Diagnostic interrupt

When diagnostic interrupts are enabled, incoming error events (initial occurrence) and outgoing error events (error is cleared) are reported by means of interrupt.
The CPU interrupts user program execution in order to process diagnostics interrupt OB82.
You can call SFC51 or 59 in OB82 in the user program to obtain detailed diagnostics data from the module.
Diagnostics data remain consistent until the program exits OB82. The module acknowledges the diagnostic interrupt when the program exits OB82.

Load restrictions in horizontal mounting position

In horizontal mounting position, the module loads must be restricted so that two adjacent inputs or outputs do not exceed their rated load.

Load restrictions in vertical mounting position

In vertical mounting position, the module loads must be restricted so that four adjacent inputs or outputs do not exceed their rated load.

3.33 Relay output module SM 322; DO 16 x Rel. AC 120/230 V; (6ES7322-1HH01-0AA0)

Order number

6ES7322-1HH01-0AA0

Properties

The SM 322; DO 16 x Rel. 120/230 V AC is characterized by the following properties:

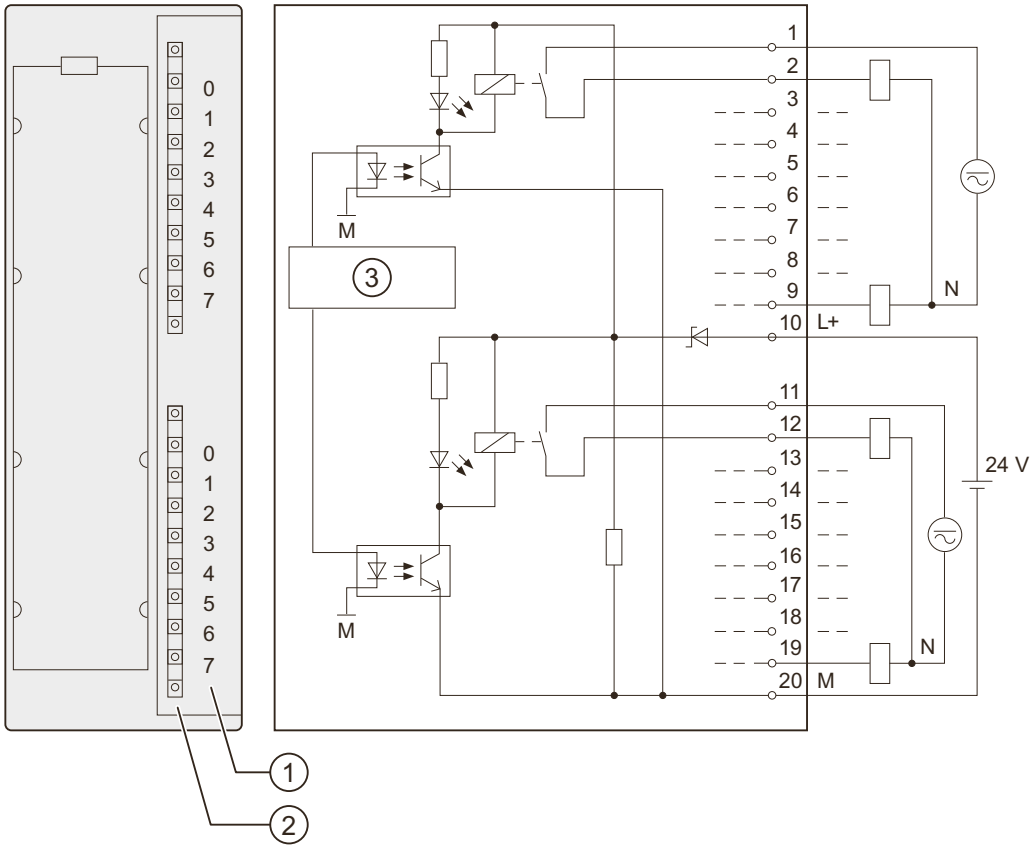
- 16 outputs, electrically isolated in groups of 8
- Load voltage 24 to 120 V DC; 24 to 230 V AC
- Suitable for AC/DC solenoid valves, contactors, motor starters, FHP motors and signal lamps.

Reaction to a shutdown of the power supply

NOTE

The internal 200-ms buffer capacitance discharges sufficient power after power off to allow the user program to set a defined relay state.

Wiring and block diagram of SM 322; DO 16 x Rel. 120/230 V AC



① Channel number
② Status display - green
③ Backplane bus interface

Technical specifications of the SM 322; DO 16 x Rel. 120/230 V AC

Technical specifications	
Dimensions and weight	
Dimensions W x H x D (mm)	40 x 125 x 117
Weight	ca. 250 g
Module-specific data	
Supports isochronous mode	no
Number of outputs	16
Cable length • unshielded • shielded	 max. 600 m max. 1000 m
Voltages, currents, electrical potentials	
Rated power supply L+ to the relays	24 V DC
Total current of outputs (per group)	max. 8 A
Electrical isolation	

Technical specifications		
• between channels and the backplane bus	yes	
• between channels in groups of	yes 8	
Maximum potential difference		
• Between $M_{internal}$ and the power supply to relays and outputs	230 V AC	
• Between outputs of different groups	500 V AC	
Isolation test voltage		
• between $M_{internal}$ and the power supply to relays	500 V DC	
• between $M_{internal}$ and the power supply to relays and outputs	1500 V AC	
• between outputs of different groups	2000 V AC	
Current consumption • from the backplane bus • from power supply L+	 max. 100 mA max. 250 mA	
Power loss of the module	typ. 4.5 W	
Status, interrupts, diagnostics		
Status display	green LED per channel	
Interrupts	none	
Diagnostic functions	none	
Actuator selection data		
Thermal current, continuous	max. 2 A	
Minimum load voltage / current	10 V / 10 mA	
Short-circuit current to IEC 947-5-1	200 A, with B10/B16 circuit breaker	
Switching capacity and service life of contacts		
• with resistive load		
Voltage	Current	No. of switching cycles (typical)
24 V DC 60 V DC 120 V DC 24 V AC 48 V AC 60 V AC 120 V AC 230 V AC	2.0 A 1.0 A 0.5 A 0.5 A 0.2 A 1.5 A 1.5 A 1.5 A 2.0 A 1.0 A 0.5 A 2.0 A 1.0 A 0.5 A	0.1 million 0.2 million 1.0 million 0.2 million 0.6 million 1.5 million 1.5 million 1.5 million 1.0 million 1.5 million 2.0 million 1.0 million 1.5 million 2.0 million
• with inductive load to IEC 947-5-1 DC13/AC15		
Voltage	Current	No. of switching cycles (typical)

Technical specifications		
24 V DC	2.0 A	0.05 million
	1.0 A	0.1 million
	0.5 A	0.5 million
DC 60 V	0.5 A	0.1 million
DC 120 V	0.2 A	0.3 million
24 V AC	1.5 A	1 million
48 V AC	1.5 A	1 million
AC 60 V	1.5 A	1 million
AC 120 V	2.0 A	0.7 million
	1.0 A	1.0 million
	0.5 A	1.5 million
230 V AC	2.0 A	0.7 million
	1.0 A	1.0 million
	0.5 A	1.5 million
An external protective circuit will increase the service life of contacts.		
Size of the motor starter	max. size 5 to NEMA	
Lamp load	50 W / 230 V AC 5 W / 24 V DC	
Contact protection (internal)	none	
Wiring two outputs in parallel		
• for redundant load control	supported (only outputs of the same group)	
• for performance increase	not supported	
Control of a digital input	supported	
Switching frequency		
• Mechanical	max. 10 Hz	
• with resistive load	max. 1 Hz	
• with inductive load to IEC 947-5-1, DC13/AC15	max. 0.5 Hz	
• with lamp load	max. 1 Hz	
Wiring of the actuators	using a 20-pin front connector	

3.34 Relay output module SM 322; DO 8 x Rel. AC 230 V; (6ES7322-1HF01-0AA0)

Order number

6ES7322-1HF01-0AA0

Properties

The SM 322; DO 8 x Rel. 230 V AC is characterized by the following properties:

- 8 outputs, electrically isolated in groups of 2
- Rated load voltage 24 to 120 V DC, 48 V to 230 V AC
- Suitable for AC/DC solenoid valves, contactors, motor starters, FHP motors and signal lamps.