 kHz Pulse Train Output		
Limitation of inductive shutdown voltage to	L+ (-48 V)		
Switching capacity of the outputs	(15.1)		
with resistive load, max.	0.5 A		
• on lamp load, max.	5 W		
Output voltage			

● for signal "0", max.	0.1 V; with 10 kOhm load		
● for signal "1", min.	20 V		
Output current			
for signal "1" rated value	0.5 A		
for signal "0" residual current, max.	0.1 mA		
Output delay with resistive load			
• "0" to "1", max.	1 µs		
• "1" to "0", max.	5 µs		
Switching frequency			
 of the pulse outputs, with resistive load, max. 	100 kHz		
Relay outputs			
Number of relay outputs	0		
Cable length			
• shielded, max.	500 m		
• unshielded, max.	150 m		
Analog inputs			
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		
	2 TOOK OHITIS		
Cable length	100 m: twisted and chielded		
• shielded, max.	100 m; twisted and shielded		
Analog outputs			
Number of analog outputs	2		
Output ranges, current			
• 0 to 20 mA	Yes		
Analog value generation for the inputs			
Integration and conversion time/resolution per channel			
 Resolution with overrange (bit including sign), max. 	10 bit		
 Integration time, parameterizable 	Yes		
 Conversion time (per channel) 	625 µs		
Analog value generation for the outputs			
Integration and conversion time/resolution per channel			
 Resolution with overrange (bit including sign), max. 	10 bit		
Encoder			
Connectable encoders			
2-wire sensor	Yes		
1. Interface			
Interface type	PROFINET		
Isolated	Yes		
automatic detection of transmission rate	Yes		
Autoregoing	Yes		
Autocrossing	Yes		
Interface types	V		
• RJ 45 (Ethernet)	Yes		
Number of ports	2		
integrated switch	Yes		
Protocols			
DDOCINET IO Occupantion			
PROFINET IO Controller	Yes		
PROFINET IO Controller PROFINET IO Device	Yes		
PROFINET IO Device	Yes		
PROFINET IO DeviceSIMATIC communication	Yes Yes		
PROFINET IO DeviceSIMATIC communicationOpen IE communication	Yes Yes Yes; Optionally also encrypted		
 PROFINET IO Device SIMATIC communication Open IE communication Web server 	Yes Yes; Optionally also encrypted Yes		
 PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy 	Yes Yes; Optionally also encrypted Yes		
 PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller 	Yes Yes; Optionally also encrypted Yes Yes		
PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max.	Yes Yes; Optionally also encrypted Yes Yes		

— Isochronous mode	No	
— IRT	No	
— PROFlenergy	No	
 Prioritized startup 	Yes	
 Number of IO devices with prioritized startup, max. 	16	
 Number of connectable IO Devices, max. 	16	
 Number of connectable IO Devices for RT, max. 	16	
— of which in line, max.	16	
 Activation/deactivation of IO Devices 	Yes	
 Number of IO Devices that can be simultaneously 	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	
— PROFlenergy	Yes	
— Shared device	Yes	
Number of IO Controllers with shared device, max.	2	
Protocols		
Supports protocol for PROFINET IO	Yes	
PROFIsafe	No	
PROFIBUS	Yes; CM 1243-5 (master) or CM 1242-5 (slave) required	
OPC UA	Yes; OPC UA Server	
AS-Interface	Yes; CM 1243-2 required	
Protocols (Ethernet)	100, 0111 1210 210441104	
TCP/IP	Yes	
• DHCP	No	
• SNMP	Yes	
	Yes	
• DCP		
LLDP Redundancy mode	Yes	
Redundancy mode		
Media redundancy	Vaca on MDD radius dancy manager and/or MDD alices	
— MRP	Yes; as MRP redundancy manager and/or MRP client	
— MRPD	No	
SIMATIC communication	W	
• 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	
— Number of sessions, max.	10	
 Number of subscriptions per session, max. 	5	
— Sampling interval, min.	100 ms	
— Publishing interval, min.	200 ms	
Number of server methods, max.	20	
Number of monitored items, recommended max.	1 000	
realist of monitored items, recommended max.		

— Number of server interfaces, max. — Number of nodes for user defined server interfaces, max. Further protocos		
max. * MODBUS Yes communication functions / header 57 communication functions / header 58 communication functions / header 59 communication functions / header 50 communication (see data size) 51 communication (see data size) 52 communication (see data size) 53 communication (see data size) 54 communication (see data size) 55 communication (see data size) 56 communication (see data size) 57 communication (see data size) 58 communication (see data size) 59 communication (see data size) 50 communication (see data size		
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### WORDING ST communication ### Communication functions / header ### Streammunication ### Sections		
communication functions / header ST communication * outprofed * so server * so screer * less desirent * User data per job, max. * overfull * PG Connections: 4 reserved / 4 max, IMM Connections: 12 reserved / 18 max, IMM Connections: 12 reserved	·	Vac
* supported		160
* spropried * Yes * as clear * o server * yes * as clear * o server * yes * as clear * o yes data per Job, max. * See online help (\$7 communication, user data size) ***Mumber of connections** ***Overall ***PG Connections: 8 reserved / 4 max; HMI Connections: 12 reserved / 18 max; Wash Connections: 8 reserved / 18 max; Wash Connections: 8 reserved / 18 max; Wash Connections: 9 reserved / 18 max; Was		
a as Server a as client Ves a so client Aves build alla per Job. max. See online help (S7 communication, user data size) Number of connections • overall PG Connections: 4 reserved / 4 max; HMI Connections: 12 reserved / 18 max; Cherry C		Vec
Sec client Overall		
Number of connections • Overall • O		
Number of connections • overall PG Connections: 4 reserved / 4 max; HMI Connections: 12 reserved / 16 max, S7 connections: 2 reserved / 16 max, C9cn User Connections: 8 reserved / 10 max, Total Connections: 9 reserved / 10 max, Total Connection		
PG Connections: 4 reserved / 4 max; Chemical Connections: 12 reserved / 15 max; ST Connections: 6 reserved / 14 max; Chemical Connections: 12 reserved / 15 max; Chemical Connections: 12 reserved / 14 max; Chemical Connections: 2 reserved / 30 max; Chemical Chemica		occ offiline help (or confinitumeation, user data size)
S/ Connections: 8 reserved / 14 max. Open User Connections: 9 reserved / 14 max. Web Connections: 2 reserved / 30 max. OPC UA Connections: 0 reserved / 14 max. Web Connections: 2 reserved / 30 max. OPC UA Connections: 0 reserved / 14 max. Web Connections: 2 reserved / 30 max. OPC UA Connections: 0 reserved / 68 max Statuscontrol variable Yes		PG Connections: 4 reserved / 4 max: HMI Connections: 12 reserved / 18 max:
Sistus/control Status/control variable Status/control variable Status/control variable Status/control variable Forcing Status/Control Forcing Forcin		S7 Connections: 8 reserved / 14 max; Open User Connections: 8 reserved / 14 max; Web Connections: 2 reserved / 30 max; OPC UA Connections: 0 reserved
Status/control variable Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Forcin	Test commissioning functions	
Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing	Status/control	
Forcing Yes Forcing Yes Prosent Present Present Number of configurable Traces RUNSTOP LED RUNSTOP LED RUNSTOP LED Number of counters Number of counters Counter Number of counters Counting frequency, max. Prequency measurement Ves Counting frequency, max. Prequency measurement Ves Number of position-controlled positioning axes, max. Number of position-controlled positioning axes, max. Number of position-parse via pluse-direction interface PID controller Number of paste outputs Limit frequency (pulse) Potential separation digital inputs Potential separation digital inputs Potential separation digital inputs Potential separation digital inputs Potential separation digital outputs Potential separation digital output	Status/control variable	Yes
Forcing Yes Diagnostic buffer present present Persent Present Page 1 Page 2 Page 2 Page 2 Page 3 Pa	Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
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Possent Freese Number of configurable Traces Number of configurable Information Diagnostics indication LED RUN/STOP LED RUN	Forcing	Yes
Number of configurable Traces 2 • Memory size per trace, max. 512 kbyte Interrupts/diagnostics/status information Diagnostics indication LED • RUN/STOP LED • REROR LED • MAINT LED Integrated Functions Counter • Number of counters 6 • Counting frequency, max. 100 kHz Frequency measurement Yes controlled positioning axes, max. 8 Number of position-controlled positioning axes, max. 8 Number of positioning axes via pulse-direction interface 4; With integrated outputs PiDc ontroller Number of alarm inputs 4 Number of pulse outputs 4 Limit frequency (pulse) Potential separation digital inputs • Potential separation digital inputs • Potential separation digital inputs • Potential separation digital outputs • Potential separation digital output	Diagnostic buffer	
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RUN/STOP LED	Interrupts/diagnostics/status information	
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— Test voltage at contact discharge 6 kV Interference immunity to cable-borne interference ● Interference immunity on supply lines acc. to IEC 61000- 4-4	· ·	8 kV
Interference immunity to cable-borne interference Interference immunity on supply lines acc. to IEC 61000- 4-4 Yes		
• Interference immunity on supply lines acc. to IEC 61000- 4-4 Yes		
Interference immunity on signal cables acc. to IEC 61000- Yes	Interference immunity on supply lines acc. to IEC 61000-	Yes
	• Interference immunity on signal cables acc. to IEC 61000-	Yes

4-4 Interference immunity against voltage surge	
Interference immunity against voltage surge Interference immunity on supply lines acc. to IEC 61000-	Yes
4-5	165
Interference immunity against conducted variable disturbance indu	ced by high-frequency fields
 Interference immunity against high-frequency radiation 	Yes
acc. to IEC 61000-4-6	
Emission of radio interference acc. to EN 55 011	V 0 4
Limit class A, for use in industrial areas Limit class B, for use in recidential 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	IP20
Standards, approvals, certificates	
Siemens Eco Profile (SEP)	Siemens EcoTech
CE mark	Yes
UL approval	Yes
cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Marine approval	Yes
Ecological footprint	
environmental product declaration	Yes; type II acc. to ISO 14021
Global warming potential	400 la
— global warming potential, (total) [CO2 eq]	106 kg
 — global warming potential, (during production) [CO2 eq] 	18.5 kg
global warming potential, (during operation) [CO2 eq]	88.2 kg
— global warming potential, (after end of life cycle)[CO2 eq]	-1.1 kg
Ambient conditions	
Ambient conditions Free fall	
	0.3 m; five times, in product package
Free fall	0.3 m; five times, in product package
Free fall ● Fall height, max.	-20 °C
Free fall • Fall height, max. Ambient temperature during operation	
Free fall • Fall height, max. Ambient temperature during operation • min.	-20 °C 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
Free fall • Fall height, max. Ambient temperature during operation • min. • max.	-20 °C 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
Free fall • Fall height, max. Ambient temperature during operation • min. • max. • horizontal installation, min.	-20 °C 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 -20 °C
Free fall • Fall height, max. Ambient temperature during operation • min. • max. • horizontal installation, min. • horizontal installation, max.	-20 °C 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 -20 °C 60 °C
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min.	-20 °C 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 -20 °C 60 °C -20 °C
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max.	-20 °C 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 -20 °C 60 °C -20 °C
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. Ambient temperature during storage/transportation	-20 °C 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 -20 °C 60 °C -20 °C 50 °C
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. min. min. min.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. max. Ambient temperature during storage/transportation min. max.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 70 °C
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. vertical installation, max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 70 °C 795 hPa 1 080 hPa 660 hPa
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, min.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 70 °C
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 70 °C 795 hPa 1 080 hPa 660 hPa 1 080 hPa
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. wertical installation, max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 795 hPa 1 080 hPa 1 080 hPa 1 080 hPa
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, min. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min. Installation altitude, max.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 70 °C 795 hPa 1 080 hPa 660 hPa 1 080 hPa
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. vertical installation, max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min. Installation altitude, max. Relative humidity	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 70 °C 795 hPa 1 080 hPa
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min. Installation altitude, max. Relative humidity Operation, max.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 795 hPa 1 080 hPa 1 080 hPa 1 080 hPa
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min. Installation altitude, max. Relative humidity Operation, max. Vibrations	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 795 hPa 1 080 m; Restrictions for installation altitudes > 2 000 m, see manual
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. min. max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min. Installation altitude, max. Relative humidity Operation, max.	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 70 °C 795 hPa 1 080 hPa
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min. Installation altitude, max. Relative humidity Operation, max. Vibrations Vibrations Vibration resistance during operation acc. to IEC 60068-	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 795 hPa 1 080 hPa
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min. Installation altitude, max. Relative humidity Operation, max. Vibrations Vibrations Vibration resistance during operation acc. to IEC 60068-2-6	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 795 hPa 1 080 hPa 2 (m/s²) wall mounting, 1 g (m/s²) DIN rail
Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. Ambient temperature during storage/transportation min. max. Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, min. Storage/transport min. Installation altitude, min. Installation altitude, max. Relative humidity Operation, max. Vibrations Vibrations Vibrations Operation, tested according to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6	-20 °C 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 -20 °C 60 °C -20 °C 50 °C -40 °C 795 hPa 1 080 hPa 2 (m/s²) wall mounting, 1 g (m/s²) DIN rail

Pollutant concentrations • SO2 at RH < 60% without condensation configuration / header configuration / programming / header Programming language	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
configuration / header configuration / programming / header	Suz. < 0.5 ppini, 1125. < 0.1 ppini, 1011 < 00% condensation nee
configuration / programming / header	
— LAD	Yes
— FBD	Yes
— SCL	Yes
Know-how protection	
User program protection/password protection	Yes
Copy protection	Yes
Block protection	Yes
Access protection	
protection of confidential configuration data	Yes
Protection level: Write protection	Yes
Protection level: Read/write protection	Yes
Protection level: Complete protection	Yes
User administration	Yes; device-wide
Number of users	42
Number of groups	14
Number of roles	20
programming / cycle time monitoring / header	
adjustable	Yes
Dimensions	
Width	130 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	500 g
Classifications	

	Version	Classification
eClass	14	27-24-22-07
eClass	12	27-24-22-07
eClass	9.1	27-24-22-07
eClass	9	27-24-22-07
eClass	8	27-24-22-07
eClass	7.1	27-24-22-07
eClass	6	27-24-22-07
ETIM	9	EC000236
ETIM	8	EC000236
ETIM	7	EC000236
IDEA	4	3565
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval









<u>KC</u>



EMV Functional Saftey Test Certificates

Marine / Shipping



Type Examination Certificate Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping other











Confirmation

other Railway Environment

Miscellaneous Special Test

Special Test Certificate

Type Test Certificates/Test Report



Environmental Confirmations

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