



SIMATIC S7-300, Digital output SM 322 High Speed, isolated, 16 DO, 24 V DC, 0.5A, 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.	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
• Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	L+ (-53 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	4 kΩ
Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range for 0 to 40 °C, min.	5 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.	5 mA
• for signal "1" permissible range for 40 to 60 °C, max.	0.6 A
• for signal "1" minimum load current	5 mA
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", max.	100 μs
• "1" to "0", max.	200 μs
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	Yes; only outputs of the same group
Switching frequency	
• with resistive load, max.	1 000 Hz
• with inductive load, max.	0.5 Hz

<ul style="list-style-type: none"> <li>with inductive load (acc. to IEC 60947-5-1, DC13), max.</li> <li>on lamp load, max.</li> </ul>	0.5 Hz 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.	2 A
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>shielded, max.</li> <li>unshielded, max.</li> </ul>	1 000 m 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> <li>Short-circuit</li> <li>Fuse blown</li> <li>missing load voltage</li> </ul>	No No No No
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>Rated load voltage PWR (green)</li> <li>Fuse OK FSG (green)</li> <li>Status indicator digital output (green)</li> </ul>	No No Yes; per channel
<b>Potential separation</b>	
Potential separation digital outputs	
<ul style="list-style-type: none"> <li>between the channels</li> <li>between the channels, in groups of</li> <li>between the channels and backplane bus</li> </ul>	Yes 8 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.	200 g

**last modified:** 3/12/2024 