

# AZ9731

## 40 AMP MINI-ISO AUTOMOTIVE RELAY

### FEATURES

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



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPDT (1 Form C) SPST NO DM (1 Form U) SPST (1 Form A2)
<b>Ratings</b>	Resistive load: Max. switched power: 630W (SPST) 630W (N.O.) 473W (N.C.) Max. switched current: 40A (SPST) 40A (N.O.) 30A (N.C.) Max. switched voltage: 75VDC
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 100 milliohms initially (6V, 1A voltage drop method)

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	0.68W
<b>Max. Continuous Dissipation</b>	4.8W at 20°C (68°F)
<b>Temperature Rise</b>	75°C (135°F) at nominal coil voltage (40A)
<b>Temperature</b>	Max. 155°C (311°F)

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 1 x 10 <sup>5</sup> at 40A, 14VDC Res.
<b>Operate Time (max.)</b>	7ms at nominal coil voltage
<b>Release Time (max.)</b>	5ms at nominal coil voltage
<b>Dielectric Strength (at sea level for 1 min.)</b>	500Vrms coil to contact 500Vrms contact to contact
<b>Insulation Resistance</b>	100 megohms min. at 500VDC, 20°C 50% RH
<b>Dropout</b>	Greater than 15% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	-40°C (-40°F) to 125°C (257°F) -55°C (-67°F) to 155°C (311°F)
<b>Vibration</b>	0.062" DA at 10-40 Hz
<b>Shock</b>	15g
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy 0.25 Quick Connect Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force.
<b>Weight</b>	31 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.

**AMERICAN ZETTLER, INC.** [www.azettler.com](http://www.azettler.com)

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## COIL SPECIFICATIONS

Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohms $\pm$ 10%
6	3.9	7.8	22.5
12	7.8	15.6	90
24	15.6	31.2	360
48	31.2	62.4	1440

## RELAY ORDERING DATA

**AZ9731-1C-12DC2 R1**

Blank - Standard no diode, no resistor

R1 - 180 Ohm  $\frac{1}{2}$  watt resistor in parallel with 6V coil  
680 Ohm  $\frac{1}{2}$  watt resistor in parallel with 12V coil  
2700 Ohm  $\frac{1}{2}$  watt resistor in parallel with 24V coil

D1 - 1N4005 diode in parallel with coil, anode on terminal #86 (see Fig 1)

D2 - 1N4005 diode in parallel with coil, cathode on terminal #86 (see Fig 2)

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

48D - 48 volt coil

24D - 24 volt coil

12D - 12 volt coil

6D - 6 volt coil

1A - SPNO Single pole normally open

1C - SPDT Single pole double throw

1U - SPST NO DM Single pole N.O. double make

1A2 - SPNO Single pole normally open (2x)

Basic series designation - AZ9731

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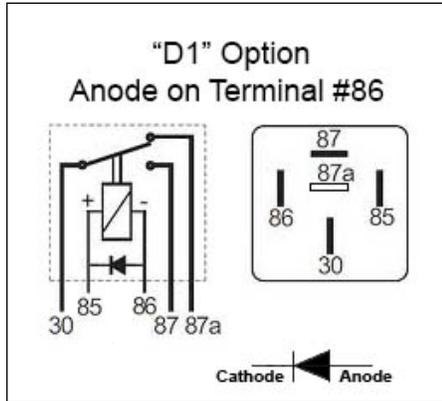


Fig 1

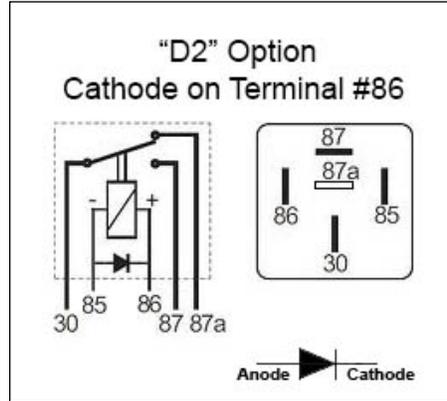
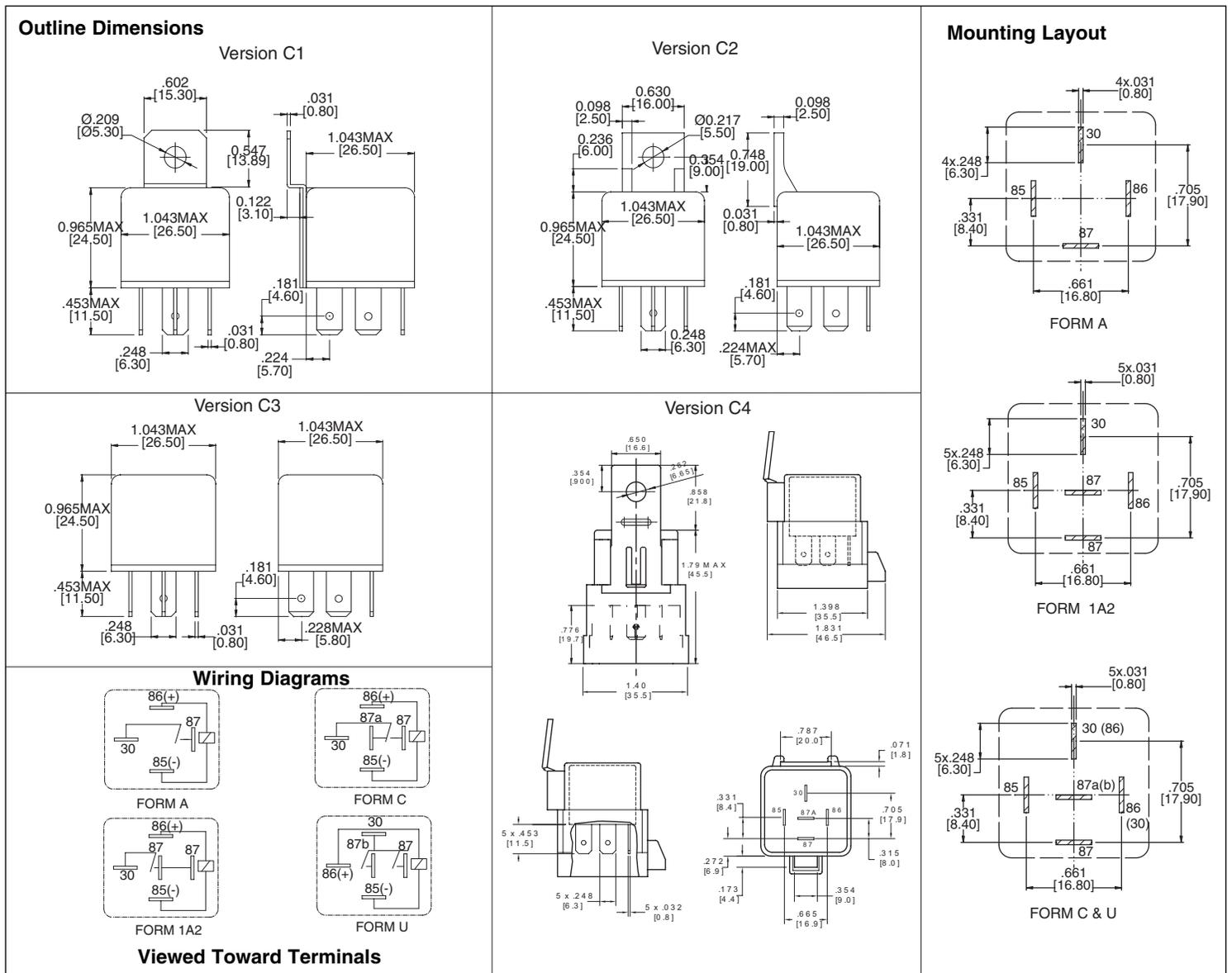


Fig 2

## MECHANICAL DATA



Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

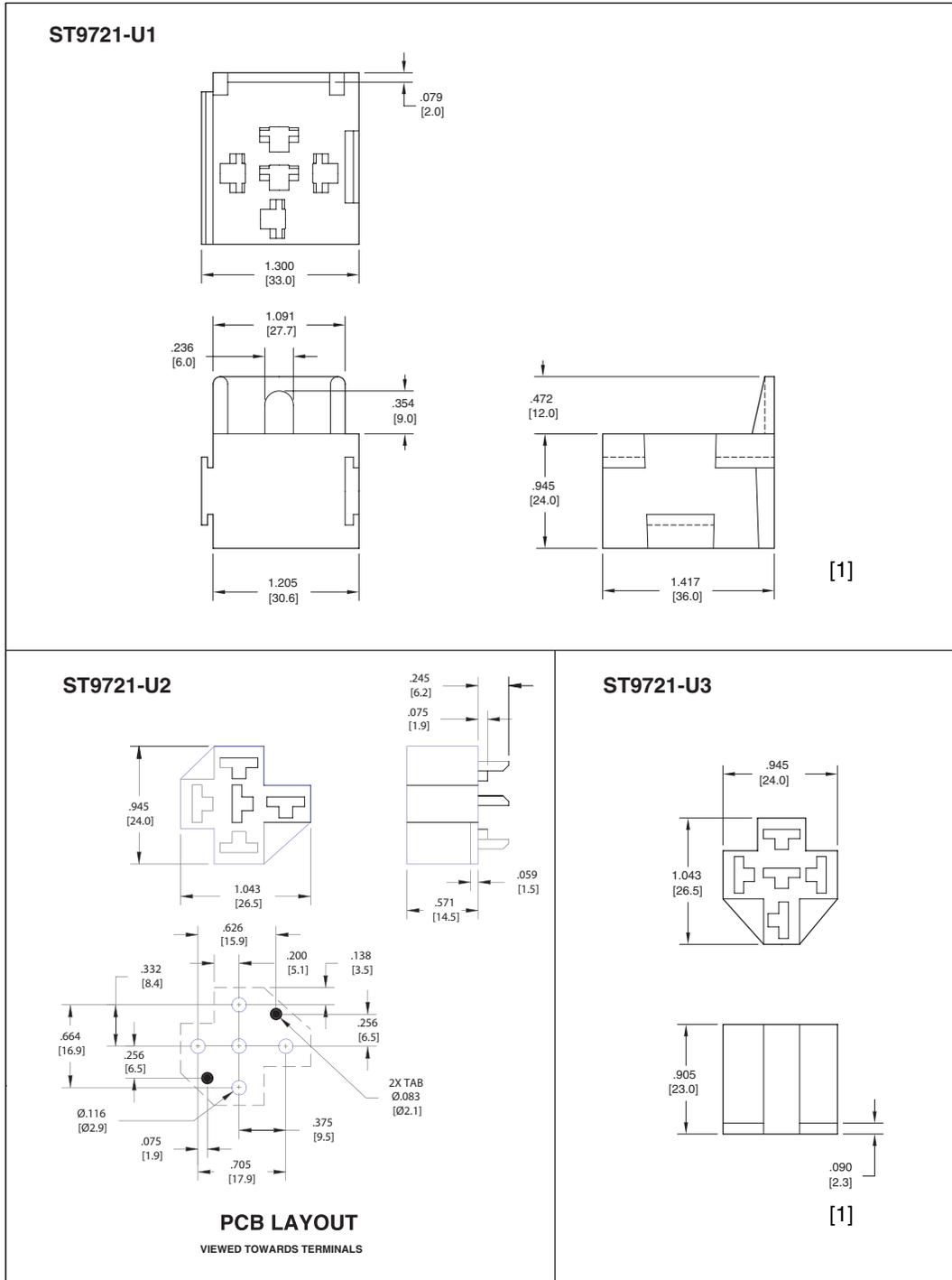
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## Sockets & Hardware for AZ9731



[1] Recommended receptical connector Amp Part numbers are 5-160558-9 or 5-1605-26-9