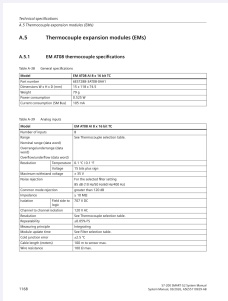


AMIKON TECHNICAL INTELLIGENCE

Product Data Sheet

Siemens 6ES7288-3AT08-0AA1

EM AT08 Thermocouple Input Module



TC INPUTS	TEMPERATURE	BUS CURRENT	POWER
8	0.1 degree	105 mA	0.525 W

Siemens 6ES7288-3AT08-0AA1 is the SIMATIC S7-200 SMART G2 EM AT08 analog expansion module. Eight inputs measure thermocouples or low-level voltage signals. Each channel can use a different supported thermocouple type, with temperature values reported in tenths of the selected degree unit.

01 VERIFIED PRODUCT PARAMETERS

Analog input channels	8
Temperature representation	0.1 degree C / 0.1 degree F
Voltage resolution	15 bits plus sign
Nominal voltage range	-80 to +80 mV
Input impedance	At least 10 MOhm
Maximum withstand voltage	+/-35 V
Noise rejection	85 dB at the selected filter frequency
Common-mode rejection	Greater than 120 dB
Field-to-logic isolation	707 V DC
Channel-to-channel isolation	120 V AC

Technical values were verified against Siemens S7-200 SMART G2, 03/2026, A5E55110929-AB and the Siemens Industry Mall record for the exact article number.

02

ADDITIONAL TECHNICAL DATA

Repeatability	+/-0.05% of full scale
Cold-junction error	+/-2.5 degrees C; specified warm-up applies
Maximum sensor cable	100 m; wire resistance 100 Ohm maximum
Power consumption	0.525 W
SM-bus current	105 mA

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SYSTEM ROLE AND APPLICATIONS

The March 2026 Siemens system manual specifies 0.525 W power consumption and 105 mA SM-bus current for this module. Its integrating measurement method requires the filter, sensor range and cold-junction arrangement to be configured together. Allow for startup calibration and verify valid channel data before enabling the associated control task.

- Measure a high-temperature process point: Acquire a supported high-temperature thermocouple signal with its correct software linearization. For example, the official Type C nominal range is 100 to 2315 degrees C. Check the sensor assembly, cold-junction error and required warm-up when specifying the measurement chain.
- Track a below-zero temperature point: Use an appropriate supported sensor for a subzero measurement task. The Type T nominal range extends from -200 to 400 degrees C. Preserve sensor polarity and interpret under-range and underflow indications separately from valid negative temperature readings.
- Acquire a millivolt measurement signal: Configure voltage mode when the task requires a low-level electrical measurement instead of thermocouple conversion. The nominal range is -80 to +80 mV with full scale represented by decimal 27648. Match signal limits, filtering and program scaling to this mode.

04

OFFICIAL INSTALLATION FACTS

- Isolate power to the CPU, all G2 modules and related equipment before mounting or wiring.
- Mount on the grounded DIN rail with at least 25 mm clearance above, below and in front; observe vertical derating.
- Connect the module bus as instructed and use the exact EM AT08 pin diagram for each thermocouple pair.
- Short unused analog inputs; preserve polarity and select each installed thermocouple type in the project.

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OFFICIAL DOCUMENTATION

Siemens S7-200 SMART G2, 03/2026, A5E55110929-AB

AMIKON PRODUCT SUPPORT

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