

*** 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 ² t	0.05 A ² ·s; with starting current inrush

Power loss

Power loss, max.	5.5 W
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Hardware configuration

Rack	
• required terminal block	TB2/DC, TB2-4/DC, TB4/DC, TB4-4/DC

Digital inputs

Number of digital inputs	16
Input voltage	
• Rated value (DC)	24 V
• for signal "0"	-30 to +5V
• for signal "1"	13 to 30V
Input current	
• for signal "1", typ.	4 mA; At 24 V min. 2 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", max.	3 ms
Cable length	
• unshielded, max.	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	
• on lamp load, max.	5 W

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

• Potential separation digital inputs	No
Potential separation digital outputs	
• Potential separation digital outputs	Yes
• between the channels, in groups of	8
Degree and class of protection	
Degree of protection acc. to EN 60529	IP20
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C; 40°C for other mountings
Air pressure acc. to IEC 60068-2-13	
• permissible range, lower limit	795 hPa
• permissible range, upper limit	1 080 hPa
Relative humidity	
• Operation, min.	15 %
• Operation, max.	95 %; RH class 2 in accordance with IEC 1131-2
Vibrations	
• 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)
Shock test	
• tested according to IEC 60068-2-27	Yes; IEC 68, Part 2-27; half-sine, 15 g, 11 ms
Connection method	
Design of electrical connection for the inputs and outputs	Screw-type and spring-loaded terminals, permanent wiring; 3 and 4-wire connection
Dimensions	
Width	235 mm; EB and TB
Height	130 mm; EB and TB
Depth	60 mm; EB and TB
Weights	
Weight, approx.	800 g; EB and TB
last modified:	03/07/2017