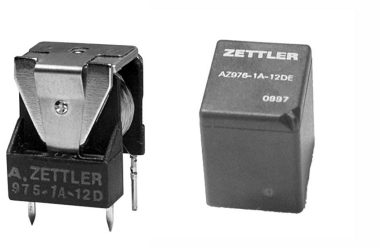
AZ975/AZ976

20 AMP SUB-MINIATURE POWER RELAY FOR AUTOMOTIVE USE

FEATURES

- Low cost
- 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

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 (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
Material	Silver nickel or 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)

GENERAL DATA

Life Expectancy **Mechanical** **Electrical**	Minimum operations 1 x 10^7 operations 1 x 10^5 operations 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 85°C (185°F) -40°C (-40°F) to 105°C (221°F)
Vibration	0.062" (1.5 mm) 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 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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AZ975/AZ976

RELAY ORDERING DATA — AZ 975 - Open Style

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

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

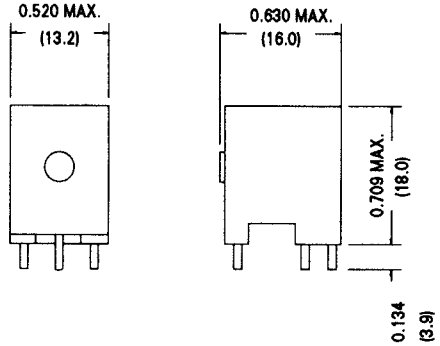
RELAY ORDERING DATA — AZ 976 - With Dust Cover

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

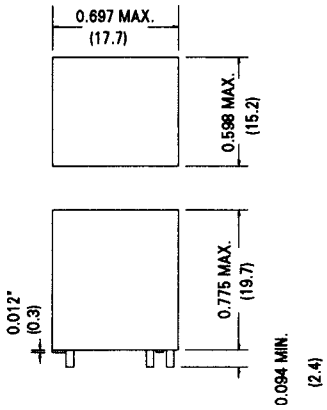
* Add suffix “E” for epoxy sealed version. Use “U”, “V” or “W” in place of “A” for Form U, Form V or Form W relays.
Add suffix “T” for silver tin oxide.

MECHANICAL DATA

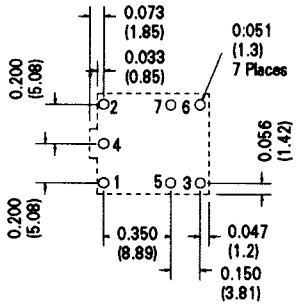
AZ 975 Outline Dimensions



AZ 976 Outline Dimensions

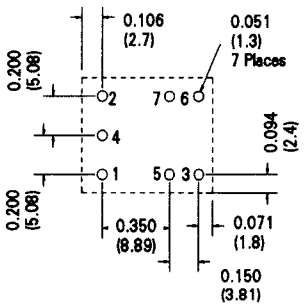


AZ 975 Suggested PCB Layout



Bottom View

AZ 976 Suggested PCB Layout



Bottom View

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

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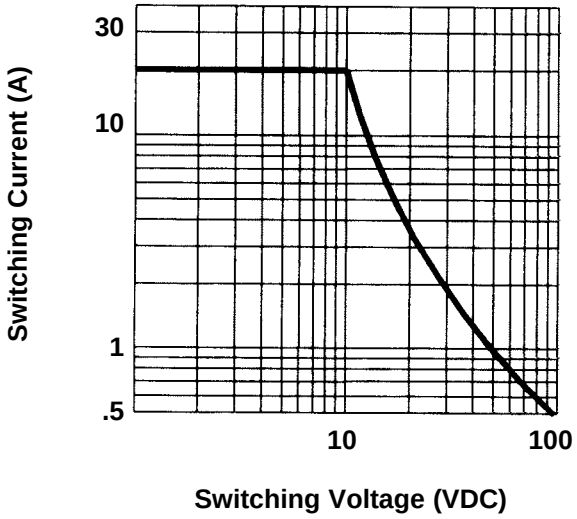
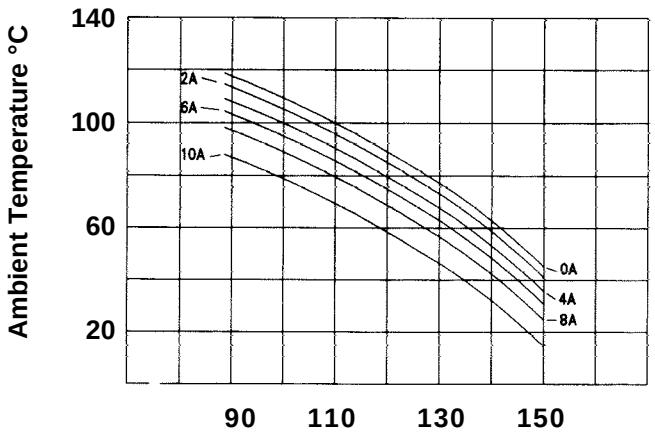
Load Power limit

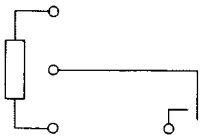


Max. Allowable Ambient Temperature

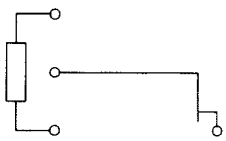


MECHANICAL DATA

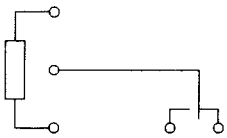
Wiring Diagrams (Bottom View)



1 Form A



1 Form B



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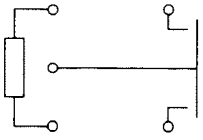
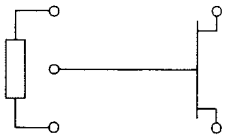
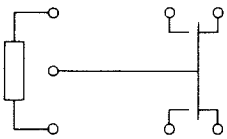


1 Form U



1 Form V



1 Form W

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