

AZ9731

40 AMP AUTOMOTIVE RELAY

FEATURES

- 40 Amp contact rating
- High operating temperature (125°C)
- Quick connect terminals
- Epoxy sealed version available
- Metal or plastic mounting bracket available
- Resistor or diode parallel to coil available
- ISO/TS 16949, ISO14001



CONTACTS

| | |
|--------------------|---|
| Arrangement | SPST (1 Form A) SPDT (1 Form C) |
| Ratings | Resistive load: Max. switched power: 560 W Max. switched current: 40 A (N.O.), 30 A (N.C.) Max. switched voltage: 28 VDC |
| Rated load | 1 Form A* 40 A at 14 VDC 20 A at 24 VDC 1 Form C* 40 A at 14 VDC (N.O.) 30 A at 14 VDC (N.C.) 20 A at 24 VDC (N.O.) 15 A at 24 VDC (N.C.) *Note: 80°C ambient at continuous current 125°C ambient at switched current 1 Form A 15 A at 14 / 24 VDC, continuous, 125°C 1 Form C 15A at 14 / 24 VDC (N.O.), continuous, 125°C 10 A at 14 / 24 VDC (N.C.), continuous, 125°C |
| Material | Silver tin oxide |
| Resistance | < 100 milliohms initially (at 6 V, 1 A, voltage drop method) |

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

| | |
|--|--|
| 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 (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min.) | 750Vrms coil to contact 500Vrms between open contacts |
| Insulation Resistance | 100 megohms min. at 20°C, 500 VDC, 50% RH |
| Dropout | Greater than 10% of nominal coil voltage |
| Ambient Temperature Operating | At nominal coil voltage -40°C (-40°F) to 125°C (257°F) |
| Vibration | 0.062" (1.5 mm) DA at 10–40 Hz |
| Shock | 15 g |
| Enclosure | PA66 |
| Terminals | Tinned copper alloy Quick connect Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force. |
| Weight | 36 grams |

COIL

| | |
|--|---|
| Power At Pickup Voltage (typical) | 680 mW |
| Max. Continuous Dissipation | 2.7 W at 20°C (68°F) ambient |
| Temperature Rise | 75°C (135°F) at nominal coil voltage (at 40 A) |
| Temperature | Max. 155°C (311°F) Class F |

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This product specification to be used only together with the application notes
which can be downloaded from <http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf>

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AZ9731

RELAY ORDERING DATA

| COIL SPECIFICATIONS | | | |
|---------------------|------------------|---------------------|--------------------------------|
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance Ohm $\pm 10\%$ |
| 6 | 3.9 | 7.8 | 22.5 |
| 12 | 7.8 | 15.6 | 90 |
| 24 | 15.6 | 31.2 | 360 |

RELAY ORDERING DATA

| AZ9731 - 1C - 12D C2 R1 | |
|--------------------------------|---|
| | Blank - Standard no diode, no resistor |
| R1 | - 180 Ohm, ½ W resistor in parallel with 6 V coil - 680 Ohm, ½ W resistor in parallel with 12 V coil - 2700 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 |
| C1 | - Plastic dust cover with steel mounting bracket |
| C1E | - Plastic dust cover with steel mounting bracket, sealed |
| C2 | - Plastic dust cover with plastic mounting bracket |
| C2E | - Plastic dust cover with plastic mounting bracket, sealed |
| C3 | - Plastic dust cover |
| C3E | - Plastic dust cover, sealed |
| C4 | - Plastic dust cover, shrouded, with metal mounting bracket, sealed |
| 24D | -24 volt coil |
| 12D | -12 volt coil |
| 6D | - 6 volt coil |
| 1A | - SPST normally open |
| 1A2 | - SPST normally open (2 x terminal 87) |
| 1C | - SPDT changeover |
| | Basic series designation - AZ9731 |

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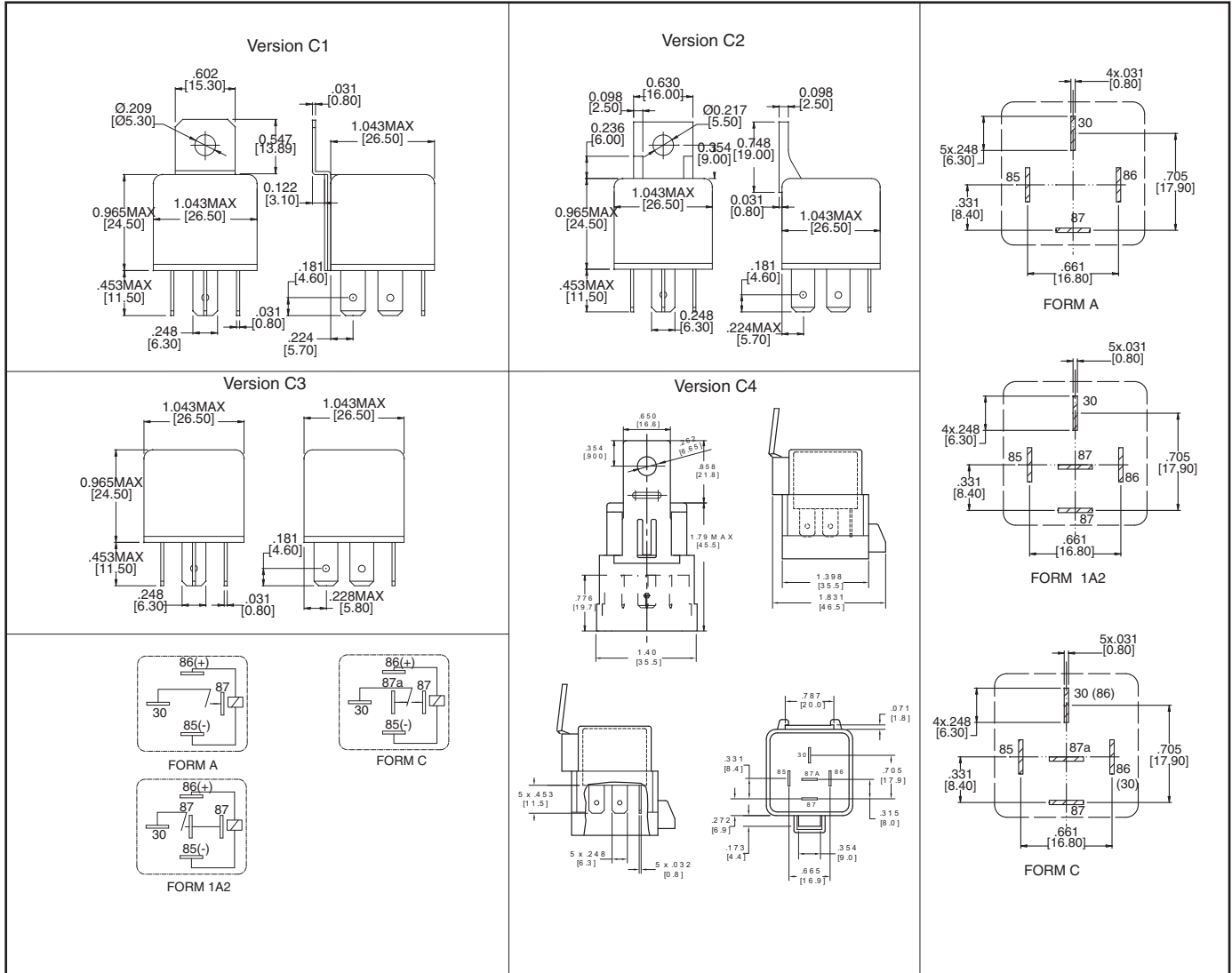
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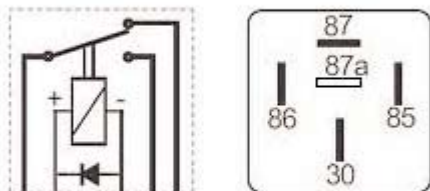
AZ9731

MECHANICAL DATA



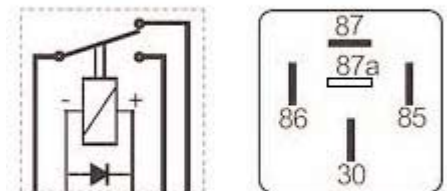
Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm .010$ "

"D1" Option Anode on Terminal #86



Cathode ← Anode

"D2" Option Cathode on Terminal #86



Anode → Cathode

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