

Spare part SIMATIC DP, Electronics module ET200S: 2AI High Speed I-2-wire 4-20 mA; 14 bit, 15 mm width, for 2-wire transducer
Cycle time of module: 1 ms, with SF LED (group fault)



Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V; From power module
• Short-circuit protection	Yes; Destruction limit 35 mA per channel
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	35 mA; Without encoder supply voltage
from backplane bus 3.3 V DC, max.	10 mA
Encoder supply	
Number of outputs	2
Type of output voltage	L+ (-2.5 V), under load
Short-circuit protection	Yes; Electronic
Output current	
• Rated value	90 mA; both channels
• permissible range, lower limit	0 mA
• permissible range, upper limit	90 mA
Power loss	

Power loss, typ.	0.8 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.	60 mA
Cycle time (all channels) max.	1 ms; Per module
Input ranges	
• Current	Yes
Input ranges (rated values), currents	
• Input resistance (0 to 20 mA)	0.05 k Ω
• 4 mA to 20 mA	Yes; on 50 ohms
Cable length	
• shielded, max.	200 m
Analog value generation for the inputs	
Measurement principle	Actual value encryption
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	13 bit; 4 to 20 mA: 13 bits, 0 to 20 mA: 13 bits
• Conversion time (per channel)	0.1 ms
Smoothing of measured values	
• parameterizable	Yes; In four stages by means of digital filtering
• Step: None	Yes; 1x cycle time
• Step: low	Yes; 64 x cycle time
• Step: Medium	Yes; 128 x cycle time
• Step: High	Yes; 512x cycle time
Encoder	
Connection of signal encoders	
• for current measurement as 2-wire transducer	Yes
— Burden of 2-wire transmitter, max.	670 Ω
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.01 %/K
Crosstalk between the inputs, min.	50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.05 %
Operational error limit in overall temperature range	
• Current, relative to input range, (+/-)	0.3 %
Basic error limit (operational limit at 25 °C)	

• Current, relative to input range, (+/-)	0.2 %
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)	Yes
Interrupts/diagnostics/status information	
Alarms	
• Hardware interrupt	Yes; Parameterizable
Diagnostic messages	
• Wire-break	Yes
• Group error	Yes
• Overflow/underflow	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
Parameter	
Remark	12 byte
Diagnostics wire break	Disable / enable
Measurement type/range	Deactivated / 0 to 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
Permissible potential difference	
between MANA and M internally (UISO)	75 V DC/60 V AC
Isolation	
Isolation tested with	500 V DC
Dimensions	
Width	15 mm
Height	81 mm
Depth	52 mm
Weights	
Weight, approx.	40 g
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