

INSTRUCTION AND PARTS LIST

AIRPORT BEACON

MODEL AB-1000 / AB-1000A

ALWAYS FURNISH BOTH MODEL AND SERIAL NUMBER WHEN PLACING
PARTS ORDER

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PLEASE READ THESE INSTRUCTIONS BEFORE INSTALLATION

Your airport beacon is designed to give trouble-free service with a minimum of attention. However, one important fact must be remembered and considered before installation: bulbs do burn out and must be replaced. Therefore, it is important to mount the beacon in such a location that it may be easily reached. The bulbs have a rated life of 4,000 hours. Based on an average use of 10 hours per night, one might expect to replace bulbs once a year. Light output is 200,000 cp. per bulb. Total wattage of unit is 2,190 watts, 18.7 amps.

UNPACKING- Carefully inspect beacon for shipping damage. If any is noted, notify carrier at once.

INSTALLATION – Beacon should be mounted in highest possible location, remembering comment above about changing bulbs. Provide a secure, stable, level platform; bolt firmly in place, using ¼” bolts. Make sure beacon is perfectly level. Uneven mounting will throw beam low on one side and high on the other, and will result in uneven wear on bearings.

WIRING - Unit is designed to operate on 117 VAC, 60 HZ. Connect power supply and ground wire through watertight connector and attach to terminal block located in lower left corner of the enclosure. The 117 VAC conductors should be connected to the first and third terminal on the block. If the Arctic Kit has been installed, a separate 117 VAC power supply must be connected to the two most left terminals on the block and the beacon supply will be connected to the two most right terminals. The ground wire will always be connected to the center terminal on the block regardless of whether the unit has an Arctic Kit or not. The use of a separate power supply on Arctic Kit will insure that the heating element will function during the beacons off cycle.

Time clock or photoelectric cell may be used to control the operating time of the beacon. Since the inrush current of the halogen lamps far exceeds the capabilities of most control timers and photocells. It is highly recommended that a minimum 30AMP contactor with the appropriate inrush characteristics be used to load the beacon. Make sure to only switch the hot wire, **(DO NOT SWITCH THE NEUTRAL)**. Be sure to fuse power supply to the beacon.

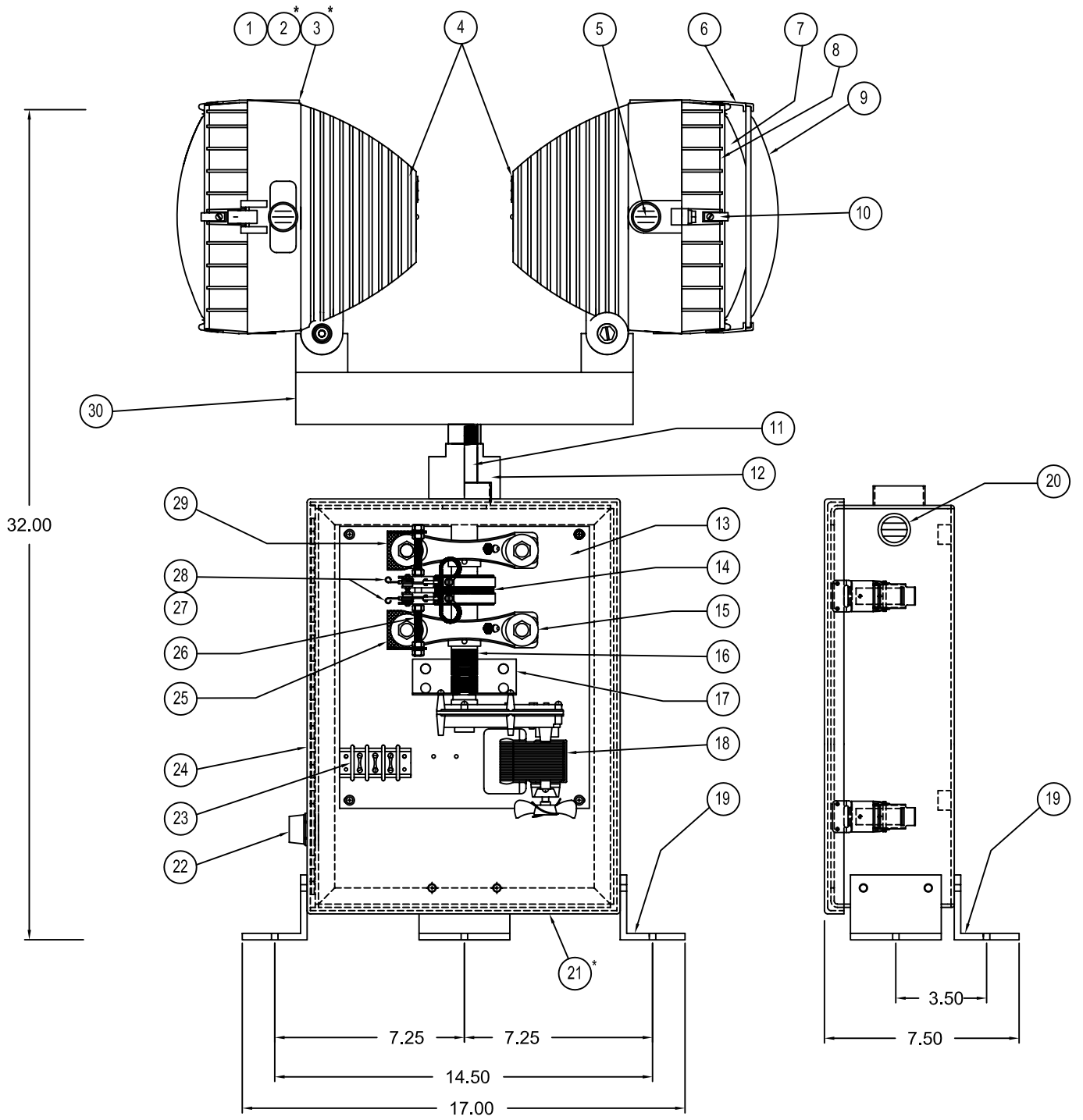
MAINTENANCE – The only routine maintenance required is lubrication of shaft bearing once every four months. Use lithium base pressure gun grease. One shot is more than enough. Over-lubrication will damage bearings due to excess heat. We repeat; one shot is plenty. **TURN OFF POWER SUPPLY** before opening access panel. Each six months **CHECK** brushes at commutator. Replace if less than 3/8” long.

CHANGING BULBS – TURN OFF POWER SUPPLY. Loosen bolt at 9 o'clock position on lamp head with ½" socket or wrench. Swing front of head aside, unplug bulb from socket, and replace with new bulb. Socket holding clip in back of housing must be in vertical position. Beam spread is 15 x 32 , so bulb must be installed with terminals vertical. Proper seating of gasket is important as bulb must be protected from moisture.

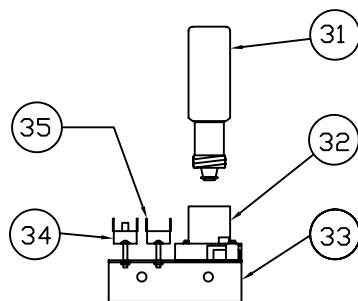
OPERATION OF ARCTIC KIT – With a constant source of power, control thermostat will start 100 watt heater when temperature in unit lowers to approximately 32 F. Heater will continue to operate until temperature in unit reaches approximately 45 F. Overheat thermostat will shut heater off if temperature in unit reaches 160 F, and must manually reset by pushing red button in. SHUT OFF ALL POWER TO BEACON BEFORE OPENING ACCESS DOOR. It is possible for overheated thermostat to trip during the summer with beacon in hot sun. CHECK reset button before winter operation.

MAJOR REPAIRS - - Items such as the motor, brushes, thermostats and heater can be replaced with unit in place. The beacon is designed so other major components can be removed as an assembly and taken to a more convenient working area. (1) TURN OFF POWER AT SOURCE. (2) Disconnect power supply at terminal block inside housing. (3) Remove screws in lamp bar (M10-11) cover and remove. (4) Disconnect wires coming through top of drive shaft. (5) Loosen the two set screws (M10-11) and remove both set screws. (6) Unscrew beacon head and lay aside (turn counter clockwise). (7) Loosen set screws securing rain guard (M20-8). (8) Remove rain guard. (9) Remove four screws holding backpanel (M240-8A). (10) Entire rotating assembly can now be removed.

TO REINSTALL - (1) Insert shaft through hole in top of housing and secure mounting plate loosely in place with four screws. (2) Center the shaft and tighten four back panel screws. (3) Install rain guard on shaft and hand tighten set screws. Place a small amount of duct seal or silicone compound around shaft at top of rain guard. (4) Screw lamp bar assembly on shaft until tight. (5) Tighten set screws. (6) Slide rain guard up until it makes contact with the bottom of lamp bar assembly. Tighten set screws securely. Bottom of rain guard should not touch top of beacon enclosure (M10-13). Ideal distance is 3/8". (7) Connect shaft wires to socket wires in order they were removed. (8) Replace M10-11 cover plate. (9) Connect power supply to terminal block.



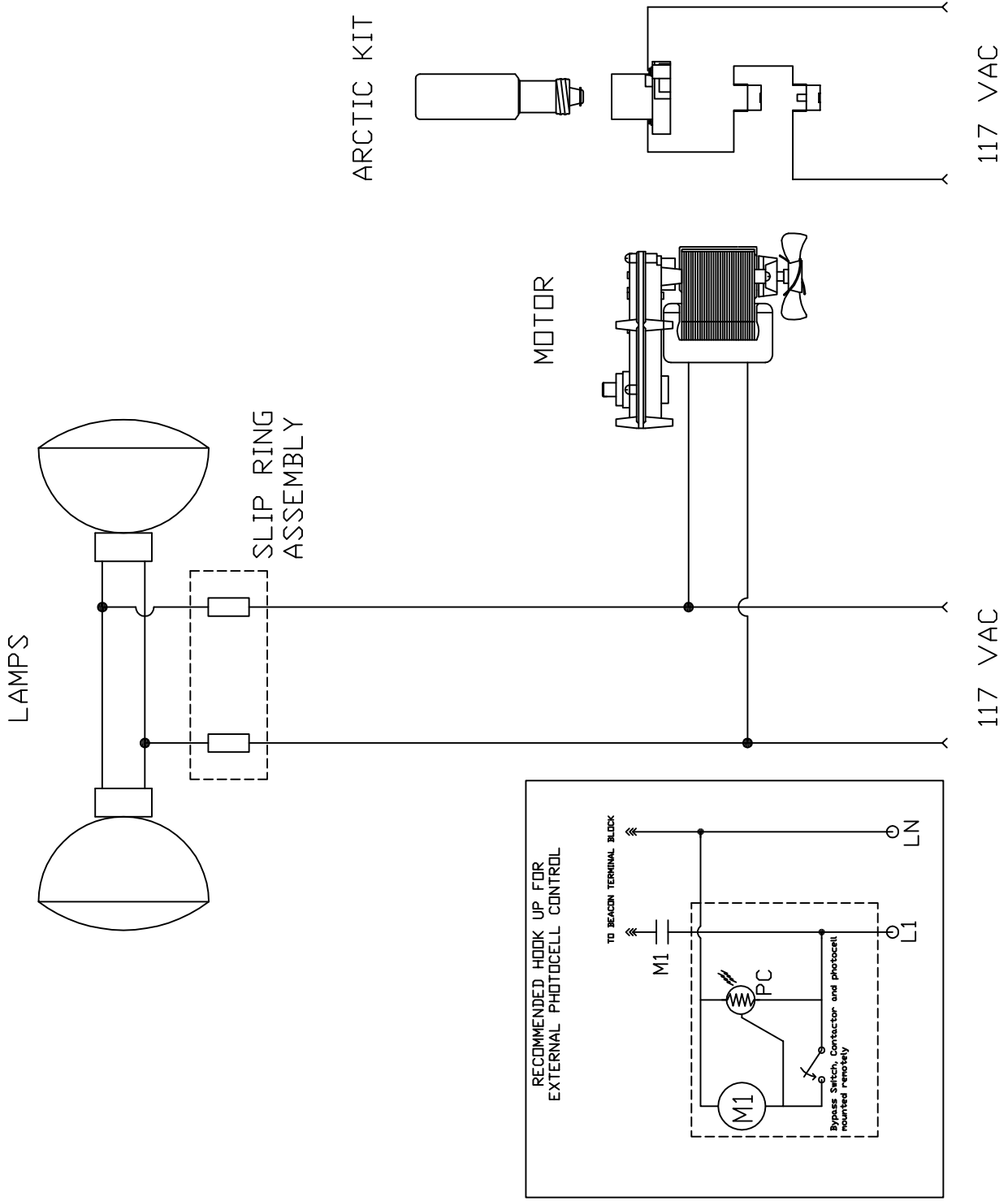
ARCTIC KIT



REF. NO.	PART NO.	DESCRIPTION	TOT. REQ.	DWG. OR REMARKS
1	M10-14	LAMP HOUSING (HEAD)	2	PAR 64
2	M70-7B	LAMP SOCKET	2	*
3	M60-19	1000W LAMP	2	120VAC PAR 64 *
4	M460-3	1" HOUSING VENT (TAB)	2	
5	M460-2	1" HOUSING VENT	6	
6	M420-1	LENS STAND-OFF	4	Stands M50-29 off
7	M50-28	CLEAR LENS	2	PAR 64
8	M150-8	LENS/HEAD GASKET	2	
9	M50-29	GREEN LENS	1	PAR 64
10	M405-2	LENS RETAINING CLIP	16	8 PER LENS
11	M320-3	LAMP MTG. SHAFT	1	
12	M20-8	RAIN GUARD	1	
13	M240-8A	SHAFT & MOTOR PANEL	1	
14	M315-2	SLIP RING ASSEMBLY	1	TWO RING
15	M330-2	PILLOW BLOCK BEARING	2	
16	M370-1	FLEXIBLE COUPLING	1	THREE PARTS
17	M335-5	MOTOR MTG. FLANGE	1	
18	M260-8	GEARMOTOR, 120VAC 60HZ	1	12 RPM
19	M335-2	HOUSING MTG. FLANGE	3	
20	M460-3	1" HOUSING VENT (TAB)	2	
21	M460-4	3" HOUSING VENT (TAB)	1	*
22	M140-2	CONDUIT HUB	1	
23	M395-1	TERMINAL BLOCK	1	
24	M10-13	BEACON HOUSING	1	
25	M335-3	STUD MTG. FLANGE	1	BOTTOM
26	M320-4	INSULATED STUD	1	
27	M55-2	BRUSH HOLDER	2	
28	M325-2	BRUSH	2	
29	M335-4	STUD MTG. FLANGE	1	TOP
30	M10-11	LAMP BAR HOUSING	1	
31	M380-2	100 W HEATER	1	
32	M70-6	HEATER SOCKET	1	
33	M335-8	AK-100 MTG. FLANGE	1	
34	M390-2	OVERHEAT THERMOSTAT	1	
35	M390-1	CONTROL THERMOSTAT	1	

* Denotes items not shown

AB-1000 SCHEMATIC



LAMPS

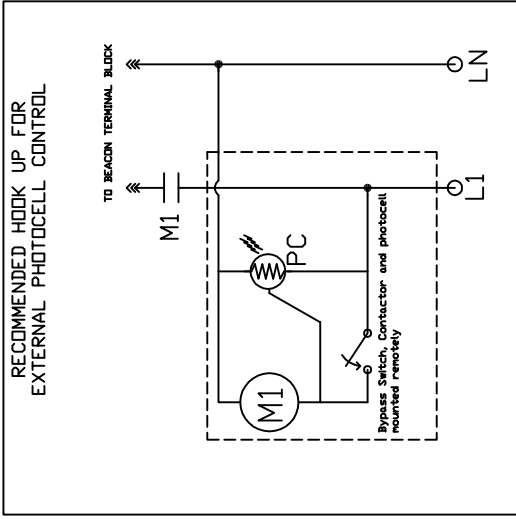
SLIP RING ASSEMBLY

MOTOR

ARCTIC KIT

117 VAC

117 VAC



SETTING BEAM ANGLE - Beacon heads can be set at any angle desired. When shipped, angle is 3° to 5° which works well in most cases. If beam is too low or too high, adjust heads one notch at a time. Table below shows vertical height in feet of beam center line above beacon at various angles:

Feet	Miles	6° Beam	3° Beam	1 ½° Beam
10	-	1.05	.5	.13
100	-	10.5	5.2	1.3
1,000	.19	105	52	25
2,000	.38	210	104	51
4,000	.76	420	208	104
6,000	1.14	630	312	156
8,000	1.52	840	416	208
10,000	1.90	1,050	520	260
20,000	3.80	2,100	1,040	520
40,000	7.60	4,200	2,080	1,040
60,000	11.40	6,300	3,120	1,560
80,000	15.20	8,400	4,160	2,080
100,000	19.00	10,500	5,250	2,625

EXAMPLE: With 3° setting, center line of beam will be 3,120 feet above beacon at a distance of 11.4 miles.

SERIAL NO. _____

NOTES