

# AZ2280

## 30 AMP MINIATURE POWER RELAY

### FEATURES

- Quick-connect leads for contacts and coil
- 1 Form A, B and C contacts available
- AC and DC coils available
- Epoxy sealed versions available
- UL Class F (155°C) standard
- UL, CUR file E44211
- VDE certificate 40027037



### CONTACTS

<b>Arrangement</b>	SPST (1 Form A) SPST (1 Form B) SPDT (1 Form C)
<b>Ratings</b>	Resistive load:
<b>1 Form A</b>	Max. switched power: 840 W or 8310 VA Max. switched current: 30 A Max. switched voltage: 28 VDC or 277 VAC
<b>1 Form B</b>	Max. switched power: 280 W or 4155VA Max. switched current: 15 A Max. switched voltage: 28 VDC or 277 VAC
<b>1 Form C</b>	Max. switched power: 560 W or 8310 VA (N.O.) 280 W or 5540 VA (N.C.) Max. switched current: 30 A (N.O.) 20 A (N.C.) Max. switched voltage: 28 VDC or 277 VAC
<b>Material</b>	Silver cadmium oxide [1], silver tin oxide [2]
<b>Resistance</b>	< 50 milliohm initially (24 V, 1A voltage drop method)

### COIL

<b>Power At Pickup Voltage (typical)</b>	500 mW, DC coil 1.4 VA, AC coil
<b>Max. Continuous Dissipation</b>	1.7 W at 20°C (68°F) ambient, DC coil 2.7 VA at 20°C (68°F) ambient, AC coil
<b>Temperature Rise</b>	38°C (68°F) at nominal coil voltage
<b>Max. Temperature</b>	155°C (311°F)

### NOTES

1. All values at 20°C (68°F)
2. Relay may pull in with less than "Must Operate" value.
3. AC coils are not VDE approved
4. 18 VDC coil is not VDE approved.
5. Specification subject to change without notice.

### GENERAL DATA

<b>Life Expectancy</b> <b>Mechanical</b> <b>Electrical</b>	Minimum operations 1 x 10 <sup>7</sup> 1 x 10 <sup>5</sup> at 30 A 120 VAC Res. N.O.
<b>Operate Time</b>	15 ms max. at nominal coil voltage
<b>Release Time</b>	10 ms max. at nominal coil voltage (with no coil suppression)
<b>Dielectric Strength</b> <b>(at sea level for 1 min.)</b>	2500 Vrms coil to contact 1500 Vrms between open contacts
<b>Insulation Resistance</b>	1000 megaohms min. at 20°C, 500 VDC 50% RH
<b>Dropout</b>	DC: > 10% of nominal coil voltage AC: > 20% of nominal coil voltage
<b>Ambient Temperature</b> <b>Operating</b>	-40°C (-40°F) to 85°C (185°F), DC coils -40°C (-40°F) to 70°C (158°F), AC coils
<b>Vibration</b>	1.5 mm DA at 10-55 Hz
<b>Shock</b>	10 g
<b>Enclosure</b>	P.B.T. polyester
<b>Terminals</b>	Tinned copper alloy, Quick Connects Note: Allow suitable slack on leads when wiring, and do not subject the terminals to excessive force.
<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>	36 grams
<b>Packing unit in pcs</b>	40 per plastic tray / 240 per carton

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This product specification to be used only together with the application notes  
which can be downloaded from <http://www.ZETTLERelectronics.com/pdfs/relais/ApplicationNotes.pdf>

2014-09-08

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## CONTACTS

<b>Rated load UL</b>	1 Form A 30 A at 277 VAC, General Use, 6k cycles [1][2] 30 A at 28 VDC, resistive, 6k cycles [1] 28 A at 277 VAC, General Use, 100k cycles [1] 20 FLA / 60 LRA at 277 VAC, 30k cycles [1] 2 HP at 250 VAC [1][2] 1 HP at 125 VAC [1][2]
	1 Form B 15 A at 277 VAC, General Use, 6k cycles [1] 10 A at 28 VDC, resistive, 6k cycles [1] 10 FLA / 33 LRA at 277 VAC, 30k cycles [1] 0.5 HP at 250VAC [1] 0.25 HP at 125 VAC [1]
	1 Form C, (N.O.) 30 A at 277 VAC, General Use, 6k cycles [1][2] 20 A at 277 VAC, General Use, 6k cycles [1] 20 A at 28 VDC, resistive, 6k cycles [1] 20 FLA / 60 LRA at 277 VAC, 30k cycles [1] 2 HP at 250 VAC [1][2] 1 HP at 125 VAC [1][2]
	1 Form C, (N.C.) 20 A at 277 VAC, General Use, 6k cycles [1][2] 10 A at 28 VDC, resistive, 6k cycles [1] 10 FLA / 33 LRA at 277 VAC, 30k cycles [1] 0.5 HP at 250 VAC [1][2] 0.25 HP at 125 VAC [1][2]

<b>Rated load VDE</b>	1 Form A, DC coils only 30 A at 250 VAC, resistive, 30k cycles [1] 15 A at 250 VAC, cos phi = 0.4, 100k cycles [1][2]
	1 Form B, DC coils only 15 A at 250 VAC, resistive, 30k cycles [1]
	1 Form C, (N.O.), DC coils only 30 A at 250 VAC, resistive, 30k cycles [1] 20 A at 250 VAC, resistive, 100k cycles [2]
	1 Form C, (N.C.), DC coils only 15 A at 250 VAC, resistive, 30k cycles [1] 10 A at 250 VAC, resistive, 100k cycles [2]
Note: 18 VDC coil is not VDE approved. AC coils are not VDE approved.	

## RELAY ORDERING DATA

COIL SPECIFICATIONS – DC Coil					ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Nominal Current mA ± 10%	Coil Resistance Ohm ± 10%	
5	3.75	6.4	185	27	AZ2280-1AT-5DF
6	4.5	7.8	150	40	AZ2280-1AT-6DF
9	6.75	12.2	93	97	AZ2280-1AT-9DF
12	9.0	15.4	77	155	AZ2280-1AT-12DF
15	11.25	19.8	59	256	AZ2280-1AT-15DF
18	13.5	24.1	47	380	AZ2280-1AT-18DF
24	18.0	32.0	36	660	AZ2280-1AT-24DF
48	36.0	62.6	19	2,560	AZ2280-1AT-48DF

COIL SPECIFICATIONS – AC Coil 50/60 Hz				ORDER NUMBER*	
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Nominal Coil Power VA	Coil Resistance Ohm ± 10%	
12	9.6	13.8	2.3	25	AZ2280-1AT-12AF
24	19.2	27.6	2.1	100	AZ2280-1AT-24AF
120	96.0	138.0	2.3	2,500	AZ2280-1AT-120AF
220	176.0	286.0	2.2	13,490	AZ2280-1AT-220AF
240	192.0	286.0	2.6	13,490	AZ2280-1AT-240AF
277	220.0	318.5	2.2	15,000	AZ2280-1AT-277AF

\* "1AT" denote silver cadmium oxide contacts.

Substitute "1BT" in place of "1AT" for 1 Form B relay.

Substitute "1CT" in place of "1AT" for 1 Form C relay.

Substitute "1AET" or "1CET" in place of "1AT" or "1CT" for silver tin oxide contacts.

Substitute "DEF" or "AEF" for epoxy sealed version.

Add suffix "K" at the end of order number for 0.11 x 0.02 [2.8 x 0.5] coil terminals.

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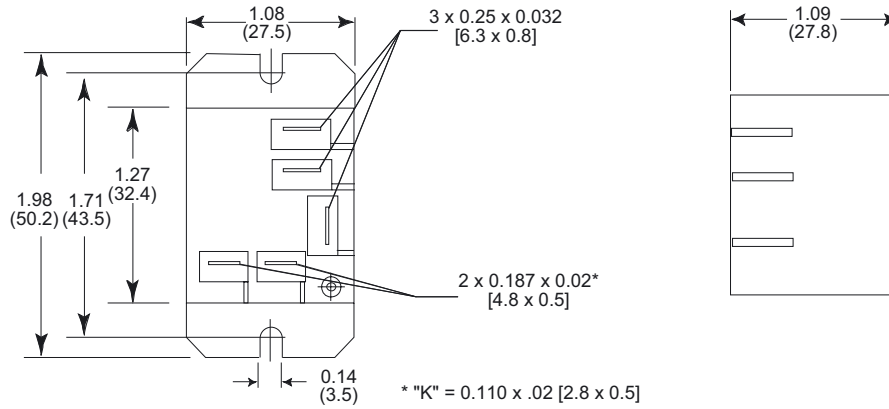
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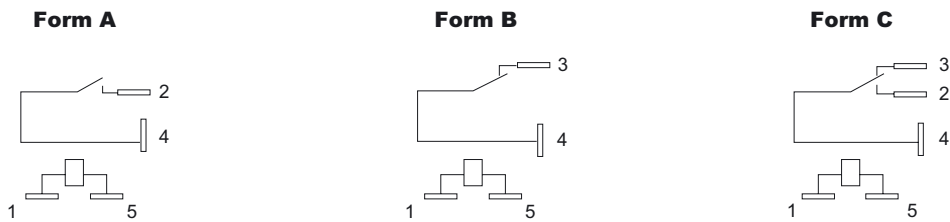
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## MECHANICAL DATA



## WIRING DIAGRAMS (Top View)



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

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