

SIMATIC S7-400, digital output SM 422, isolated 32 DO; 24 V DC, 0.5 A with 0.15 ms output delay, diagnostics



Figure similar

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.	120 mA
from backplane bus 5 V DC, max.	200 mA
Power loss	
Power loss, typ.	8 W
Digital outputs	
Number of digital outputs	32
Short-circuit protection	Yes; Clocked electronically
• Response threshold, typ.	0.75 to 1.5 A
Limitation of inductive shutdown voltage to	L+ (-45 V)
Controlling a digital input	Yes; possible

<b>Switching capacity of the outputs</b>	
• on lamp load, max.	5 W
<b>Load resistance range</b>	
• lower limit	48 Ω
• upper limit	4 kΩ
<b>Output voltage</b>	
• for signal "1", min.	L+ (-0.8 V)
<b>Output current</b>	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, min.	5 mA
• for signal "1" permissible range, max.	600 A
• for signal "0" residual current, max.	0.5 mA
<b>Parallel switching of two outputs</b>	
• for uprating	Yes; possible (only outputs of the same group)
• for redundant control of a load	Yes; possible (only outputs of the same group)
<b>Switching frequency</b>	
• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
• with inductive load (acc. to IEC 60947-5-1, DC13), max.	2 Hz
• on lamp load, max.	2 Hz
<b>Total current of the outputs (per group)</b>	
all mounting positions	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	2 A
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes; Parameterizable
<b>Alarms</b>	
• Diagnostic alarm	Yes; Parameterizable
• Hardware interrupt	Yes; Parameterizable
<b>Diagnostic messages</b>	
• Diagnostic information readable	Yes
• Wire-break	Yes; <0.15 mA
• Short-circuit	Yes; > 1 A (typ.)
<b>Diagnostics indication LED</b>	
• internal fault INTF (red)	Yes
• external fault EXTf (red)	Yes
• Status indicator digital output (green)	Yes

## Potential separation

### Potential separation digital outputs

- |  |     |
|--|-----|
| • between the channels                   | Yes |
| • between the channels, in groups of     | 8   |
| • between the channels and backplane bus | Yes |

## Isolation

Isolation tested with	500 V DC
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## Dimensions

Width	25 mm
Height	290 mm
Depth	210 mm

## Weights

Weight, approx.	600 g
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<b>last modified:</b>	06/09/2020
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