SIEMENS

Data sheet

6ES7211-1AE40-0XB0



SIMATIC S7-1200, CPU 1211C, compact CPU, DC/DC/DC, onboard I/O: 6 DI 24 V DC; 4 DO 24 V DC; 2 AI 0-10 V DC, Power supply: DC 20.4-28.8V DC, Program/data memory 50 KB

Figure	simi	ar
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General information	
Product type designation	CPU 1211C DC/DC/DC
Firmware version	V4.5
Engineering with	
Programming package	STEP 7 V17 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)	300 mA; CPU only
Current consumption, max.	900 mA; CPU with all expansion modules
Inrush current, max.	12 A; at 28.8 V DC
l²t	0.5 A ² ·s
Output current	
for backplane bus (5 V DC), max.	750 mA; Max. 5 V DC for CM
Encoder supply	
24 V encoder supply	
• 24 V	L+ minus 4 V DC min.
Power loss	
Power loss, typ.	8 W
Memory	
Work memory	
• integrated	50 kbyte
Load memory	
• integrated	1 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
Memory Work memory • integrated Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • maintenance-free • without battery CPU processing times	50 kbyte 1 Mbyte with SIMATIC memory card Yes Yes Yes

bit word opendions, bp. 1.7 kr./instruction Orbailing point attimutes, bp. 2.3 kr./instruction OPULAtional 2.3 kr./instruction OPULAtional DBs, PCa, FBs, counters and times. The maximum number of addressable blocks range from 10 65335. There is no restriction, the entite working memory calibre back OB • Number of blocks (bla) OB • Linked only by FAAM for code Data areas and their retenviry • Kenthe data area (numbers, fage), max. • Sea, max. 14 kbyte: Size of bit memory address area Lond ida • or profiny class, max. • or profiny class, max. 16 kbyte: Priority class 1 (congram cycle): 16 KB, pronty class 2 to 20: 6 KB Address area • or profiny class, max. 16 kbyte: Size of bit memory address area Lond ida • or profiny class, max. 16 kbyte: Size of bit memory address area Address area • or profiny class, max. 16 kbyte: Size of bit memory address area Lond ida • or profiny class, max. 16 kbyte: Size of bit memory address area Lond ida • or profiny class, max. 16 kbyte: Size of bit memory address area Lond ida • or profiny class, max. 16 kbyte: Size of bit memory address area <		
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blocks anges Kon 1 to 6555. There is no restriction, the entire working memory actions be used memory actions and their restantizion, the entire working service and their restantizion memory actions and their restantizion (there accounters, flags), max. Large and their restantizion (there accounters, flags), max. A target accounter of the service accounters flags, max. A target accounter of the service accounters flags, max. A target accounter of the service accounte	CPU-blocks	
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Data area and their retunnity If kigs Retentive data area (incl. times, counters, flags), max. If k ktyle Initial If k ktyle Initial If ktyle Initial It ktyle Init dtyle It ktyle <tr< td=""><td>OB</td><td></td></tr<>	OB	
Reserved value area (incl. timers, counters, flags), max. 14 kbyte Flag Size, max. 4 kbyte; Size of bit memory address area coal data e per protry class, max. 1 kbyte; Phonty class 1 (program cycle); 16 KB, pronty class 2 to 26: 6 KB Address area Protoss image Floads, adjustable 1 kbyte 1 kbyte Protoss image Floads, adjustable 1 kbyte 1 kbyte 1 kbyte Address area Protoss image Floads area Protoss image Floads area 1 kbyte Address area Cook Hardware clock (real-time) 480 ximunication modules, 1 signal board Time of day Boreation per day, max. 480 ximunication modules, 1 signal board Original inputs of which must usable for technological functions 6: Integrated 1 kbyte; Size of bit memory address area of which must usable for technological functions 5: Store-Stick input Yes Number of animalianeously controllable inputs at mounting positions — up to 40 °C, max: 6 Inger ated or signal 1°1 The add value (CC) 24 V or signal 1°1 Yes Yes (Address area at 70°1 bit 1'', min. at 70°1 bit 1'', min.<	Number, max.	Limited only by RAM for code
Figs 4 kbyte; Size of bit memory address area • Size, max. 4 kbyte; Size of bit memory address area • Local data 18 kbyte; Priority class. 1 (program cycle): 16 KB, priority class. 2 to 26: 6 KB • Inputs, adjustable 1 kbyte • Inputs, adjustable 3 communication modules, 1 signal board • Inputs, adjustable 480 h; Typical • Backup time 480 h; Typical • Brackup time 6 integrated • Ord vhich inputs caller for technological functions 6, Integrated • Ord vhich inputs caller for technological functions 6 kBC (High Speed Counting) • Or signal "0" 5 V DC at 1 mA • Or signal "1", top. 6 A M; norminal Input catrier 0 A M; norminal<	Data areas and their retentivity	
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• per priority class, max. 16 kbyte. Priority class 1 (program cycle); 16 KB, priority class 2 to 26: 6 KB Address aria. Process image • Inputs, adjustable 1 kbyte • Outputs, adjustable 1 kbyte • Conducts, adjustable 1 kbyte • Hardware configuration 3 communication modules, 1 signal board • Mardware configuration Yes • Hardware cock (real-line) Yes • Backup time 460 h; Typical • Backup time 460 h; Typical • Outputs, max. 0 integrated • Hardware clock (real-line) Yes • Backup time 460 h; Typical • Order of hinputs usable for technological functions 6: Integrated • of which inputs usable for technological functions 6: 116 Speed Counting) Source/sink input Yes Number of signal for? 5 VC Call 1 mA • or signal for? 5 VC Call 1 mA • for signal for? 5 VC Call 1 mA • for signal for? 5 VC Call 2 mA Input tauge 6 • for signal for? 5 VC Call 1 mA • for signal for? 5 VC Call 1 mA • or signal for? 5 VC Call 2 mA • for signal for? 5 VC Call 2 MA • for signal for? 5 VC Call 2 MA	• Size, max.	4 kbyte; Size of bit memory address area
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 A byte Hardware configuration Hardware configuration Number of modules, per system, max. 3 communication modules, 1 signal board Time of day Clock Hardware clock (real-line) Yes Backup time 480 h; Typical Boviation per day, max. 480 h; Typical Deviation per day, max. 480 h; Typical Source/sink input of which inputs usable for technological functions 6, HSC (Hiph Speed Counting) Source/sink input Yees Number of simultaneously controllable inputs 6, HSC (Hiph Speed Counting) Source/sink input Yees Number of simultaneously controllable inputs 6, HSC (Hiph Speed Counting) Source/sink input Yees Number of simultaneously controllable inputs Handward (PC) 24 V Kor signal "0", max. 6 Input voltage Put b 40 °C, max. 6 Input voltage Put b 40 °C, max. 6 Input voltage Put b 40 °C, max. 6 /S V DC at 1 mA for signal "1", hp; 4 mA; nominal Input detage (bit read value of input voltage) for signal "1", inp; 4 mA; nominal 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 /		1 kbyte
Hardware configuration 3 communication modules, 1 signal board Time of day Clock • Hardware clock (real-time) • Backup time 480 h; Typical • Backup time 480 h; Typical • Deviation per day, max. ±50 strongth at 25 °C Digital inputs K Number of digital inputs 6; Integrated • of which inputs usable for technological functions 6; HSC (High Speed Counting) Source/sink input Yes all mounting positions -		
Number of modules per system, max. 3 communication modules, 1 signal board Time of day Clock • • Hardware clock (real-lime) 480 h; Typical • Deviation per day, max. 480 h; Typical • Deviation per day, max. 480 h; Typical • Deviation per day, max. 60 simonth at 25 °C Digital inputs 6; Integrated • of which inputs usable for technological functions 6; IHSC (High Speed Counting) Source/sink input Yes Number of simultaneously controllable inputs 6 • all mounting positions - - up to 40 °C, max. 6 • for signal °C 5 V DC at 1 mA • for signal °C 5 V DC at 2.5 mA Input delay (for rated value of input voltage) 6 • for signal °C 5 V DC at 1 mA • for signal °C 4 mA; nominal Input delay (for rated value of input voltage) 6 for ratemeterizable 01/02/04/08/18/32/64/100/12.8/20.0 µs; 0.05/0.1/0.2/0.4/ - at °C to °1*, min. 0.2 ms - at °C to °1*, max. 12.8 ms for interrupt inputs - - parameterizable		
Time of day Clock • Hardware clock (real-time) • Backup time • Bokup time • Of which inputs usable for technological functions • Gital input • Of which inputs usable for technological functions • Gital input • Of which inputs usable for technological functions • Gital input • Instructure of signulations up to 40 °C, max. 6 Input voltage • for signal °C* • parameterizable 0 1/0 2/0 4/0 8/1 6/3 2/6 4/10.0/12.8/20.0 µs; 0.05/0.1/0.2/0.4/2 • at °C* for °C* - parameteriza		3 communication modules, 1 signal board
Clock Yes • Hardware clock (real-time) • Backup time • Deviation per day, max. ±60 s/month at 25 °C Digital inputs Number of digital inputs • Integrated • of which inputs usable for technological functions • 6; HSC (High Speed Counting) Source/sink input Yes Number of digital inputs all mounting positions	· · · ·	
• Hardware clock (real-time) Yes • Backup time 490 h; Typical • Deviation per day, max. 490 s/month at 25 °C Digital inputs 6; Integrated • of which inputs usable for technological functions 6; HSC (High Speed Counting) Source/sink input Yes Number of simultaneously controllable inputs 6 all mounting positions		
Backup time AB0 h; Typical Deviation per day, max. 480 smonth at 25 °C Deviation per day, max. Adv Smonth at 25 °C Distain parture Number of digital inputs of which inputs usable for technological functions f. HSC (High Speed Counting) Source/sink input Yes Number of simultaneously controllable inputs all mounting positions -up to 40 °C, max. for signal °0° for signal °0° for signal °1° for signal		Van
Deviation per day, max. ±00 simonth at 25 °C Digital inputs Number of digital inputs of which inputs usable for technological functions or up to 40 °C, max. for signal °0° retate value (DC) for signal °0° for signal °0° for signal °1° for signal °2° for		
Digital inputs 6: 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. 6 Input voltage 6 • for signal 10° 5 V DC at 1 mA • for signal 10° 5 V DC at 2.5 mA Input current 6 • for signal 1°*, typ. 4 mA; nominal Input delay (for rated value of input voltage) 6 for standard inputs 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/ - at 10° to 1*1, min. 0.2 ms - at 10° to 1*1, max. 12.8 ms for interrupt inputs - - parameterizable Yes for interrupt inputs - - parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • • of which high-speed outputs 4 • of which high-speed outputs 4; 100 kHz Pulse Train Output Unstand of digital outputs 4 • of which high-speed outputs 4; 100 kHz Pulse Train Output Li		
Number of digital inputs 6; 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		
• of which inputs usable for technological functions 6; HSC (High Speed Counting) Source/sink input Yes Number of simultaneously controllable inputs all mounting positions		
Source/sink input Yes Number of simultaneously controllable inputs all mounting positions up to 40 °C, max, 6 Input voltage • Rated value (DC) • for signal °C • for signal °C • for signal °C • for signal °T • at °C °T to °T, min. • at °C °T to °T, min. • at °C °T to °T, max. • Cable length <		-
Number of simultaneously controllable inputs all mounting positions	· · · · · · · · · · · · · · · · · · ·	
all mounting positions 6 Input voltage 6 Input voltage 24 V • for signal "0" 5 V DC at 1 mA • for signal "1" 15 V DC at 2.5 mA Input durrent 4 mA; nominal • for signal "1", typ. 4 mA; nominal Input delay (for rated value of input voltage) 6 or signal "1", typ. for standard inputs 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 1.8 / 20.0 µs; 0.05 / 0.1 / 0.2 / 0.4 / 2.8 / 20.0 µs; 0.5 / 0.1 / 0.2 / 0.4 / 2.8 / 20.0 µs; 0.5 / 0.1 / 0.2 / 0.4 / 2.8 / 20.0 µs; 0.5 / 0.1 / 2.8 / 20.0 µs; 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5 / 0.5		Yes
up to 40 °C, max. 6 Input voltage 24 V • 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 current 4 mA; nominal Input delay (for rated value of input voltage) 6 for standard inputs 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/ - 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/ - at "0" to "1", min. 0.2 ms - at "0" to "1", max. 12.8 ms for interrupt inputs - - parameterizable Yes for itechnological functions - - parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length 500 m; 50 m for technological functions • os thielded, max. 300 m; for technological functions • unshielded, max. 300 m; for technological functions • 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 5W • of which high-speed outputs 5W • on lam		
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 current 4 mA; nominal • for signal "1", typ. 4 mA; nominal Input delay (for rated value of input voltage) 5 v DC at 2.5 mA for standard inputs - parameterizable - parameterizable 0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 µs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 ms - at "0" to "1", min. 0.2 ms - at "0" to "1", max. 12.8 ms for iternotinguits - - parameterizable Yes for technological functions - - parameterizable Yes for technological functions - - parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length - • shielded, max. 500 m; 50 m for technological functions • unshielded, max. 300 m; for technological functions • of which high-speed outputs 4 • of which high-speed outputs 4; 100 kHz Pulse Train Output Limitation of inductive shutdown voltage to		
 Rated value (DC) Particular (DC) Pa		6
• 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. 4 mA; nominal 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/ - 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, differential: 3 @ 80 kHz Cable length - • of which high-speed outputs 4 • of which high-speed outputs 5W • with resistive load, max. 0.5 A • on imp load, max. 5W Output voltage 5W • for signal on, max. 5W		
• for signal "1" 15 V DC at 2.5 mA Input current 4 mA; nominal Input delay (for rate value of input voltage) 4 mA; nominal for signal "1", typ. 4 mA; nominal Input delay (for rate value of input voltage) 5 voltage for standard inputs 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 / 10.0 / 12.8 / 20.0 µs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 10.0 / 12.8 / 20.0 µs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 10.0 / 12.8 / 20.0 µs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 10.0 / 12.8 / 20.0 µs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 10.0 / 12.8 / 20.0 µs; 0.05 / 0.1 / 0.2 / 0.4 / 2.8 ms for interrupt inputs		
Input current • for signal "1", typ. 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 µs; 0.05/0.1/0.2/0.4/ 0.2 ms - at "0" to "1", max. 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, differential: 3 @ 80 kHz Cable length - • shielded, max. 500 m; 50 m for technological functions • unshielded, max. 500 m; 50 m for technological functions: No Digital outputs 4 • of which high-speed outputs 4; 100 kHz Pulse Train Output Limitation of inductive shutdown voltage to	-	
 for signal "1", typ. 4 mA; nominal 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 µs; 0.8/1.6/3.2/6.4/10.0/12.8/20.0 µs; 0.8/1.6/3.2/6.4/10.0/12.8/20.0 µs; 0.8/1.6/3.2/6.4/10.0/12.8/20.0 µs; 0.2 µs 0.2 µs 0.1/0.2/0.4/10.0/12.8/20.0 µs; 0.5 A 0.1 µnp load, max. 0.1 V; with 10 kOhm load 		15 V DC at 2.5 mA
Input delay (for rated value of input voltage) for standard inputs - parameterizable 0.1/0.2/0.4/0.8/1.6/3.2/6.4/10.0/12.8/20.0 µs; 0.05/0.1/0.2/0.4/ 0.8/1.6/3.2/6.4/10.0/12.8/20.0 µs; 0.05/0.1/0.2/0.4/ 0.2 ms - at "0" to "1", max. 500 m; 50 m for technological functions No Digital outputs Number of digital outputs 4 • of which high-speed outputs • unshielded, max. • of which high-speed outputs • unshielded, max. • unshielded, max. • unshielded, max. • unshielded, max. • unshielded, max. • on lamp load, max. • on lamp load, max. • on lamp load, max. • for signal "0", max. • 0.1 V; with 10 kOhm load	•	
for standard inputs 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 µs; 0.05/0.1/0.2/0.4/ 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 µs; 0.05/0.1/0.2/0.4/ 0.2 µs; 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 µs; 0.8/1.6/3.2/6.4/10.0/12.8/20.0 µs; 0.05/0.1/0.2/0.4/ 0.2 µs; 0.5 0 µs; 0.5 A 0.1/0.2/0.4/0.8/1 5W 0.5 A 0.1 µs; 0.5 A 5W Output voitage 0.5 A 5W		4 mA; nominal
parameterizable0.1 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 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 µs; 0.05 / 0.1 / 0.2 / 0.4 // 0.2 / 0.8 // 0.2 ms- at "0" to "1", max.12.8 msfor interrupt inputs- - parameterizable- parameterizableYesfor technological functions- - parameterizableCable length500 m; 50 m for technological functions• shielded, max.300 m; for technological functions• unshielded, max.300 m; for technological functions: NoDigital outputs4• of which high-speed outputs4• of which high-speed outputs4• of which high-speed outputs4• with resistive load, max.0.5 A• on lamp load, max.0.5 A• on lamp load, max.5 WOutput voltage0.1 V; with 10 kOhm load		
0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 ms at "0" to "1", min.0.2 ms at "0" to "1", max.12.8 msfor interrupt inputs12.8 ms parameterizableYesfor technological functions5ingle phase : 3 @ 100 kHz, differential: 3 @ 80 kHzCable length500 m; 50 m for technological functions• shielded, max.500 m; 50 m for technological functions• unshielded, max.300 m; for technological functions• unshielded, max.500 m; 50 m for technological functions• unshielded, max.0.5 A• of which high-speed outputs4• with resistive load, max.0.5 A• on lamp load, max.5 WOutput voltage5 W• for signal "0", max.0.1 V; with 10 kOhm load		
at "0" to "1", min.0.2 ms at "0" to "1", max.12.8 msfor interrupt inputs parameterizableYesfor technological functions parameterizableSingle phase : 3 @ 100 kHz, differential: 3 @ 80 kHzCable length• shielded, max.500 m; 50 m for technological functions• unshielded, max.300 m; for technological functions• unshielded, max.300 m; for technological functions• unshielded, max.4• of which high-speed outputs4+ of which high-speed outputs4Unitation of inductive shutdown voltage toL+ (-48 V)Switching capacity of the outputs0.5 A• with resistive load, max.5 WOutput voltage5 WOutput voltage	— parameterizable	
at "0" to "1", max.12.8 msfor interrupt inputs parameterizableYesfor technological functions parameterizableSingle phase : 3 @ 100 kHz, differential: 3 @ 80 kHzCable length• shielded, max.500 m; 50 m for technological functions• unshielded, max.300 m; for technological functions: NoDigital outputs4• of which high-speed outputs4; 100 kHz Pulse Train OutputLimitation of inductive shutdown voltage toL+ (-48 V)Switching capacity of the outputs0.5 A• with resistive load, max.5 WOutput voltage5 W	at "0" to "1" min	
for interrupt inputs Yes — parameterizable Yes for technological functions Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length 500 m; 50 m for technological functions • shielded, max. 500 m; 50 m for technological functions • unshielded, max. 300 m; for technological functions: No Digital outputs 4 Number of digital outputs 4; 100 kHz Pulse Train Output Limitation of inductive shutdown voltage to L+ (-48 V) Switching capacity of the outputs 0.5 A • on lamp load, max. 5 W Output voltage 5 W Output voltage 0.1 V; with 10 kOhm load		
		12.0110
for technological functions — parameterizable Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz Cable length • shielded, max. 500 m; 50 m for technological functions • unshielded, max. 300 m; for technological functions: No Digital outputs • of which high-speed outputs 4 • 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 0.5 A • on lamp load, max. 5 W Output voltage 5 W Output voltage 5 W		Ves
	·	
Cable length • shielded, max. • unshielded, max. 300 m; 50 m for technological functions • unshielded, max. Digital outputs Number of digital outputs • of which high-speed outputs 4; 100 kHz Pulse Train Output Limitation of inductive shutdown voltage to Limitation of the outputs • with resistive load, max. 0.5 A on lamp load, max. 5 W Output voltage • for signal "0", max.		Single phase : 3 @ 100 kHz differential: 2 @ 00 kHz
• shielded, max.500 m; 50 m for technological functions• unshielded, max.300 m; for technological functions: NoDigital outputs00• of which high-speed outputs4• of which high-speed outputs4; 100 kHz Pulse Train OutputLimitation of inductive shutdown voltage toL+ (-48 V)Switching capacity of the outputs0.5 A• on lamp load, max.5 WOutput voltage-• for signal "0", max.0.1 V; with 10 kOhm load		
• unshielded, max.300 m; for technological functions: NoDigital outputsNumber of digital outputs4• of which high-speed outputs4; 100 kHz Pulse Train OutputLimitation 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 "0", max.0.1 V; with 10 kOhm load		500 m: 50 m for toobpological functions
Digital outputs 4 Number of digital outputs 4; 100 kHz Pulse Train Output • 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 0.5 A • with resistive load, max. 0.5 A • on lamp load, max. 5 W Output voltage 0.1 V; with 10 kOhm load		-
Number of digital outputs 4 • 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 0.5 A • with resistive load, max. 0.5 A • on lamp load, max. 5 W Output voltage 0.1 V; with 10 kOhm load		
• 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		
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 0.1 V; with 10 kOhm load		
Switching capacity of the outputs 0.5 A • with resistive load, max. 0.5 A • on lamp load, max. 5 W Output voltage		
• with resistive load, max. 0.5 A • on lamp load, max. 5 W Output voltage - • for signal "0", max. 0.1 V; with 10 kOhm load		L+ (-48 V)
• on lamp load, max. 5 W Output voltage • for signal "0", max. • for signal "0", max. 0.1 V; with 10 kOhm load		
Output voltage • for signal "0", max. 0.1 V; with 10 kOhm load		
• for signal "0", max. 0.1 V; with 10 kOhm load		5 W
• for signal "1", min. 20 V	-	
	• for signal "1", min.	20 V

Output current	
 for signal "1" rated value 	0.5 A
 for signal "0" residual current, max. 	0.1 mA
Output delay with resistive load	
• "0" to "1", max.	1 µs
• "1" to "0", max.	5 µs
Switching frequency	
 of the pulse outputs, with resistive load, max. 	100 kHz
Relay outputs	
 Number of relay outputs 	0
Cable length	
 shielded, max. 	500 m
• unshielded, max.	150 m
Analog inputs	
Number of analog inputs	2
Input ranges	
Voltage	Yes
Input ranges (rated values), voltages	
• 0 to +10 V	Yes
— Input resistance (0 to 10 V)	≥100k ohms
Cable length	
• shielded, max.	100 m; twisted and shielded
Analog outputs	
Number of analog outputs	0
Analog value generation for the inputs	0
Integration and conversion time/resolution per channel	
-	10 bit
Resolution with overrange (bit including sign), max.	Yes
Integration time, parameterizable	
Conversion time (per channel) Encoder	625 μs
Encoder	
Connectable encoders	Ver
• 2-wire sensor	Yes
2-wire sensor 1. Interface	
2-wire sensor 1. Interface Interface type	PROFINET
2-wire sensor 1. Interface Interface type Isolated	PROFINET Yes
• 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate	PROFINET Yes Yes
2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation	PROFINET Yes Yes Yes
• 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing	PROFINET Yes Yes
• 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types	PROFINET Yes Yes Yes Yes
• 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types • RJ 45 (Ethernet)	PROFINET Yes Yes Yes Yes
• 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types • RJ 45 (Ethernet) • Number of ports	PROFINET Yes Yes Yes Yes Yes
2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch	PROFINET Yes Yes Yes Yes
2-wire sensor Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types	PROFINET Yes Yes Yes Yes Yes
2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch	PROFINET Yes Yes Yes Yes Yes
2-wire sensor Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types	PROFINET Yes Yes Yes Yes 1 No
• 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • PROFINET IO Controller	PROFINET Yes Yes Yes Yes 1 No
2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • PROFINET IO Controller • PROFINET IO Device	PROFINET Yes Yes Yes Yes 1 No
2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication	PROFINET Yes Yes Yes Yes Yes 1 No Yes Yes Yes Yes
2-wire sensor Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication	PROFINET Yes Yes Yes Yes Yes 1 No Yes Yes Yes Yes Yes Yes Yes; Optionally also encrypted
2-wire sensor Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server	PROFINET Yes Yes Yes Yes Yes 1 No Yes Yes Yes Yes Yes Yes Yes Yes Yes
2-wire sensor Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy	PROFINET Yes Yes Yes Yes Yes 1 No Yes Yes Yes Yes Yes Yes Yes Yes Yes
 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller 	PROFINET Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. 	PROFINET Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
2-wire sensor Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services	PROFINET Yes Yes Yes Yes Yes 1 No Yes Yes Yes Yes Yes; Optionally also encrypted Yes No
 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication 	PROFINET Yes Yes Yes Yes Yes 1 No Yes Yes Yes Yes Yes; Optionally also encrypted Yes No Yes; encryption with TLS V1.3 pre-selected
 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Isochronous mode 	PROFINET Yes Yes Yes Yes Yes Yes Yes Yes
 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Isochronous mode — IRT 	PROFINET Yes Yes Yes Yes Yes Yes Yes Yes
 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Prioritized startup 	PROFINET Yes Yes Yes Yes 1 No Yes Yes Yes Yes Yes Yes Yes Yes Yes No 100 Mbit/s Yes; encryption with TLS V1.3 pre-selected No No No
 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services PG/OP communication Isochronous mode IRT PROFInergy 	PROFINET Yes Yes Yes Yes Yes 1 No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
 2-wire sensor 1. Interface Interface type Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controller Transmission rate, max. Services — PG/OP communication — Isochronous mode — IRT — PROFInergy — Prioritized startup — Number of IO devices with prioritized startup, max. 	PROFINET Yes 100 Mbit/s Yes; encryption with TLS V1.3 pre-selected No Yes 16

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PROFIsia No PROFIBUS Yes, Ch1 243-5 (naster) or Cl1 242-5 (slave) required OPC UA Yes, Ch1 243-2 required AS-Interface Yes, Ch1 243-2 required Protocols (Ehrenet) Yes • TCP/IP Yes • DHCP No • SIMP Yes • LLDP Yes • LLDP Yes • CP in MP Yes • LLDP Yes • MRP No MRP No MRP No MRPO No • STrouting Yes Open IE communication Yes • STorouting Yes • Data length, max. 8 ktyte - several passive connections per port, supported Yes • UDP Yes - Data length, max. 1472 byte • ubgorted Yes • UDP Yes • UDP Yes • UDP Yes • Number of sessions, max. 1472 byte		Vec
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• TCP/IPYes• UHCPNo• SIMPYes• CCPYes• CDPYes• LLDPYes• MRPNo- MRPNo- MRPNo- MRPNoStroutingYesOpen IE communicationYes• Ore IE communicationYes• Data length, max.8 ktyte- soveral passive connections per port, supportedYes• Blo on-TCP (RFC1006)Yes• Data length, max.8 ktyte• UDPYes- Data length, max.8 ktyte• UDPYes- Data length, max.8 ktyte• UDPYes- Data length, max.9 ktyte• UDPYes- Data length, max.8 ktyte• UDPYes- Data length, max.9 ktyte• UDPYes- SupportedYes• SupportedYes• CPC UA ServerYes- Data length, max.10 ktyte- SupportedYes• User authentication7 anonymous' or yuser name & password- Number of severins per session, max.5- Sampling interval, min.100 ms- Number of server interfaces, max.20- Number of server interfaces, max.20-		TES, GIVI 1240-2 TEQUITEU
• DHCPNo• SNMPYes• CCPYes• LLDPYesRedundancy modeNo• MRPNo- MRPNo- MRPNo- MRPNo- Data fungtin, max.Yes• S7 routingYes• Dotal length, max.8 kbyte- Data length, max.1472 byte• Dort CPC (RF-Ctoo)Yes- Data length, max.1472 byte• Dort CPC KASCYes- Data length, max.1472 byte• Dort CPC KASCYes- Data length, max.1472 byte• UDPYes- UDPYes- Data access (read, write, subscribe), runtime license required• UDPYes- UDPYes- Data access (read, write, subscribe), runtime license required• Worber of subscriptions per session, max.5- Sampling interval, min.100 ms- Number of sessions, max.20- Number of sessions, max.200- Number of session ruser, max.<		Ver
• SNMPYes• CCPYes• CLPYesRedundancy modeYes• MRPNo• MRPDNo• MRPDNo• MRPDNo• MRPDNo• STroutingVes• Open IE communicationYes• CP/IPYes• Data length, max.& byle• Data length, max.& data length, max.• Data length, max.& data access (read, write, subscribe), runtime license required• Data length, max.& data access (read, write, subscribe), runtime license required• Application authentication"anonymous" or by user name & password• Number of subscriptions per session, max.& dot manonymous" or by user name & password• Number of distored methods, max. <td< td=""><td></td><td></td></td<>		
• DCPYes• LLDPYesReturdancy modeMRPNo- MRPNoSIMATIC communicationYes• MRPDYes• Communication• TCP/IPYes• CDP/IPYes• CDP/IPYes• Data length, max.& Khyte• Socometions per port, supportedYes• Data length, max.Key• Socometions per port, supportedYes• Data length, max.Key• Data		
• ILDP Yes Redurdancy mode		
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• S7 routing Yes Open IE communication ************************************	— MRPD	No
Open IE communication Yes • TCP/IP Yes - Data length, max. 8 kbyte - several passive connections per port, supported Yes • ISO-on-TCP (RFC1006) Yes - Data length, max. 8 kbyte • UDP Yes - Data length, max. 8 kbyte • UDP Yes - Data length, max. 1472 byte Web server Yes • User-defined websites Yes OPC UA Yes • Runtime license required Yes; "Basic" license required • OPC UA Yes; Data access (read, write, subscribe), runtime license required • OPC UA Yes; Data access (read, write, subscribe), runtime license required • OPC UA Yes; Data access (read, write, subscribe), runtime license required • Application authentication "anonymous" or by user name & password - User authentication "anonymous" or by user name & password - Number of sessions, max. 10 - Number of session, max. 5 - Sampling interval, min. 20 - Number of server interfaces, max.	SIMATIC communication	
• TCP/IP Yes - Data length, max. 8 kbyte - Several passive connections per port, supported Yes • ISO-on-TCP (RFC1006) Yes - Data length, max. 8 kbyte • UDP Yes - Data length, max. 1 472 byte Web server Yes • Data length, max. 1 472 byte Web server Yes • User-defined websites Yes OPC UA Yes • Runtime license required Yes; "Basic" license required • OPC UA Yes; "Data access (read, write, subscribe), runtime license required • OPC UA Variable security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 - User authentication "anonymous" or by user name & password - Number of subscriptions per session, max. 5 - Sampling interval, min. 100 ms - Number of subscriptions per seession, max. 20 - Number of nonitored items, recommended max. 1000 - Number of nonitored items, recommended max. 20 - Number of nonitored items, recommended max. 200 - Number of nonitored items, recommended max. 2000	S7 routing	Yes
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Data length, max.8 kbyte• UDPYes Data length, max.1 472 byteWeb server1 472 byte• supportedYes• User-defined websitesYesOPC UAYes; "Basic" license required• OPC UA ServerYes; "Basic" license required• OPC UA ServerYes; "Data access (read, write, subscribe), runtime license required• OPC UA ServerYes; "Data access (read, write, subscribe), runtime license required- Application authenticationAvailable security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256- User authentication"anonymous" or by user name & password- Number of subscriptions per session, max.5- Sampling interval, min.100 ms- Publishing interval, min.200 ms- Number of server methods, max.20- Number of server interfaces, max.2- Number of notored items, recommended max.1 000- Number of server interfaces, max.2- Number of notes for user-defined server interfaces, anax.2 000- Number of notes for user-defined server interfaces, max.2 000- Number of notes for user-defined server interfaces, anax.2 000- Number of notes for user-defined server interfaces, anax.2 000- Number of notes for user-defined server interfaces, anax.2 000- Number of notes for user-defined server interfaces, anax.2 000- Number of notes for user-defined server interfaces, anax.2 000- Number of notes for user-defined server interfaces, anax.2 000	 — several passive connections per port, supported 	Yes
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Data length, max.1 472 byteWeb server• supportedYes• User-defined websitesYesOPC UA• Runtime license requiredYes; "Basic" license required• OPC UA ServerYes; Data access (read, write, subscribe), runtime license required• OPC UA ServerYes; Data access (read, write, subscribe), runtime license required- Application authentication"anonymous" or by user name & password- Number of sessions, max.10- Number of subscriptions per session, max.5- Sampling interval, min.100 ms- Number of server methods, max.20- Number of server interfaces, max.1000- Number of server interfaces, max.20- Number of nodes for user-defined server interfaces, max.2000- Number of modes for user-defined server interfaces, max.2000- Number of nodes for user-defined server interfaces, max.20	— Data length, max.	8 kbyte
Web server • supported Yes • User-defined websites Yes OPC UA - • Runtime license required Yes; "Basic" license required • OPC UA Server Yes; Data access (read, write, subscribe), runtime license required - Application authentication Available security policies: None, Basic128Rsa15, Basic256Sha256 - User authentication "anonymous" or by user name & password - Number of sessions, max. 10 - Number of subscriptions per session, max. 5 - Sampling interval, min. 200 ms - Number of server methods, max. 20 - Number of server interfaces, max. 2 - Number of nodes for user-defined server interfaces, max. 2 - Number of nodes for user-defined server interfaces, max. 2 000 - Number of nodes for user-defined server interfaces, max. 2 000 - Number of nodes for user-defined server interfaces, max. 2 000 - Number of nodes for user-defined server interfaces, max. 2 000 - Number of nodes for user-defined server interfaces, max. 2 000	• UDP	Yes
• supportedYes• User-defined websitesYesOPC UA• Runtime license requiredYes; "Basic" license required• OPC UA ServerYes; Data access (read, write, subscribe), runtime license required- Application authenticationAvailable security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256- User authentication"anonymous" or by user name & password- Number of sessions, max.10- Number of subscriptions per session, max.5- Sampling interval, min.100 ms- Publishing interval, min.200 ms- Number of server methods, max.2- Number of server interfaces, max.2- Number of server interfaces, max.2- Number of server interfaces, max.2- Number of nodes for user-defined server interfaces, max.2- MODBUSYes	— Data length, max.	1 472 byte
• User-defined websites Yes OPC UA • Runtime license required Yes; "Basic" license required • OPC UA Server Yes; Data access (read, write, subscribe), runtime license required • Application authentication Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Rsa256 - User authentication "anonymous" or by user name & password - Number of sessions, max. 10 - Number of subscriptions per session, max. 5 - Sampling interval, min. 100 ms - Number of server methods, max. 200 ms - Number of server methods, max. 1000 - Number of server methods, max. 2000 - Number of nonitored items, recommended max. 2000 - Number of notes for user-defined server interfaces, max. 2 - Number of notes for user-defined server interfaces, max. 2 - Number of notes for user-defined server interfaces, max. 2 - Number of notes for user-defined server interfaces, max. 2 - Number of notes for user-defined server interfaces, max. 2000	Web server	
OPC UA • Runtime license required Yes; "Basic" license required • OPC UA Server Yes; Data access (read, write, subscribe), runtime license required - Application authentication Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 - User authentication "anonymous" or by user name & password - Number of sessions, max. 10 - Number of subscriptions per session, max. 5 - Sampling interval, min. 100 ms - Publishing interval, min. 200 ms - Number of server methods, max. 20 - Number of server interfaces, max. 2 - Number of server interfaces, max. 2 - Number of nonitored items, recommended max. 1000 - Number of nonitored items, recommended max. 2 - Number of nodes for user-defined server interfaces, max. 2 - Number of nodes for user-defined server interfaces, max. 2 - Number of nodes for user-defined server interfaces, max. 2 - Number of nodes for user-defined server interfaces, max. 2 - Number of nodes for user-defined server interfaces, max. 2 - Number of nodes for user-defined server interfaces, max. 2 - MODBUS <td>• supported</td> <td>Yes</td>	• supported	Yes
• Runtime license required Yes; "Basic" license required • OPC UA Server Yes; Data access (read, write, subscribe), runtime license required - Application authentication Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 - User authentication "anonymous" or by user name & password - Number of sessions, max. 10 - Number of subscriptions per session, max. 5 - Sampling interval, min. 100 ms - Number of server methods, max. 200 ms - Number of server methods, max. 1000 - Number of server interfaces, max. 200 cms - Number of server interfaces, max. 2000 - Number of server interfaces, max. 2000 - Number of nodes for user-defined server interfaces, max. 2000	User-defined websites	Yes
• OPC UA ServerYes; Data access (read, write, subscribe), runtime license required- Application authenticationAvailable security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Rsa256- User authentication"anonymous" or by user name & password- Number of sessions, max.10- Number of subscriptions per session, max.5- Sampling interval, min.100 ms- Publishing interval, min.200 ms- Number of server methods, max.20- Number of server methods, max.20- Number of server interfaces, max.2- Number of nonitored items, recommended max.1000- Number of nodes for user-defined server interfaces, max.2- NUMDBUSYes	OPC UA	
• OPC UA ServerYes; Data access (read, write, subscribe), runtime license required- Application authenticationAvailable security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Rsa256- User authentication"anonymous" or by user name & password- Number of sessions, max.10- Number of subscriptions per session, max.5- Sampling interval, min.100 ms- Publishing interval, min.200 ms- Number of server methods, max.20- Number of server methods, max.20- Number of server interfaces, max.2- Number of nonitored items, recommended max.1000- Number of nodes for user-defined server interfaces, max.2- NUMDBUSYes		Yes; "Basic" license required
Application authenticationAvailable security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256- User authentication"anonymous" or by user name & password- Number of sessions, max.10- Number of subscriptions per session, max.5- Sampling interval, min.100 ms- Publishing interval, min.200 ms- Number of server methods, max.1- Number of server methods, max.20- Number of server methods, max.20- Number of server methods, max.20- Number of server interfaces, max.2- Number of nonitored items, recommended max.1000- Number of nodes for user-defined server interfaces, max.2- NUMDENCSYes		
Basic256Sha256User authentication"anonymous" or by user name & passwordNumber of sessions, max.10Number of subscriptions per session, max.5Sampling interval, min.100 msPublishing interval, min.200 msNumber of server methods, max.20Number of server methods, max.1 000Number of server interfaces, max.20Number of server interfaces, max.20Number of server interfaces, max.2Number of nodes for user-defined server interfaces, max.2		
Number of sessions, max.10 Number of subscriptions per session, max.5 Sampling interval, min.100 ms Publishing interval, min.200 ms Number of server methods, max.20 Number of server methods, max.1 000 Number of server interfaces, max.2 Number of server interfaces, max.2 Number of nodes for user-defined server interfaces, max.2Further protocolsYes	FF	
Number of subscriptions per session, max.5 Sampling interval, min.100 ms Publishing interval, min.200 ms Number of server methods, max.20 Number of server methods, max.1 000 Number of monitored items, recommended max.1 000 Number of server interfaces, max.2 Number of nodes for user-defined server interfaces, max.2 000Further protocols•- MODBUSYes	— User authentication	"anonymous" or by user name & password
Sampling interval, min.100 ms Publishing interval, min.200 ms Number of server methods, max.20 Number of monitored items, recommended max.1 000 Number of server interfaces, max.2 Number of server interfaces, max.2 Number of nodes for user-defined server interfaces, max.2 000Further protocolsYes	- Number of sessions, max.	10
Publishing interval, min. 200 ms Number of server methods, max. 20 Number of monitored items, recommended max. 1 000 Number of server interfaces, max. 2 Number of nodes for user-defined server interfaces, max. 2 000 Further protocols 2 000 • MODBUS Yes	 — Number of subscriptions per session, max. 	5
Number of server methods, max. 20 Number of monitored items, recommended max. 1 000 Number of server interfaces, max. 2 Number of nodes for user-defined server interfaces, max. 2 000 Further protocols Yes	— Sampling interval, min.	100 ms
Number of server methods, max. 20 Number of monitored items, recommended max. 1 000 Number of server interfaces, max. 2 Number of nodes for user-defined server interfaces, max. 2 000 Further protocols Yes	— Publishing interval, min.	200 ms
Number of monitored items, recommended max. 1 000 Number of server interfaces, max. 2 Number of nodes for user-defined server interfaces, max. 2 000 Further protocols Yes	-	20
Number of server interfaces, max. 2 Number of nodes for user-defined server interfaces, max. 2 000 Further protocols Yes		
 Number of nodes for user-defined server interfaces, max. Further protocols MODBUS Yes 		
max. Further protocols ODBUS Yes		
MODBUS Yes		
	Further protocols	
communication functions / header	MODBUS	Yes
	communication functions / header	

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	PG Connections: 4 reserved / 4 max; HMI Connections: 12 reserved / 18 max; S7 Connections: 8 reserved / 14 max; Open User Connections: 8 reserved / 14 max; Web Connections: 2 reserved / 30 max; OPC UA Connections: 0 reserved / 10 max; Total Connections: 34 reserved / 64 max
Test commissioning functions	
Status/control	
 Status/control variable 	Yes
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	
Counter	
Number of counters	6
Counting frequency, 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	4 100 kHz
Limit frequency (pulse) Potential separation	
Potential separation digital inputs	
	No
 Potential separation digital inputs between the channels, in groups of 	1
Detween the channels, in groups of Potential separation digital outputs	
Potential separation digital outputs	Yes
between the channels	No
between the channels, in groups of	1
EMC	
Interference immunity against discharge of static electricity	
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 disturbance indu	iced by high-frequency fields
 Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 	Yes

Emission of ratio interference acc. to EM 5011 • Exp. Sforup 1 • Limit class B, for use in inexidential areas Yes, Sforup 1 Pressen and class of protection IP20 Standards, approvals, certificates IP20 CE mark Yes, Sforup 1 Use growals, certificates Yes, Sforup 1 CE mark Yes UL approval Yes cUus Yes cUus Yes Rod (growal) Yes Rod (growal) Yes Rod (growal) Yes Antifications Yes Rod (growal) Yes Antification (growal) Yes
• Limit class B, for use in residential areas Yes. When appropriate massures are used to ensure compliance with the limits for class B according to EN S0111 • Degree of protection IP 20 • Enderdraf, sproval, certificates - CE mark Yes U.a approval Yes clus Yes clus Yes clus Yes clus Yes clus Yes clus Yes RCM (tomely C+TICK) Yes Marine approval Yes Ambreat conditions Yes Ambreat conditions Yes Ambreat conditions operation - • File foll - • For foll - • for toronal installation, min. - • oritoconal installation, min. - • operation, min. - • operation, min.
for Class B according to EN 55011 IP degree of protection IP20 Standards, approvals, conflicates E CE mark Yes UL approval Yes cllus Yes cllus Yes ROM (formerly C-TICK) Yes KC approval Yes ROM (formerly C-TICK) Yes KC approval Yes Ambient conditions Free fail Free fail Free fail • Fail height, max. 0.3 m; five times, in product package Ambient temperature during operation - • min. -20 °C • horizontal installation, min. -20 °C • horizontal installation, max. 60 °C • vertical installation, max. 60 °C • vertical installation, max. 50 °C • vertical installation, max. 60 °C • vertical installation, max. 50 °C • operation, max. 60 °C • operation, max. 60 °C • operation, max. 50 °C • operation, max.
IP degree of protection IP20 Standard, approvals, colfficitus CE mark Yes UL approval Yes UL approval Yes FM approval Yes FM approval Yes RCM (formerly C-TICK) Yes KC approval Yes Matrix approval Yes Ambient conditions Free fail • Fail height, max. 0.3 m; five times, in product package Ambient conditions Free fail • Indicating operation -20 °C • Indicating operation -20 °C • Indicating installation, min. -20 °C • ontractal installation, max. 60 °C • vertical installation, max. 50 °C Ambient temporature during storage/transportation • min. -20 °C • vertical installation, max. 50 °C Ambient temporature during storage/transportation • min. -40 °C • min. -40 °C • min. -60 °C • vertical installation, min. -20 °C • Notice on max 1080 PiPa • Storage/transport, min. -1000 m • Installation althude, min. -1000 m • Installation althude, min. -1000 m •
IP degree of protection IP20 Standard, approvals, colfficitus CE mark Yes UL approval Yes UL approval Yes FM approval Yes FM approval Yes RCM (formerly C-TICK) Yes KC approval Yes Matrix approval Yes Ambient conditions Free fail • Fail height, max. 0.3 m; five times, in product package Ambient conditions Free fail • Indicating operation -20 °C • Indicating operation -20 °C • Indicating installation, min. -20 °C • ontractal installation, max. 60 °C • vertical installation, max. 50 °C Ambient temporature during storage/transportation • min. -20 °C • vertical installation, max. 50 °C Ambient temporature during storage/transportation • min. -40 °C • min. -40 °C • min. -60 °C • vertical installation, min. -20 °C • Notice on max 1080 PiPa • Storage/transport, min. -1000 m • Installation althude, min. -1000 m • Installation althude, min. -1000 m •
Standards, approvals, certificates Ves CE mark Yes UL. approval Yes cULus Yes FM approval Yes RCM (formely C-TICK) Yes Marine approval Yes Arabient conditions Yes Fire fail • Fail height, max. 0.3 m; five times, in product package Ambient conditions Fire fail -20 °C • inin. -20 °C • ortical installation, min. -20 °C • ortical installation, max. 60 °C • ortical installation, max. 50 °C • ortical installation, max. 50 °C • ortical installation, max. 50 °C • ortical installation, max. 100 °C • operation, max. 1080 Pa
CE mark Yes UL approval Yes CULus Yes FM approval Yes RCM (formerly C-TICK) Yes RCM (formerly C-TICK) Yes Ambient conditions Yes Free fail • Free fail • Free fail - 20 °C • min. -20 °C • Introducting operation - • Introducting operation - • Introducting installation, min. -20 °C • Introducting installation, max. 60 °C • Introducting installation, max. 60 °C • Vertical installation, max. 60 °C • Vertical installation, max. 50 °C • Vertical installation, max. 20 °C • Vertical installation, max. 70 °C Ambient temperature during storage/transportation - • Intradiction max. 70 °C Arbiert temperature during storage/transportation - • Intradiction altrude, max. 70 °C Arbiert temperature during storage/transport. - • Operation, max. 1080 hPa • Storage/transport. max. 1080 hPa • Installation altrude, max. 5 000 m; Restrictions for installation altrude e> 2 000 m, see manual Retaring -
UL approval Yes cULus Yes FM approval Yes RCM (formerly C-TICK) Yes RCM (formerly C-TICK) Yes Marine approval Yes Antibient conditions Yes Free fall • Fall height: max. • Fall height: max. 0.3 m; five times, in product package Antibient temperature during operation • inin. • inin. -20 °C • ontricontial installation, min. -20 °C • ontricontial installation, max. 60 °C • ontricontial installation, max. 60 °C • ontricontial installation, max. 20 °C • ontricontial installation, max. 50 °C Ambient temperature during storage/transportation • of °C • inin. -40 °C • max. 1080 iPa • operation, max. 1080 iPa • Operation, max. 1080 iPa • Storage/transport, max. 1080 iPa • Installation attrude, max. 5000 m; Restrictions for installation attrude, max. • Installation attrude, max. 5000 m; Restrictions for installation attrude => 2000 m; see manual Relative humidity • operation, max. 2 g (m/s ⁴) wall mounting. 1 g (m/s ⁴) DIN rail • Operation, max. 95 %; no condensation
cULus Yes FM approval Yes FCM (formerly C-TICK) Yes KC approval Yes Marine approval Yes Ambient conditions
FM approval Yes RCM (formerly C-TICK) Yes KC approval Yes Marine approval Yes Ambient conditions Tere fall • Fall height, max. 0.3 m; five times, in product package Ambient temperature during operation • inin. • inin. -20 °C • nax. 60 °C • nax. 60 °C • origonial installation, min. -20 °C • origonial installation, min. -20 °C • vertical installation, max. 60 °C • vertical installation, max. 60 °C • vertical installation, min. -20 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation - • inin. -40 °C • max. 70 °C • Arbient temperature during storage/transport. -40 °C • operation, max. 1080 Pa • Operation, max. 1080 Pa • Storage/transport, max. 1080 Pa • Installation attitude, min. -1000 m • installation attitude, min. -1000 m • installation attitude, min. -1000 m • installation attitude, max. 50 °G • Operation, tested according to IEC 60068-2-6 Yes
RCM (formerly C-TICK) Yes KC approval Yes Ambient conditions Yes Ambient conditions 0.3 m; five times, in product package Ambient temperature during operation • rail height, max. 0.3 m; five times, in product package Ambient temperature during operation • min. -20 °C • nax. 60 °C • horizontial installation, min. -20 °C • horizontial installation, min. -20 °C • ericical installation, max. 60 °C • ericical installation, max. 60 °C • ericical installation, max. -20 °C • ericical installation, min. -20 °C • ericial installation, min. -20 °C • ericial installation, min. -20 °C • ericial installation, min. -20 °C • operation, min. 40 °C • operation, min. 1080 IPa • Storage/transport, max. 1080 IPa • Storage/transport, max. 5000 m • installation altitude, min. -1000 m • installation altitude, min. -1000 m • installation altitude, mi
KC approval Yes Ambient conditions Free fail • Fail height, max. 0.3 m; five times, in product package Ambient comperature during operation -20 °C • min. -20 °C • max. 60 °C • horizontal installation, min. -20 °C • horizontal installation, max. 60 °C • vertical installation, max. 60 °C • vertical installation, max. 50 °C • operation, max. 70 °C • Ambient temperature during storage/transportation -40 °C • nim. -40 °C • operation, max. 1080 Pa • Operation, min. 1080 Pa • Storage/transport, max. 1080 Pa • Installation altitude, min. -1 000 m • Installation altitude, max. 50 000 m; Restrictions for installation altitudes > 2 000 m, see manual Vibration Poeration, max. 95 %; no condensation Vibration Vibratio
Marine approval Yes Ambient conditions Free fail • Fail height, max. 0.3 m; five times, in product package Ambient temperature during operation -20 °C • max. 60 °C • horizontal installation, min. -20 °C • vertical installation, max. 60 °C • vertical installation, min. -20 °C • vertical installation, max. 60 °C • vertical installation, max. 50 °C • vertical installation, max. 50 °C • vertical installation, min. -20 °C • vertical installation, min. -20 °C • vertical installation, min. -20 °C • operation installation, min. -20 °C • operature during storage/transportation -00 °C • inin. -40 °C • operation, max. 1080 hPa • Operation, max. 1080 hPa • Storage/transport, max. 1080 hPa • Storage/transport, max. 5000 m; Restrictions for installation altitudes > 2 000 m, see manual • Norage/transport, max. 5000 m; Restrictions for installation altitudes > 2 000 m, see manual • operation, max. 95 %; no condensation
Ambient conditions Free fail • Fail height, max. 0.3 m; five times, in product package Ambient temperature during operation • min. -20 ° C • max. 60 ° C • horizontal installation, min. -20 ° C • vertical installation, min. -20 ° C • vertical installation, max. 60 ° C • vertical installation, min. -20 ° C • vertical installation, max. 50 ° C Ambient temperature during storage/transportation -0 ° C • min. -40 ° C • max. 70 ° C Ambient temperature during storage/transport. -40 ° C • operation, max. 10 ° C • Storage/transport, max. 10 ° C • Storage/transport, max. 50 ° C ° • Storage/transport, max. 50 ° C ° • operation, max. 50 ° C ° • Installation altitude, max. 50 ° C °
Free fail - Fail height, max. 0.3 m; five times, in product package Anbient temperature during operation - • min. -20 °C • max. 60 °C • horizontal installation, min. -20 °C • orbit temperature during operation - • vertical installation, max. 60 °C • vertical installation, max. 60 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation - • min. -20 °C • min. -20 °C • min. -20 °C • max. 70 °C Ambient temperature during storage/transport. - • Operation, min. -40 °C • Operation, min. -70 °C • Operation, max. 1080 Pa • Storage/transport, max. 1080 Pa • Installation altitude, max. 5 000 m, Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 5 000 m, Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 95 %; no condensation
• Fall height, max. 0.3 m; five times, in product package Ambient temperature during operation • min. -20 °C • max. 60 °C • horizontal installation, min. -20 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation -0 °C • max. 70 °C Amine temperature during storage/transportation -0 °C • max. 70 °C Air pressure acc. to EC 60068-2-13 -0 °C • Operation, min. 70 °C • Operation, min. 1080 Pa • Storage/transport, max. 1080 Pa • Installation altitude, max. 50 °C • Installation altitude, max. 50 °C • Installation altitude, max. 50 °C • Operation, reax. 95 %; no condensation • Operation, max. 95 %; no condensation • Operation, max. 95 %; no condensation • Vibration resist
Ambient temperature during operation -20 °C • min. 60 °C • horizontal installation, min. -20 °C • horizontal installation, max. 60 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation -40 °C • eritical installation, max. 50 °C Ambient temperature during storage/transportation -40 °C • max. 70 °C Air pressure acc. to IEC 60068-2-13 -70 °C • Operation, min. 195 hPa • Operation, min. 1960 hPa • Storage/transport, min. 660 hPa • Storage/transport, max. 1080 hPa • Installation altitude, min. -1 000 m • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity -0 peration, max. 95 %; no condensation • Vibration resistance during operation acc. to IEC 60068-2-6 Yes • Vibration resistance during operation acc. to IEC 60068-2-6 Yes • Storage the 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 • Operation, tested according to IEC 60068-2-6 <td< td=""></td<>
• min. -20 °C • max. 60 °C • max. 60 °C • horizontal installation, min. -20 °C • vertical installation, max. 60 °C • vertical installation, max. 60 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation -20 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation -40 °C • min. -40 °C • max. 70 °C Air pressure ace, to IEC 60068-2-13 -0 Operation, max. • Operation, max. 1080 hPa • Storage/transport, min. 660 hPa • Storage/transport, max. 1080 hPa • Installation altitude, min. -1 000 m • Installation altitude, max. 500 m; Restrictions for installation altitudes > 2 000 m, see manual • Note the steriet according to IEC 60068-2-6 Yes • Operation, max. 95 %; no condensation Vibration resistance during operation acc. to IEC 60068-2-6 Yes • Operation, max. 95 %; no condensation Vibration resistance during to IEC 60068-2-6 Yes
• max. 60 °C • horizontal installation, min. -20 °C • vertical installation, max. 60 °C • vertical installation, max. 50 °C • vertical installation, max. 70 °C • max. 70 °C • Operation, min. 795 hPa • Operation, min. 795 hPa • Operation, max. 1080 hPa • Storage/transport, min. 660 °Ra • Storage/transport, max. 1080 hPa • Attitude during operation relating to sea level - • Installation altitude, min. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual • Relative humidity - • Operation, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual • Vibration 5 (g (m/s ²) wall mounting, 1 g (m/s ²) DIN rail • Operation, max. 5 000 erg • Operation, tested according to IEC 60068-2-6 Yes • Stock testing - • Vibration resistance during operation acc. to IEC 60068-2-6 Yes </td
• horizontal installation, min. 20 °C • horizontal installation, max. 60 °C • vertical installation, max. 20 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation -20 °C • min. -40 °C • max. 70 °C Ar pressure acc. to IEC 60068-2-13 -0 °C • Operation, min. 795 hPa • Operation, max. 1080 hPa • Storage/transport, max. 1080 hPa • Storage/transport, max. 1080 hPa • Installation altitude, min. -1000 m • Installation altitude, max. 5000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 95 %; no condensation Vibration 5000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, tested according to IEC 60068-2-6 2 g (m/s ³) wall mounting, 1 g (m/s ³) DIN rail 2-6 - 95 %; no condensation Vibration Successing - • tested according to IEC 60068-2-27 Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g
• horizontal installation, max. 60 °C • vertical installation, min. -20 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation - • min. -40 °C • max. 70 °C Arr pressure acc. to IEC 60068-2-13 - • Operation, min. 1080 hPa • Operation, max. 1080 hPa • Storage/transport, min. 660 hPa • Storage/transport, max. 1080 hPa • Installation altitude, min. -1 000 m • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, tested according to IEC 60068-2-6 2 g (m/s ³) wall mounting, 1 g (m/s ³) DIN rail -2-6 - • Vibration - • Vibration - • So2 at RH < 60% without condensation
• vertical installation, min. -20 °C • vertical installation, max. 50 °C Ambient temperature during storage/transportation - • min. -40 °C • max. 70 °C Air pressure acc. to IEC 60068-2-13 - • Operation, min. 795 hPa • Operation, max. 1080 hPa • Storage/transport, max. 660 hPa • Storage/transport, max. 1080 hPa • Installation altitude, min. -1 000 m • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 95 %; no condensation Vibration - • Operation, tested according to IEC 60068-2-6 Yes Shock testing - • Lested according to IEC 60068-2-6 Yes Shock testing - • Lested 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 - • Lested 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
• vertical installation, max. 50 ° C Ambient temperature during storage/transportation - • min. -40 ° C • max. 70 ° C Air pressure acc. to IEC 60068-2-13 - • Operation, max. 1080 hPa • Operation, max. 1080 hPa • Operation, max. 600 hPa • Storage/transport, max. 600 hPa • Installation altitude, max. 500 00 m; Restrictions for installation altitudes > 2 000 m, see manual Attitude during operation relating to see level - • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 95 %; no condensation Vibration resistance during operation acc. to IEC 60068-2-6 2 g (m/s³) wall mounting, 1 g (m/s³) DIN rail 2-6 - 2 g (m/s³) wall mounting, 1 g (m/s³) DIN rail 2-6 Yes Shock testing • tested according to IEC 60068-2-6 Yes Shock testing - • tested according to IEC 60068-2-6 Yes Shock testing - • tested according to IEC 60068-2-27 Yes (IEC 68, Part 2-27 half-
Ambient temperature during storage/transportation • min. -40 °C • max. 70 °C Air pressure acc. to IEC 60068-2-13 • Operation, min. • Operation, min. 795 hPa • Operation, max. 1 080 hPa • Storage/transport, max. 1 080 hPa • Storage/transport, max. 1 080 hPa • Installation altitude, min. -1 000 m • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity • • Operation, max. 95 %; no condensation Vibrations 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes Shock testing - • 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 -40 °C • max. 70 °C Air pressure acc. to IEC 60068-2-13 70 °C • Operation, min. 795 hPa • Operation, max. 1 080 hPa • Storage/transport, max. 1 080 hPa • Storage/transport, max. 1 080 hPa • Storage/transport, max. 1 080 hPa • Installation altitude, min. -1 000 m • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity - • Operation, max. 95 %; no condensation Vibrations 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes Shock testing - • tested according to IEC 60068-2-6 Yes Shock testing - • elsel 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
 min. 40 °C max. 70 °C Air pressure acc. to IEC 60068-2-13 Operation, min. Operation, max. Storage/transport, min. Storage/transport, max. 1080 hPa Storage/transport, max. 1080 hPa Attitude during operation relating to sea level Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Betailation altitude, max. 95 %; no condensation Vibration resistance during operation acc. to IEC 60068-2-6 Yes Shock testing tested according to IEC 60068-2-6 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 / header Programming language -LAD Yes
Air pressure acc. to IEC 60068-2-13 • Operation, min. • Operation, max. • Operation, max. • Storage/transport, min. • Storage/transport, max. • Storage/transport, max. • Installation altitude, min. • Installation altitude, min. • Installation altitude, min. • Installation altitude, max. • Operation, tesistance during operation acc. to IEC 60068-2-6 · Vibrations • Vibration resistance during operation acc. to IEC 60068-2-6 · Question, tested according to IEC 60068-2-6 · Ves Shock testing • lested 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
• Operation, min.795 hPa• Operation, max.1 080 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPaAltitude during operation relating to sea level1 080 nPa• Installation altitude, min1 000 m• Installation altitude, max.5 000 m; Restrictions for installation altitudes > 2 000 m, see manualRelative humidity-1 000 m• Operation, max.95 %; no condensation• Operation resistance during operation acc. to IEC 60068- 2-62 g (m/s²) wall mounting, 1 g (m/s²) DIN rail 2-6• Vibration2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail 2-6• Vibration tested according to IEC 60068-2-6Yes• Shock testing-• tested according to IEC 60068-2-6YesShock testing-• tested according to IEC 60068-2-27Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 msPollutant concentrationsS02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
• Operation, min.795 hPa• Operation, max.1 080 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPaAltitude during operation relating to sea level1 080 nPa• Installation altitude, min1 000 m• Installation altitude, max.5 000 m; Restrictions for installation altitudes > 2 000 m, see manualRelative humidity-1 000 m• Operation, max.95 %; no condensation• Operation resistance during operation acc. to IEC 60068- 2-62 g (m/s²) wall mounting, 1 g (m/s²) DIN rail 2-6• Vibration2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail 2-6• Vibration tested according to IEC 60068-2-6Yes• Shock testing-• tested according to IEC 60068-2-6YesShock testing-• tested according to IEC 60068-2-27Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 msPollutant concentrationsS02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
Operation, max.1 080 hPa• Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPaAttitude during operation relating to sea level• Installation altitude, min1 000 m• Installation altitude, max.5 000 m; Restrictions for installation altitudes > 2 000 m, see manualRelative humidity• Operation, max.95 %; no condensationVibrationsVibration relating to peration acc. to IEC 60068- 2-62 g (m/s²) wall mounting, 1 g (m/s²) DIN rail• Operation, tested according to IEC 60068-2-6YesShock testing• tested according to IEC 60068-2-27Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 msPollutant concentrations• SO2 at RH < 60% without condensation
Storage/transport, min.660 hPa• Storage/transport, max.1 080 hPaAttitude during operation relating to sea level• Installation altitude, min1 000 m• Installation altitude, max.5 000 m; Restrictions for installation altitudes > 2 000 m, see manualRelative humidity• Operation, max.95 %; no condensationVibrationsVibrationsVibration resistance during operation acc. to IEC 60068- 2-62 g (m/s²) wall mounting, 1 g (m/s²) DIN rail 2-6• Operation, tested according to IEC 60068-2-6YesShock testing• tested according to IEC 60068-2-27Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 msPollutant concentrations• SO2 at RH < 60% without condensation
• Storage/transport, max. 1 080 hPa Attitude during operation relating to sea level -1 000 m • Installation altitude, min. -1 000 m • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity -0 operation, max. • Operation, max. 95 %; no condensation Vibrations 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Vibration resistance during operation acc. to IEC 60068- 2-6 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • 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
Altitude during operation relating to sea level • Installation altitude, min. -1 000 m • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity -0 Operation, max. • Operation, max. 95 %; no condensation Vibrations -1 000 m • Vibration resistance during operation acc. to IEC 60068- 2-6 2 g (m/s ²) wall mounting, 1 g (m/s ²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes Shock testing - • tested according to IEC 60068-2-27 Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations - • SO2 at RH < 60% without condensation
• Installation altitude, min. -1 000 m • Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity 95 %; no condensation • Operation, max. 95 %; no condensation Vibrations 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Vibration resistance during operation acc. to IEC 60068- 2-6 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes Shock testing - • tested according to IEC 60068-2-27 Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations - • SO2 at RH < 60% without condensation
• Installation altitude, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual Relative humidity 95 %; no condensation • Operation, max. 95 %; no condensation Vibrations 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes • Operation, tested according to IEC 60068-2-6 Yes Shock testing - • tested according to IEC 60068-2-27 Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations - • SO2 at RH < 60% without condensation
Relative humidity 95 %; no condensation • Operation, max. 95 %; no condensation Vibrations 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Vibration resistance during operation acc. to IEC 60068- 2-6 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes Shock testing Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations 95 %; no condensation • SO2 at RH < 60% without condensation
• Operation, max. 95 %; no condensation Vibrations • Vibration resistance during operation acc. to IEC 60068- 2-6 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes Shock testing
Vibrations • Vibration resistance during operation acc. to IEC 60068- 2-6 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes Shock testing 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
• Vibration resistance during operation acc. to IEC 60068- 2-6 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail • Operation, tested according to IEC 60068-2-6 Yes Shock testing Yes; 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
2-6 Operation, tested according to IEC 60068-2-6 Yes Shock testing • tested according to IEC 60068-2-27 Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations • SO2 at RH < 60% without condensation
Shock testing • tested according to IEC 60068-2-27 Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms Pollutant concentrations • SO2 at RH < 60% without condensation
 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 / header Configuration / programming / header Programming language LAD Yes
duration 11 ms Pollutant concentrations • SO2 at RH < 60% without condensation
• SO2 at RH < 60% without condensation
configuration / header configuration / programming / header Programming language — LAD Yes
configuration / programming / header Programming language — LAD Yes
configuration / programming / header Programming language — LAD Yes
Programming language — LAD Yes
— LAD Yes
— FBD Yes
- SCL Yes
Know-how protection
Copy protection Yes
Block protection Yes
Access protection
protection of confidential configuration data Yes
Protection level: Write protection Yes
- Drotaction level: Dead/write protection
Protection level: Read/write protection Yes Protection level: Complete protection Yes

programming / cycle time monitoring / header		
adjustable	Yes	
Dimensions		
Width	90 mm	
Height	100 mm	
Depth	75 mm	
Weights		
Weight, approx.	370 g	

last modified:

4/1/2022 🖸