

SIMATIC DP, Electronics module f. ET200S, 2AI Standard I-4DMU  
 15 mm width, +/-20mA; 13 bit+sign 4.. 20mA; 12-bit for 4-wire  
 transmitter Cycle time 65 ms/channel with SF LED (group fault)



<b>Supply voltage</b>	
Load voltage L+	
• Rated value (DC)	24 V; From power module
<b>Input current</b>	
from load voltage L+ (without load), max.	30 mA
from backplane bus 3.3 V DC, max.	10 mA
<b>Power loss</b>	
Power loss, typ.	0.6 W
<b>Address area</b>	
Address space per module	
• Address space per module, max.	4 byte
<b>Analog inputs</b>	
Number of analog inputs	2
permissible input current for current input (destruction limit), max.	40 mA
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
<b>Input ranges</b>	

• Voltage	No
• Current	Yes
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No
<b>Input ranges (rated values), currents</b>	
• -20 mA to +20 mA	Yes; 50 Ohm
• 4 mA to 20 mA	Yes; 50 Ohm
<b>Cable length</b>	
• shielded, max.	200 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.	14 bit; ±20 mA: 14 bit, 4 to 20 mA: 13 bit
• 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
<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>	
<b>Connection of signal encoders</b>	
• for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max.	750 Ω

<b>Errors/accuracies</b>	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.005 %/K
Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.05 %
<b>Operational error limit in overall temperature range</b>	
• Current, relative to input range, (+/-)	0.6 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• Current, relative to input range, (+/-)	0.4 %
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

### Isochronous mode

Isochronous operation (application synchronized up to terminal)

No

### Interrupts/diagnostics/status information

#### Diagnostic messages

- Wire-break Yes; Measuring range 4 to 20 mA only
- Group error Yes
- Overflow/underflow Yes

#### Diagnostics indication LED

- Group error SF (red) Yes

### Parameter

Remark	4 byte
Diagnostics wire break	Disable / enable (only in measuring range 4 to 20 mA)
Measurement type/range	deactivated / $\pm 20$ mA / 4 to 20 mA
Group diagnostics	Disable / enable
Overflow/underflow	Disable / enable

### Potential separation

#### Potential separation analog inputs

- between the channels No
- between the channels and backplane bus Yes
- Between the channels and load voltage L+ No

### Isolation

Isolation tested with 500 V DC

### Dimensions

Width	15 mm
Height	81 mm
Depth	52 mm

### Weights

Weight, approx. 40 g

**last modified:** 09/13/2018