

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

Arrangement	SPST (1 Form A) SPDT (1 Form C)
Ratings	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
Material	Silver tin oxide
Resistance	< 100 milliohms initially (6 V, 1 A voltage drop method)

COIL

Power	
At Pickup Voltage (typical)	0.68 W
Max. Continuous Dissipation	5.1 W at 20°C (68°F)
Temperature Rise	52°C (94°F) at nominal coil voltage
Temperature	Max. 155°C (311°F)

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
Dielectric Strength (at sea level for 1 min.)	500 Vrms coil to contact 500 Vrms contact to contact
Insulation Resistance	100 megohms min. at 500 VDC, 20°C 50% RH
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature Operating Storage	-55°C (-67°F) to 85°C (185°F) -55°C (-67°F) to 105°C (221°F)
Vibration	0.062" (1.5 mm) DA at 10-40 Hz
Shock	100 m/s ²
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy 0.25 Quick Connect Note: Allow suitable slack on leads when wiring and do not subject the terminals to excessive force.
Weight	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, $\frac{1}{2}$ 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

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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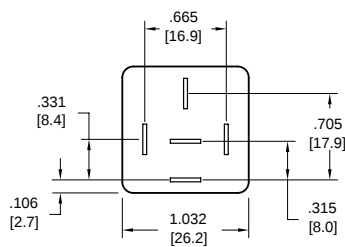
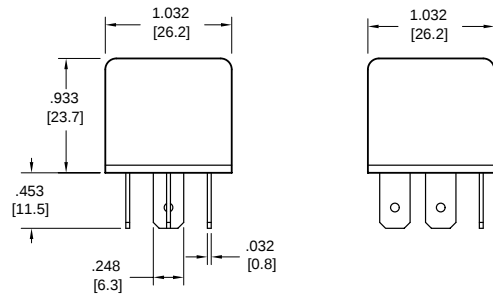
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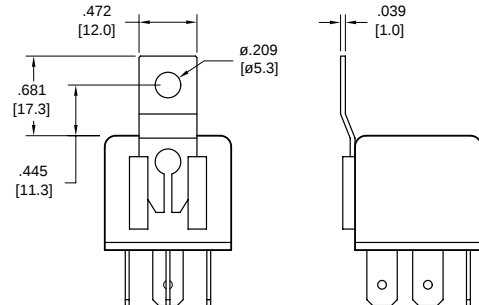
MECHANICAL DATA

Version C3

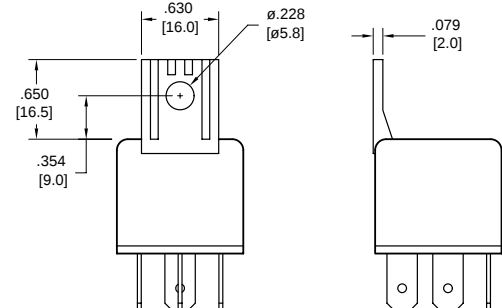


Note:
Dimensions shown for Version C3
are typical for all other versions

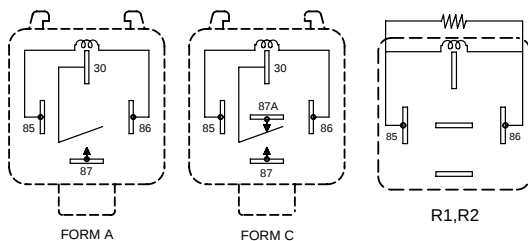
Version C1



Version C2



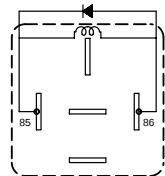
WIRING DIAGRAMS



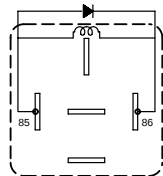
FORM A

FORM C

R1,R2



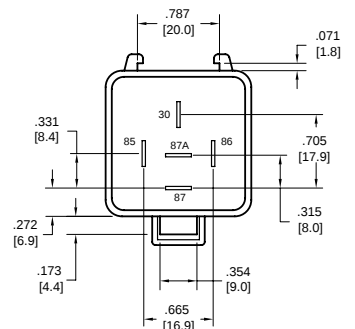
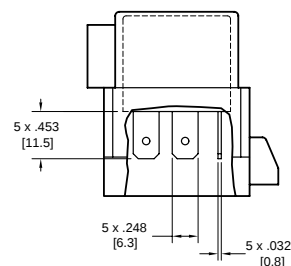
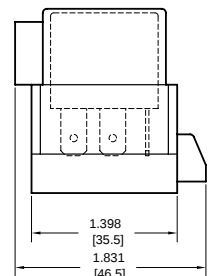
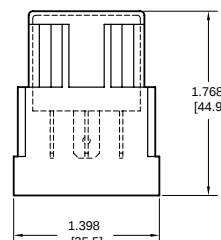
D1,D3



D2,D4

Viewed Toward Terminals

Version C4



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

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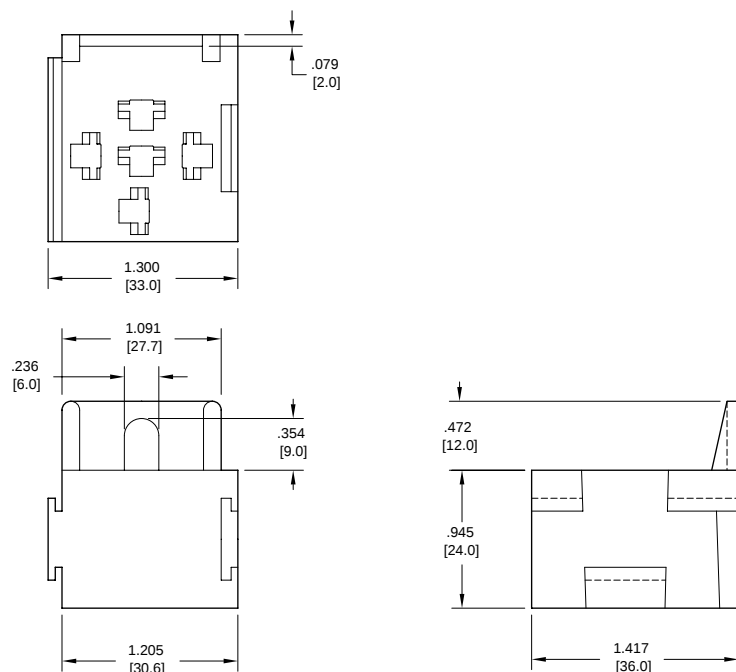
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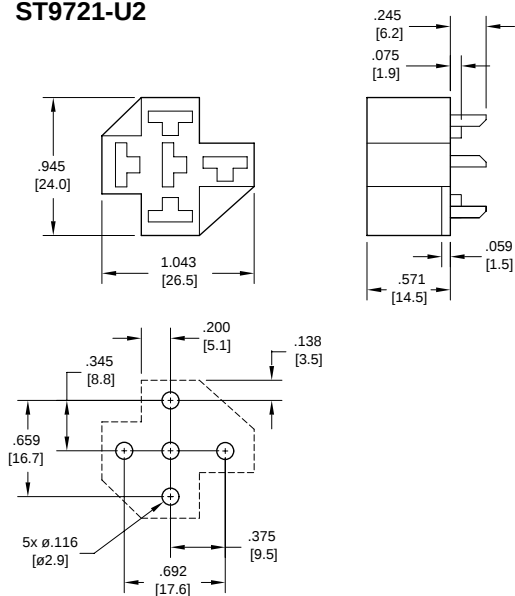
AZ973

Sockets & Hardware for AZ973

ST9721-U1



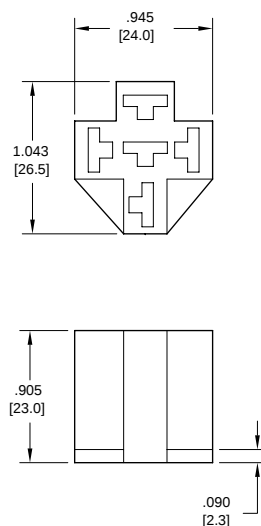
ST9721-U2



PCB LAYOUT

VIEWED TOWARDS TERMINALS

ST9721-U3



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

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