

# AZ973

## 40 AMP MINI-ISO AUTOMOTIVE RELAY

### FEATURES

- Quick connect terminals
- 40 Amp contact rating
- High momentary carry current (60A)
- High operating temperature (110°C)
- SPST (1 Form A), SPDT (1 Form C)
- Epoxy sealed versions available
- Metal or plastic mounting bracket available
- Resistor or diode parallel to coil available
- ISO/TS 16949, ISO14000



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load: Max. switched power: 560W (SPST) 560W (N.O.) 420W (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 At Pickup Voltage (typical)</b>	0.68W
<b>Max. Continuous Dissipation</b>	5.1W at 20°C (68°F)
<b>Temperature Rise</b>	52°C (94°F) at nominal coil voltage
<b>Temperature</b>	Max. 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

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 1 x 10 <sup>6</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 10% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	-55°C (-67°F) to 110°C (230°F) -55°C (-67°F) to 155°C (311°F)
<b>Vibration</b>	0.062" DA at 10-40 Hz
<b>Shock</b>	100 m/s <sup>2</sup>
<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>	Approx. 35 grams

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## RELAY ORDERING DATA

COIL SPECIFICATIONS			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$
6	3.9	10.1	22
12	7.8	20.2	85
24	15.6	40.5	350

## RELAY ORDERING DATA

### AZ973-1C-12DC2R1

- Blank - Standard no diode, no resistor
- R1 - 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
- R2 - 820 Ohm,  $\frac{1}{2}$  w resistor in parallel with 12 V coil  
3200 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
- D3 - 1N4004 diode in parallel with coil, anode on #86 terminal
- D4 - 1N4004 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, sealed, with metal mounting bracket
- 24D - 24 volt coil
- 12D - 12 volt coil
- 6D - 6 volt coil
- 1A - SPNO Single pole normally open
- 1C - SPDT Single pole double throw
- Basic series designation - AZ973

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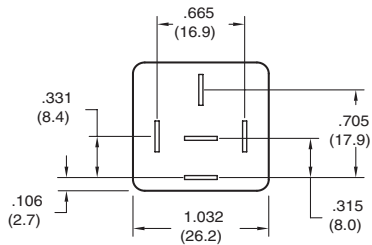
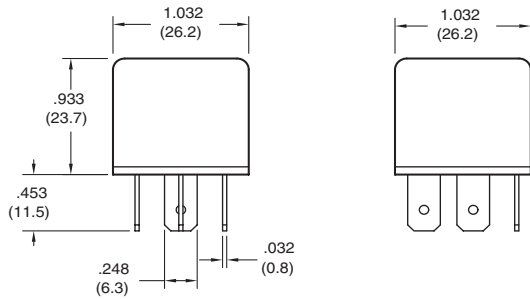
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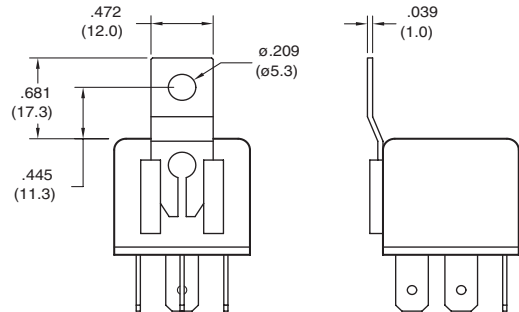
## MECHANICAL DATA

### Version C3

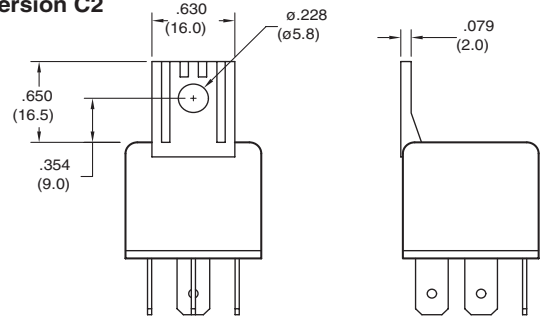


Note:  
Dimensions shown for Version C3  
are typical for all other versions

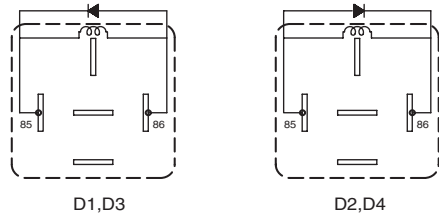
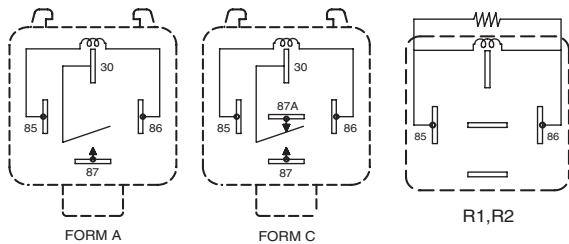
### Version C1



### Version C2

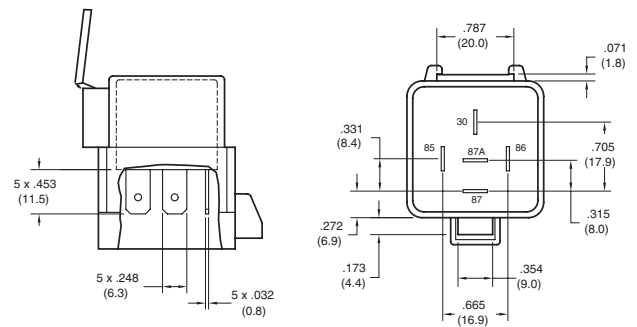
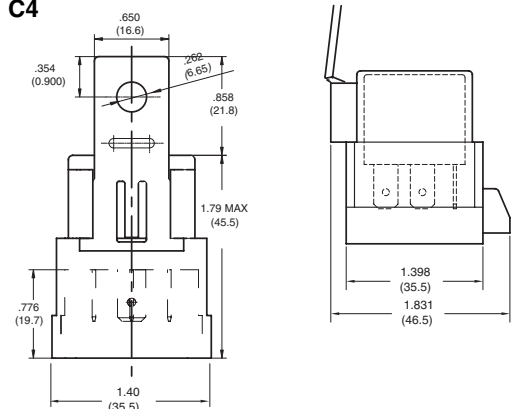


## WIRING DIAGRAMS



Viewed Toward Terminals

### Version C4



Connector for use with Version C4- Connectors to mate with AZ973 relay with the version C4 cover are available from Delphi Connection Systems ([www.delphiconnect.com](http://www.delphiconnect.com)). (Typical Delphi part number is 12065685)

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

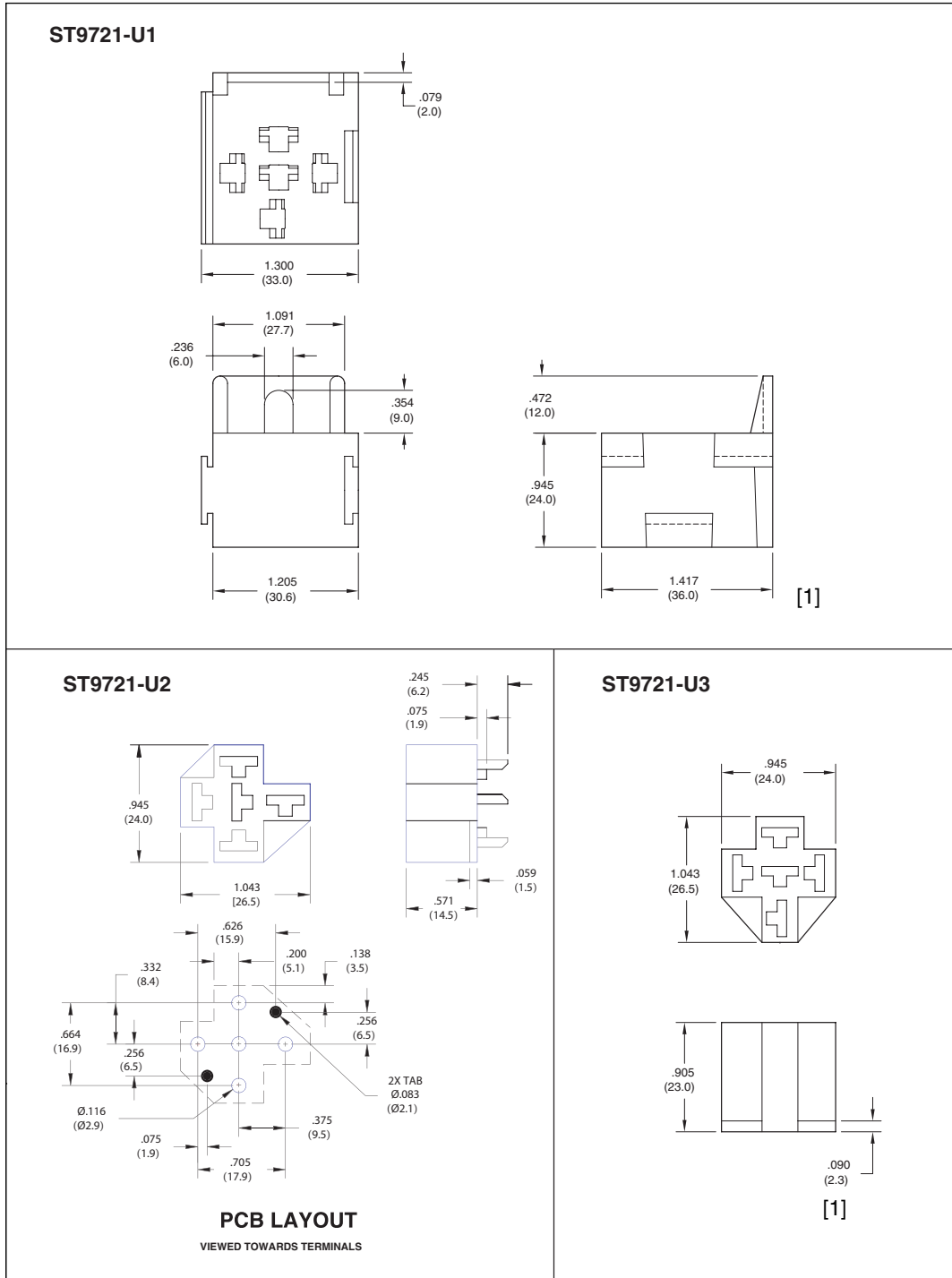
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## Sockets & Hardware for AZ973



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