



SIMATIC S7-400, digital output SM 422, isolated 16 DO; 120/230 V AC, 2 A

Figure similar

Supply voltage	
Load voltage L1	
<ul style="list-style-type: none"> <li>Rated value (AC)</li> </ul>	230 V; 120/230 V AC
<ul style="list-style-type: none"> <li>permissible range, lower limit (AC)</li> </ul>	79 V
<ul style="list-style-type: none"> <li>permissible range, upper limit (AC)</li> </ul>	264 V
<ul style="list-style-type: none"> <li>permissible frequency range, lower limit</li> </ul>	47 Hz
<ul style="list-style-type: none"> <li>permissible frequency range, upper limit</li> </ul>	63 Hz
Input current	
from load voltage L+ (without load), max.	1.5 mA
from backplane bus 5 V DC, max.	400 mA
Power loss	
Power loss, typ.	16 W
Digital outputs	
Number of digital outputs	16
Short-circuit protection	Yes; Clocked electronically: Following a short-circuit, reclosing under a full load cannot be ensured. Countermeasures: change the signal at the output or interrupt the load voltage of the module. Briefly disconnect the load from the output.
<ul style="list-style-type: none"> <li>required current for fuse shutdown, min.</li> </ul>	100 A
<ul style="list-style-type: none"> <li>Response time, max.</li> </ul>	100 ms
Controlling a digital input	Yes; possible
Size of motor starters according to NEMA, max.	Size 5 according to NEMA
Spare fuses	Fuse 8 A, 250 V, quick response
Zero-crossing switch	No
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	50 W
Output voltage	
<ul style="list-style-type: none"> <li>for signal "1", min.</li> </ul>	L1 (-18.1 V)
<ul style="list-style-type: none"> <li>for signal "1" (at max. current), min.</li> </ul>	L1 (-1.3 Vrms)
<ul style="list-style-type: none"> <li>for signal "1" (at min. current), min.</li> </ul>	L1 (-18.1 Vrms)
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>for signal "1" permissible range, min.</li> </ul>	10 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible range, max.</li> </ul>	2 A
<ul style="list-style-type: none"> <li>for signal "1" permissible surge current, max.</li> </ul>	50 A; per cycle
<ul style="list-style-type: none"> <li>for signal "0" residual current, max.</li> </ul>	2.6 mA
Output delay with resistive load	
<ul style="list-style-type: none"> <li>"0" to "1", max.</li> </ul>	1 ms
<ul style="list-style-type: none"> <li>"1" to "0", max.</li> </ul>	1 AC cycle

<b>Parallel switching of two outputs</b>	
• for redundant control of a load	Yes; Possible (only outputs with the same load voltage)
<b>Switching frequency</b>	
• with resistive load, max.	10 Hz
• with inductive load, max.	0.5 Hz
• with inductive load (acc. to IEC 60947-5-1, AC15), max.	0.5 Hz
• on lamp load, max.	1 Hz
<b>Total current of the outputs (per group)</b>	
all mounting positions	
— up to 40 °C, max.	4 A; 6 A with fan assembly
— up to 60 °C, max.	2 A; 5 A with fan subassembly; per 4 adjacent outputs
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Not parameterizable
<b>Diagnostics indication LED</b>	
• internal fault INTF (red)	Yes; Fuse blown
• external fault EXTf (red)	Yes; Missing load voltage
<b>Potential separation</b>	
Potential separation digital outputs	
• between the channels	Yes
• between the channels, in groups of	4
• between the channels and backplane bus	Yes
<b>Isolation</b>	
Isolation tested with	1 500 V AC
<b>Dimensions</b>	
Width	25 mm
Height	290 mm
Depth	210 mm
<b>Weights</b>	
Weight, approx.	800 g
<b>Classifications</b>	

	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	10	EC001419
ETIM	9	EC001419
ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

**Approvals / Certificates**  
**General Product Approval**

[Miscellaneous](#)



General Product Approval	EMV	For use in hazardous locations
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[China RoHS](#)

[Miscellaneous](#)



[FM](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application



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

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