

SIMATIC S7-200 SMART, CPU SR60, CPU, AC/DC/relay, onboard I/O: 36 DI 24 V DC; 24 DO relay 2A; 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	
Type of supply voltage	85V to 264VAC
Rated value (DC)	
<ul style="list-style-type: none"> <li>24 V DC</li> </ul>	No
Rated value (AC)	
<ul style="list-style-type: none"> <li>120 V AC</li> </ul>	Yes
<ul style="list-style-type: none"> <li>230 V AC</li> </ul>	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> </ul>	47 Hz
<ul style="list-style-type: none"> <li>permissible range, upper limit</li> </ul>	63 Hz

Input current	
Current consumption (rated value)	220 mA; at 240 V AC
Current consumption, max.	370 mA; At 120 V DC
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)
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
• Hardware clock (real-time)	Yes
• Backup time	7 d
• Deviation per day, max.	4 s; within 120s/month at 25 °C
Digital inputs	
Number of digital inputs	36
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	< 5 V DC
• for signal "1"	+15 to +30V
Input current	
• for signal "1", typ.	4 mA
Cable length	

- shielded, max. 500 m; 50m shielded for HSC inputs
- unshielded, max. 300 m

## Digital outputs

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

### Relay outputs

- Number of relay outputs 24

### 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

Interface type Ethernet

Physics RJ45

Isolated Yes; Transformer isolated, 1,500V AC

automatic detection of transmission rate Yes; 10/100 Mbit/s

Autonegotiation Yes

Autocrossing Yes

### 2. Interface

Interface type RS 485 (max. 187.5 Mbit/s)

## Communication functions

### S7 communication

- supported Yes
- as server Yes
- as client Yes

## Test commissioning functions

### Forcing

- Forcing Yes

## Integrated Functions

Number of counters 4; 4 HSC at 200 kHz for single phase or 2 HSC at 100 kHz for A/B phase

PID controller Yes; PID closed-loop control function: Continuous controller outputs, binary controller outputs, automatic/manual mode, max. 8 loops

## EMC

Interference immunity against discharge of static electricity

<ul style="list-style-type: none"> <li>• Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 <ul style="list-style-type: none"> <li>— Test voltage at air discharge</li> <li>— Test voltage at contact discharge</li> </ul> </li> </ul>	<p>Yes</p> <p>8 kV</p> <p>4 kV</p>
<b>Interference immunity against high-frequency electromagnetic fields</b>	
<ul style="list-style-type: none"> <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)
<b>Interference immunity to cable-borne interference</b>	
<ul style="list-style-type: none"> <li>• Interference immunity on supply lines acc. to IEC 61000-4-4</li> <li>• Interference immunity on signal cables acc. to IEC 61000-4-4</li> </ul>	<p>Yes; 2 kV acc. to IEC 61000-4-4, burst</p> <p>Yes; ±2 kV acc. to IEC 61000-4-4, Burst</p>
<b>Interference immunity against conducted variable disturbance induced by high-frequency fields</b>	
<ul style="list-style-type: none"> <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)
<b>Emission of radio interference acc. to EN 55 011</b>	
<ul style="list-style-type: none"> <li>• Limit class A, for use in industrial areas</li> </ul>	Yes; EN 61000-6-4, interference emission: Intended for use in industrial areas.
<b>Emission of conducted and non-conducted interference</b>	
<ul style="list-style-type: none"> <li>• Interference emission via line/AC current cables</li> </ul>	EN 61000-6-4, interference emission: Intended for use in industrial areas.
<b>Degree and class of protection</b>	
Degree of protection acc. to EN 60529	
<ul style="list-style-type: none"> <li>• IP20</li> </ul>	Yes
<b>Standards, approvals, certificates</b>	
CE mark	Yes
<b>Ambient conditions</b>	
<b>Free fall</b>	
<ul style="list-style-type: none"> <li>• Fall height, max.</li> </ul>	0.3 m; five times, in product package
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> <li>• horizontal installation, min.</li> <li>• horizontal installation, max.</li> <li>• vertical installation, min.</li> <li>• vertical installation, max.</li> </ul>	<p>0 °C</p> <p>55 °C</p> <p>0 °C</p> <p>55 °C</p> <p>0 °C</p> <p>45 °C</p>
<b>Ambient temperature during storage/transportation</b>	
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>	<p>-40 °C</p> <p>70 °C</p>
<b>Air pressure acc. to IEC 60068-2-13</b>	
<ul style="list-style-type: none"> <li>• Storage/transport, min.</li> <li>• Storage/transport, max.</li> </ul>	<p>660 hPa</p> <p>1 080 hPa</p>

### 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 %

### Configuration

#### Programming

##### Programming language

- LAD Yes
- FBD Yes
- STL Yes

### Dimensions

Width	175 mm
Height	100 mm
Depth	81 mm

### Weights

Weight, approx.	611.5 g
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**last modified:** 07/17/2018