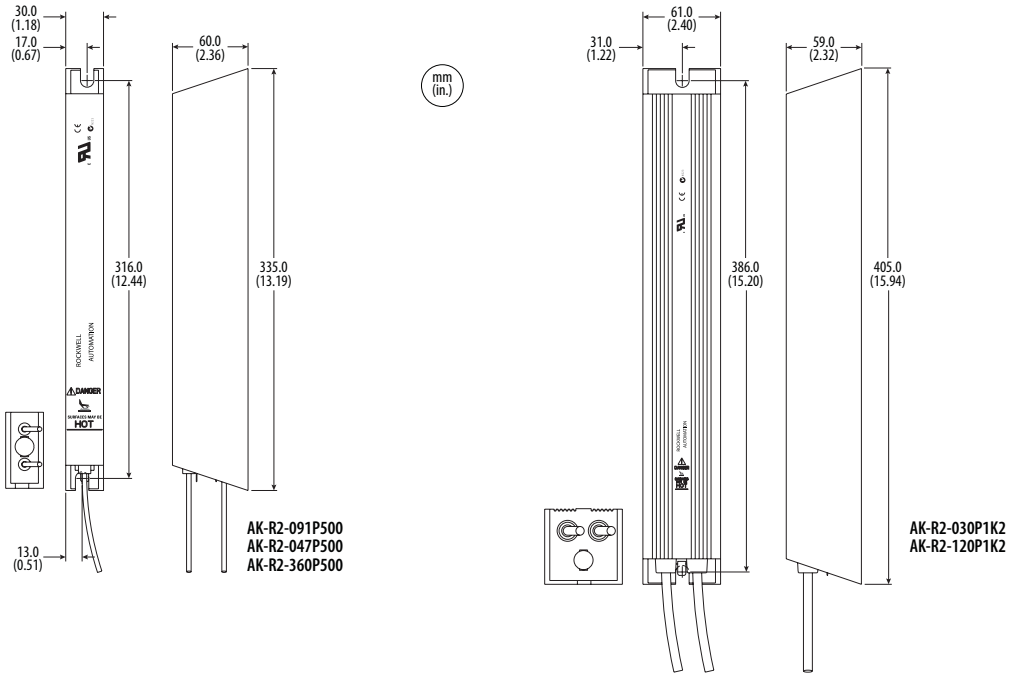
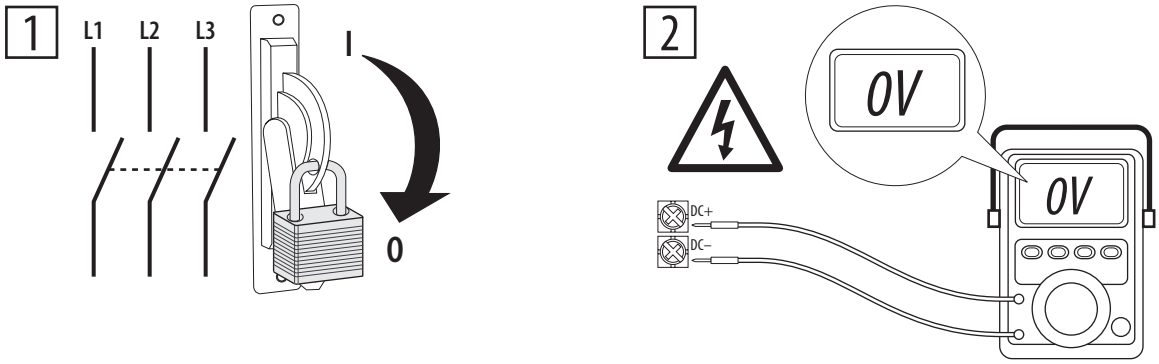
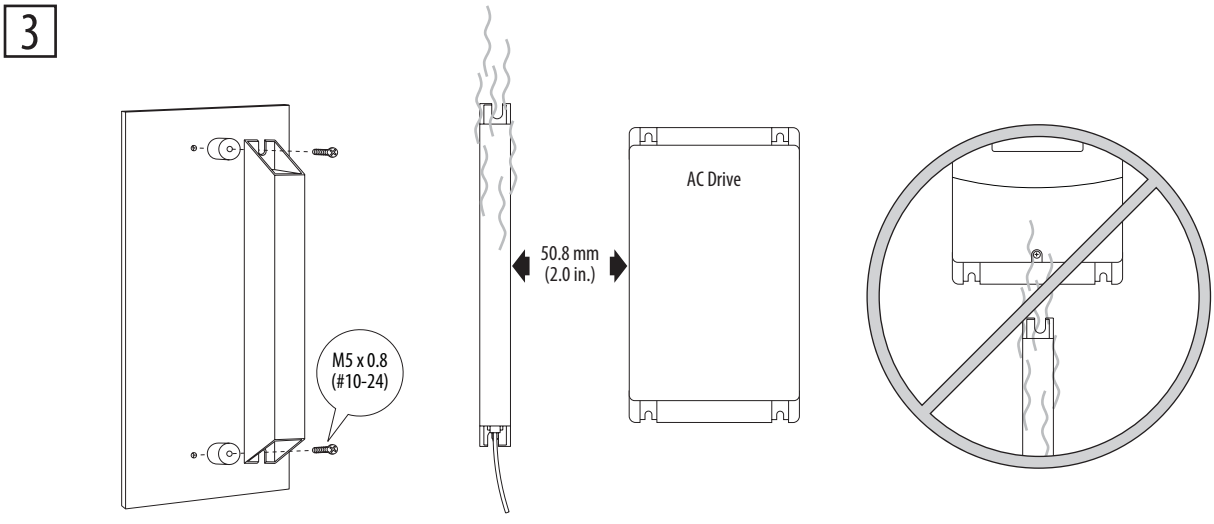
External Dynamic Brake Kit

Installation Instructions







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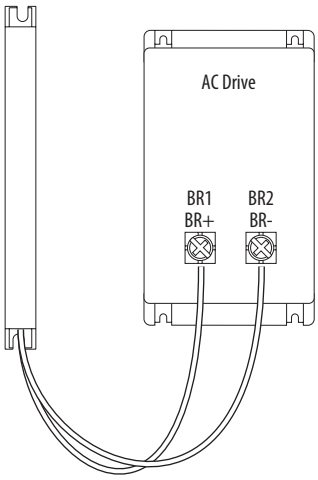

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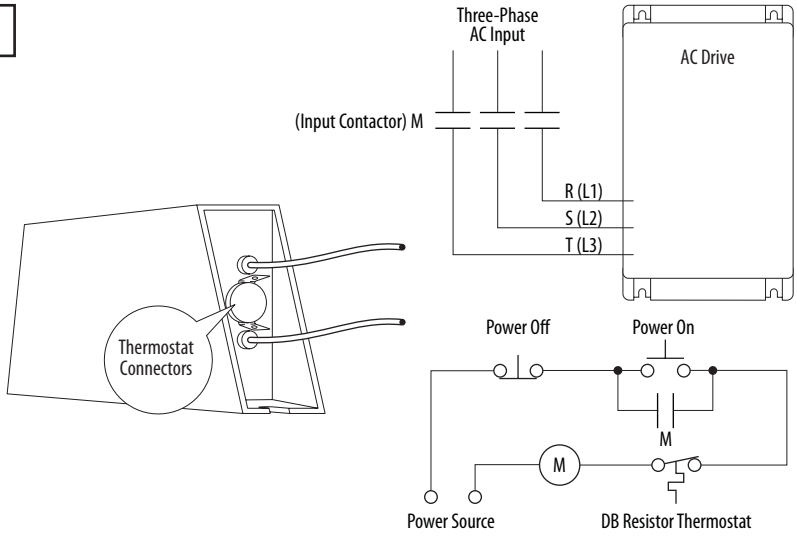

ATTENTION:
Resistor temperature may exceed 200 degrees C.

ATTENTION: AC drives do not offer protection for externally mounted brake resistors, especially in the case of brake IGBT failure. A risk of fire exists if external braking resistors are not protected. External resistor packages must be protected from over temperature or the protective circuit shown, or equivalent, must be supplied.

Thermostat Contact Rating: 125 VAC, 15 A, Opens at 227 °C (440 °F) Closes at 182 °C (359 °F)

Application Cross-Reference

Drive and Motor Size kW (HP)	Part Number	Resistance Ohms ±5%	Continuous Power kW	Max Energy kJ	Max Braking Torque % of Motor	Application Type 1		Application Type 2	
						Braking Torque % of Motor	Duty Cycle %	Braking Torque % of Motor	Duty Cycle %
100…120 Volt AC Input Drives									
0.75 (1)	AK-R2-091P500	91	0.086	17	218%	100%	23%	150%	31%
1.1 (1.5)	AK-R2-091P500	91	0.086	17	164%	100%	16%	148%	11%
200…240 Volt AC Input Drives									
0.37 (0.5)	AK-R2-091P500	91	0.086	17	293%	100%	46%	150%	31%
0.75 (1)	AK-R2-091P500	91	0.086	17	218%	100%	23%	150%	15%
1.5 (2)	AK-R2-091P500	91	0.086	17	109%	100%	11%	109%	11%
2.2 (3)	AK-R2-047P500	47	0.166	33	144%	100%	15%	144%	11%
4 (5)	AK-R2-047P500	47	0.166	33	79%	79%	11%	N/A	N/A
5.5 (7.5)	AK-R2-030P1K2	30	0.26	52	90%	90%	10%	N/A	N/A
7.5 (10)	AK-R2-030P1K2	30	0.26	52	66%	66%	10%	N/A	N/A
11 (15)	See Note 3	15	0.52	104	90%	90%	10%	N/A	N/A
15 (20)	See Note 3	15	0.52	104	66%	66%	10%	N/A	N/A
400…480 Volt AC Input Drives									
0.37 (0.5)	AK-R2-360P500	360	0.086	17	305%	100%	47%	150%	31%
0.75 (1)	AK-R2-360P500	360	0.086	17	220%	100%	23%	150%	15%
1.5 (2)	AK-R2-360P500	360	0.086	17	110%	100%	12%	110%	11%
2.2 (3)	AK-R2-120P1K2	120	0.26	52	197%	100%	24%	150%	16%
4 (5)	AK-R2-120P1K2	120	0.26	52	124%	100%	13%	124%	10%
5.5 (7.5)	AK-R2-120P1K2	120	0.26	52	90%	90%	10%	N/A	N/A
7.5 (10)	AK-R2-120P1K2	120	0.26	52	66%	66%	10%	N/A	N/A
11 (15)	See Note 3	60	0.52	104	90%	90%	10%	N/A	N/A
15 (20)	See Note 3	60	0.52	104	66%	66%	10%	N/A	N/A
600 Volt AC Input Drives									
0.37 (0.5)	AK-R2-360P500	360	0.086	17	274%	100%	46%	150%	31%
0.75 (1)	AK-R2-360P500	360	0.086	17	251%	100%	23%	150%	15%
1.5 (2)	AK-R2-360P500	360	0.086	17	172%	100%	11%	150%	8%
2.2 (3)	AK-R2-120P1K2	120	0.26	52	193%	100%	24%	150%	16%
4 (5)	AK-R2-120P1K2	120	0.26	52	185%	100%	13%	150%	9%
5.5 (7.5)	AK-R2-120P1K2	120	0.26	52	141%	100%	9%	141%	7%
7.5 (10)	AK-R2-120P1K2	120	0.26	52	103%	100%	7%	103%	7%
11 (15)	See Note 3	60	0.52	104	141%	100%	9%	141%	7%
15 (20)	See Note 3	60	0.52	104	103%	100%	7%	103%	7%

Note 1: Always check resistor ohms against minimum resistance for drive being used.

Note 2: Duty cycle listed is based on full speed to zero speed deceleration.
For constant regen at full speed, duty cycle capability is half of what is listed.
Application Type 1 represents maximum capability up to 100% braking torque where possible.
Application Type 2 represents more than 100% braking torque where possible, up to a maximum of 150%.

Note 3: For 11 and 15 kW (15 and 20 HP) normal duty external resistor applications, use two 7.5 kW (10 HP) size resistors wired in parallel.

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