SIEMENS

Data sheet 6ES7144-4GF01-0AB0

SIMATIC DP, ELECTRONIC MODULE FOR ET200PRO 4 AI I HIGH FEATURE, +-20MA; 0...20MA; 4-20MA CHANNEL DIAGNOSTICS; INCLUSIVE BUS MODULE CONNECTING MODULE IO 6ES7194-4..00-0AA0 MUST BE ORDERED SEPERATELY

Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes; against destruction
Input current	
from supply voltage 1L+, max.	40 mA; Typical
from backplane bus 3.3 V DC, max.	12 mA; Typical
Encoder supply	
Number of outputs	4
Short-circuit protection	Yes; per module, electronic to frame
Output current	
• up to 55 °C, max.	1 A
Power loss	
Power loss, typ.	1.1 W
Address area	
Address space per module	
• Address space per module, max.	8 byte
Analog inputs	

Number of analog inputs	4
permissible input current for current input (destruction limit), max.	40 mA
Cycle time (all channels) max.	10 ms
Input ranges	
• Voltage	No
• Current	Yes
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
• -20 mA to +20 mA	Yes
• 4 mA to 20 mA	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; 15 bits + sign at ±10 V, at ±5 V; 15 bits at 0 V to 10 V, at 1 V to 5 V
• Integration time (ms)	0,3 / 16,7 / 20 / 60
• Interference voltage suppression for interference frequency f1 in Hz	16,67 / 50 / 60 / 3 600
• Conversion time (per channel)	1.1 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), (+/-)	0.0075 %
Temperature error (relative to input range), (+/-)	0.00075 %/K
Crosstalk between the inputs, min.	-70 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.004 %
Operational error limit in overall temperature range	
• Current, relative to input range, (+/-)	0.1 %
Basic error limit (operational limit at 25 °C)	
• Current, relative to input range, (+/-)	0.075 %
Interference voltage suppression for f = n x (f1 +/- 0.5 %), f1 = interference frequency	

• Series mode interference (peak value of interference < rated value of input range), min.	60 dB
• Common mode interference (USS < 2.5 V) , min.	80 dB; Interference voltage < 5 V
Interrupts/diagnostics/status information	
Diagnostic functions	Yes
Alarms	
• Diagnostic alarm	Yes; Parameterizable
• Hardware interrupt	Yes; (limit value alarm), can be parameterized for channel 0
Diagnostic messages	
• Diagnostic information readable	Yes
• Wire-break	Yes; at 4 to 20 mA
• Short-circuit	Yes; at 4 to 20 mA
Diagnostics indication LED	
• 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 and MANA (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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