

TWR Lighting, Inc.

4300 WINDFERN RD #100 HOUSTON TX 77041-8943

VOICE (713) 973-6905 FAX (713) 973-9352

WEB: www.twrlighting.com

IMPORTANT!!!

PLEASE TAKE THE TIME TO FILL OUT THIS FORM COMPLETELY. FILE IT IN A SAFE PLACE. IN THE EVENT YOU EXPERIENCE PROBLEMS WITH OR HAVE QUESTIONS CONCERNING YOUR CONTROLLER, THE FOLLOWING INFORMATION IS NECESSARY TO OBTAIN PROPER SERVICE AND PARTS.

MODEL # AA3-TSS

SERIAL # _____

PURCHASE DATE _____

PURCHASED FROM _____

AA3-TSS CONTROLLER

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AA3-TSS CONTROLLER

APPENDIX

CHASSIS COMPONENT LAYOUT	1098-R
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TOWER LIGHTING KITS 401' TO 500'	261-32
L-810 OL-1 SINGLE OBSTRUCTION LIGHT	FM10018
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AA3-TSS CONTROLLER

1.0 GENERAL INFORMATION

The TWR Lighting Division Model AA3-TSS Controller is for towers 700' to 1050' above ground level. Beacons should be placed at top, 2/3, 1/3 intervals with respect to overall tower height. Obstruction lights should be placed at 5/6, 1/3, 1/6 intervals.

The flash rate of the beacons is thirty (30) per minute. The beacons flash synchronized to one another. The sidelights burn steady.

A by-pass switch allows the controller to be turned on during daylight hours without covering the photocell. This is particularly helpful since the controller can be mounted indoors while the photocell is outdoors.

Each beacon requires (2) 620 watt or (2) 900 watt 120 volt bulbs. TWR recommends that you use only these bulbs. Each sidelight requires one (1), 120-volt bulb.

The photocell is the three (3) blade, twist to lock, type.

Power supplied to the controller shall be 120/240 volts wire single phase.

The controller housing is rated at NEMA 4X. It is suitable for indoor or outdoor mounting.

AA3-TSS CONTROLLER

2.0 INSTALLATION

2.1 MOUNTING THE CONTROL CABINET

(Refer to Drawing 1098-R)

The power supply control cabinet can be located at the base of the structure or in an equipment building. Mounting footprints are shown on Drawing 1098-R. Power wiring to the control cabinet should be in accordance with local methods and National Electrical Codes (NEC).

2.1.1 If the control cabinet is mounted inside an equipment building, the photocell should be mounted vertically on ½" conduit outside the building above the eaves facing north. Wiring from the photocell socket to the control cabinet should consist of one (1) each, red, black, and white wires. The white wire is connected to the socket terminal marked "COM," the black wire is connected to the socket terminal marked "B," and the red wire is connected to the socket terminal marked "R." These socket connections are made by using .25" quick connect terminals, which must be crimped to the wires. The photocell should be positioned so that it does not "see" ambient light, which would prevent it from switching to the nightmode.

2.1.2 If the control cabinet is mounted outside an equipment building, the photocell should be mounted vertically on ½" conduit so the photocell is above the control cabinet. Care must be taken to assure that the photocell does not "see" any ambient light that would prevent it from switching into the nightmode. The photocell wiring is the same as in 2.1.1.

The wiring from the photocell, the service breaker, the red incandescent beacon and the sidelights should enter the control cabinet through the watertight connectors in the bottom of the cabinet. Inside the cabinet, the connections will be made on the terminal strips and breakers located at the bottom of the controller. These connections are made as follows:

AA3-TSS CONTROLLER

2.2 EXTERNAL PHOTOCELL WIRING

(Refer to Drawing 1098-R)

2.2.1 Connect the **BLACK** wire from the photocell to small terminal block TB2 marked "L2."

2.2.2 Connect the **RED** wire from the photocell to small terminal block TB2 marked "SSR."

2.2.3 Connect the **WHITE** wire from the photocell to small terminal block TB2 marked "N."

2.3 POWER WIRING

(Refer to Drawing 1098-R)

2.3.1 Power wiring to the control cabinet should be in accordance with local methods and National Electrical Codes (NEC).

2.3.2 Circuit breaker needs to be a 2 pole common trip rated at 40 amps.

2.3.3 Connect incoming 120V AC "Hot #1" to terminal block TB1 marked "L1".

2.3.4 Connect incoming 120V AC "hot #2" to terminal block TB1 marked "L2".

2.3.5 Connect the neutral wire to one (1) of the terminal blocks on TB1 marked "N."

2.3.6 Connect the AC ground to the aluminum mounting plate.

2.4 RED BEACON & SIDELIGHT WIRING

(Refer to Drawing 1098-R, 261-31 and 261-32)

2.4.1 Connect the **BLACK** wire from beacon #1 to breaker marked "B1".

2.4.2 Connect the first **BLUE** wire from beacon #2 to breaker marked "B2".

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- 2.4.3 Connect the second **BLUE** wire from beacon #3 to breaker marked "B3".
- 2.4.4 Connect the **RED** and **YELLOW** wires from sidelight group #1 and #2 to the breaker marked "S".
- 2.4.5 Connect the **Neutral** wire to one of the terminals TB1 marked "N".

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3.0 THEORY OF OPERATION

3.1 Power Supply

120V/240V AC enters the controller from the circuit breaker panel. Lines (L1, L2) sit at the PRD waiting. When the 102FAA photocell is activated, line (L2) energizes the coil of the PRD relay. This can also be accomplished by using the photocell by-pass switch.

3.2 Sidelights

LD4 is sent to the breaker marked "S" which will power the three levels of the sidelights.

3.3 Beacons

LD1, LD2 and LD3 are sent to the flasher module M1 and the load contractor modules M5 and M6. M1 is a solid-state flasher that operates Beacon #1 and the coils of module M5 and M6, which makes the M5, and M6 flash beacon #2 and beacon #3 synchronized with beacon #1.

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4.0 MAINTENANCE GUIDE

4.1 RED OBSTRUCTION LIGHTING

The only required maintenance needed to be performed is replacement of the lamps in the L-864 and L-810 fixtures. Lamps should be replaced after being operated for not more than 75% of the rated life or immediately upon failure as per FAA Advisory Circular 70/7460-1K. By following these instructions, maximum safety and performance can be achieved.

TOOLS REQUIRED: NONE

4.2 L-864 LAMP REPLACEMENT

4.2.1 Loosen the one (1) wing nut on the latch pin so that it can recline.

4.2.2 Open the lens and tilt it back.

4.2.3 To remove each lamp, depress down while rotating the lamp counter-clockwise 90 degrees.

4.2.4 Install the new lamps by depressing down while rotating the lamp clockwise 90 degrees.

4.2.5 Close the lens and let the latch pin drop in the recessed slot.

4.2.6 Tighten the wing nut snug then 1/4 turn more.

4.3 L-810 LAMP REPLACEMENT

4.3.1 Unclasp the two (2) latches and let the bail recline back.

4.3.2 Lift the lens up and over the lamp, letting the lens hang from the safety cable.

4.3.3 Unscrew the lamp counter-clockwise and remove.

4.3.4 Install the new lamp by screwing the lamp clockwise.

AA3-TSS CONTROLLER

4.3.5 Reinstall the lens; making sure it is seated properly on the base.

4.3.6 Reclasp the two (2) latches.

4.4 L-864 CONTROLLER

No scheduled maintenance is required. Perform on an as needed basis.

4.5 PHOTOCELL

The photocell is a sealed unit. No maintenance is needed or required other than replacement as necessary.

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5.0 MAJOR COMPONENTS PARTS LIST

QUANTITY	PART NUMBER	DESCRIPTION
1	102-FAA	Photocell
1	FS155-30T	Solid State Flasher
1	B12J2K5	2500 OHM 12W Resistor
2	FA155-2	Solid State Load Contractor
1	PM17AY120V	Mechanical Load Contractor PRD
2	5SX2120-8	20 Amp Breaker
3	8WA1204	Single Pole Terminal Block

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6.0 SUGGESTED SPARE PARTS LIST

QUANTITY	PART NUMBER	DESCRIPTION
1	102-FAA	Photocell
1	FS155-30T	Solid State Flasher
1	FA155-2	Solid State Load Contractor
2	5SX2120-8	20 Amp Breaker

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Warranty & Return Policy

TWR Lighting, Inc. ("TWR") warrants its products (other than replacement parts) against defects in design, material (excluding incandescent bulbs) and workmanship for a period ending on the earlier of two (2) years from the date of shipment or one (1) year from the date of installation.

Replacement parts are warranted for 90-days from the date of shipment.

Conditions not covered by this Warranty or which might **void** this Warranty are as follows:

- Improper Installation or Operation
- Misuse
- Abuse
- Unauthorized or Improper Repair or Alteration
- Accident or Negligence in Use, Storage, Transportation, or Handling
- Any Acts of God or Nature

Field Service – Repairs are warranted for 90 days from the date of service, except where TWR has made recommendations that were not adhered to that may cause premature failure on previous repairs. Labor, Travel, and Tower Climb are not covered under warranty. Customer shall be obligated to pay for all incurred charges not related to warranty. All warranty repairs are performed by trained TWR personnel, or dispatched through an extensive network of certified and insured subcontractors.

Return Policy

Return Terms – You must first contact our Product Support Administrative Assistant at **(713-973-6905)** to acquire a Return Goods Authorization (RGA) number in order to return the product(s). Please have the following information available when requesting an RGA number:

- The contact name and phone number of the tower owner
- *The contact name and phone number of the contractor*
- The site name and number
- The part number
- The serial number (if any)
- A description of the problem
- The billing information
- The Ship To address

This RGA number must be clearly visible on the outside of the box. If the RGA number is not clearly labeled on the outside of the box, your shipment will be refused. Please ensure the material you are returning is packaged carefully. **The warranty is null and void if the product(s) are damaged in the return shipment.**

All RGA's must be received by TWR 4300 Windfern Rd., Suite 100, Houston TX 77041-8943, within 30 days of issuance.

Upon full compliance with the Return Terms, TWR will replace, repair and return, or credit products returned by the customer. It is TWR's sole discretion to determine the disposition of the returned item(s).

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Replacements – Replacement part(s) will be shipped and billed to the customer for product(s) considered as Warranty, pending return of defective product(s). When available, a certified reconditioned part is shipped as warranty replacement with a Return Goods Authorization (RGA) number attached. Upon receipt of returned product(s), inspection, testing and evaluation will be performed to determine the cause of defect. The customer is then notified of the determination of the testing.

- Product(s) that is deemed defective and/or un-repairable and covered under warranty, a credit will be issued to the customer's account.
- Product(s) that are found to have no defect will be subject to a **\$60.00 per hour testing charge (1 hour minimum), which will be invoiced to the customer.** At this time the customer may decide to have the tested part(s) returned and is responsible for the return charges.
- Product(s) under warranty, which the customer does not wish returned, the customer will be issued a credit against the replacement invoice.

Repair & Return – A Return Goods Authorization (RGA) will be issued for all part(s) returned to TWR for repair. Upon receipt of returned product(s), inspection, testing and evaluation will be performed to determine the cause of defect. The customer is then notified of the determination of the testing. If the returned part(s) is deemed un-repairable or the returned part(s) is found to have no defect, the customer will be subject to a **\$60.00 per hour testing charge (1 hour minimum), which will be invoiced to the customer.** Should the returned parts be determined to be repairable, a written estimated cost of repair will be sent to the customer for their written approval prior to any work being performed. In order to have the tested part(s) repaired and/or returned, the customer must issue a purchase order and is responsible for the return shipping charges.

Return to Stock – Any order that is returned to TWR for part(s) ordered incorrectly by the customer or unneeded upon receipt, the customer is required to pay a **20% restocking fee.** A credit will be issued once it is determined that the Return Terms are met.

Credits – Credits are issued once it is determined that all of the Warranty and Return Terms are met. All credits are processed on Fridays. In the event a Friday falls on a Holiday, the credit will be issued on the following Friday.

Freight – All warranty replacement part(s) will be shipped via ground delivery and paid for by TWR. Delivery other than ground is the responsibility of the customer.

REMEDIES UNDER THIS WARRANTY ARE LIMITED TO PROVISIONS OF REPLACEMENT PARTS AND REPAIRS AS SPECIFICALLY PROVIDED. IN NO EVENT SHALL **TWR** BE LIABLE FOR ANY OTHER LOSSES, DAMAGES, COSTS OR EXPENSES INCURRED BY THE CUSTOMER, INCLUDING BUT NOT LIMITED TO, LOSS FROM FAILURE OF THE PRODUCTS TO OPERATE FOR ANY TIME, AND ALL OTHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING ALL PERSONAL INJURY PROPERTY DAMAGE DUE TO ALLEGED NEGLIGENCE, STRICTLY LIABLE, OR ANY OTHER LEGAL THEORY WHATSOEVER. THIS WARRANTY IS MADE BY **TWR** EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, **TWR** MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS OF THE PRODUCTS FOR ANY PARTICULAR PURPOSE. **TWR** EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES.

AA3-TSS CONTROLLER
TWR Lighting, Inc.

RETURN GOODS AUTHORIZATION FORM (RGA)

RGA#: _____ **DATE:** _____

CUSTOMER: _____

CONTACT: _____ **PHONE NO.:** _____

ITEM DESCRIPTION (PART NO.): _____

MODEL NO.: _____ **SERIAL NO.:** _____

ORIGINAL TWR INVOICE NO.: _____ **DATED:** _____

DESCRIPTION OF PROBLEM: _____

SIGNED _____ **DATE NEEDED** _____

RETURN ADDRESS: _____

RETURN PRODUCT TO: 4300 WINDFERN RD. #100 HOUSTON TX 77041-8943

AA3-TSS CONTROLLER
TWR Lighting, Inc.

RETURN GOODS AUTHORIZATION FORM (RGA)

RGA#: _____ **DATE:** _____

CUSTOMER: _____

CONTACT: _____ **PHONE NO.:** _____

ITEM DESCRIPTION (PART NO.): _____

MODEL NO.: _____ **SERIAL NO.:** _____

ORIGINAL TWR INVOICE NO.: _____ **DATED:** _____

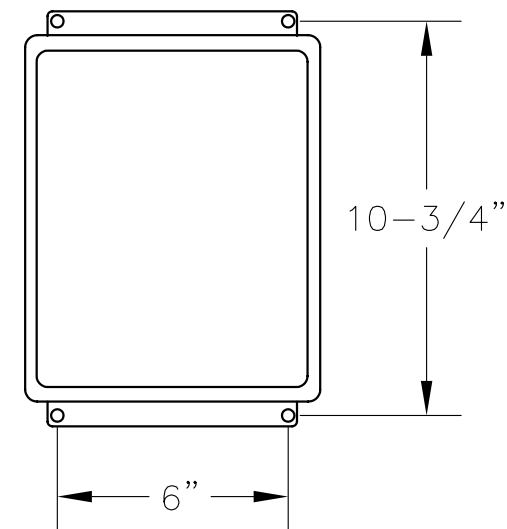
DESCRIPTION OF PROBLEM: _____

SIGNED _____ **DATE NEEDED** _____

RETURN ADDRESS: _____

RETURN PRODUCT TO: 4300 WINDFERN RD. #100 HOUSTON TX 77041-8943

AA3-TSS CONTROLLER




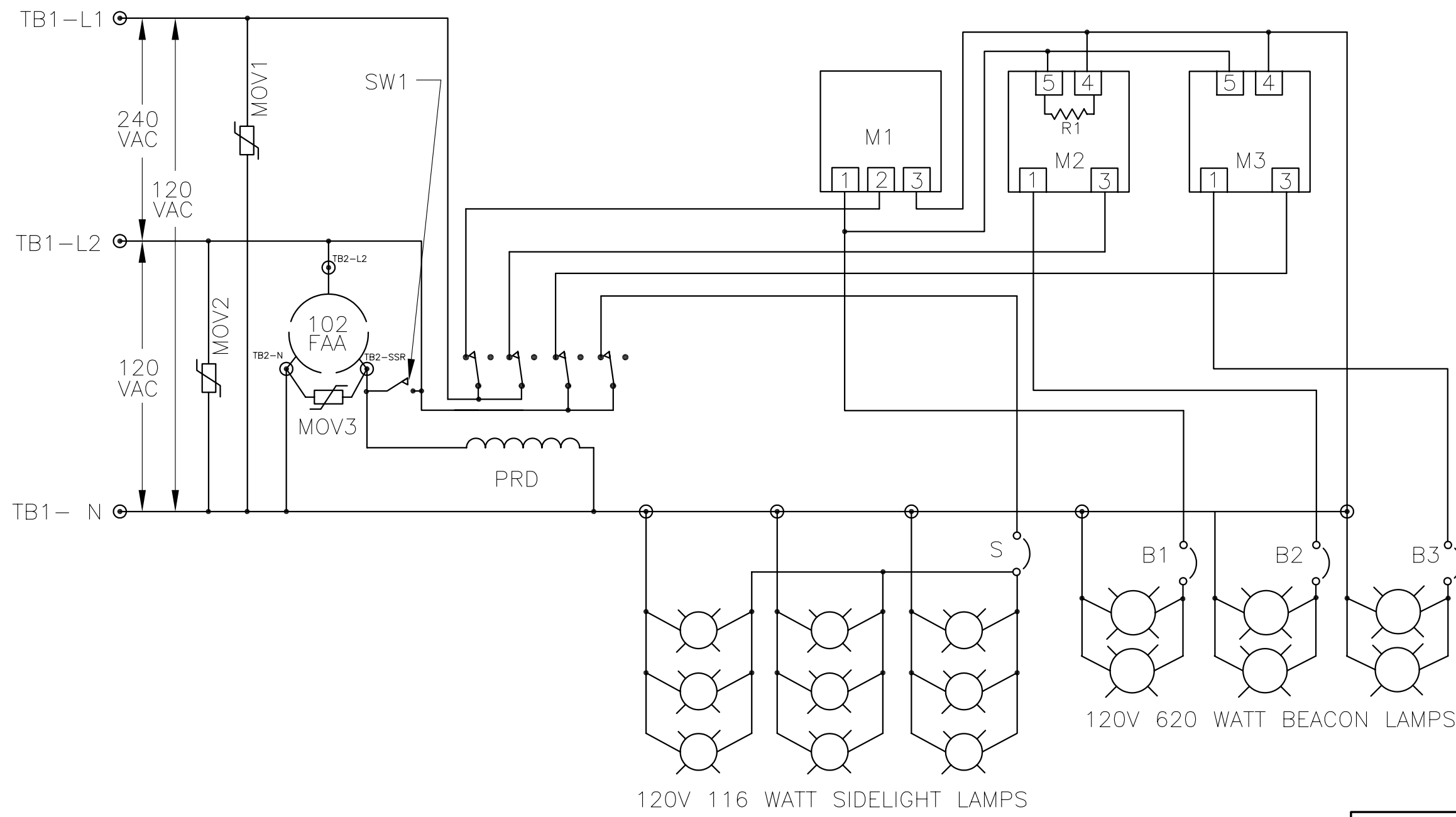
MOUNTING DIMENSIONS (FOR CABINET)

NOTES:

1. WHEN REPLACING MODULES USE HEAT SINK COMPOUND BETWEEN MODULE AND ALUMINUM PLATE.
2. PLUG 102 FAA PHOTOCELL INTO 43109 TWIST LOCK RECEPTACLE AND TWIST TO LOCK.
3. WIRES ARE CONNECTED LETTER TO LETTER. (EXAMPLE) S TO S TO S.

AA3-TSS CHASSIS COMPONENT LAYOUT			
PROD DEPT SERV DEPT ENGINEER		TWR Lighting, Inc. <i>Enlightened Technology</i>	
DRAWN BY G.D. SEBEK		SHEET SIZE B	SHEET QTY. 1 OF 1
DATE 05/26/93	SCALE N.T.S.	DWG. NO. 1098-R	
<p>The use of non-TWR parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.</p> <p>NOTE: The drawings and photographic images contained herein are the sole property of TWR Lighting, Inc. All information contained herein that is not generally known shall be considered confidential except to the extent the information has been previously established. The drawings and photographic images contained herein may not be reproduced, copied or used as the basis for manufacture or sale or promotion or any other purpose without the expressed written permission of TWR Lighting, Inc.</p>			

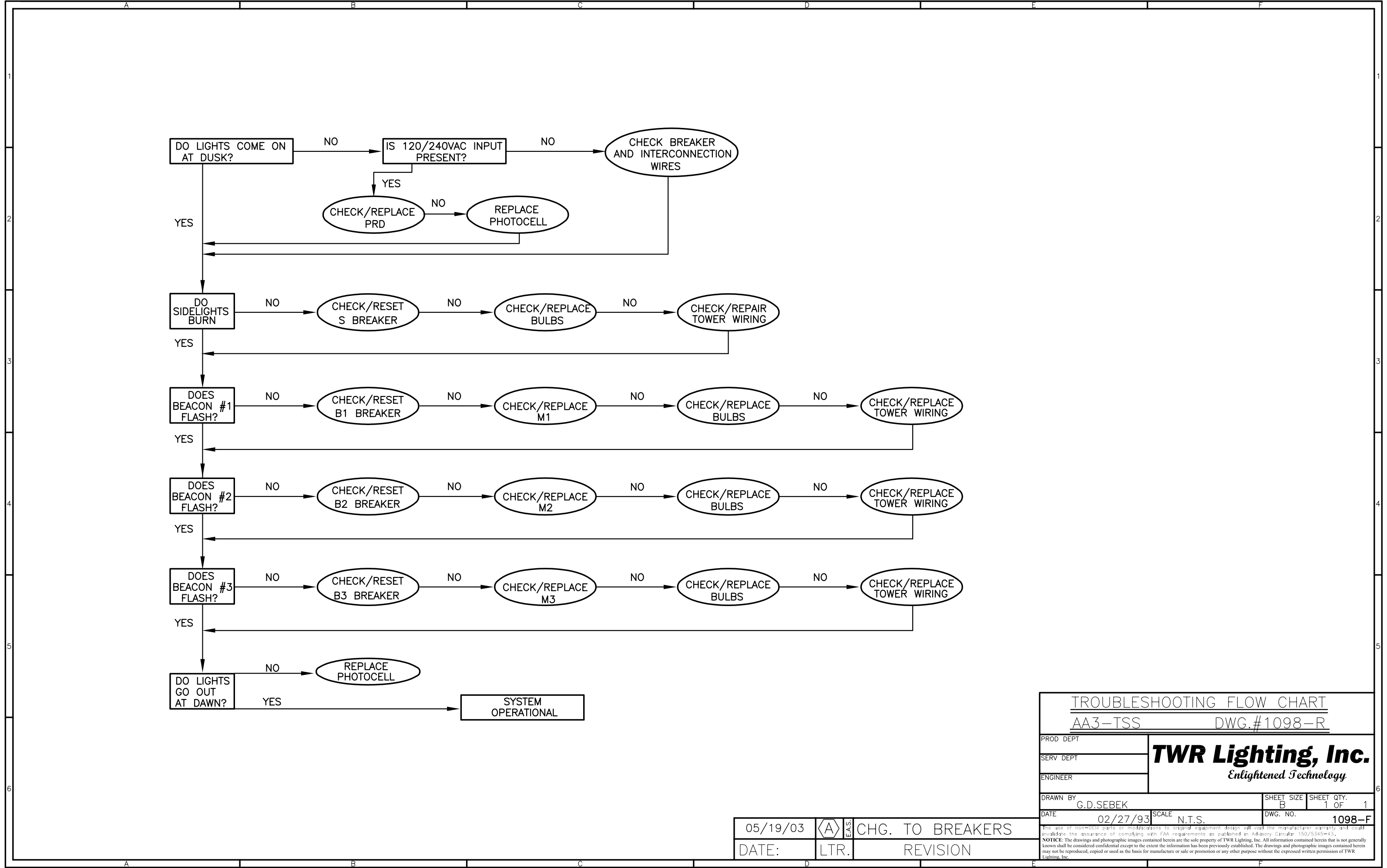
05/19/03		E.A.S.	CHG. TO BREAKERS
DATE:	LTR.	REVISION	

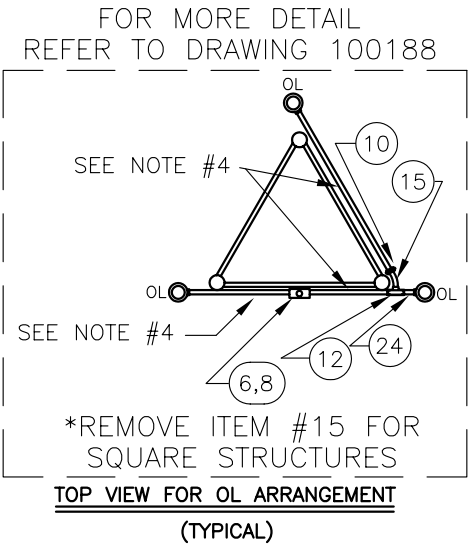
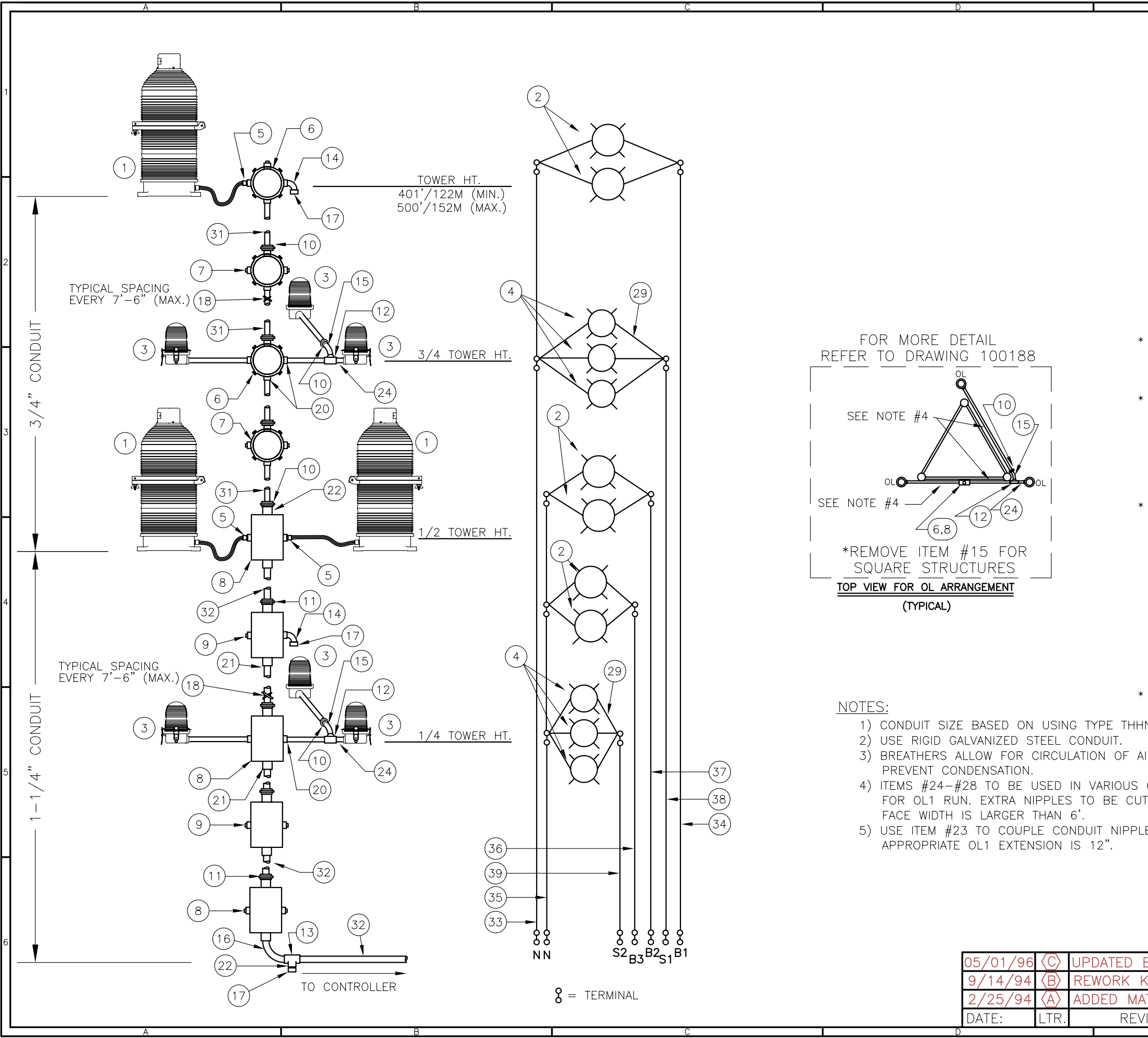


AA3-TSS SCHEMATIC

APP'D		TWR Lighting, Inc. <i>Enlightened Technology</i>	
CHK'D BY			
ENGINEER			
DRAWN BY G.D.SEBEK		SHEET SIZE B	SHEET QTY. 1 OF 1
DATE 05/27/93		SCALE N.T.S.	DWG. NO. 1098-S
<small>The use of non-TWR parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43. NOTICE: The drawings and photographic images contained herein are the sole property of TWR Lighting, Inc. All information contained herein that is not generally known shall be considered confidential except to the extent the information has been previously established. The drawings and photographic images contained herein may not be reproduced, copied or used as the basis for manufacture or sale or promotion or any other purpose without the expressed written permission of TWR Lighting, Inc.</small>			

12/01/05	B	CHG. M2 TO M3
DATE:	LTR.	REVISION





- NOTES:
- 1) CONDUIT SIZE BASED ON USING TYPE THHN WIRE.
 - 2) USE RIGID GALVANIZED STEEL CONDUIT.
 - 3) BREATHERS ALLOW FOR CIRCULATION OF AIR TO PREVENT CONDENSATION.
 - 4) ITEMS #24-#28 TO BE USED IN VARIOUS COMBINATIONS FOR OL1 RUN. EXTRA NIPPLES TO BE CUT TO FIT IF FACE WIDTH IS LARGER THAN 6'.
 - 5) USE ITEM #23 TO COUPLE CONDUIT NIPPLES. APPROPRIATE OL1 EXTENSION IS 12".

BILL OF MATERIALS

ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	3	BEACON	300 MM BEACON RED
2	6	620PS40P	620 WATT 120 VOLT LAMP
3	6	OL1	3/4" OBSTRUCTION LIGHT
4	6	116A21TS	116 WATT 120 VOLT LAMP
5	3	CGB295SA	3/4" CORD CONNECTOR
6	2	JB5	3/4" JUNCTION BOX
7	2	JB0	3/4" STRAIN RELIEF BOX
8	3	JB8114	1-1/4" JUNCTION BOX
9	2	JB8SR114	1-1/4" STRAIN RELIEF BOX
10	7	UNY205	3/4" UNION
11	5	UNY405	1-1/4" UNION
12	3	T27CG	3/4" CONDULET W/COVER AND GASKET
13	2	T47CG	1-1/4" CONDULET W/COVER AND GASKET
14	2	EL3490	3/4" 90° SHORT ELBOW
15	2	EL3430	3/4" 30° ELBOW
16	2	EL11490	1-1/4" 90° ELBOW
17	3	5012902	3/4" BREATHER
18	2	SS10012	WRAPLOCK
* 19	2	PIPDOP	4 oz. PIPE DOPE
20	19	A314	3/4" CONDUIT LOCKNUTS
21	13	A316	1-1/4" CONDUIT LOCKNUTS
22	3	RE42	1-1/4" TO 3/4" REDUCER
* 23	16	CPLG34	3/4" GALVANIZED COUPLING
24	8	N34T3	3/4" x 3" NIPPLE
25	6	N34T6	3/4" x 6" NIPPLE
26	6	N34T12	3/4" x 12" NIPPLE
27	6	N34T24	3/4" x 24" NIPPLE
28	4	N34T36	3/4" x 36" NIPPLE
29	6	SLPIGTAIL25	25' SIDELIGHT PIGTAIL
* 30	1	AA3	AA3 CONTROLLER

ITEM NUMBERS #31-#39 ARE NOT INCLUDED IN THE KIT BUT ARE AVAILABLE UPON REQUEST, AND REQUIRED FOR INSTALLATION.

31	-	CONDUIT34	3/4" CONDUIT (1/2 TOWER HT.)
32	-	CONDUIT114	1-1/4" CONDUIT (1/2 TOWER HT. + 30'/9M)
33	-	4THHNWHT	#4 THHN WHT. WIRE (TOWER HT.+40'/12M)
34	-	4THHNBK	#4 THHN BLK. WIRE (TOWER HT.+40'/12M)
35	-	4THHNWHT	#4 THHN WHT. WIRE (1/2 TOWER HT.+40'/12M)
36	-	6THHNBLUE	#6 THHN BLUE WIRE (1/2 TOWER HT.+40'/12M)
37	-	6THHNBLUE	#6 THHN BLUE WIRE (1/2 TOWER HT.+40'/12M)
38	-	12THHNRED	#12 THHN RED WIRE (3/4 TWR HT.+40'/12M)
39	-	12THHNYLW	#12 THHN YLW. WIRE (1/4 TWR HT.+40'/12M)

* = ITEMS NOT SHOWN

LK2A2/3 TOWER LIGHTING KIT W/NO BOOST (TOWERS 401'/122M TO 500'/152M)			
PROD DEPT		TWR Lighting, Inc. Enlightened Technology	
SERV DEPT			
ENGINEER			
DRAWN BY E.A.SALAZAR		SHEET SIZE B	SHEET QTY. 1 OF 1
DATE 02/02/93		SCALE N.T.S.	DWG. NO. 261-32
<small>The use of non-TWR parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43. NOTICE: The drawings and photographic images contained herein are the sole property of TWR Lighting, Inc. All information contained herein that is not generally known shall be considered confidential except to the extent the information has been previously established. The drawings and photographic images contained herein may not be reproduced, copied or used as the basis for manufacture or sale or promotion or any other purpose without the expressed written permission of TWR Lighting, Inc.</small>			
DATE:		LTR.	REVISION

05/01/96	(C)	UPDATED B.O.M.
9/14/94	(B)	REWORK KIT PARTS
2/25/94	(A)	ADDED MATERIALS
DATE:	LTR.	REVISION

TWR Lighting, Inc.

FAA Approved L-810

Single Obstruction Light Side Hub

OL1

FM10018_RD.DWG

For use as an obstruction light on towers, building, bridges, cooling towers.
Meets or exceeds all FAA specs as found in AC 150/5345-43 Type L-810.

Our most popular light. The side hub allows for a straight run of conduit from the junction box for hook up.

High temperature, ultra pure
FAA approved Aviation red, blue,
yellow, or clear glass fresnel lens.

Can be used steady
burning or flashing.

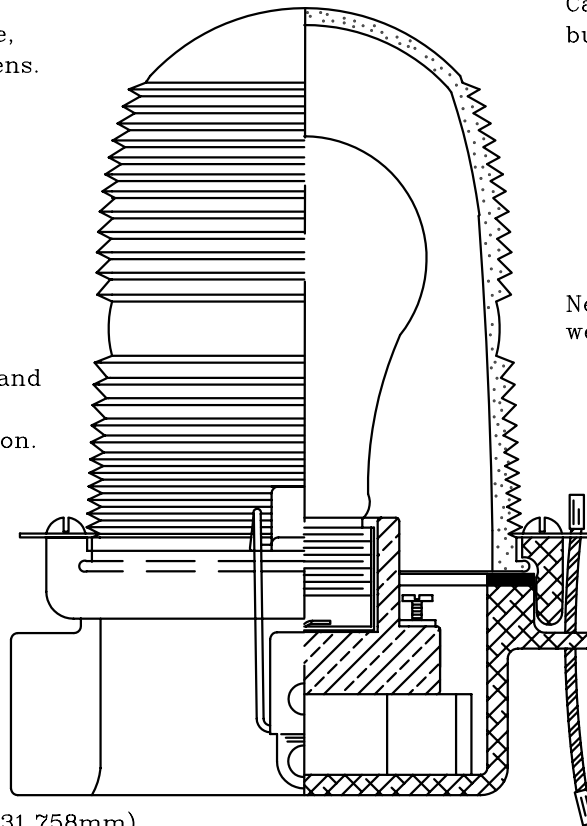
Copper free aluminum casting and
all stainless steel latches and
hardware for corrosion protection.

Neoprene gasket for
weatherproofing.

High quality porcelain
receptacle.

Stainless steel
safety cable.

Specify conduit size
3/4", 1", 1-1/4" NPT
(19.055mm), (25.407mm), (31.758mm)



No special tools required for maintenance.

General Specifications

Height 7.5 inches (19.055 cm)

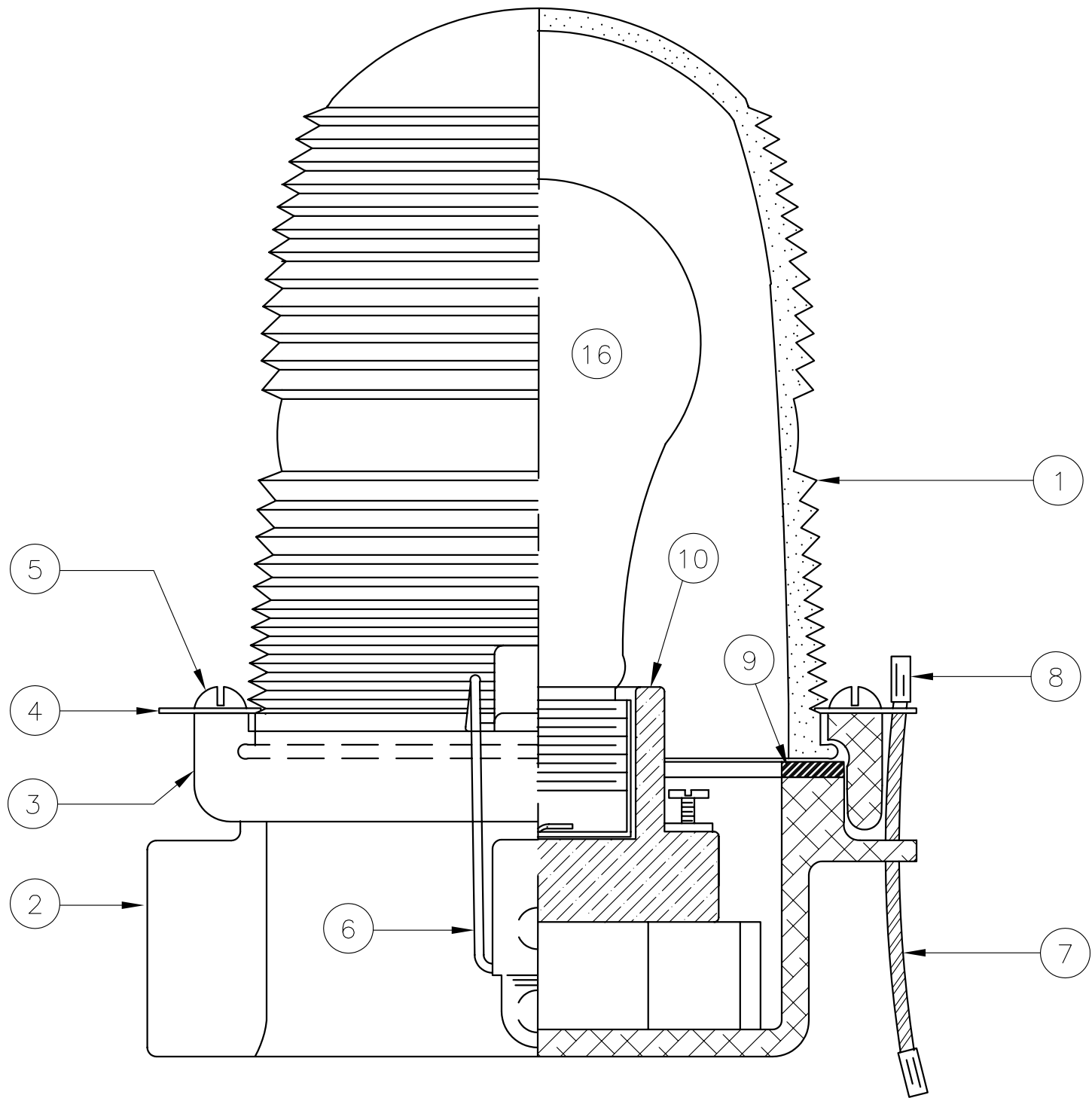
Weight 3 lbs (13605.442g)

Power 120, 230, or 240 volts AC

Uses 116W, 120V or 240V bulbs

Bulbs sold separately

TWR Lighting, Inc.
4300 Windfern Rd. #100
Houston, Tx., 77041-8943
Phone: (713)973-6905
Fax: (713)973-9352
WEB SITE: <http://www.twrlighting.com>
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ITEM NO	QTY.	TWR PART NUMBER	DESCRIPTION
1	1	AP35222	RED SIDELIGHT GLASS
2	1	105C	SINGLE SIDELIGHT BODY
3	1	106C	LENS HOLDER RING
4	2	12V245	OL LENS CLIP
5	2	832X14PH	8-32 X 1/4" PH S.S. SLOT
6	2	HC255SS	SIDELIGHT LATCHES
7	1	7X7SS	1/16 7 X 7 S.S. WIRE
8	2	A1A	STAKON CRIMP
9	1	OLG	OL GASKET
10	1	19062	SIDELIGHT RECEPTACLE
11	4	18PRSS	1/8 POP RIVETS
12	1	A314	3/4" CONDUIT LOCKNUT
13	2	104G	WHITE TEFLON WASHER
14	2	832X34PH	8-32 X 3/4" S.S. RH SLOT
15	1	100327	OL-1 SERIAL NUMBER LABEL
16	1	116A21TS	116W-120V LAMP (TYP.)

*=PART NOT SHOWN
~=PART SOLD SEPARATELY

NOTE:
1. FAA APPROVED LIGHT USES THE 116A21TS LAMP.
OTHER LAMPS ARE AVAILABLE TO MEET YOUR APPLICATION.

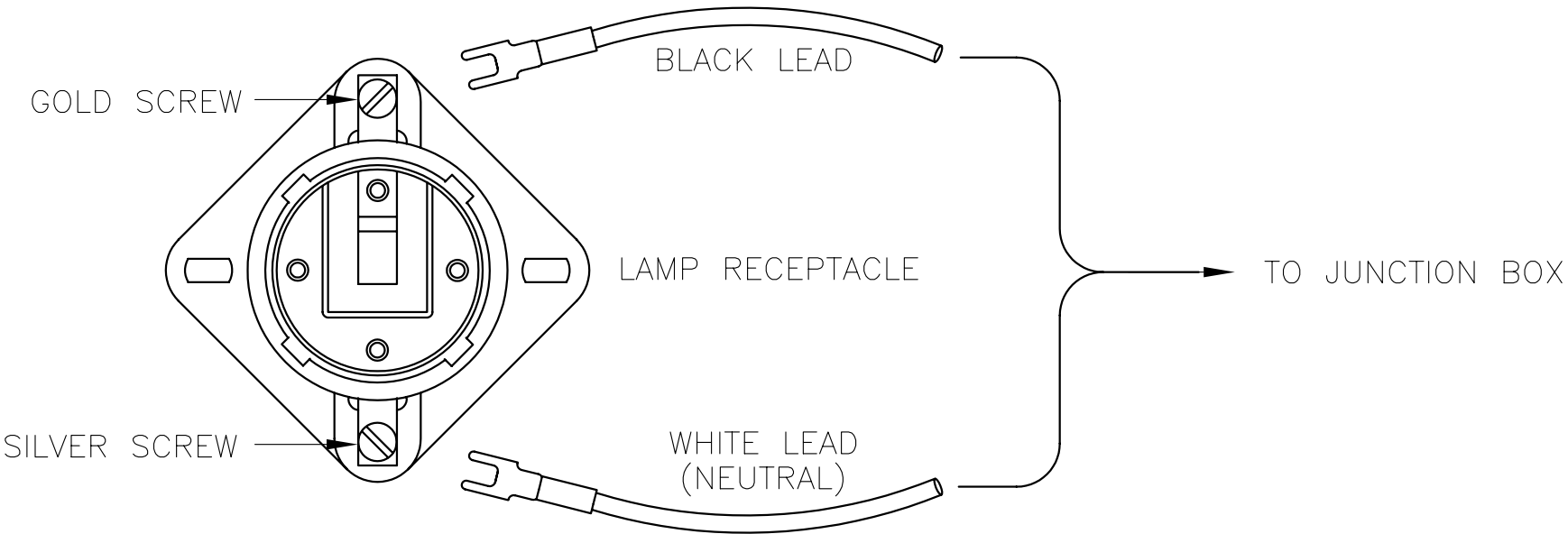
OL1

3/4" OL-1 SIDE HUB
ASSEMBLY DETAIL (PART #OL1)

PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology</i>		
SERV DEPT			
ENGINEER			
DRAWN BY	E.A.SALAZAR	SHEET SIZE	SHEET QTY.
DATE	1/7/92	B	1 OF 1
SCALE	FULL	DWG. NO.	279-OL

05/13/02	B	UPDATED B.O.M.
DATE:	LTR.	REVISION

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SIDELIGHT RECEPTACLE WIRING

PROD DEPT
SERV DEPT
ENGINEER

TWR Lighting, Inc.
Enlightened Technology

DRAWN BY
G.D. SEBEK

SHEET SIZE
B

SHEET QTY.
1 OF 1

DATE
06/08/91

SCALE
N.T.S.

DWG. NO.
274-S

7/2/98

A

G.D.S.

CHANGED LABEL

DATE:

LTR.

REVISION

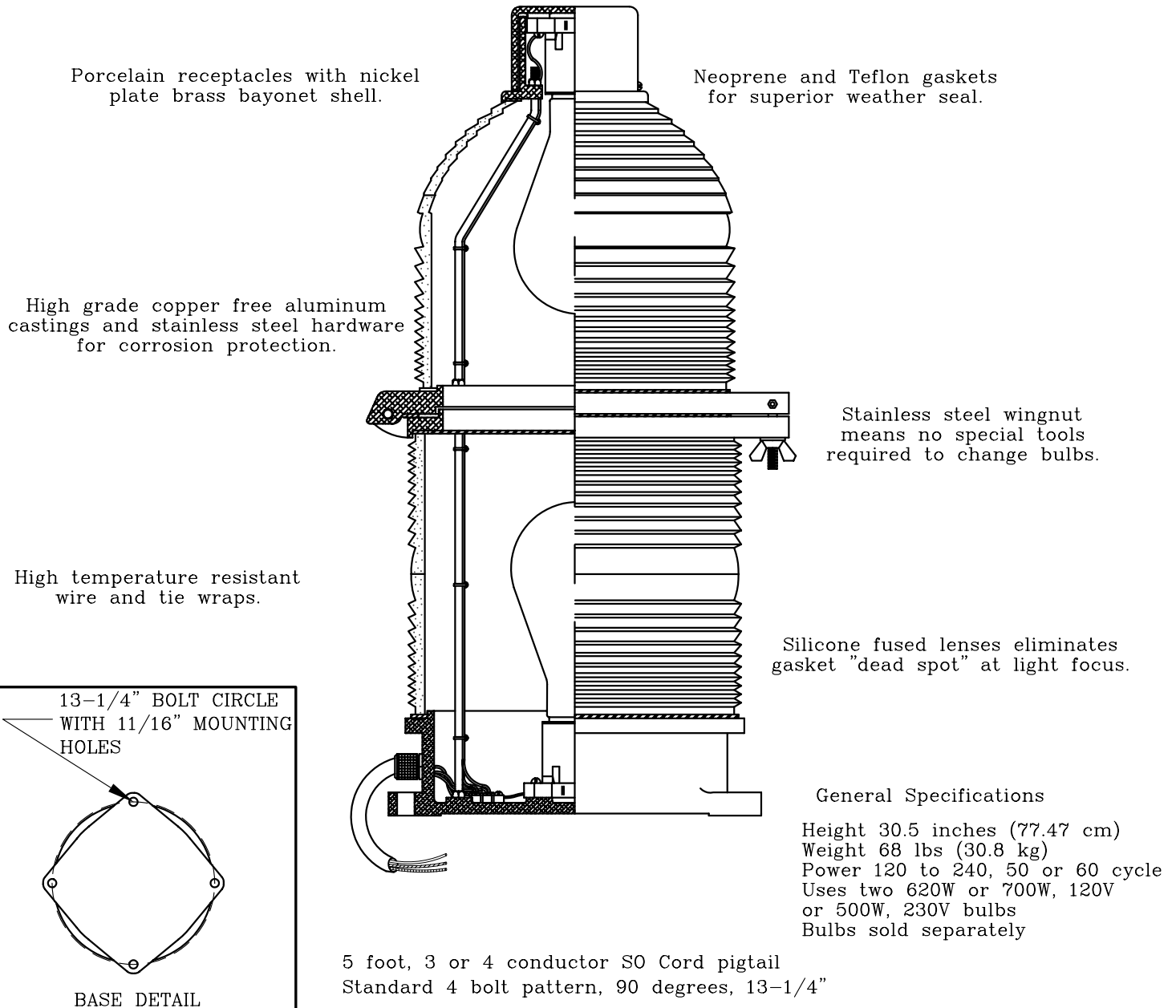
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TWR Lighting, Inc.

FAA Approved L-864 300 mm BEACON

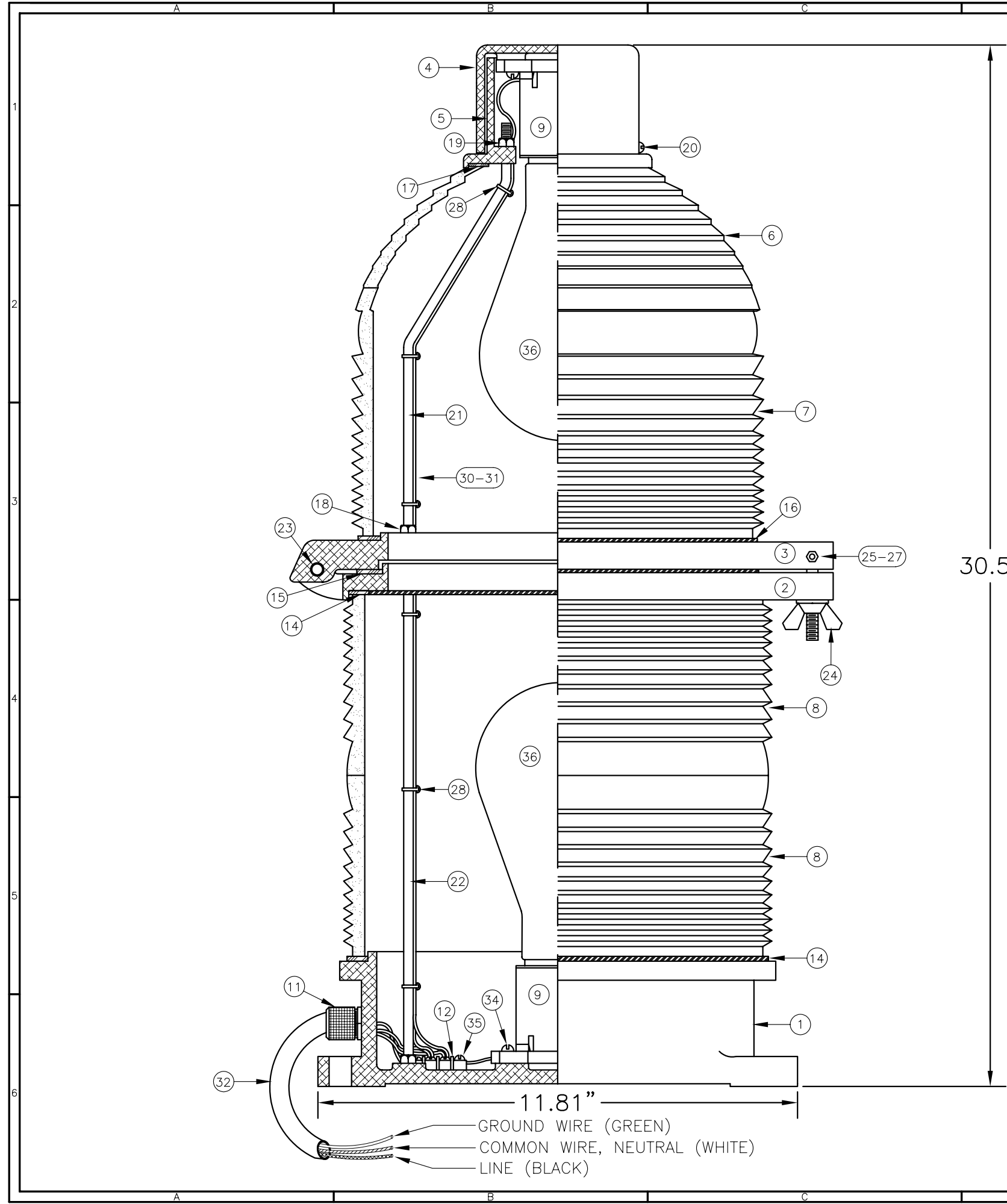
FM10017RB.DWG

Flashing 300 mm Code Red Beacon is used to light aviation obstructions taller than 150 feet AGL.
ETL approved to meet or exceed all FAA specifications as found in AC 150/5345-43 Type L-864.



TWR Lighting, Inc.
4300 Windfern Rd. #100
Houston, Tx., 77041-8943
Phone: (713)973-6905
Fax: (713)973-9352

WEB SITE: <http://www.twrlighting.com>
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ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	100C	BEACON BASE
2	1	101C	LOWER HINGE
3	1	102C	UPPER HINGE
4	1	103C	CANOPY CAP
5	1	104C	CANOPY FLANGE
6	1	AP3557	CAP LENS RED
7	1	AP3556	MIDDLE LENS RED
8	2	AP3555	BOTTOM LENS RED
9	2	23X546	BEACON LAMP RECEPTACLE
* 10	4	104G	WHITE TEFLON WASHER 5K MIN.
11	1	CGB295SA	CORD CONNECTOR 3/4 .50 - .62
12	1	TERMBLK3	TERMINAL BLOCK 3-PART
13	1	832X38PH	8-32 X 3/8 SS PH SCREW
14	2	100G	GASKET, BEACON BASE
* 15	1	101G	GASKET, MIDDLE BEACON
16	1	102G	GASKET, TOP HINGE
17	1	103G	GASKET TEFLON, TOP
18	6	516NUT	5/16-18 HEX NUT
19	6	516NUTN	5/16-18 NUT W/NYLON INSERT
20	3	1420X58RH	1/4-20 X 5/8" SS RH SCREW
21	3	BTRB	BEACON TIE RODS BENT
22	3	BTRS-1	BEACON TIE ROD STRAIGHT
23	1	BHP	BEACON HINGE PIN W/COTTER PIN
24	1	BLP	BEACON LATCH PIN
25	1	632X2RH	6-32 X 2 SS RH SCREW
26	1	632NUT	6-32 NUT HEX
27	1	632LW	6-32 LOCK WASHER
28	7	TYZ23M	HI-TEMP TY WRAPS
* 29	1	100328	BEACON SERIAL NUMBER LABEL
30	4'	16HTWH	#16 HI-TEMP WHITE WIRE
31	4'	16HTBL	#16 HI-TEMP BLACK WIRE
32	5'	CS014/3	S.O. CORD 3 WIRE, #14
* 33	11	YAV14-H34F	(STAKON) BURNDY HEAVY DUTY
34	4	1032X1RH	10-32 X 1 SS RH SCREW
35	2	1032X38BH	10-32 x 3/8 BH
~ 36	2	- -	BEACON LAMP
37	1	1032X58PH	10-32 x 5/8 PH

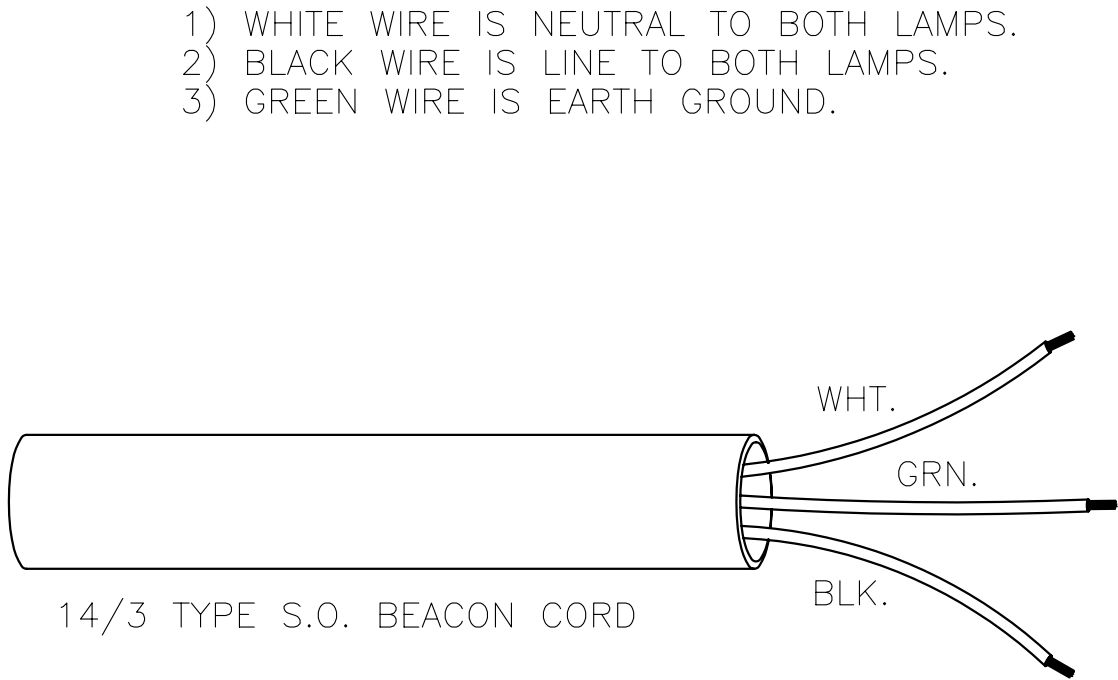
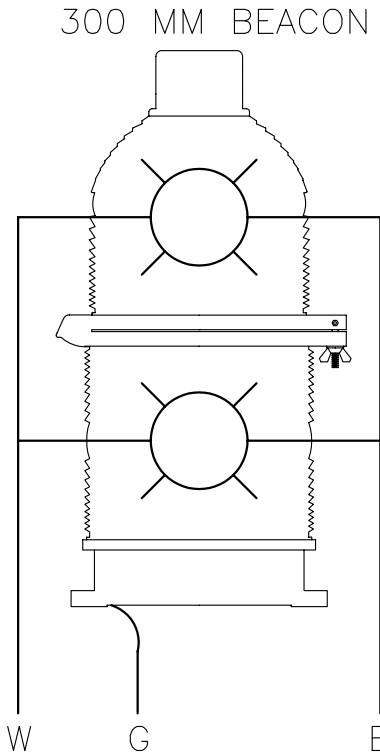
* = ITEM NOT SHOWN
~ = PART SOLD SEPARATELY

300MM BEACON

300 MM BEACON			
ASSEMBLY DETAIL (PART #BEACON)			
PROD DEPT		TWR Lighting, Inc. <i>Enlightened Technology</i>	
SERV DEPT			
ENGINEER			
DRAWN BY G.D. SEBEK		SHEET SIZE B	SHEET QTY. 1 OF 1
DATE 06/03/91		SCALE N.T.S.	DWG. NO. 275-B

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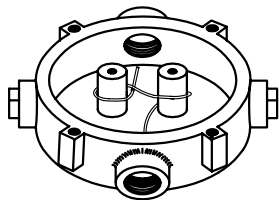
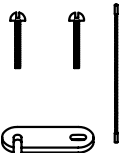
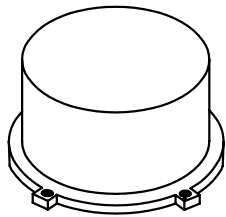
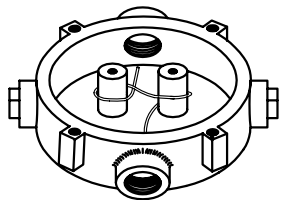
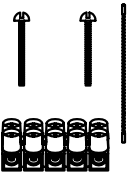
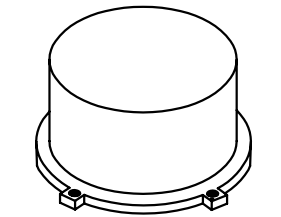
05/18/00	(D)	UPDATED B.O.M.
DATE:	LTR.	REVISION



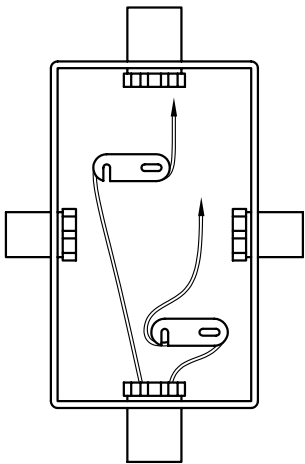
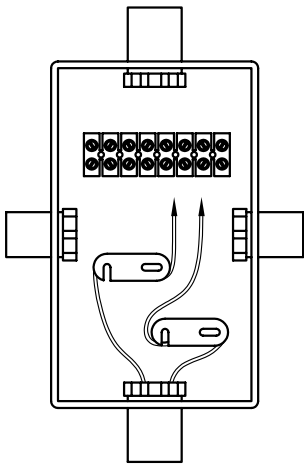
- 1) WHITE WIRE IS NEUTRAL TO BOTH LAMPS.
2) BLACK WIRE IS LINE TO BOTH LAMPS.
3) GREEN WIRE IS EARTH GROUND.

300 MM BEACON WIRE			
PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology</i>		
SERV DEPT			
ENGINEER			
DRAWN BY	G.D. SEBEK	SHEET SIZE B	SHEET QTY. 1 OF 1
DATE	6/10/91	SCALE N.T.S.	DWG. NO. 273-B

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JB-5 AND JB-0
3/4" JUNCTION BOX



JB-8 AND JB-8SR
1" JUNCTION BOX

NOTES:

- 1) DRAWING ILLUSTRATES METHOD OF STRAIN RELIEVING WIRE. USE THIS METHOD ON ALL JUNCTION BOXES.
- 2) THE NATIONAL ELECTRICAL CODE-ARTICLE 300-19-B3 REQUIRES CONDUCTORS IN A VERTICAL CONDUIT BE SUPPORTED TO RELIEVE STRAIN ON TERMINAL BLOCK CONNECTIONS.
- 3) SKETCH ILLUSTRATES METHOD OF STRAIN RELIEVING A SINGLE CONDUCTOR. SEVERAL CONDUCTORS MAY BE GROUPED TOGETHER.
- 4) CONDUCTORS MAY BE MIXED BUT SHOULD NOT TAKE UP MORE THAN 40% OF CONDUIT'S INSIDE AREA.

USING THIS JUNCTION BOX METHOD SPACING IS 100 FEET MAXIMUM.

AWG WIRE SIZE	MAX. NUMBER WIRES IN 3/4" CONDUIT	MAX. NUMBER WIRES IN 1" CONDUIT	WIRE AREA SQ. INCHES	WEIGHT PER 100 FEET
12 THHN	16	26	0.0117	2.50
10 THHN	10	17	0.0184	4.10
8 THHN	6	9	0.0373	6.70
6 THHN	4	7	0.0519	10.30
4 THHN	2	4	0.0845	16.20

JUNCTION AND STRAIN RELIEF BOXES

PROD DEPT

SERV DEPT

ENGINEER

TWR Lighting, Inc.
Enlightened Technology

DRAWN BY
G.D. SEBEK

DATE
07/26/93

SCALE
N.T.S.

SHEET SIZE
B

SHEET QTY.
1 OF 1

DWG. NO.
100089

9/29/00 (A) 3 UPDATED NOTES

DATE: LTR. REVISION

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