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Data sheet 6ES7144-4JF00-0AB0



Figure similar

SIMATIC DP, electronic modules for ET 200pro 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 to be ordered 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	

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● 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
● PTC	Yes
— Input resistance (PTC)	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	
● Resolution with overrange (bit including sign), max.	15 bit; at 150, 300, 600 und 3 000 ohms; otherwise 15 bits + sign
● Integration time (ms)	20 / 16,667
● Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
● Conversion time (per channel)	20.625 ms; 20.625 ms at 50 Hz; 17.25 ms at 60 Hz
Smoothing of measured values	
● parameterizable	Yes
● Step: None	Yes; 1x cycle time
● Step: low	Yes; 4x cycle time
● Step: Medium	Yes; 16x cycle time
● Step: High	Yes; 64x cycle time
Encoder	
Connection of signal encoders	
● for resistance measurement with two-wire connection	Yes; Line resistances are also measured
● for resistance measurement with three-wire connection	Yes
● 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	
● Resistance thermometer, relative to input range, (+/-)	0.175 %
Basic error limit (operational limit at 25 °C)	
● Resistance thermometer, relative to input range, (+/-)	0.125 %
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference frequency	
● Series mode interference (peak value of interference < rated value of input range), min.	50 dB
● Common mode interference (USS < 2.5 V), min.	70 dB; Interference voltage < 5 V
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes; Parameterizable
● Hardware interrupt	No
Diagnoses	
● Diagnostic information readable	Yes
● Wire break	Yes
● Overflow/Underflow	Yes
Diagnostics indication LED	
● Group error SF (red)	Yes

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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	16	27-24-26-01
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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