

SIMATIC DP, Electronics module 2 AI I High Feature for ET 200S, 15 mm width, Cycle time per module: 0.5 ms, +/-20mA; 15 bit+sign, 4.. 20mA; 15 bit, Operational limit +/-0.1% with SF LED (group fault)



Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	48 mA
from backplane bus 3.3 V DC, max.	10 mA
Output voltage	
Power supply to the transmitters	
• present	Yes
• short-circuit proof	Yes
Power loss	
Power loss, typ.	1.2 W
Address area	
Address space per module	
• Address space per module, max.	4 byte
Analog inputs	

Number of analog inputs	2
permissible input current for current input (destruction limit), max.	50 mA
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
<b>Input ranges (rated values), currents</b>	
• -20 mA to +20 mA	Yes
• 4 mA to 20 mA	Yes
<b>Cable length</b>	
• shielded, max.	200 m

### Analog value generation for the inputs

Measurement principle	Sigma Delta
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	16 bit
• Interference voltage suppression for interference frequency f1 in Hz	60 / 50 Hz / no
• Conversion time (per channel)	0.04 ms; Without noise suppression 17/20 ms per channel with error
<b>Smoothing of measured values</b>	
• parameterizable	Yes; In 4 stages: 1x, 4x, 16x, 32x cycle time
• Step: None	Yes; 1x
• Step: low	Yes; 4x
• Step: Medium	Yes; 16x
• Step: High	Yes; 32x

### Encoder

<b>Connection of signal encoders</b>	
• for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max.	750 Ω

### Errors/accuracies

Linearity error (relative to input range), (+/-)	0.03 %
Temperature error (relative to input range), (+/-)	0.003 %/K
Crosstalk between the inputs, min.	-100 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.01 %
<b>Operational error limit in overall temperature range</b>	
• Current, relative to input range, (+/-)	0.1 %; 0.2% without interference frequency suppression
<b>Basic error limit (operational limit at 25 °C)</b>	
• Current, relative to input range, (+/-)	0.05 %; 0.1% without interference frequency suppression
<b>Interference voltage suppression for <math>f = n \times (f_1 \pm 1 \%)</math>, <math>f_1 =</math> interference frequency</b>	
• Series mode interference (peak value of interference < rated value of input range), min.	90 dB

- Common mode interference (USS < 2.5 V) , min. 100 dB

### Isochronous mode

- Isochronous operation (application synchronized up to terminal) Yes

### Interrupts/diagnostics/status information

#### Alarms

- Hardware interrupt Yes

#### 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 12 bytes, 4 bytes in compatibility mode
- Diagnostics wire break Disable / enable
- Measurement type/range deactivated / ±20 mA / 4 to 20 mA
- Group diagnostics Disable / enable
- Overflow/underflow Disable / enable

### Potential separation

#### Potential separation analog inputs

- between the channels No; however, increased permissible potential difference between the inputs.
- between the channels and backplane bus Yes
- Between the channels and load voltage L+ Yes

### Dimensions

- Width 15 mm
- Height 81 mm
- Depth 52 mm

### Weights

- Weight, approx. 45 g

**last modified:** 05/09/2019