

SIMATIC DP, ELECTRONIC MODULES FOR ET200PRO 4 AI RTD HIGH FEATURE, PT100; PT200; PT500; PT1000; NI100; NI200; NI500; NI1000; CHANNEL DIANOSTICS; INCLUSIVE BUS MODULE, CONNECTING MODULE IO 6ES7194-4..00-0AA0 MUST BE ORDERED SEPERATELY



Figure similar

Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes; against destruction
Input current	
from supply voltage 1L+, max.	27 mA; Typical
from backplane bus 3.3 V DC, max.	10 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
Cycle time (all channels) max.	83 ms; 83 ms at 50 Hz; 69 ms at 60 Hz
Technical unit for temperature measurement adjustable	Yes; Degrees Celsius/degrees Fahrenheit

Input ranges	
• Voltage	No
• Current	No
• Thermocouple	No
• Resistance thermometer	Yes
• Resistance	Yes
Input ranges (rated values), resistance thermometer	
• Cu 10	No
• Ni 100	Yes
• Input resistance (Ni 100)	10 000 kΩ
• Ni 1000	Yes
• Input resistance (Ni 1000)	10 000 kΩ
• Ni 120	Yes
• Input resistance (Ni 120)	10 000 kΩ
• Ni 200	Yes
• Input resistance (Ni 200)	10 000 kΩ
• Ni 500	Yes
• Input resistance (Ni 500)	10 000 kΩ
• Pt 100	Yes
• Input resistance (Pt 100)	10 000 kΩ
• Pt 1000	Yes
• Input resistance (Pt 1000)	10 000 kΩ
• Pt 200	Yes
• Input resistance (Pt 200)	10 000 kΩ
• Pt 500	Yes
• Input resistance (Pt 500)	10 000 kΩ
Input ranges (rated values), resistors	
• 0 to 150 ohms	Yes
• Input resistance (0 to 150 ohms)	10 000 kΩ
• 0 to 300 ohms	Yes
• Input resistance (0 to 300 ohms)	10 000 kΩ
• 0 to 600 ohms	Yes
• Input resistance (0 to 600 ohms)	10 000 kΩ
• 0 to 3000 ohms	Yes
• Input resistance (0 to 3000 ohms)	10 000 kΩ
Characteristic linearization	
• parameterizable	Yes
— for resistance thermometer	Ptxxx, Nixxx
Cable length	
• shielded, max.	30 m
Analog value generation for the inputs	

Measurement principle	integrating
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> Resolution with overrange (bit including sign), max. Integration time (ms) Interference voltage suppression for interference frequency f1 in Hz Conversion time (per channel) 	15 bit; at 150, 300, 600 und 3000 ohms; otherwise 15 bits + sign 20 / 16,667 50 / 60 Hz 20.625 ms; 20.625 ms at 50 Hz; 17.25 ms at 60 Hz
Smoothing of measured values	
<ul style="list-style-type: none"> parameterizable Step: None Step: low Step: Medium Step: High 	Yes Yes; 1 x cycle time Yes; 4 x cycle time Yes; 16 x cycle time Yes; 64 x cycle time
Encoder	
Connection of signal encoders	
<ul style="list-style-type: none"> for resistance measurement with two-wire connection for resistance measurement with three-wire connection for resistance measurement with four-wire connection 	Yes; Line resistances are also measured Yes Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.05 %
Temperature error (relative to input range), (+/-)	0.002 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.015 %
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> Resistance thermometer, relative to input range, (+/-) 	0.175 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> Resistance thermometer, relative to input range, (+/-) 	0.125 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, $f1 =$ interference frequency	
<ul style="list-style-type: none"> Series mode interference (peak value of interference < rated value of input range), min. Common mode interference (USS < 2.5 V), min. 	50 dB 70 dB; Interference voltage < 5 V
Interrupts/diagnostics/status information	
Diagnostic functions	Yes
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm 	Yes; Parameterizable

• Hardware interrupt	No
Diagnostic messages	
• Diagnostic information readable	Yes
• Wire-break	Yes
• Overflow/underflow	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
Parameter	
Diagnosics wire break	Yes
Measurement type/range	R4L / R3L / R2L/ TR4L / TR3L / TR2L
Potential separation	
Potential separation analog inputs	
• between the channels	No
• between the channels and backplane bus	Yes
Permissible potential difference	
between the inputs (UCM)	5 Vpp AC
Isolation	
Isolation tested with	707 V DC (type test)
Dimensions	
Width	45 mm
Height	130 mm
Depth	35 mm
Weights	
Weight, approx.	150 g
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