

Data sheet

6ES7134-6GB00-0BA1



SIMATIC ET 200SP, Analog input module, AI 2xI 2-/4-wire Standard, Pack quantity: 1 unit, suitable for BU type A0, A1, Color code CC05, Module diagnostics, 16 bit

| General information | |
|---|---|
| Product type designation | AI 2xI 2-/4-wire ST |
| HW functional status | from FS04 |
| Firmware version | |
| • FW update possible | Yes |
| usable BaseUnits | BU type A0, A1 |
| Color code for module-specific color identification plate | CC05 |
| Product function | |
| • I&M data | Yes; I&M0 to I&M3 |
| • Isochronous mode | No |
| • Measuring range scalable | No |
| Engineering with | |
| • STEP 7 TIA Portal configurable/integrated from version | V13 SP1 |
| • STEP 7 configurable/integrated from version | V5.5 SP3 |
| • PROFIBUS from GSD version/GSD revision | One GSD file each, Revision 3 and 5 and higher |
| • PROFINET from GSD version/GSD revision | V2.3 / - |
| Operating mode | |
| • Oversampling | No |
| • MSI | No |
| CiR - Configuration in RUN | |
| Reparameterization possible in RUN | Yes |
| Calibration possible in RUN | No |
| Supply voltage | |
| Rated value (DC) | 24 V |
| permissible range, lower limit (DC) | 19.2 V |
| permissible range, upper limit (DC) | 28.8 V |
| Reverse polarity protection | Yes |
| Input current | |
| Current consumption, max. | 45 mA; without sensor supply |
| Encoder supply | |
| 24 V encoder supply | |
| • 24 V | Yes |
| • Short-circuit protection | Yes |
| • Output current, max. | 50 mA; Total current for both channels (two-wire) |
| Additional 24 V encoder supply | |
| • 24 V | Yes |
| • Short-circuit protection | Yes; Module-wise |
| • Output current, max. | 200 mA; Total current for both channels (four-wire) |
| Power loss | |

| | |
|---|---|
| Power loss, typ. | 1.1 W |
| Address area | |
| Address space per module | |
| • Address space per module, max. | 4 byte; + 1 byte for QI information |
| Hardware configuration | |
| Automatic encoding | |
| • Mechanical coding element | Yes |
| • Type of mechanical coding element | Type A |
| Selection of BaseUnit for connection variants | |
| • 1-wire connection | BU type A0, A1 |
| • 2-wire connection | BU type A0, A1 |
| • 4-wire connection | BU type A0, A1 |
| Analog inputs | |
| Number of analog inputs | |
| • For current measurement | 2 |
| permissible input current for current input (destruction limit), max. | 50 mA |
| Cycle time (all channels), min. | 500 µs |
| Input ranges (rated values), currents | |
| • 0 to 20 mA | Yes; 15 bit |
| — Input resistance (0 to 20 mA) | 130 Ω; 90 ohms with two wires |
| • -20 mA to +20 mA | Yes; 16 bit incl. sign |
| — Input resistance (-20 mA to +20 mA) | 130 Ω |
| • 4 mA to 20 mA | Yes; 15 bit |
| — Input resistance (4 mA to 20 mA) | 130 Ω; 90 ohms with two wires |
| Cable length | |
| • shielded, max. | 1 000 m |
| Analog value generation for the inputs | |
| Measurement principle | Sigma Delta |
| Integration and conversion time/resolution per channel | |
| • Resolution with overrange (bit including sign), max. | 16 bit |
| • Integration time, parameterizable | Yes |
| • Interference voltage suppression for interference frequency f1 in Hz | 16.6 / 50 / 60 Hz / off |
| • Conversion time (per channel) | 50 ms @ 60 Hz, 60 ms @ 50 Hz, 180 ms @ 16.6 Hz, 500 µs without filter |
| Smoothing of measured values | |
| • Number of smoothing levels | 4 |
| • parameterizable | Yes |
| • Step: None | Yes; 1x conversion time |
| • Step: low | Yes; 4x conversion time |
| • Step: Medium | Yes; 8x conversion time |
| • Step: High | Yes; 16x conversion time |
| Encoder | |
| Connection of signal encoders | |
| • for current measurement as 2-wire transducer | Yes |
| — Burden of 2-wire transmitter, max. | 650 Ω |
| • for current measurement as 4-wire transducer | Yes |
| Errors/accuracies | |
| Linearity error (relative to input range), (+/-) | 0.01 % |
| Temperature error (relative to input range), (+/-) | 0.005 %/K |
| Crosstalk between the inputs, min. | -50 dB |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) | 0.05 % |
| Operational error limit in overall temperature range | |
| • Current, relative to input range, (+/-) | 0.5 % |
| Basic error limit (operational limit at 25 °C) | |
| • Current, relative to input range, (+/-) | 0.3 % |
| Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency | |
| • Series mode interference (peak value of interference < rated value of input range), min. | 70 dB |

| | |
|--|--|
| • Common mode voltage, max. | 10 V |
| • Common mode interference, min. | 90 dB |
| Interrupts/diagnostics/status information | |
| Diagnostics function | Yes |
| Alarms | |
| • Diagnostic alarm | Yes |
| • Limit value alarm | No |
| Diagnoses | |
| • Monitoring the supply voltage | Yes |
| • Wire-break | Yes; at 4 to 20 mA |
| • Short-circuit | Yes; Short-circuit of the encoder supply |
| • Group error | Yes |
| • Overflow/underflow | Yes |
| Diagnostics indication LED | |
| • Monitoring of the supply voltage (PWR-LED) | Yes; green PWR LED |
| • Channel status display | Yes; green LED |
| • for channel diagnostics | No |
| • for module diagnostics | Yes; green/red DIAG LED |
| Potential separation | |
| Potential separation channels | |
| • between the channels | No |
| • between the channels and backplane bus | Yes |
| • between the channels and the power supply of the electronics | Yes |
| Permissible potential difference | |
| between the inputs (UCM) | 10 V _{pp} |
| Isolation | |
| Isolation tested with | 707 V DC (type test) |
| Standards, approvals, certificates | |
| Ecological footprint | |
| • environmental product declaration | Yes |
| Global warming potential | |
| — global warming potential, (total) [CO ₂ eq] | 9.32 kg |
| — global warming potential, (during production) [CO ₂ eq] | 4.97 kg |
| — global warming potential, (during operation) [CO ₂ eq] | 4.79 kg |
| — global warming potential, (after end of life cycle) [CO ₂ eq] | -0.449 kg |
| Ambient conditions | |
| Ambient temperature during operation | |
| • horizontal installation, min. | -30 °C; < 0 °C as of FS04 |
| • horizontal installation, max. | 60 °C |
| • vertical installation, min. | -30 °C; < 0 °C as of FS04 |
| • vertical installation, max. | 50 °C |
| Altitude during operation relating to sea level | |
| • Installation altitude above sea level, max. | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual |
| Dimensions | |
| Width | 15 mm |
| Height | 73 mm |
| Depth | 58 mm |
| Weights | |
| Weight, approx. | 32 g |
| Classifications | |

| | Version | Classification |
|--------|---------|----------------|
| eClass | 14 | 27-24-26-01 |
| eClass | 12 | 27-24-26-01 |
| eClass | 9.1 | 27-24-26-01 |
| eClass | 9 | 27-24-26-01 |

| | | |
|--------|-----|-------------|
| eClass | 8 | 27-24-26-01 |
| eClass | 7.1 | 27-24-26-01 |
| eClass | 6 | 27-24-26-01 |
| ETIM | 10 | EC001596 |
| ETIM | 9 | EC001596 |
| ETIM | 8 | EC001596 |
| ETIM | 7 | EC001596 |
| IDEA | 4 | 3562 |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

General Product Approval

[Miscellaneous](#)



[Manufacturer Declaration](#)



[Metrological Approval](#)

General Product Approval

For use in hazardous locations

[KC](#)



[FM](#)

[CCC-Ex](#)



For use in hazardous locations

Maritime application



[Type Examination Certificate](#)

[Miscellaneous](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)



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