## SIEMENS

## **Data sheet**

6ES7288-1ST30-0AA0

\*\*\* spare part \*\*\* SIMATIC S7-200 SMART, CPU ST30, standard CPU, DC/DC/DC, onboard I/O: 18 DI 24 V DC; 12 DO 24 V DC; power supply: DC 20.4-28.8V DC, program/data memory 30 KB

General information	20.0V DC, program/data memory 30 KB		
Product type designation	CPU ST30 DC/DC/DC		
	CP0 \$130 DC/DC/DC		
Engineering with	OTED 7 Missa ANIM OMART		
Programming package  Installation tyro/mounting	STEP 7 Micro/WIN SMART		
Installation type/mounting	Vos. Chandard DIAI roll		
Rail mounting	Yes; Standard - DIN rail		
Supply voltage	041/		
Rated value (DC)	24 V		
permissible range, lower limit (DC)	20.4 V		
permissible range, upper limit (DC)	28.8 V		
Input current	201 1 21 1 2 2		
Current consumption, max.	624 mA; 24 V DC		
Inrush current, max.	6 A; at 28.8 V		
Output current			
Current output, max.	300 mA; 24 V DC Sensor Power		
for backplane bus (5 V DC), max.	1.4 A; max. 5 V DC for EM bus		
Power loss			
Power loss, max.	12 W		
Memory			
Type of memory	DDR		
Flash	Yes		
RAM	Yes		
Memory available for user data	12 kbyte		
Memory size	18 kbyte; Program memory		
Micro Memory Card	Yes; microSDHC Card (optional)		
Backup			
present	Yes; Maintenance free, RTC requires 7 days.		
CPU processing times			
for bit operations, typ.	150 ns; / instruction		
for word operations, typ.	1.2 µs; / instruction		
for floating point arithmetic, typ.	3.6 µs; / instruction		
Address area			
I/O address area			
• Inputs	144 byte; 256 bit of digital inputs & 56 words of analog inputs		
Outputs	144 byte; 256 bit of digital outputs & 56 words of analog outputs		
Time of day			
Clock			
• Type	Hardware clock, no battery backup		
<ul> <li>Hardware clock (real-time)</li> </ul>	Yes		
Backup time	7 d		
Deviation per day, max.	120 s; within 120s/month at 25 °C		
Digital inputs			
Number of digital inputs	18		
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.	18		
Input voltage			
Type of input voltage	DC		

	a Rated value (DC)	24.1/
Figure   Content   Conte	Rated value (DC)     for signal "O"	24 V
Imput courser	-	
		10.0 to 10.3 > 4V; 10.4 to 12.7 > 15V
for dignal "1", typ.   4 mA	·	
Imput days (for rated value of Input voltage)		
Designation in puls		4 mA
— parameterizable		
groups of four  - at "0" to "1", min parameterizable  / yes  for interrupt inputs  - parameterizable  / yes  / /	·	
	·	groups of four
For interrupt inputs		
— parameterizable   Yes	·	12.8 IIIS
for technological functions  - parameterizable Yes, 6 Single phase: 5 HSCs at 200 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz; 1 HSCs at 30 kHz 4 A/B phase: 3 HSCs at 100 kHz; 1 HSCs at 30 kHz;	·	Von
Ves. 6 Single phases 6 HSCs at 200 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz 4 AIB phases 3 HSCs at 100 kHz; 1 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1 HSCs at 30 kHz 4 AIB phases 3 HSCs at 20 kHz; 1	·	res
HSCs at 100 kHz; 1 HSC at 20 kHz  a shielded, max, 500 m; 50m shielded for HSC inputs briefled, max, 300 m; for technological functions; No  Politat outputs  Number of digital outputs 12; Transistor No  Short-circuit protection No  Short-circuit protection No  Switching capacity of the outputs  • with resistive load, max. 5W  Output voltage • for signal "1" rated value 0.5 A • on samp load, max. 10 µA  Output current • or signal "1" rated value 0.5 A • for signal "0" residual current, max. 10 µA  Output delay with resistive load • "0" to "1", max. 3 µs; of the standard outputs, max. 3 µs; of the pulse outputs, max. (Q a 0 to Q a 3) fo ps  * "1" to "0", max. 200 µs; of the standard outputs, max. 200 µs; of the pulse outputs, max. (Q a 0 to Q a 3) fo ps  Switching frequency • of the pulse outputs, with resistive load, max. 100 kHz  Relay outputs • Number of Relay outputs • PROFINET in Own maximum in the frace 11. Interface  Interface bye  Interface bye • R4 545 (Ethernet) Yes; Transiformer isolated, 1,500V AC  automatic detection of transmission rate Yes; 10100 Mbit/s • R7 45 (Ethernet) Yes • R7 45 (Ethernet) Yes • R7 45 (Ethernet) Yes • PROFINET IO Controller • PROFINET IO Controller • PROFINET IO Device Yes; Since V2.4 • PROFINET IO Device • PROFINET IO Controller	·	Vac. C. Circle where: E. LICCe et 200 ld let 4. LICCe et 20 ld let 4. A /D where: 2
Shielded, max.	— parameterizable	
Pigital cutputs    Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutputs   Pigital cutput   Pigi	Cable length	
Number of digital outputs 12; Transistor of which high-speed outputs 3; 100 kHz Pulse Train Output No Switching capacity of the outputs • with resistive load, max. • on almp load, max. • on almp load, max. • for signal "1", min. 20 V DC Output current • for signal "0" residual current, max.  Output delay with resistive load • "0" to "1", max.  **O' to "		500 m; 50m shielded for HSC inputs
Number of digital outputs 12; Transistor of which high-speed outputs 3; 100 kHz Pulse Train Output No Switching capacity of the outputs • with resistive load, max. • on almp load, max. • on almp load, max. • for signal "1", min. 20 V DC Output current • for signal "0" residual current, max.  Output delay with resistive load • "0" to "1", max.  **O' to "	• unshielded, max.	
Number of digital outputs	Digital outputs	
• of which high-speed outputs Short-circuit protection No Switching capacity of the outputs  • with resistive load, max. • on lamp load, max. • for signal "1", min.  Cutput variet • for signal "1" rated value • for signal "0" residual current, max.  Output delay with resistive load • "0" to "1", max. • "1" to "0", max.  Switching frequency • of the pulse outputs, with resistive load, max.  100 kHz  Switching frequency • "1" to "0", max.  Switching frequency • of the pulse outputs, with resistive load, max.  100 kHz  Relay outputs • Number of relay outputs • shielded, max. • shi		12; Transistor
Short-circuit protection  Switting capacity of the outputs  • with resistive load, max. • on lamp load, max. • on lamp load, max. • or signal "1", min.  Output current • for signal "1" rated value • for signal "0" residual current, max.  Output delay with resistive load • "0" to "1", max. • "1" to "0", max. • Output delay with resistive load • "0" to "1", max. • "1" to "0", max. • "0" the pulse outputs, with resistive load, max.  Poly by some of the pulse outputs, with resistive load, max.  Relay outputs • Number of relay outputs • Shelled, max. • shelled, max. • shelled, max. • shelled, max. • Interfaces  Number of industrial Ethernet interfaces  Number of Rs 485 interfaces  1 Number of Rs 485 interfaces  1 Interface type  PROFINET  Isolated  Autonogodiation  Yes  - RJ 45 (Ethemet)  Yes  PROFINET IO Controller • Transmission rate, max.  Services		
Switching capacity of the outputs  • with resistive load, max. • on lamp load, max. • on signal "1", min. 20 V DC  Output voltage • for signal "1" rated value • for signal "0" residual current, max.  • "0" to "1", max. • "1" to "0", max.  • "1" to "0", max.  • "1" to "0", max.  • "1" to "0", max.  • of the pulse outputs, with resistive load  Switching frequency • of the pulse outputs, with resistive load, max.  • Number of relay outputs • Number of relay outputs • Shielded, max. • unshielded, max. • unshielded, max. • unshielded, max. • unshielded of RS 485 interfaces  Interface type  Interface type  Interface type  Autonogotiation  Autonogotiation  Autonogotiation  Autonogotiation  PROFINET  O Controller • PROFINET IO Controller • PROFINET IO Controller • PROFINET IO Controller • PROFINET IO Controller • Transmission rate, max.  Services  10 Mbit/s		
• with resistive load, max.         5 W           • on lamp load, max.         5 W           Output vortage         5 V           • for signal "1", min.         20 V DC           Output ourrent         • for signal "1" rated value         0.5 A           • for signal "0" residual current, max.         10 µA           Output delay with resistive load         • "0" to *1", max.         3 µs; of the standard outputs, max. 3 µs; of the pulse outputs, max. (Q a.0 to Q a.3) *1 µs           • "1" to "0", max.         200 µs; of the standard outputs, max. 200 µs; of the pulse outputs, max. (Q a.0 to Q a.3) *50 µs           Switching frequency         • of the pulse outputs, with resistive load, max.         100 kHz           • Number of relay outputs         0           • Number of relay outputs         0           • Shielded, max.         500 m           • shielded, max.         150 m           • Interfaces         1           Number of industrial Ethernet interfaces         1           Number of RS 485 interfaces         1           • Interface type         PROFINET           • Isolated         Yes; Transformer isolated, 1,500V AC           automatic detection of transmission rate         Yes           • PROFINET IO Controller         Yes           • PROFINET IO Controller		
on lamp load, max.  Output vortiage of ror signal "1", min. Output current  of ror signal "1" rated value of rated value value, as 3 ps; of the pulse outputs, max. 2pu, so fithe pulse outputs, max. (Q a.0 to Q a.3) 1 ps ca.3) 1 ps ca.9) 1 ps ca		0.5.Δ
Output voitage   For signal "1", min.   20 V DC		
• for signal "1", min.  Output current  • for signal "1" rated value • for signal "0" residual current, max.  10 μA  Output delay with resistive load  • "0" to "1", max. • "1" to "0", max.  200 μs; of the standard outputs, max. 3 μs; of the pulse outputs, max. (Q a.0 to Q a.3) 1 μs  • "1" to "0", max.  200 μs; of the standard outputs, max. 200 μs; of the pulse outputs, max. (Q a.0 to Q a.3) 50 μs  Switching frequency • of the pulse outputs, with resistive load, max.  Relay outputs • Number of relay outputs  • Number of relay outputs  • Shielded, max. • unshielded, max. • unshielded, max. • unshielded, max. • 150 m  Interface S  Number of Industrial Ethernet interfaces 1 Number of relay standard outputs, max. 200 μs; of the pulse outputs, max. (Q a.0 to Q a.3) 50 μs  Switching frequency  • γες Transformer isolated, 1,500V AC  automatic detection of transmission rate  Autocrossing Yes  Interface types • RU 45 (Ethernet) • Yes  PROFINET IO Controller • Yes; Since V2.4 • PROFINET IO Device • PROFINET IO Device • Transmission rate, max.  100 Mbit/s  Services		J VV
Output current  • for signal "1" rated value • for signal "0" residual current, max.  0.5 A 10 µA  Output delay with resistive load  • "0" to "1", max.  3 us; of the standard outputs, max. 3 µs; of the pulse outputs, max. (Q a.0 to Q a.3) 1 µs  • "1" to "0", max.  200 µs; of the standard outputs, max. 200 µs; of the pulse outputs, max. (Q a.0 to Q a.3) 50 µs  Switching frequency  • of the pulse outputs, with resistive load, max.  100 kHz  Selay outputs  • Number of relay outputs  • Shielded, max.  • shielded, max.  • unshielded, max.  • shielded, max.  • 150 m  Interfaces  Number of industrial Ethernet interfaces  1 Number of RS 485 interfaces  1 Interface  Thereface  Thereface type  PROFINET  Isolated  Yes; Transformer isolated, 1,500V AC  automatic detection of transmission rate  • Yes  • Ru 45 (Ethernet)  • Pes  PROFINET IO Controller  • PROFINET IO Device  PROFINET IO Device  PROFINET IO Device  • Transmission rate, max.  100 Mbit/s	· •	20 V DC
• for signal "1" rated value • for signal "0" residual current, max.  Output delay with resistive load • "0" to "1", max.  • "1" to "0", max.  • "1" to "0", max.  • "1" to "0", max.  • 100 kHz  Switching frequency • of the pulse outputs, with resistive load, max.  Relay outputs • Number of relay outputs • Number of relay outputs • shielded, max. • unshielded, max. • unshielded, max. • 150 m  Interfaces  Interface type  Interface type  • RJ 45 (Ethernet) • PROFINET IO Controller • RPOFINET IO Device • PROFINET IO Device • PROFINET IO Device • Transmission rate, max. • 100 Mbit/s • PROFINET IO Controller • Transmission rate, max. • 100 Mbit/s • PROFINET IO Controller • Transmission rate, max. • 100 Mbit/s • Services		20 V DC
• for signal "0" residual current, max.  Output delay with resistive load  • "0" to "1", max.  a.3 μs; of the standard outputs, max. 3 μs; of the pulse outputs, max. (Q a.0 to Q a.3) 1 μs  200 μs; of the standard outputs, max. 200 μs; of the pulse outputs, max. (Q a.0 to Q a.0) to Q a.3) 50 μs  Switching frequency  • of the pulse outputs, with resistive load, max.  100 kHz  Relay outputs  • Number of relay outputs  • Number of relay outputs  • shielded, max.  • unshielded, max.  • unshielded, max.  150 m  Interfaces  Interface type  PROFINET  Isolated  Autonegotiation  Autonegotiation  Autonegotiation  Fes  Autonegotiation  • R2 45 (Ethernet)  Pes  Protocols  • PROFINET IO Controller  • PROFINET IO Device  PROFINET IO Device  PROFINET IO Controller  • Transmission rate, max.  100 Mbit/s  Services	·	0.5.4
Output delay with resistive load  • "0" to "1", max.  • "1" to "0", max.  • "1" to "0", max.  200 µs, of the standard outputs, max. 3 µs, of the pulse outputs, max. (Q a.0 to Q a.3) 1 µs  200 µs, of the standard outputs, max. 200 µs, of the pulse outputs, max. (Q a.0 to Q a.3) 50 µs  Switching frequency  • of the pulse outputs, with resistive load, max.  100 kHz  Relay outputs  • Number of relay outputs  • Number of relay outputs  • shielded, max.  • unshielded, max.  • unshielded, max.  150 m  Interfaces  Number of RS 485 interfaces  1  Number of RS 485 interfaces  1  Interface  Interface type  PROFINET  Isolated  4 Yes; Transformer isolated, 1,500V AC  automatic detection of transmission rate  Autorcossing  Yes  Interface types  • RJ 45 (Ethernet)  Peo  Protocols  • PROFINET IO Controller  • PROFINET IO Device  PROFINET IO Device  PROFINET IO Controller  • Transmission rate, max.  100 Mbit/s  Services	-	
• "0" to "1", max. 3 µs; of the standard outputs, max. 3 µs; of the pulse outputs, max. (Q a.0 to Q a.3) 1 µs 200 µs; of the standard outputs, max. 200 µs; of the pulse outputs, max. (Q a.0 to Q a.3) 50 µs  Switching frequency  • of the pulse outputs, with resistive load, max. 100 kHz  Relay outputs • Number of relay outputs  • Number of relay outputs  • shielded, max. • unshielded, max. • unshielded, max. • 150 m  Number of industrial Ethernet interfaces 1 Number of RS 485 interfaces 1 1. Interface  Interface type PROFINET  Isolated Yes; Transformer isolated, 1,500V AC  automatic detection of transmission rate 4 Yes; 10/100 Mbit/s  Autonegotiation Autonegotiation Pes  • RJ 45 (Ethernet) Protocols • PROFINET IO Controller • PROFINET IO Controller • Transmission rate, max. 100 Mbit/s  Services		10 μΑ
a.3) 1 μs 200 μs, of the standard outputs, max. 200 μs; of the pulse outputs, max. (Q a.0 to Q a.3) 50 μs  Switching frequency  • of the pulse outputs, with resistive load, max.  Relay outputs  • Number of relay outputs  • Number of relay outputs  • Soo m  • unshielded, max.  • unshielded, max.  • unshielded, max.  150 m  Interfaces  Number of industrial Ethernet interfaces  1 Number of RS 485 interfaces  1 1. Interface  Interface type  Interface type  Autonegotiation  Autonegotiation  Autonegotiation  Pes  Protocols  • PROFINET   O Controller  • PROFINET   O Controller  • PROFINET   O Controller  • Transmission rate, max.  100 Mbit/s  Services	• •	
Switching frequency  of the pulse outputs, with resistive load, max. 100 kHz  Relay outputs  Number of relay outputs  shielded, max. 500 m  unshielded, max. 150 m  Interfaces  Number of findustrial Ethernet interfaces 1 Number of RS 485 interfaces 1  Interface type PROFINET  Isolated Yes; Transformer isolated, 1,500V AC automatic detection of transmission rate Yes 10/100 Mbit/s  Autonegotiation Yes  Interface types  RJ 45 (Ethernet) Yes  PROFINET O Controller  PROFINET O Controller  PROFINET IO Controller  PROFINET IO Controller  Transmission rate, max. 100 Mbit/s  Services	• "U" to "1", max.	
of the pulse outputs, with resistive load, max.  Relay outputs  Number of relay outputs  shielded, max. shielded, max. 150 m  Interfaces  Number of industrial Ethernet interfaces 1 Number of RS 485 interfaces 1 Interface type PROFINET IO Controller PROFINET IO Controller PROFINET IO Controller Transmission rate, max. 100 kHz  100 kHz  100 kHz 100	• "1" to "0", max.	
Relay outputs  Number of relay outputs  Shielded, max. Shielded, max. Shielded, max. Sumber of industrial Ethernet interfaces  Number of RS 485 interfaces  Interface  Interface type Interface types Interface t	Switching frequency	
● Number of relay outputs  ● shielded, max.  ● unshielded, max.  150 m  Interfaces  Number of industrial Ethernet interfaces  Number of RS 485 interfaces  1 1. Interface  Interface type  Interface type  Interface type  Interface detection of transmission rate  Autonegotiation  Autocrossing  FRJ 45 (Ethernet)  PROFINET IO Controller  ● PROFINET IO Controller  ● Transmission rate, max.  Services  100 Mbit/s	<ul> <li>of the pulse outputs, with resistive load, max.</li> </ul>	100 kHz
Cable length  • shielded, max.  • unshielded, max.  • unshielded, max.  150 m  Interfaces  Number of industrial Ethernet interfaces  1 Number of RS 485 interfaces 1 1.Interface  Interface type  Interface type  Isolated  4 Yes; Transformer isolated, 1,500V AC  automatic detection of transmission rate  4 Yes; 10/100 Mbit/s  Autorossing  Yes  Interface types  • RJ 45 (Ethernet)  PROFINET IO Controller  • PROFINET IO Controller  • Transmission rate, max.  100 Mbit/s  Services	Relay outputs	
shielded, max.     unshielded, max.     150 m  Interfaces  Number of industrial Ethernet interfaces 1 Number of RS 485 interfaces 1  Interface  Interface type Interface types Interf	<ul> <li>Number of relay outputs</li> </ul>	0
unshielded, max.  Interfaces  Number of industrial Ethernet interfaces  Number of RS 485 interfaces  1  1. Interface  Interface type  Interface types	Cable length	
Interfaces  Number of industrial Ethernet interfaces 1 Number of RS 485 interfaces 1  1. Interface  Interface type Interface types Inter	• shielded, max.	500 m
Number of industrial Ethernet interfaces 1 Number of RS 485 interfaces 1  1. Interface  Interface type PROFINET Isolated Yes; Transformer isolated, 1,500V AC automatic detection of transmission rate Yes; 10/100 Mbit/s  Autonegotiation Yes Autocrossing Yes Interface types  • RJ 45 (Ethernet) Yes PROFINET IO Controller Yes; Since V2.4 • PROFINET IO Device Yes; I-Device since V2.5  PROFINET IO Controller • Transmission rate, max. 100 Mbit/s Services	• unshielded, max.	150 m
Number of industrial Ethernet interfaces  Number of RS 485 interfaces  1  1. Interface  Interface type  Interface type  Interface type  PROFINET  Isolated  yes; Transformer isolated, 1,500V AC  automatic detection of transmission rate  Yes; 10/100 Mbit/s  Autonegotiation  Yes  Autocrossing  Interface types  • RJ 45 (Ethernet)  Protocols  • PROFINET IO Controller  • PROFINET IO Device  PROFINET IO Controller  • Transmission rate, max.  100 Mbit/s  Services	·	
Number of RS 485 interfaces  1  1. Interface Interface type Interface type Isolated Autonatic detection of transmission rate Autorossing Autocrossing Interface types  • RJ 45 (Ethernet)  Protocols  • PROFINET IO Controller • PROFINET IO Device PROFINET IO Controller • Transmission rate, max.  100 Mbit/s  11  PROFINET IO Mainterfaces  1  PROFINET IO Controller • Transmission rate, max.  100 Mbit/s  Services		1
Interface type PROFINET Isolated Yes; Transformer isolated, 1,500V AC automatic detection of transmission rate Yes; 10/100 Mbit/s Autonegotiation Yes Autocrossing Yes Interface types • RJ 45 (Ethernet) Yes Protocols • PROFINET IO Controller • PROFINET IO Device Yes; I-Device since V2.5  PROFINET IO Controller • Transmission rate, max. 100 Mbit/s  Services		
Interface type Isolated Isolated Yes; Transformer isolated, 1,500V AC  automatic detection of transmission rate Yes; 10/100 Mbit/s  Autorossing Yes Interface types  RJ 45 (Ethernet) Yes  Protocols  PROFINET IO Controller PROFINET IO Device PROFINET IO Controller Transmission rate, max.  100 Mbit/s  Services		
Isolated Yes; Transformer isolated, 1,500V AC automatic detection of transmission rate Yes; 10/100 Mbit/s  Autonegotiation Yes  Autocrossing Yes  Interface types  • RJ 45 (Ethernet)  Protocols  • PROFINET IO Controller • PROFINET IO Device  PROFINET IO Controller  • Transmission rate, max.  100 Mbit/s  Services		PROFINET
automatic detection of transmission rate  Yes; 10/100 Mbit/s  Autonegotiation  Yes  Autocrossing  Yes  Interface types  RJ 45 (Ethernet)  Protocols  PROFINET IO Controller  PROFINET IO Device  PROFINET IO Controller  Transmission rate, max.  100 Mbit/s  Services	·	
Autoregotiation  Autocrossing  Interface types  RJ 45 (Ethernet)  Protocols  PROFINET IO Controller PROFINET IO Device  PROFINET IO Controller Transmission rate, max.  100 Mbit/s  Services		
Autocrossing Interface types  • RJ 45 (Ethernet)  Protocols  • PROFINET IO Controller  • PROFINET IO Device  PROFINET IO Controller  • Transmission rate, max.  Yes  Yes  Yes  Yes  Yes  Yes; Since V2.4  Yes; I-Device since V2.5  PROFINET IO Controller  • Transmission rate, max.  100 Mbit/s		
Interface types  • RJ 45 (Ethernet)  Protocols  • PROFINET IO Controller • PROFINET IO Device  PROFINET IO Controller • Transmission rate, max.  Services  Yes  Yes  Yes  Yes  Yes  Yes; Since V2.4  Yes; I-Device since V2.5  PROFINET IO Controller  • Transmission rate, max.  100 Mbit/s		
RJ 45 (Ethernet)  Protocols  PROFINET IO Controller PROFINET IO Device PROFINET IO Controller Transmission rate, max.  Services  Yes; Since V2.4 Yes; I-Device since V2.5  PROFINET IO Controller  100 Mbit/s	· · · · · · · · · · · · · · · · · · ·	res
Protocols  PROFINET IO Controller PROFINET IO Device Yes; Since V2.4 PROFINET IO Controller Transmission rate, max. 100 Mbit/s Services	* *	Von
PROFINET IO Controller     PROFINET IO Device     Yes; Since V2.4     PROFINET IO Device     Yes; I-Device since V2.5  PROFINET IO Controller     Transmission rate, max.     100 Mbit/s  Services		Yes
● PROFINET IO Device Yes; I-Device since V2.5  PROFINET IO Controller  ● Transmission rate, max. 100 Mbit/s  Services		
PROFINET IO Controller  ● Transmission rate, max. 100 Mbit/s  Services		
Transmission rate, max.  Services  100 Mbit/s	PROFINET IO Device	Yes; I-Device since V2.5
Services	PROFINET IO Controller	
	Transmission rate, max.	100 Mbit/s
— Number of connectable IO Devices, max. 8	Services	
	<ul> <li>Number of connectable IO Devices, max.</li> </ul>	8

— Updating time	4 ms; 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.
Address area	
— Inputs, max.	128 byte; Per device
— Outputs, max.	128 byte; Per device
2. Interface	
Interface type	RS 485 (max. 187.5 kbps)
Interface types	
• RS 485	Yes
PROFIBUS DP master	
Services	
— S7 communication	Yes
Protocols	
Supports protocol for PROFINET IO	Yes; RT Controller (since FW V2.4) & I-Device (since FW V2.5)
PROFIBUS	Yes; Via CM DP module
Protocols (Ethernet)	
• TCP/IP	Yes
communication functions / header	
S7 communication	
• supported	Yes
as server	Yes
as client	Yes
Test commissioning functions	160
Forcing	Voc
• Forcing	Yes
Integrated Functions	
Counter	
Number of counters	6
PID controller	Yes; PID closed-loop control function: Continuous controller outputs, binary controller outputs, automatic/manual mode, max. 8 loops
Number of pulse outputs	3
EMC	
Interference immunity against discharge of static electricity	
Interference immunity against discharge of static	Yes
electricity acc. to IEC 61000-4-2	
<ul> <li>Test voltage at air discharge</li> </ul>	8 kV
<ul> <li>Test voltage at contact discharge</li> </ul>	4 kV
Interference immunity against high-frequency electromagnetic field	s
<ul> <li>Interference immunity against high-frequency radiation acc. to IEC 61000-4-3</li> </ul>	Yes; 10 V/m, 80 to 1 000 MHz (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)
Interference immunity to cable-borne interference	
<ul> <li>Interference immunity on supply lines acc. to IEC 61000- 4-4</li> </ul>	Yes; 2 kV acc. to IEC 61000-4-4, burst
<ul> <li>Interference immunity on signal cables acc. to IEC 61000- 4-4</li> </ul>	Yes; ±2 kV acc. to IEC 61000-4-4, Burst
Interference immunity against conducted variable disturbance indu	, , ,
<ul> <li>Interference immunity against high frequency current feed acc. to IEC 61000-4-6</li> </ul>	Yes; 10 V, 150 kHz to 80 MHz (to IEC 61000-4-6)
Emission of radio interference acc. to EN 55 011	
Limit class A, for use in industrial areas	Yes; EN 61000-6-4, interference emission: Intended for use in industrial areas.
Emission of conducted and non-conducted interference	
Interference emission via line/AC current cables	EN 61000-6-4, interference emission: Intended for use in industrial areas.
Degree and class of protection	
IP degree of protection	
ii degree of protection	IP20
Standards, approvals, certificates	IP20
	IP20 Yes
Standards, approvals, certificates	
Standards, approvals, certificates  CE mark	
Standards, approvals, certificates  CE mark  Ambient conditions	
Standards, approvals, certificates  CE mark  Ambient conditions  Free fall	Yes
Standards, approvals, certificates  CE mark  Ambient conditions  Free fall  • Fall height, max.	Yes
Standards, approvals, certificates  CE mark  Ambient conditions  Free fall  • Fall height, max.  Ambient temperature during operation	Yes  0.3 m; five times, in product package

	01		
		Version	Classification
Classifications			
Weight, approx.	375 g		
Weights			
Depth	81 mm		
Height	100 mm		
Width	110 mm		
Dimensions			
— STL	Yes		
— FBD	Yes		
— LAD	Yes		
Programming language			
configuration / programming / header			
configuration / header			
Operation at 25 °C without condensation, max.	95 %		
Relative humidity			
Installation altitude, max.	2 000 m		
Installation altitude, min.	-1 000 m		
Altitude during operation relating to sea level			
Storage/transport, max.	1 080 hPa		
Storage/transport, min.	660 hPa		
Air pressure acc. to IEC 60068-2-13			
• max.	70 °C		
min.	-40 °C		
Ambient temperature during storage/transportation	45 C		
vertical installation, max.	45 °C		
<ul><li>horizontal installation, max.</li><li>vertical installation, min.</li></ul>	0 °C		
horizontal installation, min.	0 °C 55 °C		

	version	Classification
eClass	14	27-24-22-07
eClass	12	27-24-22-07
eClass	9.1	27-24-22-07
eClass	9	27-24-22-07
eClass	8	27-24-22-07
eClass	7.1	27-24-22-07
eClass	6	27-24-22-07
ETIM	9	EC000236
ETIM	8	EC000236
ETIM	7	EC000236
IDEA	4	3565
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval





last modified: 12/8/2024 🖸