

# AZ975/976

## 20 AMP MINIATURE AUTOMOTIVE RELAY

### FEATURES

- Up to 20 Amp switching capability in a compact size
- Open or with cover - epoxy sealed
- Coils to 12VDC
- Small footprint
- Six different contact arrangements available
- Vibration and shock resistant
- ISO/TS 16949, ISO9001, ISO14000
- Cost effective
- Designed for high in-rush applications

### CONTACTS

<b>Arrangement</b>	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)
<b>Ratings</b>	Max. switched power: 200W 500VA Max. switched voltage: 100VDC 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
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 100 milliohms at 1A, 5VDC

### COIL

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



AZ975



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### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> operations 1 x 10 <sup>5</sup> at 12A, 14VDC Res.
<b>Operate Time (typical)</b>	3ms at nominal coil voltage
<b>Release Time (typical)</b>	1.5ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength</b> (at sea level for 1 min.)	500Vrms coil to contact 500Vrms between open contacts
<b>Insulation Resistance</b>	100 megohms min. at 20°C, 500VDC, 50% RH
<b>Dropout</b>	> 6% (for B&V), > 11% (for ACUW) of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b> <b>Storage</b>	At nominal coil voltage -40°C (-40°F) to 115°C (239°F) -40°C (-40°F) to 155°C (311°F)
<b>Vibration</b>	0.062" DA at 10–55Hz
<b>Shock</b>	10g, 11ms, functional
<b>Terminals</b>	Tinned copper alloy, P.C.
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max. Solder Time</b>	5 seconds
<b>Max. Solvent Temp.</b>	80°C (176°F)
<b>Max. Immersion Time</b>	30 seconds
<b>Weight (approx.)</b>	AZ975 = 8 grams; AZ976 = 12 grams

### 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, 15VDC for A, B, C, U, V contacts, 7A, 15VDC 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.

# 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	Form B	Form C
	A.B.C.U.V.	W.			(SPST NO)	(SPST NC)	(SPDT)
6	3.75	4.5	9.0	28	AZ975-1A-6DT	AZ975-1B-6DT	AZ975-1C-6DT
12	7.5	9.0	19.6	130	AZ975-1A-12DT	AZ975-1B-12DT	AZ975-1C-12DT

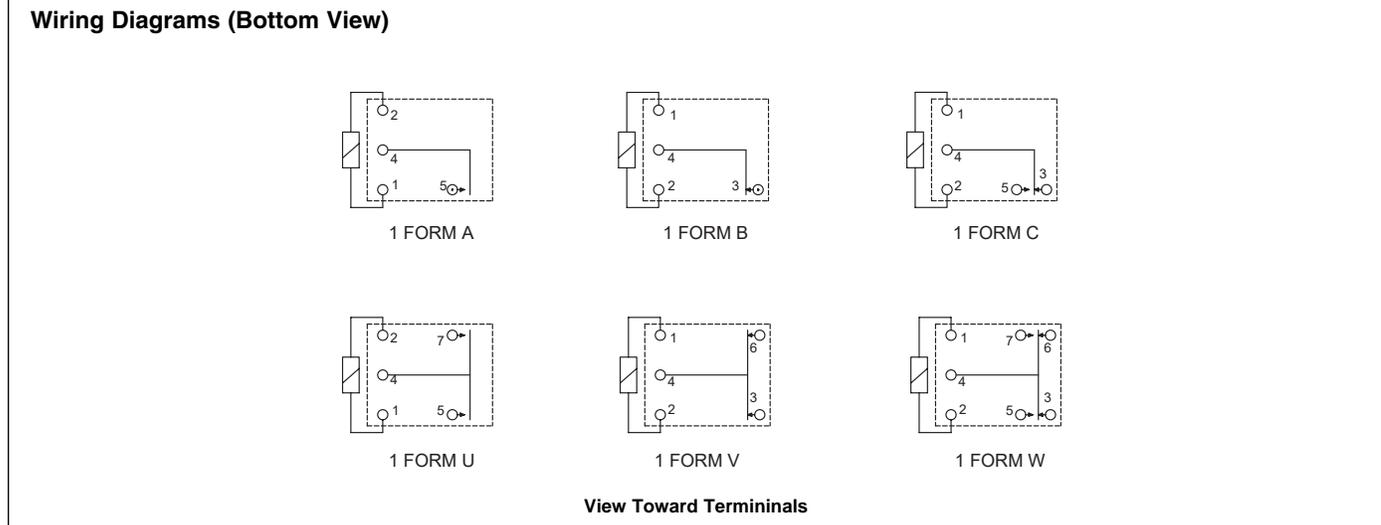
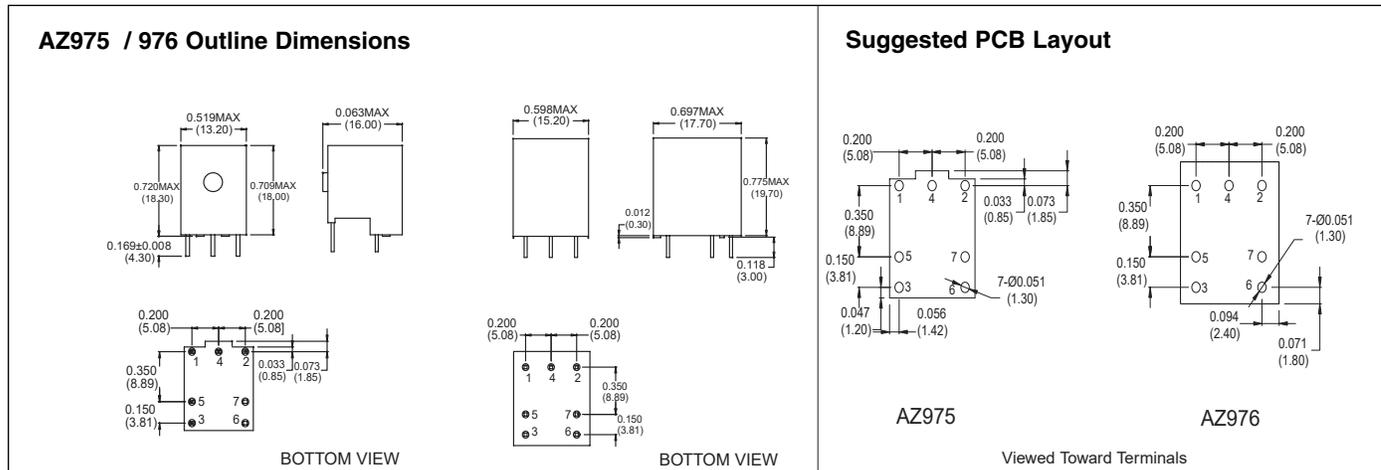
\* Use "U", "V" or "W" in place of "A" for Form U, Form V or Form W relays.

## 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	Form B	Form C
	A.B.C.U.V.	W.			(SPST NO)	(SPST NC)	(SPDT)
6	3.75	4.5	9.0	28	AZ976-1A-6DET	AZ976-1B-6DET	AZ976-1C-6DET
12	7.5	9.0	19.6	130	AZ976-1A-12DET	AZ976-1B-12DET	AZ976-1C-12DET

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

## MECHANICAL DATA



Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm 0.010$ "

# AMERICAN ZETTLER, INC.

2/02/16

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This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.