



Figure similar

SIMATIC DP, Electronic modules for ET 200 PRO 4 AI RTD High Feature, Pt100; PT200; PT500; Pt1000; NI100; NI200; NI500; NI1000; 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.	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
Constant measurement current for resistance-type transmitter, typ.	1.25 mA; 1.25 / 0.5 mA depending on measuring range
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 (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	

<ul style="list-style-type: none"> • 0 to 150 ohms <ul style="list-style-type: none"> — Input resistance (0 to 150 ohms) 	Yes 10 000 kΩ
<ul style="list-style-type: none"> • 0 to 300 ohms <ul style="list-style-type: none"> — Input resistance (0 to 300 ohms) 	Yes 10 000 kΩ
<ul style="list-style-type: none"> • 0 to 600 ohms <ul style="list-style-type: none"> — Input resistance (0 to 600 ohms) 	Yes 10 000 kΩ
<ul style="list-style-type: none"> • 0 to 3000 ohms <ul style="list-style-type: none"> — Input resistance (0 to 3000 ohms) 	Yes 10 000 kΩ
<ul style="list-style-type: none"> • PTC <ul style="list-style-type: none"> — Input resistance (PTC) 	Yes 10 000 kΩ
Characteristic linearization	
<ul style="list-style-type: none"> • Parameterizable <ul style="list-style-type: none"> — for resistance thermometer 	Yes Ptxxx, Nixxx
Cable length	
<ul style="list-style-type: none"> • 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. 	15 bit; at 150, 300, 600 und 3 000 ohms; otherwise 15 bits + sign
<ul style="list-style-type: none"> • Integration time (ms) 	20 / 16,667
<ul style="list-style-type: none"> • Interference voltage suppression for interference frequency f_1 in Hz 	50 / 60 Hz
<ul style="list-style-type: none"> • Conversion time (per channel) 	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 	Yes
<ul style="list-style-type: none"> • Step: None 	Yes; 1x cycle time
<ul style="list-style-type: none"> • Step: low 	Yes; 4x cycle time
<ul style="list-style-type: none"> • Step: Medium 	Yes; 16x cycle time
<ul style="list-style-type: none"> • Step: High 	Yes; 64x cycle time
Encoder	
Connection of signal encoders	
<ul style="list-style-type: none"> • for resistance measurement with two-wire connection 	Yes; Line resistances are also measured
<ul style="list-style-type: none"> • for resistance measurement with three-wire connection 	Yes
<ul style="list-style-type: none"> • for resistance measurement with four-wire connection 	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 $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency	
<ul style="list-style-type: none"> • Series mode interference (peak value of interference < rated value of input range), min. 	50 dB
<ul style="list-style-type: none"> • Common mode interference (USS < 2.5 V), min. 	70 dB; Interference voltage < 5 V
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes; Parameterizable
<ul style="list-style-type: none"> • Hardware interrupt 	No
Diagnoses	
<ul style="list-style-type: none"> • Diagnostic information readable 	Yes
<ul style="list-style-type: none"> • Wire break 	Yes
<ul style="list-style-type: none"> • Overflow/Underflow 	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • Group error SF (red) 	Yes

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
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	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

[Miscellaneous](#)

[Manufacturer Declaration](#)



[Metrological Approval](#)

General Product Approval



[China RoHS](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application

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

[KR \(Korean Register of Shipping\)](#)

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