

\*\*\* SPARE PART\*\*\* SIMATIC DP, ELECTRONIC MODULE  
DIGITAL, FOR ET 200B, W=235MM, 16DI 24V DC, 16DO 24V  
DC/0.,5A STANDARD

### Supply voltage

Rated value (DC)	24 V; L1+, L2+, L5+; 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, typ.	85 mA; From L5+; logic
Current consumption, max.	1 000 mA; from L5+; sensor
$I^2t$	0.05 A <sup>2</sup> ·s; with starting current inrush

### Power loss

Power loss, max.	5.5 W
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### Hardware configuration

Rack	
<ul style="list-style-type: none"> <li>required terminal block</li> </ul>	TB2/DC, TB2-4/DC, TB4/DC, TB4-4/DC

### Digital inputs

Number of digital inputs	16
Input voltage	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>for signal "0"</li> </ul>	-30 to +5V
<ul style="list-style-type: none"> <li>for signal "1"</li> </ul>	13 to 30V
Input current	
<ul style="list-style-type: none"> <li>for signal "1", typ.</li> </ul>	4 mA; At 24 V min. 2 mA
Input delay (for rated value of input voltage)	
for standard inputs	
<ul style="list-style-type: none"> <li>at "0" to "1", max.</li> </ul>	3 ms
Cable length	
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	100 m

### Digital outputs

Number of digital outputs	16
Short-circuit protection	Yes; Electronic
Limitation of inductive shutdown voltage to	typ. (L1+, L2+) -55 V
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	5 W

<b>Output voltage</b>	
• Rated value (DC)	24 V
• for signal "0", max.	2 V; idling
• for signal "1", min.	UE -3 V
<b>Output current</b>	
• for signal "1" permissible range, max.	0.5 A; in groups of 8, each group 8x 0.5 A
• for signal "0" residual current, max.	1 mA
<b>Output delay with resistive load</b>	
• "0" to "1", max.	20 µs
• "1" to "0", max.	0.5 ms
<b>Switching frequency</b>	
• with resistive load, max.	1 000 Hz
• with inductive load, max.	0.5 Hz
• on lamp load, max.	8 Hz
<b>Total current of the outputs (per group)</b>	
all mounting positions	
— up to 60 °C, max.	2 A
<b>Cable length</b>	
• unshielded, max.	100 m
<b>Encoder</b>	
<b>Connectable encoders</b>	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
<b>Interfaces</b>	
<b>PROFIBUS DP</b>	
• Transmission rate, max.	12 Mbit/s
• SYNC capability	Yes
• FREEZE capability	Yes
<b>Protocols</b>	
Bus protocol/transmission protocol	PROFIBUS DP
<b>Interrupts/diagnostics/status information</b>	
<b>Diagnostics indication LED</b>	
• RUN LED	Yes
• Bus fault BF (red)	Yes
• Status indicator digital input (green)	Yes
• Status indicator digital output (green)	Yes
<b>Potential separation</b>	
between electronic block and PROFIBUS DP	Yes
Potential separation digital inputs	

• Potential separation digital inputs	No
<b>Potential separation digital outputs</b>	
• Potential separation digital outputs	Yes
• between the channels, in groups of	8
<b>Degree and class of protection</b>	
Degree of protection acc. to EN 60529	IP20
<b>Ambient conditions</b>	
<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	235 mm; EB and TB
Height	130 mm; EB and TB
Depth	60 mm; EB and TB
<b>Weights</b>	
Weight, approx.	800 g; EB and TB
<b>last modified:</b>	03/07/2017