

APPLICATION NOTE - SEMI F47 COMPLIANCE

SEMI F47

AF09Z.. AF38Z, AF40...AF750 contactors and NFZ contactor relays





AF09Z ... AF38Z and AF40 ... AF750 contactors, NFZ contactor relays increase the voltage sag immunity and the uptime of semiconductor processing equipment without use of specific accessory.

Definitions according to SEMI F47 (1)

SEMIF47 defines the voltage sag immunity required for semiconductor processing, metrology and automated test equipment, and on subsystems and components which are used in the construction of semiconductor processing equipment including but not limited to:

- Power supplies
- Generators
- · Robots and factory interface
- · Chillers, pumps, blowers
- · AC operated contactors and contactor relays
- ...

Voltage sag immunity

The ability of equipment to withstand momentary electrical power interruptions or sags.

Voltage sag

An rms reduction in the AC voltage, at the power frequency, for durations from a half cycle to a few seconds. The IEC terminology for this phenomenon is voltage dip.

Characteristics

- AF09Z...AF38Z, AF40...AF750 contactors and NFZ contactor relays are compliant to SEMI F47 (1) and withstand voltage sags for:
- required voltage sag immunity
- recommended voltage sag immunity (≤ 20 ms)
- · Conditions of use:
- rated control circuit voltages between 24 V to 500 V AC 50 / 60 Hz (see selection table)
- air ambient temperature -20°C $\leq \theta \leq$ +60°C
- 1-stack and factory-mounted 2-stack contactors (2 stack contactors as AF..-30-11-.., AF..-30-22-..)
- 1-stack and 2-stack contactor relays
- no additional accessories.

(1) AF09Z...AF38Z and AF40...AF370 are compliant with SEMI F47-0706, AF400...AF750 are compliant with SEMI F47-0200.

Contactor or contactor relay	Rated control circuit voltages	Coil voltage code	
AF09Z38Z, NFZ	24 60 V 50/60 Hz	21	
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	60 130 V 50/60 Hz	22	
	130 250 V 50/60 Hz	23	
AF40AF96	24 60 V 50/60 Hz	11	
	60 130 V 50/60 Hz	12	
	130 250 V 50/60 Hz	13	
AF116AF370	48 130 V 50/60 Hz	12	
	100 250 V 50/60 Hz	13, 33	
	250 500 V 50/60 Hz	14, 34	
AF400AF750	48 130 V 50/60 Hz	69	
	100 250 V 50/60 Hz	70	

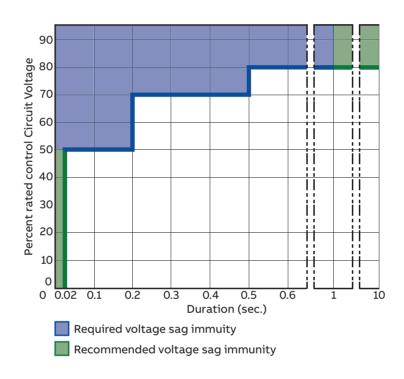


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