

AMIKON TECHNICAL INTELLIGENCE

Product Data Sheet

Siemens 6ES7288-1ST40-0AA0

CPU ST40 DC/DC/DC

[illegible]

INPUTS	OUTPUTS	PULSES	SUPPLY
24	16	3	24 V DC

Siemens 6ES7288-1ST40-0AA0 is the SIMATIC S7-200 SMART CPU ST40 DC/DC/DC. It provides 24 digital inputs and 16 sourcing transistor outputs, with 24 KB of program memory and 16 KB of user data memory. Its 24 V DC supply operates over the documented 20.4 to 28.8 V DC range.

01 VERIFIED PRODUCT PARAMETERS

CPU supply voltage	24 V DC nominal; 20.4 to 28.8 V DC
Integrated digital inputs	24 sinking or sourcing inputs
Integrated digital outputs	16 sourcing MOSFET outputs
Program memory	24 KB
User data memory	16 KB
Retentive memory	10 KB maximum
Local expansion capacity	6 expansion modules and 1 signal board maximum
High-speed counters	6 total; single phase: 4 at 200 kHz and 2 at 30 kHz
Pulse output channels	3 at up to 100 kHz
Communication interfaces	1 Ethernet/PROFINET port and 1 RS485 port

Technical values were verified against Siemens S7-200 SMART V2.5, A5E03822230-A1, 01/2020 and the Siemens Industry Mall record for the exact article number.

02 ADDITIONAL TECHNICAL DATA

PROFINET IO device capacity	8 devices maximum with supported controller firmware
Output current limits	0.5 A per point; 6 A per common
Sensor supply capacity	300 mA maximum at 20.4 to 28.8 V DC
Maximum power dissipation	18 W
Module dimensions	125 x 100 x 81 mm (W x H x D)

03 SYSTEM ROLE AND APPLICATIONS

The V2.5 system manual documents three pulse outputs up to 100 kHz, six high-speed counters, Ethernet and RS485 communications. PROFINET functions depend on the installed firmware and project configuration. Siemens lists the AA0 article as a cancelled spare part with an AA1 successor; verify the required hardware and software before approving a replacement.

- Exchange signals with ET 200SP: The Siemens example uses a V2.5 ST40 and an IM 155-6 PN ST to read distributed inputs and write distributed outputs. Configure the GSDML, device name, IP address and process-image mapping before testing the remote station.
- Transfer process data to an S7-1200: The documented ST40 example sends and reads 20-byte data blocks with an S7-1200 partner. Match the actual V-memory and partner data-block areas, connection permissions and software configuration before using the exchanged values in control logic.
- Command a stepper or servo axis: The system manual describes open-loop speed and position control using pulse outputs. Select a compatible pulse-input drive, configure the motion task and engineer direction, limit and protective functions. The pulse output alone is not a complete safeguarded axis.

04 OFFICIAL INSTALLATION FACTS

- Isolate power to the CPU and all associated input, output and expansion equipment.
- Secure the CPU on the specified rail or panel and preserve the expansion-module order.
- Identify X11 pins18 and19 as the incoming 24 V DC supply and X13 pins10 and11 as sensor supply output.
- Check sourcing-output group wiring, the 0.5 A point limit and 6 A common limit; provide external protection.

05 OFFICIAL DOCUMENTATION

Siemens S7-200 SMART V2.5, A5E03822230-AI, 01/2020

AMIKON PRODUCT SUPPORT

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