

20 AMP MINIATURE POWER RELAY

FEATURES

- Dielectric strength 5000 Vrms
- Low cost
- Epoxy sealed version available
- 20 Amp switching — single pole contacts
- Isolation spacing greater than 8mm
- UL, CUR file E44211
- TÜV file R9659060



CONTACTS

Arrangement	SPST (1 Form A, 1 Form B) SPDT (1 Form C)
Ratings	Resistive load: Max. switched power: 480 W or 5540 VA Max. switched current: 20 A Max. switched voltage: 150 VDC* or 380 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Load UL, CUR	20 A at 277 VAC N.O. resistive, 50k cycles 16 A at 240 VAC general use, 100k cycles 12 A at 277 VAC N.O. resistive., 100k cycles 20 A at 24 VDC resistive 1 HP 240 VAC TV-8 120 VAC N.O. (silver tin oxide only)
TÜV	16 A at 30 VDC, 250 VAC resistive, 100k cycles 13 A at 420 VAC res., 100k cycles (1 Form A)
Material	Silver cadmium oxide or silver tin oxide
Resistance	< 50 milliohms initially (24 V, 1 A voltage drop method)

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 5 x 10 ⁶ 5 x 10 ⁴ at 16 A 250 VAC Res. 2 x 10 ⁴ at 20 A 277 VAC Res.
Operate Time (typical)	8 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.)	5000 Vrms coil to contact 1000 Vrms between open contacts
Insulation Resistance	1000 megohms min. at 20°C 500 VDC 50% RH
Dropout	Greater than 10% 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 10–55 Hz
Shock	10 g
Enclosure	P.B.T. polyester
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	18.5 grams
Packing unit in pcs	50 per plastic tray / 500 per carton box

COIL

Power	
At Pickup Voltage (typical)	270 mW
Max. Continuous Dissipation	1.9 W at 20°C (68°F) ambient
Temperature Rise	34°C (61°F) at nominal coil voltage
Temperature	Max. 130°C (266°F)

NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

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AZ755

RELAY ORDERING DATA

COIL SPECIFICATIONS				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm	Form A (SPST)	Form C (SPDT)
5	3.6	9.4	47 ±10%	AZ755-1A-5D	AZ755-1C-5D
6	4.3	11.4	69 ±10%	AZ755-1A-6D	AZ755-1C-6D
9	6.5	17.4	155 ±10%	AZ755-1A-9D	AZ755-1C-9D
12	8.6	22.8	275 ±10%	AZ755-1A-12D	AZ755-1C-12D
18	13.0	27.9	620 ±10%	AZ755-1A-18D	AZ755-1C-18D
24	17.3	45.7	1,100 ±15%	AZ755-1A-24D	AZ755-1C-24D
48	34.6	89.0	4,400 ±15%	AZ755-1A-48D	AZ755-1C-48D
60	43.2	115.3	6,880 ±15%	AZ755-1A-60D	AZ755-1C-60D
110 **	73.9	170.5	22,900 ±15%	AZ755-1A-110D	AZ755-1C-110D

* Substitute "1B" in place of "1A" or "1C" to indicate 1 Form B contact arrangement.

Add suffix "E" at the end of order number for epoxy sealed version. Add suffix "A" for silver tin oxide contacts. Add suffix "F" for Class F.

** 110VDC coil not TÜV approved.

MECHANICAL DATA

Top View Dimensions:

- Width: 1.14 (29)
- Height: 1.02 (25.9)
- Terminal Spacing: .160 ± .015 (4.2 ± .4)

Side View Dimensions:

- Width: .51 (13)
- Height: .015 (0.38)

Terminal No.	Dimensions Tol.: ± 0.005 (0.13)
1,2,4,5,7,8	0.018 (0.457) x 0.038 (0.965)
3,6	0.011 (0.279) x 0.038 (0.965)

PC BOARD LAYOUT

PC Board Layout Dimensions (Form B & C only):

- Terminal Spacing: .197 (5)
- Terminal Width: .590 (15)
- Terminal Height: .295 (7.5)
- Terminal Diameter: 8 x ø .05 [ø 1.3]
- Terminal Spacing (Form B & C only): .08 (2.1)

Viewed toward terminals

WIRING DIAGRAMS

Wiring Diagrams:

- Form A:** Shows terminals 1, 3, 4, 6, 8. Terminal 1 is connected to terminal 3, and terminal 4 is connected to terminal 6.
- Form B:** Shows terminals 1, 2, 3, 6, 7, 8. Terminal 1 is connected to terminal 3, and terminal 2 is connected to terminal 6.
- Form C:** Shows terminals 1, 2, 3, 4, 6, 7, 8. Terminal 1 is connected to terminal 3, and terminal 2 is connected to terminal 6.

Viewed toward terminals

Dimensions in inches with metric equivalents in parentheses. Tolerance: ± .010"

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