## **SIEMENS**

## **Data sheet**

## 6ES7422-1FH00-0AA0



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

Figure similar

Supply voltage		
Load voltage L1		
Rated value (AC)	230 V; 120/230 V AC	
permissible range, lower limit (AC)	79 V	
permissible range, lower limit (AC)     permissible range, upper limit (AC)	264 V	
permissible range, upper limit (AC)     permissible frequency range, lower limit	47 Hz	
permissible frequency range, lower limit     permissible frequency range, upper limit	63 Hz	
Input current	00112	
from load voltage L+ (without load), max.	1.5 mA	
from backplane bus 5 V DC, max.	400 mA	
Power loss	TOO IIIA	
Power loss, typ.	16 W	
Digital outputs	10 W	
Number of digital outputs	16	
Short-circuit protection	Yes; Fuse 8 A, 250 V; per group	
required current for fuse shutdown, min.	100 A	
Response time, max.	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		
• on lamp load, max.	50 W	
Output voltage		
• for signal "1", min.	L1 (-18.1 V)	
• for signal "1" (at max. current), min.	L1 (-1.3 Vrms)	
<ul><li>for signal "1" (at min. current), min.</li></ul>	L1 (-18.1 Vrms)	
Output current		
for signal "1" rated value	2 A	
• for signal "1" permissible range, min.	10 mA	
<ul><li>for signal "1" permissible range, max.</li></ul>	2 A	
• for signal "1" permissible surge current, max.	50 A; per cycle	
<ul><li>for signal "0" residual current, max.</li></ul>	2.6 mA	
Output delay with resistive load		
• "0" to "1", max.	1 ms	
• "1" to "0", max.	1 AC cycle	
Parallel switching of two outputs		
for redundant control of a load	Yes; Possible (only outputs with the same load voltage)	
Switching frequency		

with inductive load, max.     with inductive load (acc. to IEC 60947-5-1, AC15), max.     with inductive load (acc. to IEC 60947-5-1, AC15), max.     von lamp load, max.  I Hz  Total current of the outputs (per group)  all mounting positions	- with reciptive load recy	40.11=
with inductive load (acc. to IEC 60947-5-1, AC15), max.     on lamp load, max.  1 Hz  Total current of the outputs (per group)  all mounting positions	with resistive load, max.	10 Hz
on lamp load, max.     Total current of the outputs (per group)  all mounting positions      — up to 40 °C, max.     — up to 60 °C, max.     2 A; 5 A with fan assembly; per 4 adjacent outputs  Cable length      • shielded, max.     • unshielded, max.     • unshielded, max.     • foo m  Interrupts/diagnostics/status information  Diagnostics function  Diagnostics indication LED      • internal fault INTF (red)     • external fault EXTF (red)     Yes; Fuse blown      • external fault EXTF (red)  Potential separation  Potential separation digital outputs      • between the channels     • between the channels, in groups of     • between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  25 mm  Height	•	
Total current of the outputs (per group)  all mounting positions	•	
all mounting positions		1 Hz
- up to 40 °C, max up to 60 °C, max.  2 A; 5 A with fan assembly - up to 60 °C, max.  2 A; 5 A with fan subassembly; per 4 adjacent outputs  Cable length  • shielded, max. • unshielded, max. • unshielded, max.  1 000 m  Interrupts/diagnostics/status information  Diagnostics function  Diagnostics indication LED  • internal fault INTF (red) • external fault EXTF (red)  Potential separation  Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  4 A; 6 A with fan assembly 2 A; 5 A with fan assembly 2 A; 5 A with fan assembly 2 A; 6 A with fan subassembly; per 4 adjacent outputs  4 A; 6 A with fan subassembly; per 4 adjacent outputs  4 A; 6 A with fan subassembly; per 4 adjacent outputs  4 A (5 A with fan subassembly; per 4 adjacent outputs  4 A (5 A with fan subassembly; per 4 adjacent outputs  4 A (5 A with fan subassembly; per 4 adjacent outputs  4 A (5 A with fan subassembly; per 4 adjacent outputs  4 A (5 A with fan subassembly; per 4 adjacent outputs  4 A (5 A with fan subassembly; per 4 adjacent outputs  5 A with fan subassembly; per 4 adjacent outputs  5 A with fan subassembly; per 4 adjacent outputs  6 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; per 4 adjacent outputs  9 A (5 A with fan subassembly; pe		
— up to 60 °C, max.  Cable length  ● shielded, max. ● unshielded, max. 1 000 m  • unshielded, max. 600 m  Interrupts/diagnostics/status information  Diagnostics function  Diagnostics indication LED  ● internal fault INTF (red) • external fault EXTF (red)  Potential separation  Potential separation digital outputs  ● between the channels • between the channels, in groups of • between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  Height  25 mm  Height	all mounting positions	
Cable length  • shielded, max.  • unshielded, max.  1 000 m  Interrupts/diagnostics/status information  Diagnostics function  Diagnostics indication LED  • internal fault INTF (red) • external fault EXTF (red)  Potential separation  Potential separation digital outputs  • between the channels • between the channels, in groups of • between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  Height  1 500 m  1 000 m	— up to 40 °C, max.	4 A; 6 A with fan assembly
shielded, max.	— up to 60 °C, max.	2 A; 5 A with fan subassembly; per 4 adjacent outputs
unshielded, max.     lot on m  Interrupts/diagnostics/status information  Diagnostics function  Diagnostics indication LED      internal fault INTF (red)     ves; Fuse blown     external fault EXTF (red)  Potential separation  Potential separation  Potential separation digital outputs      between the channels     between the channels, in groups of     between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  25 mm  Height  Height	Cable length	
Interrupts/diagnostics/status information  Diagnostics function  Diagnostics indication LED  • internal fault INTF (red) • external fault EXTF (red)  Potential separation  Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  Height  25 mm  Height	<ul><li>shielded, max.</li></ul>	1 000 m
Diagnostics function  Diagnostics indication LED  internal fault INTF (red)  external fault EXTF (red)  Potential separation  Potential separation digital outputs  between the channels  between the channels, in groups of  between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  25 mm  Height  Aves; Fuse blown  Yes; Missing load voltage  Yes  4  4  5 botward  4  5 botward  1 500 V AC	• unshielded, max.	600 m
Diagnostics indication LED  • internal fault INTF (red) • external fault EXTF (red)  Potential separation  Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus  Isolation  Isolation tested with  Dimensions  Width  25 mm  Height  Pyes; Fuse blown  Yes; Missing load voltage  Yes  4   Yes  1 500 V AC	Interrupts/diagnostics/status information	
<ul> <li>internal fault INTF (red)</li> <li>external fault EXTF (red)</li> <li>Yes; Fuse blown</li> <li>Yes; Missing load voltage</li> </ul> Potential separation Potential separation digital outputs <ul> <li>between the channels</li> <li>between the channels, in groups of</li> <li>between the channels and backplane bus</li> </ul> Yes <ul> <li>between the channels and backplane bus</li> <li>Yes</li> </ul> Isolation Isolation tested with <ul> <li>1 500 V AC</li> </ul> Dimensions Width <ul> <li>25 mm</li> <li>Height</li> <li>290 mm</li> </ul>	Diagnostics function	Not parameterizable
external fault EXTF (red)  Potential separation  Potential separation digital outputs      • between the channels     • between the channels, in groups of     • between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  25 mm  Height  290 mm	Diagnostics indication LED	
Potential separation  Potential separation digital outputs  • between the channels • between the channels, in groups of • between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  25 mm  Height  290 mm	<ul><li>internal fault INTF (red)</li></ul>	Yes; Fuse blown
Potential separation digital outputs  • between the channels • between the channels, in groups of • between the channels and backplane bus  Isolation  Isolation tested with  Dimensions  Width  25 mm  Height  290 mm	<ul> <li>external fault EXTF (red)</li> </ul>	Yes; Missing load voltage
between the channels     between the channels, in groups of     between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  25 mm  Height  290 mm	Potential separation	
between the channels, in groups of     between the channels and backplane bus  Isolation  Isolation tested with  1 500 V AC  Dimensions  Width  25 mm  Height  290 mm	Potential separation digital outputs	
● between the channels and backplane bus  Isolation  Isolation tested with 1 500 V AC  Dimensions  Width 25 mm  Height 290 mm	<ul> <li>between the channels</li> </ul>	Yes
Isolation           Isolation tested with         1 500 V AC           Dimensions         Width           Wight         25 mm           Height         290 mm	<ul> <li>between the channels, in groups of</li> </ul>	4
Isolation tested with         1 500 V AC           Dimensions         Width           Wight         25 mm           Height         290 mm	<ul> <li>between the channels and backplane bus</li> </ul>	Yes
Dimensions           Width         25 mm           Height         290 mm	Isolation	
Width         25 mm           Height         290 mm	Isolation tested with	1 500 V AC
Height 290 mm	Dimensions	
	Width	25 mm
Depth 210 mm	Height	290 mm
<u>Σ10 ΙΙΙΙΙΙ</u>	Depth	210 mm
Weights	Weights	
Weight, approx. 800 g	Weight, approx.	800 g

last modified:

8/30/2023