

# 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.

**AMERICAN ZETTLER, INC.**

[www.azettler.com](http://www.azettler.com)

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## 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

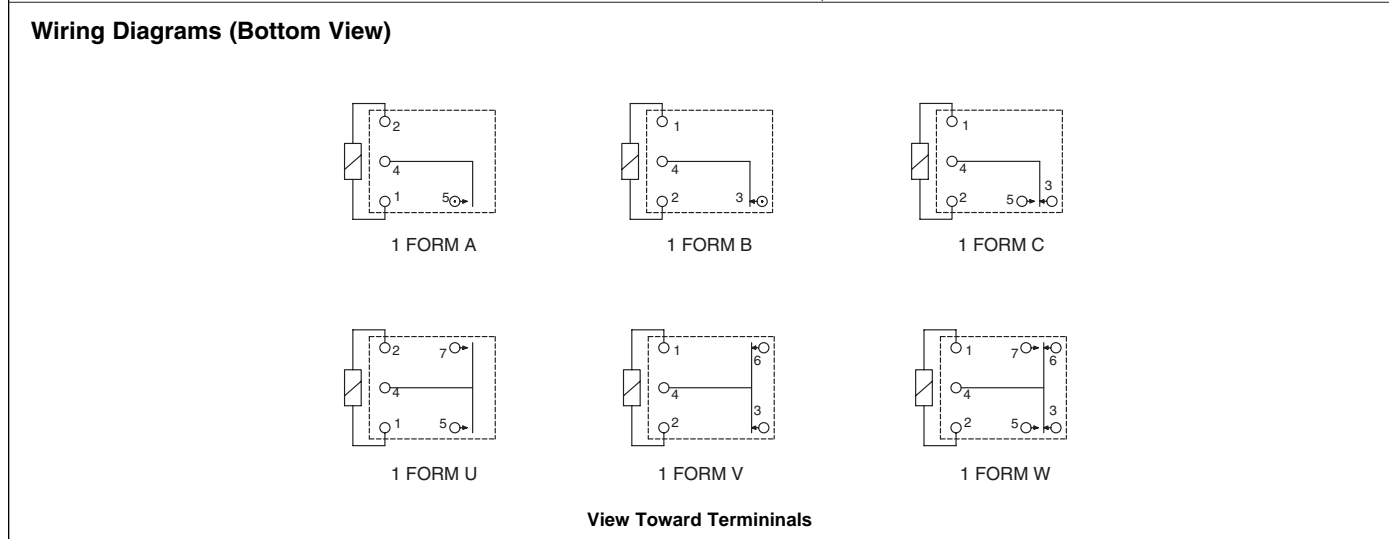
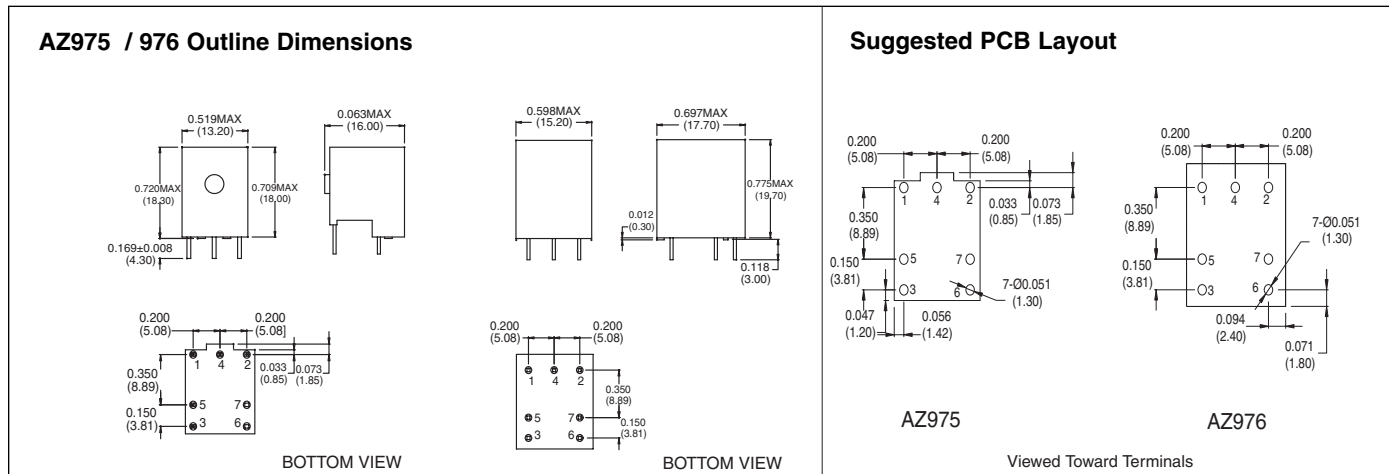
\* Use "U", "V" or "W" in place of "A" for Form U, Form V or Form W relays.

## 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:  $\pm 0.010$ "