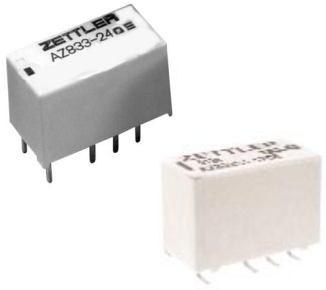
AZ833P

MICROMINIATURE POLARIZED LATCHING RELAY

FEATURES

- Single and dual coil latching versions
- 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: 79 mW pickup
- Stable contact resistance for low level signal switching
- Epoxy sealed
- UL, CUR file E43203
- All plastics meet UL94 V–O, 30 min. oxygen index



CONTACTS

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Ratings	Resistive load: Max. switched power: 60 W or 62.5 VA Max. switched current: 2.0 A Max. switched voltage: 220 VDC or 250 VAC
Rated Load **UL/CSA**	0.25 A at 240 VAC 0.5 A at 125 VAC 2.0 A at 30 VDC 0.3 A at 110 VDC
Material	Silver nickel gold plated Silver palladium available upon request

COIL (Polarized)

Power	
At Pickup Voltage (typical)	79 mW (dual coil) 39 mW (single coil)
Max. Continuous Dissipation	1.0 W at 20°C (68°F)
Temperature Rise	At nominal coil voltage 18°C (32°F)
Temperature	Max. 110°C (230°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 1 x 10^5 at 0.5 A, 125 VAC, resistive 2 x 10^5 at 1.0 A, 30 VDC, resistive
Operate Time (set) (typical)	3 ms at nominal coil voltage
Release Time (reset) (typical)	3 ms at nominal coil voltage (with no coil suppression)
Bounce (typical)	At 10 mA contact current 1 ms at operate or release
Dielectric Strength (at sea level)	See table
Insulation Resistance	10^9 ohms min. at 25°C, 500 VDC, 50% RH
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	Operational, 35 g, 10–1000 Hz
Shock	Operational, 50 g min., 11 ms Non-destructive, 150 g min., 11 ms
Max. Solder Temp. Temp./Time	See soldering profile
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	2.5 grams
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P.C.
Packing unit in pcs **THT** **SMT**	 50 per plastic tube / 1000 per carton box 400 per reel / 2000 per carton box

ZETTLER electronics GmbH
Junkersstrasse 3, D-82178 Puchheim, Germany
Tel. +49 89 800 97 0 office@ZETTLERelectronics.com
Fax +49 89 800 97 200 www.ZETTLERelectronics.com

2005-08-04

AZ833P

RELAY ORDERING DATA

COIL SPECIFICATIONS

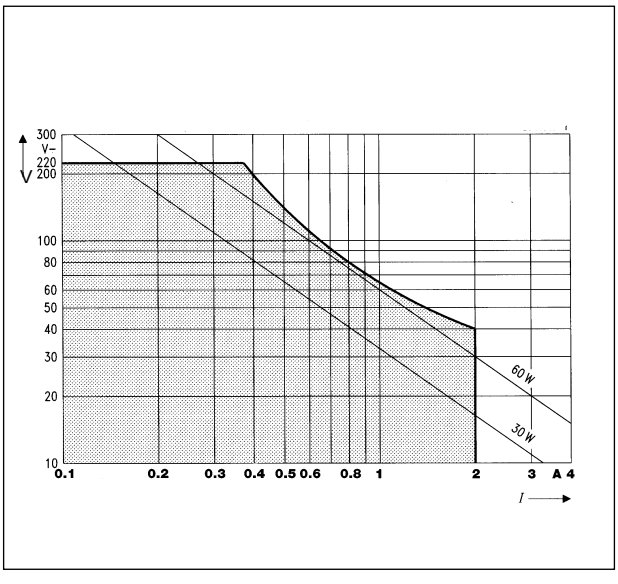
STANDARD RELAYS: Bistable, 2 coils				Order Number		
Nominal Coil VDC	Set / Reset VDC	Max. Continuous VDC	Coil Resistance Ohm ± 10%	THT Through Hole	SMT Long	SMT Short
3	2.25	6.5	64.3	AZ833P2–3DE	AZ833P2S1–3DE	AZ833P2S2–3DE
4.5	3.38	9.8	145	AZ833P2–4.5DE	AZ833P2S1–4.5DE	AZ833P2S2–4.5DE
5	3.75	10.9	178	AZ833P2–5DE	AZ833P2S1–5DE	AZ833P2S2–5DE
6	4.50	13.0	257	AZ833P2–6DE	AZ833P2–6DE	AZ833P2S2–6DE
9	6.75	19.6	578	AZ833P2–9DE	AZ833P2S1–9DE	AZ833P2S2–9DE
12	9.00	26.2	1,029	AZ833P2–12DE	AZ833P2S1–12DE	AZ833P2S2–12DE
24	18.00	52.3	4,114	AZ833P2–24DE	AZ833P2S1–24DE	AZ833P2S2–24DE

STANDARD RELAYS: Bistable, 1 coil				Order Number		
Nominal Coil VDC	Set / Reset VDC	Max. Continuous VDC	Coil Resistance Ohm ± 10%	THT Through Hole	SMT Long	SMT Short
3	2.25	6.5	128	AZ833P1–3DE	AZ833P1S1–3DE	AZ833P1S2–3DE
4.5	3.38	9.8	289	AZ833P1–4.5DE	AZ833P1S1–4.5DE	AZ833P1S2–4.5DE
5	3.75	10.9	357	AZ833P1–5DE	AZ833P1S1–5DE	AZ833P1S2–5DE
6	4.50	13.0	514	AZ833P1–6DE	AZ833P1S1–6DE	AZ833P1S2–6DE
9	6.75	19.6	1,157	AZ833P1P1–9DE	AZ833P1S1–9DE	AZ833P1S2–9DE
12	9.00	26.2	2,057	AZ833P1–12DE	AZ833P1S1–12DE	AZ833P1S2–12DE
24	18.00	52.3	8,228	AZ833P1–24DE	AZ833P1S1–24DE	AZ833P1S2–24DE

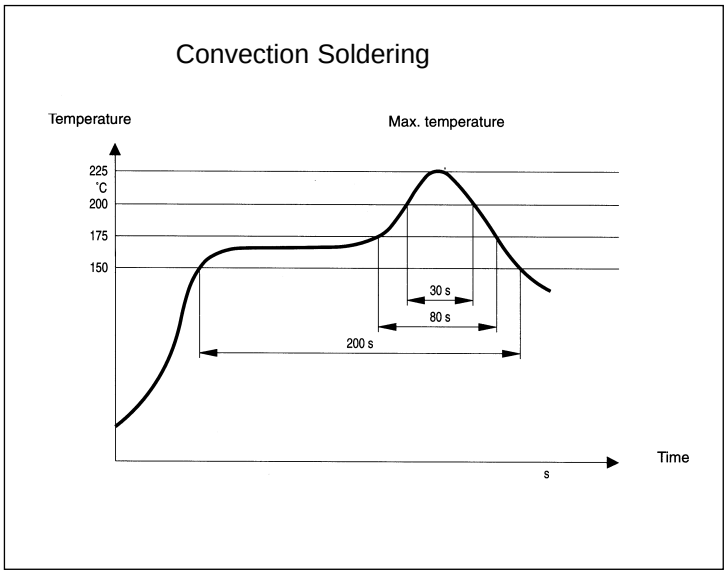
INITIAL DIELECTRIC STRENGTH (minimum)		SURGE		
	VRMS, 1 min.	Peak (V)	Rise Time (µS)	Decay Time* (9µS) (1/2 peak)
Between open contacts	1,000	1,500	10	160
Between contact sets	1,000	1,500	2	160
Between coil and contacts	1,800	2,500	2	10

* Decay time measured from beginning of surge.

LOAD LIMIT CURVE



RECOMMENDED SOLDERING PROFILE



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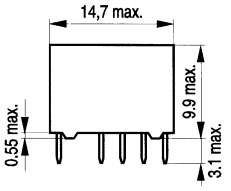
Tel. +49 89 800 97 0 office@ZETTLERelectronics.com
Fax +49 89 800 97 200 www.ZETTLERelectronics.com

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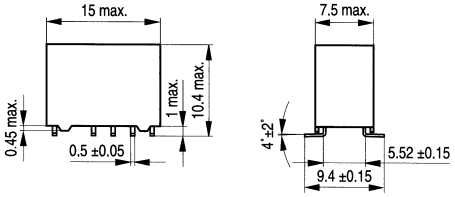
AZ833P

MECHANICAL DATA

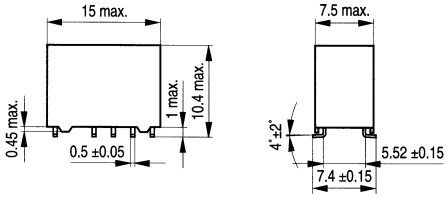
THT



SMT Long Terminals



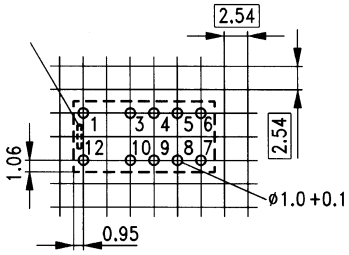
SMT Short Terminals



PCB Layout

Viewed toward terminals

Orientation mark

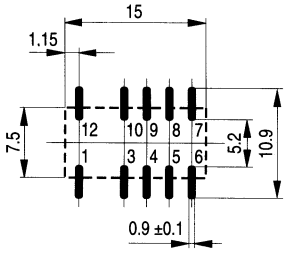


Note: Hole for pin 6 and 7 only for bistable with 2 windings

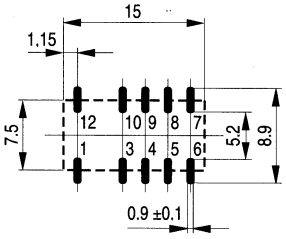
Solder Pad Layout

Viewed toward the component side of the PCB

Long terminals



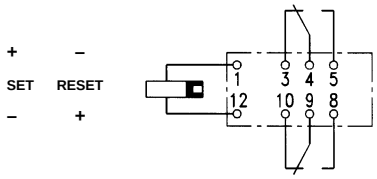
Short terminals



Note: Solder pad for pin 6 and 7 only for bistable with 2 windings

Wiring Diagram

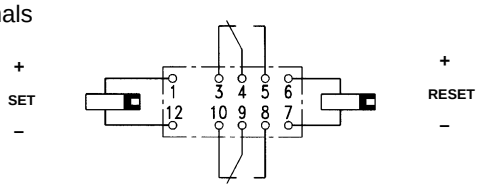
bistable, 1 winding



Shown in reset position

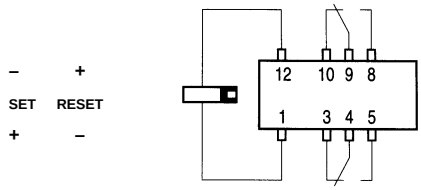
Bistable,
2 windings

Viewed toward terminals



Shown in reset position

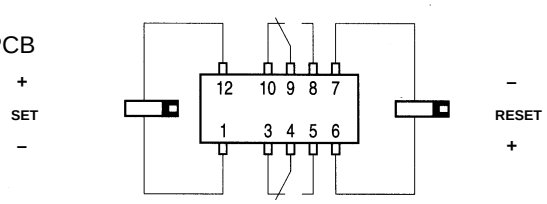
bistable, 1 winding



Shown in reset position

Bistable, 2 windings

Viewed toward
component side of PCB



Shown in reset position

All dimensions in mm

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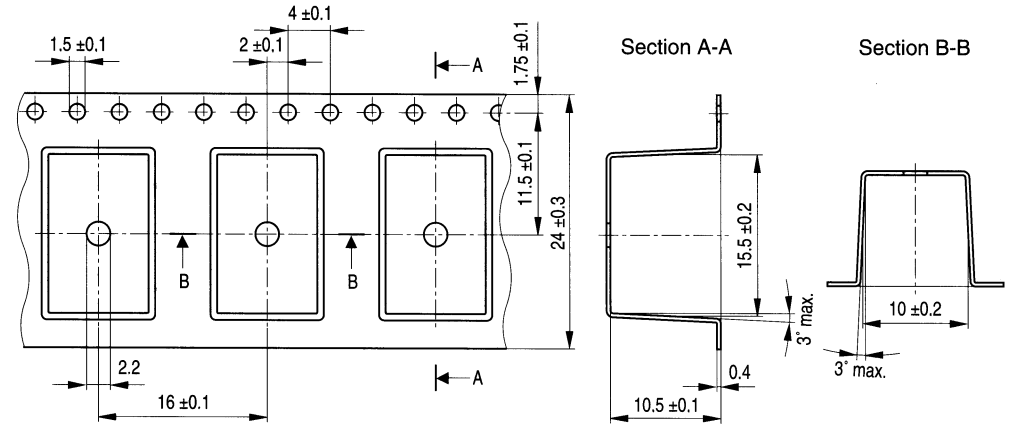
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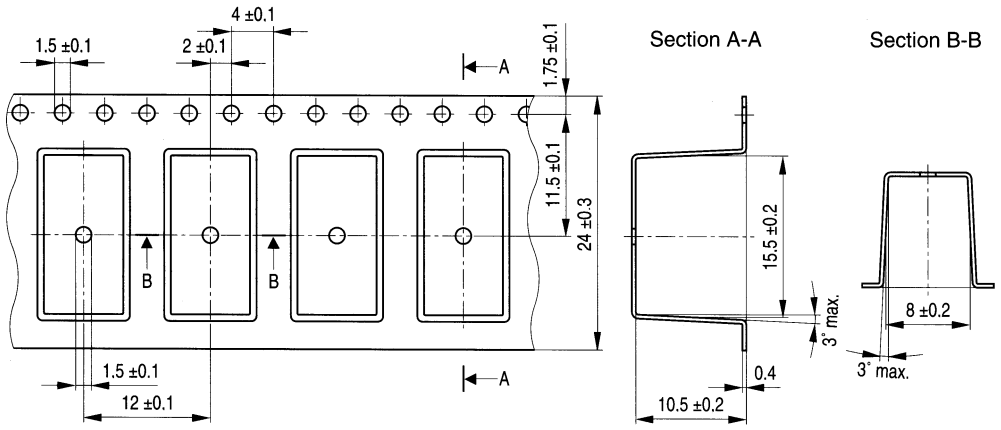
AZ833P

PACKAGING

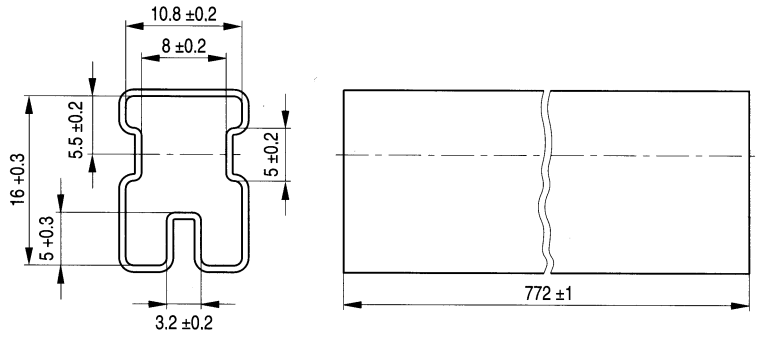
Tape and reel for SMT version with long terminals – AZ833P1S1 or AZ833P2S1



Tape and reel for SMT version with short terminals – AZ833P1S2 or AZ833P2S2



Tube for THT version – AZ833P1 or AZ833P2



50 items / tube

All dimensions in mm

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Junkersstrasse 3, D-82178 Puchheim, Germany

Tel. +49 89 800 97 0 office@ZETTLERelectronics.com

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