

AZ2850

30 AMP MINIATURE POWER RELAY

FEATURES

- DPST-NO and DPDT configuration
- Meets 8 mm creepage, 4 kV dielectric
- Epoxy selead version available
- UL Class F (155°C) standard
- UL, CUR file E44211
- VDE certificate 40023442



CONTACTS

Arrangement	SPST (1 Form A) DPDT (2 Form C)
Ratings	Resistive load: Max. switched power: 560 W or 8310 VA Max. switched current: 30 A (N.O.), 3 A (N.C.) Max. switched voltage: 30 VDC* or 600 VAC * Note: If switching voltage is greater than 30 VDC, special precautions must be taken. Please contact the factory.
Rated Load UL	Normally open contacts (N.O.) 30 A at 277 VAC, General Use, 100k cycles [1][2] 10 A at 600VAC, General Use, 6k cycles [1] 1 HP at 120 VAC, 100k cycles [1][2] 2.5 HP at 240 VAC, 100k cycles [1][2] 8 FLA / 26 LRA at 600 VAC, 30k cycles [1] Normally open contacts (N.O.), DC coils only 25.3 FLA / 110 LRA at 240 VAC, 30kcycles [1][2] Normally closed contacts (N.C.) 3 A at 277 VAC, General Use, 100k cycles [1][2] 2 A at 480 VAC, Gerenal Use, 6k cycles [1] 1 A at 600 VAC, Gerenral Use, 6k cycles [1] 3 FLA / 3 LRA at 240 VAC, 30k cycles [1] 2 FLA / 2 LRA at 480 VAC, 30k cycles [1] 1 FLA / 1 LRA at 600 VAC, 30k cycles [1]
VDE	Normally open contacts (N.O.) 30 A at 250 VAC, resistive, 50k cycles [2] Normally closed contacts (N.C.) 3 A at 250 VAC, resistive, 50k cycles [2]
Material	Silver cadmium [1], silver tin oxide [2],
Resistance	< 50 milliohms initially (at 6 V, 1 A, voltage drop method)

COIL

Power At Pickup Voltage (typical)	925 mW, DC coil 2.6 VA, AC coil
Max. Continuous Dissipation	5 W at 20°C (68°F) ambient, DC coil 7 VA at 20°C (68°F) ambient, AC coil
Temperature Rise	48°C (86°F) at nominal coil voltage, DC coil 68°C (122°F) at nominal coil voltage, AC coil
Temperature	Max. 155°C (311°F)

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 5 x 10 ⁷ 1 x 10 ⁵ at 30 A 277 VAC Res. (N.O.)
Operate Time	15 ms typical 25 ms maximum with bounce
Release Time	10 ms typical 25 ms maximum with bounce (with no coil suppression)
Dielectric Strength (at sea level for 1 min.)	1500 Vrms contact to contact 4000 Vrms contact to coil 2000 Vrms between contact sets
Insulation Resistance	10 ⁹ ohms minimum at 500 VDC
Dropout	DC: Greater than 10% of nominal coil voltage AC: Greater than 20% of nominal coil voltage
Ambient Temperature Operating Storage	At nominal coil voltage DC: -40°C (-40°F) to 85°C (185°F) AC: -40°C (-40°F) to 65°C (149°F) -40°C (-40°F) to 105°C (221°F)
Vibration	0.062" (1.5 mm) DA at 10–55 Hz
Shock	Operational, 10 g for 11 ms 1/2 sine pulse (no contact opening > 100usec) Non-destructive, 100 g for 11 ms 1/2 sine pulse
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	86 grams
Packing unit in pcs	20 per plastic tray / 100 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.

ZETTLER electronics GmbH

Junkersstr. 3, D-82178 Puchheim, Germany

phone: +49 89 800 97-0 office@ZETTLERelectronics.com
fax: +49 89 800 97-200 www.ZETTLERelectronics.com

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>

2011-05-27

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RELAY ORDERING DATA

COIL SPECIFICATIONS – DC Coil					ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Nominal Current mA $\pm 10\%$	Coil Resistance Ohm $\pm 10\%$	
6	4.5	10.5	272.0	22	AZ2850-2C-6D
12	9.0	20.7	140.0	86	AZ2850-2C-12D
24	18.0	41.8	68.5	350	AZ2850-2C-24D
48	36.0	83.4	34.5	1,390	AZ2850-2C-48D
110	82.5	190.5	15.2	7,255	AZ2850-2C-110D

COIL SPECIFICATIONS – AC Coil 50 Hz					ORDER NUMBER*
Nominal Coil VAC	Must Operate VAC	Max. Continuous VAC	Nominal Current mA $\pm 10\%$	Coil Resistance Ohm $\pm 10\%$	
12	9.6	15.6	340.0	8	AZ2850-2C-12A5
24	19.2	31.2	166.0	45	AZ2850-2C-24A5
120	96.0	156.0	33.3	1,125	AZ2850-2C-120A5
220	176.0	286.0	18.2	3,800	AZ2850-2C-220A5
240	192.0	312.0	16.7	4,500	AZ2850-2C-240A5
277	221.6	360.1	14.4	6,000	AZ2850-2C-277A5

* Substitute "2A" in place of "2C" to indicate 2 Form A contacts.
 "2A" or "2C" denote silver cadmium contacts.
 Add suffix "E" to "2A" or "2C" for silver tin oxide contacts.
 Add suffix "E" at the end of order number for sealed version.

MECHANICAL DATA

WIRING DIAGRAMS

2 Form C

2 Form A

Viewed toward terminals

PC BOARD LAYOUT

(Form C only)

Viewed toward terminals

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

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