

SIMATIC DP, ELECT. SUBMODULE FOR ET200IS, 2 AI HART, 4DMU, FOR CONNECTION OF HART 4-WIRE TRANSDUCER

Input current	
From load voltage L+ (no load), typ.	70 mA
Output voltage	
Power supply to the transmitters	
• present	No
Power loss	
Power loss, typ.	0.84 W
Analog inputs	
Number of analog inputs	2
permissible input current for current input (destruction limit), max.	50 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; min. 285 ohms
• 4 mA to 20 mA	Yes; min. 285 ohms
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	Yes
• Integration time (ms)	16,67 / 20 ms
• Basic conversion time, including integration time (ms)	22 / 25 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; 1 x cycle time

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| • Step: low | Yes; 4 x cycle time |
| • Step: Medium | Yes; 32 x cycle time |
| • Step: High | Yes; 64 x cycle time |

Encoder

Connection of signal encoders

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| • for current measurement as 4-wire transducer | Yes |
| • Internal resistance of the input for 4-wire transducer, min. | 300 Ω |

Errors/accuracies

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| Linearity error (relative to input range), (+/-) | 0.015 % |
| 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 | |
| • Current, relative to input range, (+/-) | 0.15 % |
| Basic error limit (operational limit at 25 °C) | |
| • Current, relative to input range, (+/-) | 0.1 % |
| 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 |

Interrupts/diagnostics/status information

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|----------------------------|--------------------------------------|
| Diagnostic functions | Yes; Diagnostic information readable |
| Alarms | |
| • Diagnostic alarm | Yes; Parameterizable |
| • Limit value alarm | Yes; Parameterizable |
| Diagnostics indication LED | |
| • Group error SF (red) | Yes |

Parameter

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

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

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

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| Isolation tested with | 500 V AC |
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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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last modified:

03/07/2017 