



SIMATIC DP,
ELEKTRONIC MODULE FOR ET200PRO,
4 AI TC HIGH FEATURE, TC TYP B, E, J,
K, L, N, R,
S,T VOLTAGE +/- 80MV CHANNEL DIANOSTICS;
INCL. BUS MODULE,
CONNECTING MODULE IO 6ES7194-4..00-0AA0 MUST BE
ORDERED SEPERATELY

Supply voltage	
Load voltage L+	
Rated value (DC)	24 V
Reverse polarity protection	Yes ; against destruction
Input current	
from load voltage L+ (without load), max.	34 mA ; Typical
from backplane bus 3.3 V DC, max.	20 mA ; Typical
Power losses	
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
Input ranges	
Voltage	Yes

Current	No
Thermocouple	Yes
Resistance thermometer	No
Resistance	No
Input ranges (rated values), voltages	
-80 mV to +80 mV	Yes
Input resistance (-80 mV to +80 mV)	10 MΩ
Input ranges (rated values), thermoelements	
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	
Cable length, shielded, max.	30 m
Analog value creation	
Measurement principle	integrating
Integrations 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 ; 1 x cycle time
Step: low	Yes ; 4 x cycle time
Step: Medium	Yes ; 16 x cycle time
Step: High	Yes ; 64 x cycle time
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 area), (+/-)	0.01 %
Operational limit in overall temperature range	
Voltage, relative to input area, (+/-)	0.12 % ; Positive temperature
Basic error limit (operational limit at 25 °C)	
Voltage, relative to input area, (+/-)	0.1 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency	
Series mode interference (peak value of interference < rated value of input range), min.	42 dB
common mode voltage (USS < 2.5 V) , min.	85 dB ; Interference voltage < 10 V
Interrupts/diagnostics/status information	
Diagnostic messages	
Wire break	No
Group error	Yes
Overflow/underflow	Yes
Diagnostics indication LED	
Group error SF (red)	Yes
Parameter	
Measurement type/range	Deactivated/ +/- 80 mV/ TC-EL Type T (Cu-CuNi)/ TC-EL Type K (NiCr-Ni)/ TC-EL Type B (PtRh-PtRh)/ TC-EL Type N (NiCrSi-NiSi)/ TC-EL Typ E (NiCr-CuNi)/ TC-EL Type R (PtRh-Pt)/ TC-EL Type S (PtRh-Pt)/ TC-EL Type J (Fe-Cu-Ni)/ TC-EL Type L (Fe-CuNi)
Interference frequency suppression	10 / 50 / 60 / 400 Hz
Group diagnostics	Yes
Overflow/underflow	Yes
Comparison point	None/internal/RTD(0)/dyn. ref. temp./fix. ref. temp.
Unit	°C/°F/K

Galvanic isolation	
Galvanic isolation analog inputs	
between the channels	No
between the channels and the backplane bus	Yes
between the channels and the load voltage L+	Yes
Permissible potential difference	
between the inputs (UCM)	20 Vpp AC
Isolation	
Isolation checked with	500 V DC
Dimensions	
Width	45 mm
Height	130 mm
Depth	35 mm
Weights	
Weight, approx.	150 g
Status	Jun 16, 2014