



SIMATIC DP, Electronics module f. ET200S, 2AI TC High Feature, 15 mm width, 15 bit+sign with internal temperature Compensation

| Supply voltage | |
|---|--|
| Load voltage L+ | |
| <ul style="list-style-type: none"> Rated value (DC) | 24 V; From power module |
| <ul style="list-style-type: none"> Reverse polarity protection | Yes |
| Input current | |
| from load voltage L+ (without load), max. | 30 mA |
| from backplane bus 3.3 V DC, max. | 10 mA |
| Power loss | |
| Power loss, typ. | 0.6 W |
| Address area | |
| Address space per module | |
| <ul style="list-style-type: none"> Address space per module, max. | 4 byte |
| Analog inputs | |
| Number of analog inputs | 2 |
| permissible input voltage for voltage input (destruction limit), max. | 20 V; ± 20 V, continuous |
| Cycle time (all channels) max. | Number of active channels per module x basic conversion time |
| Technical unit for temperature measurement adjustable | Yes; Celsius / Fahrenheit |
| Input ranges (rated values), voltages | |
| <ul style="list-style-type: none"> -80 mV to +80 mV | Yes |
| <ul style="list-style-type: none"> — Input resistance (-80 mV to +80 mV) | 1 M Ω |
| Input ranges (rated values), thermocouples | |
| <ul style="list-style-type: none"> Type B | Yes |
| <ul style="list-style-type: none"> — Input resistance (Type B) | 1 M Ω |
| <ul style="list-style-type: none"> Type C | Yes |
| <ul style="list-style-type: none"> — Input resistance (Type C) | 1 M Ω |
| <ul style="list-style-type: none"> Type E | Yes |
| <ul style="list-style-type: none"> — Input resistance (Type E) | 1 M Ω |
| <ul style="list-style-type: none"> Type J | Yes |
| <ul style="list-style-type: none"> — Input resistance (type J) | 1 M Ω |
| <ul style="list-style-type: none"> Type K | Yes |
| <ul style="list-style-type: none"> — Input resistance (Type K) | 1 M Ω |
| <ul style="list-style-type: none"> Type L | Yes |
| <ul style="list-style-type: none"> — Input resistance (Type L) | 1 M Ω |
| <ul style="list-style-type: none"> Type N | Yes |
| <ul style="list-style-type: none"> — Input resistance (Type N) | 1 M Ω |
| <ul style="list-style-type: none"> Type R | Yes |

| | |
|---|--|
| — Input resistance (Type R) | 1 MΩ |
| • Type S | Yes |
| — Input resistance (Type S) | 1 MΩ |
| • Type T | Yes |
| — Input resistance (Type T) | 1 MΩ |
| Thermocouple (TC) | |
| Temperature compensation | |
| — internal temperature compensation | Yes; possible with TM-E15S24-AT, TM-E15C24-AT |
| — external temperature compensation with compensations socket | Yes; one external compensating box per channel |
| Characteristic linearization | |
| • parameterizable | Yes |
| — for thermocouples | Type B, C, E, J, K, L, N, R, S, T to IEC 584 |
| Cable length | |
| • shielded, max. | 50 m |
| Analog value generation for the inputs | |
| Measurement principle | integrating |
| Integration and conversion time/resolution per channel | |
| • Resolution with overrange (bit including sign), max. | 16 bit |
| • Conversion time (per channel) | 66 ms; 66 / 80 ms; additional conversion time for diagnostic wire break test |
| Smoothing of measured values | |
| • parameterizable | Yes; In four stages by means of digital filtering |
| • Step: None | Yes; 1x cycle time |
| • Step: low | Yes; 4x cycle time |
| • Step: Medium | Yes; 32x cycle time |
| • Step: High | Yes; 64x cycle time |
| Errors/accuracies | |
| Operational error limit in overall temperature range | |
| • Voltage, relative to input range, (+/-) | 0.1 %; ±1.5 K for thermocouples, ±7 K for thermocouples type C, ±2.5 K with static thermal state (ambient temperature change < 0.3 K/min) |
| Basic error limit (operational limit at 25 °C) | |
| • Voltage, relative to input range, (+/-) | 0.05 %; ±1 K with thermocouples, ±5 K with thermocouples type C, ±1.5 K with static thermal state (ambient temperature change < 0.3 K/min) |
| Interrupts/diagnostics/status information | |
| Diagnoses | |
| • Wire-break | Yes; only thermocouples |
| • Group error | Yes |
| • Overflow/underflow | Yes |
| Diagnostics indication LED | |
| • Group error SF (red) | Yes |
| Parameter | |
| Remark | 4 byte |
| Diagnostics wire break | Disable / enable (wire break is detected only in thermocouples) |
| Group diagnostics | Disable / enable |
| Overflow/underflow | Disable / enable |
| Comparison point | none / yes, internal |
| Potential separation | |
| Potential separation analog inputs | |
| • between the channels | No |
| • between the channels and backplane bus | Yes |
| • Between the channels and load voltage L+ | Yes |
| Isolation | |
| Isolation tested with | 500 V DC |
| Dimensions | |
| Width | 15 mm |
| Height | 81 mm |
| Depth | 52 mm |

Weights

Weight, approx.

40 g

last modified:

3/2/2021 