

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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AZ973

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

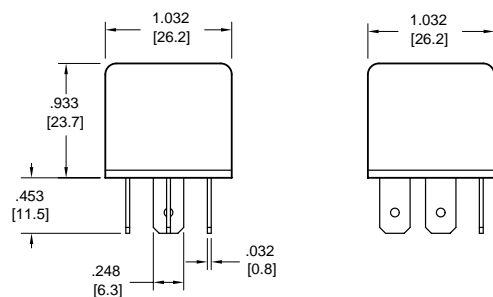
1C - SPDT Single pole double throw

Basic series designation - AZ973

AZ973

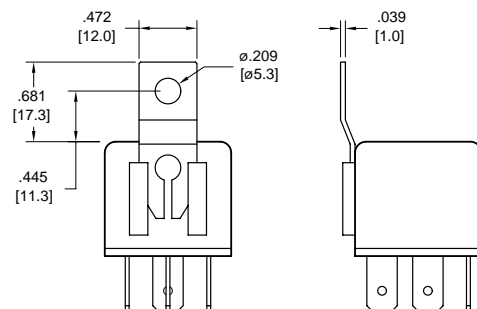
MECHANICAL DATA

Version C3

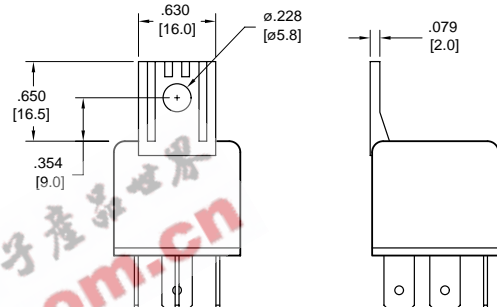


Note:
Dimensions shown for Version C3
are typical for all other versions

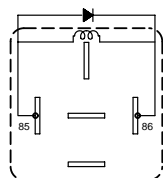
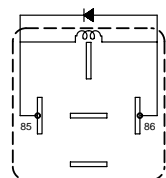
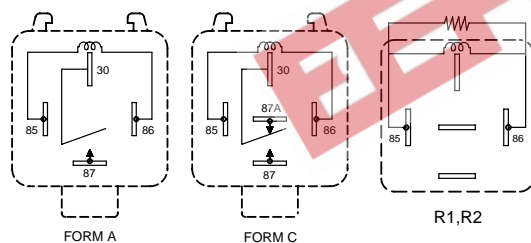
Version C1



Version C2

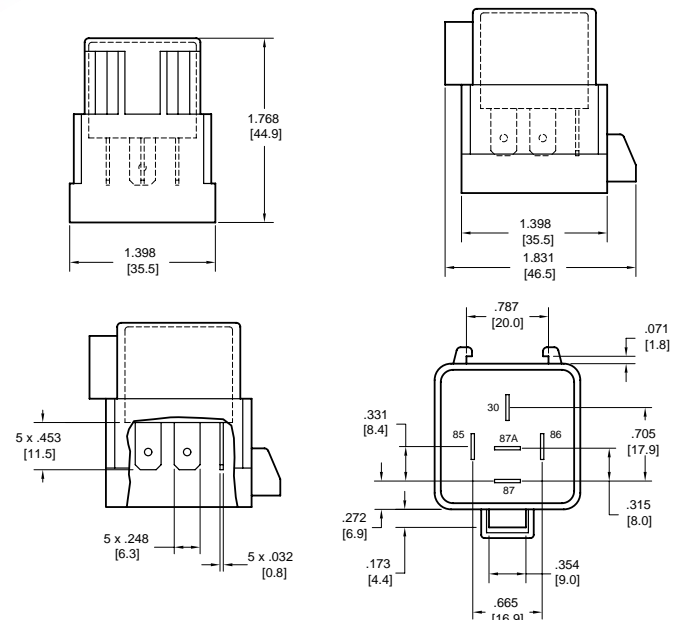


WIRING DIAGRAMS



Viewed Toward Terminals

Version C4



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

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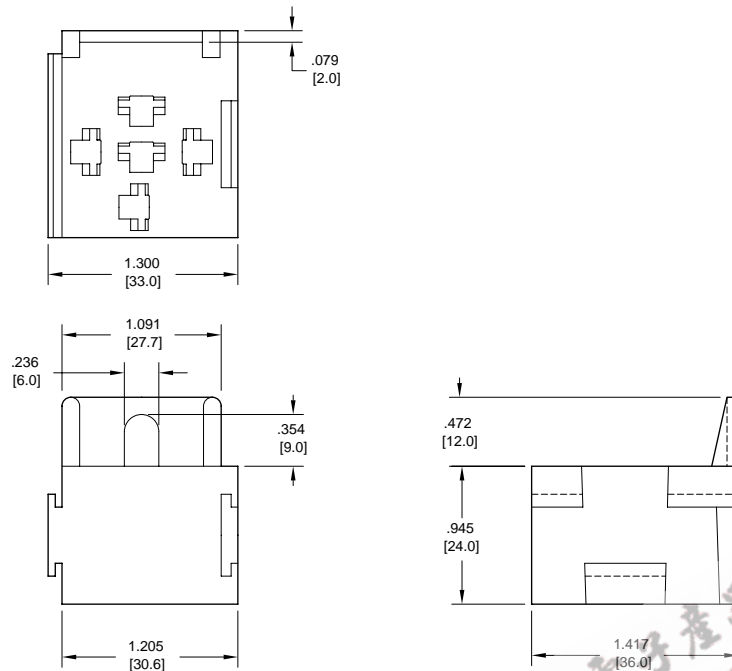
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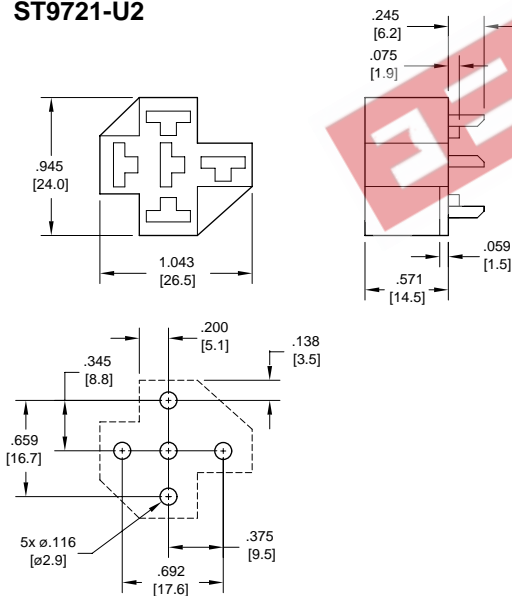
AZ973

Sockets & Hardware for AZ973

ST9721-U1



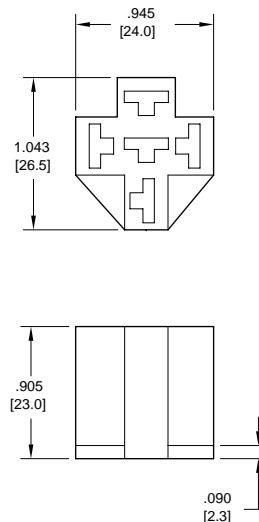
ST9721-U2



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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