

SIMATIC DP, Electronic module for ET 200 PRO 4 AI U High Feature, +-10 V; 0...10 V; +-5 V; 1...5V; 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.	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	
<ul style="list-style-type: none"> <li>up to 55 °C, max.</li> </ul>	1 A
Power loss	
Power loss, typ.	1.1 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	8 byte
Analog inputs	

Number of analog inputs	4
permissible input voltage for voltage input (destruction limit), max.	35 V
Cycle time (all channels) max.	5 ms
<b>Input ranges (rated values), voltages</b>	
• 0 to +10 V	Yes
• 1 V to 5 V	Yes
• -10 V to +10 V	Yes
• -5 V to +5 V	Yes
<b>Cable length</b>	
• shielded, max.	30 m

### Analog value generation for the inputs

Measurement principle	integrating
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	15 bit; 15 bit + sign at $\pm 10$ V, at $\pm 5$ V; 15 bit 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 $f_1$ in Hz	16,67 / 50 / 60 / 3 600
• Conversion time (per channel)	1.1 ms
<b>Smoothing of measured values</b>	
• 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

<b>Connection of signal encoders</b>	
• for voltage measurement	Yes

### 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 %
<b>Operational error limit in overall temperature range</b>	
• Voltage, relative to input range, (+/-)	0.1 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• Voltage, relative to input range, (+/-)	0.075 %
<b>Interference voltage suppression for <math>f = n \times (f_1 \pm 0.5 \%)</math>, <math>f_1</math> = interference frequency</b>	
• 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 < 10 V

### Interrupts/diagnostics/status information

Diagnostics function 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 1 to 5 V
- Short-circuit Yes; at 1 to 5 V

#### 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

### Isolation

Isolation tested with 707 V DC (type test)

### Dimensions

Width 45 mm  
 Height 130 mm  
 Depth 35 mm

### Weights

Weight, approx. 150 g

**last modified:** 05/09/2020