

SIMATIC S7-400 advanced controller

Digital modules

SM 422 digital output module

1

Overview



- Digital outputs for the SIMATIC S7-400
- For connecting solenoid valves, contactors, low-power motors, lamps and motor starters

Technical specifications

Article number	6ES7422-1FH00-0AA0	6ES7422-1HH00-0AA0	6ES7422-1BH11-0AA0	6ES7422-1BL00-0AA0	6ES7422-7BL00-0AB0
	SM422, 16DO, AC 120/230V, 2A	SM422, 16DO, AC5-230V, 5A RELAY	SM422, 16DO, DC24V, 2A	SM422, 32DO, DC24V, 0,5A	SM422, 32DO, DC24V, 0,5A
Product type designation					
Supply voltage					
Load voltage L+					
• Rated value (DC)		60 V	24 V	24 V	24 V
• permissible range, lower limit (DC)		1 V	20.4 V	20.4 V	20.4 V
• permissible range, upper limit (DC)		60 V	28.8 V	28.8 V	28.8 V
Load voltage L1					
• Rated value (AC)	230 V; 120/230V AC	230 V			
• permissible range, lower limit (AC)	79 V	2 V			20.4 V
• permissible range, upper limit (AC)	264 V	264 V			28.8 V
Input current					
from load voltage L+ (without load), max.	1.5 mA		30 mA	30 mA	120 mA
from load voltage L1 (without load), max.	6 mA				
from backplane bus 5 V DC, max.	400 mA	1 A	160 mA	200 mA	200 mA
Power losses					
Power loss, max.	16 W	25 W	7 W	4 W	8 W
Digital outputs					
Number of digital outputs	16	16; Relays	16	32	32
Limitation of inductive shutdown voltage to			-30 V	-27 V	L+ (-45 V)
Switching capacity of the outputs					
• on lamp load, max.	50 W	60 W	10 W	5 W	5 W
Output voltage					
• for signal *I*, min.	L1 (-18.1 V)		L+ (-0.5 V)	L+ (-0.3 V)	L+ (-0.8 V)

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Technical specifications (continued)

Article number	6ES7422-1FH00-0AA0 SM422, 16DO, AC120/230V, 2A	6ES7422-1HH00-0AA0 SM422, 16DO, AC5-230V, 5A RELAY	6ES7422-1BH11-0AA0 SM422, 16DO, DC24V, 2A	6ES7422-1BL00-0AA0 SM422, 32DO, DC24V, 0,5A	6ES7422-7BL00-0AB0 SM422, 32DO, DC24V, 0,5A
Output current					
• for signal "1" rated value	2 A	5 A	2 A	0.5 A	0.5 A
• for signal "1" permissible range for 0 to 60 °C, min.	10 mA		5 mA	5 mA	5 mA
• for signal "1" permissible range for 0 to 60 °C, max.			2.4 A	0.6 A	0.6 A
• for signal "0" residual current, max.	2.6 mA		0.5 mA	0.3 mA	0.5 mA
Switching frequency					
• with resistive load, max.	10 Hz	10 Hz	100 Hz	100 Hz	100 Hz
• with inductive load, max.	0.5 Hz		0.1 Hz	0.5 Hz	2 Hz
Aggregate current of outputs (per group)					
all mounting positions					
- up to 60 °C, max.	2 A; 5 A with fan subassembly; per 4 adjacent outputs	5 mA; 10 A with fan subassembly	2 A; 2 adjacent outputs each	2 A; 8 adjacent outputs each	2 A
Relay outputs					
• Number of operating cycles, max.		100 000; 100 000 (AC 15 / DC 13); 3 000 000 mechanical			
Switching capacity of contacts					
- with inductive load, max.		5 A; 5 A (30 V DC); 5 A (230 V AC)			
- with resistive load, max.		5 A; 5 A (30 V DC); 5 A (230 V AC); 1.2 A (60 V DC); 0.2 A (125 V DC)			
Cable length					
• shielded, max.	1 000 m	1 000 m	1 000 m	1 000 m	1 000 m
• Unshielded, max.	600 m	600 m	600 m	600 m	600 m
Interrupts/diagnostics/ status information					
Alarms					
• Diagnostic alarm					Yes; Parameterizable
Diagnostic messages					
• Diagnostics					Yes; internal/ external fault
Galvanic isolation					
Galvanic isolation digital outputs					
• between the channels, in groups of	4	2	8	32	8
• between the channels and the backplane bus	Yes	Yes	Yes	Yes	Yes
Isolation					
Isolation checked with	1500 V AC	1500 V AC	500 V DC	500 V DC	500 V DC
Dimensions					
Width	25 mm	25 mm	25 mm	25 mm	25 mm
Height	290 mm	290 mm	290 mm	290 mm	290 mm
Depth	210 mm	210 mm	210 mm	210 mm	210 mm
Weights					
Weight, approx.	800 g	700 g	600 g	600 g	600 g

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1

Ordering data	Article No.		Article No.
SM 422 digital output modules		Labeling sheets for machine inscription	
16 outputs, 24 V DC; 2 A	6ES7422-1BH11-0AA0	DIN A4, for printing using laser printer; pack of 10	
32 outputs, 24 V DC; 0.5 A	6ES7422-1BL00-0AA0	petrol	6ES7492-2AX00-0AA0
32 outputs, 24 V DC, 0.5 A; with diagnostics	6ES7422-7BL00-0AB0	light-beige	6ES7492-2BX00-0AA0
16 outputs, 120/230 V AC; 2 A	6ES7422-1FH00-0AA0	yellow	6ES7492-2CX00-0AA0
16 outputs, relay contacts	6ES7422-1HH00-0AA0	red	6ES7492-2DX00-0AA0
Front connector		SIMATIC Manual Collection	6ES7998-8XC01-8YE0
48-pin		Electronic manuals on DVD, multilingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC	
• with screw contacts, 1 unit	6ES7492-1AL00-0AA0		
• with screw contacts, 84 units	6ES7492-1AL00-1AB0		
• with spring-loaded terminals, 1 unit	6ES7492-1BL00-0AA0		
• with crimp contacts, 1 unit	6ES7492-1CL00-0AA0		
• with crimp contacts, 84 units	6ES7492-1CL00-1AB0		
Cover film for labeling strips	6ES7492-2XX00-0AA0	SIMATIC Manual Collection update service for 1 year	6ES7998-8XC01-8YE2
Spare part		Current "Manual Collection" DVD and the three subsequent updates	