



SIMATIC S7-200 SMART CPU CR60s, COMPACT CPU, AC/DC/RELAY,  
ONBOARD I/O: 36 DI 24V DC; 24DO RELAY 2A; POWER SUPPLY: AC, 85 - 264  
V AC AT 47 - 63 HZ, PROGRAM/DATA MEMORY: 20 KB

General information	
Product type designation	CPU CR60s 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)	230 V; 230 V AC (L1, N)
<ul style="list-style-type: none"> <li>120 V AC</li> <li>230 V AC</li> </ul>	Yes; 85 to 132 V AC Yes; 170 to 264 V AC
permissible range, lower limit (AC)	85 V
permissible range, upper limit (AC)	264 V
Reverse polarity protection	No
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
Load voltage L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> <li>permissible range, lower limit (DC)</li> <li>permissible range, upper limit (DC)</li> </ul>	24 V 5 V 250 V
Input current	
Current consumption (rated value)	100 mA; At 220 V AC
Current consumption, max.	150 mA; At 220 V AC
Inrush current, max.	16.3 A; at 264 V
Power loss	
Power loss, max.	10 W; max.
Memory	
Type of memory	DDR
Flash	Yes
RAM	Yes
Micro Memory Card	No
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
Hardware configuration	
Integrated power supply	No
Time of day	
Clock	
<ul style="list-style-type: none"> <li>Type</li> </ul>	Software clock

• Hardware clock (real-time)	No
<b>Digital inputs</b>	
Number of digital inputs	36; Integrated
• of which inputs usable for technological functions	4; HSC: 4 @ 100 kHz single phase, 2 @ 50 kHz A/B phase
Source/sink input	Yes
<b>Input voltage</b>	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	< 5 V DC
• for signal "1"	+15 to +30 V
<b>Input current</b>	
• for signal "0", max. (permissible quiescent current)	1 mA
• for signal "1", typ.	4 mA
<b>Input delay (for rated value of input voltage)</b>	
for standard inputs	
— parameterizable	Yes; 0.2 $\mu$ s, 0.4 $\mu$ s, 0.8 $\mu$ s, 1.6 $\mu$ s, 3.2 $\mu$ s, 6.4 $\mu$ s and 12.8 $\mu$ s, selectable in 4 groups
— at "0" to "1", min.	0.2 ms
— at "0" to "1", max.	12.8 ms
for interrupt inputs	
— parameterizable	Yes
<b>Cable length</b>	
• shielded, max.	500 m; 50m shielded for HSC inputs
• unshielded, max.	300 m
<b>Digital outputs</b>	
Number of digital outputs	24; Relays
<b>Switching capacity of the outputs</b>	
• with resistive load, max.	2 A
• on lamp load, max.	30 W; 30 W with DC, 200 W with AC
<b>Output delay with resistive load</b>	
• "0" to "1", max.	10 ms; max.
• "1" to "0", max.	10 ms; max.
<b>Switching frequency</b>	
• of the pulse outputs, with resistive load, max.	1 Hz
<b>Relay outputs</b>	
• Number of relay outputs	24
• Number of operating cycles, max.	100 000; mechanically 10 million, at rated load voltage 100 000
<b>Cable length</b>	
• shielded, max.	500 m
• unshielded, max.	150 m
<b>Interfaces</b>	
Number of industrial Ethernet interfaces	0
Number of RS 485 interfaces	1
Optical interface	No
<b>1. Interface</b>	
Interface type	RS 485 (max. 187.5 kbps)
Isolated	Yes; 500 V AC or 707 V DC
<b>Interface types</b>	
• RS 485	Yes
• Design of the connection	9-pin sub D socket
<b>Protocols</b>	
Supports protocol for PROFINET IO	No
PROFIBUS	No
<b>Protocols (Ethernet)</b>	
• TCP/IP	No
<b>EMC</b>	
<b>Interference immunity against discharge of static electricity</b>	
• 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

<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 <ul style="list-style-type: none"> <li>— Frequency range of the RF radiation</li> </ul> </li> </ul>	<p>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)</p> <p>10 V/m for 80 MHz ~ 1 GHz, 3 V/m for 1.4 GHz ~ 2 GHz, 3 V/m for 87 MHz ~ 108 MHz, 174 MHz ~ 230 MHz, 470 MHz ~ 790 MHz, 1.4 GHz ~ 2 GHz, 1 V/m for 2 GHz ~ 2.7 GHz</p>
<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 voltage surge</b>	
<ul style="list-style-type: none"> <li>● Interference immunity on supply lines acc. to IEC 61000-4-5</li> <li>● asymmetric interference <ul style="list-style-type: none"> <li>— Test voltage on supply cables</li> <li>— Test voltage on signal cables &gt;30m</li> </ul> </li> </ul>	<p>Yes; ±1 kV (acc. to IEC 61000-4-5; 1995; surge symm.), ±2 kV (acc. to IEC 61000-4-5; 1995; surge asymm.), no external protective circuit required</p> <p>2 kV</p> <p>2 kV</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>	<p>Yes; 10 V, 150 kHz to 80 MHz (to IEC 61000-4-6)</p>
<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>	<p>Yes; EN 61000-6-4, interference emission: Intended for use in industrial areas.</p>
<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>	<p>EN 61000-6-4, interference emission: Intended for use in industrial areas.</p>
<b>Degree and class of protection</b>	
IP degree of protection	IP20
<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>	<p>0.5 m; five times, in product package</p>
<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>
<b>Altitude during operation relating to sea level</b>	
<ul style="list-style-type: none"> <li>● Installation altitude, min.</li> <li>● Installation altitude, max.</li> </ul>	<p>-1 000 m</p> <p>2 000 m</p>
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>● Operation at 25 °C without condensation, max.</li> </ul>	<p>95 %</p>
<b>configuration / header</b>	
<b>configuration / programming / header</b>	
<b>Programming language</b>	
<ul style="list-style-type: none"> <li>— LAD</li> <li>— FBD</li> <li>— STL</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
<b>Dimensions</b>	
Width	175 mm
Height	100 mm
Depth	81 mm
<b>Weights</b>	
Weight, approx.	605 g; approx.
<b>last modified:</b>	8/23/2023 

