

# AZ975/AZ976

## 20 AMP SUB-MINIATURE POWER RELAY FOR AUTOMOTIVE USE

### 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
- 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: 200 W (See power curve) 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
<b>Material</b>	Silver tin oxide
<b>Resistance</b>	< 100 milliohms at 1A, 5 VDC

### 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> operations at 12 A 14 VDC Res.
<b>Operate Time (typical)</b>	3 ms at nominal coil voltage
<b>Release Time (typical)</b>	1.5 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength</b> (at sea level for 1 min.)	500 Vrms coil to contact 500 Vrms between open contacts
<b>Insulation Resistance</b>	100 megohms min. at 20°C, 500 VDC, 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 85°C (185°F) -40°C (-40°F) to 105°C (221°F)
<b>Vibration</b>	0.062" (1.5 mm) DA at 10–55Hz
<b>Shock</b>	10 g, 11 ms, 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</b>	AZ975 = 8g, AZ976 = 12g, approx.
<b>Packing unit in pcs</b>	AZ975: 50 per plastic tray / 1000 per box AZ976: 20 per plastic tube / 1200 per box

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	514 mW (12 and 24 VDC Coil) 573 mW (6 VDC Coil)
<b>Max. Continuous Dissipation</b>	3.4 W 20°C (68°F) ambient - AZ975 3.1 W 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)

### 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 arcsuppression 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.

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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 Ohm $\pm 10\%$	Form A	Form B	Form C
	A.B.C.U.V.	W.			[SPST NO]	[SPST NC]	[SPDT]
6	3.75	4.5	9.75	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

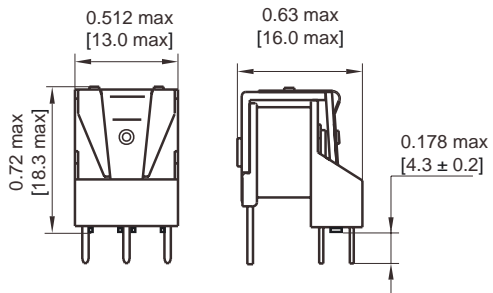
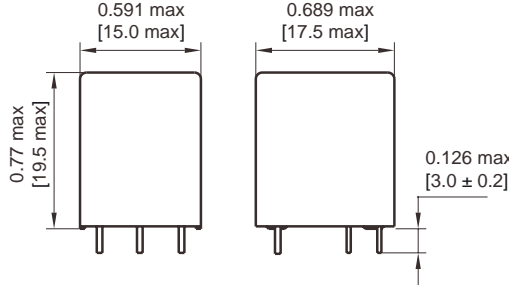
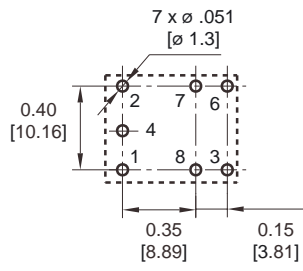
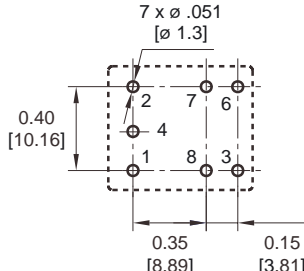
\* Use "U", "V" or "W" in place of "A" for Form U, Form V or Form W relays.

## 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 Ohm $\pm 10\%$	Form A	Form B	Form C
	A.B.C.U.V.	W.			[SPST NO]	[SPST NC]	[SPDT]
6	3.75	4.5	9.2	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

\* Use "U", "V" or "W" in place of "A" for Form U, Form V or Form W relays. Substitute "DT" with "DET" for epoxy sealed version.

## MECHANICAL DATA

<p style="text-align: center;">AZ975 OUTLINE DIMENSIONS</p> 	<p style="text-align: center;">AZ976 OUTLINE DIMENSIONS</p> 
<p style="text-align: center;">AZ975 PC BOARD LAYOUT</p>  <p style="text-align: center;">Viewed toward terminals</p>	<p style="text-align: center;">AZ976 PC BOARD LAYOUT</p>  <p style="text-align: center;">Viewed toward terminals</p>

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

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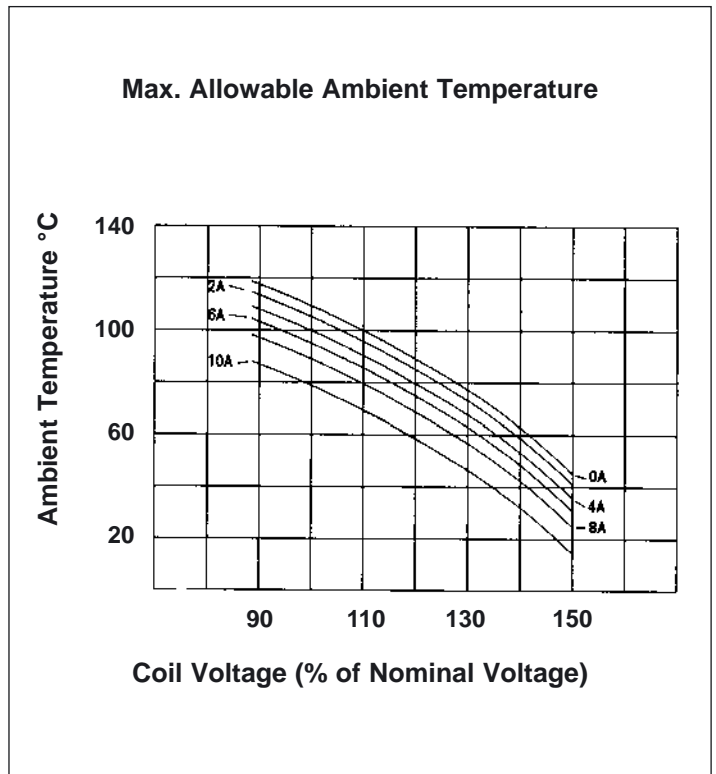
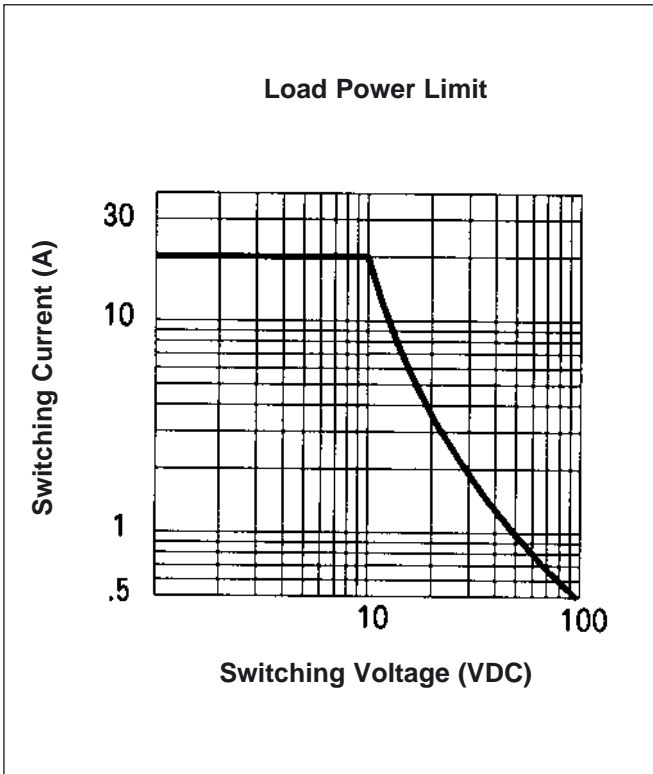
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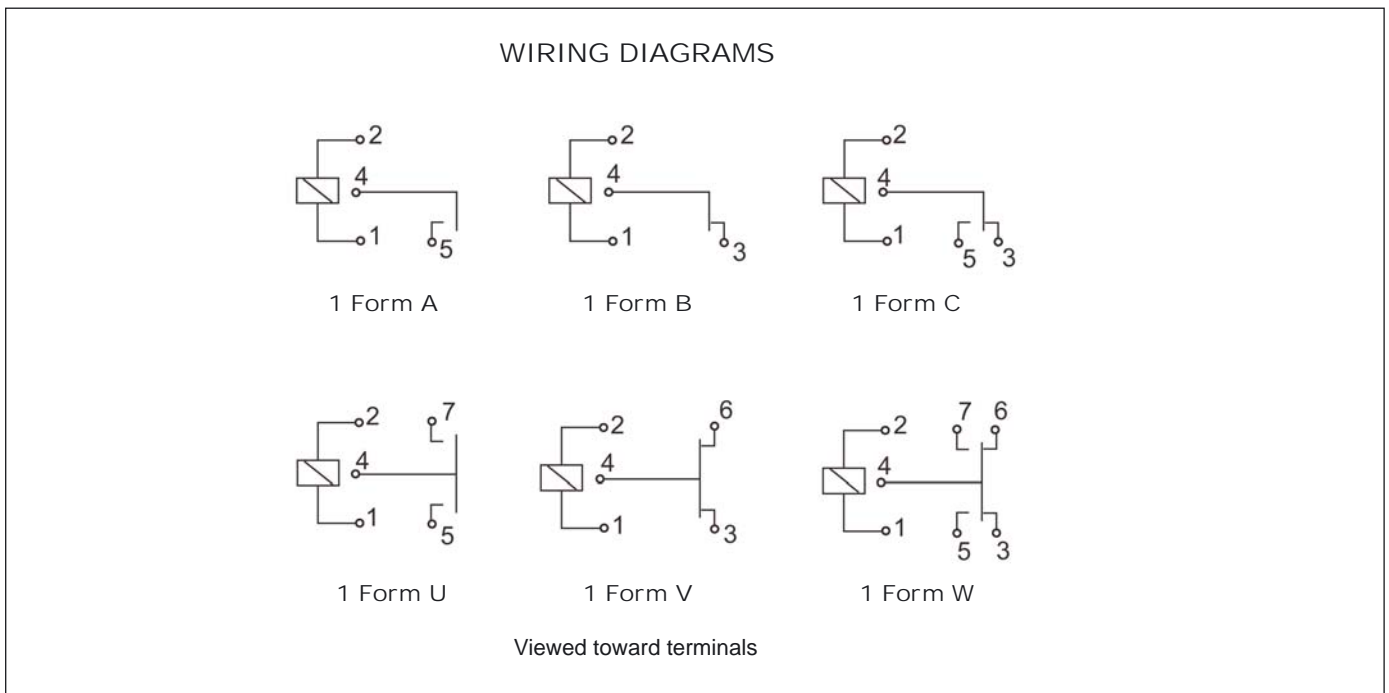
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