



SIMATIC DP, Electronics module 2 AI U High Feature f. ET200S, 15 mm width, Cycle time per module: 0.5 ms, +/-10V; 15 bit+sign, +/-5 V; 15 bit+sign, 1..5 V; 15 bit, Operational limit +/-0.1% with SF LED (group fault)

General information	
Product function	
<ul style="list-style-type: none"> <li>• Isochronous mode</li> </ul>	Yes
Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> <li>• Rated value (DC)</li> <li>• Reverse polarity protection</li> </ul>	24 V Yes
Input current	
from load voltage L+ (without load), max.	55 mA
from backplane bus 3.3 V DC, max.	10 mA
Output voltage	
Power supply to the transmitters	
<ul style="list-style-type: none"> <li>• present</li> </ul>	No
Power loss	
Power loss, typ.	0.85 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>• Address space per module, max.</li> </ul>	4 byte
Analog inputs	
Number of analog inputs	2
permissible input voltage for voltage input (destruction limit), max.	35 V; 35 V continuous; 75 V for max. 1 ms
Cycle time (all channels) max.	0.5 ms; 0.5 ms for 2 channels without noise suppression, 18 / 21 ms per channel with noise suppression
Input ranges (rated values), voltages	
<ul style="list-style-type: none"> <li>• 1 V to 5 V                             <ul style="list-style-type: none"> <li>— Input resistance (1 V to 5 V)</li> </ul> </li> <li>• -10 V to +10 V                             <ul style="list-style-type: none"> <li>— Input resistance (-10 V to +10 V)</li> </ul> </li> <li>• -5 V to +5 V                             <ul style="list-style-type: none"> <li>— Input resistance (-5 V to +5 V)</li> </ul> </li> </ul>	Yes 800 kΩ Yes 800 kΩ Yes 800 kΩ
Cable length	
<ul style="list-style-type: none"> <li>• shielded, max.</li> </ul>	200 m
Analog value generation for the inputs	
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, parameterizable</li> </ul>	16 bit; 0 to 5 V: 15 bit, ±10 V: 16 bit, ±5 V: 16 bit Yes

<ul style="list-style-type: none"> <li>• Interference voltage suppression for interference frequency f1 in Hz</li> </ul>	60 / 50 Hz / no
<ul style="list-style-type: none"> <li>• Conversion time (per channel)</li> </ul>	0.04 ms; Without noise suppression 17/20 ms per channel with error
<b>Smoothing of measured values</b>	
<ul style="list-style-type: none"> <li>• parameterizable</li> </ul>	Yes; In 4 stages: 1x, 4x, 16x, 32x cycle time
<ul style="list-style-type: none"> <li>• Step: None</li> </ul>	Yes; 1x
<ul style="list-style-type: none"> <li>• Step: low</li> </ul>	Yes; 4x
<ul style="list-style-type: none"> <li>• Step: Medium</li> </ul>	Yes; 16x
<ul style="list-style-type: none"> <li>• Step: High</li> </ul>	Yes; 32x
<b>Encoder</b>	
Connection of signal encoders	
<ul style="list-style-type: none"> <li>• for voltage measurement</li> </ul>	Yes
<b>Errors/accuracies</b>	
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> <li>• Voltage, relative to input range, (+/-)</li> </ul>	0.1 %; 0.2% without interference frequency suppression
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> <li>• Voltage, relative to input range, (+/-)</li> </ul>	0.05 %; 0.1% without interference frequency suppression
<b>Interrupts/diagnostics/status information</b>	
Alarms	
<ul style="list-style-type: none"> <li>• Hardware interrupt</li> </ul>	Yes
Diagnoses	
<ul style="list-style-type: none"> <li>• Wire-break</li> </ul>	Yes; Measuring range 1 to 5 V only
<ul style="list-style-type: none"> <li>• Group error</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Overflow/underflow</li> </ul>	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> <li>• Group error SF (red)</li> </ul>	Yes
<b>Parameter</b>	
Remark	12 bytes, 4 bytes in compatibility mode
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable
<b>Potential separation</b>	
Potential separation analog inputs	
<ul style="list-style-type: none"> <li>• between the channels</li> </ul>	No; however, increased permissible potential difference between the inputs.
<ul style="list-style-type: none"> <li>• between the channels and backplane bus</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Between the channels and load voltage L+</li> </ul>	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.	45 g
<b>last modified:</b>	1/16/2021 