SIEMENS

Data sheet 6ES7144-4PF00-0AB0

Figure similar

SIMATIC DP, Electronics module f. ET200 PRO, 4 AI TC High Feature, TC type B, E, J, K, L, N, R, S,T Voltage +/-80 mV, 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.	34 mA; Typical
from backplane bus 3.3 V DC, max.	20 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
permissible input voltage for voltage input (destruction limit), max.	20 V
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
Technical unit for temperature measurement adjustable	Yes; °C/°F/K
Input ranges (rated values), voltages	
● -80 mV to +80 mV	Yes
— Input resistance (-80 mV to +80 mV)	10 MΩ
Input ranges (rated values), thermocouples	
● Type B	Yes
— Input resistance (Type B)	10 MΩ
● Type E	Yes
— Input resistance (Type E)	10 MΩ
● Type J	Yes
— Input resistance (type J)	10 MΩ
● Type K	Yes
— Input resistance (Type K)	10 MΩ
● Type L	Yes
— Input resistance (Type L)	10 MΩ
● Type N	Yes
— Input resistance (Type N)	10 MΩ
● Type R	Yes
— Input resistance (Type R)	10 MΩ
● Type S	Yes
— Input resistance (Type S)	10 MΩ
● Type T	Yes

— Input resistance (Type T)	10 MΩ
Thermocouple (TC)	
Temperature compensation	
— internal temperature compensation	Yes
— external temperature compensation with compensations socket	Yes
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; + sign
● Integration time (ms)	2,5 / 16,67 / 20 / 100 ms
● Interference voltage suppression for interference frequency f1 in Hz	10 / 50 / 60 / 400 Hz
● Conversion time (per channel)	4.7/19/22/102 ms
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 voltage measurement	Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.0004 %/K; Positive temperature
Crosstalk between the inputs, min.	-90 dB; max.
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.01 %
Operational error limit in overall temperature range	
● Voltage, relative to input range, (+/-)	0.12 %; Positive temperature
Basic error limit (operational limit at 25 °C)	
● Voltage, relative to input range, (+/-)	0.1 %
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.	42 dB
● Common mode interference (USS < 2.5 V), min.	85 dB; Interference voltage < 10 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
Parameter	
Comparison point	None/internal/RTD(0)/dyn. ref. temp./fix. ref. temp.
Potential separation	
Potential separation analog inputs	
● between the channels	No
● between the channels and backplane bus	Yes
Permissible potential difference	
between the inputs (UCM)	20 Vpp AC
Isolation	
Isolation tested with	707 V DC (type test)

Standards, approvals, certificates	
Suitable for applications according to AMS 2750	Yes; Declaration of Conformity, see online support entry 109757262
Suitable for applications according to CQI-9	Yes; Based on AMS 2750 E
Dimensions	
Width	45 mm
Height	130 mm
Depth	35 mm
Weights	
Weight, approx.	150 g

last modified: 3/2/2021