SIEMENS

Data sheet

6ES7215-1AF40-0XB0

SIMATIC S7-1200F, CPU 1215 FC, compact CPU, DC/DC/DC, 2 PROFINET ports, onboard I/O: 14 DI 24 V DC; 10 DO 24 V DC; 0.5A; 2 AI 0-10 V DC, 2 AO 0-20 mA DC, Power supply: DC 20.4-28.8V DC, Program/data memory 150 KB



General information	
Product type designation	CPU 1215FC DC/DC/DC
Firmware version	V4.2
Engineering with	
Programming package	STEP 7 V14 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
l²t	0.5 A²·s
Output current for backplane bus (5 V DC), max.	1 600 mA; Max. 5 V DC for SM and CM
Tot backplane bus (5 v bc), max.	1 000 IIIA, MAX. 3 V DO IOI SIW AND CIVI
Encoder supply	
24 V encoder supply	
• 24 V	L+ minus 4 V DC min.
Power loss	
Power loss, typ.	12 W
Momony	
Memory Work memory	
• integrated	150 kbyte
• expandable	No
Load memory	
• integrated	4 Mbyte
Plug-in (SIMATIC Memory Card), max.	with SIMATIC memory card
Backup	
• present	Yes
maintenance-free	Yes
without battery	Yes
·	
CPU processing times for bit operations, typ.	0.08 μs; / instruction
for word operations, typ.	1.7 μs; / instruction
for floating point arithmetic, typ.	2.3 µs; / instruction
	2.0 μο, / ποιτασίοπ
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	10 kbyto
Retentive data area (incl. timers, counters, flags), max.	10 kbyte
Flag	
• Number, 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	V
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	Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four
— at "0" to "1", min.	0.2 ms
— at "0" to "1", max.	12.8 ms
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Single phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz
Cable length	
• shielded, max.	500 m; 50 m for technological functions
• unshielded, max.	300 m; for technological functions: No
Digital outputs	
Number of digital outputs	10
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	
• with resistive load, max.	0.5 A

Output voitage • for signal "0", max. • for signal "1", min. Output current • for signal "1" rated value • for signal "0" residual current, max. Output delay with resistive load • "0" to "1", max. • "1" to "0", max. Switching frequency • of the pulse outputs, with resistive load, max. Relay outputs • Number of relay outputs O Cable length • shelded, max. • unshielded, max. • unshielded, max. Analog inputs Number of analog inputs 2 linput ranges • Voltage Input ranges (rated values), voltages • O to +10 V — Input resistance (0 to 10 V) Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs • Shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs • Shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs • Shielded, max. 100 m; twisted and shielded Analog outputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. Analog value generation for the outputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max.	• on lamp load, max.	5 W
• for signal "1", min. Output current • for signal "0" residual current, max. Out signal "0" residual current, max. Output delay with resistive load • "0" to "1", max. • "1" to "0", max. • "1" to "0", max. Switching frequency • of the pulse outputs, with resistive load, max. Relay outputs • Number of relay outputs • Number of relay outputs • shelded, max. • unshielded, max. • unshielded, max. Iso m Analog inputs Number of analog inputs Input ranges • Voltage Not to +10 V	Output voltage	
Output current • for signal "1" rated value • for signal "0" residual current, max. Output dealy with resistive load • "0" to "1", max. • "1" to "0", max. Switching frequency • of the pulse outputs, with resistive load, max. Number of relay outputs • Number of relay outputs OCable length • shielded, max. • unshielded, max. 150 m Analog inputs Number of analog inputs 1put ranges • Voltage Input ranges (rated values), voltages • 0 to +10 V — Input resistance (0 to 10 V) Cable length • shielded, max. 100 m: twisted and shielded Analog outputs Number of analog outputs Oto 20 mA Yes Number of analog outputs • shielded, max. 100 m: twisted and shielded Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), linegration and conversion time/resolution per channel • Resolution with overrange (bit including sign), linegration and conversion time/resolution per channel • Resolution with overrange (bit including sign), linegration and conversion time/resolution per channel • Resolution with overrange (bit including sign), linegration and conversion time/resolution per channel • Resolution with overrange (bit including sign), linegration and conversion time/resolution per channel • Resolution with overrange (bit including sign), linegration and conversion time/resolution per channel • Resolution with overrange (bit including sign), linegration and conversion time/resolution per channel	• for signal "0", max.	0.1 V; with 10 kOhm load
• for signal "1" rated value • for signal "0" residual current, max. Output delay with resistive load • "0" to "1", max. • "1" to "0", max. Switching frequency • of the pulse outputs, with resistive load, max. Relay outputs • Number of relay outputs • Number of relay outputs • shielded, max. • unshielded, max. • unshielded, max. • Unshielded, max. • Voltage Input ranges • Voltage Input ranges • Voltage Input ranges (rated values), voltages • 0 to +10 V — Input resistance (0 to 10 V) Cable length • shielded, max. 100 kHz Relay outputs Outputs Outputs Outputs Cable length • ot to +10 V — Input resistance (0 to 10 V) Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs Output ranges, current • 0 to 20 mA Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Conversion time (per channel) • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), lobit	• for signal "1", min.	20 V
• for signal "0" residual current, max. Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 5 µs Switching frequency • of the pulse outputs, with resistive load, max. Relay outputs • Number of relay outputs • Number of relay outputs • Shielded, max. • ushielded, max. 150 m Analog inputs Number of analog inputs 2 linput ranges • Voltage • Voltage Input ranges (rated values), voltages • 0 to +10 V — Input resistance (0 to 10 V) Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs Couput 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. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), 10 bit	Output current	
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• "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) 2100k ohms Cable length • 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. • Integration time, parameterizable Yes • Conversion time (per channel) • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel	• for signal "0" residual current, max.	0.1 mA
• "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) 2100k ohms Cable length • shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs 2 Analog outputs Number of analog outputs 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. • 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. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel	Output delay with resistive load	
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of the pulse outputs, with resistive load, max. Relay outputs Number of relay outputs shielded, max. unshielded, max. unshielded, max. unshielded, max. voltage Input ranges Voltage Input ranges voltage Input ranges (rated values), voltages ot to +10 V	• "1" to "0", max.	5 μs
Relay outputs Number of relay outputs shielded, max. unshielded, max. Som Analog inputs Number of analog inputs Voltage Input ranges Voltage Input ranges (rated values), voltages Oto +10 V Input resistance (0 to 10 V) Cable length shielded, max. 100 m; twisted and shielded Analog outputs Number of analog outputs Quiput ranges Ves Input ranges (rated values), voltages Ves Input ranges (rated values), voltages Ves Input ranges (rated values), voltages Output ranges, created values), voltages Analog outputs Number of analog outputs Quiput ranges, current O to 20 mA Yes Analog value generation for the inputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration time, parameterizable Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), integration and conversion time/resolution per channel Resolution with overrange (bit including sign), integration and conversion time/resolution per channel Resolution with overrange (bit including sign), integration and conversion time/resolution per channel	Switching frequency	
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Cable length • shielded, max. • unshielded, max. 150 m Analog inputs Number of analog inputs • Voltage Input ranges (rated values), voltages • 0 to +10 V — Input resistance (0 to 10 V) Cable length • 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. • Integration time, parameterizable • Conversion time (per channel) • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), integration and conversion time/resolution per channel	Relay outputs	
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Number of analog inputs 2 Input ranges 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 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. • 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), 10 bit	• unshielded, max.	150 m
Number of analog inputs 2 Input ranges 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 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. • 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), 10 bit	Analog inputs	
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• shielded, max. Analog outputs Number of analog outputs 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. • Integration time, parameterizable • Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), Integration and conversion time/resolution per channel		
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• Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), 10 bit		10 bit
Analog value generation for the outputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), 10 bit	• Integration time, parameterizable	Yes
Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), 10 bit	• Conversion time (per channel)	625 µs
• Resolution with overrange (bit including sign),	Analog value generation for the outputs	
3.07	Integration and conversion time/resolution per channel	
max.	 Resolution with overrange (bit including sign), 	10 bit
	max.	

Connectable encoders • 2-wire sensor Yes Interface type **PROFINET Physics** Ethernet Isolated Yes automatic detection of transmission rate Yes Autonegotiation Yes Yes Autocrossing Interface types 2 • Number of ports • integrated switch Yes Protocols Yes • PROFINET IO Controller • PROFINET IO Device Yes Yes • SIMATIC communication • Open IE communication Yes Yes • Web server • Media redundancy Yes; as MRP client PROFINET IO Controller 100 Mbit/s • Transmission rate, max. Services Yes - PG/OP communication Yes - S7 routing No - Isochronous mode Yes — Open IE communication — IRT No Yes; as MRP client - MRP No - MRPD No - PROFlenergy Yes - Prioritized startup 16 - Number of IO devices with prioritized startup, max. 16 - Number of connectable IO Devices, max. - Number of connectable IO Devices for RT, 16 max. 16 - of which in line, max. Yes - Activation/deactivation of IO Devices - Number of IO Devices that can be 8 simultaneously activated/deactivated, max.

— Updating time	The minimum value of the update time also depends on the communication component set for PROFINET IO, on the number of IO devices and the quantity of configured user data.
PROFINET IO Device	
Services	
— PG/OP communication	Yes
— S7 routing	Yes
— Isochronous mode	No
 Open IE communication 	Yes
— IRT	No
— MRP	Yes; as MRP client
— MRPD	No
— PROFlenergy	Yes
— Shared device	Yes
 Number of IO Controllers with shared 	2
device, max.	
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIBUS	Yes; CM 1243-5 (master) or CM 1242-5 (slave) required
AS-Interface	Yes; CM 1243-2 required
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	No
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
Open IE communication	
• TCP/IP	Yes
— Data length, max.	8 kbyte
• 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
Further protocols	
• MODBUS	Yes
Communication functions	
S7 communication	
• supported	Yes

• as server	Yes
• as client	Yes
 User data per job, max. 	See online help (S7 communication, user data size)
Number of connections	
• overall	16: dynamically

Test commissioning functions	
Status/control	
Status/control variable	Yes
 Variables 	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	
• Forcing	Yes
Diagnostic buffer	
• present	Yes
Traces	
Number of configurable Traces	2
 Memory size per trace, max. 	512 kbyte

Interrupts/diagnostics/status information	
Diagnostics indication LED	
RUN/STOP LED	Yes
• ERROR LED	Yes
MAINT LED	Yes

Integrated Functions	
Number of counters	6
Counting frequency (counter) max.	100 kHz
Frequency measurement	Yes
controlled positioning	Yes
Number of position-controlled positioning axes, max.	8
Number of positioning axes via pulse-direction interface	4; With integrated outputs
PID controller	Yes
Number of alarm inputs	4
Number of pulse outputs	4
Limit frequency (pulse)	100 kHz

Potential separation	
Potential separation digital inputs	
Potential separation digital inputs	No
between the channels, in groups of	1
Potential separation digital outputs	
Potential separation digital outputs	Yes
• between the channels	No

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 cables acc. to IEC 61000-4-4 	Yes
Interference immunity against voltage surge	
 Interference immunity on supply lines acc. to IEC 61000-4-5 	Yes
Interference immunity against conducted variable distur	bance 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 	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 and class of protection IP degree of protection	IP20
IP degree of protection	IP20
	IP20 Yes
IP degree of protection Standards, approvals, certificates	
IP degree of protection Standards, approvals, certificates CE mark	Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval	Yes Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus	Yes Yes Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval	Yes Yes Yes Yes Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK)	Yes Yes Yes Yes Yes Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval	Yes Yes Yes Yes Yes Yes Yes Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval Marine approval	Yes Yes Yes Yes Yes Yes Yes Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval Marine approval Highest safety class achievable in safety mode	Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval Marine approval Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 • SIL acc. to IEC 61508	Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval Marine approval Highest safety class achievable in safety mode • Performance level according to ISO 13849-1	Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval Marine approval Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 • SIL acc. to IEC 61508 Ambient conditions	Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval Marine approval Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 • SIL acc. to IEC 61508 Ambient conditions Free fall	Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval Marine approval Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 • SIL acc. to IEC 61508 Ambient conditions Free fall • Fall height, max.	Yes
IP degree of protection Standards, approvals, certificates CE mark UL approval cULus FM approval RCM (formerly C-TICK) KC approval Marine approval Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 • SIL acc. to IEC 61508 Ambient conditions Free fall • Fall height, max. Ambient temperature during operation	Yes Yes Yes Yes Yes Yes Yes Yes Yes SIL 3

• horizortal installation, min. • vertical installation, min. • vertical installation, max. • vertical installation, max. • vertical installation, max. • vertical installation, max. Anbient temperature during storage/transportation • min. • max. • 70 °C Air pressure acc. to IEC 60068-2-13 • Operation, min. • Operation, min. • Operation, min. • Operation, max. • Storage/transport, min. • Storage/transport, min. • Storage/transport, min. • Storage/transport, min. • Operation, max. * Vibrations • Vibrations • Vibrations • Vibrations • Vibration resistance during operation acc. to IEC 60068-2-6 • Operation, tested according to IEC 60068-2-6 * Shock testing • tested according to IEC 60068-2-27 • Ves: IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations • S02 at RH < 60% without condensation * S02 = Configuration Programming Programming Programming Programming language — LAD — FBD — SCL Know-how protection • User program protection/password protection • Protection level: Write protection • Protection level: Complete protection		
vertical installation, max. Ambient temperature during storage/transportation vinin. · max.	 horizontal installation, max. 	55 °C
Ambient temperature during storage/transportation • min. • max. • max. • 70 °C Af pressure acc. to IEC 60068-2-13 • Operation, min. • Operation, max. • Storage/transport, min. • Storage/transport, min. • Storage/transport, min. • Storage/transport, max. * Operation, max. * Operation, max. * Operation, max. * Operation resistance during operation acc. to IEC 60068-2-6 • Operation, tested according to IEC 60068-2-6 * Operation, tested according to IEC 60068-2-6 * Operation, tested according to IEC 60068-2-8 * Shock testing • tested according to IEC 60068-2-27 * Ves: IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms * SO2 at RH < 60% without condensation * SO2 at RH < 60% without condensation * SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free **Configuration * Programming * Programming * Programming language - LAD - FBD - SCL - Yes; incl. failsafe - Yes; incl. failsafe - Yes * Yes * Copy protection • User program protection/password protection • User program protection/password protection • Block protection • Block protection • Protection level: Write protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection • Adjustable **Dimensions** Width	• vertical installation, min.	0 °C
	• vertical installation, max.	45 °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 • Storage/transport, max. Relative humidity • Operation, max. 95 %; no condensation Vibration resistance during operation acc. to IEC 60068-2-6 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail IEC 60068-2-6 • Operation, tested according to IEC 60068-2-6 Yes Shock testing • tested according to IEC 60068-2-7 Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations • SO2 at RH < 60% without condensation	Ambient temperature during storage/transportation	
Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. 1 080 nPa Storage/transport, min. Storage/transport, max. 1 080 nPa Storage/transport, max. 95 %: no condensation Vibrations Vibrations Vibrations Vibrations Vibration resistance during operation acc. to IEC 60068-2-6 Shock testing Ves: IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations VSO2 at RH < 60% without condensation SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming language — LAD — FBD — SCL Xnow-how protection Ves: incl. failsafe — SCL Xnow-how protection Ves Block protection Ves Storage Read/write protection Prosper Read/write protection Ves Protection level: Write protection Protection level: Read/write protection Protection level: Read/write protection Protection level: Complete	● min.	-40 °C
Operation, min. Operation, max. Operation, max. Operation, max. Storage/transport, min. Operation, max. Storage/transport, max. 1 080 hPa 1 080 hPa 1 080 hPa 1 080 hPa Storage/transport, max. Polarition, max. Operation, max. Operation, max. Operation, max. Operation, max. Operation, max. Operation, max. Operation, tested according operation acc. to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Shock testing Operation, tested according to IEC 60068-2-7 Operation, tested according to IEC 60068-2-7 Yes: IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations Operation Operation Operation Programming Programming language - LAD - FED - SCL Yes: incl. failsafe - Yes; incl. failsafe - Yes; incl. failsafe - Yes Know-how protection Operation	• max.	70 °C
Operation, max. Storage/transport, min. Storage/transport, min. Storage/transport, max. Pelative humidity Operation, max. Vibrations Vibration resistance during operation acc. to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Yes Shock testing Oteration tested according to IEC 60068-2-7 Yes: IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming language — LAD — FBD — SCL Know-how protection Occupy protection User program protection/password protection User program protection Protection level: Write protection Protection level: Write protection Protection level: Read/write protection Protection level: Complete protection Protections Protection level: Complete protection Protection level: Complete protection Protections Protections Protections Protections Protections Protections Protections Protection level: Complete protection Protections Protection	Air pressure acc. to IEC 60068-2-13	
Storage/transport, min. Storage/transport, max. Relative humidity Operation, max. Operation, max. Operation, max. Operation resistance during operation acc. to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Operation, tested according to IEC 60068-2-7 Operation, tested according to IEC 60068-2-7 Operation, tested according to IEC 60068-2-7 Operation, tested according to IEC 60068-2-8 Shock testing Operation, tested according to IEC 60068-2-8 Shock testing Operation to IEC 60068-2-8 Operation to IEC 60068-2-9 Yes: IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations Operation to Improve the shock operation of the shock 15 g (peak value), duration 11 ms Programming Programming Programming language — LAD — FBD — SCL — Yes; incl. failsafe — Yes; incl. failsafe — Yes; incl. failsafe — Yes Operation Opera	Operation, min.	795 hPa
Storage/transport, max. Relative humidity Operation, max. Polytications Vibration resistance during operation acc. to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Shock testing Ites tested according to IEC 60068-2-7 Shock testing Ites tested according to IEC 60068-2-7 Pollutant concentrations So2 at RH < 60% without condensation So2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming language LAD FBD SCL Yes Know-how protection User program protection/password protection Copy protection Plock protection Protection level: Write protection Protection level: Read/write protection Protection level: Read/write protection Protection level: Complete protection Yes Cycle time monitoring adjustable Dimensions Width 130 mm	Operation, max.	1 080 hPa
Relative humidity Operation, max. 95 %; no condensation Vibrations Vibrations Vibration resistance during operation acc. to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Operation, tested according to IEC 60068-2-7 Yes Shock testing Itested 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: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming language — LAD — FBD — SCL Yes; incl. failsafe — Yes Know-how protection User program protection/password protection Yes Access protection Protection level: Write protection Protection level: Read/write protection Protection level: Complete protection Yes Cycle time monitoring adjustable Pimensions Width 130 mm	• Storage/transport, min.	660 hPa
Operation, max. Objections Operation resistance during operation acc. to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Shock testing Itested according to IEC 60068-2-7 Ves: IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming language — LAD — FBD — SCL Ves: incl. failsafe — SCL Know-how protection User program protection/password protection Suser protection Ves Access protection Protection level: Write protection Protection level: Read/write protection Protection level: Complete protection Protection level: Complete protection Ves Operations Width 130 mm	• Storage/transport, max.	1 080 hPa
Vibrations Vibration resistance during operation acc. to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Yes Shock testing Ves; 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 Programming Programming Programming language LAD FBD SCL Yes; incl. failsafe Yes; incl. failsafe Yes Know-how protection User program protection/password protection Oppy protection Protection level: Write protection Protection level: Write protection Protection level: Complete protection Yes Cycle time monitoring adjustable Pimensions Width 130 mm	Relative humidity	
Vibration resistance during operation acc. to IEC 60068-2-6 Operation, tested according to IEC 60068-2-6 Yes Shock testing Itested according to IEC 60068-2-7 Ves; 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 Programming Programming Programming language LAD FBD SCL Ves; incl. failsafe Yes; incl. failsafe Yes Know-how protection User program protection/password protection Copy protection Block protection Protection level: Write protection Protection level: Write protection Protection level: Complete protection Yes Cycle time monitoring adjustable Pinnersions Width	Operation, max.	95 %; no condensation
IEC 60068-2-6 • Operation, tested according to IEC 60068-2-6 Shock testing • tested according to IEC 60068-2-27 Pollutant concentrations • SO2 at RH < 60% without condensation S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming Ianguage — LAD — FBD — SCL — SCL — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection • Protection level: Write protection • Protection level: Write protection • Protection level: Complete protection	Vibrations	
Shock testing • tested according to IEC 60068-2-27 • tested according to IEC 60068-2-27 Ves; 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 SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming language — LAD — Yes; incl. failsafe — SCL — Yes Know-how protection • User program protection/password protection • Copy protection • Block protection • Block protection • Protection level: Write protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection • Protection level: Complete protection Ves Cycle time monitoring • adjustable Pimensions Width 130 mm		2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail
• tested according to IEC 60068-2-27 Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations • SO2 at RH < 60% without condensation SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming language — LAD — FBD — Yes; incl. failsafe — SCL Yes Know-how protection • User program protection/password protection • Copy protection • Block protection Protection level: Write protection • Protection level: Read/write protection • Protection level: Read/write protection • Protection level: Complete protection • Protection level: Complete protection • Access protection • Protection level: Complete protection	Operation, tested according to IEC 60068-2-6	Yes
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 Programming Programming language — LAD Yes; incl. failsafe — FBD Yes; incl. failsafe — SCL Yes Know-how protection ● User program protection/password protection Yes ● Block protection Yes ● Block protection Yes Access protection ● Protection level: Write protection Yes ● Protection level: Read/write protection Yes ● Protection level: Complete protection Yes Cycle time monitoring ● adjustable Yes Dimensions Width 130 mm	Shock testing	
SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free Configuration Programming Programming language — LAD — FBD — SCL — Yes; incl. failsafe — SCL Know-how protection • User program protection/password protection • Copy protection • Block protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection	• tested according to IEC 60068-2-27	
Programming Programming language — LAD Yes; incl. failsafe — FBD Yes; incl. failsafe — SCL Yes Know-how protection • User program protection/password protection • Copy protection Yes • Block protection • Protection level: Write protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection • Protection level: Complete protection • Protection level: Complete protection • Protection level: Omplete protection	Pollutant concentrations	
Programming Programming language — LAD — FBD — Yes; incl. failsafe — SCL Yes Know-how protection • User program protection/password protection • Copy protection • Block protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection • Protection level: Tomplete protection	SO2 at RH < 60% without condensation	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
Programming language — LAD — FBD — Yes; incl. failsafe — SCL Yes Know-how protection • User program protection/password protection • Copy protection • Block protection • Block protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection • Protection level: Complete protection • Protection level: Tead/write protection		
LAD Yes; incl. failsafe FBD Yes; incl. failsafe SCL Yes Know-how protection User program protection/password protection Copy protection Copy protection Block protection Protection level: Write protection Protection level: Read/write protection Protection level: Complete protection Protection level: Complete protection Protection level: Tead/write protection		
FBD Yes; incl. failsafe SCL Yes Know-how protection • User program protection/password protection • Copy protection • Block protection • Block protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Read/write protection • Protection level: Complete protection • Protection level: Tomplete protection • Adjustable Dimensions Width	Programming language	
— SCL Know-how protection • User program protection/password protection • Copy protection • Block protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection • Protection level: Complete protection • Protection level: Tomplete protection	— LAD	
Know-how protection • User program protection/password protection • Copy protection • Block protection • Protection level: Write protection • Protection level: Read/write protection • Protection level: Complete protection • Protection level: Complete protection • Protection level: Tead/write protection	— FBD	Yes; incl. failsafe
User program protection/password protection Copy protection Block protection Yes Protection Protection level: Write protection Protection level: Read/write protection Protection level: Complete protection Protection level: Complete protection Protection level: Templete protection Protection leve	— SCL	Yes
Copy protection Block protection Yes Access protection Protection level: Write protection Protection level: Read/write protection Protection level: Complete protection Protection level: Complete protection Yes Cycle time monitoring adjustable Pimensions Width 130 mm	Know-how protection	
Block protection Access protection Protection level: Write protection Protection level: Read/write protection Protection level: Read/write protection Protection level: Complete protection Yes Cycle time monitoring adjustable Ves Dimensions Width 130 mm	 User program protection/password protection 	Yes
Access protection Protection level: Write protection Protection level: Read/write protection Protection level: Complete protection Protection level: Complete protection Protection level: Complete protection Yes Cycle time monitoring Adjustable Yes Dimensions Width 130 mm	Copy protection	Yes
 Protection level: Write protection Protection level: Read/write protection Protection level: Complete protection Yes Cycle time monitoring adjustable Yes Dimensions Width 130 mm 	Block protection	Yes
 Protection level: Read/write protection Protection level: Complete protection Cycle time monitoring adjustable Yes Dimensions Width 130 mm 	Access protection	
 Protection level: Complete protection Cycle time monitoring adjustable Yes Dimensions Width 130 mm 	Protection level: Write protection	Yes
Cycle time monitoring	 Protection level: Read/write protection 	Yes
adjustable Yes Dimensions Width 130 mm	 Protection level: Complete protection 	Yes
Dimensions Width 130 mm	Cycle time monitoring	
Width 130 mm	● adjustable	Yes
	Dimensions	
Height 100 mm	Width	130 mm
	Height	100 mm

Depth	75 mm
Weights	
Weight, approx.	585 g
last modified:	02/14/2020