

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

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|-----------------------------------------------------------|
| 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. |

ZETTLER electronics GmbH

Junkersstrasse 3, D-82178 Puchheim, Germany

Tel. +49 89 800 97 0
Fax +49 89 800 97 200

office@ZETTLERelectronics.com
www.ZETTLERelectronics.com

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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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MECHANICAL DATA



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

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AZ973

Sockets & Hardware for AZ973



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

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