

AZ9701/AZ9711

45 AMP AUTOMOTIVE RELAY

FEATURES

- Up to 45 Amp switching capability in a compact size
- Epoxy sealed versions available
- Coils to 24 VDC
- Small footprint
- 1 Form A and C contacts available
- Vibration and shock resistant
- ISO/TS 16949, ISO9001, ISO14000
- Cost effective
- Designed for high in-rush applications
- UL, CUR file E43203



CONTACTS

Arrangement	SPST (1 Form A) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: Form A: 630 W Form C: 630 W/420W N.O./N.C. Max. switched current: Form A: 45 A Form C: 45 A/30A N.O./N.C. Max. switched voltage: 150* VDC Max. carry current: 60 A * If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
UL, CUR	45A at 14VDC res. 10k cycles (1Form A)
Material	Silver tin oxide
Resistance	< 100 milliohms initially (24 V, 1 A voltage drop method)

COIL

Power	
At Pickup Voltage (typical)	484-573 mW standard coil 675 mW sensitive coil
Max. Continuous Dissipation	4.2W 20°C (68°F) ambient
Temperature Rise	50°C (90°F) nominal coil VDC
Max. Temperature	155°C (311°F)

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.

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 5 x 10 ⁶ 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 (68°F), 500 VDC, 50% RH
Dropout	Greater than 6% of nominal coil voltage
Ambient Temperature Operating Storage	At nominal coil voltage -40°C (-40°F) to 135°C (275°F) -40°C (-40°F) to 155°C (311°F)
Vibration	10-40 Hz – 1.27 mm DA 40-70 Hz – 50 m/s ² 70-100 HZ – 0.5 mm DA 100-500 Hz – 100 m/s ²
Shock	20 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

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RELAY ORDERING DATA – STANDARD COIL

COIL SPECIFICATIONS				ORDER NUMBER			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Open		Sealed*	
6	3.3	9.0	19.0	AZ9701-1A-6DT	AZ9701-1C-6DT	AZ9711-1A-6DET	AZ9711-1C-6DET
9	5.1	14.7	51.0	AZ9701-1A-9DT	AZ9701-1C-9DT	AZ9711-1A-9DET	AZ9711-1C-9DET
12	6.8	19.6	90.0	AZ9701-1A-12DT	AZ9701-1C-12DT	AZ9711-1A-12DET	AZ9711-1C-12DET
24	13.9	39.3	362.0	AZ9701-1A-24DT	AZ9701-1C-24DT	AZ9711-1A-24DET	AZ9711-1C-24DET

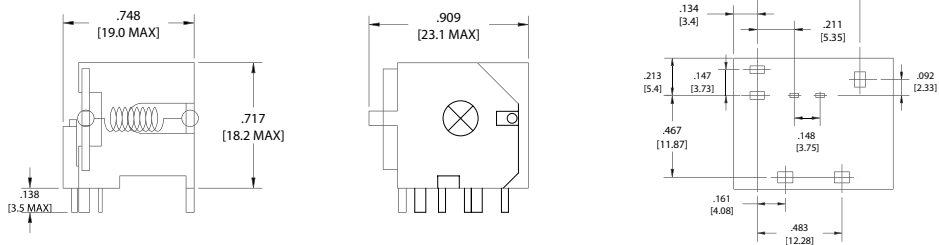
RELAY ORDERING DATA – SENSITIVE COIL

COIL SPECIFICATIONS				ORDER NUMBER			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Open		Sealed*	
6	4.5	11.3	30.0	AZ9701-1A-6DST	AZ9701-1C-6DST	AZ9711-1A-6DSET	AZ9711-1C-6DSET
9	6.8	17.0	68.0	AZ9701-1A-9DST	AZ9701-1C-9DST	AZ9711-1A-9DSET	AZ9711-1C-9DSET
12	9.0	22.6	120.0	AZ9701-1A-12DST	AZ9701-1C-12DST	AZ9711-1A-12DSET	AZ9711-1C-12DSET
24	19.2	45.2	480.0	AZ9701-1A-24DST	AZ9701-1C-24DST	AZ9711-1A-24DSET	AZ9711-1C-24DSET

*Add suffix "K" to add third yoke pin.

MECHANICAL DATA

AZ9701 Outline Dimensions and PCB Layout



Side view dimensions: .748 [19.0 MAX], .717 [18.2 MAX], .138 [3.5 MAX]

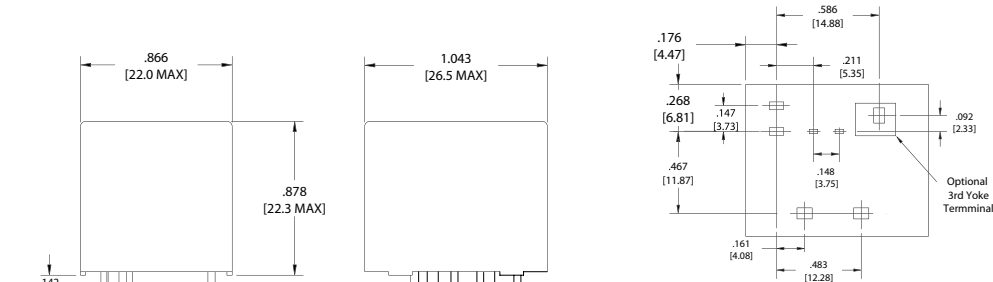
Top view dimensions: .909 [23.1 MAX]

Terminal view dimensions: .586 [14.88], .134 [3.4], .211 [5.35], .092 [2.33], .213 [5.4], .147 [3.73], .467 [11.87], .148 [3.75], .161 [4.08], .483 [12.28]

Terminal Dimensions

Term.	Dimensions
3, 5	.070 [1.78] x .032 [.81]
1, 2	.025 [.64] x .048 [1.22]
4	.048 [1.22] x .063 [1.6]

AZ9711 Outline Dimensions and PCB Layout



Side view dimensions: .866 [22.0 MAX], .878 [22.3 MAX], .142 [3.6 MAX]

Top view dimensions: 1.043 [26.5 MAX]

Terminal view dimensions: .586 [14.88], .176 [4.47], .268 [6.81], .147 [3.73], .467 [11.87], .148 [3.75], .161 [4.08], .483 [12.28], .092 [2.33]

Optional 3rd Yoke Terminal

Viewed towards terminals

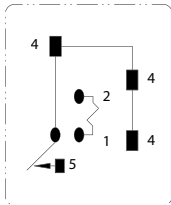


Diagram showing terminal connections for FORM A. Pins 1, 2, 3, 4, and 5 are connected to a common terminal.

FORM A

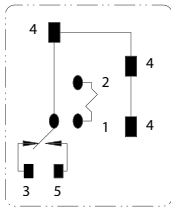


Diagram showing terminal connections for FORM C. Pins 1, 2, 3, 4, and 5 are connected to a common terminal.

FORM C

Viewed towards terminals

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

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