

AZ983

80 AMP AUTOMOTIVE RELAY

FEATURES

- 80 Amp contact rating
- High momentary carry current
- High operating temperature (85°C)
- SPST N.O. (1 Form A), SPDT (1 Form C), SPST N.C. (1 Form B)
- PCB terminals
- Epoxy sealed version available



CONTACTS

| | |
|--------------------|---|
| Arrangement | SPST (1 Form A) SPST (1 Form B) SPDT (1 Form C) |
| Ratings | Resistive load: 1 Form A Max. switched power: 1120 W Max. switched current: 80 A Max. switched voltage: 28 VDC 1 Form B Max. switched power: 840 W Max. switched current: 60 A Max. switched voltage: 28 VDC 1 Form C Max. switched power: 840 W Max. switched current: 60 A Max. switched voltage: 28 VDC |
| Rated Load | Resistive load: 1 Form A 80 A at 14 VDC Resistive, 20°C 40 A at 28 VDC Resistive, 20°C 40 A at 14 VDC Resistive, 85°C 20 A at 28 VDC Resistive, 85°C 120 A at 28 VDC Resistive, 85°C (inrush for 3 seconds with make/break ratio 1:10) 1 Form B 60 A at 14 VDC Resistive, 20°C 30 A at 28 VDC Resistive, 20°C 30 A at 14 VDC Resistive, 85°C 15 A at 28 VDC Resistive, 85°C 1 Form C 60 A at 14 VDC Resistive, 20°C, (N.O.) 40 A at 28 VDC Resistive, 20°C, (N.O.) 40 A at 14 VDC Resistive, 85°C, (N.O.) 20 A at 28 VDC Resistive, 85°C, (N.O.) 60 A at 14 VDC Resistive, 20°C, (N.C.) 30 A at 28 VDC Resistive, 20°C, (N.C.) 30 A at 14 VDC Resistive, 85°C, (N.C.) 15 A at 28 VDC Resistive, 85°C, (N.C.) |
| Material | Silver tin oxide |
| Resistance | < 50 milliohms initially (at 24 V, 1 A, voltage drop method) |

GENERAL DATA

| | |
|--|--|
| Life Expectancy Mechanical Electrical | Minimum operations 1 x 10 ⁷ 1 x 10 ⁵ at 80 A 14 VDC Res. |
| Operate Time (typical) | 7 ms at nominal coil voltage |
| Release Time (typical) | 5 ms at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min.) | 500 Vrms coil to contact 500 Vrms between open contacts |
| Insulation Resistance | 100 megohms min. at 500 VDC, 20°C 50% RH |
| Dropout | Greater than 10% of nominal coil voltage |
| Ambient Temperature Operating | -40°C (-40°F) to 85°C (185°F) |
| Vibration | 0.062" (1.5 mm) DA at 10-55 Hz |
| Shock | 10 g |
| Enclosure | PA 66 |
| Terminals | Copper alloy PCB |
| Weight | 40 grams |

COIL

| | |
|---|--|
| Power At Pickup Voltage (typical) Max. Continuous Dissipation Temperature Rise | 0.76 W 3.0 W at 20°C (68°F) 68°C (122°F) at nominal coil voltage |
| Temperature | Max.155°C (311°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.

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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>

2012-10-18

AZ983

RELAY ORDERING DATA

| COIL SPECIFICATIONS | | | | ORDER NUMBER* | |
|---------------------|------------------|---------------------|----------------------------|---------------|--------------|
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | SPST | SPDT |
| 6 | 3.9 | 7.8 | 20 | AZ983-1A-6D | AZ983-1C-6D |
| 12 | 7.8 | 15.6 | 80 | AZ983-1A-12D | AZ983-1C-12D |
| 24 | 15.6 | 31.2 | 320 | AZ983-1A-24D | AZ983-1C-24D |

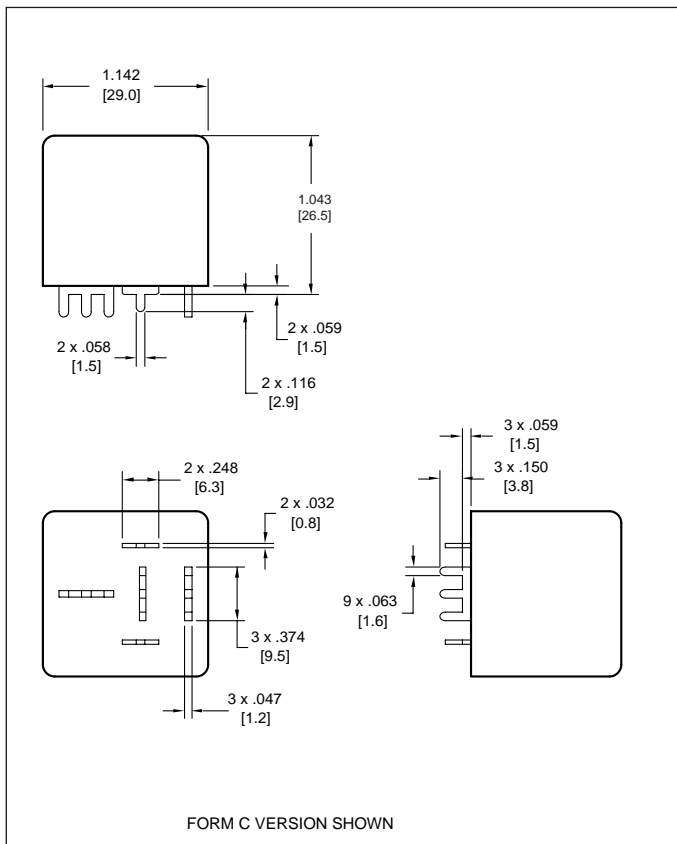
* For SPST (N.C.) (1 Form B) relay, substitute "1B" for "1A".

Add suffix "R" for resistor in parallel with coil. Resistor values: 6V: 180 Ω , 12V: 680 Ω , 24V: 2700 Ω .

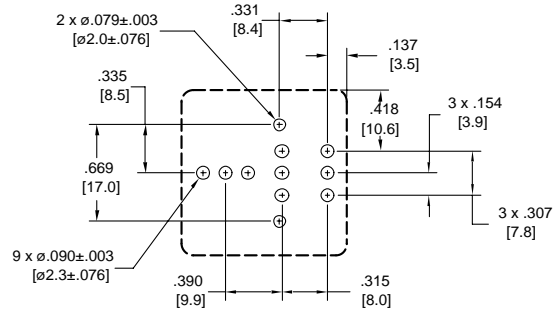
Add suffix "D" for diode across coil option (+ pole of power supply at terminal #86).

Add suffix "E" for epoxy sealed version.

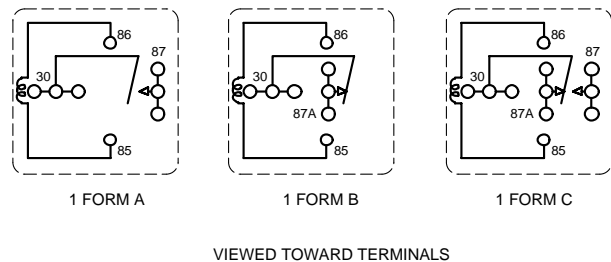
MECHANICAL DATA



PC BOARD LAYOUT



WIRING DIAGRAMS



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

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