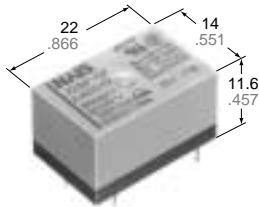


8 A POWER RELAY

JG-RELAYS



mm inch

FEATURES

- **Compact & flat design:** 22 mm .866 inch (length) x 14 mm .551 inch (width) x 11.6 mm .457 inch (height)
- **High capacity:** 8 A nominal switching capacity
- **High surge resistance:** Min. 10,000 V between contact and coil
- **High sensitivity:** 200 mW nominal operating power
- **VDE, TÜV, SEMKO also approved**

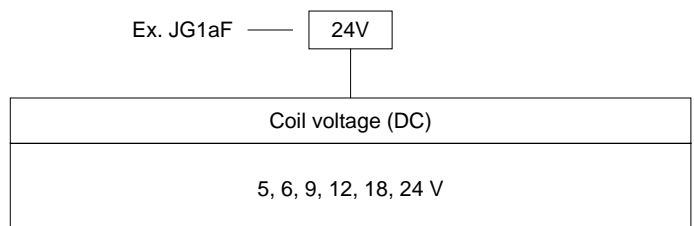
SPECIFICATIONS

Contact		Characteristics	
Arrangement	1 Form A	Max. operating speed	20 cpm
Initial contact resistance, max. (By voltage drop 6 V DC 1A)	100 mOhm	Initial insulation resistance*1	Min. 100 mOhm at 500 V DC
Contact material	Silver alloy	Initial breakdown voltage*2	Between open contacts 750 Vrms for 1 min. Between contacts and coil 2,000 Vrms for 1 min.
Rating (resistive load)	Nominal switching capacity	8 A 125 V AC 5 A 250 V DC 5 A 30 V DC	Surge voltage between contact and coil*3
	Max. switching power	1,250 VA, 150 W	Min. 10,000 V
	Max. switching voltage	250 V AC, 110 V DC (0.3 A)	Operate time*4 (at nominal voltage)
	Max. switching current	8 A (AC), 5A (DC)	Approx. 5 ms
Expected life (min. operations)	Mechanical (at 180 cpm)	5x10 ⁶	Release time*4 (at nominal voltage)(without diode)
	Electrical (at 8 A 125 V AC) (at 20 cpm)	10 ⁵	Approx. 3 ms
Coil		Temperature rise (Ambient temperature: 70°C)	Max. 45°C with nominal coil voltage and at 8 A contact current
Nominal operating power		200 mW	Shock resistance
Remarks			Functional*5 Min. 98 m/s ² {10 G} Destructive*6 Min. 980 m/s ² {100 G}
* Specifications will vary with foreign standards certification ratings.			Vibration resistance
*1 Measurement at same location as "Initial breakdown voltage" section			Functional*7 98 m/s ² {10 G}, 10 to 55 Hz at double amplitude of 1.6 mm Destructive 117.6 m/s ² {12 G}, 10 to 55 Hz at double amplitude of 2 mm
*2 Detection current; 10 mA			Conditions for operation, transport and storage*8 (Not freezing and condensing at low temperature)
*3 Wave is standard shock voltage of ±1.2 x 50µs according to JEC-212-1981			Ambient temp. -40°C to +70°C -40°F to +158°F
*4 Excluding contact bounce time			Humidity 5 to 85% R.H.
*5 Half-wave pulse of sine wave: 11ms; detection time: 10µs			Unit weight Approx. 7 g .25 oz
*6 Half-wave pulse of sine wave: 6ms			
*7 Detection time: 10µs			
*8 Refer to 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT (Page 61).			

TYPICAL APPLICATIONS

- Microwave ovens
- Small household appliances
- Water heaters
- Electric irons
- Coffee makers

ORDERING INFORMATION



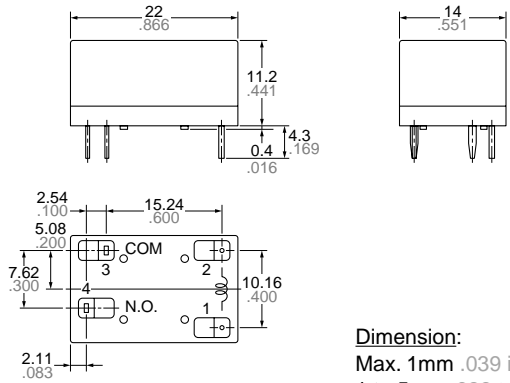
Note: Standard packing: 100 pcs. Case: 500 pcs.
UL/CSA, VDE approved type is standard.

TYPES AND COIL DATA

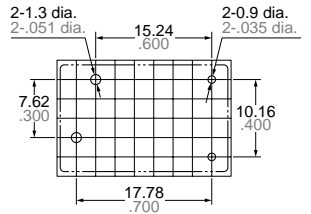
Part No.	Nominal voltage, V DC	Pick-up voltage, V DC (max.) (at 20°C 68°F)	Drop-out voltage, V DC (min.) (at 20°C 68°F)	Coil resistance, Ohm (±10%) (at 20°C 68°F)	Nominal operating current, mA (±10%) (at 20°C 68°F)	Nominal operating power, mW	Max. allowable voltage, V DC (at 70°C 158°F)
JG1aF-5V	5	4.0	0.25	125	40	200	6.5
JG1aF-6V	6	4.8	0.3	180	33	200	7.8
JG1aF-9V	9	7.2	0.45	405	22	200	11.7
JG1aF-12V	12	9.6	0.6	720	17	200	15.6
JG1aF-18V	18	14.4	0.9	1,620	11	200	23.4
JG1aF-24V	24	19.2	1.2	2,880	8.3	200	31.2

DIMENSIONS

mm inch



PC board pattern (Copper-side view)



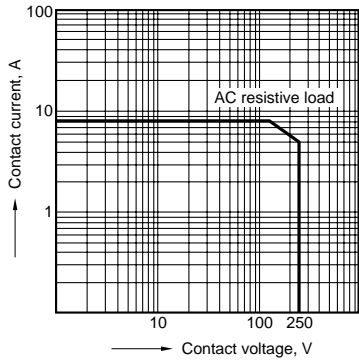
Tolerance: ±0.1 ±.004

Dimension:
 Max. 1mm .039 inch:
 1 to 5mm .039 to .118 inch:
 Min. 5mm .118 inch:

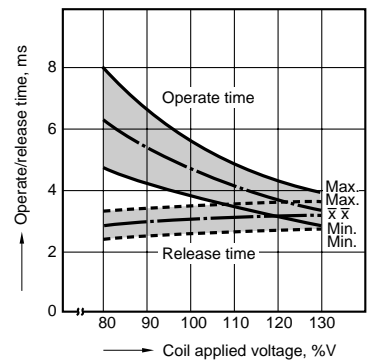
General tolerance
 ±0.2 ±.008
 ±0.3 ±.012
 ±0.4 ±.016

REFERENCE DATA

1. Maximum value for switching capacity

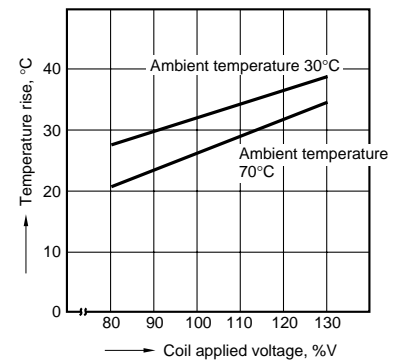


2. Operate/release time



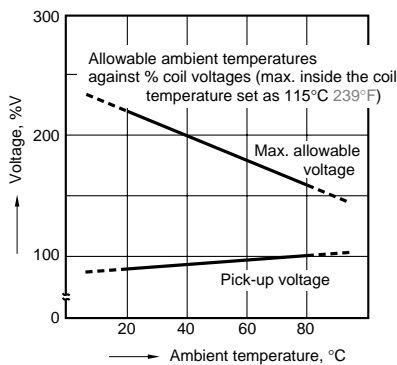
3. Coil temperature rise

Point measured: Inside the coil
 Contact current: 8A



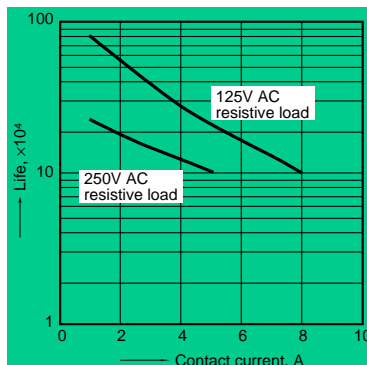
4. Ambient temperature characteristics

Contact current: 8 A



5. Life curve

Operation frequency: 20 times/min.
 (ON/OFF = 1.5 s : 1.5 s)
 Ambient temperature: Room temperature



6. Electrical life test

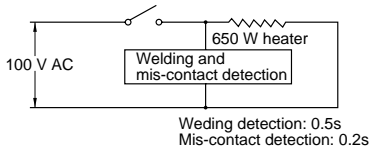
(5.8 A 100 V AC resistive load)

Sample: JG1aF-12V, 6 pcs.

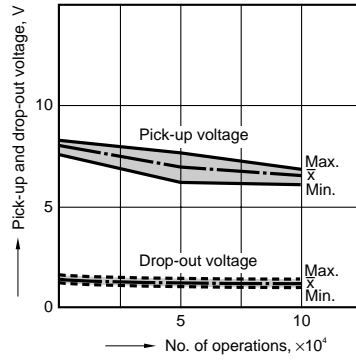
Operating speed: 20 cpm

Ambient temperature: 80°C 176°F

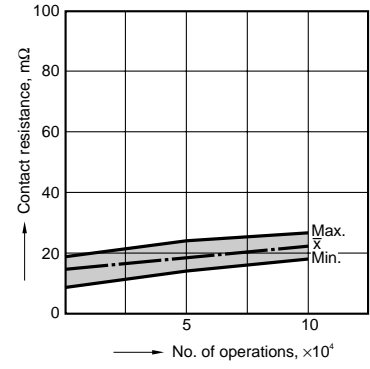
Circuit



Change of pick-up and drop-out voltage



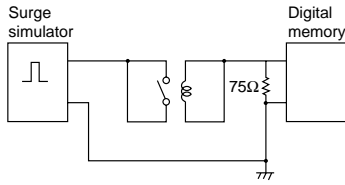
Change of contact resistance



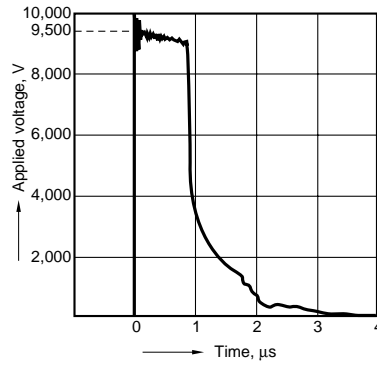
7. Electrical noise resistance characteristics between contact and coil

Sample: JG1aF-12V

Circuit



Noise wave



Output wave

