## SIEMENS

## Data sheet

## 6ES7215-1AF40-0XB0



SIMATIC S7-1200F, CPU 1215 FC, compact CPU, DC/DC/DC, 2 PROFINET ports, onboard I/O: 14 DI 24 V DC; 10 DO 24 V DC; 0.5 A; 2 AI 0-10 V DC, 2 AO 0-20 mA DC, power supply: DC 20.4-28.8 V DC, program/data memory 250 KB



General information	
Product type designation	CPU 1215FC DC/DC/DC
Firmware version	V4.6
Engineering with	
<ul> <li>Programming package</li> </ul>	STEP 7 V18 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
<ul> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
<ul> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
Input current	
Current consumption (rated value)	500 mA; CPU only
Current consumption, max.	1 500 mA; CPU with all expansion modules
Inrush current, max.	12 A; at 28.8 V DC
l²t	0.5 A <sup>2</sup> ·s
Output current	
for backplane bus (5 V DC), max.	1 600 mA; Max. 5 V DC for SM and CM
Encoder supply	
24 V encoder supply	
• 24 V	L+ minus 4 V DC min.
Power loss	
Power loss, typ.	12 W
Memory	
Work memory	
integrated	250 kbyte
Load memory	
<ul> <li>integrated</li> </ul>	4 Mbyte
<ul> <li>Plug-in (SIMATIC Memory Card), max.</li> </ul>	with SIMATIC memory card
Backup	
• present	Yes
maintenance-free	Yes
without battery	Yes

CPU processing times	
for bit operations, typ.	0.08 μs; / instruction
for word operations, typ.	1.7 µs; / instruction
for floating point arithmetic, typ.	2.3 µs; / instruction
CPU-blocks	
Number of blocks (total)	DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used
OB	
Number, max.	Limited only by RAM for code
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	14 kbyte
Flag	
• Size, max.	8 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	
<ul> <li>Inputs, adjustable</li> </ul>	1 kbyte
<ul> <li>Outputs, adjustable</li> </ul>	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 comm. modules, 1 signal board, 8 signal modules
Time of day	
Clock	
<ul> <li>Hardware clock (real-time)</li> </ul>	Yes
Backup time	480 h; Typical
<ul> <li>Deviation per day, max.</li> </ul>	±60 s/month at 25 °C
Digital inputs	
Number of digital inputs	14; Integrated
<ul> <li>of which inputs usable for technological functions</li> </ul>	6; HSC (High Speed Counting)
Source/sink input	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	14
Input voltage	
Rated value (DC)	24 V
● for signal "0"	5 V DC at 1 mA
● for signal "1"	15 V DC at 2.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	$0.2\ \text{ms}, 0.4\ \text{ms}, 0.8\ \text{ms}, 1.6\ \text{ms}, 3.2\ \text{ms}, 6.4\ \text{ms}$ and $12.8\ \text{ms}, \text{selectable}$ in groups of four
— at "0" to "1", min.	0.2 ms
— at "0" to "1", max.	12.8 ms
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Single phase: 3 @ 100 kHz & 3 @ 30 kHz, differential: 3 @ 80 kHz & 3 @ 30 kHz
Cable length	
<ul> <li>shielded, max.</li> </ul>	500 m; 50 m for technological functions
• unshielded, max.	300 m; for technological functions: No
Digital outputs	
	10
Number of digital outputs	10
	4; 100 kHz Pulse Train Output
Number of digital outputs	
Number of digital outputs <ul> <li>of which high-speed outputs</li> </ul>	4; 100 kHz Pulse Train Output
Number of digital outputs • of which high-speed outputs Limitation of inductive shutdown voltage to	4; 100 kHz Pulse Train Output
Number of digital outputs • of which high-speed outputs Limitation of inductive shutdown voltage to Switching capacity of the outputs	4; 100 kHz Pulse Train Output L+ (-48 V)
Number of digital outputs • of which high-speed outputs Limitation of inductive shutdown voltage to Switching capacity of the outputs • with resistive load, max.	4; 100 kHz Pulse Train Output L+ (-48 V) 0.5 A

2 · · · · · · · ·	
• for signal "1", min.	20 V
Output current	
<ul> <li>for signal "1" rated value</li> </ul>	0.5 A
<ul> <li>for signal "0" residual current, max.</li> </ul>	0.1 mA
Output delay with resistive load	
• "0" to "1", max.	1 µs
• "1" to "0", max.	5 µs
Switching frequency	
<ul> <li>of the pulse outputs, with resistive load, max.</li> </ul>	100 kHz
Relay outputs	
Number of relay outputs	0
Cable length	
<ul> <li>shielded, max.</li> </ul>	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	2
Output ranges, current	
• 0 to 20 mA	Yes
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
	Yes
<ul> <li>Integration time, parameterizable</li> <li>Conversion time (per channel)</li> </ul>	
Conversion time (per channel)	Yes 625 μs
Conversion time (per channel) Analog value generation for the outputs	
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel	625 μs
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel     Resolution with overrange (bit including sign), max.	
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel     Resolution with overrange (bit including sign), max. Encoder	625 μs
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel     Resolution with overrange (bit including sign), max. Encoder Connectable encoders	625 μs 10 bit
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel     Resolution with overrange (bit including sign), max. Encoder Connectable encoders     0 2-wire sensor	625 μs
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel     Resolution with overrange (bit including sign), max. Encoder Connectable encoders     2-wire sensor 1. Interface	625 μs 10 bit Yes
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel     Resolution with overrange (bit including sign), max. Encoder Connectable encoders     2-wire sensor 1. Interface Interface type	625 μs 10 bit Yes PROFINET
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel     Resolution with overrange (bit including sign), max. Encoder Connectable encoders     2-wire sensor 1. Interface Interface type Isolated	625 μs 10 bit Yes PROFINET Yes
Conversion time (per channel) Analog value generation for the outputs Integration and conversion time/resolution per channel     Resolution with overrange (bit including sign), max. Encoder Connectable encoders     2-wire sensor I. Interface Interface type Isolated automatic detection of transmission rate	625 μs 10 bit Yes PROFINET Yes Yes
Conversion time (per channel)      Analog value generation for the outputs      Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> <li>Encoder         <ul> <li>Connectable encoders             <ul> <li>2-wire sensor</li> </ul> </li> <li>Interface</li> <li>Interface type</li></ul></li>	625 μs 10 bit Yes PROFINET Yes Yes Yes Yes
Conversion time (per channel)      Analog value generation for the outputs      Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> <li>Encoder         <ul> <li>Connectable encoders</li> <li>2-wire sensor</li> </ul> </li> <li>Interface         <ul> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autorcossing</li> </ul> </li>	625 μs 10 bit Yes PROFINET Yes Yes
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Conversion time (per channel)     Analog value generation for the outputs     Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> <li>Encoder         <ul> <li>Connectable encoders</li> <li>2-wire sensor</li> </ul> </li> <li>Interface         <ul> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autocrossing</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> </ul> </li>	625 μs 10 bit 10 bit Yes PROFINET Yes Yes Yes Yes Yes
Conversion time (per channel)     Analog value generation for the outputs     Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> <li>Encoder         <ul> <li>Connectable encoders             <ul> <li>2-wire sensor</li> </ul> </li> <li>Interface</li> <ul> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autocrossing</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> </ul> </ul></li>	625 μs 10 bit Yes PROFINET Yes Yes Yes Yes Yes Yes Yes 2
Conversion time (per channel)     Analog value generation for the outputs     Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> <li>Encoder         <ul> <li>Connectable encoders             <ul> <li>2-wire sensor</li> </ul> </li> <li>Interface</li> <li>Interface type</li></ul></li>	625 μs 10 bit 10 bit Yes PROFINET Yes Yes Yes Yes Yes
Conversion time (per channel)     Analog value generation for the outputs     Integration and conversion time/resolution per channel         Resolution with overrange (bit including sign), max.     Encoder     Connectable encoders             • 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	625 μs 10 bit Yes PROFINET Yes Yes Yes Yes Yes Yes Yes
Conversion time (per channel)     Analog value generation for the outputs     Integration and conversion time/resolution per channel         Resolution with overrange (bit including sign), max.     Encoder     Connectable encoders         • 2-wire sensor     1. Interface     Interface type     Isolated     automatic detection of transmission rate     Autoregotiation     Autocrossing     Interface types         • RJ 45 (Ethernet)         • Number of ports         • integrated switch     Protocols     • PROFINET IO Controller	625 μs  10 bit  10 bit  Yes  PROFINET  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Conversion time (per channel)     Analog value generation for the outputs     Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> <li>Encoder         <ul> <li>Connectable encoders</li> <li>2-wire sensor</li> </ul> </li> <li>Interface         <ul> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autorcossing</li> <li>Interface types                 <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> </ul> </li>	625 μs  10 bit  10 bit  Yes  PROFINET  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye
Conversion time (per channel)     Analog value generation for the outputs     Integration and conversion time/resolution per channel         Resolution with overrange (bit including sign), max.     Encoder     Connectable encoders         • 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	625 μs 10 bit Yes Yes PROFINET Yes Yes Yes Yes Yes Yes Yes Yes
Conversion time (per channel)     Analog value generation for the outputs     Integration and conversion time/resolution per channel         Resolution with overrange (bit including sign), max.     Encoder     Connectable encoders         2-wire sensor     1. Interface     Interface type     Isolated     automatic detection of transmission rate     Autonegotiation     Autocrossing     Interface types         R.J 45 (Ethernet)         Number of ports         integrated switch     Protocols         PROFINET IO Controller         PROFINET IO Device         SIMATIC communication         Open IE communication	625 μs 10 bit 10 bit Yes PROFINET Yes Yes Yes Yes Yes Yes Yes Yes
<ul> <li>Conversion time (per channel)</li> <li>Analog value generation for the outputs</li> <li>Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> </li> <li>Encoder <ul> <li>Connectable encoders <ul> <li>2-wire sensor</li> </ul> </li> <li>Interface <ul> <li>Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autoregotiation</li> <li>Autocrossing</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> <li>Web server</li> </ul> </li> </ul></li></ul>	625 μs 625 μs 10 bit 10 bit Yes
<ul> <li>Conversion time (per channel)</li> <li>Analog value generation for the outputs</li> <li>Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> </li> <li>Encoder <ul> <li>Connectable encoders <ul> <li>2-wire sensor</li> </ul> </li> <li>Interface <ul> <li>Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autorossing</li> </ul> </li> <li>Interface types <ul> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> </ul></li></ul>	625 μs 10 bit 10 bit Yes PROFINET Yes Yes Yes Yes Yes Yes Yes Yes
Conversion time (per channel)  Analog value generation for the outputs  Integration and conversion time/resolution per channel      Resolution with overrange (bit including sign), max.  Encoder  Connectable encoders      2-wire sensor  Interface 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      Neb server     Media redundancy PROFINET IO Controller	625 μs 10 bit 10 bit Yes PROFINET Yes
<ul> <li>Conversion time (per channel)</li> <li>Analog value generation for the outputs</li> <li>Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> </li> <li>Encoder <ul> <li>Connectable encoders</li> <li>2-wire sensor</li> </ul> </li> <li>Interface <ul> <li>Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> <li>PROFINET IO Controller <ul> <li>Transmission rate, max.</li> </ul> </li> </ul>	625 μs 10 bit 10 bit Yes Yes PROFINET Yes Yes Yes Yes Yes Yes Yes Yes
<ul> <li>Conversion time (per channel)</li> <li>Analog value generation for the outputs</li> <li>Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> </li> <li>Encoder <ul> <li>Connectable encoders</li> <li>2-wire sensor</li> </ul> </li> <li>Interface <ul> <li>Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> <li>PROFINET IO Controller <ul> <li>Transmission rate, max.</li> <li>Services</li> </ul> </li> </ul>	625 μs 10 bit 10 bit Yes PROFINET Yes
<ul> <li>Conversion time (per channel)</li> <li>Analog value generation for the outputs</li> <li>Integration and conversion time/resolution per channel <ul> <li>Resolution with overrange (bit including sign), max.</li> </ul> </li> <li>Encoder <ul> <li>Connectable encoders</li> <li>2-wire sensor</li> </ul> </li> <li>Interface <ul> <li>Interface</li> <li>Interface type</li> <li>Isolated</li> <li>automatic detection of transmission rate</li> <li>Autonegotiation</li> <li>Autocrossing</li> <li>Interface types</li> <li>RJ 45 (Ethernet)</li> <li>Number of ports</li> <li>integrated switch</li> </ul> </li> <li>Protocols <ul> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul> </li> <li>PROFINET IO Controller <ul> <li>Transmission rate, max.</li> </ul> </li> </ul>	625 μs 10 bit 10 bit Yes

— IRT	No
- PROFlenergy	No
— Prioritized startup	Yes
<ul> <li>— Number of IO devices with prioritized startup, max.</li> </ul>	16
<ul> <li>Number of connectable IO Devices, max.</li> </ul>	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
<ul> <li>Number of IO Devices that can be simultaneously activated/deactivated, max.</li> </ul>	8
— Updating time	The minimum value of the update time also depends on the communication component set for PROFINET IO, on the number of IO devices and the quantity of configured user data.
PROFINET IO Device	
Services	
— PG/OP communication	Yes; encryption with TLS V1.3 pre-selected
— Isochronous mode	No
— IRT	No
— PROFlenergy	Yes
— Shared device	Yes
<ul> <li>— Shared device</li> <li>— Number of IO Controllers with shared device, max.</li> </ul>	2
Protocols	-
	Vee
Supports protocol for PROFINET IO	Yes
PROFISATe	Yes
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	Yes
• LLDP	Yes
Redundancy mode	
Media redundancy	
— MRP	Yes; as MRP redundancy manager and/or MRP client
— MRPD	No
SIMATIC communication	
S7 routing	Yes
Open IE communication	
• TCP/IP	Yes
— Data length, max.	8 kbyte
ISO-on-TCP (RFC1006)	Yes
— Data length, max.	8 kbyte
• UDP	Yes
— Data length, max.	1 472 byte
Web server	
supported	Yes
User-defined websites	Yes
OPC UA	
Runtime license required	Yes; "Basic" license required
OPC UA Server	
	Yes; data access (read, write, subscribe), method call, 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
<ul> <li>Number of subscriptions per session, max.</li> </ul>	5
— Sampling interval, min.	100 ms
— Publishing interval, min.	200 ms
<ul> <li>Number of server methods, max.</li> </ul>	20
- Number of monitored items, recommended max.	1 000
- Number of server interfaces, max.	2

Fundmentable                  • ADDRUNG is the state of the st	<ul> <li>— Number of nodes for user-defined server interfaces, max.</li> </ul>	2 000
• Ves           communication (needer)           92 communication           • sported         Yes           • os server         Yes           • oliert data per Job, max.         See communication, user data size)           Number of commentions         PC Connections: 4 reserved / 4 max. HMI Connections: 12 reserved / 18 max. STr Connections: 36 reserved / 46 max.           • versall         PC Connections: 4 reserved / 4 max. HMI Connections: 12 reserved / 18 max. STr Connections: 36 reserved / 46 max.           • versall         PC Connections: 36 reserved / 46 max.           • Statuscontrol variable         Yes           • statuse         incomments integration (16 max).           • Statuscontrol variable         Yes           • statuse         incomments integration (16 max).           • Reserved         Yes           • Statuscontrol variable         Yes           • Reserved         Yes<		
communication         Formunication           87 communication         Yes           • exported         Yes           • est data per job, max.         See contine help (S7 communication, user data size)           Number of commonities         See contine help (S7 communication, user data size)           Number of commonities         See contine help (S7 communication, user data size)           Number of commonities         See contine help (S7 communication, user data size)           Number of commonities         See see contine           • overall         PG connections: A reserved / 4 max. HUI Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 0 reserved / 18 max. Yee Connections: CPC UN Connections: 0 reserved / 18 max. Yee Connections: CPC UN Connections: 0 reserved / 18 max. Yee Connections: CPC UN Connections: 0 reserved / 18 max. Yee Connections: CPC UN Connections: 0 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 0 reserved / 18 max. Yee Connections: CPC UN Connections: 0 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connections: 12 reserved / 18 max. Yee Connections: CPC UN Connection: 12 reserved / 18 max. Yee Connection: CPC UN Connection: 12 rese	· · · ·	Yes
37 communication     Yes       • sis schorer     Yes       • statistication of connections     PG Communication, user data size)       Number of schorections: A reserved / 14 max; MMI Connections: 12 reserved / 18 max; Des United Connections: 34 reserved / 14 max; MI Connections: 15 reserved / 14 max; Ves       Statistocontrol variable     Yes       • Variables     result       • Variables     reserved / 18 max; DBS, peripheral I/Os (without fail-safe), times, inputs/schore / 14 max; MI Connections: 12 reserved / 14 max; MI Connectio		
• supported         Yes           • supported         Yes           • set enter         Yes           • use data per job, max.         Set online help (S7 communication, user data size)           Number of contencions         PG Connections: 4 nearword / 14 max. (DMI Connections: 12 reserved / 18 max. Set online should be size)           • everall         PG Connections: 4 nearword / 14 max. (DMI Connections: 12 reserved / 18 max. Set online should be size)           • fact comminisationing functions         PS Connections: 4 nearword / 14 max. Set online should be size)           • fact comminisationing functions         PS connections: 4 nearword / 14 max. Set online should be size)           • fact comminisationing functions         PS connections: 3 nearword / 14 max. Set online should be size)           • fact comminisationing functions         Yes           • fact comminisationing functions         Yes           • fact comminisationing functions         Yes           • fact comminisation of the size)         Yes           • fact comminisation of the size only the size o		
server		Yes
Identifies per job. max.         See online help (97 communication, user data size)           Number of connections:         PG Connections: A reserved / A max. (PG Connections: 2) reserved / 30 max. (PG Cut A Connections: 2) reserved / 30 max. (PG Cut A Connections: 2) reserved / 30 max. (PG Cut A Connections: 2) reserved / 30 max. (PG Cut A Connections: 2) reserved / 30 max. (PG Cut A Connections: 0		Yes
Isser data per job, max.         See online help (S7 communication, user data size)           Number of connections: A reserved / A max. (PMI Connections: B reserved / A max. (PMI Connections: B reserved / S0 max: (PC UA Connections: S1 reserved / S1 max. (PC UA Con		
Number of connections:         PG Connections: 4 mass Pd / 4 max; HMI Connections: 12 reserved / 16 max; S7 Connections: 7 max; Opt User Connections: 8 reserved / 10 max; Pd Connections: 9 reserved / 10 max; Pd Connection: 9 reserved / 10 r		
S7 Connections: 3 reserved 1/4 max; Open User Connections: 0 reserved 1/4 max; Copen User Con		
Status/control         Yas           • Variables         input/siouputs, bit memories, DBs, peripheral I/Os (without fail-safe), times, counters           Forcing         Yes; peripheral input/siouputs (without fail-safe), times, counters           • present         Yes           • Number of configurable Traces         2           • Number of configurable Traces, max.         512 kbyte           • Interrupt/sidiagnostic/sidatus information         Diagnostic sidatus information           Diagnostic sidatus information         Yes           • REROR RED         Yes           • REROR RED         Yes           • REROR RED         Yes           • Counting Frequency, max.         100 kHz           • Preasent         Yes           • Counting requency, max.         100 kHz           • Prequency measurement         Yes           • United positioning axes, max.         8           Number of positioning axes, max.         100 kHz           Prequency measurement         Yes           • Potential separation digital inputs         4           Number of positioning axes, max. <td< td=""><td>• overall</td><td>S7 Connections: 8 reserved / 14 max; Open User Connections: 8 reserved / 14 max; Web Connections: 2 reserved / 30 max; OPC UA Connections: 0 reserved</td></td<>	• overall	S7 Connections: 8 reserved / 14 max; Open User Connections: 8 reserved / 14 max; Web Connections: 2 reserved / 30 max; OPC UA Connections: 0 reserved
Status/control variable     Ves     input/siduputs, bit memories, DBs, peripheral I/Os (without fail-safe), times,     controls     Forcing     Ves: peripheral inputs/outputs (without fail-safe), times,     controls     Present     Present     Ves: peripheral inputs/outputs (without fail-safe)     Diagnostic buffer     Present     Number of configurable Traces     S12 Mytle     Interrupts/diagnostics/fathus information     Diagnostics indication LED     RUNSTOP LED     Yes     ERROR LED     Ves     ERROR LED     Ves     ERROR LED     Ves     Control     Number of conters     G     Counter     Number of conters     G     Counter     Number of conters     G     Counting frequency, max.     100 kHz     Prequency massumement     Yes     Countor     Number of positioning axes, max.     S     Number of positioning axes in quick direction interface     Avith integrated outputs     Integrated     Pedential separation digital inputs     Potential separation digital inputs     Potential separation digital inputs     Potential separation digital inputs     No     between the channels, in groups of     Integrated     Potential separation digital inputs     Potential separatin digita	Test commissioning functions	
• Variables         inputs/outpuds. bit memories. DBs. peripheral I/Os (without fail-safe), times, counters           • Forcing         Ves: peripheral Inputs/outpuds (without fail-safe), times, counters           • Diagnosts buffer         Yes           • Number of configurable Traces         2           • Number of configurable Traces         2           • Number of configurable Traces         2           • RUNSTOP LED         Yes           • ERROR LED         Yes           • ERROR NE LED         Yes           • Number of counters         6           • Counter         Yes           • Number of counters         100 MHz           • Counter         4           • Number of counters         6           • Counter         Yes           • Distoining axes via pulse-direction interface         4. With integrated outputs           • Prequency max.         100 MHz           • Prequency max.         8           • Number of positoning axes via pulse-direction interface         4. With integrated outputs           • Preductor (pulse)         100 MHz           • Preductial separation digital inputs         No           • Potential separation digital inputs         No           • Potential separatin digital inputs         No	Status/control	
Forcing                Forcing                  Forcing </td <td><ul> <li>Status/control variable</li> </ul></td> <td>Yes</td>	<ul> <li>Status/control variable</li> </ul>	Yes
• Forcing         Yes; peripheral inputs/outputs (without fail-safe)           Diagnostic buffer         •           • present         Yes           Traces         2           • Memory size per trace, max.         512 kbyte           Interrupts/diagnostics/status information         512 kbyte           Diagnostics indication LED         Yes           • RUNSTOP LED         Yes           • ENROR LED         Yes           • MAINT LED         Yes           Integrated Functions         6           Counter         6           • Counting frequency, max.         100 kHz           Frequeny measurement         Yes           Outber of position-controlled positioning axes, max.         8           Number of position-controlled positioning axes via pulse-direction interface         4           Number of position-controlled positioning axes via pulse-direction interface         100 kHz           Potential separation         Yes           Number of pulse outputs         4           Number of pulse outputs         100 kHz <td>Variables</td> <td></td>	Variables	
Disgnostic buffer         Yes           • present         Yes           Traces         2           • Number of configurable Traces         2           • Memory size per trace, max.         512 kbyte           Diagnostics studie Information	Forcing	
	Forcing	Yes; peripheral inputs/outputs (without fail-safe)
Traces         2           • Number of configurable Traces         2           • Memory size per trace, max.         512 kbyte           Interrupts/diagnostics/status information         512 kbyte           Diagnostics/status information         FUNSTOP LED           • RUNSTOP LED         Yes           • RUNSTOP LED         Yes           • MINT LED         Yes           • Interfractions         6           • Counting frequency, max.         100 kHz           • Frequency measurement         Yes           • Number of positioning frequency, max.         8           Number of position-controlled positioning axes, max.         8           Number of position-controlled positioning axes, max.         8           Number of position-controlled positioning axes, max.         8           Number of paise outputs         4           Number of paise outputs         4           Number of paise outputs         4           Piotential separation         100 kHz           Potential separation         100 kHz           Potential separation         100 kHz           Potential separation         100 kHz           • Detential separation         100 kHz           • Detenties is portation         10 kHz </td <td>Diagnostic buffer</td> <td></td>	Diagnostic buffer	
Number of configurable Traces     Aemory size per trace, max.     512 kbyte  Interrupts//diagnostics/status information  Diagnostics indication LED      RUNSTOP LED     Yes     ERROR LED     Yes     MaINT LED     Yes  Interrupts//diagnostics/status Information  Counter     Number of counters     Counter     Number of counters     S     Counting frequency, max.     100 kHz  Frequency measurement     Yes Controlled positioning axes, max.     S Number of position-controlled positioning axes, max.     S Number of positioning axes via pulse-direction interface     Yes Number of positioning axes via pulse-direction interface     Yes Number of positioning axes via pulse-direction interface     Yes Number of positioning inputs     Yes Number of positioning inputs     Yes Number of positioning inputs     Yes Number of position digital inputs     Potential separation digital inputs     No     between the channels, in groups of     Interference immunity against discharge of static electricity     Interference immunity against discharge     KV     Test voltage at discharge of static     electricity on signal cables acc. to IEC 61000-     Yes	• present	Yes
Memory size per trace, max.     512 kbyte  Interruptidilignosticsidiatus Information  Diagnostics indication LED      RUNSTOP LED      RUNSTOP LED      RUNSTOP LED      RUNSTOP LED      Yes      ERROR LED      Yes      MAINT LED      Yes  Counter      Number of counters      Counting      frequency measurement      Yes      Counting frequency, max.     100 kHz      Frequency measurement      Yes  Number of positioning axes, max.     8  Number of positioning axes, max.     8  Number of positioning axes via pulse-direction interface      Yes      Number of positioning axes      Yes      Number of positioning axes      Yes      Number of pulse outputs      Yes      between the channels, ng roups of      Interference immunity against discharge of static electricity      Interference immunity against discharge of static     electricity acc. Interference      Interference immunity against discharge of static     electricity acc. Interference      Interference immunity against discharge      KV      Interference immunity against discharge      KV      Interference immunity on signal cables acc. to IEC 61000-      Yes      Interference immunity on signal cables acc. to IEC 61000	Traces	
Interrupts/diagnostics/status information Diagnostics indication LED   • RUNSTOP LED  • RUNSTOP LED  • REROR LED  • KAINT LED  Integrated Functions  Counter  • Number of counters  6  • Counting frequency, max.  100 kHz  Frequency measurement  Yes  controlled positioning axes, max.  8  Number of positioning axes, max. 8  Number of positioning axes via pulse-direction interface  PlD controller  PlD controller  PlD controller  Potential separation digital inputs  • Potential separation digital inputs  • Detential separation digital inputs • Detential separation digital inputs • Detential separation digital inputs • Detential separation digital inputs • Detential separation digital inputs • Detential separation digital inputs • Detential separation digital inputs • Detential separation digit	<ul> <li>Number of configurable Traces</li> </ul>	2
Diagnostics indication LED     Yes       • RUN/STOP LED     Yes       • MAINT LED     Yes       • MAINT LED     Yes       Integrated Functions     Yes       Counter     6       • Counting frequency, max.     100 kHz       Frequency measurement     Yes       controlled positioning axes, max.     8       Number of position-controlled positioning axes, max.     8       Number of position-controlled positioning axes, max.     8       Number of position-controlled positioning axes, max.     4       Number of alarm inputs     4       Number of alarm inputs     4       Number of alarm inputs     4       Optimal separation     100 kHz       Potential separation digital inputs     4       • Potential separation digital inputs     No       • between the channels, in groups of     1       Potential separation digital outputs     Yes       • between the channels, in groups of     1       • Interference immunity against discharge     4 kV       •	Memory size per trace, max.	512 kbyte
• RUNSTOP LED     Yes       • ERROR LED     Yes       • MAINT LED     Yes       Integrated Functions     6       • Counting frequency, max.     100 kHz       - Frequency measurement     Yes       • Controlled positioning     Yes       controlled positioning axes, max.     8       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 positioning axes via pulse-direction interface     4       Number of positioning axes via pulse-direction interface     4       Interface provide a positioning axes, max.     8       Number of positioning axes via pulse-direction interface     4       Unumber of pulse outputs     4       Limit frequency (pulse)     100 kHz       Potential separation digital inputs     No       • Detential separation digital inputs     No       • Detential separation digital outputs     Yes       • Detential separation digital outputs     Yes       • Dotential separation digital outputs     Yes       • Detential separatis disc	Interrupts/diagnostics/status information	
• ERROR LED     Yes       • MAINT LED     Yes       Integrated Functions     •       Counter     •       • Number of counters     6       • Counting frequency, max.     100 kHz       Prequency measurement     Yes       controlled positioning     Yes       Number of position-controlled positioning axes, max.     8       Number of position-controlled positioning axes, max.     8       Number of position-controlled positioning axes, max.     8       Number of pulse outputs     4       Number of pulse outputs     100 kHz       Potential separation digital inputs     1       • Potential separation digital outputs     1       • Potential separation digital outputs     Yes       • between the channels     No       • linterference immunity against discharge of st	Diagnostics indication LED	
• MAINT LED     Yes       Integrated Functions     E       Courter     6       • Counting frequency, max.     100 kHz       Frequency measurement     Yes       controlled position-ign axes, via youtse, set via youtse,	RUN/STOP 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       Limit frequency (pulse)     100 kHz       Potential separation digital inputs     4       • Potential separation digital inputs     1       • Potential separation digital outputs     Yes       • Potential separation digital outputs     Yes       • Potential separation digital outputs     Yes       • Deteween the channels, in groups of     1       Potential separation digital outputs     Yes       • Detevene the channels, in groups of     1       EMC     Interference immunity against discharge of static electricity       • Interference immunity against discharge     8 kV       - Test voltage at air discharge     8 kV       - Test voltage at air discharge     8 kV       - Test voltage at air discharge     6 kV       Interference immunity on supply lines acc. to IEC 61000- Yes	• ERROR LED	Yes
Counter     6       • 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       Potential separation digital inputs     6       • Potential separation digital inputs     No       • between the channels, in groups of     1       Potential separation digital outputs     Yes       • between the channels     No       • between the channels     No       • between the channels, in groups of     1       EMC     Interference immunity against discharge of static electricity       • Interference immunity against discharge     8 kV       - Test voltage at air discharge     6 kV       Interference immunity on supply lines acc. to IEC 61000- 44	MAINT LED	Yes
• 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 position-controlled positioning axes, max.       100 kHz         Potontial separation digital inputs       4         Number of pulse outputs       4         Limit frequency (pulse)       100 kHz         Potential separation digital inputs       No         • between the channels, in groups of       1         Potential separation digital outputs       Yes         • between the channels       No         • between the channels       No         • between the channels, in groups of       1         Interference immunity against discharge of static electricity       Interference immunity against discharge of static electricity         • Interference immunity against discharge       8 kV         - Test voltage at onitact discharge       6 kV	Integrated Functions	
• Counting frequency, max.     100 kHz       Frequency measurement     Yes       controlled positioning     Yes       Number of positioning axes max.     8       Number of positioning axes via pulse-direction interface     4; With integrated outputs       PID controller     Yes       Number of alarm inputs     4       Number of pulse outputs     4       Limit frequency (pulse)     100 kHz       Potential separation digital inputs     4       • Potential separation digital inputs     No       • Potential separation digital inputs     No       • Potential separation digital outputs     Yes       • Dotential separation digital outputs     Yes       • Detential separ	Counter	
Frequency measurement       Yes         controlled positioning       Yes         Number of position-controlled positioning axes, max.       8         Number of position-controlled positioning axes via pulse-direction interface       4; With integrated outputs         PID controller       Yes         Number of pulse outputs       4         Limit frequency (pulse)       100 kHz         Potential separation       Potential separation digital inputs         Potential separation digital inputs       No         • Potential separation digital outputs       Yes         • Potential separation digital outputs       Yes         • Potential separation digital outputs       Yes         • Detween the channels, in groups of       1         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       8 kV         - Test voltage at contact discharge       6 kV	Number of counters	6
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 palarm inputs       4         Number of pulse outputs       4         Limit frequency (pulse)       100 kHz         Potential separation       100 kHz         Potential separation digital inputs       No         • Potential separation digital inputs       No         • between the channels, in groups of       1         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       8 kV         - Test voltage at air discharge       8 kV         - Test voltage at air discharge       6 kV         Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes	<ul> <li>Counting frequency, max.</li> </ul>	100 kHz
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 alarn inputs       4         Number of pulse outputs       4         Limit frequency (pulse)       100 kHz         Potential separation digital inputs       No         • Potential separation digital inputs       No         • between the channels, in groups of       1         Potential separation digital outputs       Yes         • between the channels, in groups of       1         Potential separation digital outputs       Yes         • between the channels, in groups of       1         EMC       Interference immunity against discharge of static electricity         • Interference immunity against discharge of static electricity       Yes         - Test voltage at air discharge       8 kV         - Test voltage at air discharge       6 kV         Interference immunity to cable-borne interference       6 kV         Interference immunity on supply lines acc. to IEC 61000-       Yes	Frequency measurement	Yes
Number of positioning axes via pulse-direction interface       4; With integrated outputs         PID controller       Yes         Number of alarm inputs       4         Number of pulse outputs       4         Limit frequency (pulse)       100 kHz         Potential separation       100 kHz         Potential separation digital inputs       No         • Detential separation digital outputs       Yes         • between the channels, in groups of       1         EMC       Interference immunity against discharge of static electricity         • Interference immunity against discharge       8 kV         - Test voltage at air discharge       6 kV         Interference immunity to cable-borne interference       6 kV         Interference immunity on supply lines acc. to IEC 61000-       Yes	controlled positioning	Yes
PID controller     Yes       Number of alarm inputs     4       Number of pulse outputs     4       Limit frequency (pulse)     100 kHz       Potential separation digital inputs     4       • Potential separation digital inputs     No       • between the channels, in groups of     1       Potential separation digital outputs     Yes       • between the channels, in groups of     1       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     8 kV       - Test voltage at air discharge     8 kV       - Test voltage at ontact discharge     6 kV       Interference immunity to cable-borne interference     4 kV       • Interference immunity on supply lines acc. to IEC 61000- 4-4     Yes		
Number of alarm inputs       4         Number of pulse outputs       4         Limit frequency (pulse)       100 kHz         Potential separation         Potential separation digital inputs       No         • Potential separation digital inputs       No         • between the channels, in groups of       1         Potential separation digital outputs       Yes         • Potential separation digital outputs       Yes         • between the channels, in groups of       1         EMC       Interference immunity against discharge of static electricity         • Interference immunity against discharge       8 kV         - Test voltage at air discharge       6 kV         Interference immunity to cable-borne interference       6 kV         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes	Number of positioning axes via pulse-direction interface	4; With integrated outputs
Number of pulse outputs       4         Limit frequency (pulse)       100 kHz         Potential separation       100 kHz         Potential separation digital inputs       No         • Potential separation digital inputs       No         • Detential separation digital outputs       1         Potential separation digital outputs       Yes         • Potential separation digital outputs       Yes         • Potential separation digital outputs       Yes         • between the channels, in groups of       1         EMC       Interference immunity against discharge of static electricity         • Interference immunity against discharge of static electricity       Yes         - Test voltage at air discharge       8 kV         - Test voltage at contact discharge       6 kV         Interference immunity to cable-borne interference       6 kV         Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes		Yes
Limit frequency (pulse) 100 kHz  Potential separation  Potential separation digital inputs  Potential separation digital inputs  Potential separation digital inputs  Potential separation digital outputs  Potential separati	Number of alarm inputs	4
Potential separation         Potential separation digital inputs         • Potential separation digital inputs         • between the channels, in groups of         • Potential separation digital outputs         • between the channels         • between the channels, in groups of         • between the channels         • between the channels         • Deterference immunity against discharge of static electricity         • Interference immunity against discharge of static electricity         • Interference immunity against discharge         • KV         - Test voltage at air discharge         • KV         - Test voltage at contact discharge         • Interference immunity to cable-borne interference         • Interference immunity on supply lines acc. to IEC 61000-         4-4         • Interference immunity on signal cables acc. to IEC 61000- <td>Number of pulse outputs</td> <td></td>	Number of pulse outputs	
Potential separation digital inputs       No         • Potential separation digital inputs       No         • between the channels, in groups of       1         Potential separation digital outputs       Yes         • Potential separation digital outputs       Yes         • between the channels       No         • between the channels, in groups of       1         EMC       1         Interference immunity against discharge of static electricity       Yes         • Interference immunity against discharge       8 kV         — Test voltage at air discharge       8 kV         — Test voltage at air discharge       6 kV         Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes		100 kHz
Potential separation digital inputs     between the channels, in groups of     1  Potential separation digital outputs     Ves     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     — Test voltage at air discharge     6 kV  Interference immunity to cable-borne interference     Interference immunity on supply lines acc. to IEC 61000-     4-4     e Interference immunity on signal cables acc. to IEC 61000-     Yes	Potential separation	
between the channels, in groups of     1 Potential separation digital outputs     Potential separation digital outputs     Potential separation digital outputs     Potential separation digital outputs     Ves     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     — Test voltage at air discharge     6 kV Interference immunity to cable-borne interference     Interference immunity on supply lines acc. to IEC 61000-     4-4     Interference immunity on supply lines acc. to IEC 61000-     Yes	Potential separation digital inputs	
Potential separation digital outputs       Yes         • 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       Yes         • Interference immunity against discharge of static       Yes         - Test voltage at air discharge       8 kV         - Test voltage at contact discharge       6 kV         Interference immunity to cable-borne interference       Ves         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes	<ul> <li>Potential separation digital inputs</li> </ul>	No
<ul> <li>Potential separation digital outputs</li> <li>Potential separation digital outputs</li> <li>between the channels</li> <li>No</li> <li>between the channels, in groups of</li> <li>1</li> <li>EMC</li> <li>Interference immunity against discharge of static electricity</li> <li>Interference immunity against discharge of static</li> <li>electricity acc. to IEC 61000-4-2</li> <li>Test voltage at air discharge</li> <li>KV</li> <li>Test voltage at contact discharge</li> <li>6 kV</li> <li>Interference immunity to cable-borne interference</li> <li>Interference immunity on supply lines acc. to IEC 61000-</li> <li>4-4</li> <li>Interference immunity on signal cables acc. to IEC 61000-</li> <li>Yes</li> </ul>		1
• 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       Yes         • Interference immunity against discharge       8 kV         Test voltage at air discharge       8 kV         Test voltage at contact discharge       6 kV         Interference immunity to cable-borne interference       9 kV         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes         • Interference immunity on signal cables acc. to IEC 61000- 4-4       Yes	· · · ·	
between the channels, in groups of      Interference immunity against discharge of static electricity      Interference immunity against discharge of static electricity      Interference immunity against discharge     Test voltage at air discharge     A kV      Test voltage at contact discharge     B kV      Interference immunity to cable-borne interference      Interference immunity on supply lines acc. to IEC 61000-     4-4      Interference immunity on signal cables acc. to IEC 61000-     Yes	<ul> <li>Potential separation digital outputs</li> </ul>	Yes
EMC         Interference immunity against discharge of static electricity         • Interference immunity against discharge of static electricity acc. to IEC 61000-4-2         - Test voltage at air discharge       8 kV         - Test voltage at contact discharge       6 kV         Interference immunity to cable-borne interference       6 kV         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes         • Interference immunity on signal cables acc. to IEC 61000- Yes       Yes		
Interference immunity against discharge of static electricity <ul> <li>Interference immunity against discharge of static electricity</li> <li>Person electricity acc. to IEC 61000-4-2</li> <li>Person voltage at air discharge</li> <li>RV</li> <li>Person voltage at contact discharge</li> <li>RV</li> </ul> <li>Interference immunity to cable-borne interference</li> <li>Interference immunity on supply lines acc. to IEC 61000-4-4</li> <li>Interference immunity on signal cables acc. to IEC 61000-Yes</li>		1
<ul> <li>Interference immunity against discharge of static electricity acc. to IEC 61000-4-2</li> <li>Test voltage at air discharge</li> <li>KV</li> <li>Test voltage at contact discharge</li> <li>6 kV</li> </ul> Interference immunity to cable-borne interference <ul> <li>Interference immunity on supply lines acc. to IEC 61000-4-4</li> <li>Interference immunity on signal cables acc. to IEC 61000-Yes</li> </ul>		
electricity acc. to IEC 61000-4-2       8 kV         — Test voltage at air discharge       8 kV         — Test voltage at contact discharge       6 kV         Interference immunity to cable-borne interference       9 kV         • Interference immunity on supply lines acc. to IEC 61000- 4-4       Yes         • Interference immunity on signal cables acc. to IEC 61000- 4-4       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- Yes		Yes
— Test voltage at contact discharge     6 kV       Interference immunity to cable-borne interference     6 kV       • Interference immunity on supply lines acc. to IEC 61000- 4-4     Yes       • Interference immunity on signal cables acc. to IEC 61000- Yes     Yes	-	8 1/
Interference immunity to cable-borne interference         • Interference immunity on supply lines acc. to IEC 61000-         4-4         • Interference immunity on signal cables acc. to IEC 61000-         Yes		
Interference immunity on supply lines acc. to IEC 61000- 4-4      Interference immunity on signal cables acc. to IEC 61000- Yes		
Interference immunity on signal cables acc. to IEC 61000- Yes	Interference immunity on supply lines acc. to IEC 61000-	Yes
		Yes

Interference immunity enginest veltage surge	
Interference immunity against voltage surge     Interference immunity on supply lines acc. to IEC 61000-	Yes
4-5	
Interference immunity against conducted variable disturbance indu	uced 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
Degree and class of protection	
IP degree of protection	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Marine approval	Yes
Ecological footprint	Yes
environmental product declaration	Tes
Global warming potential — global warming potential, (total) [CO2 eq]	106 kg
— global warming potential, (total) [CO2 eq] — global warming potential, (during production) [CO2 eq]	18.5 kg
— global warming potential, (during operation) [CO2 eq]	88.2 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-1.12 kg
Highest safety class achievable in safety mode	
<ul> <li>Performance level according to ISO 13849-1</li> </ul>	PLe
• SIL acc. to IEC 61508	SIL 3
Ambient conditions	
Free fall	
<ul> <li>Fall height, max.</li> </ul>	0.3 m; five times, in product package
Ambient temperature during operation	
● min. ● max.	0 °C 55 °C; Number of simultaneously activated inputs or outputs 4 or 3 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 8 or 6 at 55 °C horizontal or 45 °C vertical
<ul> <li>horizontal installation, min.</li> </ul>	0° 0
<ul> <li>horizontal installation, max.</li> </ul>	55 °C
• vertical installation, min.	O° 0
<ul> <li>vertical installation, max.</li> </ul>	45 °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.	1 080 hPa
Storage/transport, min.	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, min.</li><li>Installation altitude, max.</li></ul>	-1 000 m 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Installation altitude, min.     Installation altitude, max. Relative humidity	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
<ul> <li>Installation altitude, min.</li> <li>Installation altitude, max.</li> <li>Relative humidity</li> <li>Operation, max.</li> </ul>	
Installation altitude, min.     Installation altitude, max. Relative humidity     Operation, max. Vibrations	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 95 %; no condensation
Installation altitude, min.     Installation altitude, max.  Relative humidity     Operation, max.  Vibrations     Vibration resistance during operation acc. to IEC 60068- 2-6	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 95 %; no condensation 2 g (m/s <sup>2</sup> ) wall mounting, 1 g (m/s <sup>2</sup> ) DIN rail
Installation altitude, min.     Installation altitude, max. Relative humidity     Operation, max. Vibrations     Vibration resistance during operation acc. to IEC 60068-	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 95 %; no 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	
<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; incl. failsafe
— FBD	Yes; incl. failsafe
— SCL	Yes
Know-how protection	
<ul> <li>User program protection/password protection</li> </ul>	Yes
Copy protection	Yes
Block protection	Yes
Access protection	
<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: Complete protection</li> </ul>	Yes
programming / cycle time monitoring / header	
adjustable	Yes
Dimensions	
Width	130 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	500 g

last modified:

10/9/2024 🖸