

*** SPARE PART*** SIMATIC DP, ELECTRONIC MODULE ET 200S: 2 AI HIGH SPEED U, +/-10V; 14 BIT, 15 MM WIDE, CYCLE TIME OF THE MODULE: 1MS, WITH LED SF (GROUP FAULT)



Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V; From power module
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	35 mA
from backplane bus 3.3 V DC, max.	10 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 voltage for voltage input (destruction limit), max.	50 V; 50 V continuous; 100 V for max. 1 ms (mark to space ratio 1:20)
Cycle time (all channels) max.	1 ms; Per module

Input ranges	
• Voltage	Yes
Input ranges (rated values), voltages	
• 1 V to 5 V	Yes
• Input resistance (1 V to 5 V)	100 kΩ
• -10 V to +10 V	Yes
• Input resistance (-10 V to +10 V)	100 kΩ
• -2.5 V to +2.5 V	Yes
• Input resistance (-2.5 V to +2.5 V)	100 kΩ
• -5 V to +5 V	Yes
• Input resistance (-5 V to +5 V)	100 kΩ
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.	14 bit; +/-10 V: 13 bits + sign, +/-5 V: 13 bits + sign, +/-2.5 V: 13 bits + sign; 1 to 5 V: 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; 1 x 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 voltage measurement	Yes
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 area), (+/-)	0.05 %
Operational error limit in overall temperature range	
• Voltage, relative to input area, (+/-)	0.3 %
Basic error limit (operational limit at 25 °C)	
• Voltage, relative to input area, (+/-)	0.2 %
Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, $f_1 =$ interference frequency	
• Common mode interference (USS < 2.5 V), min.	70 dB; $U_{cm} < 100 V_{pp}$

Isochronous mode	
Isochronous operation (application synchronized up to terminal)	Yes
Interrupts/diagnostics/status information	
Alarms	
• Hardware interrupt	Yes; Parameterizable
Diagnostic messages	
• Diagnostic information readable	Yes
• Wire-break	No
• Group error	Yes
• Overflow/underflow	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
Parameter	
Remark	12 byte
Measurement type/range	deactivated / +/-10 V / +/-5 V, +/-2.5 V, to 5 V
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+	Yes
Permissible potential difference	
Between the inputs and MANA (UCM)	100 Vpp AC
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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