



Figure similar

SIMATIC S7-300, Digital output SM 322, isolated, 8 DO, 24 V DC, 0.5A (1x 8 DO), Short-circuit protection diagnostics, 1x 20-pole

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• permissible range, lower limit (DC)	20.4 V
• permissible range, upper limit (DC)	28.8 V
Input current	
from load voltage L+ (without load), max.	90 mA
from backplane bus 5 V DC, max.	70 mA
Power loss	
Power loss, typ.	5 W
Digital outputs	
Number of digital outputs	8
Short-circuit protection	Yes; Electronic
• Response threshold, typ.	0.75 to 1.5 A
Limitation of inductive shutdown voltage to	L+ (-45 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
• on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
• upper limit	3 kΩ
Output voltage	
• for signal "1", min.	L+ (-0.8 to -1.6 V)
Output current	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range for 0 to 40 °C, min.	10 mA
• for signal "1" permissible range for 0 to 40 °C, max.	0.6 A
• for signal "1" permissible range for 40 to 60 °C, min.	10 mA
• for signal "1" permissible range for 40 to 60 °C, max.	0.6 A
• for signal "1" minimum load current	10 mA
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", max.	180 μs
• "1" to "0", max.	245 μs
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	Outputs with series diodes only
Switching frequency	
• with resistive load, max.	100 Hz

<ul style="list-style-type: none"> <li>• with inductive load, max.</li> </ul>	2 Hz
<ul style="list-style-type: none"> <li>• with inductive load (acc. to IEC 60947-5-1, DC13), max.</li> </ul>	2 Hz
<ul style="list-style-type: none"> <li>• on lamp load, max.</li> </ul>	10 Hz
<b>Total current of the outputs (per group)</b>	
horizontal installation	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	3 A
vertical installation	
— up to 40 °C, max.	4 A
<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>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes; Parameterizable
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes; Parameterizable
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Diagnostic information readable</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Wire-break</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Short-circuit</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Fuse blown</li> </ul>	No
<ul style="list-style-type: none"> <li>• missing load voltage</li> </ul>	Yes
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• Rated load voltage PWR (green)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Fuse OK FSG (green)</li> </ul>	No
<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; per channel
<ul style="list-style-type: none"> <li>• Channel fault indicator F (red)</li> </ul>	Yes
<b>Potential separation</b>	
Potential separation digital outputs	
<ul style="list-style-type: none"> <li>• between the channels, in groups of</li> </ul>	8
<ul style="list-style-type: none"> <li>• between the channels and backplane bus</li> </ul>	Yes; Optocoupler
<b>Isolation</b>	
Isolation tested with	500 V DC
<b>connection method</b>	
required front connector	20-pin
<b>Dimensions</b>	
Width	40 mm
Height	125 mm
Depth	120 mm
<b>Weights</b>	
Weight, approx.	210 g
<b>last modified:</b>	3/12/2024 