

NOTIFICATION OF MANUAL STATUS

RB-6 L-801A (Airport) Rotating Beacon (Export) is now sold by Halibrite. Use manual 96A0221 only for old equipment in the field. Discard this notification page before sending manual.



RB-6 L-801A (Airport) Rotating Beacon (Export)

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Manufactured to FAA Specification
AC 150/5345-12C



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Record of Changes

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	A	Released manual.	3250	KJ	VP	2/6/98
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Warranties

Products of Siemens Airfield Solutions manufacture are guaranteed against mechanical, electrical, and physical defects (excluding lamps) for a period of one year from the date of installation or a maximum of two years from the date of shipment and are guaranteed to be merchantable and fit for the ordinary purposes for which such products are made.

Siemens Airfield Solutions will correct by repair or replacement, at its option, equipment or parts which fail because of mechanical, electrical or physical defects, provided that the goods have been properly handled and stored prior to installation, properly installed and properly operated after installation, and provided further that Buyer gives Siemens Airfield Solutions written notice of such defects after delivery of the goods to Buyer.

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Disclaimers

This manual could contain technical inaccuracies or typographical errors. Siemens Airfield Solutions reserves the right to revise this manual from time to time in the contents thereof without obligation of Siemens Airfield Solutions to notify any person of such revision or change.

Details and values given in this manual are average values and have been compiled with care. They are not binding, however, and Siemens Airfield Solutions disclaims any liability for damages or detriments suffered as a result of reliance on the information given herein or the use of products, processes or equipment to which this manual refers. No warranty is made that the use of the information or of the products, processes or equipment to which this manual refers will not infringe any third party's patents or rights. The information given does not release the buyer from making their own experiments and tests.

Section 1

Safety

1. Introduction

This section contains general safety instructions for using your Siemens Airfield Solutions equipment. Some safety instructions may not apply to the equipment in this manual. Task- and equipment-specific warnings are included in other sections of this manual where appropriate. Note all warnings and follow all instructions carefully. Failure to do so may result in personal injury, death, or property damage.

To use this equipment safely,

- refer to the FAA Advisory Circular AC 150/5340-26, *Maintenance of Airport Visual Aids Facilities*, for instructions on safety precautions.
- observe all safety regulations. To avoid injuries, always remove power prior to making any wire connections and touching any parts. Refer to FAA Advisory Circular AC 150/5340-26.
- read and become familiar with the general safety instructions provided in this section of the manual before installing, operating, maintaining, or repairing this equipment.
- read and carefully follow the instructions given throughout this manual for performing specific tasks and working with specific equipment.
- store this manual within easy reach of personnel installing, operating, maintaining, or repairing this equipment.
- follow all applicable safety procedures required by your company, industry standards, and government or other regulatory agencies.
- obtain and read Material Safety Data Sheets (MSDS) for all materials used.

2. Safety Symbols

Become familiar with the safety symbols presented in this section. These symbols will alert you to safety hazards and conditions that may result in personal injury, death, or property and equipment damage.



WARNING: Failure to observe this warning may result in personal injury, death, or equipment damage.



WARNING: Risk of electrical shock. Failure to observe this warning may result in personal injury, death, or equipment damage.

2. Safety Symbols *(contd.)*



WARNING: Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage.



WARNING: Wear safety goggles. Failure to observe may result in serious injury.



CAUTION: Failure to observe may result in equipment damage.

3. Qualified Personnel

The term *qualified personnel* is defined here as individuals who thoroughly understand the equipment and its safe operation, maintenance, and repair. Qualified personnel are physically capable of performing the required tasks, familiar with all relevant safety rules and regulations and have been trained to safely install, operate, maintain, and repair the equipment. It is the responsibility of the company operating this equipment to see that its personnel meet these requirements.

4. Intended Use



WARNING: Use of this equipment in ways other than described in this manual may result in personal injury, death, or property and equipment damage. Use this equipment only as described in this manual.

Siemens Airfield Solutions cannot be responsible for injuries or damages resulting from nonstandard, unintended applications of its equipment. This equipment is designed and intended only for the purpose described in this manual. Uses not described in this manual are considered unintended uses and may result in serious personal injury, death, or property damage. Unintended uses may result from taking the following actions:

- making changes to equipment that have not been recommended or described in this manual or using parts that are not genuine Siemens Airfield Solutions replacement parts
- failing to make sure that auxiliary equipment complies with approval agency requirements, local codes, and all applicable safety standards
- using materials or auxiliary equipment that are inappropriate or incompatible with your Siemens Airfield Solutions equipment
- allowing unqualified personnel to perform any task

5. Installation

Read the installation section of all system component manuals before installing your equipment. A thorough understanding of system components and their requirements will help you install the system safely and efficiently.



WARNING: Failure to follow these safety procedures can result in personal injury or death.

- Allow only qualified personnel to install Siemens Airfield Solutions and auxiliary equipment. Use only approved equipment. Using unapproved equipment in an approved system may void agency approvals.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Follow all instructions for installing components and accessories.
- Install all electrical connections to local code.
- Use only electrical wire of sufficient gauge and insulation to handle the rated current demand. All wiring must meet local codes.
- Route electrical wiring along a protected path. Make sure they will not be damaged by moving equipment.
- Protect components from damage, wear, and harsh environment conditions.
- Allow ample room for maintenance, panel accessibility, and cover removal.
- Protect equipment with safety devices as specified by applicable safety regulations.
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning.

6. Operation

Only qualified personnel, physically capable of operating the equipment and with no impairments in their judgment or reaction times, should operate this equipment.

Read all system component manuals before operating this equipment. A thorough understanding of system components and their operation will help you operate the system safely and efficiently.

6. Operation *(contd.)*

- Before starting this equipment, check all safety interlocks, fire-detection systems, and protective devices such as panels and covers. Make sure all devices are fully functional. Do not operate the system if these devices are not working properly. Do not deactivate or bypass automatic safety interlocks or locked-out electrical disconnects or pneumatic valves.
- Never operate equipment with a known malfunction.
- Do not attempt to operate or service electrical equipment if standing water is present.
- Use this equipment only in the environments for which it is rated. Do not operate this equipment in humid, flammable, or explosive environments unless it has been rated for safe operation in these environments.
- Never touch exposed electrical connections on equipment while the power is ON.

7. Action in the Event of a System or Component Malfunction

Do not operate a system that contains malfunctioning components. If a component malfunctions, turn the system OFF immediately.

- Disconnect and lock out electrical power.
- Allow only qualified personnel to make repairs. Repair or replace the malfunctioning component according to instructions provided in its manual.

8. Maintenance and Repair

Allow only qualified personnel to perform maintenance, troubleshooting, and repair tasks. Only persons who are properly trained and familiar with Siemens Airfield Solutions equipment are permitted to service this equipment.

- Always use safety devices when working on this equipment.
- Follow the recommended maintenance procedures in your equipment manuals.
- Do not service or adjust any equipment unless another person trained in first aid and CPR is present.
- Connect all disconnected equipment ground cables and wires after servicing equipment. Ground all conductive equipment.
- Use only approved Siemens Airfield Solutions replacement parts. Using unapproved parts or making unapproved modifications to equipment may void agency approvals and create safety hazards.

8. Maintenance and Repair*(contd.)*

- Check interlock systems periodically to ensure their effectiveness.
- Do not attempt to service electrical equipment if standing water is present. Use caution when servicing electrical equipment in a high-humidity environment.
- Use tools with insulated handles when working with electrical equipment.

Section 2

Description

1. Introduction

See Figure 2-1. This section describes the Siemens Airfield Solutions RB-6 rotating beacon (Export Version). The RB-6 is manufactured to specification AC 150/5345-12C.

The RB-6 all-weather rotating beacon (Export Version) consists of a rotating unit on which are mounted a cast-aluminum housing containing 1000-W PAR64 spot quartz lamps, and a motor box.

An electrical connection is provided on the terminal block, located in the motor box, for a light or alarm to indicate a lamp failure. The rotating unit is mounted on a vertical shaft that turns at 12.5 revolutions per minute, resulting in an output of 24-30 flashes per minute, alternately white and green.

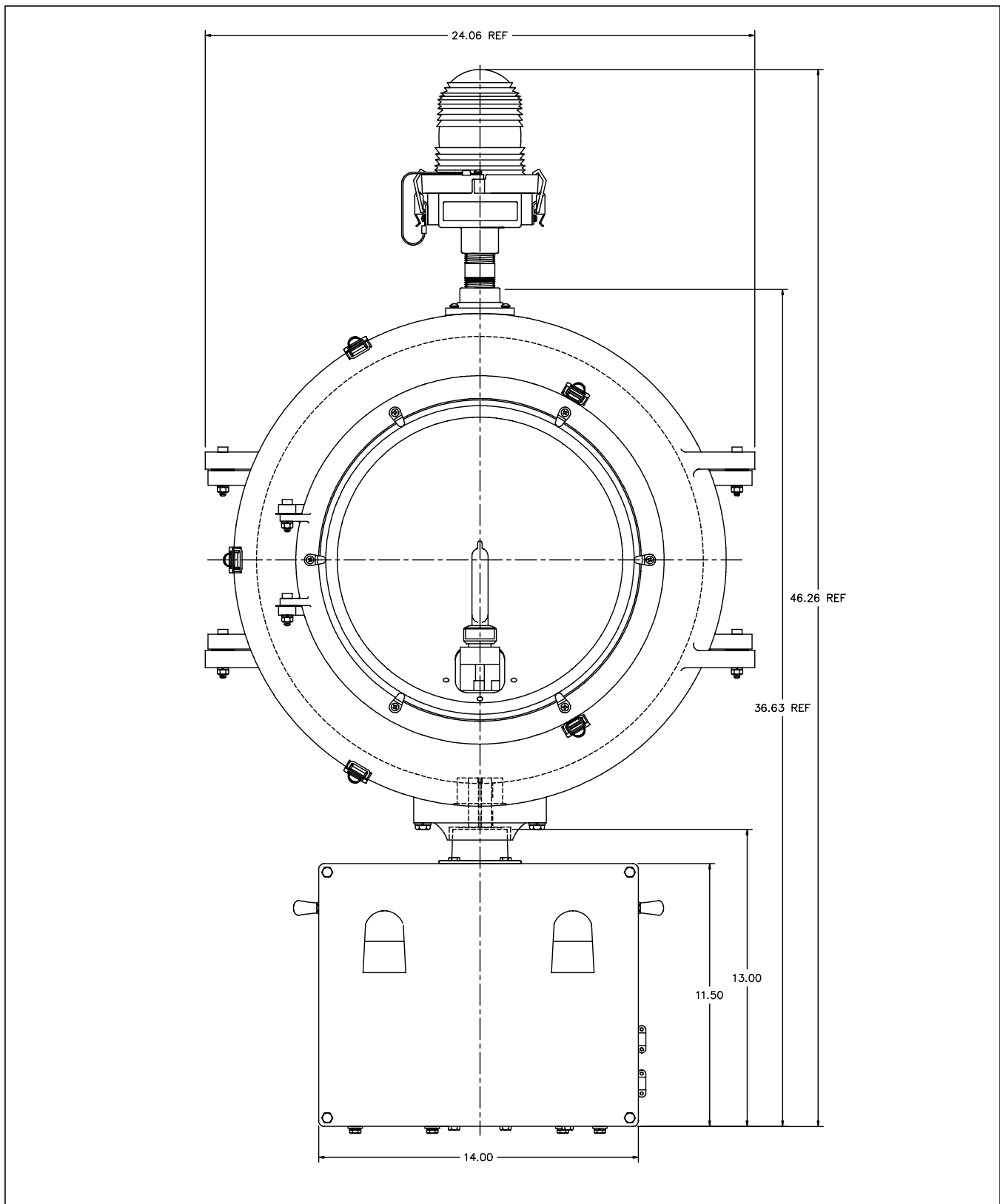


Figure 2-1. RB-6 Rotating Beacon

2. RB-6 Beacon Assemblies

The RB-6 beacon consists of the following assemblies: a head assembly, hub and shaft assembly, box assembly, and motor assembly. These assemblies are described below.

Head Assembly

The head is made of aluminum castings. The forward and aft sections of the housings are hinged to allow access to the lamp for replacement, or to the lens for cleaning, or replacement.

Clear and green lenses are mounted 180 degrees apart, and each head is factory preset to an elevation of 5 degrees above the horizontal.

Hub and Shaft Assembly

The rotating hub is mounted on a shaft which passes through the top of the motor box, and is supported by bearings at the top and bottom of the box.

Box Assembly

A heavy duty aluminum casting with a cover plate houses the motor and electrical equipment, and is vented to prevent an accumulation of excess heat. Access to the interior of the housing is gained by removal of the four cover plate screws and the plate.

Motor and Drive Assembly

The 50/60 Hz motor is geared to drive the shaft at 12.5 (Export) RPM when operating at 50 Hz. This output shaft is connected to the hub assembly that rotates the lamp heads.

3. Options

This subsection describes options for the RB-6 rotating beacon (Export Version).

Optional Obstruction Light

See Figure 2-2. An L-810 obstruction light is available for mounting on top of the beacon. The obstruction light lights when one or both of the beacon lamps fail to operate. A fault circuit is also available. The fault circuit can be wired to a horn or light to serve as an alarm indicating that one or both of the beacon lamps have failed.

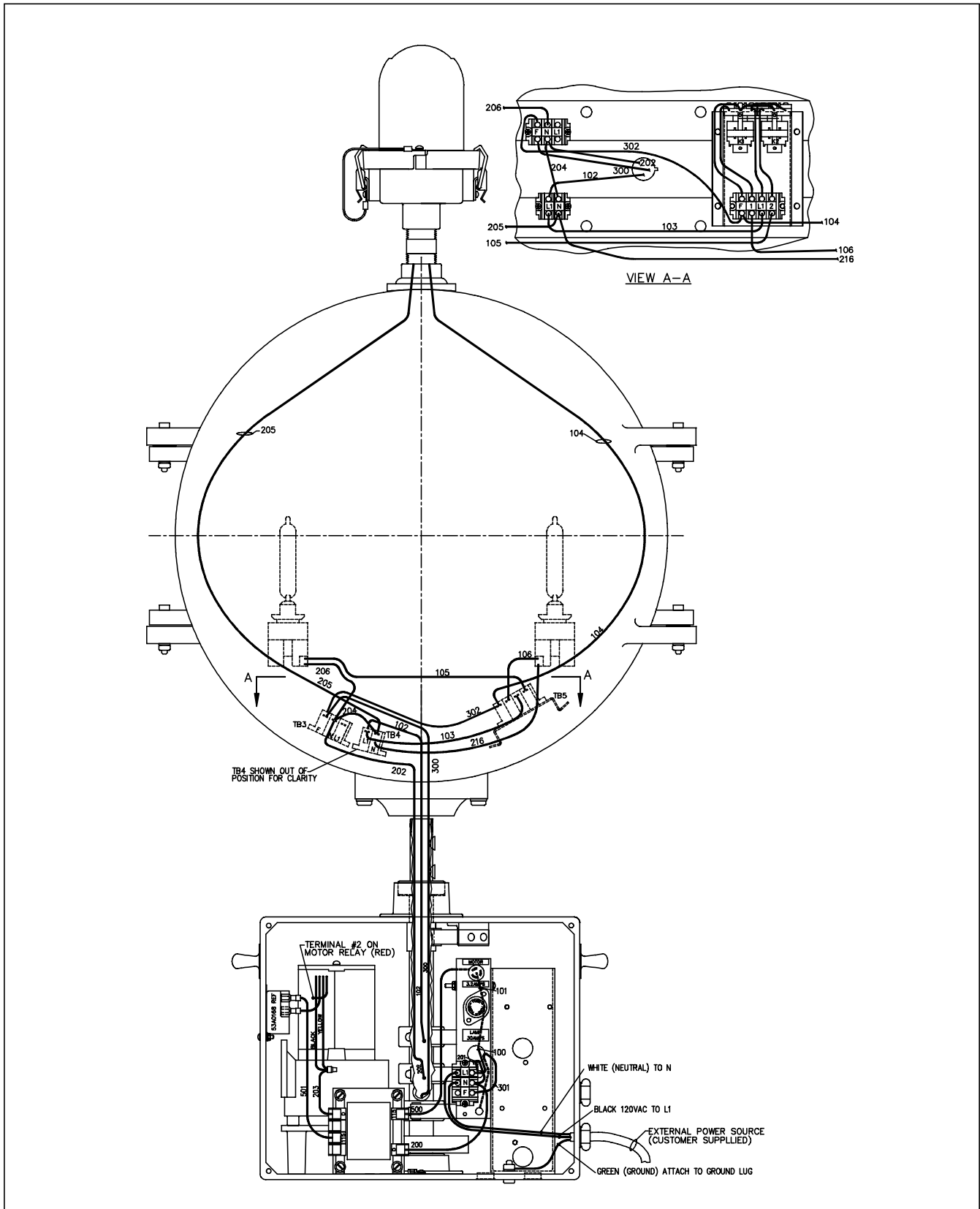


Figure 2-2. RB-6 Final Assembly with Optional Obstruction Light Wiring

Optional Heater Assembly

See Figure 2-3. A heater assembly is available for use at temperatures below -10 °C (+14 °F). The heater turns off at temperatures above +10 °C (+50 °F).

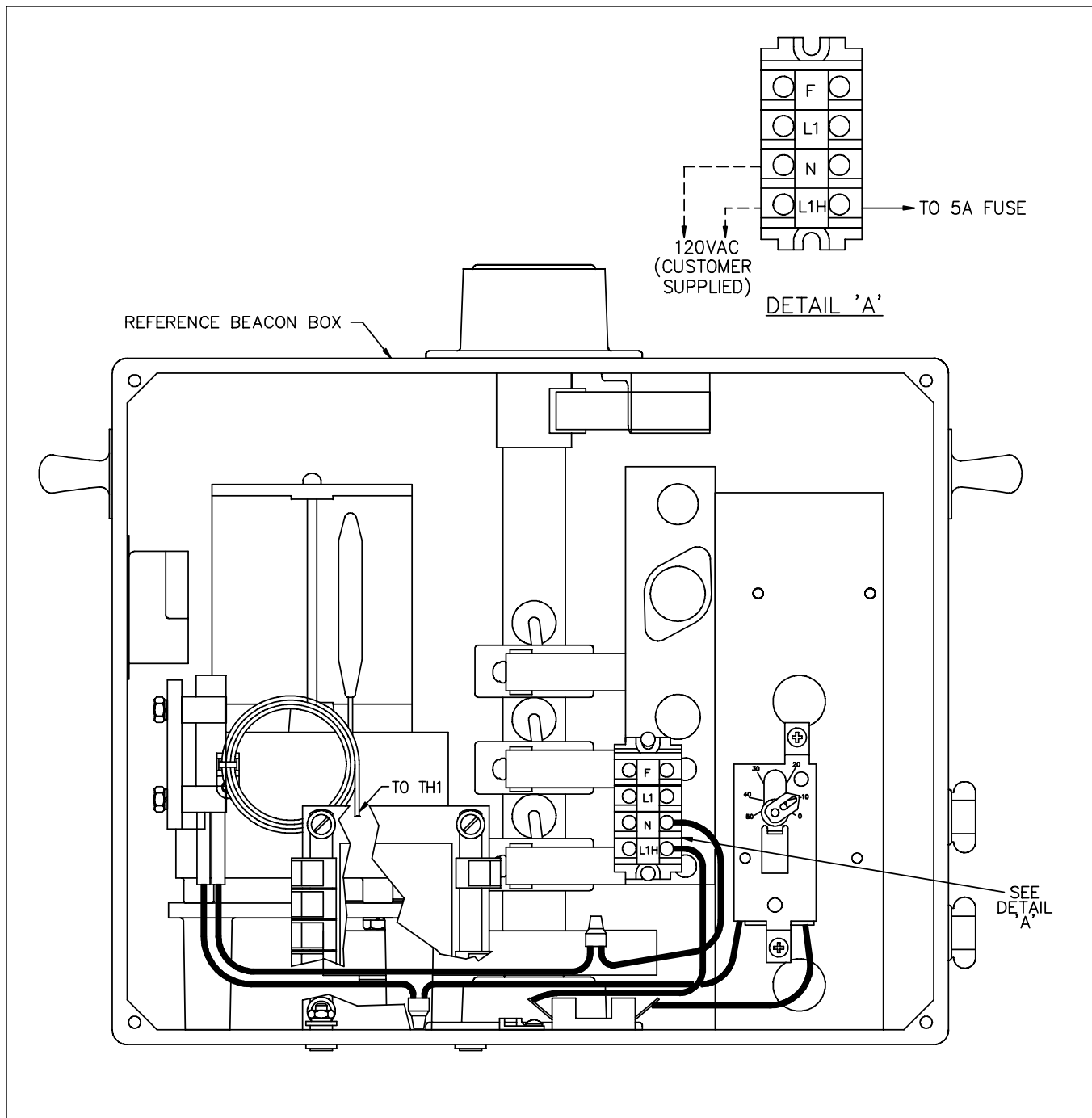


Figure 2-3. Optional Heater Assembly Wiring

Optional Mounting Bases

Optional bases are available for mounting the beacon on a flat, horizontal roof or on top of a pole. See Figure 2-4 for optional pole mounting adapter. An optional roof mounting assembly is shown in Figure 2-5.

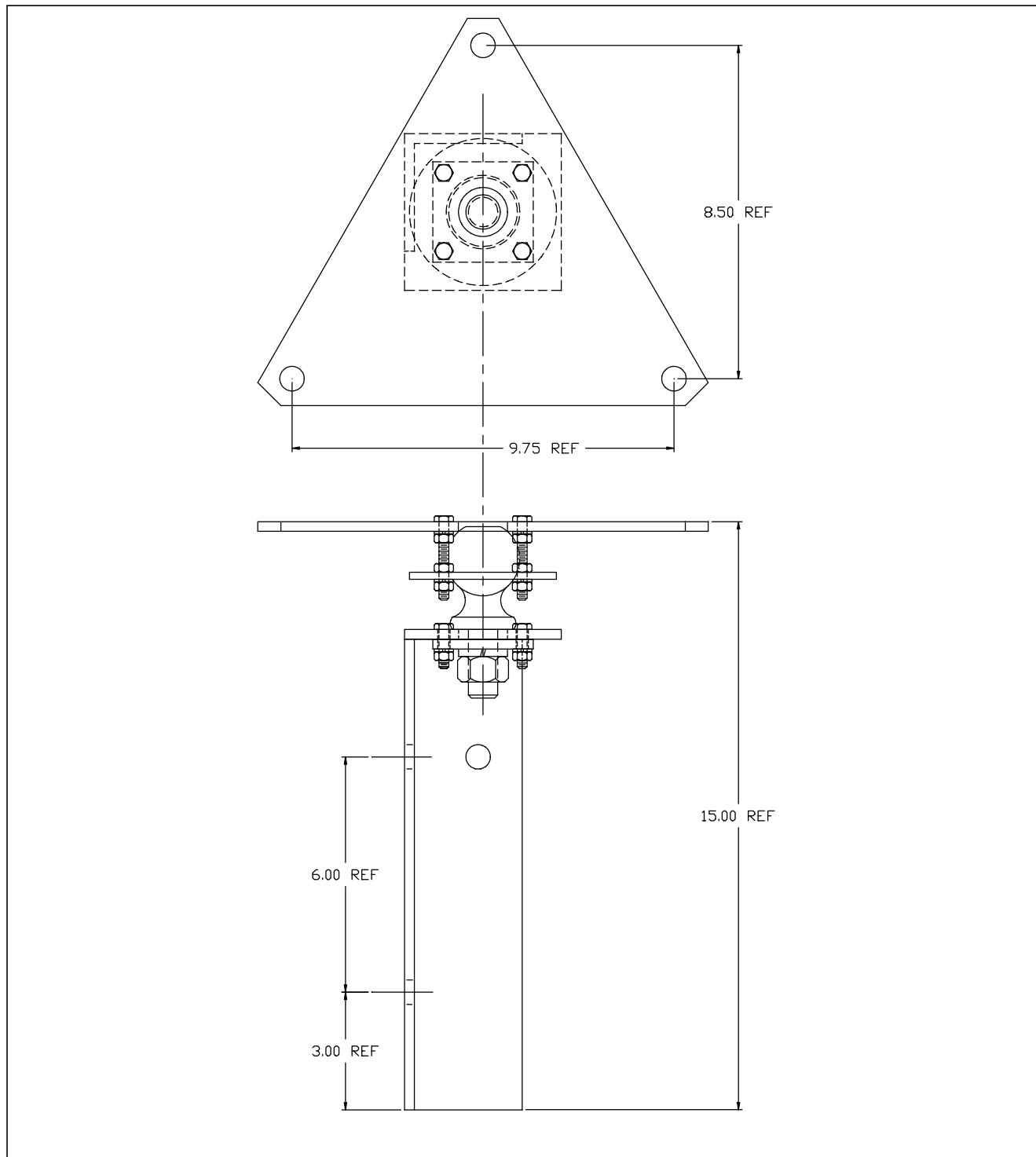


Figure 2-4. Optional Pole Mounting Adapter

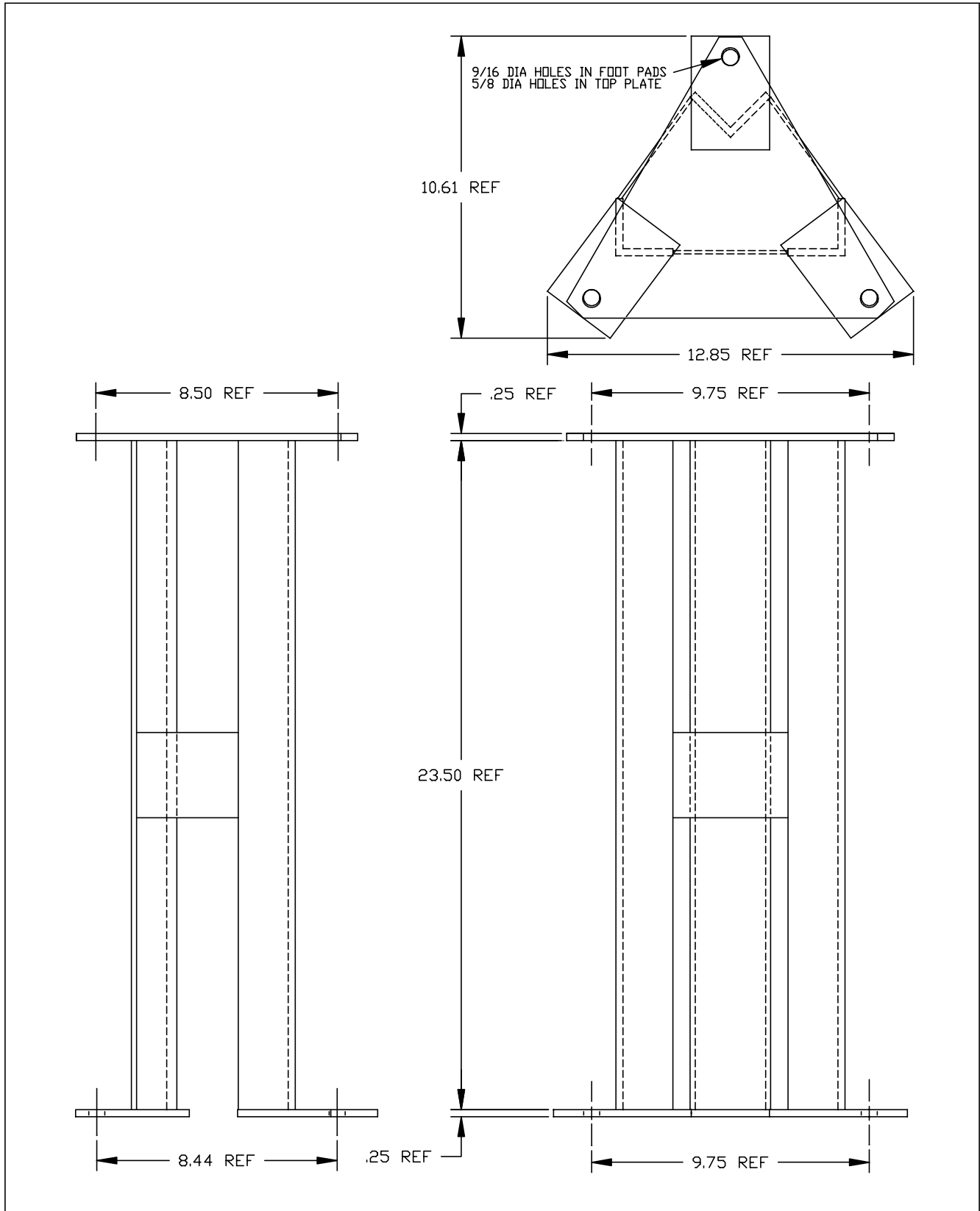


Figure 2-5. Optional Roof Mounting Assembly

Optional Photocell Assembly

See Figure 7-2 the *Wiring Schematics* section. An optional photocell assembly is available to automatically turn the beacon on at dusk and off at dawn.

4. Theory of Operation

This subsection describes the operations of the RB-6, the optional heater assembly, and the optional photocell assembly.

RB-6 Rotating Beacon Operations

See Figure 7-1 the *Wiring Schematics* section. Power is connected to TB1 terminals L1 (120 Vac) and N (neutral). Power is supplied through fuse F1 to motor relay K1. Relay K1 is a motor starting relay. When power is first applied, 120 Vac is present at K1 pins 2 and 3. Relay pin 3 is connected to the motor main winding and pin 2 is connected to the start winding. When the motor is first turned on, it draws a current greater than 4.4 A, energizing the relay and placing 120 Vac on pin 2. After the motor has reached its operating speed, the current drops to less than 3.2 A and relay K1 de-energizes. This disconnects 120 Vac from the motor start winding. 120 Vac is continuously connected to the motor main winding at relay K1 pin 3.

Power is supplied to the lamps through fuse F2, brush brackets #2 and #3, and terminal blocks TB3 and TB4.

Optional Heater Assembly Operations

See Figure 2-3. The optional heater assembly consists of a 400-watt heating element, thermostat, and safety fuse. The heater assembly should be connected through a power cord to a separate circuit breaker, so that it may remain operable when the beacon is turned off. The circuit breaker should be switched off during the summer months.

When the temperature drops below +14 °F (-10 °C), the thermostat activates the heater, which is attached to the motor gear box. The gear box lubricant is warmed and this facilitates rotation of the beacon when it is energized; the more effective lubrication which results also extends the service life of the motor.

Optional Photocell Assembly Operations

See Figure 7-2 the *Wiring Schematics* section. At dusk the decrease in light on the photocell causes a current to flow through terminal block TBX, the photocell and into the coil of relay K1 in the photocell relay assembly. This closes the normally open contact which connects 120 Vac to terminal block TBX terminal L0. This is connected to terminal block TB1 in the rotating beacon and starts it operating. At dawn the increase in light on the photocell stops current from flowing through relay K1 which opens the contact and shuts down the beacon.

Optional Obstruction Light Operations

See Figure 7-1 in the *Wiring Schematics* section. When power is applied to the RB-6 beacon, lamp #1 illuminates because current is taken through fuse F2, brush block #2, terminal block TB4 terminal L1, terminal block TB3 terminal L1. Lamp #2 illuminates because current is taken through fuse F2, brush block #2, terminal block TB4 terminal L1.

Neutral is connected through brush block #3 and terminal blocks TB3 and TB4 terminal N.

5. RB-6 Rotating Beacon: Required Equipment

Refer to Table 2-1 for required equipment that is supplied. Refer to Table 2-2 for required equipment that is not supplied. Refer to the *Parts* section for ordering information.

Table 2-1. Required Equipment Supplied

Description	Quantity
RB-6 rotating beacon	1
Instruction manual	1

Table 2-2. Required Equipment Not Supplied

Description	Quantity
Wrenches, 7/16 in.	1
Voltmeter	1
Insulation tester	1
Level	1
Lightening rod	1
SO-3 cable, AWG 10	1
Set of screwdrivers	As required
Ground wire for lightening rod	As required
Set of pliers	As required
Liquid glass cleaner	As required
Linear barrel scale, 0-16 oz	1

6. Specifications

This subsection describes the specifications for the RB-6, Type L-801A rotating beacons. Refer to the *Parts* section for part numbers.

Input

120 Vac, $\pm 10\%$, 50/60 Hz

Beacon Wattage

Refer to the table below for beacon wattage.

Standard RB-6	Lamp Wattage (W)
Without optional heater	2100
With optional heater	2500

Lenses

One pair: one clear, one green

Rated Lamp Life

4000 hours

Lamp Wattage

1000 W

Beam Intensity

Refer to the table below.

Beam Direction	Measured Beam Intensity Candelas (cd)
+1 to +2 degrees above horizontal	25,000 (minimum)
+2 to +8 degrees above horizontal	50,000 (minimum)
+8 to +10 degrees above horizontal	25,000 (minimum)

Rotation Speed

The RB-6 has a rotation speed of 12.5 rpm when operating at 50 Hz.

Heater

400 W heating element (optional)

The RB-6 beacon automatically turns on below -10 °C (+14 °F).

The RB-6 beacon automatically turns off above +10 °C (+50 °F).

**Environmental Operating
Conditions**

The RB-6 rotating beacon is designed to operate under the conditions presented below for temperature, altitude, and relative humidity.

Temperature

-55 to + 55 °C (-67 to +131 °F)

Altitude

Sea level to 10,000 feet (3000 m)

Relative Humidity

Up to 100 %

Wind

Velocities to 100 mph (161 km/h)

Weight

Approximately 135 lb (61 kg)

Dimensions

See Figure 2-1. This subsection describes the dimensions for the RB-6 beacon and the obstruction light. Refer to the table below.

	RB-6 Beacon	RB-6 Beacon with Obstruction Light
Height:	35-1/4 in. (895.35 mm)	46-1/4 in. (1174.75 mm)
Width:	24 in. (609.6 mm)	24 in. (609.6 mm)

Clearance for Rotation

30 in. (762 mm)

Mounting Dimensions

See Figure 2-6. Three holes are tapped 1/2-13 UNC.

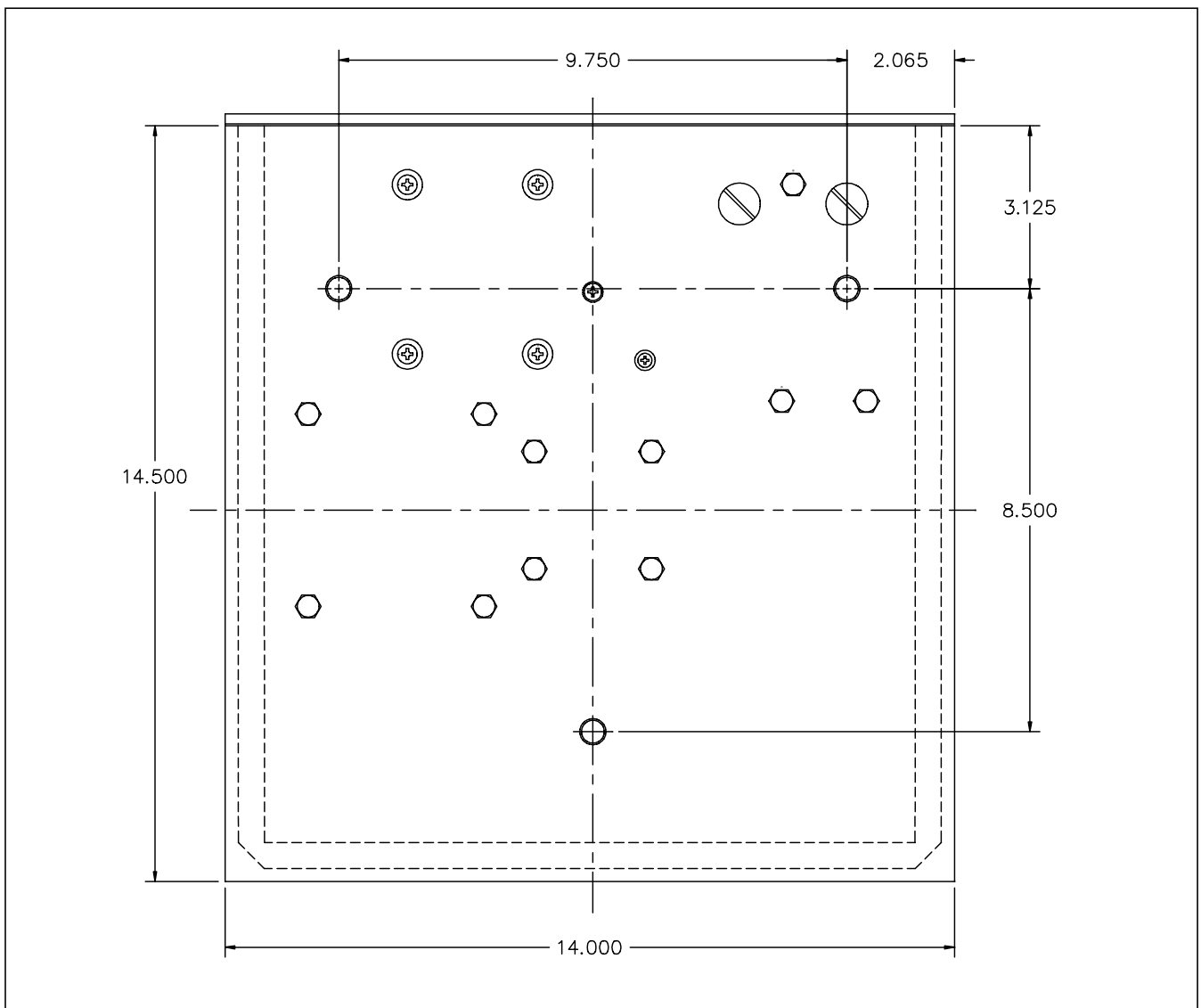


Figure 2-6. Mounting Holes

Section 3

Installation



WARNING: Allow only qualified personnel to perform the following tasks. Observe and follow the safety instructions in this document and all other related documentation.

1. Introduction

This section describes instructions for installing the RB-6 rotating beacon (Export Version).

2. Unpacking

Handle equipment very carefully to prevent component damage. Note any exterior damage to the carton/crate that might lead to detection of equipment damage. Open the top of the carton/crate. Remove foam packing from the top of the box. Carefully lift the unit out of the box by the handles on the side of the motor box.



CAUTION: Do not lift the unit by the head. Failure to observe this warning may result in equipment damage.

Unpack the carton/crate upon receipt and check the contents and their condition. If you note any damage to any equipment, file a claim with the carrier immediately. The carrier may need to inspect the equipment.

3. RB-6 Beacon Installation

This subsection provides instructions for the installation of the RB-6 rotating beacon (Export Version). Refer to the project plans and specifications for the specific installation instructions.

The RB-6 rotating beacon comes completely assembled except for installation of a customer-supplied AWG 10, S0-3 power cord (not supplied).

Mounting

Remove the cover plate from the motor box. Inspect the interior to make sure all parts are tight and have not been loosened in shipment. Reinstall the cover plate. Mounting adapters furnished are for mounting on a level surface with the following mounting dimensions: Three holes are tapped 1/2–13 UNC. If the surface is not level, spacers or shims will be needed. Place a level on top of the motor box and use shims as necessary under the four corners to bring the beacon to level. Tighten the mounting bolts, four each #1/4 - 20 length as required.

Wiring

See Figure 7-1 the *Wiring Schematics* section for final assembly wiring diagram. An AWG 10, S0-3 power cord (user supplied) must be attached to the beacon.

To install power cord, perform the following procedure:

1. Remove the motor box cover plate and gasket by removing the four screws (7/16 wrench required) on the front of the motor box.
2. Route the cable through side hole into box.
3. Connect the power cord at the terminal strip as shown in Figure 2-2 in the *Description* section.
4. Attach 3-conductor black wire (120 VAC) to terminal marked L1, white wire (neutral) to terminal marked N, and green wire (ground) to the ground lug in the base of the box.

Optional Heater Wiring

See Figure 2-3 the *Description* section. The optional heater assembly, when ordered, is pre-wired at the factory. The power cord for the heater assembly should be connected from a separate circuit breaker to terminal block TB1 terminals L1_H and N so the heater can be operated when the beacon is off.

Angle Adjustment

All beacons are shipped from the factory preset at an angle of 5 degrees.

To adjust the beacon angle needs, perform the following procedure:

1. See Figure 3-1. Loosen the wing nut (4) holding the head in place.
2. Slide the elevation adjustment device (3) to the desired angle and tighten nut.

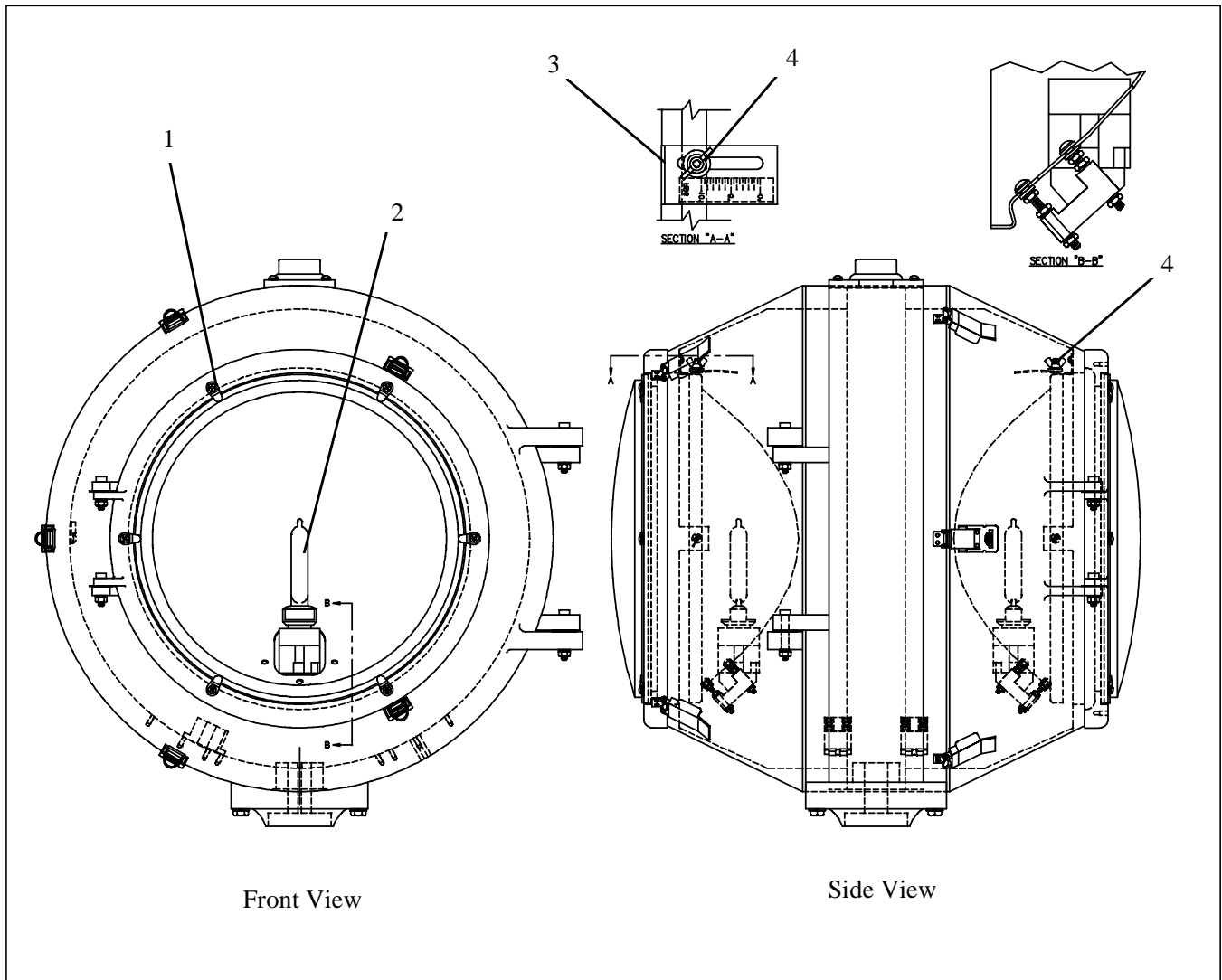


Figure 3-1. Adjusting Beacon Angle

- 1. Lens Clip
- 2. Lamp
- 3. Elevation Adjustment Device
- 4. Wing Nut

Export Beacon Installation Requirement

Requirement for export beacon installation only: *A fence with a padlock gate shall be installed around the beacon to prevent unauthorized entry.*

Section 4

Maintenance

1. Introduction

This section provides maintenance information for the RB-6 rotating beacon (Export Version).

2. Maintenance Schedule

To keep RB-6 rotating beacons operating efficiently, follow a preventive maintenance schedule. Refer to Table 4-1. Refer to FAA AC 150/5340-26 for more detailed information.

Table 4-1. RB-6 Rotating Beacon (Export Version) Maintenance

Interval	Maintenance Task	Action
Daily	Check for lamp failure.	Replace lamp. Refer to <i>Replacing Lamps</i> in this section.
	Check for 24-30 flashes per minute to see if beacon has correct rpm.	Check the motor and shaft bearing.
Bimonthly (60 days)	Check for dirty or pitted slip rings and brushes.	Clean slip rings and brushes. Replace worn brushes, deeply pitted slip rings, or shaft. Refer to <i>Replacing Brushes and Brush Brackets</i> and <i>Cleaning Slip Rings and Brushes</i> in this section.
	Check for loose lens retainer.	Tighten screws or clamps on the lens retainer.
	Check for dirty or pitted photocell relay contacts.	Clean photocell relay contacts. Replace if badly pitted.
	Check for dirty lamp glassware.	Clean lamp glassware.
Semi-annually	Check for input voltage out of tolerance.	Record reading. If the voltage is out of tolerance, contact the power company or install an autotransformer. The voltage is out of tolerance if it is not within $\pm 10\%$ rated lamp voltage.
	Verify beam elevation.	Adjust beam elevation. Check the angle indicator on the beacon head assembly.
	Poor contact on the electrical switches and contacts.	If the contacts are corroded, repair or replace.
	Check for loose lightning rod connections.	Tighten loose connections. Check and record ground resistance.

Continued on next page

Table 4-1. RB-6 Rotating Beacon (Export Version) Maintenance

Interval	Maintenance Task	Action
Annually	Check to see if the beacon is level.	Make the beacon level, if necessary. Check the level in four directions.
	Check for loose or broken wiring, lugs, and conduit.	Repair or renew wiring when needed. Tighten loose lugs, conduit supports, and connections. Replace broken brackets.
	Check for cracked or deteriorated gaskets or deteriorated weatherproofing.	Replace gaskets or weatherproofing, if necessary.

3. Maintenance Procedures

This subsection describes the following maintenance procedures:

- replacing lamp
- adjusting lamp beam
- replacing brushes
- cleaning lenses
- cleaning head
- cleaning vents
- cleaning slip rings and brushes
- lubricating parts

Replacing Lamp

To replace the lamp, perform the following procedure:

1. See Figure 3-1 in the *Installation* section. Loosen the two lens clips (1) on the front of the beacon.
2. Grasp the top of the lamp (2), push downward, and turn counterclockwise approximately 120 degrees. Lift the lamp out of the socket.
3. Carefully insert the replacement lamp into the socket.

NOTE: Make sure the lamp filament is vertical before closing the lens cover and tightening the hexagonal screw.



WARNING: The lens temperature can be as high as 373 °F (189 °C). Allow one-half hour for the lamps to cool before opening the lens cover. Failure to observe this warning may result in personal injury or equipment damage.

Replacing Brushes and Brush Brackets

Replace all three brushes at the same time to provide even wear.

To replace the brushes and brush brackets, perform the following procedure:

1. See Figure 4-1. Remove the two screws, lockwashers, and hex nuts holding the brush block assembly (1) to the motor box.

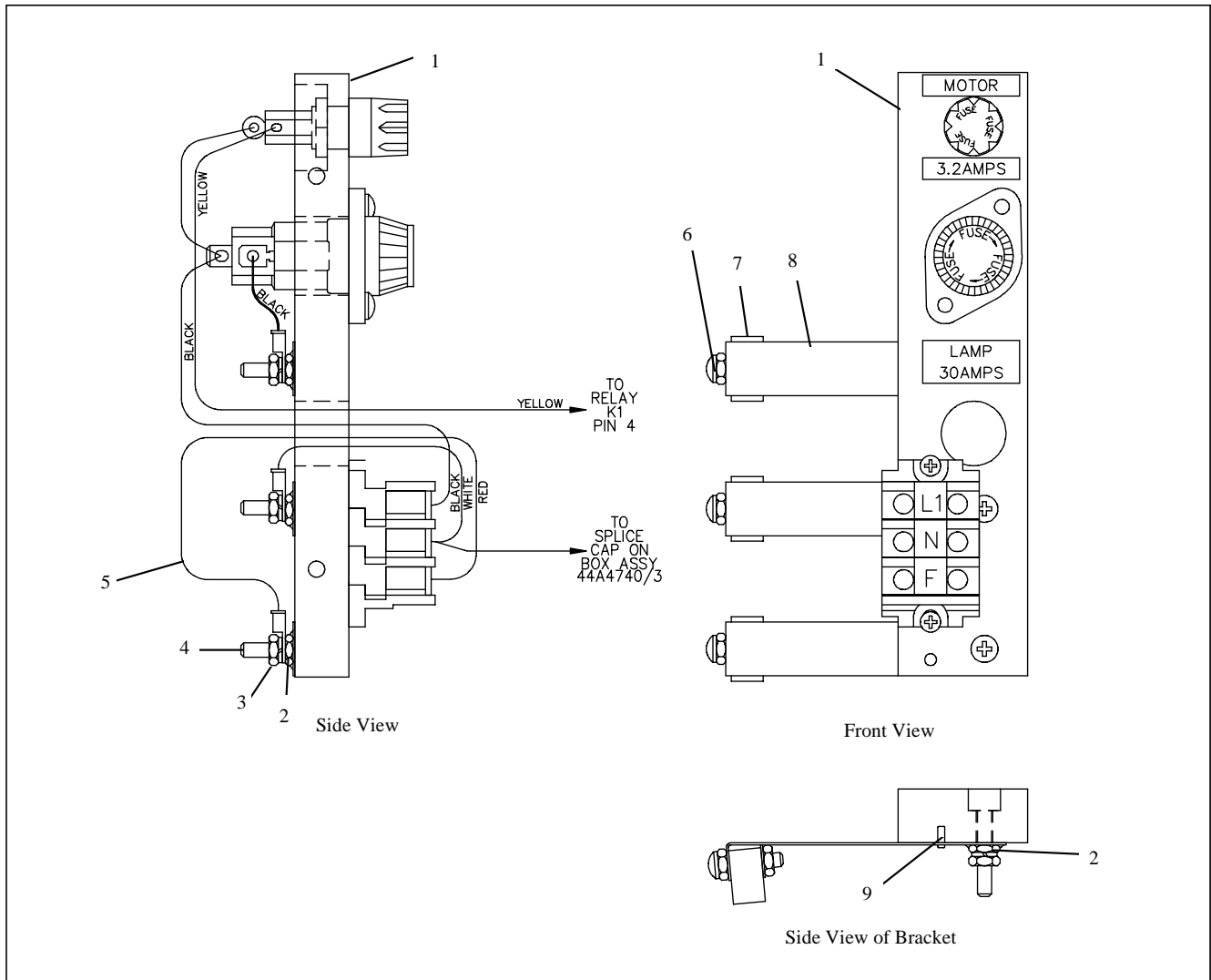


Figure 4-1. Brush Block Assembly

- | | | |
|---------------------------|----------------------|------------------|
| 1. Brush Block Assembly | 4. Brush Block Screw | 7. Brush |
| 2. Brass Hex Nut | 5. Wire | 8. Brush Bracket |
| 3. Hex Nut and Lockwasher | 6. Brush Screw | 9. Drive Pint |

2. Lift the brush block assembly away from the shaft. Be careful not to place any strain on the wires.
3. Remove the screw (6) holding the brush (7) to the brush bracket (8).
4. Install new brushes on the brush block by performing the following procedure:
 - a) Use a screwdriver blade to loosen and remove the 2 x 1/4 round head drive pin (9) on the old bracket.
 - b) Remove the outer hex nut and lockwasher (3), and wire (5) from the screw holding the end of the bracket to the brush block.
 - c) Remove solder from the remaining brass hex nut (2). Remove the hex nut and brush bracket from the screw on the brush block.



CAUTION: Do not remove the screw (4). Failure to observe this warning may result in equipment damage.

- d) See Figure 4-2. Pre-bend (4) the new brush bracket(s) (2) so that the bend in the new bracket is similar to the bend in the old bracket.

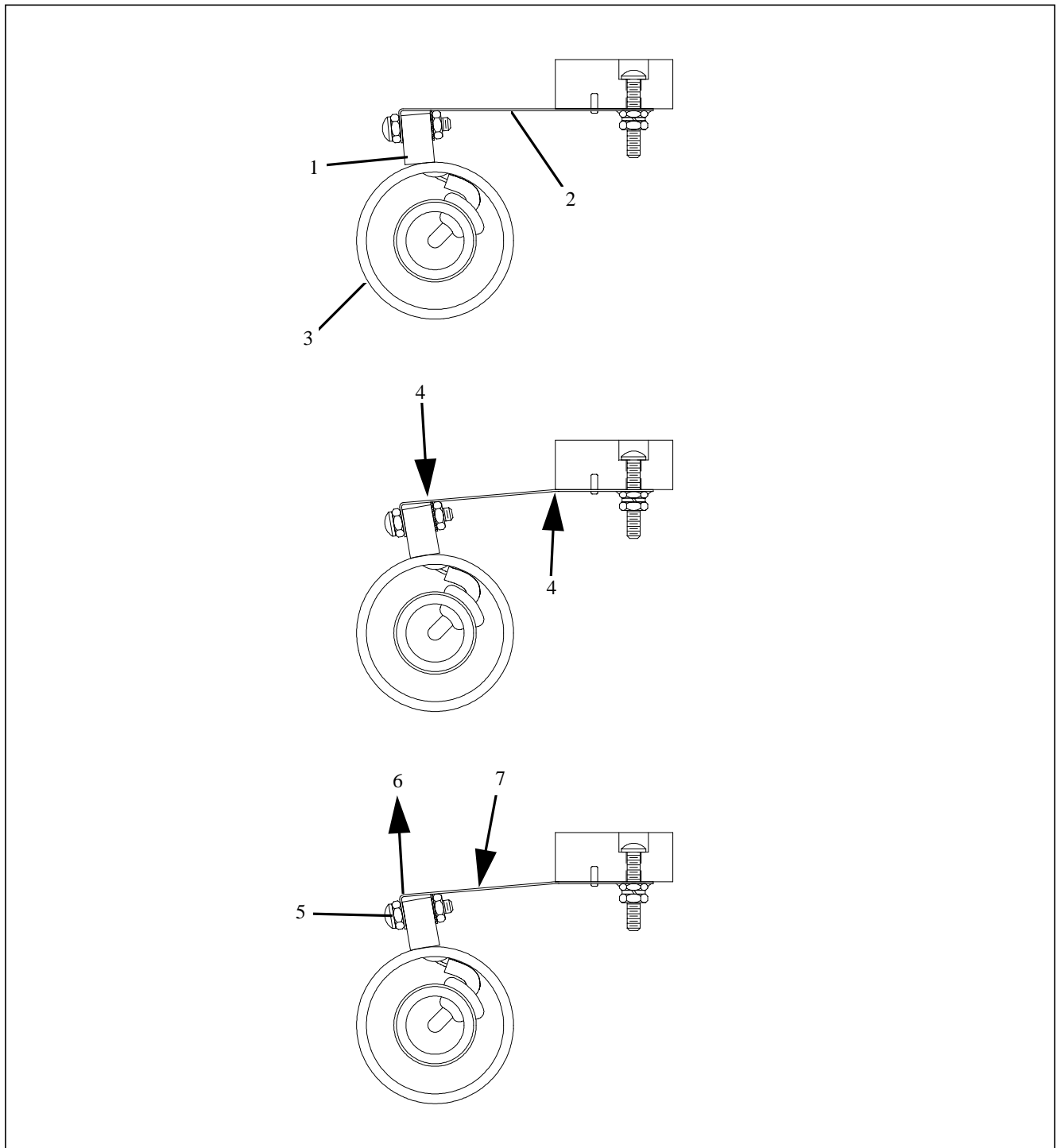


Figure 4-2. Pre-Bending New Brush Brackets

- | | | |
|-----------------------|----------------------------------|---|
| 1. Brush | 4. Pre-Bend Brush Bracket Here | 7. Bend Brush Bracket Here to Release Tension |
| 2. Brush Bracket | 5. Attach Spring Scale Here | |
| 3. Slip Ring Assembly | 6. Direction of Required Tension | |

- e) Install the brush bracket assembly.
- f) Use a customer-supplied spring scale attached to the head of the screws (5) to check the tension of the brush (1) against the shaft assembly (3). The brushes must have a tension of 14 + 2 oz against the shaft. The spring scale is a Linear Barrel Scale (0-16 oz in 1/4 oz increments).
- g) If too much tension exists, release tension by bending the brush bracket (7).
- h) Place a new bracket on the screw, install the drive pin on the bracket, and use a 60/40 solder to secure the brass hex nut to the screw and bracket. Then reinstall the wire, lockwasher, and outer hex nut on the screw.

Cleaning Lenses

Clean lenses periodically with alcohol or glass cleaner and soft cloth. Wipe dry with a clean soft cloth.

Cleaning Head Assembly

Remove dust and dirt from the head assembly using a soft cloth or sponge with soap and water.

Cleaning Slip Rings and Brushes

To clean slip rings and brushes, follow the guidelines below.

- Clean the slip rings and brushes with a cloth moistened with an appropriate solvent that will not leave a film or residue.
- If sparking or pitting occurs, smooth rings with 420 sandpaper. Avoid sanding, if possible. Sanding produces a raw copper surface that shortens brush life.
- Replace brushes showing excessive wear.

NOTE: It is recommended that all three brushes be replaced at the same time to provide even wear.



WARNING: If the brushes are worn down to the brush bracket, the bracket may damage the slip rings. Replace the brushes worn to 1/8 inch (3.175 mm) of the bracket edge.

Lubricating Parts

All moving parts are permanently lubricated and will not require further attention.

Section 5

Troubleshooting



WARNING: Allow only qualified personnel to perform the following tasks. Observe and follow the safety instructions in this document and all other related documentation.



WARNING: De-energize the circuit and lock out the circuit or regulator so that the circuit cannot be energized by remote means before attempting to service the fixture.

1. Introduction

This section contains troubleshooting information. This information covers only the most common problems that you may encounter. If you cannot solve the problem with the information given here, contact your local Siemens Airfield Solutions representative for help.

2. Troubleshooting Procedures

Refer to the table below for troubleshooting procedures.

Problem	Possible Cause	Corrective Action
1. Short lamp life	Loose connections Excess vibrations Low brush pressure Bad socket Voltage or voltage spikes greater than 126 Vac	Tighten connections. Replace bearing or shaft. Adjust brush bracket or replace brush assembly. Refer to <i>Replacing Brushes and Brush Brackets</i> in the <i>Maintenance</i> section. Replace socket. Check input voltage. Record reading. If the voltage is out of tolerance, contact the power company or install an autotransformer. The voltage is in tolerance if it is within $\pm 10\%$ rated lamp voltage.
Continued on next page		

Problem	Possible Cause	Corrective Action
2. Lamp not lighting	Lamp defective	Replace lamp. Refer to <i>Replacing Lamp</i> in the <i>Maintenance</i> section.
	Blown fuse	Replace fuse F2 (30 A, Slo-Blo).
	Photocell inoperable	See <i>Photocell not operating</i> in this table.
	Brush assembly not working	Replace brush assembly. Refer to <i>Replacing Brushes and Brush Brackets</i> in the <i>Maintenance</i> section.
	Loose or broken wire	Replace cordset or socket.
3. Photocell not operating	Photocell defective	Replace photocell.
	Relay defective	Replace relay.
	Loose or broken wire	Repair or replace wire.
4. Poor beacon visibility	Lamp filament not at focal point of reflector	Move socket up or down so the lamp filament is at the focal point of the reflector.
	Dirty lenses	Clean lenses after they cool off.
5. Motor not turning	Blown fuse	Replace fuse F1 (3.2 A, Slo-Blo).
	Motor relay defective	Replace relay.
	Motor defective	Replace motor.
	Shaft bearing seized	Replace defective bearing.
	Loose or broken wire	Repair or replace wire.
6. Motor not turning during cold weather	Heater inoperable	Refer to <i>Heater not operating</i> in this table.
7. Heater not operating	Blown fuse	Replace fuse F3 (5 A, Slo-Blo).
	Thermostat defective	Replace thermostat.
	Heater defective	Replace heater.
	Loose or broken wire	Repair or replace wire.

Section 6

Parts

1. Introduction

To order parts, call Siemens Airfield Solutions Customer Service or your local representative. Use this four-column parts list, and the accompanying illustration, to describe and locate parts correctly.

2. Using the Illustrated Parts List

The Item column numbers correspond to the numbers that identify parts in illustrations following each parts list. NS (not shown) indicates that a listed part is not illustrated.

The Description column gives the part name, as well as its dimensions and other characteristics when appropriate. Parts are indented under an assembly to show the part that applies to your particular sign module.

The Part Number column gives the Siemens Airfield Solutions part number.

Item	Description	Part Number	Note
NS	Assembly	xxxxxxx	A
T1	Assembly Part Part	xxxxxxx xxxxxxx	

The Note column contains letters that refer to notes at the end of each parts list. Notes contain special ordering information.

**3. RB-6 Rotating Beacon
Final Assembly Parts List**

See Figure 6-1.

The RB-6 Beacon Export Version final assembly part number is 44D0221-X.

Item	Description	Part Number	Note
A2	Head assembly	44D0751	
A1	Box assembly (Export)	44D4740-3	
A3	Optional heater assembly	44B0789	
S1	Silicone rubber sealant	67A0006-3	

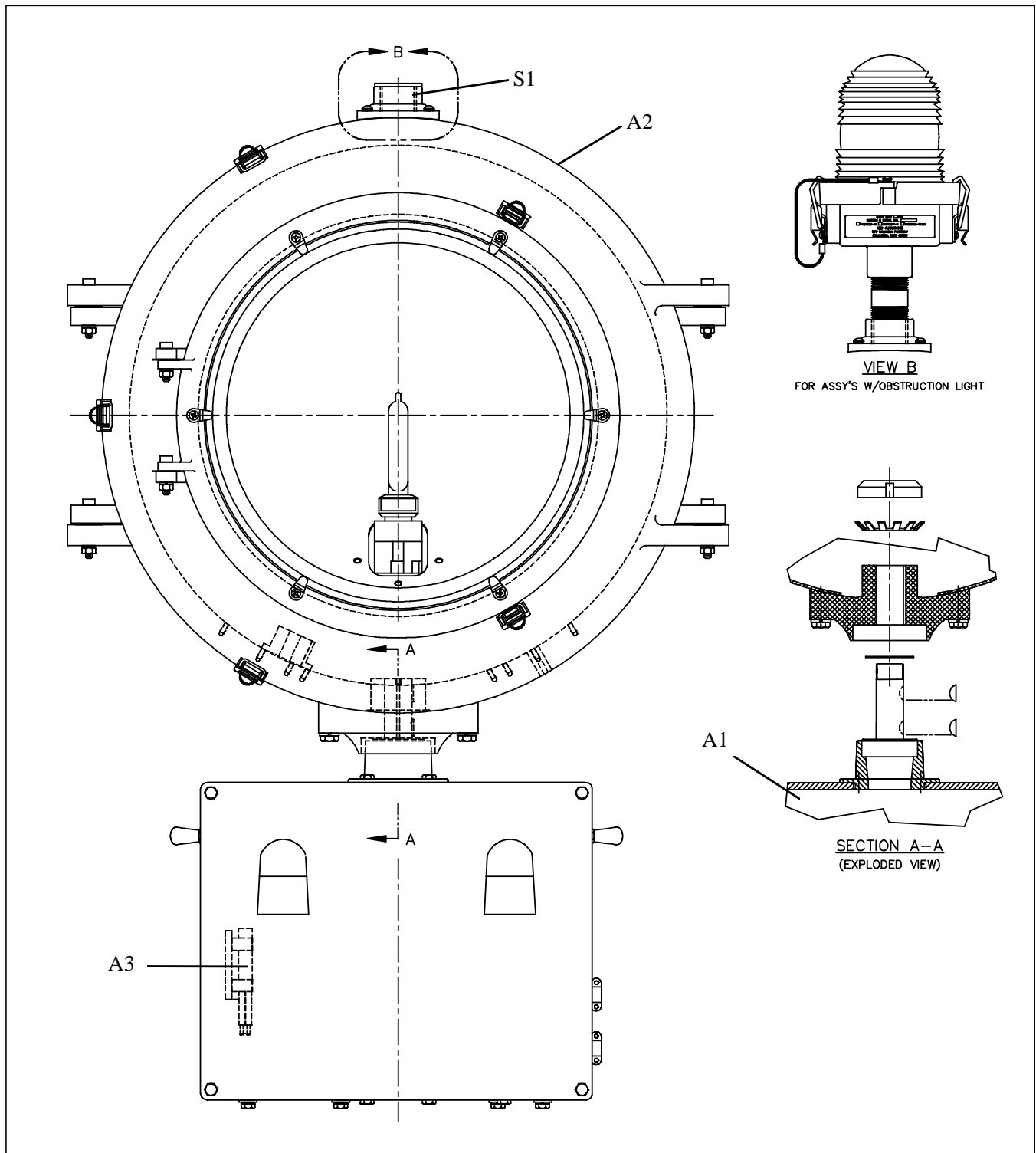


Figure 6-1. RB-6 Rotating Beacon Final Assembly (Export Version)

4. Head Assembly (Single Head) Parts List

See Figure 6-2.

Head assembly (single head) part number is 44C0238-X.

Item	Description	Part Number	Note
M6	Lens ring	62D0303	
M9	Gasket, lens, RB-6, 14-1/16 in. (357.1875 mm) O.D.	63A0167	
M11	Gasket, lens, RB-6, 15-7/8 in. (403.225 mm) O.D.	63A0172	
M10	Gasket, conical ring, RB-6, 21-1/4 in. (539.75 mm) O.D.	63A0170	
H5	Lens, green, 14 in. (355.6 mm)	63A0168	
H6	Lens, clear, 14 in. (355.6 mm)	63A0169	
M8	Reflector assembly	62D0455	
TB1	Terminal block, 22-10 AWG, 300 V, 50 A	72A0016	
M1	Lens clip	61A0074	
H3	Strike	61A0051-3	
H2	Catch	61A0051-1	
NS	Silicone sealant	67A0009	
NS	Adhesive	67A0005	
NS: Not Shown			

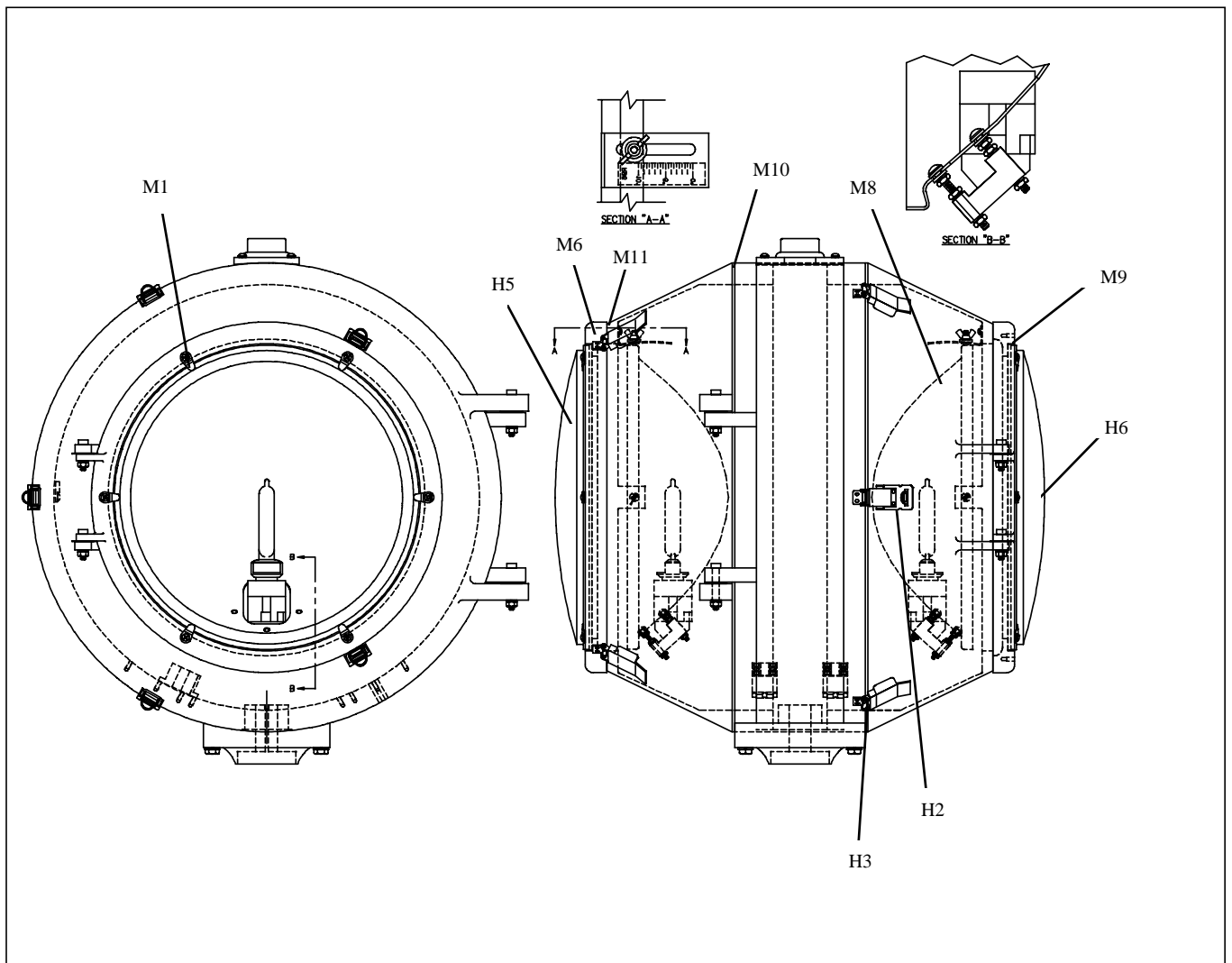


Figure 6-2. Head Assembly (Single Head)

5. Box Assembly Parts List

See Figure 6-3.

The box assembly part number is 44C0750-X.

Item	Description	Part Number	Note
H24	Bearing	75A0004	
A3	Shaft assembly	44C0393	
H20	Fiber gear, 48 teeth	68A0002	
A2	Motor assembly, export, 115 V, 50/60 Hz, 26-teeth gear	44B0998-2	
A5	Lid assembly	44B0285	

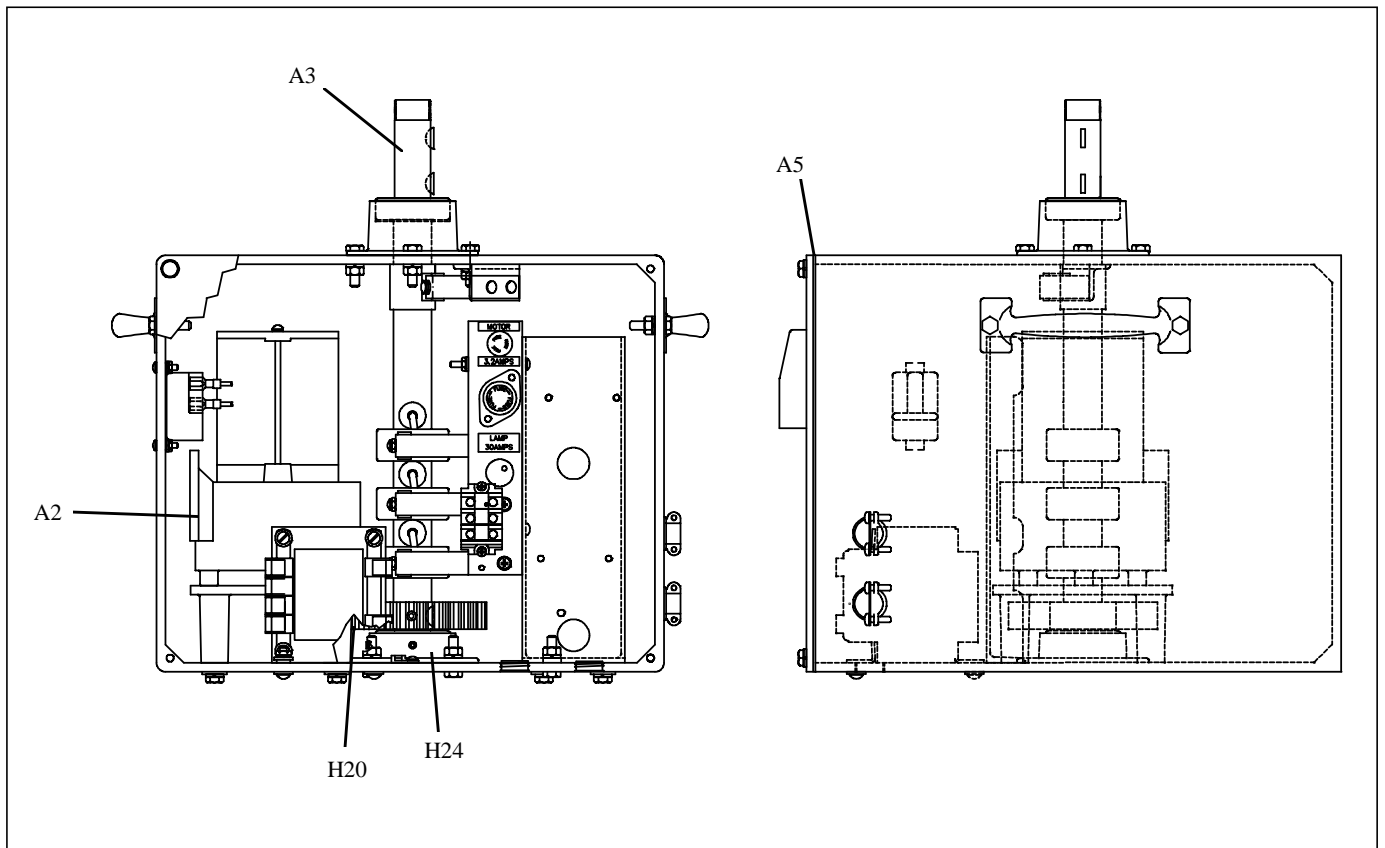


Figure 6-3. Box Assembly

6. Motor Assembly Parts List

See Figure 6-4.

Motor assembly part number is 44B0998-X.

Item	Description	Part Number	Note
MT1	Gear motor, 50/60 Hz, 115 V, 26-28 rpm, Von Weise Gear Co., #V0378AA88, Series K83	69C0006	
M1	Motor mount, Export	62C0179-2	
H3	Gear, 26 teeth, Export	68A0007	

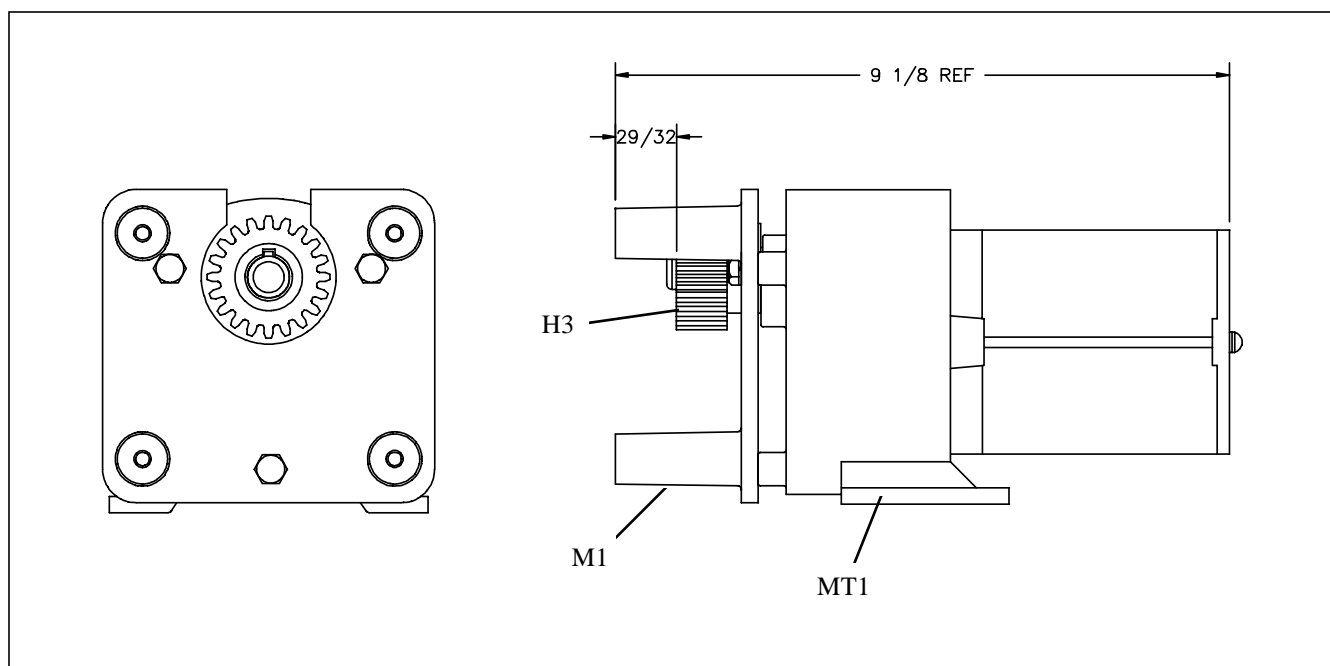


Figure 6-4. Motor Assembly

7. Brush Block Assembly
Parts List

See Figure 6-5.

Brush block assembly part number is 44A0222.

Item	Description	Part Number	Note
H10	Brush	76A0001	
F3	Fuse, 3.2 A, Slo-Blo	47A0003	
F2	Fuse, 30 A, Slo-Blo	47A0024	

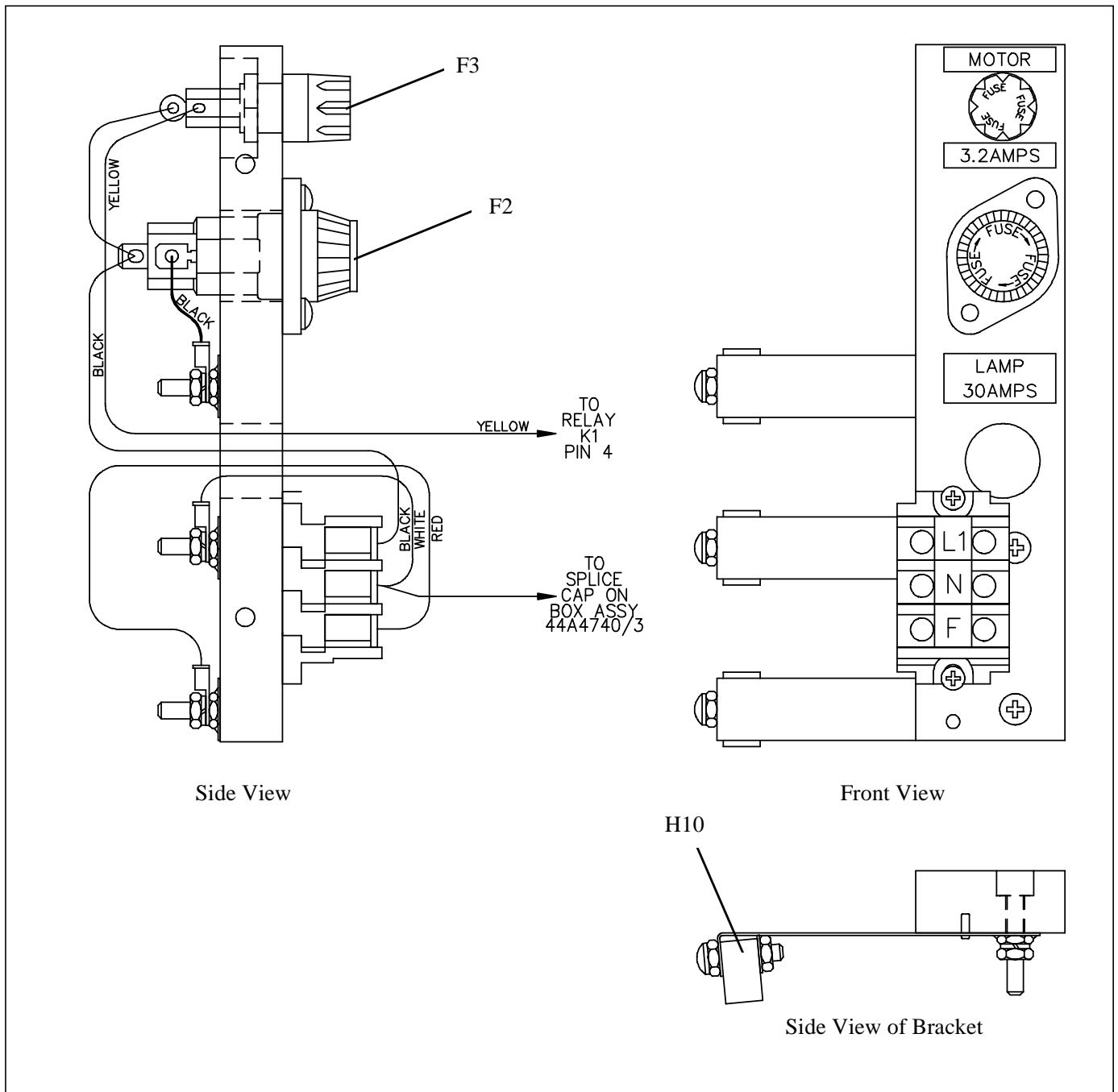


Figure 6-5. Brush Block Assembly

**8. Photocell Contactor
Assembly Parts List**

See Figure 6-6.

Photocell contactor assembly part number is 44B0812.

Item	Description	Part Number	Note
1	Photocell	48A0089	
2	Socket	49A0095	
3	Terminal block	72A0016	
4	Relay	53A0126-1	

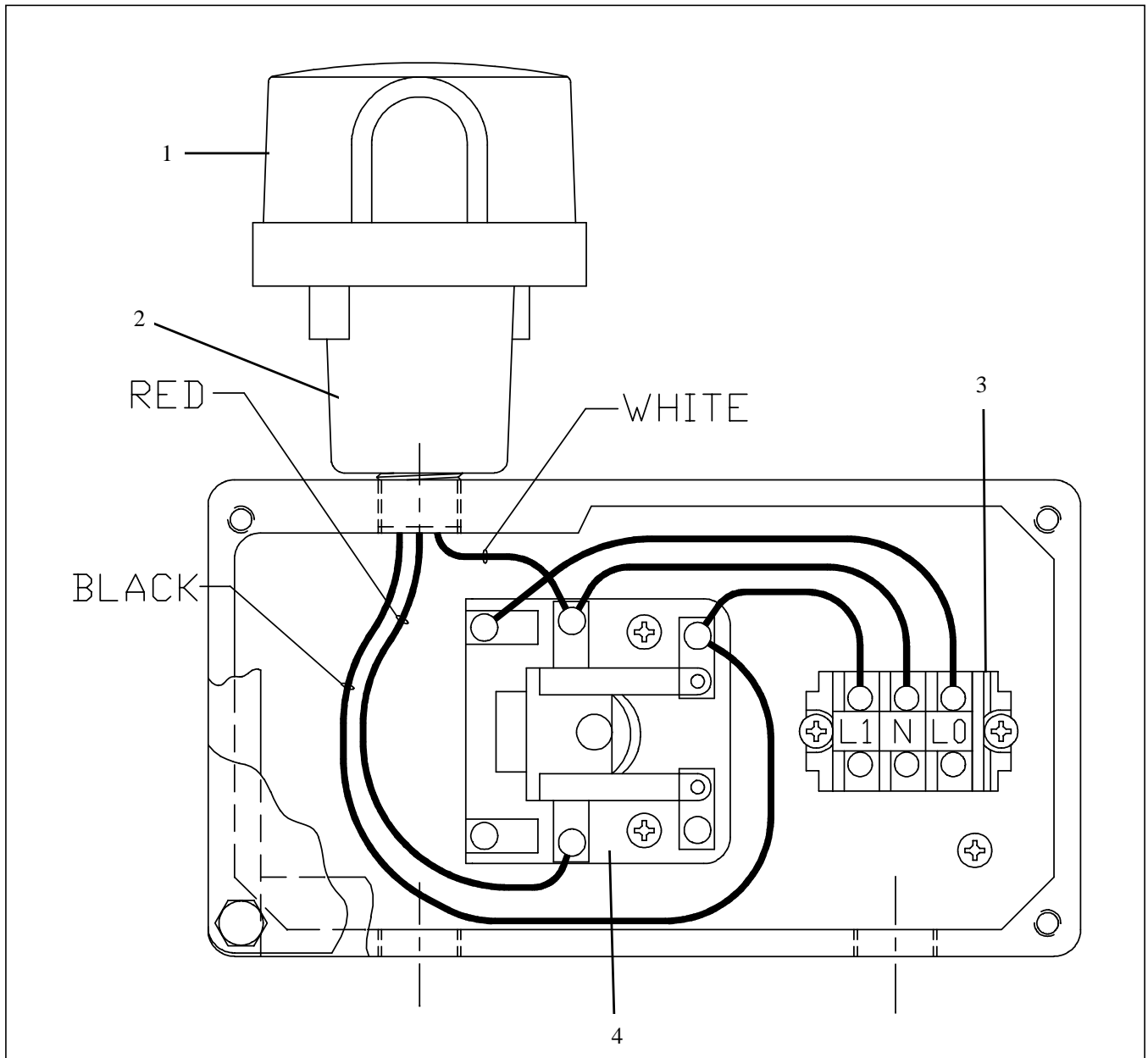


Figure 6-6. Photocell Contactor Assembly

**9. Heater Assembly Parts
List**

See Figure 6-7.

Heater assembly part number is 44B0789.

Item	Description	Part Number	Note
HT1	Heater element, 400 W	85A0050	
F1	Fuse, 5 A, Slo-Blo	47A0107	
F1	Fuse holder	47A0061	
TH1	Thermostat, Dayton #2E998	54A0010	
TB1	Terminal block	72A0016	

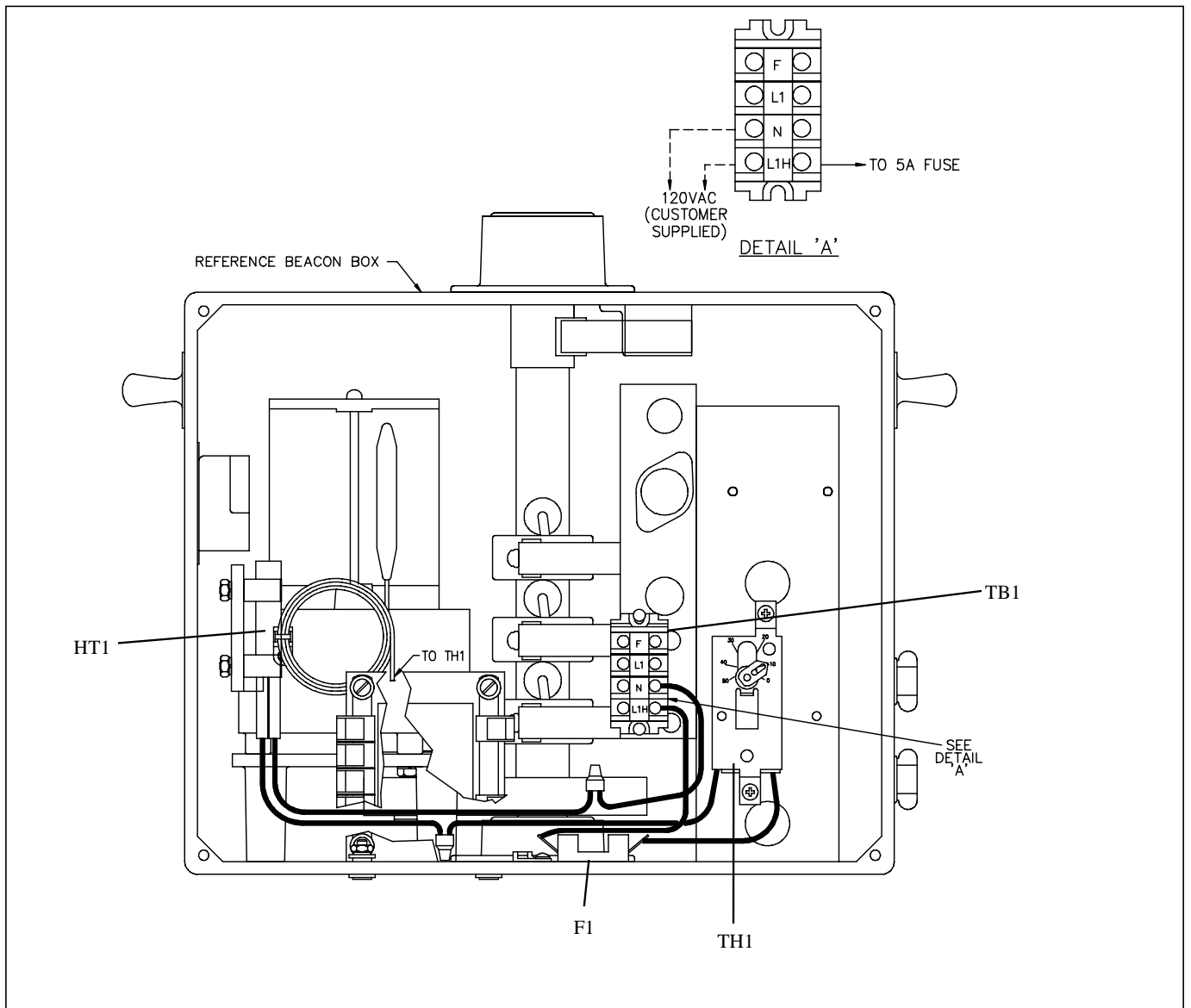


Figure 6-7. Heater Assembly

10. Reflector Assembly Parts List

See Figure 6-8.

The reflector assembly part number is 44D0981.

Item	Description	Part Number	Note
1	Reflector	62D0455	
2	Lamp support	62B0323	
3	Socket, phenolic	49A0002	
4	Lamp, 1000 w	48A0032	

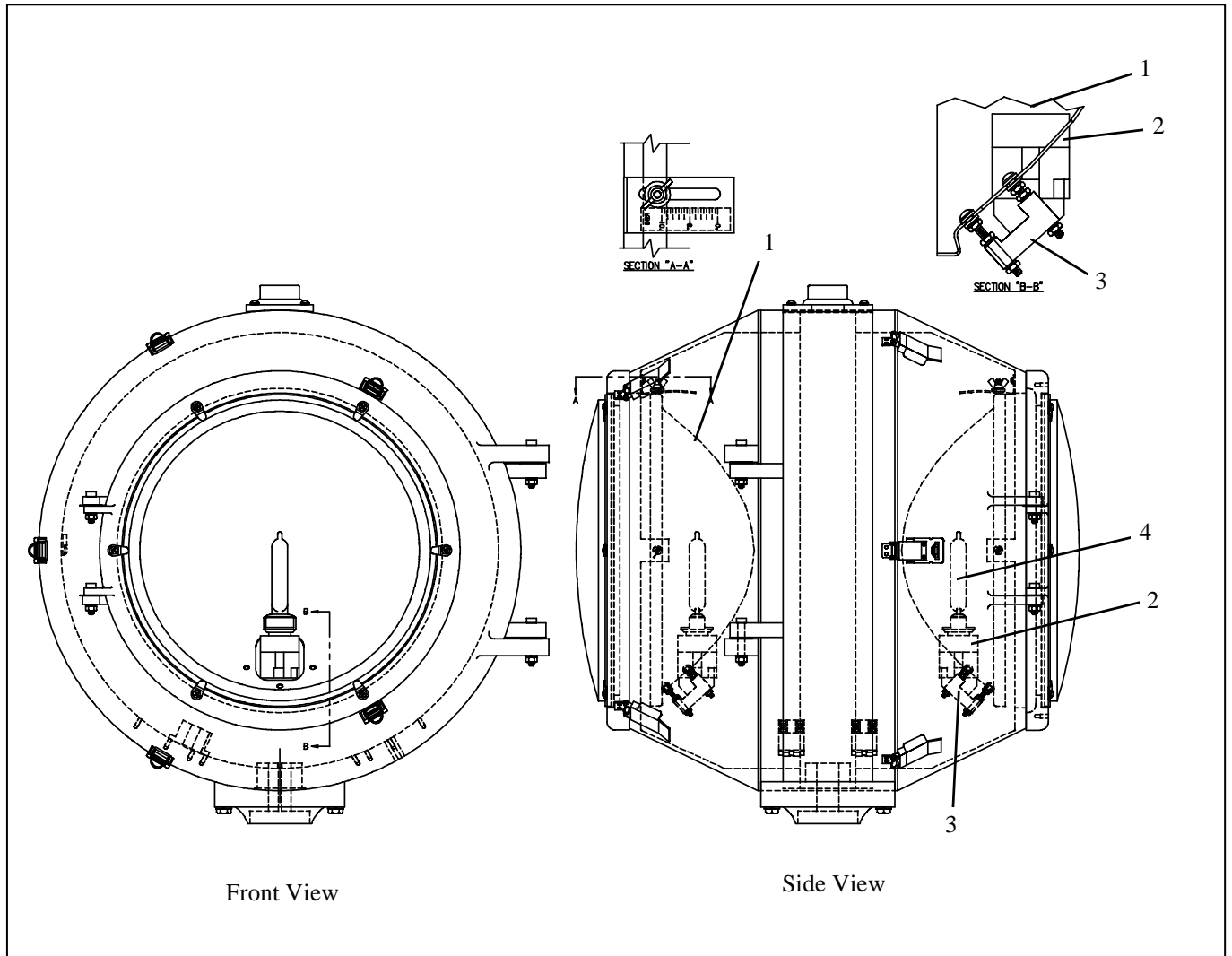


Figure 6-8. Reflector Assembly

**11. Obstruction Light and
Relay Parts List**

See Figure 6-9.

The optional obstruction light part number is 44B0805.

Item	Description	Part Number	Note
1	Obstruction light assembly	44B0804	
2	Silicone rubber sealant	67A0006-1	
3	Relay assembly	44B0435	

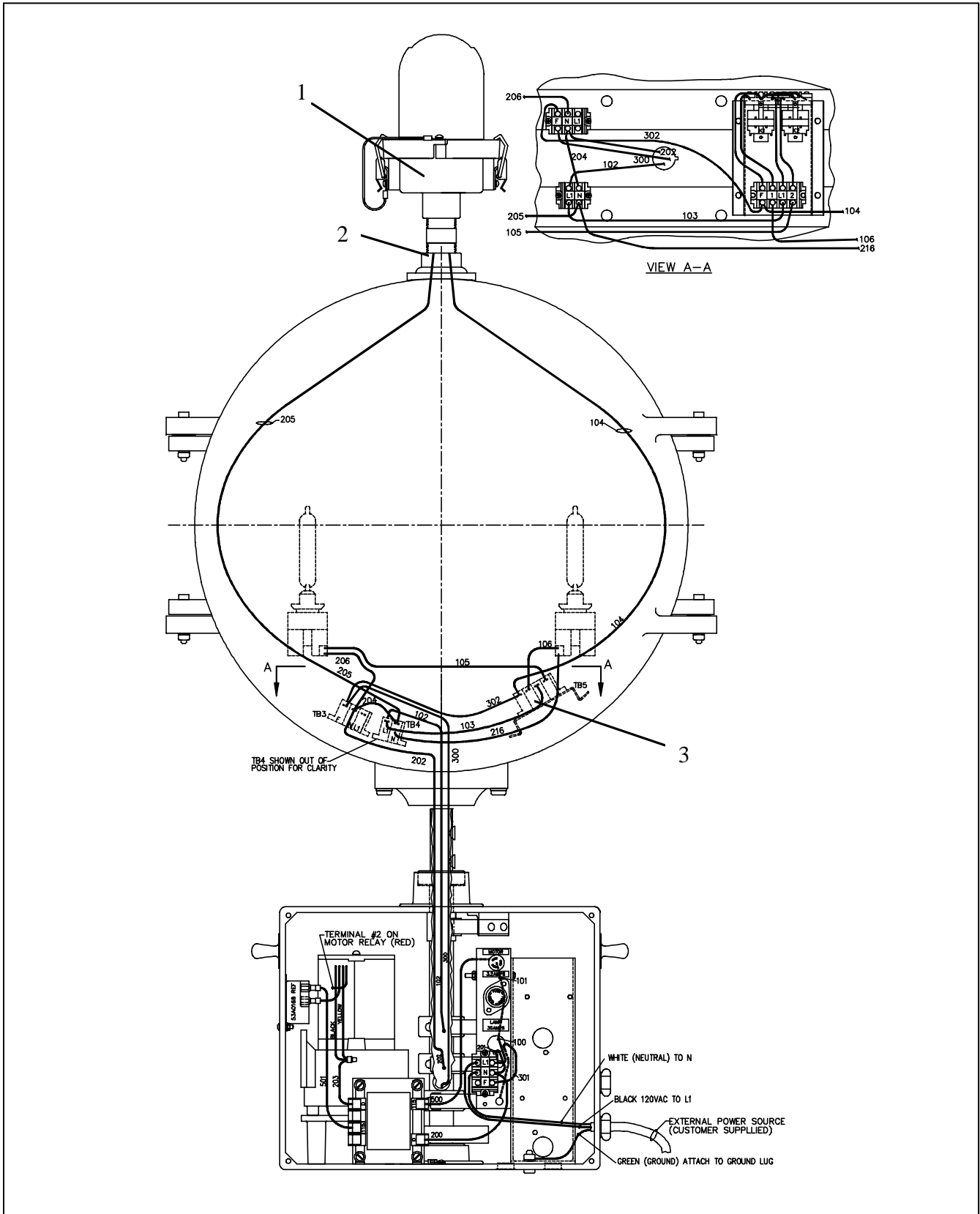


Figure 6-9. Obstruction Light

12. Optional Assemblies
Parts List

Refer to the table below for optional assemblies part numbers.

Item	Description	Part Number	Note
NS	Photocell contractor assembly	44B0812	
NS	Roof mounting assembly	44D0351-1	
NS	Pole mounting assembly	44C0259	
NS	Heater assembly	44B0789	
NS	Obstruction light assembly	44D0805	

Section 7

Wiring Schematics

1. Introduction

This section provides wiring schematics for the RB-6 beacon (Export Version).

Wiring Schematics

Wiring schematics and diagrams for Export Version RB-6 beacons include the following:

- RB-6 beacon with optional heater wiring schematic
- photocell assembly wiring schematic

RB-6 Beacon with Optional Heater Wiring

See Figure 7-1.

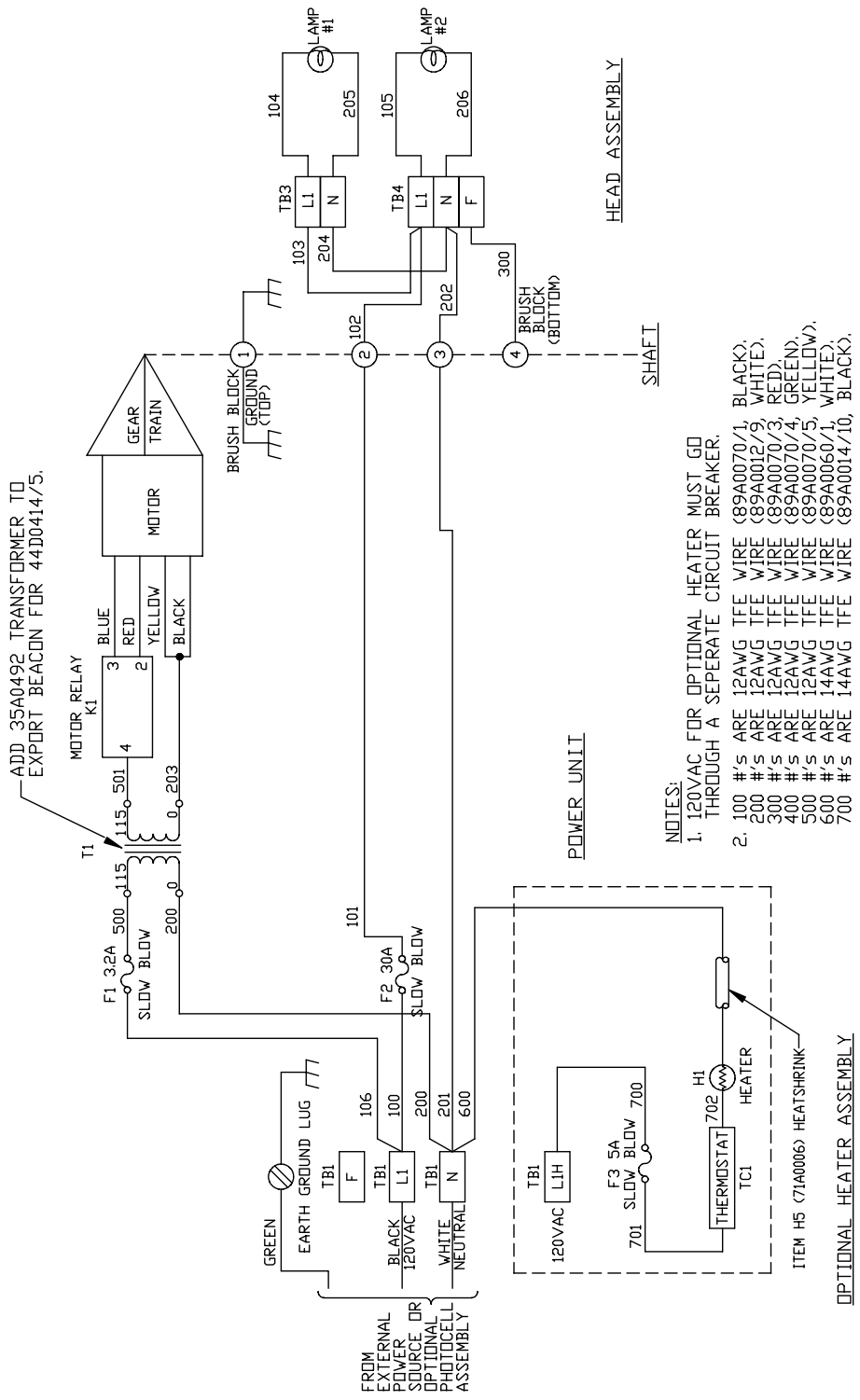


Figure 7-1. RB-6 Beacon with Optional Heater Wiring Schematic

Optional Photocell Assembly Wiring

See Figure 7-2.

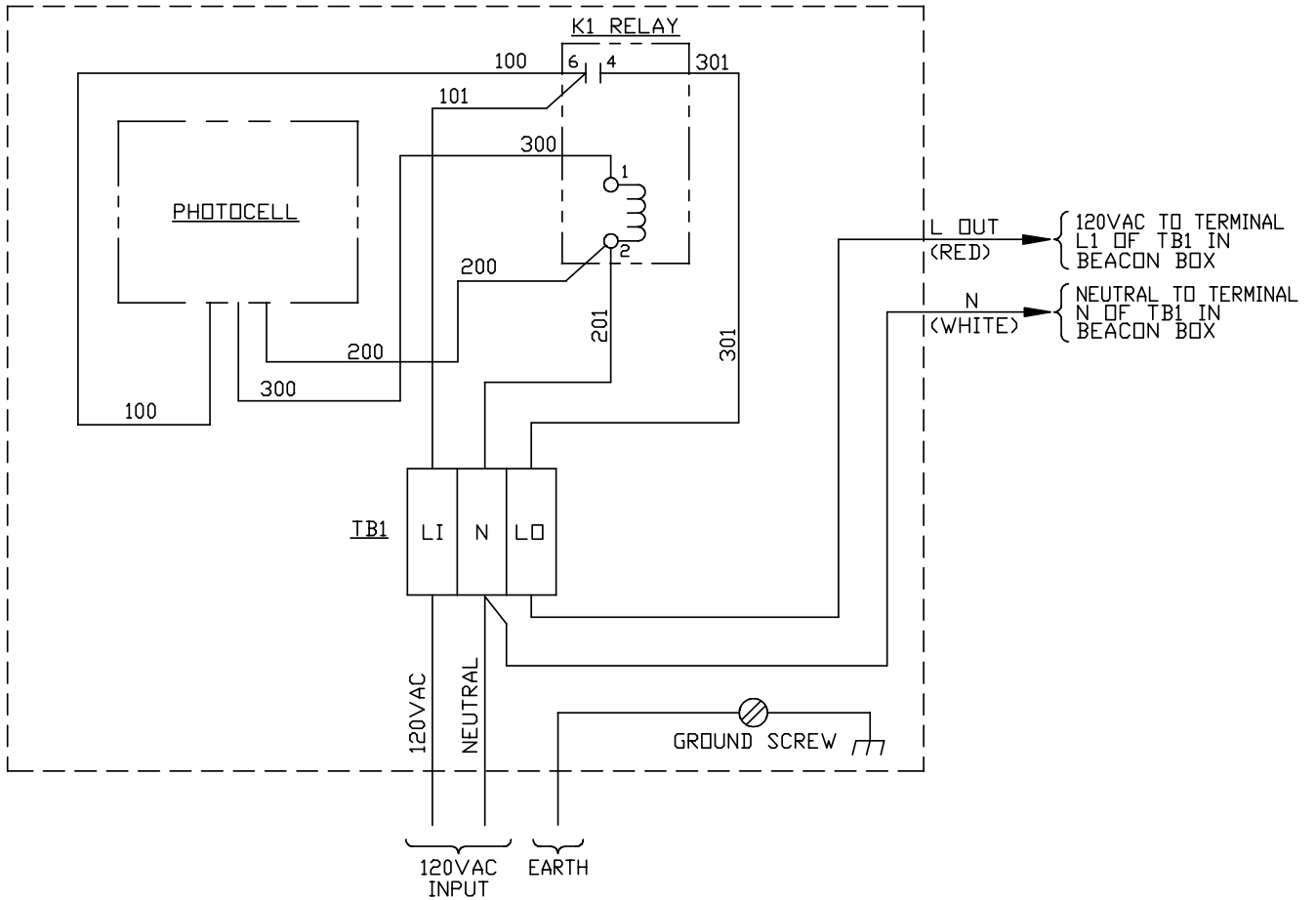


Figure 7-2. Optional Photocell Assembly Wiring Schematic