



SIMATIC S7-300, Digital output SM 322, isolated, 32 DO, 24 V DC, 0.5A, 1x 40-pole, Total current 4 A/group (16 A/module)

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.	160 mA
from backplane bus 5 V DC, max.	110 mA
Power loss	
Power loss, typ.	6.6 W
Digital outputs	
Number of digital outputs	32
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.	500 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.	100 Hz
• with inductive load, max.	0.5 Hz

• with inductive load (acc. to IEC 60947-5-1, DC13), max. • on lamp load, max.	0.5 Hz 10 Hz		
Total current of the outputs (per group)			
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		
Cable length			
• shielded, max.	1 000 m		
• unshielded, max.	600 m		
Interrupts/diagnostics/status information			
Alarms	No		
Diagnostics function	No		
Alarms			
• Diagnostic alarm	No		
Diagnoses			
• Diagnostic information readable	No		
• Wire-break	No		
• Short-circuit	No		
• missing load voltage	No		
Diagnostics indication LED			
• Rated load voltage PWR (green)	No		
• Fuse OK FSG (green)	No		
• Group error SF (red)	No		
• Status indicator digital output (green)	Yes; per channel		
• Channel fault indicator F (red)	No		
Potential separation			
Potential separation digital outputs			
• between the channels	Yes		
• between the channels, in groups of	8		
• between the channels and backplane bus	Yes; Optocoupler		
Isolation			
Isolation tested with	500 V DC		
connection method			
required front connector	40-pin		
Dimensions			
Width	40 mm		
Height	125 mm		
Depth	120 mm		
Weights			
Weight, approx.	260 g		
Classifications			
		Version	Classification
	eClass	14	27-24-22-04
	eClass	12	27-24-22-04
	eClass	9.1	27-24-22-04
	eClass	9	27-24-22-04
	eClass	8	27-24-22-04
	eClass	7.1	27-24-22-04
	eClass	6	27-24-22-04
	ETIM	9	EC001419
	ETIM	8	EC001419
	ETIM	7	EC001419
	IDEA	4	3566
	UNSPSC	15	32-15-17-05
Approvals / Certificates			

General Product Approval



[Manufacturer Declaration](#)

[Miscellaneous](#)



EMV



[EM](#)



For use in hazardous locations



[Miscellaneous](#)

[CCC-Ex](#)



Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

last modified:

4/7/2025