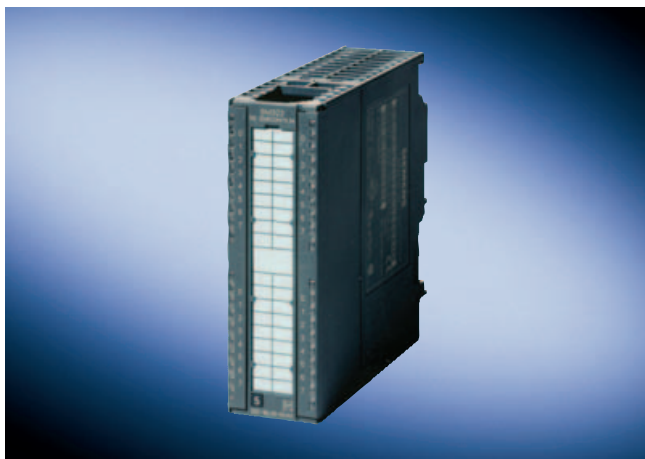


SIMATIC S7-300

Digital modules

SM 322 digital output modules

Overview



- Digital outputs
- For connecting solenoid valves, contactors, low-power motors, lamps and motor starters

Technical specifications

	6ES7 322-1BH01-0AA0	6ES7 322-1BH10-0AA0	6ES7 322-1BL00-0AA0	6ES7 322-8BF00-0AB0	6ES7 322-5GH00-0AB0	6ES7 322-1CF00-0AA0
Voltages and currents						
Load voltage L+						
• Rated value (DC)	24 V	24 V	24 V	24 V	24 V; 24/48	48 V; 48 to 125 V DC
Current consumption						
from load voltage L+ (without load), max.	80 mA	110 mA	160 mA	90 mA	200 mA	2 mA
from backplane bus DC 5 V, max.	80 mA	70 mA	110 mA	70 mA	100 mA	100 mA
Power loss, typ.	4.9 W	5 W	6.6 W	5 W	2.8 W	7.2 W
Connection point						
required front connectors	20-pin	20-pin	40-pin	20-pin	40-pin	20-pin
Digital outputs						
Number of digital outputs	16	16	32	8	16	8
Cable length, shielded, max.	1,000 m	1,000 m	1,000 m	1,000 m	1,000 m	1,000 m
Cable length unshielded, max.	600 m	600 m	600 m	600 m	600 m	600 m
Short-circuit protection of the output	Yes; electronic	Yes; electronic	Yes; electronic	Yes; electronic	No; to be provided externally	Yes; electronic
Limitation of inductive shutdown voltage to	L+ (-53 V)	L+ (-53 V)	L+ (-53 V)	L+ (-45 V)		M (-1V)
Lamp load, max.	5 W	5 W	5 W	5 W	2.5 W	15 W; 15 W (48 V) or 40 W (125 V)
Output voltage						
• for signal "1", min.	L+ (-0.8 V)	L+ (-0.8 V)	L+ (-0.8 V)	L+ (-0.8 V to -1.6 V)	L+ (-0.25 V)	L+ (-1.2 V)
Output current						
• for signal "1" rated value	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A	1.5 A
• for signal "1" permissible range for 0 to 40 °C, min.	5 mA	5 mA	5 mA	10 mA		10 mA
• for signal "1" permissible range for 0 to 40 °C, max.	0.6 A	0.6 A	0.6 A	0.6 A		1.5 A
• for signal "1" permissible range for 40 to 60 °C, min.	5 mA	5 mA	5 mA	10 mA		10 mA
• for signal "1" permissible range for 40 to 60 °C, max.	0.6 A	0.6 A	0.6 A	0.6 A		1.5 A

Technical specifications (continued)

	6ES7 322-1BH01-0AA0	6ES7 322-1BH10-0AA0	6ES7 322-1BL00-0AA0	6ES7 322-8BF00-0AB0	6ES7 322-5GH00-0AB0	6ES7 322-1CF00-0AA0
Output current (continued)						
• for signal "1" minimum load current	5 mA	5 mA	5 mA	10 mA		10 mA
• for signal "1" permissible peak current, max.					1.5 A; for 50 ms, 1 A ² s one-time	3 A; for 10 ms
• for signal "0" residual current, max.	0.5 mA	0.5 mA	0.5 mA	0.5 mA	10 µA	0.5 mA
Switching frequency						
• with resistive load, max.	100 Hz	1,000 Hz	100 Hz	100 Hz	10 Hz	25 Hz
• with inductive load, max.	0.5 Hz	0.5 Hz	0.5 Hz	2 Hz		0.5 Hz
• on lamp load, max.	10 Hz	10 Hz	10 Hz	10 Hz	0.5 Hz	10 Hz
Aggregate current of the outputs (per group)						
• vertical installation - up to 40 °C, max.	2 A	2 A	2 A	4 A		4 A
• horizontal installation - up to 40 °C, max.	4 A	4 A	4 A	4 A		6 A
- up to 50 °C, max.						4 A
- up to 60 °C, max.	3 A	3 A	3 A	3 A	0.5 A	3 A
• all other mounting positions - up to 40 °C, max.					0.5 A	
Status information/alarms/diagnostics						
Alarms						
• Diagnostic alarm	No	No	No	Yes; channel by channel	Yes; parameterizable	No
Diagnoses						
• Diagnostics	No	No	No	Yes	Yes; Parameters can be assigned	No
Isolation						
Isolation checked with	500 V DC	500 V DC	500 V DC	500 V DC	1500 V AC	1500 V AC
Isolation						
Isolation, digital outputs						
• between the channels, in groups of	8	8	8	8	1	4
• between the channels and the backplane bus	Yes; Optocoupler	Yes; Optocoupler	Yes; Optocoupler	Yes; Optocoupler	Yes; Optocoupler	Yes; Optocoupler
Dimensions and weight						
Width	40 mm	40 mm	40 mm	40 mm	40 mm	40 mm
Height	125 mm	125 mm	125 mm	125 mm	125 mm	125 mm
Depth	120 mm	120 mm	120 mm	120 mm	120 mm	120 mm
Weights						
Weight, approx.	190 g	200 g	260 g	210 g	260 g	250 g
	6ES7 322-1BF01-0AA0	6ES7 322-1FF01-0AA0	6ES7 322-5FF00-0AB0	6ES7 322-1FH00-0AA0	6ES7 322-1FL00-0AA0	6ES7 322-1HF01-0AA0
Voltages and currents						
Load voltage L+						
• Rated value (DC)	24 V					24 V
Load voltage L1						
• Rated value (AC)		230 V; 120/230 V AC	230 V; 120/230 V AC	230 V; 120/230 V AC	230 V; 120/230 V AC	