



SIEMENS

Data sheet

6ES7231-0HC22-0XA0

SIMATIC S7-200, ANALOG INPUT EM 231, FOR S7-22X CPU ONLY, 4 AI, 0 - 10V DC, 12 BIT CONVERTER



| Input current | |
|---|---------------|
| from load voltage L+ (without load), max. | 60 mA |
| from backplane bus 5 V DC, max. | 20 mA |
| Power loss | |
| Power loss, typ. | 2 W |
| Analog inputs | |
| Number of analog inputs | 4; Difference |
| permissible input voltage for voltage input (destruction limit), max. | 30 V |
| permissible input current for current input (destruction limit), max. | 32 mA |
| Input ranges | |
| • Voltage | Yes |
| • Current | Yes |
| • Thermocouple | No |
| • Resistance thermometer | No |
| • Resistance | No |
| Input ranges (rated values), voltages | |



| | |
|---|---|
| • 0 to +5 V | Yes |
| • Input resistance (0 to 5 V) | 10 MΩ |
| • 0 to +10 V | Yes |
| • Input resistance (0 to 10 V) | 10 MΩ |
| • -2.5 V to +2.5 V | Yes |
| • Input resistance (-2.5 V to +2.5 V) | 10 MΩ |
| • -5 V to +5 V | Yes |
| • Input resistance (-5 V to +5 V) | 10 MΩ |
| Input ranges (rated values), currents | |
| • 0 to 20 mA | Yes |
| • Input resistance (0 to 20 mA) | 10 MΩ |
| Thermocouple (TC) | |
| Temperature compensation | |
| — parameterizable | No |
| Cable length | |
| • shielded, max. | 100 m; to the sensor |
| Analog value generation for the inputs | |
| Integration and conversion time/resolution per channel | |
| • Resolution with overrange (bit including sign), max. | 12 bit |
| • Interference voltage suppression for interference frequency f1 in Hz | 40 dB, DC to 60 V for interference frequency 50 / 60 Hz |
| • Conversion time (per channel) | 250 μs |
| Errors/accuracies | |
| Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency | |
| • Common mode voltage, max. | 12 V |
| Interrupts/diagnostics/status information | |
| Diagnostics indication LED | |
| • external fault EXTf (red) | Yes |
| Potential separation | |
| Potential separation analog inputs | |
| • Potential separation analog inputs | No |
| Connection method | |
| Plug-in I/O terminals | No |
| Dimensions | |
| Width | 71.2 mm |
| Height | 80 mm |
| Depth | 62 mm |
| Weights | |
| Weight, approx. | 183 g |



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