

\*\*\* SPARE PART\*\*\* SIMATIC DP, ELECTRONIC MODULE  
 ANALOG, FOR ET 200B, W=160MM, 4AO 0(4)...20MA; +/- 10V, 11  
 BIT, 12 MBIT/S

### Supply voltage

Rated value (DC)	24 V; Value at t < 0.5 s: 35 V
permissible range, lower limit (DC)	18.5 V
permissible range, upper limit (DC)	30.2 V

### Input current

Current consumption, max.	200 mA; Logic
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### Power loss

Power loss, typ.	2.4 W
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### Hardware configuration

Rack	
<ul style="list-style-type: none"> <li>required terminal block</li> </ul>	TB8

### Analog outputs

Number of analog outputs	4
Voltage output, short-circuit protection	Yes; Electronic; max. 1 output in parallel
Voltage output, short-circuit current, max.	25 mA
Current output, no-load voltage, max.	18 V

### Output ranges, voltage

<ul style="list-style-type: none"> <li>0 to 10 V</li> </ul>	Yes
<ul style="list-style-type: none"> <li>-10 V to +10 V</li> </ul>	Yes

### Output ranges, current

<ul style="list-style-type: none"> <li>0 to 20 mA</li> </ul>	Yes
<ul style="list-style-type: none"> <li>4 mA to 20 mA</li> </ul>	Yes

### Connection of actuators

<ul style="list-style-type: none"> <li>for voltage output two-wire connection</li> </ul>	Yes
<ul style="list-style-type: none"> <li>for voltage output four-wire connection</li> </ul>	Yes
<ul style="list-style-type: none"> <li>for current output two-wire connection</li> </ul>	Yes

### Load impedance (in rated range of output)

<ul style="list-style-type: none"> <li>with voltage outputs, capacitive load, max.</li> </ul>	1 $\mu$ F
<ul style="list-style-type: none"> <li>with current outputs, max.</li> </ul>	300 $\Omega$
<ul style="list-style-type: none"> <li>with current outputs, inductive load, max.</li> </ul>	1 mH

### Cable length

<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	100 m
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### Analog value generation for the outputs

Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	11 bit; Two's complement
• Conversion time (per channel)	1 ms
Settling time	
• for resistive load	0.1 ms
• for capacitive load	3.3 ms
• for inductive load	0.5 ms
Errors/accuracies	
Output ripple (relative to output range, bandwidth 0 to 50 kHz), (+/-)	0.05 %
Linearity error (relative to output range), (+/-)	0.05 %
Temperature error (relative to output range), (+/-)	0.02 %/K
Crosstalk between the outputs, min.	40 dB
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.05 %
Operational error limit in overall temperature range	
• Voltage, relative to output range, (+/-)	0.05 %
• Current, relative to output range, (+/-)	1 %
Basic error limit (operational limit at 25 °C)	
• Voltage, relative to output range, (+/-)	0.2 %
• Current, relative to output range, (+/-)	0.3 %
Interfaces	
PROFIBUS DP	
• Transmission rate, max.	12 Mbit/s
Protocols	
Bus protocol/transmission protocol	PROFIBUS DP
Interrupts/diagnostics/status information	
Alarms	
• Diagnostic alarm	Yes; Parameterizable
Diagnostics indication LED	
• RUN LED	Yes
• Bus fault BF (red)	Yes
Potential separation	
between electronic block and PROFIBUS DP	Yes
Potential separation analog outputs	
• Potential separation analog outputs	No
Degree and class of protection	
Degree of protection acc. to EN 60529	IP20
Ambient conditions	

<b>Ambient temperature during operation</b>	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C; 40°C for other mountings
<b>Air pressure acc. to IEC 60068-2-13</b>	
• permissible range, lower limit	795 hPa
• permissible range, upper limit	1 080 hPa
<b>Relative humidity</b>	
• Operation, min.	15 %
• Operation, max.	95 %; RH class 2 in accordance with IEC 1131-2
<b>Vibrations</b>	
• Operation, tested according to IEC 60068-2-6	Yes; IEC 68, Part 2-6; 10 to 57 Hz; (constant amplitude 0.075 mm); 57 to 150 Hz; (constant acceleration 1 g)
<b>Shock test</b>	
• tested according to IEC 60068-2-27	Yes; IEC 68, Part 2-27; half-sine, 15 g, 11 ms
<b>Connection method</b>	
Design of electrical connection for the inputs and outputs	Screw-type and spring-loaded terminals, permanent wiring; 3 and 4-wire connection
<b>Dimensions</b>	
Width	160 mm; EB and TB
Height	130 mm; EB and TB
Depth	60 mm; EB and TB
<b>Weights</b>	
Weight, approx.	550 g; EB and TB
<b>last modified:</b>	03/07/2017