

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+ | |
| • Rated value (DC) | 24 V; From power module |
| • 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 | |
| • 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 |

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| Technical unit for temperature measurement adjustable | Yes; Celsius / Fahrenheit |
| Input ranges (rated values), voltages | |
| • -80 mV to +80 mV | Yes |
| — Input resistance (-80 mV to +80 mV) | 1 MΩ |
| Input ranges (rated values), thermocouples | |
| • Type B | Yes |
| — Input resistance (Type B) | 1 MΩ |
| • Type C | Yes |
| — Input resistance (Type C) | 1 MΩ |
| • Type E | Yes |
| — Input resistance (Type E) | 1 MΩ |
| • Type J | Yes |
| — Input resistance (type J) | 1 MΩ |
| • Type K | Yes |
| — Input resistance (Type K) | 1 MΩ |
| • Type L | Yes |
| — Input resistance (Type L) | 1 MΩ |
| • Type N | Yes |
| — Input resistance (Type N) | 1 MΩ |
| • 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 |
| Cable length | |
| • shielded, max. | 50 m |
| Analog value generation for the inputs | |
| Integration and conversion time/resolution per channel | |
| • Resolution with overrange (bit including sign), max. | 16 bit |
| • Integration time (ms) | 16,7 / 20 ms |
| • Interference voltage suppression for interference frequency f1 in Hz | 50 / 60 Hz |

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| • Conversion time (per channel) | 66 ms; 66 / 80 ms; additional conversion time for diagnostic wire break test |
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Errors/accuracies

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| 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

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|----------------------------|-------------------------|
| Diagnostic messages | |
| • Wire-break | Yes; only thermocouples |
| • Group error | Yes |
| • Overflow/underflow | Yes |
| Diagnostics indication LED | |
| • Group error SF (red) | Yes |

Parameter

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|------------------------|--|
| Remark | 4 byte |
| Diagnostics wire break | Disable / enable (wire break is detected only in thermocouples) |
| Measurement type/range | Deactivated/ ± 80 mV/ TC-EL Type T (Cu-CuNi)/ TC-EL Type K (NiCr-Ni)/ TC-EL Type B (PtRh-PtRh)/ TC-EL Type c (Wer-Wer) TC-EL Type N (NiCrSi-NiSi)/ TC-EL Type E (NiCr-CuNi)/ TC-EL Type R (PtRh-Pt)/ TC-EL Type S (PtRh-Pt)/ TC-EL Type J (Fe-Cu-Ni)/ TC |
| Group diagnostics | Disable / enable |
| Overflow/underflow | Disable / enable |
| Comparison point | none / yes, internal |

Potential separation

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| Potential separation analog inputs | |
| • between the channels | No |
| • between the channels and backplane bus | Yes |
| • Between the channels and load voltage L+ | Yes |

Isolation

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| Isolation tested with | 500 V DC |
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Dimensions

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| Width | 15 mm |
| Height | 81 mm |
| Depth | 52 mm |

Weights

Weight, approx.

40 g

last modified:

05/13/2020