

AZ977

20 AMP MINIATURE POWER RELAY FOR AUTOMOTIVE USE



FEATURES

- Low Cost
- Up to 20 Amp switching capability in a compact size
- Coils to 24 VDC
- Small footprint
- 1 Form A and C contacts available
- Vibration and shock resistant
- Designed for high in-rush applications

CONTACTS

| | |
|--------------------|--|
| Arrangement | SPST (1 Form A) SPDT (1 Form C) |
| Ratings | Resistive load: Max. switched power: 280 W Max. switched current: 20 A Max. switched voltage: 150 VDC* Rated load: 20 A at 14 VDC * If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory. |
| Material | Silver tin oxide |
| Resistance | < 50 milliohms initially (6 V, 1 A voltage drop method) |

COIL

| | |
|------------------------------------|---|
| Power | |
| At Pickup Voltage (typical) | 534 mW (Standard) 432 mW (Sensitive) |
| Max. Continuous Dissipation | 2.6 W at 20°C (68°F) ambient |
| Temperature Rise | 60°C (108°F) at nominal coil voltage |
| Max Temperature | 155°C (311°F) |

GENERAL DATA

| | |
|--|--|
| Life Expectancy Mechanical Electrical | Minimum operations 1 x 10 ⁶ 1 x 10 ⁵ at 20 A 14 VDC Res. |
| Operate Time (max.) | 10 ms max. at nominal coil voltage |
| Release Time (max.) | 7 ms max. at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min.) | 1000 VDC coil to contact 500 VDC between open contacts |
| Insulation Resistance | 100 megohms min. at 20°C, 500 VDC 50% RH |
| Dropout | Greater than 8.3% of nominal coil voltage |
| Ambient Temperature Operating Storage | At nominal coil voltage -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 105°C (221°F) |
| Vibration | 0.062" (1.5 mm) DA at 10-55 Hz |
| Shock | 10 g |
| Enclosure | P.B.T. polyester |
| Terminals | Quick connects Note: Allow suitable slack on leads when wiring and do not subject the terminals to excessive force. |
| Weight | 18.5 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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AZ977

RELAY ORDERING DATA

| STANDARD RELAYS | | | | | |
|---------------------|------------------|---------------------|----------------------------|---------------|---------------|
| COIL SPECIFICATIONS | | | | ORDER NUMBER* | |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Form A (SPST) | Form C (SPDT) |
| 6 | 3.6 | 7.8 | 25 | AZ977-1A-6D | AZ977-1C-6D |
| 12 | 7.2 | 15.6 | 97 | AZ977-1A-12D | AZ977-1C-12D |
| 24 | 14.4 | 31.2 | 384 | AZ977-1A-24D | AZ977-1C-24D |

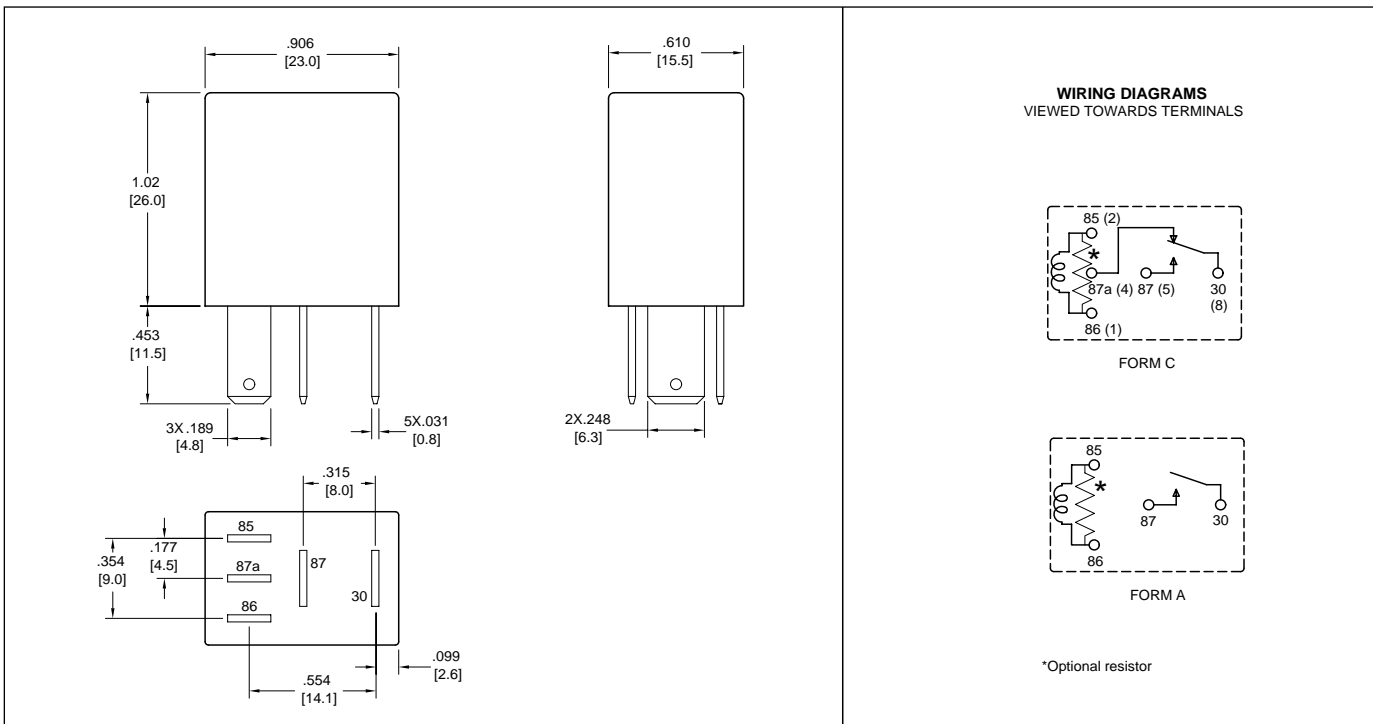
| SENSITIVE RELAYS | | | | | |
|---------------------|------------------|---------------------|----------------------------|---------------|---------------|
| COIL SPECIFICATIONS | | | | ORDER NUMBER* | |
| Nominal Coil VDC | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | Form A (SPST) | Form C (SPDT) |
| 6 | 3.6 | 7.8 | 32 | AZ977-1A-6DS | AZ977-1C-6DS |
| 12 | 7.2 | 15.6 | 123 | AZ977-1A-12DS | AZ977-1C-12DS |
| 24 | 14.4 | 31.2 | 483 | AZ977-1A-24DS | AZ977-1C-24DS |

* 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 at terminal #86).

Add suffix "E" for epoxy sealed version.

MECHANICAL DATA



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

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2003-06-24