

# AZ986

## 40 AMP 280-ISO AUTOMOTIVE RELAY

### FEATURES

- 40 Amp contact rating
- Coils to 24VDC
- High operating temperature (125°C)
- SPST (1 Form A), SPDT (1 Form C)
- Available with shrouded weatherproof cover
- Coil suppression available
- ISO/TS 16949, ISO9001, ISO 14000
- Tested in accordance with SAE J2544



### 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: 100 VDC  *Note: If switching voltage is greater than 30VDC, special precautions must be taken. Please contact the factory.
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 100 milliohms initially (6 V, 1 A voltage drop method)

### COIL

<b>Power At Pickup Voltage (typical)</b>	0.58 W
<b>Max. Continuous Dissipation</b>	3.7 W at 20°C (68°F)
<b>Temperature Rise</b>	52°C (94°F) at nominal coil voltage
<b>Temperature</b>	Max. 180°C (356°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>5</sup> at 40 A 14 VDC Res.
<b>Operate Time (max.)</b>	7 ms at nominal coil voltage
<b>Release Time (max.)</b>	4 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>	600 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 125°C (257°F) -55°C (-67°F) to 155°C (311°F)
<b>Vibration</b>	1.27mm DA 10-40 Hz 5 g 40-70 Hz 0.5mm DA 70-100 Hz 10 g 100-500 Hz
<b>Shock</b>	200 m/s <sup>2</sup>
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy 0.110 Quick Connect Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force.
<b>Weight</b>	22 grams (37 grams shrouded version)



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[www.azettler.com](http://www.azettler.com)

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11/11/04W

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## RELAY ORDERING DATA

COIL SPECIFICATIONS			
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$
6	3.6	10	27
12	7.2	20.2	109
24	14.4	39.3	436

## RELAY ORDERING DATA

### AZ986-1C-12DC2R1

- 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
- R2 - 220 Ohm,  $\frac{1}{2}$  w resistor in parallel with 6 V coil  
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 unsealed
- C2 - Plastic dust cover sealed
- C3 - Plastic dust cover, shrouded, steel mounting bracket, unsealed
- C4 - Plastic dust cover, shrouded, steel mounting bracket, 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 - AZ986



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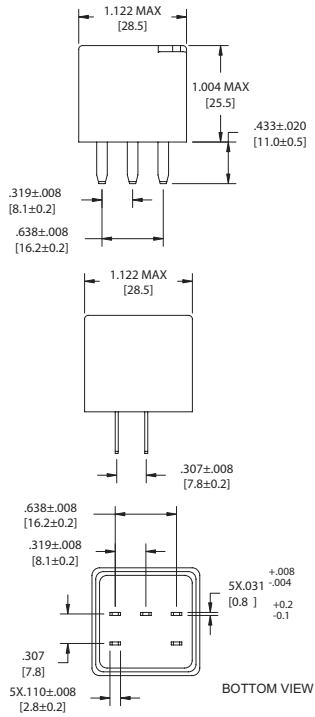
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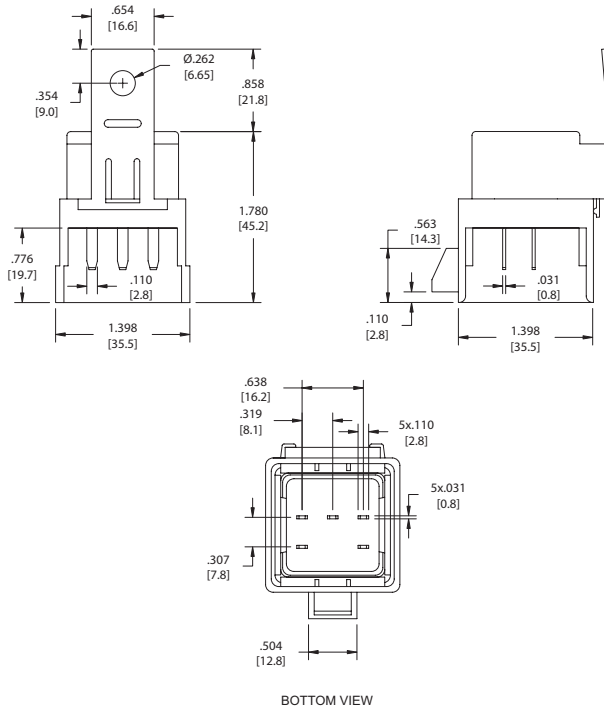
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## MECHANICAL DATA

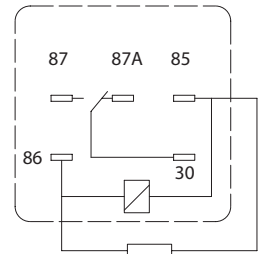
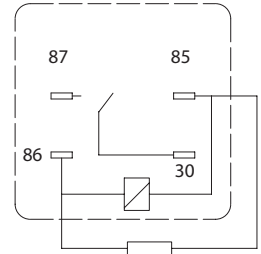
Outline Dimensions  
Versions C1 & C2



Outline Dimensions  
Versions C3 & C4



Wiring Diagram



VIEWED TOWARD TERMINALS

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



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