SIEMENS

Data sheet

6AG1214-1AE30-5XB0

SPARE PART SIPLUS S7-1200 CPU 1214C DC/DC/DC -25 ... +55 DEGREES C WITH CONFORMAL COATING SIGNAL BOARD USEABLE BASED ON 6ES7214-1AE30-0XB0 . COMPACT CPU, DC/DC/DC, ONBOARD I/O: "14 DI 24V DC; 10 DO 24 V DC;" 2 AI 0 - 10V DC, POWER SUPPLY: DC 20.4 - 28.8 V DC, PROGRAM/DATA MEMORY: 50 KB



General information	
Product type designation	CPU 1214C DC/DC/DC
Engineering with	
 Programming package 	STEP 7 Basic V10.5
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
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, max.	1.5 A; 24 V DC
Inrush current, max.	12 A; at 28.8 V
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	Permissible range: 20.4V to 28.8V
Power loss	
Power loss, typ.	12 W
Memory	
Work memory	
• integrated	50 kbyte
• expandable	No
Load memory	
• integrated	2 Mbyte
 Plug-in (SIMATIC Memory Card), max. 	24 Mbyte; with SIEMENS Memory Card
Backup	
• present	Yes; Entire project maintenance-free in the integral EEPROM
 without battery 	Yes
CPU processing times	
for bit operations, typ.	0.1 μs; / Operation
for word operations, typ.	12 µs; / Operation
for floating point arithmetic, typ.	18 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	· · · · · · · · · · · · · · · · · · ·
• Number, max.	Limited only by RAM for code
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	2 048 byte
Flag	
• Number, max.	8 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

Number of digital inputs 14; Integrated • of which inputs usable for technological functions 6; HSC (High Speed Counting) Source/sink input Yes Input voltage 24 V • for signal "0" 5 V DC at 1 mA • for signal "1" 15 V DC at 2.5 mA Input current 1 mA • for signal "1", typ. 1 mA Input delay (for rated value of input voltage) 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 Yes - parameterizable Single phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz Cable length shielded, max. • shielded, max. 500 m; 50 m for technological functions • unshielded, max. 300 m; For technological functions: No	Time of day	
Backup ime 240 h; Typical • Backup ime 4/- 60 s/month at 25 °C Digital inputs 14, Integrated • of which inputs usable for technological functions 6/ Source/sink input Yes Input voltage 24 V • for signal °C 5/ VDC at 1 mA • for signal °C 5/ VDC at 2.5 mA Input durrent 15 V DC at 2.5 mA • for signal °C 1 mA • for signal °C 1 mA • for signal °C 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 - parameterizable 0.2 ms - at "0" to "1", max. 12.8 ms for interrupt inputs - - parameterizable Yes of or interrupt inputs - - parameterizable Single phase: 3 @ 100 kHz & 3 @ 30 kHz Cable length 10 • which high-speed outputs 10 • unshielded, max. 300 m; For technological functions • unshielded, max. 05 A of which high-speed outputs 10 • of which high-speed outputs	Clock	
+ 60 simonih at 25 °C Deviation per day, max. Per digital inputs Number of digital inputs of which inputs usable for technological functions Source/sink input Pes Input voltage Per digital angle Per digital angle	 Hardware clock (real-time) 	Yes
Digital inputs Integrated • of which inputs usable for technological functions 6; HSC (High Speed Counting) Source/sink input Yes Input voltage Yes • for signal "0" 5 V DC at 1 mA • for signal "1" 15 V DC at 2.5 mA Input voltage Input voltage • for signal "1", typ. 1 mA • for signal "1", typ. 1 mA Input voltage 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 Yes • parameterizable Yes • unshielded, max. 300 m; 50 m for technological functions • unshielded, max. 300 m; For technological functions • of which high-speed outputs 1.10 kHz Pulse Train Output	Backup time	240 h; Typical
Number of digital inputs 14; Integrated • of which inputs usable for technological functions 6; HSC (High Speed Counting) Source/sink input Yes Input voltage 24 V • for signal "0" 5 V DC at 1 mA • for signal "1" 15 V DC at 2.5 mA Input current • • for signal "1", typ. 1 mA Input delay (for rated value of input voltage) 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four - at "0" to "1", min. 0.2 ms - at "0" to "1", max. 12.8 ms for interrupt inputs - - parameterizable Yes for counter/technological functions - - parameterizable Yes for counter/technological functions - - parameterizable Yes for unshielded, max. 500 m; 50 m for technological functions: No Unable of which high-speed outputs 2; 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz Ves Source/sink 300 m; For technological functions: No Unit of which high-speed outputs 2; 100 kHz Pulse Train Output	• Deviation per day, max.	+/- 60 s/month at 25 °C
• of which inputs usable for technological functions6; HSC (High Speed Counting)Source/sink inputYesInput voltage24 V• for signal "0"5 V DC at 1 mA• for signal "1"15 V DC at 2.5 mAInput det or input voltage1 mAInput det or signal "1", typ.1 mA• for signal "1", typ.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 out of "1", min at "0" to "1", min.0.2 ms- at "0" to "1", max.12.8 msfor interrupt inputs2.4 ms- at "0" to "1", max.12.8 msfor counter/technological functionsSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 	Digital inputs	
functionsYesSource/sink inputYesInput voltage24 Vfor signal "0"5 V DC at 1 mAfor signal "1"15 V DC at 2.5 mAInput currentImput delay (for rated value of input voltage)for signal "1", typ.1 mAInput delay (for rated value of input voltage)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. 12.8 ms- at "0" to "1", max.12.8 msfor interrupt inputsVesfor counter/technological functions- parameterizableSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzCable length500 m; 50 m for technological functions: No mes of digital outputsof of which high-speed outputs10of which high-speed outputs2,100 kHz Pulse Train OutputShort-circuit protectionNo; to be provided externallyLimitation of inductive shutdown voltage to with resistive load, max.0.5 ASwitcing capacity of the outputs0.5 ASwitcing capacity of the outputs5WOutput voltage5WOutput voltage </td <td>Number of digital inputs</td> <td>14; Integrated</td>	Number of digital inputs	14; Integrated
Source/sink input Yes Input voltage - • Rated value (DC) 24 V • for signal "0" 5 V DC at 1 mA • for signal "1", top. 100 Cat 2.5 mA Input current - • for signal "1", typ. 1mA Input delay (for rated value of input voltage) - for signal "1", typ. 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", max. 0.2 ms - at "0" to "1", max. 12.8 ms for counter/technological functions 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. 500 m; 50 m for technological functions • unshielded, max. 500 m; 50 m for technological functions • of which high-speed outputs 10 • of which high-speed outputs 2; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to 5W with resistive load, max. 5V	 of which inputs usable for technological 	6; HSC (High Speed Counting)
Input voltage 24 V • for signal "0" 5 V DC at 1 mA • for signal "1" 15 V DC at 2.5 mA Input current 1 mA • for signal "1", typ. 1 mA Input delay (for rated value of input voltage) 1 mA Input delay (for rated value of input voltage) 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 counter/technological functions 2.8 ms for counter/technological functions wes - parameterizable Yes engle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz Katg & 3 @ 30 kHz 300 m; 50 m for technological functions • unshielded, max. 500 m; 50 m for technological functions: No Digital outputs 10 • of which high-speed outputs 2; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to L (48 V) Switching capacity of the outputs 5W • on lamp load, max. 0.5 A • on l	functions	
• Rated value (DC)24 V• for signal "0"5 V DC at 1 mA• for signal "1"15 V DC at 2.5 mAInput current• for signal "1", typ.1 mAInput delay (for rated value of input voltage)• for standard inputs0.2 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 msfor interrupt inputs- parameterizableVesfor counter/technological functions- parameterizableSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzCable length• shielded, max.500 m; 50 m for technological functions• unshielded, max.300 m; For technological functions• of which high-speed outputs10• of which high-speed outputs2; 100 kHz Pulse Train OutputShort-circuit protectionNo; to be provided externallyLimitation of inductive shutdown voltage to1+ (48 V)Switching capacity of the outputs5W• with resistive load, max.0.5 A• on lamp load, max.0.5 A• or signal "1", min.20 V	Source/sink input	Yes
Index rectorsS V DC at 1 mAi for signal "1"15 V DC at 2.5 mAInput currentInput delay (for rated value of input voltage)for signal "1", typ.1 mAInput delay (for rated value of input voltage)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- parameterizable0.2 ms- at "0" to "1", min.0.2 ms- at "0" to "1", max.12.8 msfor interrupt inputsVesfor counter/technological functionsVesfor counter/technological functionsSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzCable lengthSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzNumber of digital outputs10ourbutive shutdown voltage to2; 100 kHz Pulse Train OutputShort-circuit protectionNo; to be provided externallyLimitation of inductive shutdown voltage to0.5 Aswitching capacity of the outputs55 Wwith resistive load, max.0.5 Ao lam load, max.0.5 Ao lam load, max.0.5 Ao lam load, max.50 W	Input voltage	
• for signal "1" 15 V DC at 2.5 mA Input current 1 mA Input delay (for rated value of input voltage) 1 mA for signal "1", typ. 1 mA Input delay (for rated value of input voltage) 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	 Rated value (DC) 	24 V
Instrument Imm Input current 1 mA Input delay (for rated value of input voltage) 1 mA Input delay (for rated value of input voltage) 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 - parameterizable Yes for counter/technological functions - parameterizable - parameterizable Yes for counter/technological functions - shielded, max. - parameterizable Single phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz Cable length - shielded, max. • of which high-speed outputs 500 m; 50 m for technological functions • unshielded, max. 300 m; For technological functions • of which high-speed outputs 2; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to Shot Switching capacity of the outputs 5W • on lamp load, max. 0.5 A • on lamp load	● for signal "0"	5 V DC at 1 mA
• for signal "1", typ. 1 mA Input delay (for rated value of input voltage) for standard inputs	● for signal "1"	15 V DC at 2.5 mA
Input delay (for rated value of input voltage) for standard inputs	Input current	
for standard inputs	● for signal "1", typ.	1 mA
parameterizable0.2 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 msfor interrupt inputs parameterizableYesfor counter/technological functions parameterizableSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzCable length shielded, max.500 m; 50 m for technological functions• unshielded, max.10• of which high-speed outputs10• of which high-speed outputs10• unitation of inductive shutdown voltage toL+ (-48 V)Switching capacity of the outputs0.5 A• with resistive load, max.0.5 A• on lamp load, max.5 WOutput voltage5 WOutput voltage5 W	Input delay (for rated value of input voltage)	
selectable in groups of four- at "0" to "1", min.0.2 ms- at "0" to "1", max.12.8 msfor interrupt inputsYes- parameterizableYesfor counter/technological functionsSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz- parameterizableSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzcable lengthSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz• shielded, max.500 m; 50 m for technological functions• unshielded, max.500 m; For technological functions• unshielded, max.00 m; For technological functions• unshielded, max.10• of which high-speed outputs2; 100 kHz Pulse Train OutputShort-circuit protectionNo; to be provided externallyLimitation of inductive shutdown voltage to1+ (48 V)Switching capacity of the outputs0.5 A• on lamp load, max.0.5 A• on lamp load, max.5 WOutput voltage5 W• for signal "1", min.20 V	for standard inputs	
Initial arrow to "1", max.12.8 msfor interrupt inputsYes- parameterizableYesfor counter/technological functionsSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzCable lengthSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzCable lengthSo0 m; 50 m for technological functions• unshielded, max.500 m; 50 m for technological functions: NoDigital outputs300 m; For technological functions: NoNumber of digital outputs10• of which high-speed outputs2; 100 kHz Pulse Train OutputShort-circuit protectionNo; to be provided externallyLimitation of inductive shutdown voltage toL (+48 V)Switching capacity of the outputs0.5 A• with resistive load, max.5 W• on lamp load, max.5 WOutput voltage5 W• for signal "1", min.20 V	— parameterizable	
for interrupt inputs Yes for counter/technological functions	— at "0" to "1", min.	0.2 ms
	— at "0" to "1", max.	12.8 ms
for counter/technological functions	for interrupt inputs	
— parameterizableSingle phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHzCable length500 m; 50 m for technological functions• shielded, max.500 m; 50 m for technological functions: No• unshielded, max.300 m; For technological functions: NoDigital outputs10• of which high-speed outputs2; 100 kHz Pulse Train OutputShort-circuit protectionNo; to be provided externallyLimitation of inductive shutdown voltage toL+ (-48 V)Switching capacity of the outputs0.5 A• with resistive load, max.0.5 A• on lamp load, max.5 WOutput voltage5 W	— parameterizable	Yes
kHz & 3 @ 30 kHz Cable length • shielded, max. • unshielded, max. 300 m; 50 m for technological functions outputs Number of digital outputs 0 • of which high-speed outputs Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to + (-48 V) Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 0.5 A • on lamp load, max. 0utput voltage • for signal "1", min.	for counter/technological functions	
• shielded, max.500 m; 50 m for technological functions• unshielded, max.300 m; For technological functions: NoDigital outputs10• of which high-speed outputs2; 100 kHz Pulse Train Output• of which high-speed outputs0.5 to be provided externallyLimitation of inductive shutdown voltage toL+ (-48 V)Switching capacity of the outputs0.5 A• with resistive load, max.5 WOutput voltage5 W	— parameterizable	
• unshielded, max. 300 m; For technological functions: No Digital outputs 10 • of which high-speed outputs 2; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs 0.5 A • with resistive load, max. 0.5 A • on lamp load, max. 5 W Output voltage 20 V	Cable length	
Digital outputs 10 • of which high-speed outputs 2; 100 kHz Pulse Train Output Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs 0.5 A • on lamp load, max. 0.5 A • Output voltage 5 W Output voltage 20 V	• shielded, max.	500 m; 50 m for technological functions
Number of digital outputs10• of which high-speed outputs2; 100 kHz Pulse Train OutputShort-circuit protectionNo; to be provided externallyLimitation of inductive shutdown voltage toL+ (-48 V)Switching capacity of the outputs0.5 A• with resistive load, max.0.5 A• on lamp load, max.5 WOutput voltage• for signal "1", min.20 V	• unshielded, max.	300 m; For technological functions: No
• of which high-speed outputs2; 100 kHz Pulse Train OutputShort-circuit protectionNo; to be provided externallyLimitation of inductive shutdown voltage toL+ (-48 V)Switching capacity of the outputs0.5 A• with resistive load, max.0.5 A• on lamp load, max.5 WOutput voltage• for signal "1", min.20 V	Digital outputs	
Short-circuit protection No; to be provided externally Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs 0.5 A • with resistive load, max. 0.5 A • on lamp load, max. 5 W Output voltage • for signal "1", min. 20 V	Number of digital outputs	10
Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs 0.5 A • with resistive load, max. 0.5 A • on lamp load, max. 5 W Output voltage 20 V	 of which high-speed outputs 	2; 100 kHz Pulse Train Output
Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 5 W Output voltage • for signal "1", min.	Short-circuit protection	No; to be provided externally
• with resistive load, max.0.5 A• on lamp load, max.5 WOutput voltage20 V	Limitation of inductive shutdown voltage to	L+ (-48 V)
• on lamp load, max. 5 W Output voltage • for signal "1", min. 20 V	Switching capacity of the outputs	
Output voltage • for signal "1", min. 20 V	 with resistive load, max. 	0.5 A
• for signal "1", min. 20 V	• on lamp load, max.	5 W
	Output voltage	
Output current	• 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
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
Cable length	
● shielded, max.	100 m; twisted and shielded
Analog outputs	
Number of analog outputs	0
Cable length	
• shielded, max.	100 m; shielded, twisted pair
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
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
1. Interface	
Interface type	PROFINET
Physics	Ethernet
Isolated	Yes
automatic detection of transmission rate	Yes
Autonegotiation	Yes
Autocrossing	Yes

PROFINET IO Controller	Yes
Protocols	
Supports protocol for PROFINET IO	No
PROFIBUS	No
AS-Interface	No
Protocols (Ethernet)	
• TCP/IP	Yes
Further protocols	
• MODBUS	No
Communication functions	
S7 communication	
 supported 	Yes
• as server	Yes
Open IE communication	
• TCP/IP	Yes
 ISO-on-TCP (RFC1006) 	Yes
Web server	
• supported	Yes
 User-defined websites 	Yes
Number of connections	
• overall	15; dynamically
Test commissioning functions	
Status/control	
 Status/control variable 	Yes
• Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	
Forcing	Yes
Integrated Functions	
Number of counters	6
Counting frequency (counter) max.	100 kHz
Frequency meter	Yes
controlled positioning	Yes
PID controller	Yes
Number of alarm inputs	4
Number of pulse outputs	2
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
 between the channels, in groups of 	2
Permissible potential difference	
Permissible potential difference between different circuits	500 V DC between 24 V DC and 5 V DC
EMC	
Interference immunity against discharge of static electric	•
 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	
 on the 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 of protection acc. to EN 60529	
• IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
FM approval	No
RCM (formerly C-TICK)	No
Ambient conditions	
Free fall	
 Fall height, max. 	0.3 m; five times, in product package
Ambient temperature during operation	
 horizontal installation, min. 	-25 °C; = Tmin
 horizontal installation, max. 	55 °C; = Tmax

 vertical installation, min. 	-25 °C; = Tmin
vertical installation, max.	45 °C; = Tmax
Ambient temperature during storage/transportation	
• min.	-40 °C
	70 °C
• max.	
Vibrations	2 = (m/2) well require $4 = (m/2)$ DIM with
• Vibrations	2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail
Operation, tested according to IEC 60068-2-6	Yes
Shock test	
 tested according to IEC 60068-2-27 	Yes; 15 g (m/s ²), 11 ms pulse, 6 shocks in each of 3 axes
Extended ambient conditions	
 relative to ambient temperature-atmospheric pressure-installation altitude 	Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)
Relative humidity	
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; Relative humidity, incl. condensation / frost permitted (no commissioning under condensation conditions)
Resistance	
 against biologically active substances / conformity with EN 60721-3-3 	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
 against chemically active substances / conformity with EN 60721-3-3 	Yes; Class 3C4 incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!
 against mechanically active substances / conformity with EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!
Configuration	
Programming	
Programming language	
— LAD	Yes
— FBD	Yes
— SCL	Yes
Cycle time monitoring	
• adjustable	Yes
Dimensions	
Width	110 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	415 g
last modified:	05/31/2017