### AZ970/AZ971\_

# 40 AMP MINIATURE POWER RELAY FOR AUTOMOTIVE USE

### **FEATURES**

- Low cost
- Up to 40 Amp switching capability in a compact size
- Open, covered or sealed
- Coils to 24 VDC
- Small footprint
- 1 Form A, B and C contacts available
- · Vibration and shock resistant
- Designed for high in-rush applications



Arrangement	SPST (1 Form A) SPST (1 Form B) SPDT (1 Form C)					
Ratings	Resistive load:					
	Max. switched power: Form A: 560 W Form B: 420 W Form C: 420 W					
	Max. switched current: Form A: 40 A Form B: 30 A Form C: 30 A					
	Max. switched voltage: 150* VDC					
	* If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.					
Material	Silver tin oxide					
Resistance	< 100 milliohms initially (24 V, 1 A voltage drop method)					

### COIL

Power				
At Pickup Voltage (typical)	514 mW (12 and 24 VDC Coil) 573 mW (6 VDC Coil)			
Max. Continuous Dissipation	5.3 W 20°C (68°F) ambient (AZ970) 4.6 W 20°C (68°F) ambient (AZ971)			
Temperature Rise	56°C (101°F) nominal coil VDC (AZ970) 59°C (106°F) nominal coil VDC (AZ971)			
Max. Temperature	155°C (311°F)			





### **GENERAL DATA**

Life Expectancy Mechanical Electrical	Minimum operations 5 x 10 <sup>6</sup> operations 1 x 10 <sup>5</sup> operations at 40 A 14 VDC Res.				
Operate Time (typical)	3 ms at nominal coil voltage				
Release Time (typical)	5 ms at nominal coil voltage (with no coil suppression)				
Dielectric Strength (at sea level for 1 min.)	500 VDC coil to contact 500 VDC between open contacts				
Insulation Resistance	100 megohms min. at 20°C, 500 VDC, 50% RH				
Dropout	Greater than 6% of nominal coil voltage				
Ambient Temperature	At nominal coil voltage				
AZ970 Operating AZ970 Storage	-40°C (-40°F) to 105°C (221°F) -40°C (-40°F) to 105°C (221°F)				
AZ971 Operating AZ971 Storage	-40°C (-40°F) to 105°C (221°F) -40°C (-40°F) to 105°C (221°F)				
Vibration	0.062" (1.5 mm) DA at 10-55 Hz				
Shock	10 g				
Enclosure	P.B.T. polyester				
Terminals	Tinned copper alloy, P.C.				
Max. Solder Temp.	270°C (518°F)				
Max. Solder Time	5 seconds				
Max. Solvent Temp.	80°C (176°F)				
Max. Immersion Time	30 seconds				
Weight	20 grams				

#### **NOTES**

- 1. All values at 20°C (68°F).
- 2. Relay may pull in with less than "Must Operate" value.
- 3. Specifications subject to change without notice.

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### RELAY ORDERING DATA — AZ970 — OPEN STYLE

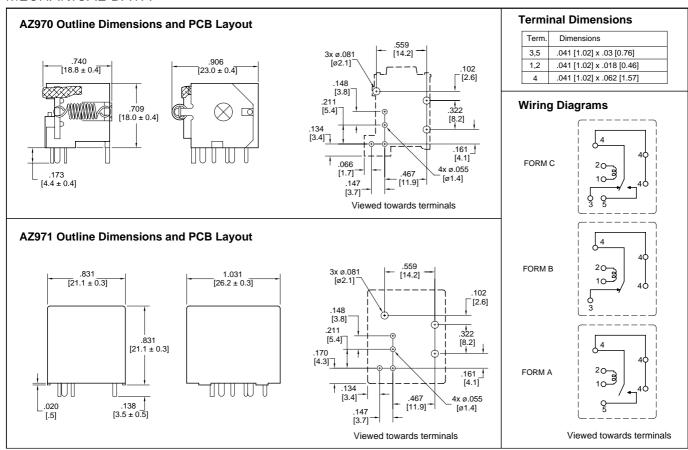
COIL SPECIFICATIONS			ORDER NUMBER			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance ±10%	Form A (SPST)	Form B (SPST)	Form C (SPDT)
6	3.3	9.8	19.0	AZ970-1A-6D	AZ970-1B-6D	AZ970-1C-6D
9	5.1	15.9	50.0	AZ970-1A-9D	AZ970-1B-9D	AZ970-1C-9D
12	6.8	21.3	90.0	AZ970-1A-12D	AZ970-1B-12D	AZ970-1C-12D
24	13.9	42.7	362.0	AZ970-1A-24D	AZ970-1B-24D	AZ970-1C-24D

### RELAY ORDERING DATA — AZ971 — With Dust Cover

COIL SPECIFICATIONS			ORDER NUMBER*			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance ±10%	Form A (SPST)	Form B (SPST)	Form C (SPDT)
6	3.3	9.4	19.0	AZ971-1A-6D	AZ971-1B-6D	AZ971-1C-6D
9	5.1	15.2	50.0	AZ971-1A-9D	AZ971-1B-9D	AZ971-1C-9D
12	6.8	20.4	90.0	AZ971-1A-12D	AZ971-1B-12D	AZ971-1C-12D
24	13.9	41.0	362.0	AZ971-1A-24D	AZ971-1B-24D	AZ971-1C-24D

<sup>\*</sup>Add suffix "E" for epoxy sealed version.

### MECHANICAL DATA



Dimensions in inches with metric equivalents in parentheses. Tolerance: ±0.010"

### ZETTLER electronics GmbH