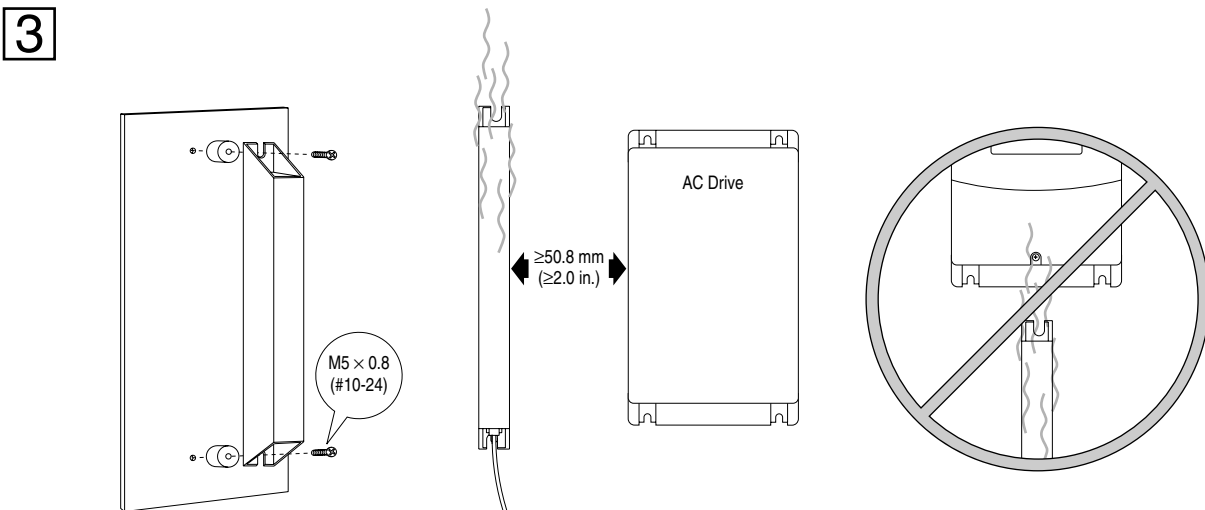
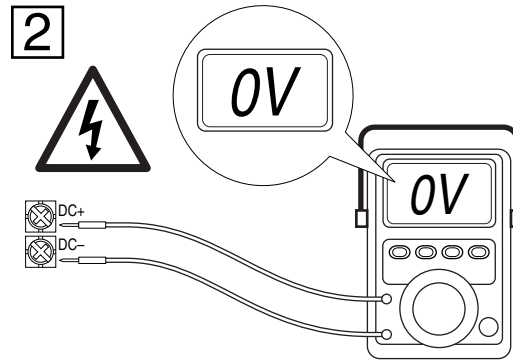
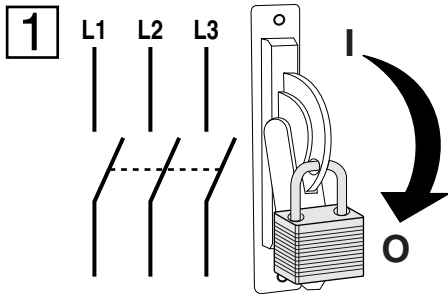
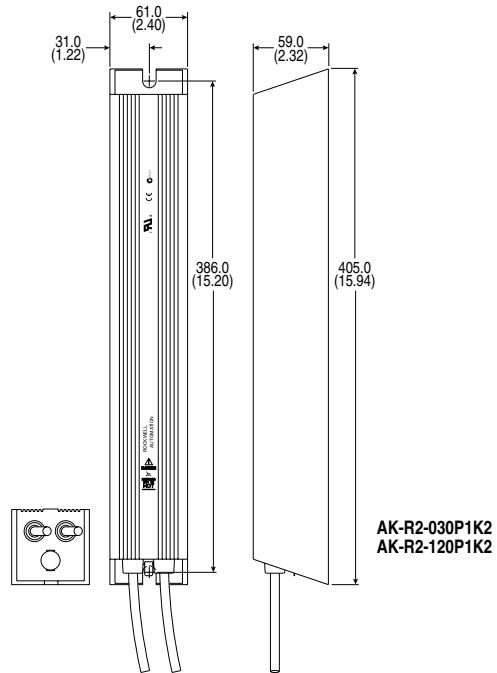
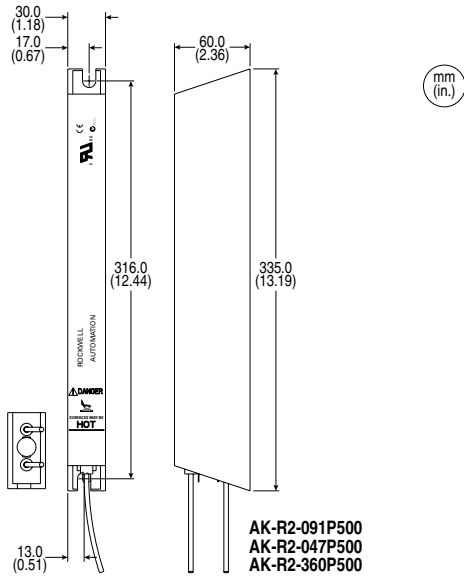
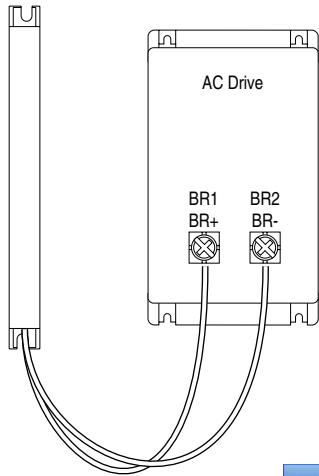


**External Dynamic Brake Kit**

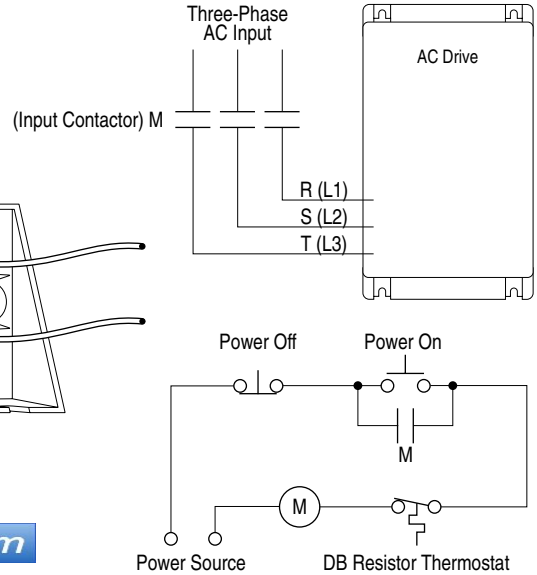
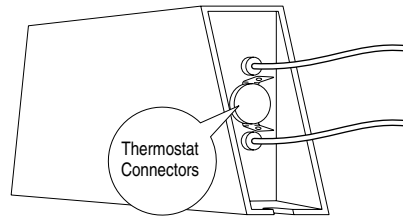
*Installation Instructions*



4



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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.

**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 %	
<b>100-120 Volt AC Input Drives</b>										
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%	
<b>200-240 Volt AC Input Drives</b>										
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	
<b>400-480 Volt AC Input Drives</b>										
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	
<b>600 Volt AC Input Drives</b>										
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.

**U.S. Allen-Bradley Drives Technical Support**

Tel: (1) 262.512.8176, Fax: (1) 262.512.2222, Email: support@drives.ra.rockwell.com, Online: www.ab.com/support/abdrives

**U.S. Reliance Drives Technical Support**

Tel: (1) 800.726.8112, Online: www.reliance.com/prodserv/standriv/customer

