## **SIEMENS**

## **Data sheet**

6ES7211-1BE40-0XB0



Figuresimilar

SIMATIC S7-1200, CPU 1211C, compact CPU, AC/DC/relay, onboard I/O: 6 DI 24 V DC; 4 DO relay 2A; 2 AI 0-10 V DC, Power supply: AC 85-264 V AC at 47-63 Hz, Program/data memory 50 KB

Product type designation CPU 1211C AC/DC/relay Firmware version V4.5 Engineering with  Programming package STEP 7 V17 or higher  Supply voltage  Rated value (AC)  120 V AC  230 V AC  Permissible range, lower limit (AC)  permissible range, upper limit (AC)  100 Fermissible range, lower limit (AC)  Permissible range, upper limit (AC)  Permissible range, upper limit (AC)  Permissible range, upper limit (AC)  Permissible range, lower limit (AC)  Permissible range, upper limit (AC)  Permissible range, lower limit (AC)  Permissible range, lover limit (AC)  Permissible range, lower limit (AC)  Permissib	General information	
Engineering with  Programming package  STEP 7 V17 or higher  Supply voltage  Rated value (AC)  120 V AC  230 V AC  Pes  Permissible range, lower limit (AC)  permissible range, upper limit (AC)  permissible range, upper limit (AC)  permissible range, lower limit (AC)  permissible range, upper limit (AC)  permissible range, lower limit (AC)  permissible range, upper limit (AC)  Ingut current  Current consumption (rated value)  Current consumption (rated value)  Current consumption, max.  180 mA at 120 V AC; 30 mA at 240 V AC  Current consumption, max.  Pit (38 A²·s)  Output current  for backplane bus (5 V DC), max.  Tooma; Max. 5 V DC for CM  Encoder supply  24 V encoder supply  24 V encoder supply  24 V encoder supply  10 W  Memory  Work memory  Work memory  Work memory  integrated  Pug-in (SIMATIC Memory Card), max.  with SIMATIC memory card  Backup  Present  maintegrace-free  ves  vilhout battery  Yes	Product type designation	CPU 1211C AC/DC/relay
Programming package  Supply voltage  Rated value (AC)  • 120 ∨ AC  • 230 ∨ AC  • 230 ∨ AC  permissible range, lower limit (AC)  • permissible range, upper limit (AC)  • permissible range, lower limit  • permissible range, lower limit  • permissible range, upper limit  • 83 Hz  Input current  Current consumption (rated value)  • 60 mA at 120 ∨ AC; 30 mA at 240 ∨ AC  Current consumption, max.  180 mA at 120 ∨ AC; 90 mA at 240 ∨ AC  Inrush current, max.  • 20 A; at 264 ∨  Pt  • 0.8 A²·s   Output current  for backplane bus (5 ∨ DC), max.  750 mA; Max. 5 ∨ DC for CM  Encoder supply  • 24 ∨ 20.4 to 28.8∨  Power loss  Power loss  Power loss, typ.  • 10 W  Memory  Work memory  • integrated • expandable • expandable • No  Load memory  • integrated • expandable • Plug-in (SIMATIC Memory Card), max.  Backup  • present • present • present • present • maintenance-free • without battery  • without battery  • ves	Firmware version	V4.5
Rated value (AC)	Engineering with	
Rated value (AC)  • 120 V AC  • 230 V AC  • 230 V AC  permissible range, lower limit (AC) permissible range, upper limit (AC) permissible range, upper limit (AC)  • 264 V  Line frequency  • permissible range, lower limit • permissible range, upper limit • permissible range, upper limit • fa3 Hz  Input current  Current consumption (rated value) Current consumption, max.  180 mA at 120 V AC; 30 mA at 240 V AC Inrush current, max.  180 mA at 120 V AC; 90 mA at 240 V AC Inrush current, max.  Pt 0.8 A²-s  Output current  for backplane bus (5 V DC), max.  For backplane bus (5 V DC)  For back	Programming package	STEP 7 V17 or higher
120 V AC     • 230 V AC     7es     7emissible range, lower limit (AC)     7emissible range, upper limit (AC)     7emissible range, lower limit     • permissible range, lower limit     • permissible range, upper limit     8 Hz  Input current  Current consumption (rated value)     7emismismismismismismismismismismismismism	Supply voltage	
• 230 V AC permissible range, lower limit (AC) permissible range, lower limit (AC) Line frequency     • permissible range, lower limit     • permissible range, upper limit     • permissible range, upper limit     • AT Hz     • permissible range, lower limit     • AT Hz     • permissible range, upper limit     • AT Hz     • AT Hz     • Power loss AT Hz     • AT H	Rated value (AC)	
permissible range, lower limit (AC) permissible range, upper limit (AC) Line frequency  • permissible range, lower limit • permissible range, lower limit • permissible range, upper limit (A7 Hz • permissible range, lower limit (A7 Hz • permissible range, upper limit (A7 Hz • permissible range, uper limit (A7 Hz • permissible range (A7 Hz • permi	• 120 V AC	Yes
permissible range, upper limit (AC)  Line frequency  • permissible range, lower limit  • permissible range, upper limit  Current  Current consumption (rated value)  Current consumption, max.  180 mA at 120 V AC; 30 mA at 240 V AC  Current consumption, max.  180 mA at 120 V AC; 90 mA at 240 V AC  Inrush current, max.  Pt  0.8 A²·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  20.4 to 28.8V  Power loss  Power loss, typ.  10 W  Memory  Work memory  • integrated  • expandable  Load memory  • integrated  • present  • Plug-in (SIMATIC Memory Card), max.  Backup  • present  • maintenance-free  • without battery  Yes  • without battery  Yes	• 230 V AC	Yes
Line frequency  • permissible range, lower limit • permissible range, upper limit  frage lower loss, lyp.  Power loss, lyp.  Work memory  • integrated • permissible range, lower limit  47 Hz 63 Hz  Input current  60 mA at 120 V AC; 30 mA at 240 V AC  Current consumption, max.  180 mA at 120 V AC; 90 mA at 240 V AC  180 mA at 120 V AC; 90 mA at 240 V AC  180 mA at 120 V AC; 90 mA at 240 V AC  180 mA at 120 V AC; 90 mA at 240 V AC  180 mA at 240 V AC  20.4 to 28.8 V AC  20.4 to 28.8 V  24 V encoder supply  24 V encoder supply  25 very loss, lyp.  10 W  11 Memory  12 Indicated  13 Mbyte  14 Mbyte  15 Mbyte  16 Plug-in (SIMATIC Memory Card), max.  17 Wes  18 With SIMATIC memory card  18 Max. 5 V DC for CM  18 Mbyte  19 Integrated  10 W  10 W  11 Mbyte  11 Mbyte  12 Mbyte  13 Mbyte  14 Mbyte  15 Mbyte  16 Mitagrated  17 Mbyte  17 Mbyte  18 Mitagrated  19 Plug-in (SIMATIC Memory Card), max.  18 Mitagrated  19 Present  10 W  10 W  11 Mbyte  11 Mbyte  11 Mbyte  11 Mbyte  12 Mbyte  13 Mbyte  14 Mbyte  15 Mitagrated  17 Mbyte  17 Mbyte  18 Mitagrated  19 Mbyte  19 Plug-in (SIMATIC Memory Card), max.  18 Mitagrated  19 Plug-in (SIMATIC Memory Card), max.  18 Mitagrated  19 Present  10 W  11 Mbyte  11 Mbyte  11 Mbyte  12 Mitagrated  11 Mbyte  12 Mitagrated  13 Mbyte  14 Mbyte  15 Mitagrated  16 Mitagrated  17 Mbyte  17 Mitagrated  18 Mitagr	permissible range, lower limit (AC)	85 V
permissible range, lower limit		264 V
permissible range, upper limit     Input current Current consumption (rated value) 60 mA at 120 V AC; 30 mA at 240 V AC Current consumption, max. 180 mA at 120 V AC; 90 mA at 240 V AC Inrush current, max. 20 A; at 264 V I²t 0.8 A²-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 encoder supply  • 24 V 20.4 to 28.8V  Power loss Power loss, typ. 10 W  Memory  Work memory  • integrated 50 kbyte • expandable No Load memory • integrated 1 Mbyte • Plug-in (SIMATIC Memory Card), max.  Backup • present Yes • without battery Yes		
Input current Current consumption (rated value) Current consumption, max.  180 mA at 120 V AC; 90 mA at 240 V AC Current consumption, max.  180 mA at 120 V AC; 90 mA at 240 V AC Inrush current, max.  20 A; at 264 V Interpret current  To backplane bus (5 V DC), max.  To mA; Max. 5 V DC for CM  The coder supply  24 V encoder supply  24 V encoder supply  24 V encoder supply  10 W  The coder supply  Work memory  integrated  expandable  No  Load memory  integrated  Plug-in (SIMATIC Memory Card), max.  Backup  present  present  yes  without battery  Yes  without battery  Yes		47 Hz
Current consumption (rated value) Current consumption, max.  Inush current, max.  If to ask plane bus (5 V DC), max.  Encoder supply 24 V encoder supply 24 V encoder supply 24 V expandable  Power loss, typ.  Memory  Work memory  integrated expandable  Load memory  integrated Plug-in (SIMATIC Memory Card), max.  Backup  present prese	permissible range, upper limit	63 Hz
Current consumption, max.  Inrush current, max.  If to 0.8 A²-s  Output current  for backplane bus (5 V DC), max.  Encoder supply  2 V vencoder supply  2 4 V vencoder supply  • 24 V  Power loss  Power loss, typ.  Work memory  • integrated • expandable  Load memory  • integrated • Plug-in (SIMATIC Memory Card), max.  Backup  • present • maintenance-free • without battery  180 mA at 120 V AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC; 90 mA at 240 V AC  10 W AC; 90 mA at 240 V AC; 90 maxer  180 maxer supplies at 240 V AC; 90 mA at 240 V AC; 90 maxer supplies at 240 V AC; 90	Input current	
Inrush current, max.  I't 0.8 A²-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 20.4 to 28.8V  Power loss, typ. 10 W  Memory  Work memory  • integrated 50 kbyte • expandable No  Load memory  • integrated 1 Mbyte • Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card  Backup  • present Yes • maintenance-free • without battery  20.4 to 28.8V	Current consumption (rated value)	60 mA at 120 V AC; 30 mA at 240 V AC
IPt 0.8 A2-s  Output current  for backplane bus (5 V DC), max. 750 mA; Max. 5 V DC for CM  Encoder supply  24 V encoder supply  224 V 20.4 to 28.8V  Power loss  Power loss, typ. 10 W  Memory  Work memory  integrated 50 kbyte expandable No  Load memory  integrated 1 Mbyte expandable No  Backup  present Yes maintenance-free Yes without battery  V 750 mA; Max. 5 V DC for CM   ### A 2	Current consumption, max.	
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 20.4 to 28.8V   Power loss Power loss, typ.   Power loss, typ. 10 W   Memory	Inrush current, max.	20 A; at 264 V
for backplane bus (5 V DC), max.  750 mA; Max. 5 V DC for CM  Encoder supply  24 V encoder supply  • 24 V  20.4 to 28.8V  Power loss  Power loss, typ.  10 W  Memory  Work memory  • integrated • expandable  Load memory  • integrated • Plug-in (SIMATIC Memory Card), max.  Backup  • present • maintenance-free • without battery  750 mA; Max. 5 V DC for CM  Tomas:  No Load new O	l²t	0.8 A <sup>2</sup> ·s
Encoder supply  24 V encoder supply  20.4 to 28.8V  Power loss  Power loss, typ.  10 W  Memory  Work memory  integrated expandable No  Load memory  integrated Plug-in (SIMATIC Memory Card), max.  Backup  present maintenance-free without battery Yes without battery  20.4 to 28.8V  20.4 to 28.8V  Above  40 With 28.8V  In Wy  With SIMATIC memory card  Yes Yes	Output current	
24 V encoder supply  • 24 V  20.4 to 28.8V  Power loss  Power loss, typ.  10 W  Memory  Work memory  • integrated • expandable • expandable  Load memory  • integrated • Plug-in (SIMATIC Memory Card), max.  Backup  • present • maintenance-free • without battery  20.4 to 28.8V  20.4 to 28.8V  Above  10 W  Mo  Memory  10 W  M	for backplane bus (5 V DC), max.	750 mA; Max. 5 V DC for CM
24 V     20.4 to 28.8V  Power loss  Power loss, typ.  10 W  Memory  Work memory  integrated expandable No  Load memory  integrated Plug-in (SIMATIC Memory Card), max.  Backup present maintenance-free without battery  20.4 to 28.8V  Above 10 W  Whency  10 W  Mo  Above 10 W  Abo	Encoder supply	
Power loss, typ. 10 W  Memory  Work memory  integrated expandable No  Load memory  integrated Plug-in (SIMATIC Memory Card), max.  Backup present maintenance-free without battery  10 W  Memory  50 kbyte No Work No		
Power loss, typ.  Memory  Work memory  integrated expandable  Load memory  integrated Plug-in (SIMATIC Memory Card), max.  Backup  present emaintenance-free		20.4 to 28.8V
Memory  Work memory  integrated expandable  Load memory integrated Plug-in (SIMATIC Memory Card), max.  Backup  present maintenance-free without battery  So kbyte No  1 Mbyte with SIMATIC memory card  Yes Yes		
Work memory  integrated expandable No  Load memory  integrated Plug-in (SIMATIC Memory Card), max.  Backup  present maintenance-free without battery  50 kbyte No  1 Mbyte No  1 Mbyte with SIMATIC memory card  Yes Yes		10 W
<ul> <li>integrated</li> <li>expandable</li> <li>No</li> </ul> Load memory <ul> <li>integrated</li> <li>Plug-in (SIMATIC Memory Card), max.</li> <li>Backup</li> <li>present</li> <li>maintenance-free</li> <li>with Old Market</li> </ul> Yes <ul> <li>without battery</li> </ul>		
<ul> <li>expandable</li> <li>Load memory</li> <li>integrated</li> <li>Plug-in (SIMATIC Memory Card), max.</li> <li>Backup</li> <li>present</li> <li>maintenance-free</li> <li>with SIMATIC memory card</li> </ul> Yes <ul> <li>without battery</li> </ul>	Work memory	
Load memory  integrated Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card  Backup  present maintenance-free without battery  Yes	3	
<ul> <li>integrated</li> <li>Plug-in (SIMATIC Memory Card), max.</li> <li>with SIMATIC memory card</li> <li>Backup</li> <li>present</li> <li>maintenance-free</li> <li>without battery</li> <li>Yes</li> <li>Yes</li> </ul>	·	No
<ul> <li>Plug-in (SIMATIC Memory Card), max.</li> <li>Backup</li> <li>present</li> <li>maintenance-free</li> <li>with SIMATIC memory card</li> <li>Yes</li> <li>without battery</li> </ul>	•	
Backup  • present  • maintenance-free  • without battery  Yes  Yes	9	
<ul> <li>present</li> <li>maintenance-free</li> <li>without battery</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>		with SIMATIC memory card
<ul><li>maintenance-free</li><li>without battery</li><li>Yes</li></ul>	·	
• without battery Yes	•	
·		
CPU processing times		Yes
for bit operations, typ. 0.08 µs; / instruction	for bit operations, typ.	0.08 μs; / instruction

for word enerations, time	1.7 us: / instruction
for word operations, typ.	1.7 µs; / instruction
for floating point arithmetic, typ.	2.3 μs; / instruction
CPU-blocks	
Number of blocks (total)	DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used
OB	
<ul><li>Number, max.</li></ul>	Limited only by RAM for code
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max. Flag	14 kbyte
• Size, max.	4 kbyte; Size of bit memory address area
Local data	
<ul><li>per priority class, max.</li></ul>	16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2 to 26: 6 KB
Address area	
Process image	
Inputs, adjustable	1 kbyte
Outputs, adjustable	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 communication modules, 1 signal board
Time of day	o communication modulos, i signal board
Clock	Voe
Hardware clock (real-time)     Rackup time	Yes
<ul><li>Backup time</li><li>Deviation per day, max.</li></ul>	480 h; Typical ±60 s/month at 25 °C
	±00 S/IIIOIIIII at 25 C
Digital inputs	
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	
— up to 40 °C, max.	6
Input voltage	24.1/
Rated value (DC)     for signal "0"	24 V
<ul><li>for signal "0"</li><li>for signal "1"</li></ul>	5 V DC at 1 mA 15 V DC at 2.5 mA
Input current	15 V DC at 2.5 IIIA
• for signal "1", typ.	4 mA; nominal
Input delay (for rated value of input voltage)	4 IIIA, Iloitiiliai
for standard inputs	
— parameterizable	0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable
paramotonizatio	in groups of four
— at "0" to "1", min.	0.2 ms
— at "0" to "1", max.	12.8 ms
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Single phase: 3 @ 100 kHz, differential: 3 @ 80 kHz
Cable length	
<ul><li>shielded, max.</li></ul>	500 m; 50 m for technological functions
• unshielded, max.	300 m; for technological functions: No
Digital outputs	
Number of digital outputs	4; Relays
Switching capacity of the outputs	
with resistive load, max.	2 A
• on lamp load, max.	30 W with DC, 200 W with AC
Output delay with resistive load	
• "0" to "1", max.	10 ms; max.
• "1" to "0", max.	10 ms; max.
Relay outputs	
Number of relay outputs	4
<ul> <li>Number of operating cycles, max.</li> </ul>	mechanically 10 million, at rated load voltage 100 000

Cable length	F00
• 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	
Integration and conversion time/resolution per channel	
<ul> <li>Resolution with overrange (bit including sign), max.</li> </ul>	10 bit
<ul> <li>Integration time, parameterizable</li> </ul>	Yes
<ul> <li>Conversion time (per channel)</li> </ul>	625 µs
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
1. Interface	
Interface type	PROFINET
Isolated	Yes
automatic detection of transmission rate	Yes
Autonegotiation	Yes
Autocrossing	Yes
Interface types	100
RJ 45 (Ethernet)	Yes
Number of ports	1
integrated switch	No
Protocols	
PROFINET IO Controller	Yes
PROFINET IO Device	Yes
<ul> <li>SIMATIC communication</li> </ul>	Yes
Open IE communication	Yes; Optionally also encrypted
Web server	Yes
Media redundancy	No
PROFINET IO Controller	
Transmission rate, max.	100 Mbit/s
Services	
— PG/OP communication	Yes; encryption with TLS V1.3 pre-selected
<ul> <li>Isochronous mode</li> </ul>	No
— IRT	No
— PROFlenergy	No
<ul> <li>Prioritized startup</li> </ul>	Yes
<ul> <li>Number of IO devices with prioritized startup,</li> </ul>	16
Max.	16
Number of connectable IO Devices, max.  Number of connectable IO Devices for DT.	16
<ul> <li>Number of connectable IO Devices for RT, max.</li> </ul>	16
— of which in line, max.	16
Activation/deactivation of IO Devices	Yes
Number of IO Devices that can be	8
simultaneously activated/deactivated, max.	
— Updating time	The minimum value of the update time also depends on the
	communication component set for PROFINET IO, on the number of IO
PROFINET IO Davida	devices and the quantity of configured user data.
PROFINET IO Device	
Services	Voca engryption with TI C V/4 2 are extended
— PG/OP communication	Yes; encryption with TLS V1.3 pre-selected
— Isochronous mode	No No
— IRT	No

DDOFIanava	Voc
— PROFlenergy     — Shared device	Yes Yes
— Snared device      — Number of IO Controllers with shared device,	2
max.	4
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIsafe	No
PROFIBUS	Yes; CM 1243-5 (master) or CM 1242-5 (slave) required
OPC UA	Yes; OPC UA Server
AS-Interface	Yes; CM 1243-2 required
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	No
• SNMP	Yes
DCP     LLDP	Yes Yes
Redundancy mode	163
Media redundancy	
— MRP	No
— MRPD	No
SIMATIC communication	
S7 routing	Yes
Open IE communication	
• TCP/IP	Yes
<ul><li>Data length, max.</li></ul>	8 kbyte
— several passive connections per port,	Yes
supported • ISO-on-TCP (RFC1006)	Yes
— Data length, max.	8 kbyte
• UDP	Yes
— Data length, max.	1 472 byte
Web server	
<ul><li>supported</li></ul>	Yes
User-defined websites	Yes Yes
User-defined websites     OPC UA	Yes
<ul><li>User-defined websites</li><li>OPC UA</li><li>Runtime license required</li></ul>	Yes Yes; "Basic" license required
User-defined websites     OPC UA	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license
<ul> <li>User-defined websites</li> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Server</li> </ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required
<ul><li>User-defined websites</li><li>OPC UA</li><li>Runtime license required</li></ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license
<ul> <li>User-defined websites</li> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Server</li> </ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15,
<ul> <li>User-defined websites</li> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Server</li> <li>Application authentication</li> </ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10
User-defined websites  OPC UA  Runtime license required  OPC UA Server  — Application authentication  — User authentication  — Number of sessions, max.  — Number of subscriptions per session, max.	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10 5
User-defined websites OPC UA  Runtime license required OPC UA Server  — Application authentication  — User authentication  — Number of sessions, max.  — Number of subscriptions per session, max.  — Sampling interval, min.	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10 5 100 ms
<ul> <li>User-defined websites</li> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Server</li> <li>Application authentication</li> <li>User authentication</li> <li>Number of sessions, max.</li> <li>Number of subscriptions per session, max.</li> <li>Sampling interval, min.</li> <li>Publishing interval, min.</li> </ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10 5 100 ms 200 ms
<ul> <li>User-defined websites</li> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Server</li> <li>Application authentication</li> <li>User authentication</li> <li>Number of sessions, max.</li> <li>Number of subscriptions per session, max.</li> <li>Sampling interval, min.</li> <li>Publishing interval, min.</li> <li>Number of server methods, max.</li> </ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10 5 100 ms 200 ms 20
<ul> <li>User-defined websites</li> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Server</li> <li>Application authentication</li> <li>User authentication</li> <li>Number of sessions, max.</li> <li>Number of subscriptions per session, max.</li> <li>Sampling interval, min.</li> <li>Publishing interval, min.</li> <li>Number of server methods, max.</li> <li>number of monitored items, recommended</li> </ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10 5 100 ms 200 ms
<ul> <li>User-defined websites</li> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Server</li> <li>Application authentication</li> <li>User authentication</li> <li>Number of sessions, max.</li> <li>Number of subscriptions per session, max.</li> <li>Sampling interval, min.</li> <li>Publishing interval, min.</li> <li>Number of server methods, max.</li> <li>number of monitored items, recommended max.</li> </ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10 5 100 ms 200 ms 20
<ul> <li>User-defined websites</li> <li>OPC UA</li> <li>Runtime license required</li> <li>OPC UA Server</li> <li>Application authentication</li> <li>User authentication</li> <li>Number of sessions, max.</li> <li>Number of subscriptions per session, max.</li> <li>Sampling interval, min.</li> <li>Publishing interval, min.</li> <li>Number of server methods, max.</li> <li>number of monitored items, recommended</li> </ul>	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10 5 100 ms 200 ms 20 1 000
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User-defined websites OPC UA  Runtime license required OPC UA Server  — Application authentication  — User authentication — Number of sessions, max. — Number of subscriptions per session, max. — Sampling interval, min. — Publishing interval, min. — Number of server methods, max. — number of monitored items, recommended max. — Number of server interfaces, max. — Number of nodes for user-defined server interfaces, max.  Further protocols  MODBUS  communication functions / header  S7 communication  supported as server as client User data per job, max.	Yes; "Basic" license required Yes; data access (read, write, subscribe), method call, runtime license required Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256 "anonymous" or by user name & password 10 5 100 ms 200 ms 20 1 000  Yes  Yes  Yes  Yes  Yes  Yes  Yes
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est commissioning functions	
Status/control	
<ul> <li>Status/control variable</li> </ul>	Yes
Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	
Forcing	Yes
Diagnostic buffer	
• present	Yes
Traces	
<ul> <li>Number of configurable Traces</li> </ul>	2
Memory size per trace, max.	512 kbyte
terrupts/diagnostics/status information	
Diagnostics indication LED	
RUN/STOP LED	Yes
• ERROR LED	Yes
MAINT LED	Yes
tegrated Functions	
Frequency measurement	Yes
controlled positioning	Yes
Number of position-controlled positioning axes, max.	8
Number of positioning axes via pulse-direction interface	Up to 4 with SB 1222
PID controller	Yes
Number of alarm inputs	4
·	•
otential separation	
Potential separation digital inputs	
Potential separation digital inputs	500V AC for 1 minute
between the channels, in groups of	1
Potential separation digital outputs	
Potential separation digital outputs	Relays
between the channels	No .
between the channels, in groups of	1
MC	
Interference immunity against discharge of static electricity	
<ul> <li>Interference immunity against discharge of static electricity acc. to IEC 61000-4-2</li> </ul>	Yes
<ul> <li>Test voltage at air discharge</li> </ul>	8 kV
<ul> <li>Test voltage at contact discharge</li> </ul>	6 kV
Interference immunity to cable-borne interference	
<ul> <li>Interference immunity on supply lines acc. to IEC 61000-4-4</li> </ul>	Yes
<ul> <li>Interference immunity on signal cables acc. to IEC 61000-4-4</li> </ul>	Yes
Interference immunity against voltage surge	
<ul> <li>Interference immunity on supply lines acc. to IEC 61000-4-5</li> </ul>	Yes
Interference immunity against conducted variable disturbanc	e induced by high-frequency fields
<ul> <li>Interference immunity against high-frequency radiation acc. to IEC 61000-4-6</li> </ul>	Yes
Emission of radio interference acc. to EN 55 011	
<ul> <li>Limit class A, for use in industrial areas</li> </ul>	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
egree and class of protection	
IP degree of protection	IP20
tandards, approvals, certificates	
CE mark	Voc
	Yes
UL approval	Yes
-1.0	Yes
cULus	V
FM approval	Yes
FM approval RCM (formerly C-TICK)	Yes
FM approval	

Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	o.o m, mo times, in product package
min.	-20 °C
• max.	60 °C
	-20 °C
horizontal installation, min.	-20 °C
horizontal installation, max.	-20 °C
vertical installation, min.	
vertical installation, max.	50 °C
Ambient temperature during storage/transportation	40.00
• min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
<ul><li>Operation, min.</li></ul>	795 hPa
<ul><li>Operation, max.</li></ul>	1 080 hPa
<ul> <li>Storage/transport, min.</li> </ul>	660 hPa
Storage/transport, max.	1 080 hPa
Altitude during operation relating to sea level	
Installation altitude, min.	-1 000 m
<ul> <li>Installation altitude, max.</li> </ul>	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Relative humidity	
Operation, max.	95 %; no condensation
Vibrations	
<ul> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> </ul>	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
Closica about any to 120 00000 2 21	value), duration 11 ms
Pollutant concentrations	
<ul> <li>SO2 at RH &lt; 60% without condensation</li> </ul>	S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
configuration / header	
configuration / programming / header	
Programming language	
— LAD	Yes
— FBD	Yes
— SCL	Yes
	165
Know-how protection	Von
User program protection/password protection     Convergetion	Yes
Copy protection	Yes
Block protection	Yes
Access protection	V
<ul> <li>protection of confidential configuration data</li> </ul>	Yes
<ul> <li>Protection level: Write protection</li> </ul>	Yes
<ul> <li>Protection level: Read/write protection</li> </ul>	Yes
<ul><li>Protection level: Read/write protection</li><li>Protection level: Complete protection</li></ul>	
<ul> <li>Protection level: Read/write protection</li> </ul>	Yes
<ul><li>Protection level: Read/write protection</li><li>Protection level: Complete protection</li></ul>	Yes
Protection level: Read/write protection Protection level: Complete protection programming / cycle time monitoring / header	Yes Yes
<ul> <li>Protection level: Read/write protection</li> <li>Protection level: Complete protection</li> <li>programming / cycle time monitoring / header</li> <li>adjustable</li> </ul>	Yes Yes
Protection level: Read/write protection Protection level: Complete protection programming / cycle time monitoring / header adjustable  Dimensions  Width	Yes Yes  Yes  90 mm
Protection level: Read/write protection Protection level: Complete protection programming / cycle time monitoring / header adjustable  Dimensions  Width Height	Yes Yes  Yes  90 mm 100 mm
Protection level: Read/write protection Protection level: Complete protection programming / cycle time monitoring / header adjustable  Dimensions  Width Height Depth	Yes Yes  Yes  90 mm
Protection level: Read/write protection Protection level: Complete protection programming / cycle time monitoring / header adjustable  Dimensions  Width Height Depth  Weights	Yes Yes  Yes  90 mm 100 mm 75 mm
Protection level: Read/write protection Protection level: Complete protection programming / cycle time monitoring / header adjustable  Dimensions  Width Height Depth	Yes Yes  Yes  90 mm 100 mm