

AZ975/976

20 AMP MINIATURE AUTOMOTIVE RELAY

FEATURES

- Up to 20 Amp switching capability in a compact size
- Open, covered or sealed
- Coils to 24 VDC
- Small footprint
- Six different contact arrangements available
- Vibration and shock resistant
- ISO/TS 16949, ISO9001, ISO14000
- Tested in accordance with SAE J2544
- Cost effective
- Designed for high in-rush applications

CONTACTS

Arrangement	SPSTNO (1 Form A) SPST NO DM (1 Form U) SPSTNC (1 Form B) SPST NC DB (1 Form V) SPDT (B-M) (1 Form C) SPDT NC-NO DM (1 Form W)
Ratings	Max. switched power: 200 W 500 VA Max. switched voltage: 100 VDC Max. switched current (make/break), continuous: 1 Form A: 60A/20A, 15A 1 Form B: 12A/10A, 10A 1 Form C (NO): 60A/20A, 15A 1 Form C (NC): 12A/10A, 10A 1 Form U: 2X40A/2X20A, 2X10A 1 Form V: 2X8A/2X7A, 2X7A 1 Form W (NO): 2X30A/2X15A, 2X7A 1 Form W (NC): 2X5A/2X5A, 2X5A
Material	Silver tin oxide
Resistance	< 100 milliohms at 1A, 5 VDC

COIL

Power	
At Pickup Voltage (typical)	514 mW (12 and 24 VDC Coil) 573 mW (6 VDC Coil)
Max. Continuous Dissipation	3.4 W 20°C (68°F) ambient - AZ975 3.1 W 20°C (68°F) ambient - AZ976
Temperature Rise	50°C (90°F) nominal coil VDC
Max. Temperature	155°C (311°F)



AZ975



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GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 1 x 10 ⁷ operations 1 x 10 ⁵ at 12 A 14 VDC Res.
Operate Time (typical)	3 ms at nominal coil voltage
Release Time (typical)	1.5 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 20°C, 500 VDC, 50% RH
Dropout	> 6% (for B&V), > 11% (for ACUW) of nominal coil voltage
Ambient Temperature Operating Storage	At nominal coil voltage -40°C (-40°F) to 115°C (239°F) -40°C (-40°F) to 155°C (311°F)
Vibration	0.062" DA at 10–55Hz
Shock	10 g, 11 ms, functional
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	270°C (518°F)
Max. Solder Time	5 seconds
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	AZ975 = 8g, AZ976 = 12g, approx.

NOTES

1. All values at 20°C (68°F).
2. Maximum make current refers to in-rush current of lamp load.
3. Electrical life obtained at resistive or inductive load of 10A, 15 VDC for A, B, C, U, V contacts, 7A, 15 VDC for W contacts with suitable arc-suppression circuit attached with operating frequency of 1 ops/sec.
4. Relay may pull in with less than "Must Operate" value.
5. Specifications subject to change without notice.



AMERICAN ZETTLER, INC.

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7/13/2010

AZ975/976

RELAY ORDERING DATA – AZ 975 - Open Style

COIL SPECIFICATIONS - DC Coil					ORDER NUMBER*		
Nominal Coil VDC	Must Operate VDC		Max. Continuous VDC	Coil Resistance $\pm 10\%$	Form A [SPST NO]	Form B [SPST NC]	Form C [SPDT]
	A.B.C.U.V.	W.					
6	3.75	4.5	9.75	28	AZ975-1A-6DT	AZ975-1B-6DT	AZ975-1C-6DT
12	7.5	9.0	21.0	130	AZ975-1A-12DT	AZ975-1B-12DT	AZ975-1C-12DT
24	15.0	18.0	42.0	520	AZ975-1A-24DT	AZ975-1B-24DT	AZ975-1C-24DT

* Use "U", "V" or "W" in place of "A" for Form U, Form V or Form W relays.

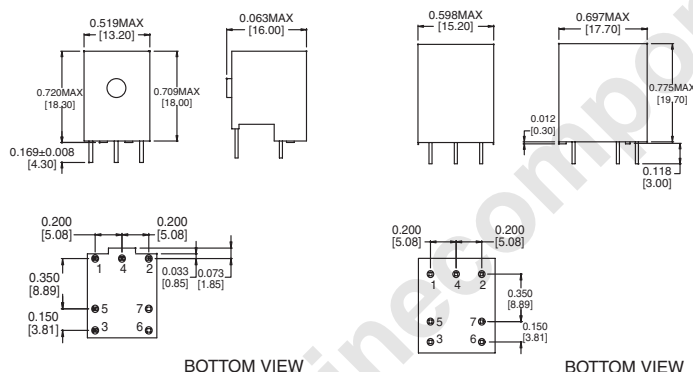
RELAY ORDERING DATA – AZ 976 - With Dust Cover

COIL SPECIFICATIONS - DC Coil					ORDER NUMBER*		
Nominal Coil VDC	Must Operate VDC		Max. Continuous VDC	Coil Resistance $\pm 10\%$	Form A [SPST NO]	Form B [SPST NC]	Form C [SPDT]
	A.B.C.U.V.	W.					
6	3.75	4.5	9.2	28	AZ976-1A-6DT	AZ976-1B-6DT	AZ976-1C-6DT
12	7.5	9.0	20.0	130	AZ976-1A-12DT	AZ976-1B-12DT	AZ976-1C-12DT
24	15.0	18.0	40.0	520	AZ976-1A-24DT	AZ976-1B-24DT	AZ976-1C-24DT

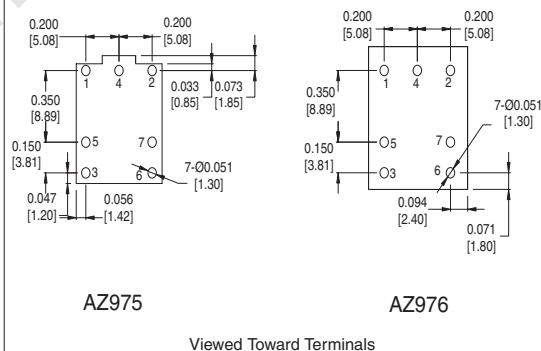
*Change suffix "T" to "ET" for epoxy sealed version. Use "U", "V" or "W" in place of "A" for Form U, Form V or Form W relays.

MECHANICAL DATA

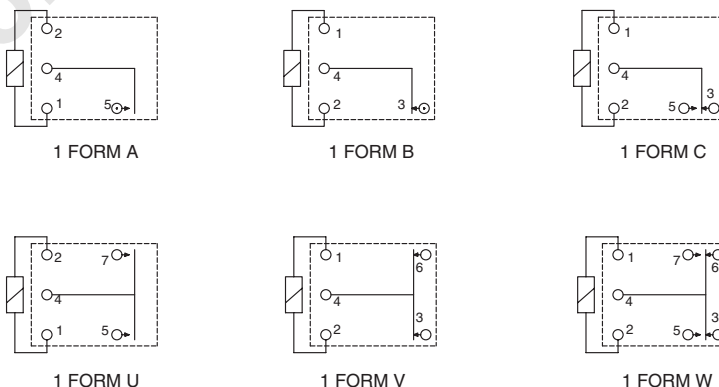
AZ975 / 976 Outline Dimensions



Suggested PCB Layout



Wiring Diagrams (Bottom View)



View Toward Terminals

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



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