



SIMATIC DP, ELECTRONIC MODULE ET200S, 4AI STANDARD I-2-WIRE, 4 - 20MA; 13BIT, 15MM WIDTH, FOR 2-WIRE TRANSDUCER CYCLE TIME 40 MS/MODULE WITH LED SF (GROUP FAULT)

Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V; From power module
<ul style="list-style-type: none"> <li>Reverse polarity protection</li> </ul>	Yes
Input current	
from load voltage L+ (without load), max.	125 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>	Yes
<ul style="list-style-type: none"> <li>short-circuit proof</li> </ul>	Yes; approx. 200 mA for module
Power losses	
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 current for current input (destruction limit), max.	30 mA; limited electronically
Cycle time (all channels) max.	40 ms; 33 to 40 ms
Input ranges	
<ul style="list-style-type: none"> <li>Voltage</li> </ul>	No

• Current	Yes
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No

<b>Input ranges (rated values), currents</b>	
• 4 mA to 20 mA	Yes; Into 25 Ohm

<b>Cable length</b>	
• shielded, max.	200 m

### Analog value creation

Measurement principle	integrating
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#### Integration and conversion time/resolution per channel

• Resolution with overrange (bit including sign), max.	13 bit; 4 to 20 mA: 13 bits
• Integration time, parameterizable	Yes
• Integration time (ms)	16,67 / 20 ms

#### Smoothing of measured values

• Parameterizable	Yes; in 4 stages
• Step: None	Yes; 1 x cycle time
• Step: low	Yes; 4 x cycle time
• Step: Medium	Yes; 16 x cycle time
• Step: High	Yes; 32 x cycle time

### Encoder

#### Connection of signal encoders

• for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max.	750 Ω
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### Errors/accuracies

Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.003 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input area), (+/-)	0.05 %

#### Operational limit in overall temperature range

• Current, relative to input area, (+/-)	0.4 %
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#### Basic error limit (operational limit at 25 °C)

• Current, relative to input area, (+/-)	0.3 %
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#### Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$ , $f_1 =$ interference frequency

• Series mode interference (peak value of interference < rated value of input range), min.	70 dB
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### Isochronous mode

Isochronous operation (application synchronized up to terminal)	No
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Diagnostic messages	
• Diagnostic functions	Yes; Can be read out
• Wire break	Yes; Measuring range 1 to 5 V only
• Group error	Yes
• Overflow/underflow	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes

Parameter	
Remark	7 byte
Diagnosis: wire break	1
Measurement type/range	1
Group diagnostics	1
Overflow/underflow	1

Galvanic isolation	
Galvanic isolation analog inputs	
• between the channels	No
• between the channels and the backplane bus	Yes
• between the channels and the load voltage L+	No

Isolation	
Isolation checked with	500 V DC

Dimensions	
Width	15 mm
Height	81 mm
Depth	52 mm

Weights	
Weight, approx.	40 g
<b>last modified:</b>	12.03.2015