

AZ9701E/AZ9711E

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 (1 Form A)
Material	Silver tin oxide (silver nickel available - contact factory)
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	Minimum operations
Mechanical	5 x 10 ⁶ operations
Electrical	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	At nominal coil voltage
Operating Storage	-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	AZ9701E-1A-6DT	AZ9701E-1C-6DT	AZ9711E-1A-6DET	AZ9711E-1C-6DET
12	6.8	19.6	90.0	AZ9701E-1A-12DT	AZ9701E-1C-12DT	AZ9711E-1A-12DET	AZ9711E-1C-12DET
24	13.9	39.3	362.0	AZ9701E-1A-24DT	AZ9701E-1C-24DT	AZ9711E-1A-24DET	AZ9711E-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	AZ9701E-1A-6DST	AZ9701E-1C-6DST	AZ9711E-1A-6DSET	AZ9711E-1C-6DSET
12	9.0	22.6	120.0	AZ9701E-1A-12DST	AZ9701E-1C-12DST	AZ9711E-1A-12DSET	AZ9711E-1C-12DSET
24	19.2	45.2	480.0	AZ9701E-1A-24DST	AZ9701E-1C-24DST	AZ9711E-1A-24DSET	AZ9711E-1C-24DSET

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

MECHANICAL DATA

AZ9701E Outline Dimensions and PCB Layout

Terminal Dimensions

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

AZ9711E Outline Dimensions and PCB Layout

Terminal Dimensions

Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm 0.010''$

AMERICAN ZETTLER, INC.

2/26/13

PHONE: (949) 831-5000

www.azettler.com

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.