

AZ9751/9761

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
- Cost effective
- Vibration and shock resistant
- ISO/TS 16949, ISO9001, ISO14000
- Tested in accordance with IEC



AZ9751



AZ9761

CONTACTS

| | |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Arrangement | SPSTNO (1 Form A) SPST NO DM (1 Form U) SPDT (B-M) (1 Form C) SPDT NC-NO (1 Form W) |
| Ratings | Max. switched power: 280 W, 1200 VA Form W: 2 x 280 W, 2 x 1200 VA Max. switched voltage: 75 VDC, 380 VAC Max. switched current: 20 A 1 Form A: 10 A at 120 VAC / 28 VDC, 20 A at 14 VDC 1 Form C: 10 A at 120 VAC / 28 VDC, 20 A at 14 VDC 1 Form U: 2 x 10 A at 120VAC / 28 VDC 2 x 20 A at 14 VDC 1 Form W: 2 x 10 A at 120 VAC / 28 VDC 2 x 20 A at 14 VDC |
| Material | Silver tin oxide |
| Resistance | < 50 milliohms at 1A, 5 VDC |

COIL

| | |
|------------------------------------|--------------------------------------------------------------------------|
| Power | |
| At Pickup Voltage (typical) | 563 mW (6 and 24 VDC Coil) 559 mW (12 VDC Coil) |
| Max. Continuous Dissipation | 1.0 W 20°C (68°F) ambient - AZ9751 1.0 W 20°C (68°F) ambient - AZ9761 |
| Temperature Rise | 50°C (90°F) nominal coil VDC |
| Max. Temperature | 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,C, U 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.

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) | ≤ 10 ms at nominal coil voltage |
| Release Time (typical) | ≤ 5 ms at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level for 1 min.) | 1500 Vrms coil to contact 750 Vrms between open contacts |
| Insulation Resistance | 100 megohms min at 500 VDC |
| Dropout | 10% of nominal coil voltage |
| Relative Humidity | 85 % at 40°C |
| Ambient Temperature Operating Storage | At nominal coil voltage -40°C (-40°F) to 105°C (221°F) -40°C (-40°F) to 105°C (221°F) |
| Vibration | 0.05" DA at 10–40Hz |
| Shock | 10 g, 11 ms, functional |
| Terminals | Tinned copper alloy, P.C. |
| Max. Solder Temp. | 235°C (455°F) ± 2°C (35.6°F) |
| Max. Solder Time | 3 ± 0.5 seconds |
| Max. Solvent Temp. | 80°C (176°F) |
| Max. Immersion Time | 30 seconds |
| Weight | AZ9751 = 9g, AZ9761 = 12g, approx. |

AMERICAN ZETTLER, INC.

www.azettler.com

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AZ9751/9761

RELAY ORDERING DATA – AZ 9751 - 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 C [SPDT] | Form U [SPST NO DM] |
| 6 | 4.50 | 7.8 | 36 | AZ9751-1A-6DT | AZ9751-1C-6DT | AZ9751-1U-6DT |
| 12 | 9.00 | 15.6 | 145 | AZ9751-1A-12DT | AZ9751-1C-12DT | AZ9751-1U-12DT |
| 24 | 18.00 | 31.2 | 576 | AZ9751-1A-24DT | AZ9751-1C-24DT | AZ9751-1U-24DT |

* Use "W" in place of "A" for Form W relays.

RELAY ORDERING DATA – AZ 9761 - 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 C [SPDT] | Form U [SPST NO DM] |
| 6 | 4.50 | 7.8 | 36 | AZ9761-1A-6DT | AZ9761-1C-6DT | AZ9761-1U-6DT |
| 12 | 9.00 | 15.6 | 145 | AZ9761-1A-12DT | AZ9761-1C-12DT | AZ9761-1U-12DT |
| 24 | 18.00 | 31.2 | 576 | AZ9761-1A-24DT | AZ9761-1C-24DT | AZ9761-1U-24DT |

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

MECHANICAL DATA

AZ9751 / 9761 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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