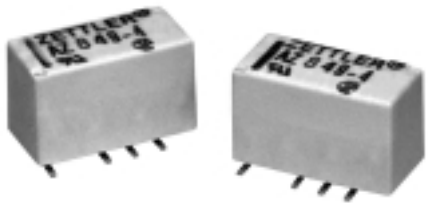
AZ849

MICROMINIATURE SURFACE MOUNT POLARIZED RELAY



FEATURES

- High dielectric and surge voltage: 2.5 kV surge (per Bellcore TA-NWT-001089), 1.5 kV surge (per FCC Part 68), 1,000 VRMS open contacts
- Low power consumption: 56 mW set
- Non-latching and latching versions
- Single coil and dual coil versions
- Stable contact resistance for low level signal switching
- Epoxy sealed for automatic wave soldering and cleaning
- UL E43203; CSA 73363
- All plastics meet UL94 V-0, 30 min. oxygen index

CONTACTS

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Ratings	Non-inductive load: Max. switched power: 60 W or 62.5 VA Max. switched current: 2 A Max. switched voltage: 220 VDC or 250 VAC
Rated Load UL/CSA	0.5 A at 125 VAC res. 2.0 A at 30 VDC res. 0.3 A at 110 VDC res.
Material	Silver alloy; gold clad
Resistance	< 50 milliohms initially at 6 V, 0.1 A

COIL

Power	
At Pickup Voltage (typical)	AZ849: 79 mW to 169 mW AZ849P1: 57 mW to 85 mW AZ849P2: 110 mW to 170 mW
Max. Continuous Dissipation	826 mW at 20°C (68°F) ambient 652 mW at 40°C (104°F) ambient
Temperature Rise	At nominal coil voltage 18°C (32°F) (3 - 12 VDC coils) 25°C (45°F) (18, 24 VDC coils) 34°C (61°F) (48 VDC coils)
Temperature	Max. 115°C (239°F)

NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Relay has fixed coil polarity.
4. Specifications subject to change without notice.

GENERAL DATA

Life Expectancy **Mechanical** **Electrical**	Minimum operations 1 x 10^8 operations at 3 Hz 2 x 10^5 operations at 0.5 A, 125 VAC, resistive 5 x 10^5 operations at 1.0 A, 30 VDC, resistive
Operate Time (typical)	2 ms at nominal coil voltage
Release Time (typical)	1 ms at nominal coil voltage (with no coil suppression)
Bounce (typical)	1 ms (at 10 mA contact current)
Capacitance	< 1.5 pF open and adjacent contacts < 2.0 pF contact to coil
Dielectric Strength (at sea level)	See table
Insulation Resistance	10^9 ohms min. at 500 VDC
Dropout	Greater than 10% 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 115°C (239°F)
Vibration	Operational, 3.3 mm DA, 10 - 55 Hz Maximum, 5.5 mm DA, 10 -55 Hz
Shock	Operational, 50g min., 11 ms Maximum, 100 g min., 6 ms
Enclosure	LCP
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	See charts
Max. Solder Time	See charts
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	1.8 grams

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11/3/99W

AZ849

RELAY ORDERING DATA

SINGLE SIDE STABLE (Standard, Non-Latching)				
COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ± 10%	Must Operate VDC	
1.5	3.7	16.1	1.13	AZ849–1
3	7.3	64.3	2.25	AZ849–3
4.5	10.9	145	3.38	AZ849–4
5	12.1	178	3.75	AZ849–5
6	14.6	257	4.5	AZ849–6
9	21.9	579	6.75	AZ849–9
12	29.1	1,028	9.0	AZ849–12
18	36.6	1,620	13.5	AZ849–18
24	48.7	2,880	18.0	AZ849–24
48	79.6	7,680	36.0	AZ849–48

RELAY ORDERING DATA

SINGLE COIL (Latching)				
COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance ± 10%	Set (+)/Reset (-) VDC	
1.5	4.3	22.5	1.13	AZ849P1–1
3	8.6	90	2.25	AZ849P1–3
4.5	12.9	203	3.38	AZ849P1–4
5	14.4	250	3.75	AZ849P1–5
6	17.2	360	4.5	AZ849P1–6
9	25.8	810	6.75	AZ849P1–9
12	34.5	1,440	9.0	AZ849P1–12
18	42.2	2,160	13.5	AZ849P1–18
24	56.3	3,840	18.0	AZ849P1–24

RELAY ORDERING DATA

DUAL COIL (Latching)				
COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance (each coil) ± 10%	Set/Reset VDC	
1.5	3.0	11.25	1.13	AZ849P2–1
3	6.1	45	2.25	AZ849P2–3
4.5	9.1	101	3.38	AZ849P2–4
5	10.2	125	3.75	AZ849P2–5
6	12.2	180	4.5	AZ849P2–6
9	25.8	405	6.75	AZ849P2–9
12	24.4	720	9.0	AZ849P2–12
18	29.9	1,080	13.5	AZ849P2–18
24	39.8	1,920	18.0	AZ849P2–24

INITIAL DIELECTRIC AND SURGE STRENGTH (minimum)

		SURGE		
	VRMS, 1 min.	Peak (V)	Rise Time	Decay Time
Between Open Contacts	1000	1500	10 µs	700 µs
Between Contact Sets	1000	1500	10 µs	700 µs
Between Coil and Contacts	AZ849: 1500 AZ849P2: 1000	AZ849, AZ849P1: 2500 (AZ849P2: 1500)	2 µs (10 µs)	10 µs (160 µs)

Decay time measured from beginning of surge.

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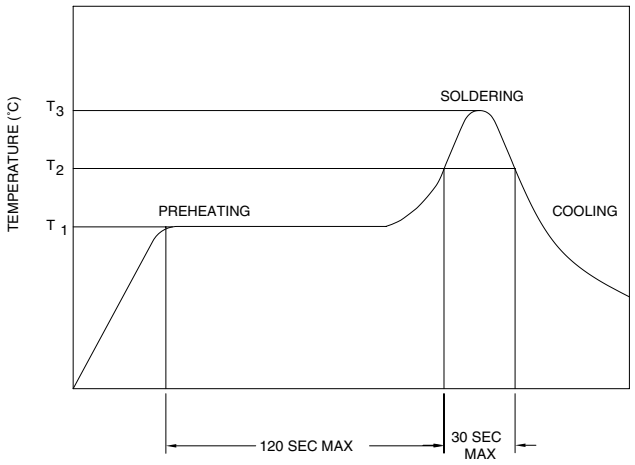
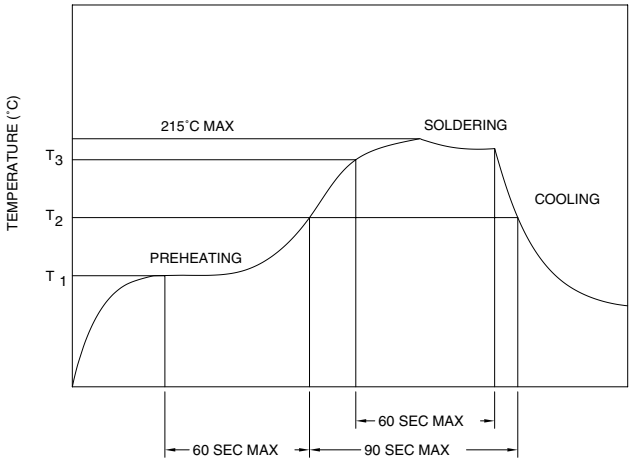
SOLDERING DATA

IRS (Infrared Reflow Soldering)



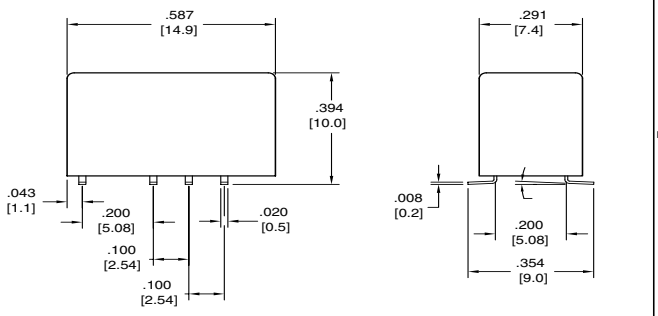
T_3= 245 °C MAX
T_2= 200 °C MAX
T_1= 165 °C MAX

VPS (Vapor Phase Soldering)

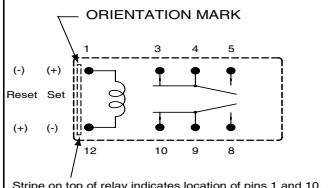


T_3= 200 °C MAX
T_2= 165 °C MAX
T_1= 100 °C MAX

MECHANICAL DATA

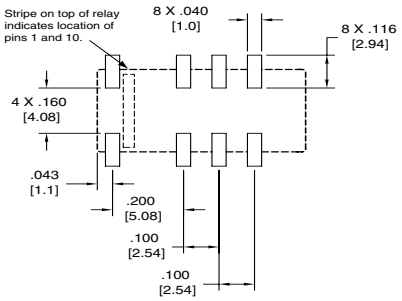


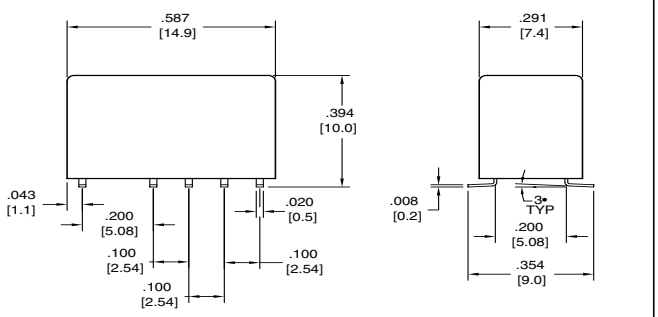
WIRING DIAGRAMS
VIEWED TOWARDS TERMINALS



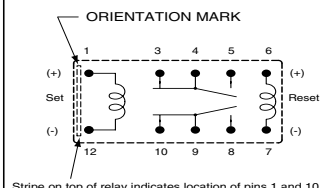
DEENERGIZED OR RESET CONDITION

PC BOARD LAYOUT
VIEWED TOWARDS TERMINALS





WIRING DIAGRAMS
VIEWED TOWARDS TERMINALS



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PC BOARD LAYOUT
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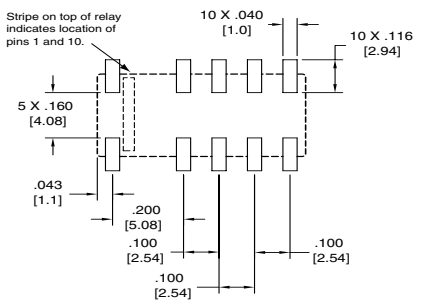

Dimensions in inches with metric equivalents in parentheses. Tolerance: ±0.010"

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