



SIMATIC DP, Electronic modules for ET 200 PRO 4 DIO/4 DO 24 V DC, 0.5A Module diagnostics; incl. bus module, Connection module IO 6ES7194-4CB50-0AA0 order separately

Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes; Against destruction; encoder power supply outputs applied with reversed polarity
Load voltage 2L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>Short-circuit protection</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Reverse polarity protection</li> </ul>	Yes; against destruction; load increasing
Input current	
from supply voltage 1L+, max.	20 mA
from load voltage 2L+ (without load), max.	20 mA
from backplane bus 3.3 V DC, max.	30 mA
Encoder supply	
Short-circuit protection	Yes; per module, electronic
Output current	
<ul style="list-style-type: none"> <li>up to 55 °C, max.</li> </ul>	1 A
Power loss	
Power loss, typ.	3 W
Digital inputs	
Number of digital inputs	4; 4 DI0s can be parameterized
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 55 °C, max.	4
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>	-3 to +5V
<ul style="list-style-type: none"> <li>for signal "1"</li> </ul>	+11 to +30V
Input current	
<ul style="list-style-type: none"> <li>for signal "1", typ.</li> </ul>	7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", min.	1.2 ms
— at "0" to "1", max.	4.8 ms
— at "1" to "0", min.	1.2 ms
— at "1" to "0", max.	4.8 ms
Cable length	
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	30 m

Digital outputs	
Number of digital outputs	8; 4 DO fixed, 4 DIO parameterizable
<ul style="list-style-type: none"> <li>in groups of</li> </ul>	4; 2 load groups for 4 outputs each
Short-circuit protection	Yes; per channel, electronic
<ul style="list-style-type: none"> <li>Response threshold, typ.</li> </ul>	0.7 A
Limitation of inductive shutdown voltage to	Typ. (L1+, L2+) -47 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
Load resistance range	
<ul style="list-style-type: none"> <li>lower limit</li> </ul>	48 Ω
<ul style="list-style-type: none"> <li>upper limit</li> </ul>	4 kΩ
Output voltage	
<ul style="list-style-type: none"> <li>for signal "1", min.</li> </ul>	2L+ (-0,8 V)
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>for signal "0" residual current, max.</li> </ul>	0.5 mA
Parallel switching of two outputs	
<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
Switching frequency	
<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>	1 Hz
Total current of the outputs (per group)	
all mounting positions	
— up to 55 °C, max.	2 A
Cable length	
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	30 m
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> <li>2-wire sensor</li> </ul>	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
<ul style="list-style-type: none"> <li>Diagnostic alarm</li> </ul>	Yes
Diagnoses	
<ul style="list-style-type: none"> <li>Diagnostic information readable</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Short-circuit</li> </ul>	Yes; Short-circuit of outputs to ground; module by module
Diagnostics indication LED	
<ul style="list-style-type: none"> <li>Group error SF (red)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Status indicator digital input (green)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Status indicator digital output (green)</li> </ul>	Yes
Potential separation	
between backplane bus and all other circuit components	Yes
Potential separation digital inputs	
<ul style="list-style-type: none"> <li>between the channels</li> </ul>	No
<ul style="list-style-type: none"> <li>between the channels and backplane bus</li> </ul>	Yes
Potential separation digital outputs	
<ul style="list-style-type: none"> <li>between the channels and backplane bus</li> </ul>	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety-related tripping of standard modules	Yes
Highest safety class achievable for safety-related tripping of standard modules	
<ul style="list-style-type: none"> <li>Performance level according to ISO 13849-1</li> </ul>	PL d
<ul style="list-style-type: none"> <li>Category according to ISO 13849-1</li> </ul>	Cat. 3

- SIL acc. to IEC 62061

SIL 2

#### Dimensions

Width	45 mm
Height	130 mm
Depth	35 mm

#### Weights

Weight, approx.	140 g
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**last modified:**

3/7/2022 