SIEMENS

## Data sheet 6ES7144-4PF00-0AB0



Figure similar

SIMATIC DP, Electronics module f. ET200 PRO, 4 AI TC High Feature, TC type B, E, J, K, L, N, R, S,T Voltage +/-80 mV, Channel diagnostics, incl. bus module, Connection module IO 6ES7194-4..00-0AA0 order separately

| | |
|---|---|
| **Supply voltage** | |
| Rated value (DC) | 24 V |
| Reverse polarity protection | Yes; against destruction |
| **Input current** | |
| from supply voltage 1L+, max. | 34 mA; Typical |
| from backplane bus 3.3 V DC, max. | 20 mA; Typical |
| **Power loss** | |
| Power loss, typ. | 0.7 W |
| **Address area** | |
| Address space per module | |
| ● Address space per module, max. | 8 byte |
| **Analog inputs** | |
| Number of analog inputs | 4 |
| permissible input voltage for voltage input (destruction limit), max. | 20 V |
| Cycle time (all channels) max. | Number of active channels per module x basic conversion time |
| Technical unit for temperature measurement adjustable | Yes; °C/°F/K |
| Input ranges (rated values), voltages | |
| ● -80 mV to +80 mV | Yes |
| — Input resistance (-80 mV to +80 mV) | 10 MΩ |
| Input ranges (rated values), thermocouples | |
| ● type B | Yes |
| — Input resistance (Type B) | 10 MΩ |
| ● Type E | Yes |
| — Input resistance (Type E) | 10 MΩ |
| ● Type J | Yes |
| — Input resistance (type J) | 10 MΩ |
| ● Type K | Yes |
| — Input resistance (Type K) | 10 MΩ |
| ● Type L | Yes |
| — Input resistance (Type L) | 10 MΩ |
| ● Type N | Yes |
| — Input resistance (Type N) | 10 MΩ |
| ● Type R | Yes |
| — Input resistance (Type R) | 10 MΩ |
| ● Type S | Yes |
| — Input resistance (Type S) | 10 MΩ |
| ● Type T | Yes |


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| | |
|---|---|
| — Input resistance (Type T) | 10 MΩ |
| Thermocouple (TC) | |
| Temperature compensation | |
| — internal temperature compensation | Yes |
| — external temperature compensation with compensations socket | Yes |
| Cable length | |
| ● shielded, max. | 30 m |
| **Analog value generation for the inputs** | |
| Measurement principle | integrating |
| Integration and conversion time/resolution per channel | |
| ● Resolution with overrange (bit including sign), max. | 15 bit; + sign |
| ● Integration time (ms) | 2,5 / 16,67 / 20 / 100 ms |
| ● Interference voltage suppression for interference frequency f1 in Hz | 10 / 50 / 60 / 400 Hz |
| ● Conversion time (per channel) | 4.7/19/22/102 ms |
| Smoothing of measured values | |
| ● Parameterizable | Yes |
| ● Step: None | Yes; 1x cycle time |
| ● Step: low | Yes; 4x cycle time |
| ● Step: Medium | Yes; 16x cycle time |
| ● Step: High | Yes; 64x cycle time |
| **Encoder** | |
| Connection of signal encoders | |
| ● for voltage measurement | Yes |
| **Errors/accuracies** | |
| Linearity error (relative to input range), (+/-) | 0.01 % |
| Temperature error (relative to input range), (+/-) | 0.0004 %/K; Positive temperature |
| Crosstalk between the inputs, min. | -90 dB; max. |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) | 0.01 % |
| Operational error limit in overall temperature range | |
| ● Voltage, relative to input range, (+/-) | 0.12 %; Positive temperature |
| Basic error limit (operational limit at 25 °C) | |
| ● Voltage, relative to input range, (+/-) | 0.1 % |
| Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency | |
| ● Series mode interference (peak value of interference < rated value of input range), min. | 42 dB |
| ● Common mode interference (USS < 2.5 V), min. | 85 dB; Interference voltage < 10 V |
| **Interrupts/diagnostics/status information** | |
| Diagnostics function | Yes |
| Alarms | |
| ● Diagnostic alarm | Yes; Parameterizable |
| ● Hardware interrupt | No |
| Diagnoses | |
| ● Diagnostic information readable | Yes |
| ● Wire break | Yes |
| ● Overflow/Underflow | Yes |
| Diagnostics indication LED | |
| ● Group error SF (red) | Yes |
| **Parameter** | |
| Comparison point | None/internal/RTD(0)/dyn. ref. temp./fix. ref. temp. |
| **Potential separation** | |
| Potential separation analog inputs | |
| ● between the channels | No |
| ● between the channels and backplane bus | Yes |
| **Permissible potential difference** | |
| between the inputs (UCM) | 20 Vpp AC |
| **Isolation** | |
| Isolation tested with | 707 V DC (type test) |


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| Standards, approvals, certificates | |
|---|---|
| Suitable for applications according to AMS 2750 | Yes; Declaration of Conformity, see online support entry 109757262 |
| Suitable for applications according to CQI-9 | Yes; Based on AMS 2750 E |
| **Dimensions** | |
| Width | 45 mm |
| Height | 130 mm |
| Depth | 35 mm |
| **Weights** | |
| Weight, approx. | 150 g |

**Classifications**

| | Version | Classification |
|---|---|---|
| eClass | 16 | 27-24-26-01 |
| 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 | other |
|---|---|

Confirmation Confirmation Confirmation

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