



SIMATIC S7-200 SMART CPU CR30s, COMPACT CPU, AC/DC/RELAY,
ONBOARD I/O: 18 DI 24V DC; 12DO RELAY 2A; POWER SUPPLY: AC, 85 - 264
V AC AT 47 - 63 HZ, PROGRAM/DATA MEMORY: 20 KB

General information	
Product type designation	CPU CR30 AC/DC/relay
Engineering with	
<ul style="list-style-type: none"> Programming package 	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"> 120 V AC 230 V AC 	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"> permissible range, lower limit permissible range, upper limit 	47 Hz 63 Hz
Load voltage L+	
<ul style="list-style-type: none"> Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 	24 V 5 V 250 V
Input current	
Current consumption (rated value)	90 mA; At 220 V AC
Current consumption, max.	90 mA; At 220 V AC
Inrush current, max.	16.3 A; at 264 V
Power loss	
Power loss, max.	7 W
Storage	
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	

• Type	Software clock
• Hardware clock (real-time)	No
Digital inputs	
Number of digital inputs	18; Integrated
• of which inputs usable for technological functions	4; HSC: 4 @ 100 kHz single phase, 2 @ 50 kHz A/B phase
Sourcing/sinking input	Yes
Input voltage	
• Rated value (DC)	24 V
• for signal "0"	< 5 V DC
• for signal "1"	+15 to +30 V
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 µs, 0.4 µs, 0.8 µs, 1.6 µs, 3.2 µs, 6.4 µs and 12.8 µs, selectable in 4 groups
— at "0" to "1", min.	0.2 µs
— at "0" to "1", max.	12.8 µs
for interrupt inputs	
— Parameterizable	Yes
Cable length	
• shielded, max.	500 m; Standard input: 500 m, high-speed counters: 50 m
• unshielded, max.	300 m
Digital outputs	
Number of digital outputs	12; 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	12
• Number of operating cycles, max.	100 000; mechanically 10 million, at rated load voltage 100 000
Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
Interfaces	
Number of industrial Ethernet interfaces	0
Number of RS 485 interfaces	1
Optical interface	No
1. Interface	
Interface type	RS 485 (max. 187.5 kbps)
Isolated	Yes; 500 V AC or 707 V DC
Interface types	
• RS 485	Yes
• Design of the connection	9-pin sub D socket
Protocols	
Supports protocol for PROFINET IO	No
PROFIBUS	No
Protocols (Ethernet)	
• TCP/IP	No
EMC	
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	
<ul style="list-style-type: none"> • 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)
— Frequency range of the RF radiation	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
Interference immunity to cable-borne interference	
<ul style="list-style-type: none"> • Interference immunity on supply lines acc. to IEC 61000-4-4 	Yes; 2 kV acc. to IEC 61000-4-4, burst
<ul style="list-style-type: none"> • Interference immunity on signal cables acc. to IEC 61000-4-4 	Yes; ±2 kV acc. to IEC 61000-4-4, Burst
Interference immunity against voltage surge	
<ul style="list-style-type: none"> • Interference immunity on supply lines acc. to IEC 61000-4-5 	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
<ul style="list-style-type: none"> • asymmetric interference 	
— Test voltage on supply cables	2 kV
— Test voltage on signal cables >30m	2 kV
Interference immunity against conducted variable disturbance induced by high-frequency fields	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • Fall height, max. 	0.5 m; five times, in product package
Ambient temperature during operation	
<ul style="list-style-type: none"> • min. 	0 °C
<ul style="list-style-type: none"> • max. 	55 °C
<ul style="list-style-type: none"> • horizontal installation, min. 	0 °C
<ul style="list-style-type: none"> • horizontal installation, max. 	55 °C
<ul style="list-style-type: none"> • vertical installation, min. 	0 °C
<ul style="list-style-type: none"> • vertical installation, max. 	45 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> • min. 	-40 °C
<ul style="list-style-type: none"> • max. 	70 °C
Air pressure acc. to IEC 60068-2-13	
<ul style="list-style-type: none"> • Storage/transport, min. 	660 hPa
<ul style="list-style-type: none"> • Storage/transport, max. 	1 080 hPa
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude, min. 	-1 000 m
<ul style="list-style-type: none"> • Installation altitude, max. 	2 000 m
Relative humidity	
<ul style="list-style-type: none"> • Operation at 25 °C without condensation, max. 	95 %
Configuration	
Programming	
Programming language	
— LAD	Yes
— FBD	Yes
— STL	Yes
Dimensions	
Width	110 mm
Height	100 mm
Depth	81 mm

Weights

Weight, approx.

424 g; approx.

Classifications

	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	10	EC000236
ETIM	9	EC000236
ETIM	8	EC000236
ETIM	7	EC000236
IDEA	4	3565
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval



[China RoHS](#)

last modified:

8/24/2025