

*** SPARE PART*** SIMATIC DP, ELECTRONIC MODULE
DIGITAL, FOR ET 200B, W=160MM, 8DE 24V DC; 8DA 24V DC,
0,5A WITH INTEGRATED HW SWITCH-OFF OF THE OUTPUTS

General information

Usable terminal block	TB1/DC, TB1-4/DC, TB3/DC
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Supply voltage

Rated value (DC)	24 V; L1+, L3+; 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.	70 mA; from L3+; logic
Current consumption, max.	500 mA; from L3+; sensor
I^2t	0.05 A ² -s; with starting current inrush

Power loss

Power loss, max.	3.8 W
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Digital inputs

Number of digital inputs	8
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Input voltage

- | | |
|--|---------------------------------|
| <ul style="list-style-type: none"> Rated value (DC) for signal "0" for signal "1" | 24 V
-30 to +5V
13 to 30V |
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Input current

- | | |
|--|-------------------------|
| <ul style="list-style-type: none"> for signal "1", typ. | 4 mA; At 24 V min. 2 mA |
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Input delay (for rated value of input voltage)

for standard inputs

— at "0" to "1", max.	3 ms
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Cable length

- | | |
|--|-------|
| <ul style="list-style-type: none"> unshielded, max. | 100 m |
|--|-------|

Digital outputs

Number of digital outputs	8
Short-circuit protection	Yes; Electronic
Limitation of inductive shutdown voltage to	typically (L1+) -55 V
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> on lamp load, max. 	5 W

Output voltage

<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> for signal "0", max. 	2 V; idling
<ul style="list-style-type: none"> for signal "1", min. 	UE -3 V
Output current	
<ul style="list-style-type: none"> for signal "1" permissible range, max. 	0.5 A; in one group
<ul style="list-style-type: none"> for signal "0" residual current, max. 	1 mA
Output delay with resistive load	
<ul style="list-style-type: none"> "0" to "1", max. 	50 µs; Typical
<ul style="list-style-type: none"> "1" to "0", max. 	100 µs; Typical
Switching frequency	
<ul style="list-style-type: none"> with resistive load, max. 	100 Hz
<ul style="list-style-type: none"> with inductive load, max. 	0.5 Hz
<ul style="list-style-type: none"> on lamp load, max. 	8 Hz
Total current of the outputs (per group)	
all mounting positions	
<ul style="list-style-type: none"> — up to 60 °C, max. 	2 A
Cable length	
<ul style="list-style-type: none"> unshielded, max. 	100 m
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> 2-wire sensor 	Yes
<ul style="list-style-type: none"> — permissible quiescent current (2-wire sensor), max. 	1.5 mA
Interfaces	
PROFIBUS DP	
<ul style="list-style-type: none"> Transmission rate, max. 	12 Mbit/s
Protocols	
Bus protocol/transmission protocol	PROFIBUS DP
PROFIBUS DP	
Services	
<ul style="list-style-type: none"> — SYNC capability 	Yes
<ul style="list-style-type: none"> — FREEZE capability 	Yes
Interrupts/diagnostics/status information	
Diagnostics indication LED	
<ul style="list-style-type: none"> RUN LED 	Yes
<ul style="list-style-type: none"> Bus fault BF (red) 	Yes
<ul style="list-style-type: none"> Status indicator digital input (green) 	Yes
<ul style="list-style-type: none"> 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	No
• 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 testing	
• 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	160 mm; EB and TB
Height	130 mm; EB and TB
Depth	60 mm; EB and TB
Weights	
Weight, approx.	650 g; EB and TB
last modified:	08/12/2019