MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7422-1FF00-0AA0

S7-400 SM 422 AC OUTPUT MODULE

Used with the applicable SIMATIC S7-400 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official technical documentation for 6ES7422-1FF00-0AA0

4.15 Digital output module SM 422; DO 16 x AC 120/230 V/2 A (6ES7422-1FF00-0AA0)

Properties

SM 422; DO 16 x AC 120/230 V/2 A has the following features:

- 16 outputs, isolated in groups of 4
- Output current 2 A
- Rated load voltage 120/230 V AC

The status LEDs indicate the system state even if the front connector is not connected.

Connection and circuit diagram for SM 422; DO 16 x AC 120/230 V/2 A

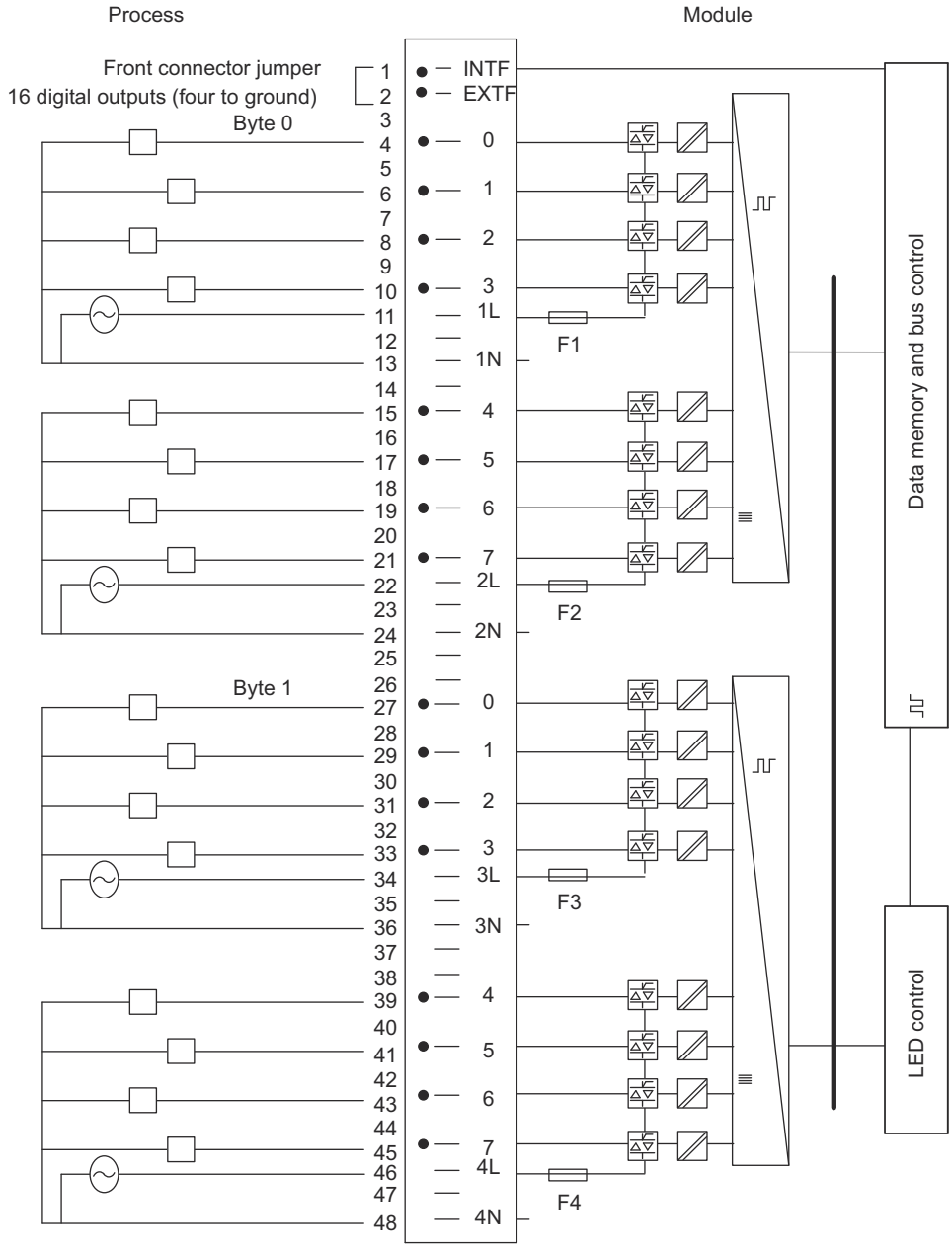


Figure 4-12 Connection and circuit diagram for SM 422; DO 16 x AC 120/230 V/2 A

Technical specifications for SM 422; DO 16 x AC 120/230 V/2 A

Article number	6ES7422-1FH00-0AA0
Supply voltage	
Load voltage L1	
• Rated value (AC)	230 V; 120/230 V AC
• permissible range, lower limit (AC)	79 V
• permissible range, upper limit (AC)	264 V
• permissible frequency range, lower limit	47 Hz
• permissible frequency range, upper limit	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; 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)
• for signal "1" (at min. current), min.	L1 (-18.1 Vrms)
Output current	
• for signal "1" rated value	2 A
• for signal "1" permissible range, min.	10 mA
• for signal "1" permissible range, max.	2 A
• for signal "1" permissible surge current, max.	50 A; per cycle
• for signal "0" residual current, max.	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 resistive load, max.	10 Hz

Article number	6ES7422-1FH00-0AA0
• 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
Total current of the outputs (per group)	
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
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Alarms	No
Diagnostics function	Not parameterizable
Diagnostics indication LED	
• internal fault INTF (red)	Yes; Fuse blown
• external fault EXTF (red)	Yes; Missing load voltage
Potential separation	
Potential separation digital outputs	
• between the channels	Yes
• between the channels, in groups of	4
• between the channels and backplane bus	Yes
Permissible potential difference	
between the outputs of different groups	500 V AC
Isolation	
Isolation tested with	1 500 V AC
Dimensions	
Width	25 mm
Height	290 mm
Depth	210 mm
Weights	
Weight, approx.	800 g