



*** Spare part *** 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
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 M Ω
Input ranges (rated values), thermocouples	
• Type B	Yes
— Input resistance (Type B)	1 M Ω
• Type C	Yes
— Input resistance (Type C)	1 M Ω
• Type E	Yes
— Input resistance (Type E)	1 M Ω
• Type J	Yes
— Input resistance (type J)	1 M Ω
• Type K	Yes
— Input resistance (Type K)	1 M Ω
• Type L	Yes
— Input resistance (Type L)	1 M Ω
• Type N	Yes
— Input resistance (Type N)	1 M Ω
• Type R	Yes
— Input resistance (Type R)	1 M Ω
• Type S	Yes
— Input resistance (Type S)	1 M Ω

• Type T — Input resistance (Type T)	Yes 1 MΩ		
Thermocouple (TC)			
Temperature compensation			
— internal temperature compensation — external temperature compensation with compensations socket	Yes; possible with TM-E15S24-AT, TM-E15C24-AT Yes; one external compensating box per channel		
Characteristic linearization			
• parameterizable — for thermocouples	Yes 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. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz • Conversion time (per channel)	16 bit 16,7 / 20 ms 50 / 60 Hz 66 ms; 66 / 80 ms; additional conversion time for diagnostic wire break test		
Smoothing of measured values			
• parameterizable • Step: None • Step: low • Step: Medium • Step: High	Yes; In four stages by means of digital filtering Yes; 1x cycle time Yes; 4x cycle time Yes; 32x cycle time 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 • Group error • Overflow/underflow	Yes; only thermocouples Yes 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 • between the channels and backplane bus • Between the channels and load voltage L+	No Yes Yes		
Isolation			
Isolation tested with	500 V DC		
Dimensions			
Width	15 mm		
Height	81 mm		
Depth	52 mm		
Weights			
Weight, approx.	40 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	9	EC001596
ETIM	8	EC001596
ETIM	7	EC001596
IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

[Manufacturer Declaration](#)




[Metrological Approval](#)


EMV For use in hazardous locations




[FM](#)



[Miscellaneous](#)

For use in hazardous locations Marine / Shipping




[CCC-Ex](#)




Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



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

last modified: 5/22/2024 