



SIMATIC S7-300, Digital output SM 322, isolated, 8 DO, 48-125 V DC, 1.5A, 1x 20-pole

Figure similar

Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	48 V; 48 V DC to 125 V DC
<ul style="list-style-type: none"> <li>permissible range, lower limit (DC)</li> </ul>	40 V
<ul style="list-style-type: none"> <li>permissible range, upper limit (DC)</li> </ul>	140 V
<ul style="list-style-type: none"> <li>Reverse polarity protection</li> </ul>	Yes; through fuse
Input current	
from load voltage L+ (without load), max.	2 mA
from backplane bus 5 V DC, max.	100 mA
Power loss	
Power loss, typ.	7.2 W
Digital outputs	
Number of digital outputs	8
Short-circuit protection	Yes; Electronic
<ul style="list-style-type: none"> <li>Response threshold, typ.</li> </ul>	4.4 A
Limitation of inductive shutdown voltage to	M (-1 V)
Controlling a digital input	Yes
Spare fuses	6.3 A / 250 V, quick-response, 5x 20 mm
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	15 W; 15 W (48 V) or 40 W (125 V)
Output voltage	
<ul style="list-style-type: none"> <li>for signal "1", min.</li> </ul>	L+ (-1.2 V)
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>	1.5 A
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 0 to 40 °C, min.</li> </ul>	10 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 0 to 40 °C, max.</li> </ul>	1.5 A
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 40 to 60 °C, min.</li> </ul>	10 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 40 to 60 °C, max.</li> </ul>	1.5 A
<ul style="list-style-type: none"> <li>for signal "1" minimum load current</li> </ul>	10 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible surge current, max.</li> </ul>	3 A; for 10 ms
<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>	2 ms
<ul style="list-style-type: none"> <li>"1" to "0", max.</li> </ul>	15 ms
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>	25 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.	6 A
— up to 50 °C, max.	4 A
— up to 60 °C, max.	3 A
<b>vertical installation</b>	
— 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>	
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>• Group error SF (red)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Status indicator digital output (green)</li> </ul>	Yes
<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>	4
<ul style="list-style-type: none"> <li>• between the channels and backplane bus</li> </ul>	Yes; Optocoupler
<b>Isolation</b>	
Isolation tested with	1 500 V AC
<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.	250 g
<b>last modified:</b>	1/16/2021 