



SIMATIC DP, Electronics module for ET 200S, 2/4 AI RTD Standard, 15 mm width, 15 bit+sign Pt100 STD; Pt100 KL; NI100 STD; NI100 KL; 150 ohm; 300 ohm; 600 ohm; Cycle time 110 ms/channel 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
output voltage / header	
supply voltage of the transmitters / header	
<ul style="list-style-type: none"> <li>• present</li> <li>• short-circuit proof</li> </ul>	Yes Yes
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; 2 for 3 or 4-wire connection
permissible input voltage for voltage input (destruction limit), max.	9 V
Constant measurement current for resistance-type transmitter, typ.	1.67 mA
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
Technical unit for temperature measurement adjustable	No
Input ranges (rated values), resistance thermometer	
<ul style="list-style-type: none"> <li>• Ni 100                             <ul style="list-style-type: none"> <li>— Input resistance (Ni 100)</li> </ul> </li> <li>• Pt 100                             <ul style="list-style-type: none"> <li>— Input resistance (Pt 100)</li> </ul> </li> </ul>	Yes; Standard/climate 2 000 kΩ Yes; Standard/climate 2 000 kΩ
Input ranges (rated values), resistors	
<ul style="list-style-type: none"> <li>• 0 to 150 ohms                             <ul style="list-style-type: none"> <li>— Input resistance (0 to 150 ohms)</li> </ul> </li> <li>• 0 to 300 ohms                             <ul style="list-style-type: none"> <li>— Input resistance (0 to 300 ohms)</li> </ul> </li> <li>• 0 to 600 ohms                             <ul style="list-style-type: none"> <li>— Input resistance (0 to 600 ohms)</li> </ul> </li> </ul>	Yes 2 000 kΩ Yes 2 000 kΩ Yes 2 000 kΩ
Characteristic linearization	

<ul style="list-style-type: none"> <li>parameterizable</li> <li>— for resistance thermometer</li> </ul>	Yes; for Pt100, Ni100 Pt100 (standard, climatic range), Ni100 (standard, climatic range)
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	200 m
<b>Analog value generation for the inputs</b>	
Measurement principle	integrating
<b>Integration and conversion time/resolution per channel</b>	
<ul style="list-style-type: none"> <li>Resolution with overrange (bit including sign), max.</li> <li>Integration time, parameterizable</li> <li>Integration time (ms)</li> <li>Interference voltage suppression for interference frequency f1 in Hz</li> <li>Conversion time (per channel)</li> </ul>	16 bit; 150 ohms: 14 bit; 300, 600 ohms: 15 bit, Pt100, Ni100: 16 bit Yes 16,7 / 20 ms 50 / 60 Hz 66 / 80 ms; additional conversion time for diagnostic wire break test
<b>Smoothing of measured values</b>	
<ul style="list-style-type: none"> <li>parameterizable</li> <li>Step: None</li> <li>Step: low</li> <li>Step: Medium</li> <li>Step: High</li> </ul>	Yes; In four stages by means of digital filtering Yes; 1x cycle time Yes; 4x cycle time Yes; 32x cycle time Yes; 64x cycle time
<b>Encoder</b>	
<b>Connection of signal encoders</b>	
<ul style="list-style-type: none"> <li>for resistance measurement with two-wire connection</li> <li>for resistance measurement with three-wire connection</li> <li>for resistance measurement with four-wire connection</li> </ul>	Yes Yes Yes
<b>Errors/accuracies</b>	
<b>Operational error limit in overall temperature range</b>	
<ul style="list-style-type: none"> <li>Resistance thermometer, relative to input range, (+/-)</li> </ul>	0.6 %
<b>Basic error limit (operational limit at 25 °C)</b>	
<ul style="list-style-type: none"> <li>Resistance thermometer, relative to input range, (+/-)</li> </ul>	0.4 %
<b>Interrupts/diagnostics/status information</b>	
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>Wire-break</li> <li>Group error</li> <li>Overflow/underflow</li> </ul>	Yes Yes Yes
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>Group error SF (red)</li> </ul>	Yes
<b>Parameter</b>	
Diagnostics wire break	Disable / enable
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable
<b>Potential separation</b>	
<b>Potential separation analog inputs</b>	
<ul style="list-style-type: none"> <li>between the channels</li> <li>between the channels and backplane bus</li> <li>Between the channels and load voltage L+</li> </ul>	No Yes Yes
<b>Isolation</b>	
Isolation tested with	500 V DC
<b>Dimensions</b>	
Width	15 mm
Height	81 mm
Depth	52 mm
<b>Weights</b>	
Weight, approx.	40 g
<b>last modified:</b>	9/11/2023 