Siemens SIMATIC S7-200 CN EM231 Analog Input 6ES7231-0HC22-0XA8

Four-channel differential analog input expansion module with 12-bit conversion and selectable voltage or current ranges.

Technical Data

Complete model	6ES7231-0HC22-0XA8
Product family	SIMATIC S7-200 CN
Product type	EM231 analog input expansion module
Analog inputs	4 differential inputs
Resolution	12-bit A/D conversion
Voltage ranges	0 to 10 V; 0 to 5 V; plus or minus 5 V; plus or minus 2.5 V
Current range	0 to 20 mA
Conversion time	Less than 250 microseconds
Step response	1.5 ms to 95 percent
Input impedance	At least 2 megohms voltage; 250 ohms current
Maximum input	30 V DC or 32 mA
Supply	24 V DC; 20.4 to 28.8 V DC permissible
Power dissipation	2 W
Dimensions	71.2 x 80 x 62 mm, width x height x depth
Weight	183 g

Official Source Trace

S7-200 System Manual

Appendix A pages 412-419: EM231 4-input specifications, wiring, ranges and data format. Appendix H page 513: exact CN cross-reference from 6ES7231-0HC22-0XA8 to 6ES7231-0HC22-0XA0 for wiring and performance specifications.

https://cache.industry.siemens.com/dl/files/582/1109582/att_22063/v1/s7200_system_manual_en-US.pdf

Siemens CE Declaration

Exact model appears on page 3 as EM231 CN I/O Module Analog Input AI 4 x 12 Bits.

https://support.industry.siemens.com/cs/attachments/16896909/S7-200_programmable_controler_2nd_Generation_v1_12_2013_de.pdf

Selection and Verification

Model verification	Match 6ES7231-0HC22-0XA8 and EM231 CN on the label, quotation and packaging.
Range check	Select the exact voltage or 0 to 20 mA range using the Siemens configuration table.
System check	Confirm S7-200 CN expansion capacity, address allocation, power budget and common-mode limits.

All specifications in this extract are limited to the cited Siemens records for the exact model or to the explicit Siemens CN cross-reference stated above. No third-party or similar-suffix data is used.