



SIMATIC DP, Electronics module for ET 200S, 4 AI TC, +/-80 mV; 15 mm width, 15 bit+sign with SF LED (group fault)

General information	
Product function	
<ul style="list-style-type: none"> <li>• Isochronous mode</li> </ul>	No
Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> <li>• Rated value (DC)</li> <li>• Reverse polarity protection</li> </ul>	24 V; From power module Yes
Input current	
from load voltage L+ (without load), max.	30 mA
from backplane bus 3.3 V DC, max.	10 mA
Power loss	
Power loss, typ.	0.6 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.	10 V; Permanent
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
Technical unit for temperature measurement adjustable	No; Celsius
Input ranges (rated values), voltages	
<ul style="list-style-type: none"> <li>• -80 mV to +80 mV</li> <li>— Input resistance (-80 mV to +80 mV)</li> </ul>	Yes 1 MΩ
Input ranges (rated values), thermocouples	
<ul style="list-style-type: none"> <li>• Type B</li> <li>— Input resistance (Type B)</li> <li>• Type E</li> <li>— Input resistance (Type E)</li> <li>• Type J</li> <li>— Input resistance (type J)</li> <li>• Type K</li> <li>— Input resistance (Type K)</li> <li>• Type L</li> <li>— Input resistance (Type L)</li> <li>• Type N</li> <li>— Input resistance (Type N)</li> </ul>	Yes 1 MΩ Yes 1 MΩ Yes 1 MΩ Yes 1 MΩ Yes 1 MΩ Yes 1 MΩ

• Type R	Yes
— Input resistance (Type R)	1 M $\Omega$
• Type S	Yes
— Input resistance (Type S)	1 M $\Omega$
• Type T	Yes
— Input resistance (Type T)	1 M $\Omega$
<b>Thermocouple (TC)</b>	
Temperature compensation	
— internal temperature compensation	Not possible
— external temperature compensation with compensations socket	Yes; possible, one external compensating box per channel
<b>Characteristic linearization</b>	
• parameterizable	Yes; Type B, E, J, K, L, N, R, S, T to IEC 584
<b>Cable length</b>	
• shielded, max.	50 m
<b>Analog value generation for the inputs</b>	
Measurement principle	integrating
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	16 bit; 15 bit + sign
• Integration time, parameterizable	Yes
• Integration time (ms)	16,7 / 20 ms
• Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
• Conversion time (per channel)	65 ms; 55 / 65 ms (additional 20 ms on activated wire-break test)
<b>Smoothing of measured values</b>	
• parameterizable	Yes; In four stages by means of digital filtering
• Step: None	Yes; 1x cycle time
• Step: low	Yes; 4x cycle time
• Step: Medium	Yes; 32x cycle time
• Step: High	Yes; 64x cycle time
<b>Encoder</b>	
Connection of signal encoders	
• for voltage measurement	Yes
<b>Errors/accuracies</b>	
Operational error limit in overall temperature range	
• Voltage, relative to input range, (+/-)	0.6 %
Basic error limit (operational limit at 25 °C)	
• Voltage, relative to input range, (+/-)	0.4 %
<b>Interrupts/diagnostics/status information</b>	
Diagnoses	
• Diagnostic information readable	Yes
• Wire-break	Yes; A break in the wire is only detected for thermocouples
• Group error	Yes
• Overflow/underflow	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
<b>Parameter</b>	
Remark	4 byte
Diagnostics wire break	Disable / enable (wire break is detected only in thermocouples)
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable
Comparison point	none / RTD
Comparison point number	None / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8
<b>Potential separation</b>	
Potential separation analog inputs	
• between the channels	No
• between the channels and backplane bus	Yes
• Between the channels and load voltage L+	Yes

Isolation	
Isolation tested with	500 V DC
Dimensions	
Width	15 mm
Height	81 mm
Depth	52 mm
Weights	
Weight, approx.	40 g
<b>last modified:</b>	3/2/2021 