



SIMATIC S7-300, Digital output SM 322 High Speed, isolated, 16 DO, 24 V DC, 0.5A, 1x 20-pole

Figure similar

Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
<ul style="list-style-type: none"> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
Input current	
from load voltage L+ (without load), max.	110 mA
from backplane bus 5 V DC, max.	70 mA
Power loss	
Power loss, typ.	5 W
Digital outputs	
Number of digital outputs	16
Short-circuit protection	Yes; Electronic
<ul style="list-style-type: none"> <li>Response threshold, typ.</li> </ul>	1 A
Limitation of inductive shutdown voltage to	L+ (-53 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>	L+ (-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 "1" permissible range for 0 to 40 °C, min.</li> </ul>	5 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 0 to 40 °C, max.</li> </ul>	0.6 A
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 40 to 60 °C, min.</li> </ul>	5 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 40 to 60 °C, max.</li> </ul>	0.6 A
<ul style="list-style-type: none"> <li>for signal "1" minimum load current</li> </ul>	5 mA
<ul style="list-style-type: none"> <li>for signal "0" residual current, max.</li> </ul>	0.5 mA
Output delay with resistive load	
<ul style="list-style-type: none"> <li>"0" to "1", max.</li> </ul>	100 μs
<ul style="list-style-type: none"> <li>"1" to "0", max.</li> </ul>	200 μs
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; only outputs of the same group

<b>Switching frequency</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> </ul>	1 000 Hz
<ul style="list-style-type: none"> <li>• with inductive load, max.</li> </ul>	0.5 Hz
<ul style="list-style-type: none"> <li>• with inductive load (acc. to IEC 60947-5-1, DC13), max.</li> </ul>	0.5 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>	
<b>horizontal installation</b>	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	3 A
<b>vertical installation</b>	
— up to 40 °C, max.	2 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>	
Alarms	No
Diagnostics function	No
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	No
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Wire-break</li> </ul>	No
<ul style="list-style-type: none"> <li>• Short-circuit</li> </ul>	No
<ul style="list-style-type: none"> <li>• Fuse blown</li> </ul>	No
<ul style="list-style-type: none"> <li>• missing load voltage</li> </ul>	No
<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>• Status indicator digital output (green)</li> </ul>	Yes; per channel
<b>Potential separation</b>	
<b>Potential separation digital outputs</b>	
<ul style="list-style-type: none"> <li>• between the channels</li> </ul>	Yes
<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 / header</b>	
required front connector	20-pin
<b>Dimensions</b>	
Width	40 mm
Height	125 mm
Depth	120 mm
<b>Weights</b>	
Weight, approx.	200 g
<b>last modified:</b>	1/16/2021 