

AZ9731

40 AMP AUTOMOTIVE RELAY

FEATURES

- 40 Amp contact rating
- High operating temperature (125°C)
- Quick connect terminals
- Epoxy sealed version available
- Metal or plastic mounting bracket available
- Resistor or diode parallel to coil available
- ISO/TS 16949, ISO14001



CONTACTS

Arrangement	SPST (1 Form A) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: 560 W Max. switched current: 40 A (N.O.), 30 A (N.C.) Max. switched voltage: 28 VDC
Rated load	1 Form A* 40 A at 14 VDC 20 A at 24 VDC 1 Form C* 40 A at 14 VDC (N.O.) 30 A at 14 VDC (N.C.) 20 A at 24 VDC (N.O.) 15 A at 24 VDC (N.C.) *Note: 80°C ambient at continuous current 125°C ambient at switched current 1 Form A 15 A at 14 / 24 VDC, continuous, 125°C 1 Form C 15A at 14 / 24 VDC (N.O.), continuous, 125°C 10 A at 14 / 24 VDC (N.C.), continuous, 125°C
Material	Silver tin oxide
Resistance	< 100 milliohms initially (at 6 V, 1 A, voltage drop method)

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 1 x 10 ⁷ 1 x 10 ⁵ at 40 A 14 VDC Res.
Operate Time (max.)	7 ms at nominal coil voltage
Release Time (max.)	5 ms at nominal coil voltage (with no coil suppression)
Dielectric Strength (at sea level for 1 min.)	750Vrms coil to contact 500Vrms between open contacts
Insulation Resistance	100 megohms min. at 20°C, 500 VDC, 50% RH
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature Operating	At nominal coil voltage -40°C (-40°F) to 125°C (257°F)
Vibration	0.062" (1.5 mm) DA at 10–40 Hz
Shock	15 g
Enclosure	PA66
Terminals	Tinned copper alloy Quick connect Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force.
Weight	36 grams

COIL

Power At Pickup Voltage (typical)	680 mW
Max. Continuous Dissipation	2.7 W at 20°C (68°F) ambient
Temperature Rise	75°C (135°F) at nominal coil voltage (at 40 A)
Temperature	Max. 155°C (311°F) Class F

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This product specification to be used only together with the application notes
which can be downloaded from <http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf>

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RELAY ORDERING DATA

COIL SPECIFICATIONS			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$
6	3.9	7.8	22.5
12	7.8	15.6	90
24	15.6	31.2	360

RELAY ORDERING DATA

AZ9731 - 1C - 12D C2 R1	
	Blank - Standard no diode, no resistor
R1	- 180 Ohm, $\frac{1}{2}$ W resistor in parallel with 6 V coil - 680 Ohm, $\frac{1}{2}$ W resistor in parallel with 12 V coil - 2700 Ohm $\frac{1}{2}$ W resistor in parallel with 24 V coil
D1	- 1N4007 diode in parallel with coil, anode on #86 terminal
D2	- 1N4007 diode in parallel with coil, cathode on #86 terminal
C1	- Plastic dust cover with steel mounting bracket
C1E	- Plastic dust cover with steel mounting bracket, sealed
C2	- Plastic dust cover with plastic mounting bracket
C2E	- Plastic dust cover with plastic mounting bracket, sealed
C3	- Plastic dust cover
C3E	- Plastic dust cover, sealed
C4	- Plastic dust cover, shrouded, with metal mounting bracket, sealed
24D	-24 volt coil
12D	-12 volt coil
6D	- 6 volt coil
1A	- SPST normally open
1A2	- SPST normally open (2 x terminal 87)
1C	- SPDT changeover
	Basic series designation - AZ9731

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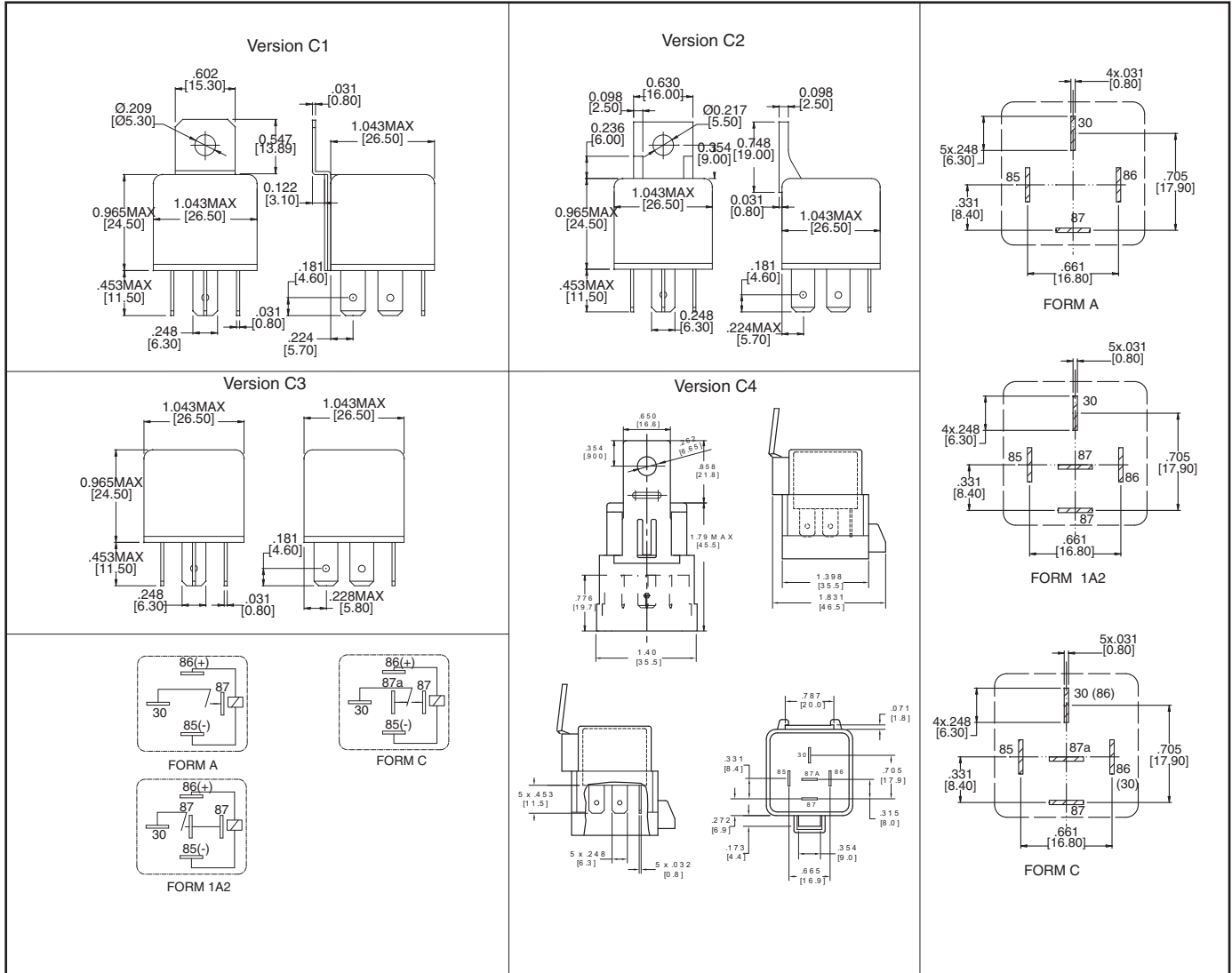
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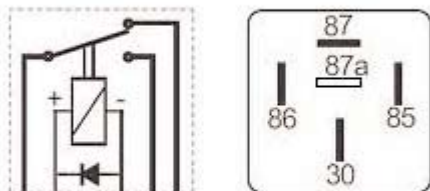
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MECHANICAL DATA



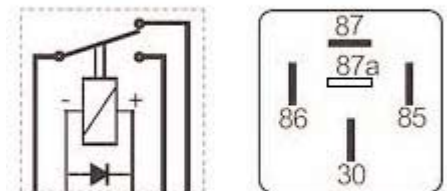
Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm .010$ "

"D1" Option Anode on Terminal #86



Cathode ← Anode

"D2" Option Cathode on Terminal #86



Anode → Cathode

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