



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
Input ranges (rated values), voltages	
<ul style="list-style-type: none"> <li>0 to +10 V</li> <li>1 V to 5 V</li> <li>-10 V to +10 V</li> <li>-5 V to +5 V</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	30 m
Analog value generation for the inputs	
Measurement principle	integrating
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> <li>Resolution with overrange (bit including sign), max.</li> <li>Integration time (ms)</li> <li>Interference voltage suppression for interference frequency <math>f_1</math> in Hz</li> <li>Conversion time (per channel)</li> </ul>	<ul style="list-style-type: none"> <li>15 bit; 15 bit + sign at <math>\pm 10</math> V, at <math>\pm 5</math> V; 15 bit at 0 V to 10 V, at 1 V to 5 V</li> <li>0,3 / 16,7 / 20 / 60</li> <li>16,67 / 50 / 60 / 3 600</li> <li>1.1 ms</li> </ul>
Smoothing of measured values	
<ul style="list-style-type: none"> <li>parameterizable</li> <li>Step: None</li> <li>Step: low</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes; 1x cycle time</li> <li>Yes; 4x cycle time</li> </ul>

• Step: Medium	Yes; 16x cycle time
• Step: High	Yes; 64x cycle time
<b>Encoder</b>	
Connection of signal encoders	
• for voltage measurement	Yes
<b>Errors/accuracies</b>	
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	
• Voltage, relative to input range, (+/-)	0.1 %
Basic error limit (operational limit at 25 °C)	
• Voltage, relative to input range, (+/-)	0.075 %
Interference voltage suppression for $f = n \times (f_1 \pm 0.5 \%)$ , $f_1 =$ 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 < 10 V
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes; Parameterizable
• Hardware interrupt	Yes; (limit value alarm), can be parameterized for channel 0
Diagnoses	
• 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
<b>Potential separation</b>	
Potential separation analog inputs	
• between the channels	No
• between the channels and backplane bus	Yes
<b>Permissible potential difference</b>	
Between the inputs and MANA (UCM)	10 Vpp AC
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Dimensions</b>	
Width	45 mm
Height	130 mm
Depth	35 mm
<b>Weights</b>	
Weight, approx.	150 g
<b>last modified:</b>	8/16/2023 