SIEMENS

Data sheet

6ES7288-1SR20-0AA0

*** spare part *** SIMATIC S7-200 SMART, CPU SR20, CPU, AC/DC/relay, onboard I/O: 12 DI 24 V DC; 8 DO relay 2A; power supply: AC 85-264 V AC at 47-63 Hz, program/data memory 20 KB

	63 Hz, program/data memory 20 KB
General information	
Product type designation	CPU SR20 AC/DC/Relay
Engineering with	
Programming package	STEP 7 Micro/WIN SMART
Installation type/mounting	
Rail mounting	Yes; Standard - DIN rail
Supply voltage	
Rated value (AC)	
• 120 V AC	Yes
• 230 V AC	Yes
permissible range, lower limit (AC)	85 V
permissible range, upper limit (AC)	264 V
Line frequency	
permissible range, lower limit	47 Hz
permissible range, upper limit	63 Hz
Input current	
Current consumption (rated value)	170 mA; at 240 V AC
Current consumption, max.	290 mA; At 120 V AC
Inrush current, max.	9.3 A; at 264 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	The state of the s
Power loss, max.	14 W
Memory	17.0
	DDR
Type of memory Flash	Yes
RAM	Yes
Memory available for user data	8 kbyte
Memory Size	12 kbyte; Program memory
Micro Memory Card	Yes; microSDHC Card (optional)
Backup	Voc. Maintanance free DTC requires 7 days
• present	Yes; Maintenance free, RTC requires 7 days.
CPU processing times	450 11 4 11
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
 Hardware clock (real-time) 	Yes
Backup time	7 d
 Deviation per day, max. 	120 s; within 120s/month at 25 °C
Digital inputs	
Number of digital inputs	12
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.	12
Input voltage	12
•	DC
Type of input voltage Peted value (PC)	24 V
Rated value (DC) for signal "0"	
• for signal "0"	5 V DC at 1 mA
• for signal "1"	15 V DC at 2.5 mA
Input current	4 4
• for signal "0", max. (permissible quiescent current)	1 mA
• for signal "1", typ.	4 mA
Input delay (for rated value of input voltage)	
for standard inputs	V 0.0 0.4 0.0 4.0 0.0 0.4 4.0 0
— parameterizable	Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four
— at "0" to "1", min.	0.2 ms
— at "0" to "1", max.	12.8 ms
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Yes; 6 Single phase: 4 HSCs at 200 kHz; 2 HSCs at 30 kHz 4 A/B phase: 2
p di di indici	HSCs at 100 kHz; 2 HSCs at 20 kHz
Cable length	
• shielded, max.	500 m; 50 m for technological functions
• unshielded, max.	300 m; for technological functions: No
Digital outputs	
Number of digital outputs	8; Relays
Switching capacity of the outputs	
with resistive load, max.	2 A
on lamp load, max.	30 W; 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.
Switching frequency	
of the pulse outputs, with resistive load, max.	1 Hz
Relay outputs	
Number of relay outputs	8
Cable length	
shielded, max.	500 m
unshielded, max.	150 m
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	1
1. Interface	PROFINET
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	Yes; Since V2.4
PROFINET IO Device	Yes; I-Device since V2.5
PROFINET IO Controller	
Transmission rate, max.	100 Mbit/s
Services	
 Number of connectable IO Devices, max. 	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

- Inputs, max Outputs, max. 128 byte; Per device 2. Interface Interface type Interface type RS 485 (max. 187.5 kbps) Interface types RS 485 PROFIBUS DP master Services - S7 communication PROFIBUS PROFIBUS PROFIBUS PROFIBUS PROFIBUS PROFIBUS PROFIBUS Protocols Supports protocol for PROFINET IO Yes; RT Controller (since FW V2.4) & I-Device (since FW V2.5) PROFIBUS Protocols (Ethernet) TCP/IP Yes communication functions / header S7 communication • supported • supported • supported • as server • as server • as client	Address area	
		128 byte: Per device
	•	
Interferce types RS 485 (max. 187.5 kbps) Interferce types RS 485 (max. 187.5 kbps) Yes PROFIBUS DP master Services Services - S7 communication PROFIBUS DP moster Supports protocol for PROFINET IO PROFIBUS Supports protocol for PROFINET IO PROFIBUS * Yes; Via CM DP module Protocols (Ethernet) * TCPUP * TCPUP * TOPUP * S8 communication functions / has day * services as server * se server * se server * Posting * Forcing * Fo		120 byte, 1 cl device
Interference immunity against discharge of static electrony. **Reference immunity against discharge of static electrony. **Interference immunity against discharge of static electrony. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-4. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-5. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against stay frequency current feed ac. to IEC 61000-4-6. **Interference immunity against s		RS 485 (max. 187.5 kbps)
PROFIBUS DP master		100 400 (max. 101.0 hsps)
Services	**	Yes
Services		
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 (Ethemet) Yes Prot		
Protocols Suports protocol for PROFINET IO Yes, RT Controller (since FW V2.4) & i-Device (since FW V2.5) PROFICEUS PROFICEUS ** Yes, Via CM DP module ** Yes ** Tornum ication functions / header ** Torcing Yes ** Forcing Yes ** Protong		Yes
Supports protocol for PROFINET IO PROFIBUS Yes, Via CM DP module Protocols (Ethemet) • (DCPIP • (Yes • (As a server) • (As a dient) • (As a server) • (As a dient) • (Porting) • (Fording) • (Porting) • (Port	Protocols	
PROFIBUS Protections (Ethernet) Frotections (Ethernet) Frotecti		Yes: RT Controller (since FW V2.4) & I-Device (since FW V2.5)
• TCP/IP		
### CPCIPIT ### COMMINITION ## COMMINITION ### COMMINITION ##	Protocols (Ethernet)	
### Strong		Yes
supported as server as client ves as server as client ves as client ves	communication functions / header	
supported as server as client ves as server as client ves as client ves		
* as server * as client * Yes		Yes
** as client ** Yes ** Commissioning functions** Forcing	• •	
Forcing Forcin		
Forcing Yes Integrated Functions PID controller Ves, PID closed-loop control function: Continuous controller outputs, binary controller outputs, automatic/manual mode, max. 8 loops Number of pulse outputs SENC Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity ac. to IEC 61000-4-2 — Test voltage at at discharge Interference immunity against high-frequency electromagnetic fields Interference immunity against high-frequency radiation ac. to IEC 61000-4-3 linterference immunity on supply lines acc. to IEC 61000-4-3 Interference immunity on supply lines acc. to IEC 61000-4-4 • Interference immunity on supply lines acc. to IEC 61000-4-4 • Interference immunity on supply lines acc. to IEC 61000-4-4 • Interference immunity on supply lines acc. to IEC 61000-4-4 • Interference immunity against high frequency current feed ac. to IEC 61000-4-4 • Interference immunity against acconducted variable disturbance induced by high-frequency fields • Interference immunity against migh frequency current feed ac. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 • Limit class A, for use in industrial areas Passion of conducted and non-conducted interference • Interference emission is line/AC current cables Emission of conducted and non-conducted interference • Interference emission is line/AC current cables Engineer of protection IP degree of protection IP 20 Standards, agnorable, and ine/AC current cables Engineer of protection IP 20 Fall height, max. Ambient temperature during operation • min. • Fall height, max. Ambient temperature during operation • min. • max. • horizontal installation, min. • o °C • or	Test commissioning functions	
Forcing Yes Integrated Functions Full controller Yes; PID closed-loop control function: Continuous controller outputs, binary controller outputs automatic/manual mode, max. 8 loops 3 SENCE		
Interference immunity against high-frequency radiation act to IEC 61000-4-3 (biterference immunity against high-frequency radiation act to IEC 61000-4-3 (biterference immunity against high-frequency radiation act to IEC 61000-4-3 (biterference immunity against high-frequency radiation act to IEC 61000-4-3 (biterference immunity against high-frequency radiation act to IEC 61000-4-3 (biterference immunity against high-frequency radiation act to IEC 61000-4-3) (biterference immunity against high-frequency radiation act to IEC 61000-4-3) (biterference immunity against high-frequency radiation act to IEC 61000-4-3) (biterference immunity against high-frequency radiation act to IEC 61000-4-3) (biterference immunity against high-frequency radiation act to IEC 61000-4-3) (biterference immunity against high-frequency radiation act to IEC 61000-4-3) (biterference immunity against high frequency radiation act to IEC 61000-4-3) (biterference immunity against high frequency radiation act to IEC 61000-4-3) (biterference immunity against high frequency radiation act to IEC 61000-4-4, burst 4-4) (biterference immunity against high frequency act to IEC 61000-4-4, burst 4-4) (biterference immunity against high frequency current feed act to IEC 61000-4-6) (biterference immunity against high frequency current feed act to IEC 61000-4-6) (biterference immunity against high frequency current feed act to IEC 61000-4-6) (biterference immunity against high frequency current feed act to IEC 61000-4-6) (biterference immunity against high frequency current feed act to IEC 61000-4-6) (biterference act to IEC 61000-4-6) (biterference immunity against high-frequency current feed act to IEC 61000-4-6) (biterference act to IEC		Yes
PID controller Ves; PID closed-loop control function: Continuous controller outputs, binary controller outputs, automatic/manual mode, max. 8 loops Number of pulse outputs Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity acu. to IEC 61000-42 — Test voltage at contact discharge — Ves; 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) Neiterference immunity to cable-borne interference — Interference immunity on signal cables acc. to IEC 610004 — Interference immunity against high frequency current feed acc. to IEC 61000-4-4 — Interference immunity against high frequency current feed acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst — Ves; 2 kV acc. to IEC 61000-4-4, burst		
Number of pulse outputs 3 3 EMC Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity acc. to IEC 61000-42 — Test voltage at air discharge (4 kV) Interference immunity against high-frequency electromagnetic fields (5 for 61000-43) Interference immunity against high-frequency relation acc. to IEC 61000-43 (50 feC 61000-43); 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-43); 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-43); 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-43; 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-43; 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-43; 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-43; 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-43; 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-44; 10 Interference immunity to supply lines acc. to IEC 61000- Interference immunity on signal cables acc. to IEC 61000- 4-4 Interference immunity against high-frequency current feed acc. to IEC 61000-46; 10 Interference immunity against high frequency current feed acc. to IEC 61000-46; 10 Interference immunity against high frequency current feed acc. to IEC 61000-46; 10 Interference immunity against high frequency current feed acc. to IEC 61000-46; 10 Interference immunity against high frequency current feed acc. to IEC 61000-46; 10 Interference immunity against high frequency current feed acc. to IEC 61000-46; 10 Interference immunity against high frequency current feed acc. to IEC 61000-46; 10 Interference immunity against high frequency feels Emission of conducted and non-conducted interference • Interference emission via line/AC current cables		Yes: PID closed-loop control function: Continuous controller outputs, binary
Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 — Test voltage at all discharge at key version of the static electricity acc. to IEC 61000-4-2 — Test voltage at all discharge at key version of the static electricity acc. to IEC 61000-4-2 Interference immunity against high-frequency electromagnetic fields Interference immunity against high-frequency radiation acc. to IEC 61000-4-3 Interference immunity to a cable-borne interference Interference immunity to n supply lines acc. to IEC 61000-4-4 Interference immunity on supply lines acc. to IEC 61000-4-4 Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-4 Interference immunity against high frequency current feed acc. to IEC 61000-4-4 Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-4 Interference immunity against conducted variable disturbance induced by high-frequency fields Yes; 10 V, 150 kHz to 80 MHz (to IEC 61000-4-6) acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Elimit 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 Emission of conducted and non-conducted interference Interference emission via line/AC current cables Free fall Fear A filter face face acc. to EN 55 011 Yes A for the face face acc. to EN 55 011 Yes A for the face face acc. to EN 55 011 Yes Emission of conducted and non-conducted interference Interference emission via line/AC current cables Yes; 10 V, 150 kHz to 80 MHz (to IEC 61000-4-4) Yes;		
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 air discharge 4 kV Interference immunity against high-frequency electromagnetic fields Interference immunity against high-frequency rediation acc. to IEC 61000-4.3 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 61000-4.4 Interference immunity against high frequency content feed acc. to IEC 61000-4.4 Interference immunity against discharge 8 kV Yes; 2 kV acc. to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.3): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.4): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.4): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.4): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.4): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.4): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.4): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.4): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4.4): 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61	Number of pulse outputs	3
Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 — Test voltage at air discharge 8 kV 4 kV Interference immunity against high-frequency electromagnetic fields 5 kg 10 kg 1000 MHz (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, acc. to IEC 61000-4-3) yagnist high-frequency radiation 5 kg 20 kg	EMC	
electricity acc. to IEC 61000-4-2 — Test voltage at air discharge — Test voltage at contact discharge — Test voltage at contact discharge — Interference immunity against high-frequency radiation acc. to IEC 61000-4-3 — Interference immunity against high-frequency radiation acc. to IEC 61000-4-3 — 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 61000-4-4 — Interference immunity on signal cables acc. to IEC 61000-4-4 — Interference immunity against high frequency current feed acc. to IEC 61000-4-4 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-6 — Interference immunity against high frequency current feed acc. to IEC 61000-4-4 — Interference immunity against high frequency fields — Interference immunity against high frequency fields — Interference immunity against high frequency current feed acc. to IEC 61000-4-4 — Interference immunity against high frequency fields — Interference immunity against hi	Interference immunity against discharge of static electricity	
- Test voltage at air discharge		Yes
Interference immunity against high-frequency electromagnetic fields Interference immunity against high-frequency radiation acc. to IEC 61000-4-3 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 61000-4-4 Interference immunity against high-frequency electromagnetic fields Interference immunity on supply lines acc. to IEC 61000-4-4 Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-6 by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-6 by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-6 by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-6, high-frequency fields Interference immunity against high-frequency current feed acc. to IEC 61000-4-6, high-frequency fields Interference immunity against high-frequency current feed acc. to IEC 61000-4-4, burst Yes; 2 kV acc. to IEC 61000-4-4, burst Yes; 10 V, 150 kHz to 80 MHz (to IEC 61000-4-6) Yes; 2 kV acc. to IEC 61000-4-4, burst Yes; 10 V, 150 kHz to 80 MHz (to IEC 61000-4-6) Emission of conducted and non-conducted interference Interference emission: Intended for use in industrial areas. Emission of conducted and non-conducted interference Interference emission: Intended for use in industrial areas. En 61000-6-4, interference emission: Intended for use in industrial areas. En 61000-6-4, interference emission: Intended for use in industrial areas. Degree and class of protection IP20 Standards, approvals, certificates CE mark Yes Yes Ambient conditions Free fall Fall height, max. 0.3 m; five times, in product package Ambient distribution, min. o °C horizontal installation, min. o °C o °C o °C vertical installation, min. o °C	•	8 kV/
Interference immunity against high-frequency electromagnetic fields Interference immunity against high-frequency radiation act. to IEC 61000-4-3 (50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3)) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-4) (10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-4, burst 4 Ves; 20 V/m, 20		
Interference immunity against high-frequency radiation acc. to IEC 61000-4-3 (50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-3); 10 V/m, 900 MHz, 1.89 GHz, 50% ED (to IEC 61000-4-4, burst 40 MTZ, 50% ED (to IEC 61000-4-4, burst 40 MTZ, 40 MTZ		
acc. to IEC 61000-4-3 50% ED (to IEC 61000-4-3) 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 61000-4-4 Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against tonducted variable disturbance induced by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Limit class A, 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 IP degree of protection Standards, approvals, certificates CE mark Yes Ambient conditions Free fall Fall height, max. O 3 m; five times, in product package Ambient temperature during operation max. o 0 °C max. o 10 °C horizontal installation, min. o 0 °C o vortical installation, min. o 0 °C vortical installation, min. o 0 °C	, , , , , ,	
Interference immunity on supply lines acc. to IEC 61000- 4-4 Interference immunity on signal cables acc. to IEC 61000- 4-4 Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-6 Interference immunity against high frequency current feed acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Limit class A, 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. En 61000-6-4, interference emission: Intended for use in industrial areas. Degree and class of protection IP 20 Standards, approvals, certificates CE mark Yes Ambient conditions Free fall Fall height, max. O 3 m; five times, in product package Ambient temperature during operation o "C max. For C Horizontal installation, min. O "C Horizontal installation, min. O "C Horizontal installation, min. O "C Vertical installation, min. O "C Vertical installation, min.		
Interference immunity on signal cables acc. to IEC 61000-4-4 Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high frequency current feed acc. 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 IP20 Standards, approvals, certificates CE mark Yes Ambient conditions Free fall Field height, max. O.3 m; five times, in product package Ambient temperature during operation min.	Interference immunity to cable-borne interference	
Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Limit class A, 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. End 61000-6-4, interference emission: Intended for use in industrial areas. Degree and class of protection IP degree of protection IP 20 Standards, approvals, certificates CE mark Yes Ambient conditions Free fall Fall height, max. Ambient temperature during operation o "C max. horizontal installation, min. horizontal installation, min. horizontal installation, min. vertical installation, min. o "C vertical installation, min. o "C vertical installation, min. o "C vertical installation, min.		Yes; 2 kV acc. to IEC 61000-4-4, burst
Interference immunity against conducted variable disturbance induced by high-frequency fields Interference immunity against high frequency current feed acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Limit class A, 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. Ensistence and class of protection IP degree of protection IP degree of protection IP20 Standards, approvals, certificates CE mark Ambient conditions Free fall Fall height, max. O.3 m; five times, in product package Ambient temperature during operation min. m		Yes; ±2 kV acc. to IEC 61000-4-4, Burst
Interference immunity against high frequency current feed acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 Limit class A, 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. 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 20 Standards, approvals, certificates CE mark Ambient conditions Free fall Fall height, max. O 3 m; five times, in product package Ambient temperature during operation min. O °C max. horizontal installation, min. o °C horizontal installation, max. standards, approvals, app		ced by high-frequency fields
acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 • Limit class A, 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 IP20 Standards, approvals, certificates CE mark Yes Ambient conditions Free fall • Fall height, max. 0.3 m; five times, in product package Ambient temperature during operation • min. • min. • max. • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, min. • vertical installation, min. • vertical installation, min.	, ,	, , ,
Limit class A, 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. EN 61000-6-4, interference emission: Intended for use in industrial areas. EN 61000-6-4, interference emission: Intended for use in industrial areas. Degree and class of protection IP 20 Standards, approvals, certificates CE mark Yes Ambient conditions Free fall Fall height, max. 0.3 m; five times, in product package Ambient temperature during operation min. min. min. min. o °C horizontal installation, min. horizontal installation, min. horizontal installation, min. vertical installation, min. o °C vertical installation, min.		(0.200.00)
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 Standards, approvals, certificates CE mark Ambient conditions Free fall • Fall height, max. O.3 m; five times, in product package Ambient temperature during operation • min. • max. • horizontal installation, min. • horizontal installation, max. • vertical installation, min. 0 °C • vertical installation, min. 0 °C	Emission of radio interference acc. to EN 55 011	
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 IP20 Standards, approvals, certificates CE mark Ambient conditions Free fall Fall height, max. O.3 m; five times, in product package Ambient temperature during operation min. min. max. for C horizontal installation, min. horizontal installation, max. vertical installation, min. o °C vertical installation, min. o °C o °C	Limit class A, for use in industrial areas	Yes; EN 61000-6-4, interference emission: Intended for use in industrial areas.
Degree and class of protection IP degree of protection Standards, approvals, certificates CE mark Ambient conditions Free fall Free fall Fall height, max. O.3 m; five times, in product package Ambient temperature during operation min. max. max. horizontal installation, min. horizontal installation, max. vertical installation, min. 0 °C 0 °C 0 °C	Emission of conducted and non-conducted interference	
IP degree of protection Standards, approvals, certificates CE mark Ambient conditions Free fall Free fall Fall height, max. O.3 m; five times, in product package Ambient temperature during operation min.	Interference emission via line/AC current cables	EN 61000-6-4, interference emission: Intended for use in industrial areas.
Standards, approvals, certificates CE mark Ambient conditions Free fall Fall height, max. O.3 m; five times, in product package Ambient temperature during operation min. mi	Degree and class of protection	
CE mark Ambient conditions Free fall Fall height, max. O.3 m; five times, in product package Ambient temperature during operation min. min. max. 55 °C horizontal installation, min. horizontal installation, max. vertical installation, min. 0 °C	IP degree of protection	IP20
Free fall Fall height, max. O.3 m; five times, in product package Ambient temperature during operation min. max. brick max. 55 °C horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, min. 0 °C	Standards, approvals, certificates	
Free fall Fall height, max. 0.3 m; five times, in product package Ambient temperature during operation min. o °C max. horizontal installation, min. horizontal installation, max. vertical installation, min. o °C	CE mark	Yes
 Fall height, max. Ambient temperature during operation min. max. 55 °C horizontal installation, min. horizontal installation, max. vertical installation, min. 0 °C 	Ambient conditions	
Ambient temperature during operation o min. o °C max. 55 °C horizontal installation, min. o °C horizontal installation, max. 55 °C vertical installation, min. o °C	Free fall	
 min. max. 55 °C horizontal installation, min. horizontal installation, max. vertical installation, min. 0 °C vertical installation, min. 0 °C 	• Fall height, max.	0.3 m; five times, in product package
 max. horizontal installation, min. horizontal installation, max. vertical installation, min. 0 °C vertical installation, min. 0 °C 	Ambient temperature during operation	
 horizontal installation, min. horizontal installation, max. vertical installation, min. 0 °C vertical installation, min. 0 °C 	• min.	0°C
 horizontal installation, max. vertical installation, min. 0 °C 	• max.	55 °C
• vertical installation, min. 0 °C	 horizontal installation, min. 	0°C
	 horizontal installation, max. 	55 °C
• vertical installation, max. 45 °C	• vertical installation, min.	
	vertical installation, max.	45 °C

-40 °C		
70 °C		
660 hPa		
1 080 hPa		
-1 000 m		
2 000 m		
95 %		
configuration / header		
Yes		
Yes		
Yes		
90 mm		
100 mm		
81 mm		
367.3 g		

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last modified: