

# AZ973

## 40 AMP AUTOMOTIVE RELAY

### FEATURES

- 40 Amp contact rating
- High momentary carry current (60A)
- High operating temperature (85°C)
- SPST (1 Form A), SPDT (1 Form C)
- Quick connect terminals
- Metal or plastic mounting bracket available
- Resistor or diode parallel to coil available



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPDT (1 Form C)
<b>Ratings</b>	Resistive load: Max. switched power: 560 W (SPST) 560 W (N.O.) 420 W (N.C.) Max. switched current: 40 A (SPST) 40 A (N.O.) 30 A (N.C.) Max. switched voltage: 75 VDC
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 100 milliohms initially (6 V, 1 A voltage drop method)

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	0.68 W
<b>Max. Continuous Dissipation</b>	5.1 W 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)

### 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 40 A 14 VDC Res.
<b>Operate Time (max.)</b>	7 ms at nominal coil voltage
<b>Release Time (max.)</b>	5 ms at nominal coil voltage
<b>Dielectric Strength (at sea level for 1 min.)</b>	500 Vrms coil to contact 500 Vrms contact to contact
<b>Insulation Resistance</b>	100 megohms min. at 500 VDC, 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 85°C (185°F) -55°C (-67°F) to 105°C (221°F)
<b>Vibration</b>	0.062" (1.5 mm) 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>	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.

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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	10.6	22
12	7.8	21.0	85
24	15.6	42.2	350

## RELAY ORDERING DATA

### AZ973-1C-12DC2R1

- Blank - Standard no diode, no resistor
- R1 - 680 Ohm, ½ W resistor in parallel with 12 V coil  
2700 Ohm ½ W resistor in parallel with 24 V coil
- R2 - 820 Ohm, ½ W resistor in parallel with 12 V coil  
3200 Ohm ½ 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
- C2 - Plastic dust cover with plastic mounting bracket
- C3 - Plastic dust cover
- C4 - Plastic dust cover, shrouded, sealed
- 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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## MECHANICAL DATA



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

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## Sockets & Hardware for AZ973



Note: Recommended receptical connector Amp Part numbers are 5-160558-9 or 5-1605-26-9

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