SIEMENS

Datasheet

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: 75 KB

Display		
with display	No	
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		
• permissible frequency range, lower limit	47 Hz	
• permissible frequency range, upper limit	63 Hz	
Input current		
Current consumption (rated value)	100 mA at 120 V AC; 50 mA at 240 V AC	
Inrush current, max.	20 A; at 264 V	
Encoder supply		
24 V encoder supply		
● 24 V	Permissible range: 20.4V to 28.8V	
Output current		
Current output to backplane bus (DC 5 V), max.	1 600 mA; Max. 5 V DC for SM and CM	
Power losses		
Power loss, typ.	14 W	
Memory		
Type of memory	EEPROM	

Usable memory for user data	75 kbyte
Work memory	
Integrated	100 kbyte
• expandable	No
Load memory	
Integrated	4 Mbyte
 Plug-in (SIMATIC Memory Card), max. 	2 Gbyte; with SIMATIC memory card
Backup	
• present	Yes; maintenance-free
without battery	Yes
CPU processing times	
for bit operations, typ.	0.085 μs; / Operation
for word operations, typ.	1.7 μs; / Operation
for floating point arithmetic, typ.	2.3 µs; / Operation
CPU-blocks	
Number of blocks (total)	DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no
	restriction, the entire working memory can be used
OB	The state of the s
Number, max.	Limited only by RAM for code
Tumbol, max.	,,,,
Data areas and their retentivity	
retentive data area in total (incl. times, counters,	10 kbyte
flags), max.	
Flag	8 kbyte; Size of bit memory address area
Number, max.	o kbyte, Size of bit memory address area
Address area	
I/O address area	
• Inputs	1 024 byte
Outputs	1 024 byte
Process image	
● Inputs, adjustable	1 kbyte
 Outputs, adjustable 	1 kbyte
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 clock)	Yes
 Deviation per day, max. 	+/- 60 s/month at 25 °C
Backup time	480 h; Typical
Digital inputs	

Number of digital inputs	14; Integrated
of which, inputs usable for technological	6; HSC (High Speed Counting)
functions	3, 11, (3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
integrated channels (DI)	14
m/p-reading	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 VDC at 2.5 mA
Input current	
• for signal "1", typ.	1 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.	0.1 μs
— at "0" to "1", max.	20 ms
for interrupt inputs	
— Parameterizable	Yes
for counter/technological functions	
— Parameterizable	Yes; Single phase: 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz
Cable length	
• shielded, max.	500 m; 50 m for technological functions
Unshielded, max.	300 m; For technological functions: No
	,
Digital outputs	
Number of digital outputs	10; Relays
integrated channels (DO)	10
short-circuit protection	No; to be provided externally
Switching capacity of the outputs	
• with resistive load, max.	2 A
• on lamp load, max.	30 W with DC, 200 W with AC
Output delay with resistive load	
• "0" to "1", max.	10 ms; max.
● "1" to "0", max.	10 ms; max.
Switching frequency	
• of the pulse outputs, with resistive load, max.	1 Hz
Relay outputs	
 Number of relay outputs, integrated 	10

Number of operating cycles, max. Source Shielded, max. Shielded,	Number of relay outputs	10
e shielded, max. 500 m • Unshielded, max. 150 m Analog Inputs 2 Integrated channels (AI) 2; 0 to 10 V Input ranges • Votage Yes Input ranges (rated values), voltages • 0 to +10 V Yes Input ranges (rated values), voltages • 10 to +10 V Yes Input resistance (0 to 10 V) 2100k ohms Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs Number of analog outputs • Resolution with overrange (bit including sign), max. Integration time, parameterizable Yes • Conversion time (per channel) 625 μs Encoder Connectable encoders • 2-wire sensor Yes Interface hype PROFINET of Prysics Ethernet Isolated Yes Automatic detection of transmission speed Yes Autorossing Yes Functionality • PROFINET IO Device Yes PROFINET IO Controller • Profinet IO Controller		
Shielded, max. Unshielded, max. 150 m Analog inputs Number of analog inputs Vasion		mechanically 10 million, at fated load voltage 100,000
• Unshielded, max. 150 m Analog inputs Number of analog inputs 2 Integrated channels (AI) 2; 0 to 10 V Input ranges • Voltage Yes Input ranges (rated values), voltages • 0 to +10 V Yes • Input resistance (0 to 10 V) 2100k ohms Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs O Analog value creation Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes • Conversion time (per channel) 625 µs Encoder Connectable encoders • 2-wire sensor Yes Interface type PROFINET Physics Ethernet Isolated Yes Autonago detection of transmission speed Yes Autonago detection of transmission speed Yes Autonago detection of transmission speed Yes Autonagodiation Yes PROFINET IO Device Yes PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. 16		500 m
Analog inputs Number of analog inputs 2 integrated channels (AI) 2; 0 to 10 V Input ranges • Voltage Input ranges (rated values), voltages • 0 to +10 V Input resistance (0 to 10 V) 2 input resistance (0 to 10 V) 3 input resistance (0 to 10 V) 3 input resistance (0 to 10 V) 4 input resistance (0 to 10 V) 5 input resistance (0 to 10 V) 6 input resistance (0 to 10 V) 7 input resistance (0 to 10 Viole (1 to 10 Vi		
Number of analog inputs 2 integrated channels (AI) 2; 0 to 10 V input ranges • Vottage Yes input ranges (rated values), vottages • 0 to +10 V Yes input resistance (0 to 10 V) Yes • Input resistance (0 to 10 V) 2100k ohms Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs 0 Analog value creation integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes • Conversion time (per channel) 625 µs Encoder Connectable encoders • 2-wire sensor Yes Ist interface Interface type PROFINET Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Automatic detection of transmission speed Yes Automatic detection of vansmission speed Yes PROFINET IO Device Yes PROFINET IO Controller • PROFINET IO Controller • PROFINET IO Controller • Profiritized startup — Number of IO Devices, max. 16	• Unsnielded, max.	130 111
Integrated channels (AI) Input ranges • Voltage Ves Input ranges (rated values), voltages • 0 to +10 V • Input resistance (0 to 10 V) 2 100k ohms Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs 0 Analog value creation Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Conversion time (per channel) • Conversion time (per channel) Encoder Connectable encoders • 2-wire sensor Yes Interface Interface type PROFINET Isolated Automatic detection of transmission speed Automatic detection of transmission speed Autocrossing • PROFINET IO Device • PROFINET IO Controller • Profitized startup — Number of IO Devices, max. 16	Analog inputs	
input ranges • Voltage Yes Input ranges (rated values), voltages • 0 to +10 V Yes • Input resistance (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 O Analog value creation Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes • Conversion time (per channel) 625 µs Encoder Connectable encoders • 2-wire sensor Yes Interface type PROFINET Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Automatic detection of transmission speed Yes Automatic detection of transmission speed Yes Functionality • PROFINET IO Device Yes • PROFINET IO Device Yes PROFINET IO Controller • Proritized startup — Number of IO Devices, max. 160 kms.	Number of analog inputs	2
Position Provided P	Integrated channels (AI)	2; 0 to 10 V
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 O Analog value creation Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes • Conversion time (per channel) • Conversion time (per channel) Encoder Connectable encoders • 2-wire sensor Yes St interface Interface type PROFINET Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Automatic detection of transmission speed Yes Autorossing Yes Functionality • PROFINET IO Device Yes PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. 160 miss sheet Adams Analog and Adams A	Input ranges	
● 0 to +10 V ● 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 creation Integration and conversion time/resolution per channel ● Resolution with overrange (bit including sign), max. ● Integration time, parameterizable Yes ● Conversion time (per channel) Encoder Connectable encoders ● 2-wire sensor Yes St interface Interface type PROFINET Physics Ethermet Isolated Automatic detection of transmission speed Automatic detection of transmission speed Autocrossing Functionality ● PROFINET IO Device ● PROFINET IO Controller ● PROFINET IO Controller ● PROFINET IO Controller ● Prioritized startup — Number of IO Devices, max. 100 m; twisted and shielded 100 bit max. 100 bit max. 100 bit max. 100 bit max.	Voltage	Yes
Integration time, parameterizable Conversion time (per channel) Integrate sensor Polysics Interface Interface type Physics Isolated Automatic detection of transmission speed Automorpoisting Automorpoisting Proprinter Io Device PROFINET IO Device PROFINET IO Controller Prioritized startup — Number of IO Devices, max. 100 m; twisted and shielded 100 bit 1	Input ranges (rated values), voltages	
Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs 0 Analog value creation Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes • Conversion time (per channel) Encoder Connectable encoders • 2-wire sensor Yes Interface Interface type Profiner Physics Ethernet Isolated Automatic detection of transmission speed Autonacjotation Autocrossing Yes Functionality • PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. 100 m; twisted and shielded Analos visited and shielded Altomatic denotement 100 m; twisted and shielded 100 bit	• 0 to +10 V	Yes
• shielded, max. Analog outputs Number of analog outputs O Analog value creation Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes • Conversion time (per channel) 625 µs Encoder Connectable encoders • 2-wire sensor Yes Interface type PROFINET Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Automatic detection of transmission speed Yes Autocrossing Yes Functionality • PROFINET IO Device Yes • PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. 10 bit 10 bit 12 bit 13 bit 14 bit 15 bit 16 bit 16 bit 16 bit 18 bit 18 bit 19 bit 10 bit 10 bit 10 bit 11 bit 12 bit 13 bit 14 bit 15 bit 16 bit 16 bit 18 bit 18 bit 19 bit 10 bi	Input resistance (0 to 10 V)	≥100k ohms
Analog outputs Number of analog outputs O Analog value creation Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes • Conversion time (per channel) Encoder Connectable encoders • 2-wire sensor Yes Ist interface Interface type PROFINET Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Autonegotiation Autocrossing Yes Functionality • PROFINET IO Device Yes • PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. 16	Cable length	
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Number of analog outputs One of analog value creation Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration time, parameterizable yes Conversion time (per channel) Fincoder Connectable encoders 2-wire sensor Yes Interface type PROFINET Physics Ethernet Isolated Automatic detection of transmission speed Autonegotiation Autocrossing Functionality PROFINET IO Device PROFINET IO Controller PROFINET IO Controller Prioritized startup Number of IO Devices, max. 10 bit	Analog outputs	
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• Conversion time (per channel) Encoder Connectable encoders • 2-wire sensor Yes Ist interface Interface type PROFINET Physics Ethernet Isolated Automatic detection of transmission speed Autonegotiation Autocrossing Functionality • PROFINET IO Device • PROFINET IO Controller PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. 16	Integration time, parameterizable	Yes
Connectable encoders • 2-wire sensor Yes Interface Interface type PROFINET Physics Ethernet Isolated Automatic detection of transmission speed Autonegotiation Autocrossing Yes Functionality • PROFINET IO Device • PROFINET IO Controller PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. Yes Yes In the face PROFINET IO Device (Pace (P	 Conversion time (per channel) 	625 µs
Connectable encoders • 2-wire sensor Yes Interface Interface type PROFINET Physics Ethernet Isolated Automatic detection of transmission speed Autonegotiation Autocrossing Yes Functionality • PROFINET IO Device • PROFINET IO Controller PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. Yes Yes In the face PROFINET IO Device (Pace (P	Encoder	
Interface type PROFINET Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Autorossing Yes Functionality PROFINET IO Device Yes PROFINET IO Controller Prioritized startup — Number of IO Devices, max. PROFINET IO Devices, max.		
Interface type PROFINET Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Autonegotiation Yes Autocrossing Yes Functionality PROFINET IO Device Yes PROFINET IO Controller Yes PROFINET IO Controller Prioritized startup — Number of IO Devices, max. 16	• 2-wire sensor	Yes
Interface type PROFINET Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Autonegotiation Yes Autocrossing Yes Functionality PROFINET IO Device Yes PROFINET IO Controller Yes PROFINET IO Controller Prioritized startup — Number of IO Devices, max. 16	1st interface	
Physics Ethernet Isolated Yes Automatic detection of transmission speed Yes Autonegotiation Yes Autocrossing Yes Functionality PROFINET IO Device Yes PROFINET IO Controller Yes PROFINET IO Controller Prioritized startup — Number of IO Devices, max. Ethernet Yes Yes Yes 16		PROFINET
Automatic detection of transmission speed Autonegotiation Autocrossing Functionality PROFINET IO Device PROFINET IO Controller PROFINET IO Controller Prioritized startup — Number of IO Devices, max. Yes Yes Yes Yes Yes Yes 16		Ethernet
Autorossing Yes Functionality PROFINET IO Device PROFINET IO Controller PROFINET IO Controller Prioritized startup — Number of IO Devices, max. Yes Yes Yes Yes 16		Yes
Autorossing Yes Functionality PROFINET IO Device PROFINET IO Controller PROFINET IO Controller Prioritized startup — Number of IO Devices, max. Yes Yes Yes Yes 16	Automatic detection of transmission speed	Yes
Functionality • PROFINET IO Device Yes • PROFINET IO Controller Yes PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. 16		Yes
PROFINET IO Device PROFINET IO Controller PROFINET IO Controller Prioritized startup — Number of IO Devices, max. Yes Yes Yes 16	Autocrossing	Yes
PROFINET IO Controller PROFINET IO Controller Prioritized startup — Number of IO Devices, max. 16	Functionality	
PROFINET IO Controller • Prioritized startup — Number of IO Devices, max. 16	PROFINET IO Device	Yes
 Prioritized startup — Number of IO Devices, max. 	PROFINET IO Controller	Yes
— Number of IO Devices, max.	PROFINET IO Controller	
— Number of IO Devices, max.	Prioritized startup	
		16
Communication functions	Communication functions	

S7 communication	
• supported	Yes
• as server	Yes
As client	Yes
Open IE communication	
• TCP/IP	Yes
• ISO-on-TCP (RFC1006)	Yes
• UDP	Yes
Web server	
• supported	Yes
User-defined websites	Yes
Test commissioning functions	
Status/control	V
Status/control variable	Yes
• Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	
• Forcing	Yes
Diagnostic buffer	
• present	Yes
Traces	
 Number of configurable Traces 	2; Up to 512 KB of data per trace are possible
Number of configurable Traces Integrated Functions	2; Up to 512 KB of data per trace are possible
·	2; Up to 512 KB of data per trace are possible 6
Integrated Functions	
Integrated Functions Number of counters	6
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning	6 100 kHz
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller	6 100 kHz Yes
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs	6 100 kHz Yes Yes Yes 4
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller	6 100 kHz Yes Yes Yes
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs	6 100 kHz Yes Yes Yes 4
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs Number of pulse outputs	6 100 kHz Yes Yes Yes 4
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs Number of pulse outputs Galvanic isolation	6 100 kHz Yes Yes Yes 4
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs Number of pulse outputs Galvanic isolation Galvanic isolation digital inputs	6 100 kHz Yes Yes Yes 4 4
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs Number of pulse outputs Galvanic isolation Galvanic isolation digital inputs • Galvanic isolation digital inputs	6 100 kHz Yes Yes Yes 4 4
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs Number of pulse outputs Galvanic isolation Galvanic isolation digital inputs • Galvanic isolation digital inputs • between the channels, in groups of	6 100 kHz Yes Yes Yes 4 4
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs Number of pulse outputs Galvanic isolation Galvanic isolation digital inputs • Galvanic isolation digital inputs • between the channels, in groups of Galvanic isolation digital outputs	6 100 kHz Yes Yes Yes 4 4 1
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs Number of pulse outputs Galvanic isolation Galvanic isolation digital inputs • Galvanic isolation digital inputs • between the channels, in groups of Galvanic isolation digital outputs • Galvanic isolation digital outputs • Galvanic isolation digital outputs	6 100 kHz Yes Yes Yes 4 4 4 Soov AC for 1 minute 1
Integrated Functions Number of counters Counter frequency (counter) max. Frequency meter controlled positioning PID controller Number of alarm inputs Number of pulse outputs Galvanic isolation Galvanic isolation digital inputs • Galvanic isolation digital inputs • between the channels, in groups of Galvanic isolation digital outputs • Galvanic isolation digital outputs • Galvanic isolation digital outputs • between the channels	6 100 kHz Yes Yes Yes 4 4 4 Following the state of the s

EMC	
Interference immunity against discharge of static electric	city
 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	
 Interference immunity on supply lines acc. to IEC 61000-4-4 	Yes
 Interference immunity on signal lines acc. to IEC 61000-4-4 	Yes
Surge immunity	
• on the supply lines acc. to IEC 61000-4-5	Yes
Immunity against conducted interference induced by high	h-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	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	
Degree of protection to EN 60529	
Degree or protection to EN 00029	
● IP20	Yes
	Yes
• IP20	Yes Yes
● IP20 Standards, approvals, certificates CE mark UL approval	
• IP20 Standards, approvals, certificates CE mark UL approval cULus	Yes Yes Yes
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK)	Yes Yes Yes Yes Yes
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval	Yes Yes Yes
◆ IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval	Yes Yes Yes Yes Yes Yes
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval	Yes Yes Yes Yes Yes
◆ IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval	Yes Yes Yes Yes Yes Yes
• IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval • Marine approval	Yes Yes Yes Yes Yes Yes
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval ● Marine approval Ambient conditions	Yes Yes Yes Yes Yes Yes
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval ● Marine approval Ambient conditions Free fall	Yes Yes Yes Yes Yes Yes Yes
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval ● Marine approval Ambient conditions Free fall ● Drop height, max. (in packaging)	Yes Yes Yes Yes Yes Yes Yes
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval ● Marine approval Ambient conditions Free fall ● Drop height, max. (in packaging) Ambient temperature in operation	Yes Yes Yes Yes Yes Yes Yes O.3 m; five times, in dispatch package
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval ● Marine approval Ambient conditions Free fall ● Drop height, max. (in packaging) Ambient temperature in operation ● Min.	Yes Yes Yes Yes Yes Yes Yes O.3 m; five times, in dispatch package
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval ● Marine approval Ambient conditions Free fall ● Drop height, max. (in packaging) Ambient temperature in operation ● Min. ● max.	Yes Yes Yes Yes Yes Yes Yes O.3 m; five times, in dispatch package -20 °C 60 °C
Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval • Marine approval Ambient conditions Free fall • Drop height, max. (in packaging) Ambient temperature in operation • Min. • max. • horizontal installation, min.	Yes Yes Yes Yes Yes Yes Yes O.3 m; five times, in dispatch package -20 °C 60 °C -20 °C
● IP20 Standards, approvals, certificates CE mark UL approval cULus RCM (formerly C-TICK) FM approval Marine approval ● Marine approval Ambient conditions Free fall ● Drop height, max. (in packaging) Ambient temperature in operation ● Min. ● max. ● horizontal installation, min. ● horizontal installation, max.	Yes Yes Yes Yes Yes Yes Yes O.3 m; five times, in dispatch package -20 °C 60 °C -20 °C 60 °C

• Min.	-40 °C	
• max.	70 °C	
Air pressure acc. to IEC 60068-2-13		
Operation, min.	795 hPa	
Operation, max.	1 080 hPa	
Storage/transport, min.	660 hPa	
• Storage/transport, max.	1 080 hPa	
Permissible operating height	-1000 to 2000 m	
Relative humidity		
Operation, max.	95 %; no condensation	
• Permissible range (without condensation) at 25	95 %	
°C		
Vibrations		
Vibrations	2G wall mounting, 1G DIN rail	
Operation, checked according to IEC 60068-2-	Yes	
Shock test		
• checked 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	
programming		
Programming language		
— LAD	Yes	
— FBD	Yes	
— SCL	Yes	
Cycle time monitoring	Cycle time monitoring	
• can be set	Yes	
Dimensions		
Width	110 mm	
Height	100 mm	
Depth	75 mm	
Weights		
Weight, approx.	475 g	
last modified:	10.02.2015	