

3.29 Relay Output Module SM 322; DO 8 x Rel. 230 VAC/5A; (6ES7322-5HF00-0AB0)

Order number

6ES7322-5HF00-0AB0

Characteristics

Relay output module SM 322; DO 8 x Rel. 230 VAC/5A has the following distinguishing characteristics:

- 8 outputs, isolated in one group
- Load voltage 24 VDC to 120 VDC, 24 VAC to 230 VAC
- Suitable for AC solenoid valves, contactors, motor starters, fractional h.p. motors and indicator lights.
- An RC quenching element can be connected via a jumper (SJ) to protect the contacts.
- Group error display
- Channel-specific status LEDs
- Programmable diagnostic interrupt
- Programmable substitute value output

Protection of contacts against overvoltages

You protect the contacts against overvoltages by inserting jumpers (SJ) on the module between terminals 3 and 4, 7 and 8, 12 and 13 etc. (refer to Figure 3-32).

Terminal assignment and block diagram of the SM 322; DO 8 x Rel. 230 VAC/5A

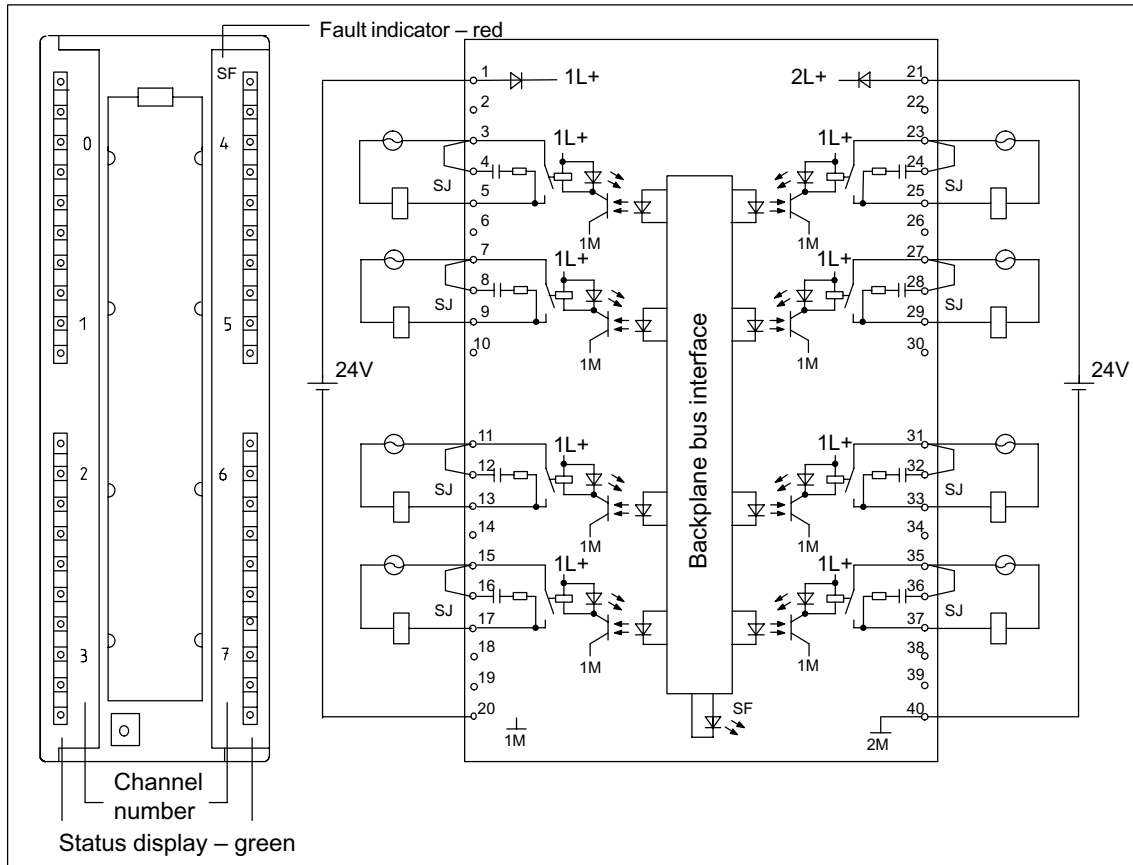


Figure 3-32 Module View and Block Diagram of the SM 322; DO 8 x Rel. 230 VAC/5A

Operation with safe electrical extra-low voltage

When using relay output module 6ES7322-5HF00-0AB0 with safe and electrically isolated extra-low voltage, take the following special characteristic into account:

If a terminal is operated with a safe and electrically isolated extra-low voltage, the horizontally adjacent terminal must be operated at a rated voltage of not more than 120 VUC. With operation at voltages greater than 120 VUC, the creepages and clearances of the 40-pin front connector do not meet the SIMATIC requirements for safe electrical isolation.

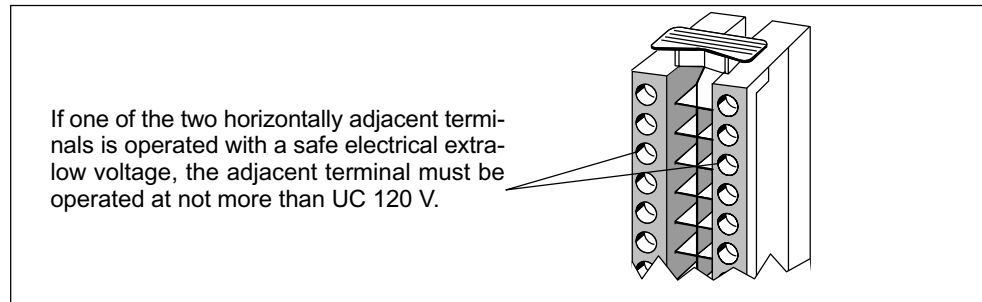


Figure 3-33 Special Characteristic for Operation with a Safe Electrical Extra-Low Voltage

Technical specifications of the SM 322; DO 8 x Rel. 230 VAC/5 A

Dimensions and Weight			
Dimensions W x H x D (in millimeters)	40 x 125 x 117		
Weight	Approx. 320 g		
Data for Specific Module			
Supports clocked operation	No		
Number of outputs	8		
Length of cable			
• Unshielded	max. 600 m		
• Shielded	max. 1000 m		
Voltages, Currents, Potentials			
Rated supply voltage of the electronics L +	24 VDC		
• Reverse polarity protection	Yes		
Total current of the outputs (per group)			
• Horizontal configuration Up to 60° C	max. 5 A		
• Vertical configuration Up to 40° C	max. 5 A		
Isolation			
• Between channels and backplane bus	Yes		
		• Between the channels and the relay supply voltage	Yes
		• Between the channels In groups of	Yes 1
		Permitted potential difference	
		• Between M _{internal} and supply voltage of the relays	75 VDC / 60 VAC
		• Between M _{internal} and supply voltage of the relays and the outputs	250 VAC
		• Between the outputs of the different groups	500 VAC

Insulation tested with <ul style="list-style-type: none"> Between $M_{internal}$ and supply voltage of the relays 500 VDC Between $M_{internal}$ and supply voltage of the relays and the outputs 1500 VAC Between the outputs of the different groups 2000 VAC 																						
Current consumption <ul style="list-style-type: none"> From the backplane bus max. 100 mA From supply voltage L+ max. 160 mA 																						
Power dissipation of the module typ. 3.5 W																						
Status, Interrupts, Diagnostics																						
Status display	Green LED per channel																					
Interrupts																						
<ul style="list-style-type: none"> Diagnostic interrupt 	Parameters can be assigned																					
Diagnostic functions	Parameters can be assigned																					
<ul style="list-style-type: none"> Group error display Diagnostics information read-out 	Red LED (SF) Possible																					
Data for Selecting an Actuator																						
Continuous thermal current	max. 5 A																					
Minimum load voltage / current	10 V /10 mA ¹⁾																					
Leakage current	11.5 mA ²⁾																					
Short-circuit proof according to IEC 947-5-1	With circuit-breaker of characteristic B for: cos ϕ 1.0: 600 A cos ϕ 0.5 to 0.7: 900 A With Diazed 8 A fuse: 1000 A																					
Switching capacity and lifetime of the contacts																						
<ul style="list-style-type: none"> For resistive load 	<table border="1"> <thead> <tr> <th>Voltage</th> <th>Current</th> <th>No. of switching cyc. (typ.)</th> </tr> </thead> <tbody> <tr> <td>24 VDC</td> <td>5.0 A</td> <td>0.2 million</td> </tr> <tr> <td>24 VDC</td> <td>2.5 A</td> <td>0.4 million</td> </tr> <tr> <td>24 VDC</td> <td>1.0 A</td> <td>0.9 million</td> </tr> <tr> <td>230 VAC</td> <td>5.0 A</td> <td>0.2 million</td> </tr> <tr> <td>230 VAC</td> <td>2.5 A</td> <td>0.4 million</td> </tr> <tr> <td>230 VAC</td> <td>1.0 A</td> <td>0.9 million</td> </tr> </tbody> </table>	Voltage	Current	No. of switching cyc. (typ.)	24 VDC	5.0 A	0.2 million	24 VDC	2.5 A	0.4 million	24 VDC	1.0 A	0.9 million	230 VAC	5.0 A	0.2 million	230 VAC	2.5 A	0.4 million	230 VAC	1.0 A	0.9 million
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With a connected RC quenching element (jumper "SJ" inserted) or with an external protection circuit, you lengthen the service life of the contacts.																						
Size of the motor starter	max. size 5 to NEMA																					
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Energy-saving lamps/fluorescent lamps with electronic ballast	10 × 58W 25000																					
Fluorescent lamps, conventionally compensated	1 × 58W 25000																					
Fluorescent lamps, non-compensated	10 × 58W 25000																					
Contact protection	RC quenching element 330 Ω , 0.1 μ F																					
Connecting two outputs in parallel																						
<ul style="list-style-type: none"> For redundant triggering of a load 	Possible (only outputs with identical load voltage)																					
<ul style="list-style-type: none"> To increase performance 	Not possible																					
Triggering a digital input	Possible																					
Switch rate																						
<ul style="list-style-type: none"> Mechanical 	max. 10 Hz																					
<ul style="list-style-type: none"> For resistive load 	max. 2 Hz																					
<ul style="list-style-type: none"> Inductive loads according to IEC 947-5-1, DC 13/15 AC 	max. 0.5 Hz																					
<ul style="list-style-type: none"> For lamp load 	max. 2 Hz																					

1) Without inserted jumper (SJ).
 2) For AC load voltage and inserted jumper (SJ). Without jumper (SJ) inserted there is a leakage current

Note

Due to the leakage current of the RC quenching element, wrong signal states might occur when an IEC Type 1 input is connected (remove SJ jumper)