

50 AMP HEAVY DUTY POWER RELAY

FEATURES

- SPST, DPST, SPDT, and DPDT versions available
- AC and DC coils available
- UL Class F (155°C) molded construction
- PRD, PRDD and PRDE are UL and cUL Listed
- PRDS, PRDQ, and PRDR are UL cUR Recognized
- UL, CUL file E44211



CONTACTS

Arrangement	SPST (1 Form A & B), SPST-NO-DM (Form 1X), SPST-NC-DB (Form 1Y), DPST (2 Form A & B), SPDT (1 Form C), DPDT (2 Form C)
Ratings	Resistive load: Max. switched power: 840 W or 12000 VA Max. switched current: 30 A Max. switched voltage: 600 VAC, 28 VDC
UL, CUR	30 A at 240 VAC [1][2][3] 1.5 HP at 120 VAC [1][2][3] 2.0 HP at 240 VAC [1][2][3] 3600 VA at 120 VAC / 240 VAC ballast [1][2][3] 30 A at 240 VAC Res., 100k cycles [1][2][3] 20 A at 600 VAC [1][2][3] 30 A at 28 VDC [1][2][3] Aux. Snap Switch 1/4 HP at 125 VAC / 240 VAC [2] 20 A at 125 VDC [3] 50 A at 277 VAC Res., [4][5] 40 A at 277 VAC General use (inductive) [4][5] PRDQ series [1], PRDS [2], PRDD [3], PRDE [4], PRDR [5]
Material	Silver cadmium oxide
Resistance	< 50 milliohms initially (24 V, 1 A voltage drop method)

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 1 x 10 ⁷ 1 x 10 ⁵ at 30 A 240 VAC Res.
Operate Time (typical)	30 msec at nominal coil voltage
Release Time (typical)	30 msec at nominal coil voltage (without suppression)
Dielectric Strength (at sea level for 1 min.)	2200 Vrms contact to contact 2200 Vrms contact to coil
Insulation Resistance	100 megohms min. at 20°C, 500 VDC 50% RH
Dropout	DC: > 10% of nominal coil voltage AC: > 20% of nominal coil voltage
Ambient Temperature Operating	-45°C (-49°F) to 80°C (176°F) AC coil, 30A -45°C (-49°F) to 70°C (239°F) AC coil, 50A -45°C (-49°F) to 115°C (176°F) DC coil, 30A -45°C (-49°F) to 105°C (239°F) DC coil, 50A
Weight	227 grams

COIL

Power	
At Pickup Voltage (typical)	DC: 1.12 W AC: 6.9 VA
Max. Continuous Dissipation	DC: 3.3 W at 25°C AC: 12.5 VA at 25°C
Temperature Rise	70°C at nominal coil voltage (AC) 35°C at nominal coil voltage (DC)
Max. Temperature	155°C (311°F)

NOTES

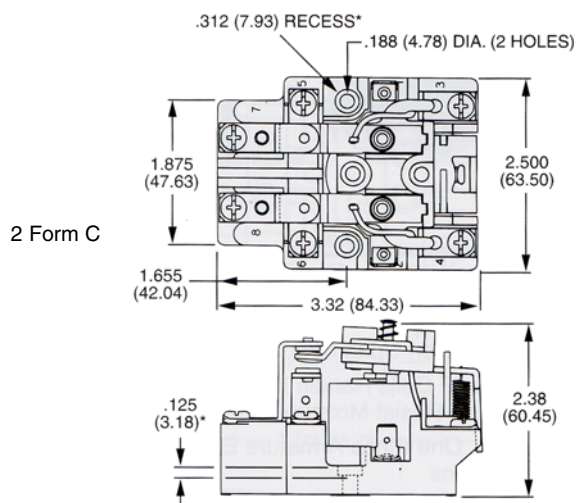
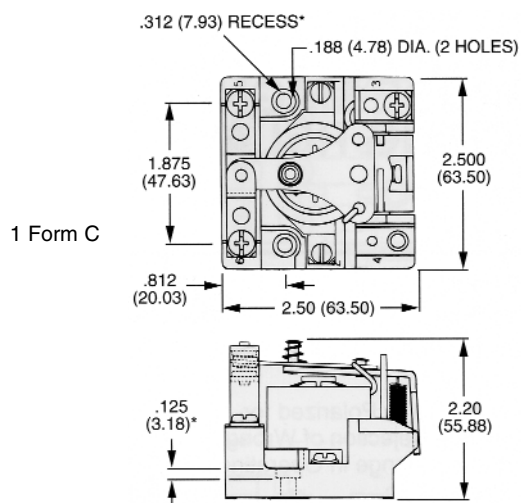
1. All values at 25°C (77°F).
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

RELAY ORDERING DATA

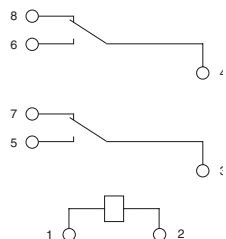
COIL SPECIFICATIONS – DC Coil					ORDER NUMBER*
Nominal Coil VDC	Must Operate VDC	Max. Continuous VDC	Nominal Current mA $\pm 10\%$	Coil Resistance $\pm 10\%$	
6	4.50	7.8	333	18	AZPRD-1C-6D
12	9.1	15.4	166	72	AZPRD-1C-12D
24	18.0	32.0	83	290	AZPRD-1C-24D
48	36.0	62.6	42	1150	AZPRD-1C-48D
110	82.5	143.0	18.2	6050	AZPRD-1C-110D
COIL SPECIFICATIONS – AC Coil 50/60 Hz					ORDER NUMBER*
Nominal Coil VAC	Must Operate VAC	Max. Continuous VAC	Nominal Coil Power VA	Coil Resistance $\pm 10\%$	
6	5.1	6.9	9.5	0.85	AZPRD-1C-6A
12	10.2	13.8	9.5	2.85	AZPRD-1C-12A
24	20.4	27.6	9.5	11.5	AZPRD-1C-24A
120	102.0	138.0	9.5	295.0	AZPRD-1C-120A
240	204.0	276.0	9.5	1170.0	AZPRD-1C-240A
480	408.0	552.0	9.5	4860.0	AZPRD-1C-480A

*For double pole version replace “-1C” with “-2C”, “-2A”, or “-2B”. For SPST replace “-1C” with “-1A” or “-1B”. For SPST-NO-DM replace “-1C” with “-1X”(Short Base). For SPST-NC-DB replace “-1C” with “-1Y”(Long Base). For addition of SPDT Auxiliary Snap Switch Rated at 10A and 1/4 H.P. add “S” after PRD. For Q.C. 0.250” terminals add “Q” after PRD. For blow out magnets used in high dc loads add “D” after PRD. For 50A rating with box lug termination add “E” after PRD. For 50A rating with screw termination add “R” after PRD.

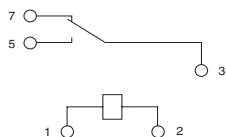
MECHANICAL DATA



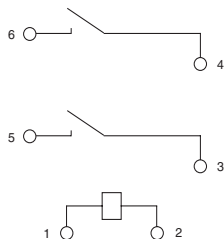
WIRING DIAGRAM



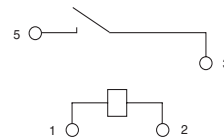
2 Form C



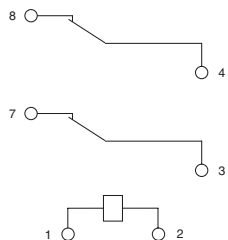
1 Form C



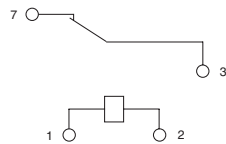
2 Form A



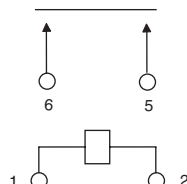
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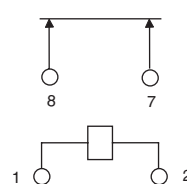
2 Form B



1 Form B



Form 1X



Form 1Y

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