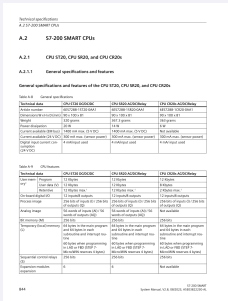


AMIKON TECHNICAL INTELLIGENCE

Product Data Sheet

Siemens 6ES7288-1CR20-0AA1

CPU CR20s Compact Controller



DIGITAL INPUTS	RELAY OUTPUTS	PROGRAM	SERIAL PORT
12	8	12 KB	RS485

Siemens 6ES7288-1CR20-0AA1 is the SIMATIC S7-200 SMART CPU CR20s AC/DC/Relay controller. It combines 12 digital inputs, eight dry-contact relay outputs and one RS485 interface with 12 KB program memory and 8 KB user data memory. The official system manual specifies an 85 to 264 V AC or 77 to 138 V DC supply.

01 VERIFIED PRODUCT PARAMETERS

Supply operating range	85 to 264 V AC or 77 to 138 V DC
AC supply frequency	47 to 63 Hz
Onboard digital inputs	12; sink/source, nominal 24 V DC
Relay outputs	8 dry contacts; up to 2 A per point
Relay switching frequency	1 Hz maximum
Program memory	12 KB
User data memory	8 KB
Retentive memory capacity	2 KB maximum
Serial interface	1 RS485 port; no Ethernet port
RS485 Freeport data rate	1200 to 115200 bit/s

Technical values were verified against Siemens S7-200 SMART V2.8, A5E03822230-AL, 08/2023 and the Siemens Industry Mall record for the exact article number.

02

ADDITIONAL TECHNICAL DATA

High-speed counter capability	4 single-phase counters at 100 kHz or 2 A/B counters at 50 kHz
Expansion capability	No expansion modules or signal boards
Sensor power output	24 V DC nominal; 300 mA maximum
Power dissipation	6 W
Hardware real-time clock	Not available

03

SYSTEM ROLE AND APPLICATIONS

Use this compact serial CPU where the complete control task fits its onboard I/O and memory. CR20s does not support expansion modules, signal boards, Ethernet or pulse-train outputs. Check the load circuits, serial protocol and retained-data requirements before transferring an existing project.

- Execute a timed discrete operating cycle: Implement a defined sequence of states using the documented SCR instructions and timers. Siemens illustrates timed signal changes and transitions between operating states. Map the actual inputs and relay loads, then validate every transition and restart condition in the machine project.
- Register incoming equipment pulses: Use the documented high-speed counters to register suitable sensor pulses without relying only on the normal program scan. Select single-phase or A/B operation within the CR20s frequency limits, verify signal levels and shielding, and test count direction and reset behavior.
- Connect an operator device over RS485: Use a compatible serial HMI connection to exchange the configured operator data with the compact CPU. The manual lists up to four serial HMI connections per port. Match addresses and communication settings and verify that operator commands and displayed values map to the intended project data.

04

OFFICIAL INSTALLATION FACTS

- Isolate the controller supply and all separate relay load circuits using the approved maintenance procedure.
- Mount the CPU using the documented panel or DIN-rail arrangement and maintain the specified installation clearances.
- Use the exact CR20s diagram for supply, functional earth, input common and the two relay commons.
- Do not connect an external supply in parallel with the CPU sensor power output; verify the sensor load budget.

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OFFICIAL DOCUMENTATION

Siemens S7-200 SMART V2.8, A5E03822230-AL, 08/2023

AMIKON PRODUCT SUPPORT

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