

SIMATIC DP, electronics module for ET200iS, 2 AI HART, 2DMU, for connecting HART 2-wire transmitters

Input current	
From load voltage L+ (no load), typ.	280 mA
Output voltage	
Power supply to the transmitters	
• present	Yes
• short-circuit proof	Yes
• Supply current, max.	23 mA
Power loss	
Power loss, typ.	3.36 W
Analog inputs	
Number of analog inputs	2
permissible input current for current input (destruction limit), max.	90 mA
Cycle time (all channels) max.	Number of active channels per module x basic conversion time
Input ranges	
• Current	Yes
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
• 4 mA to 20 mA	Yes
Cable length	
• shielded, max.	200 m
Analog value generation for the inputs	
Measurement principle	integrating
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	12 bit
• Integration time, parameterizable	No
• Basic conversion time, including integration time (ms)	30 ms
— additional conversion time for wire-break monitoring	5 ms
• Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
Smoothing of measured values	
• parameterizable	Yes

- | | |
|----------------|---------------------|
| • Step: None | Yes; 1x cycle time |
| • Step: low | Yes; 4x cycle time |
| • Step: Medium | Yes; 32x cycle time |
| • Step: High | Yes; 64x cycle time |

Encoder

Connection of signal encoders

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|--|-------|
| • for current measurement as 2-wire transducer | Yes |
| — Burden of 2-wire transmitter, max. | 750 Ω |

Errors/accuracies

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|---|----------|
| Linearity error (relative to input range), (+/-) | 0.0015 % |
| Temperature error (relative to input range), (+/-) | 0.03 %/K |
| Crosstalk between the inputs, min. | -50 dB |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) | 0.01 % |

Operational error limit in overall temperature range

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|---|--------|
| • Current, relative to input range, (+/-) | 0.15 % |
|---|--------|

Basic error limit (operational limit at 25 °C)

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|---|-------|
| • Current, relative to input range, (+/-) | 0.1 % |
|---|-------|

Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency

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|--|-------|
| • Series mode interference (peak value of interference < rated value of input range), min. | 70 dB |
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Interrupts/diagnostics/status information

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|----------------------|--------------------------------------|
| Diagnostics function | Yes; Diagnostic information readable |
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Alarms

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|---------------------|----------------------|
| • Diagnostic alarm | Yes; Parameterizable |
| • Limit value alarm | Yes; Parameterizable |

Diagnostics indication LED

- | | |
|------------------------|-----|
| • Group error SF (red) | Yes |
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Parameter

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|---------------------------|-----------------------|
| Diagnostics wire break | $I < 3,6 \text{ mA}$ |
| Diagnostics short-circuit | $I < 23,8 \text{ mA}$ |

Potential separation

Potential separation analog inputs

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|--|--|
| • between the channels | No |
| • between the channels and backplane bus | Yes |
| • Between the channels and load voltage L+ | Yes; Galvanic isolation between load voltage (power bus) and backplane bus |

Permissible potential difference

- | | |
|--------------------------|-----------------|
| between the inputs (UCM) | 60 V DC/30 V AC |
|--------------------------|-----------------|

Isolation

Isolation tested with	500 V AC
Standards, approvals, certificates	
Use in hazardous areas	
• Type of protection acc. to EN 50020 (CENELEC) • Type of protection acc. to FM	II2(1)G EEx ib[ia] IIC T4; Tu = -20 °C to +60 °C (module); II2 G EEx ia IIC (input; (Tu = +60°C for horizontal mounting) Available soon: FM 3611: Class I, Division 2, Group A-D, Class I, Zone 2 or FM 3610: Class I, Zone 1, Tu = -20 °C to +60 °C
Dimensions	
Width	30 mm
Height	81 mm
Depth	76 mm
Weights	
Weight, approx.	120 g
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