

\*\*\* SPARE PART\*\*\* SIMATIC DP, ELECTRONIC BLOCK FOR ET 200L, DIGITAL, 16 DO 0.5A, 24V DC, EXPANDABLE WITH MAX. 16 CHANNELS WITH TERMINAL BLOCK TB 16SC OF SMART CONNECT

Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Load voltage L+	
• Rated value (DC)	24 V
Input current	
from supply voltage L+, max.	180 mA
from load voltage L+ (without load), max.	50 mA
Power loss	
Power loss, typ.	4 W
Hardware configuration	
Rack	
• required terminal block	TB 16L (expansion: digital and analog with SIMATIC SC)
Digital outputs	
Number of digital outputs	16
Short-circuit protection	Yes; Electronic
• Response threshold, typ.	0.7 A
Limitation of inductive shutdown voltage to	Typ. (L1+ or L2+ / L3+) -55 V
Controlling a digital input	Yes
Switching capacity of the outputs	
• on lamp load, max.	5 W
Load resistance range	
• lower limit	41 $\Omega$
• upper limit	28 000 $\Omega$
Output voltage	
• Rated value (DC)	24 V
• for signal "1", min.	U <sub>a</sub> - 3 V
Output current	
• for signal "1" rated value	500 mA
• for signal "1" permissible range for 0 to 40 °C, min.	1 mA

<ul style="list-style-type: none"> <li>• for signal "1" permissible range for 0 to 40 °C, max.</li> </ul>	500 mA
<ul style="list-style-type: none"> <li>• for signal "1" permissible range for 0 to 60 °C, max.</li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>• for signal "0" residual current, max.</li> </ul>	1 mA
<b>Output delay with resistive load</b>	
<ul style="list-style-type: none"> <li>• "0" to "1", max.</li> </ul>	50 ms
<ul style="list-style-type: none"> <li>• "1" to "0", max.</li> </ul>	200 ms
<b>Parallel switching of two outputs</b>	
<ul style="list-style-type: none"> <li>• for uprating</li> </ul>	No
<ul style="list-style-type: none"> <li>• for redundant control of a load</li> </ul>	Yes; only outputs of the same group
<b>Switching frequency</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> </ul>	100 Hz
<ul style="list-style-type: none"> <li>• with inductive load, max.</li> </ul>	0.5 Hz
<ul style="list-style-type: none"> <li>• on lamp load, max.</li> </ul>	8 Hz
<b>Total current of the outputs (per module)</b>	
<b>horizontal installation</b>	
— up to 30 °C, max.	4 A
— up to 40 °C, max.	3 A
— up to 60 °C, max.	2 A
<b>all other mounting positions</b>	
— up to 40 °C, max.	2 A
<b>Relay outputs</b>	
<ul style="list-style-type: none"> <li>• Rated supply voltage of relay coil L+ (DC)</li> </ul>	24 V
— Reverse polarity protection	Yes
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> </ul>	1 000 m
<ul style="list-style-type: none"> <li>• unshielded, max.</li> </ul>	600 m
<b>Interfaces</b>	
<b>PROFIBUS DP</b>	
<ul style="list-style-type: none"> <li>• Transmission rate, max.</li> </ul>	1.5 Mbit/s
<ul style="list-style-type: none"> <li>• SYNC capability</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• FREEZE capability</li> </ul>	Yes; for SC inputs
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	No
<b>Diagnostic functions</b>	Yes
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• Bus fault BF (red)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Group error SF (red)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Status indicator digital output (green)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Monitoring 24 V voltage supply ON (green)</li> </ul>	Yes

## Potential separation

### Potential separation digital outputs

- |  |     |
|--|-----|
| • between the channels                 | No  |
| • between the channels and PROFIBUS DP | Yes |

## Isolation

Isolation tested with	500 V DC
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## Dimensions

Width	145 mm
Height	60 mm
Depth	60.5 mm

## Weights

Weight, approx.	130 g
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**last modified:** 03/07/2017