

# AZ2704

## 30 AMP POWER RELAY

RoHS compliant !

### FEATURES

- 30 Amp switching
- 30 Amp AC7a approved
- 900 Amp short circuit current (carrying)
- PC mount
- Dielectric strength 4000 Vrms
- Standard (2.4 mm) or wide contact gap (3.0 mm) available
- UL, CUR file E44211
- TÜV certificate R50164753



### CONTACTS

<b>Arrangement</b>	SPST (1 Form X) DPST (2 Form X)
<b>Ratings</b>	Resistive load:  Max. switched power: 840 W or 8310 VA Max. switched current: 30 A Max. switched voltage: 300 VDC* or 400 VAC  * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
<b>Rated Load UL</b>	30 A at 277 VAC, resistive, 30k cycles [1][2] 25 A at 277 VAC, resistive, 100k cycles [2] 25 A at 240 VAC, resistive, 100k cycles [1] 3 HP at 240 VAC, 6k cycles [1] 1.5 HP at 120 VAC, 6k cycles [1] TV-10 at 120 VAC, 6k cycles [1] 105 LRA / 20.5 FLA at 240 VAC, 100k cycles [1]  SPST (1 Form X) 10 A at 120 VAC, tungsten, 6k cycles [1][2] 3 HP at 240 VAC, 100k cycles [2] 1.5 HP at 120 VAC, 100k cycles [2]  DPST (2 Form X) 10 A at 277 VAC, tungsten, 6k cycles [2] 10 A at 120 VAC, tungsten, 6k cycles [1] 2 HP at 277 VAC, 75k cycles [2] 1 HP at 125 VAC, 30k cycles [2]
<b>TÜV</b>	27 A at 240 VAC, cos phi 0.8, 50k cycles [1][2] 25 A at 240 VAC, cos phi 0.4, 50k cycles [1][2]
<b>Material</b>	Silver cadmium oxide [1], silver tin oxide [2]
<b>Resistance</b>	< 100 milliohm initially (24 V, 1 A voltage drop method)

### COIL

<b>Power</b>	
<b>At Pickup Voltage (typical)</b>	1.08 W (DC) 1.7 VA (AC)
<b>Max. Continuous Dissipation</b>	3.8 W at 20°C (68°F) ambient
<b>Temperature Rise</b>	50°C (90°F) at nominal coil voltage
<b>Temperature</b>	Max. 130°C (266°F) - Class B Max. 155°C (311°F) - Class F

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>6</sup> 1 x 10 <sup>5</sup> at rated load
<b>Operate Time (typical)</b>	30 ms at nominal coil voltage
<b>Release Time (typical)</b>	30 ms at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength (at sea level for 1 min.)</b>	4000 Vrms coil to contact 2000 Vrms between open contacts
<b>Insulation Resistance</b>	1000 megohms min. at 20°C, 500 VDC, 50% RH
<b>Dropout</b>	> 5% of nominal coil voltage (DC) > 15% of nominal coil voltage (AC)
<b>Ambient Temperature Operating</b>	At nominal coil voltage -40°C (-40°F) to 70°C (158°F) at nominal, -40°C (-40°F) to 85°C (185°F) at 50% or less of nominal (holding voltage).
<b>Vibration</b>	0.062" DA at 10–55 Hz
<b>Shock</b> <b>Operating</b> <b>Non-Operating</b>	10 g, 11 ms, 1/2 sine (no false operation) 100 g, 11 ms, 1/2 sine (no damage)
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, PC mount
<b>Max. Solder Temp.</b>	270°C (518°F)
<b>Max. Solder Time</b>	5 seconds
<b>Weight</b>	120 grams
<b>Packing unit in pcs</b>	16 per plastic tray / 80 per carton box

### 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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## RELAY ORDERING DATA

COIL SPECIFICATIONS – DC COIL				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Coil Resistance Ohm $\pm 10\%$	1 Form X	2 Form X
3	2.3	4.2	5	AZ2704-1A-3D	AZ2704-2A-3D
6	4.5	8.4	19	AZ2704-1A-6D	AZ2704-2A-6D
12	9.0	16.8	75	AZ2704-1A-12D	AZ2704-2A-12D
24	18.0	33.7	300	AZ2704-1A-24D	AZ2704-2A-24D
48	36.0	67.5	1,200	AZ2704-1A-48D	AZ2704-2A-48D,
100	75.0	140.5	5,200	AZ2704-1A-100D	AZ2704-2A-100D
110	82.5	154.7	6,300	AZ2704-1A-110D	AZ2704-2A-110D
200	150.0	282.4	21,000	AZ2704-1A-200D	AZ2704-2A-200D

COIL SPECIFICATIONS – AC COIL				ORDER NUMBER*	
Nominal Coil VAC	Must Operate VAC	Max. Continuous VAC	Coil Current mA $\pm 10\%$	1 Form X	2 Form X
6	4.8	6.6	319	AZ2704-1A-6A	AZ2704-2A-6A
12	9.6	13.2	160	AZ2704-1A-12A	AZ2704-2A-12A
24	19.2	26.4	80	AZ2704-1A-24A	AZ2704-2A-24A
48	38.4	52.8	40	AZ2704-1A-48A	AZ2704-2A-48A
120	96.0	132.0	23	AZ2704-1A-120A	AZ2704-2A-120A
220	176.0	242.0	10	AZ2704-1A-220A	AZ2704-2A-220A
240	192.0	264.0	9	AZ2704-1A-240A	AZ2704-2A-240A

\* For silver tin oxide add suffix "T". For wide contact gap add "W". For Class F add suffix "F".

## MECHANICAL DATA

### PCB LAYOUT

\* Not used on 1 FORM X

### AC-operating COIL

### WIRING DIAGRAMS

2 FORM X

1 FORM X

Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "

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