

\*\*\* spare part \*\*\* SIMATIC S7-200 SMART, CPU SR60, CPU, AC/DC/relay, onboard I/O: 36 DI 24 V DC; 24 DO relay 2 A; power supply: AC 85-264 V AC at 47-63 Hz, program/data memory 50 KB

General information	
Product type designation	CPU SR60 AC/DC/Relay
Engineering with	
<ul style="list-style-type: none"> <li>Programming package</li> </ul>	STEP 7 Micro/WIN SMART
Installation type/mounting	
Rail mounting	Yes; Standard - DIN rail
Supply voltage	
Rated value (AC)	
<ul style="list-style-type: none"> <li>120 V AC</li> <li>230 V AC</li> </ul>	Yes Yes
permissible range, lower limit (AC)	85 V
permissible range, upper limit (AC)	264 V
Line frequency	
<ul style="list-style-type: none"> <li>permissible range, lower limit</li> <li>permissible range, upper limit</li> </ul>	47 Hz 63 Hz
Input current	
Current consumption (rated value)	220 mA; at 240 V AC
Current consumption, max.	370 mA; At 120 V AC
Inrush current, max.	16.3 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	
Power loss, max.	25 W
Memory	
Type of memory	DDR
Flash	Yes
RAM	Yes
Memory available for user data	20 kbyte
Memory size	30 kbyte; Program memory
Micro Memory Card	Yes; microSDHC Card (optional)
Backup	
<ul style="list-style-type: none"> <li>present</li> </ul>	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	
<ul style="list-style-type: none"> <li>Inputs</li> <li>Outputs</li> </ul>	144 byte; 256 bit of digital inputs & 56 words of analog inputs 144 byte; 256 bit of digital outputs & 56 words of analog outputs
Time of day	
Clock	
<ul style="list-style-type: none"> <li>Type</li> <li>Hardware clock (real-time)</li> <li>Backup time</li> <li>Deviation per day, max.</li> </ul>	Hardware clock, no battery backup Yes 7 d 120 s; within 120s/month at 25 °C
Digital inputs	
Number of digital inputs	36; Integrated
<ul style="list-style-type: none"> <li>of which inputs usable for technological functions</li> </ul>	4; HSC (High Speed Counting)

Source/sink input	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	36
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	5 V DC at 1 mA
• for signal "1"	15 V DC at 2.5 mA
Input current	
• 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	
— 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 technological functions	
— parameterizable	Yes; 6 Single phase: 4 HSCs at 200 kHz; 2 HSCs at 30 kHz 4 A/B phase: 2 HSCs at 100 kHz; 2 HSCs at 20 kHz
Cable length	
• shielded, max.	500 m; 50m shielded for HSC inputs
• unshielded, max.	300 m; for technological functions: No
<b>Digital outputs</b>	
Number of digital outputs	24; 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	24
Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
<b>Interfaces</b>	
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	1
<b>1. Interface</b>	
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 and the quantity of configured user data.
Address area	
— Inputs, max.	128 byte; Per device

— Outputs, max.	128 byte; Per device
<b>2. Interface</b>	
Interface type	RS 485 (max. 187.5 kbps)
Interface types	
• RS 485	Yes
PROFIBUS DP master	
Services	
— S7 communication	Yes
<b>Protocols</b>	
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
<b>communication functions / header</b>	
S7 communication	
• supported	Yes
• as server	Yes
• as client	Yes
<b>Test commissioning functions</b>	
Forcing	
• Forcing	Yes
<b>Integrated Functions</b>	
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
<b>EMC</b>	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity acc. to IEC 61000-4-2	Yes
— Test voltage at air discharge	8 kV
— Test voltage at contact discharge	4 kV
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high-frequency radiation acc. to IEC 61000-4-3	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	
• Interference immunity on supply lines acc. to IEC 61000-4-4	Yes; 2 kV acc. to IEC 61000-4-4, burst
• Interference immunity on signal cables acc. to IEC 61000-4-4	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	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.
<b>Degree and class of protection</b>	
IP degree of protection	IP20
<b>Standards, approvals, certificates</b>	
CE mark	Yes
<b>Ambient conditions</b>	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
• horizontal installation, min.	0 °C
• horizontal installation, max.	55 °C
• vertical installation, min.	0 °C
• vertical installation, max.	45 °C
Ambient temperature during storage/transportation	
• min.	-40 °C

• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
• Storage/transport, min.	660 hPa
• Storage/transport, max.	1 080 hPa
Altitude during operation relating to sea level	
• Installation altitude, min.	-1 000 m
• Installation altitude, max.	2 000 m
Relative humidity	
• Operation at 25 °C without condensation, max.	95 %
<b>configuration / header</b>	
configuration / programming / header	
Programming language	
— LAD	Yes
— FBD	Yes
— STL	Yes
<b>Dimensions</b>	
Width	175 mm
Height	100 mm
Depth	81 mm
<b>Weights</b>	
Weight, approx.	611.5 g

**last modified:** 3/12/2024 