## 30 AMP MICRO-ISO AUTOMOTIVE RELAY

## FEATURES

- Quick Connect or PCB terminals
- Up to 30 Amp switching capability in a compact size
- Coils up to 24VDC
- Small footprint
- SPST (1 Form A), SPDT (1 Form C)
- Vibration and shock resistant
- Coil suppression available
- ISO/TS 16949, ISO9001 and ISO 14000
- Tested in accordance with SAE J2544
- Cost effective solution
- Designed for high in-rush applications


## CONTACTS

| Arrangement | SPST (1 Form A) <br> SPDT (1 Form C) |
| :---: | :---: |
| Ratings | Resistive load: <br> Max. switched power: 540 W <br> Max. switched current: 30 A <br> Max. switched voltage: 27 VDC <br> 1 Form A (N.O.) <br> 30 A / 30 A (make/break) at 12 VDC resistive 40 A / 20 A (make/break) at 12 VDC motor 120 A / 20 A (make/break) at 12 VDC lamp <br> 1 Form C (N.O.) <br> 20 A / 20 A (make/break) at 12 VDC resistive 40 A / 20 A (make/break) at 12 VDC motor 120 A / 20 A (make/break) at 12 VDC lamp 1 Form C (N.C.) <br> 10 A / 10 A (make/break) at 12 VDC resistive 20 A / 10 A (make/break) at 12 VDC motor 40 A / 10 A (make/break) at 12 VDC lamp |
| Material | Silver tin oxide (silver nickel available - contact factory) |
| Resistance | < 50 milliohms initially <br> ( $24 \mathrm{~V}, 1$ A voltage drop method) |
| Contact Voltage drop | 100 mV typical, 250 mV max. at rated load |

## COIL

| Power |  |
| :--- | :--- |
| At Pickup Voltage <br> (typical) | 576 mW (Standard) |
| Max. Continuous <br> Dissipation | 318 mW (Sensitive) |
| Temperature Rise | $60^{\circ} \mathrm{C}$ at $\left(100^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)\right.$ ambient |
| Max Temperature | $180^{\circ} \mathrm{C}\left(356^{\circ} \mathrm{F}\right)$ |

## GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations $1 \times 10^{7}$ <br> $1 \times 10^{5}$ at 20 A 12 VDC Res. |
| :---: | :---: |
| Operate Time (max.) | 10 ms max. at nominal coil voltage |
| Release Time (max.) | 10 ms max. at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min.) | 500 VRMS coil to contact <br> 500 VRMS between open contacts |
| Insulation Resistance | 1 megohms min. at $20^{\circ} \mathrm{C}, 500$ VDC $50 \%$ RH |
| Dropout | Greater than 10\% of nominal coil voltage |
| Ambient Temperature Operating Storage | At nominal coil voltage $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $125^{\circ} \mathrm{C}\left(257^{\circ} \mathrm{F}\right)$ $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $155^{\circ} \mathrm{C}\left(320^{\circ} \mathrm{F}\right)$ |
| Vibration | $5 \mathrm{~g} \mathrm{10-500} \mathrm{~Hz}$ |
| Shock | 20 g |
| Enclosure | P.B.T. polyester |
| Terminals | Quick connects or PCB <br> Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force. |
| Max Solder Temp. | $270^{\circ} \mathrm{C}\left(518^{\circ} \mathrm{F}\right)$ |
| Max Solder Time | 5 seconds |
| Max Solvent Temp | $80^{\circ} \mathrm{C}\left(176{ }^{\circ} \mathrm{F}\right)$ |
| Max Immersion Time | 30 seconds |
| Weight | 22 grams |

## NOTES

1. All values at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$.
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

RELAY ORDERING DATA

| COIL SPECIFICATIONS - STANDARD |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Must Operate <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ |  |  |  |  |
| 12 | 7.2 | 18 | 90 |  |  |  |  |
| 24 | 14.4 | 36 | 360 |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Nominal Coil <br> VDC |  |  |  |  | Must Operate <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ |
| 12 | 7.2 | 21 | 124 |  |  |  |  |
| 24 | 14.4 | 40 | 441 |  |  |  |  |

## RELAY ORDERING DATA

## AZ988-1CT-12DSEC1RQ <br> Blank - Standard contact gap (=>0.5 mm) <br> Q - Wide contact gap ( $=>0.6 \mathrm{~mm}$ ) <br> R - 680 Ohm parallel with 12 V standard coil 2700 Ohm parallel with 24 V standard coil 680 Ohm parallel with 12 V sensitive coil 1800 Ohm parallel with 24 V sensitive coil <br> - QC terminals, no top grip on cover <br> C2 - QC terminals, with top grip on cover <br> C3 - PC terminals, no top grip on cover <br> Blank - Unsealed <br> E - Sealed <br> Blank - Standard coil <br> S - Sensitive coil <br> 12D - 12 VDC coil <br> 24D -24 VDC coil <br> T $\quad$ AgSnO2 contact material <br> -1A -Single pole normally open <br> -1C -Single pole double throw <br> Basic Series Designation - AZ988

MECHANICAL DATA

| Outline Dimensions C1 <br> BOTTOM VIEW | Outline Dimensions C2 $* \begin{array}{llll}  & = & 4 & 5 \\ 4 & = & 5 & 3 \\ \hline \end{array}$ <br> BOTTOM VIEW | Outline Dimensions C3 <br> BOTTOM VIEW |
| :---: | :---: | :---: |
| Wiring Diagram <br> C1 | C2 <br> VIEWED TOWARD TERMINALS |  |

Dimensions in inches with metric equivalents in parentheses. Tolerance: $\pm .010$ " (.25mm)

* On Form A relay, terminal 4 is removed.

