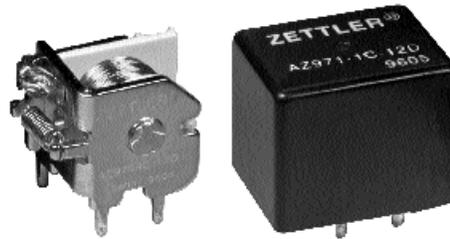


AZ970/AZ971

45 AMP AUTOMOTIVE RELAY

FEATURES

- Up to 45 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
- QS9000, ISO9001, ISO14001
- Cost effective
- Designed for high in-rush applications



CONTACTS

Arrangement	SPST (1 Form A) SPST (1 Form B) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: Form A: 630 W Form B: 420 W Form C: 420W Max. switched current: Form A: 45 A Form B: 30 A Form C: 30A Max. switched voltage: 75* 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 1 x 10 ⁷ operations 1 x 10 ⁵ 40 A 14 VDC Res.
Operate Time (typical)	5 ms at nominal coil voltage
Release Time (typical)	3 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 AZ970 Operating AZ970 Storage AZ971 Operating AZ971 Storage	At nominal coil voltage -40°C (-40°F) to 125°C (257°F) -40°C (-40°F) to 155°C (311°F) -40°C (-40°F) to 125°C (257°F) -40°C (-40°F) to 155°C (311°F)
Vibration	0.062" 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 Ohms $\pm 10\%$	Form A (SPST)	Form B (SPST)	Form C (SPDT)
6	4.2	9.8	19.0	AZ970-1A-6D	AZ970-1B-6D	AZ970-1C-6D
9	6.3	15.9	50.0	AZ970-1A-9D	AZ970-1B-9D	AZ970-1C-9D
12	8.4	21.3	90.0	AZ970-1A-12D	AZ970-1B-12D	AZ970-1C-12D
24	16.8	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 Ohms $\pm 10\%$	Form A (SPST)	Form B (SPST)	Form C (SPDT)
6	4.2	9.4	19.0	AZ971-1A-6D	AZ971-1B-6D	AZ971-1C-6D
9	6.3	15.2	50.0	AZ971-1A-9D	AZ971-1B-9D	AZ971-1C-9D
12	8.4	20.4	90.0	AZ971-1A-12D	AZ971-1B-12D	AZ971-1C-12D
24	16.8	41.0	362.0	AZ971-1A-24D	AZ971-1B-24D	AZ971-1C-24D

*Add suffix "E" for epoxy sealed version.

MECHANICAL DATA

AZ970 Outline Dimensions and PCB Layout

Top view dimensions: .740 [18.8 ± 0.4], .906 [23.0 ± 0.4]
 Side view dimensions: .709 [18.0 ± 0.4], .173 [4.4 ± 0.4]
 Terminal view dimensions: 3x ϕ .081 [2.1], .559 [14.2], .102 [2.6], .148 [3.8], .211 [5.4], .134 [3.4], .066 [1.7], .147 [3.7], .467 [11.9], .161 [4.1], 4x ϕ .055 [ϕ 1.4], .322 [8.2]

Viewed towards terminals

Terminal Dimensions

Term.	Dimensions
3,5	.041 [1.02] x .03 [0.76]
1,2	.041 [1.02] x .018 [0.46]
4	.041 [1.02] x .062 [1.57]

AZ971 Outline Dimensions and PCB Layout

Top view dimensions: .831 [21.1 ± 0.3], 1.031 [26.2 ± 0.3]
 Side view dimensions: .831 [21.1 ± 0.3], .020 [.5], .138 [3.5 ± 0.5]
 Terminal view dimensions: 3x ϕ .081 [ϕ 2.1], .559 [14.2], .102 [2.6], .148 [3.8], .211 [5.4], .170 [4.3], .134 [3.4], .147 [3.7], .467 [11.9], .161 [4.1], 4x ϕ .055 [ϕ 1.4], .322 [8.2]

Viewed towards terminals

Wiring Diagrams

FORM C

FORM B

FORM A

Viewed towards terminals

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

AMERICAN ZETTLER, INC.

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E-MAIL: SALES@AZETTLER.COM

This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.