

TWR Lighting, Inc.

4300 WINDFERN RD #100 HOUSTON TX 77041-8943

VOICE (713) 973-6905 FAX (713) 973-9852

WEB: 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 # AA0M-TSS

SERIAL # _____

PURCHASE DATE _____

PURCHASED FROM _____

AA0M-TSS CONTROLLER

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AA0M-TSS CONTROLLER

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AA0M-TSS CONTROLLER

1.0 GENERAL INFORMATION

The TWR Lighting Division Model AA0M-TSS Controller is for applications of two (2) through nine (9) L-810 single obstruction light fixtures.

The obstruction lights burn steady. Each fixture requires two (2) 116 watt, 120V bulbs (116A21TS).

A by-pass switch (SW1) 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. SW1 can be operated by turning "on" the toggle switch mounted on the panel of the controller.

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

Power supplied to the controller shall be 120V, 50/60 Hz.

Controller functions that are monitored by remote alarms in the form of dry contact closures (Form C) are as follows:

POWER FAILURE	Monitors 120V AC to the controller. Alarms in the event of power failure or tripped circuit breaker.
LIGHTS "ON"	Gives an indication whenever the controller is activated.
OBSTRUCTION LIGHTS	Will give an alarm when one (1) of the group of sidelights fail.

AA0M-TSS CONTROLLER

2.0 INSTALLATION

2.1 MOUNTING THE CONTROL CABINET

(Refer to Drawing 1133-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 1133-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 $\frac{1}{2}$ " 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 $\frac{1}{2}$ " 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, 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 circuit breaker located at the bottom of the chassis. These connections are made as follows:

2.2 EXTERNAL PHOTOCELL WIRING

(Refer to Drawing 1133-R)

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

AA0M-TSS CONTROLLER

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

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

2.3 POWER WIRING

(Refer to Drawing 1133-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 rated at 15 amps.

2.3.3 Connect incoming 120V AC line to terminal block TB1 marked "L."

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

2.3.5 Connect the AC ground to the aluminum mounting plate.

2.4 SIDELIGHT WIRING

(Refer to Drawing 1133-R)

2.4.1 Connect the **RED** from the sidelight group to the circuit breaker marked "S."

2.4.2 Connect the **WHITE** neutral wire(s) to the terminal block TB1 marked "N."

2.5 SIDELIGHT ALARM WIRING

(Refer to Drawings 1113-R and 1133-S)

2.5.1 Alarm relays K1, K2, and Module M1 are provided for independent contact closures for: Power Failure, Lights "ON," and Sidelight Lamp Burnout.

AA0M-TSS CONTROLLER

2.5.2 Alarm wiring: To utilize all of the red light alarms, the customer will need three (3) pair of wires to interface with the alarm device. One (1) wire from each of the three (3) pair will terminate at K1, pin #4. The remaining wire from each pair will terminate as follows:

Sidelight Lamp Burnout: Connect to Module M1, terminal T5, for normally open (or) terminal T6, for normally closed monitoring.

Power Failure Alarm: Connect to relay K1, terminal #3, for normally open (or) terminal #6, for normally closed monitoring.

Lights "ON" Alarm: Connect to relay K2, terminal #3, for normally open (or) terminal #6, for normally closed monitoring.

2.5.3 Testing: To test alarms, follow the procedures using the "ohm" meter between alarm common and alarm points.

Power Failure Pull circuit breaker at electrical panel.

Lights "ON" Operate photocell by-pass switch (SW1) or cover the photocell.

NOTE: (Indication will be delayed 8 to 10 seconds for the sidelight relay to position itself.)

Sidelights Trip circuit breaker on the controller panel.

AA0M-TSS CONTROLLER

3.0 THEORY OF OPERATION

3.1 Power Supply

120V AC enters the controller from the circuit breaker panel. Line sits at the 102FAA photocell waiting to be switched and also keeps the power failure relay K1 energized. When the 102FAA photocell is activated, line SSR energizes K2 "Lights On" relay. This can also be accomplished by using the photocell by-pass switch (SW1).

3.2 Sidelights

Line (SSR) is also being sent to Module M1 and through the toridal sensing coil to circuit breaker "S." Module M1 is the current sensor for all of the sidelights. If one (1) sidelight within the group burns out, then Module M1 will send 120V to the on board relay coil, which will cause a contact closure for sidelight alarm.

AA0M-TSS CONTROLLER

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-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 70/7460-1J. By following these instructions, maximum safety and performance can be achieved.

TOOLS REQUIRED: NONE

4.2 L-810 LAMP REPLACEMENT

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

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

4.2.3 Unscrew the lamp counter-clockwise and remove.

4.2.4 Install the new lamp by screwing the lamp clockwise.

4.2.5 Reinstall the lens, making sure it is seated properly on the base.

4.2.6 Reclasp the two (2) latches.

4.3 CONTROLLER

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

4.4 PHOTOCELL

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

AA0M-TSS CONTROLLER

5.0 MAJOR COMPONENTS PARTS LIST

QUANTITY	PART NUMBER	DESCRIPTION
1	102FAA	Photocell
1	VJ1008HPL2	Enclosure
2	PB27E122	Octal Sockets (K1, K2)
6	8WA1204	Terminal Blocks (TB1, TB2)
1	5SX2120-8	20 amp Circuit Breaker (S)
2	8WA1808	End Stop
1	X9KE-115V	SPDT Relay (K1, K2)
1	SSPIGTAIL	20' Photocell Pigtail
1	STJ01002	15 amp SPDT Switch (SW1)
1	SCR490D	Current Sensor (M1)

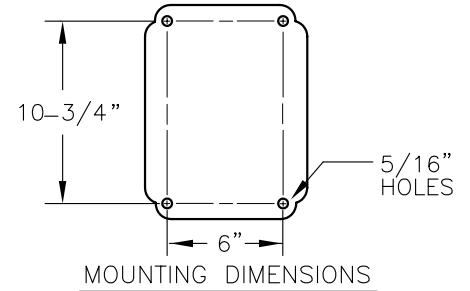
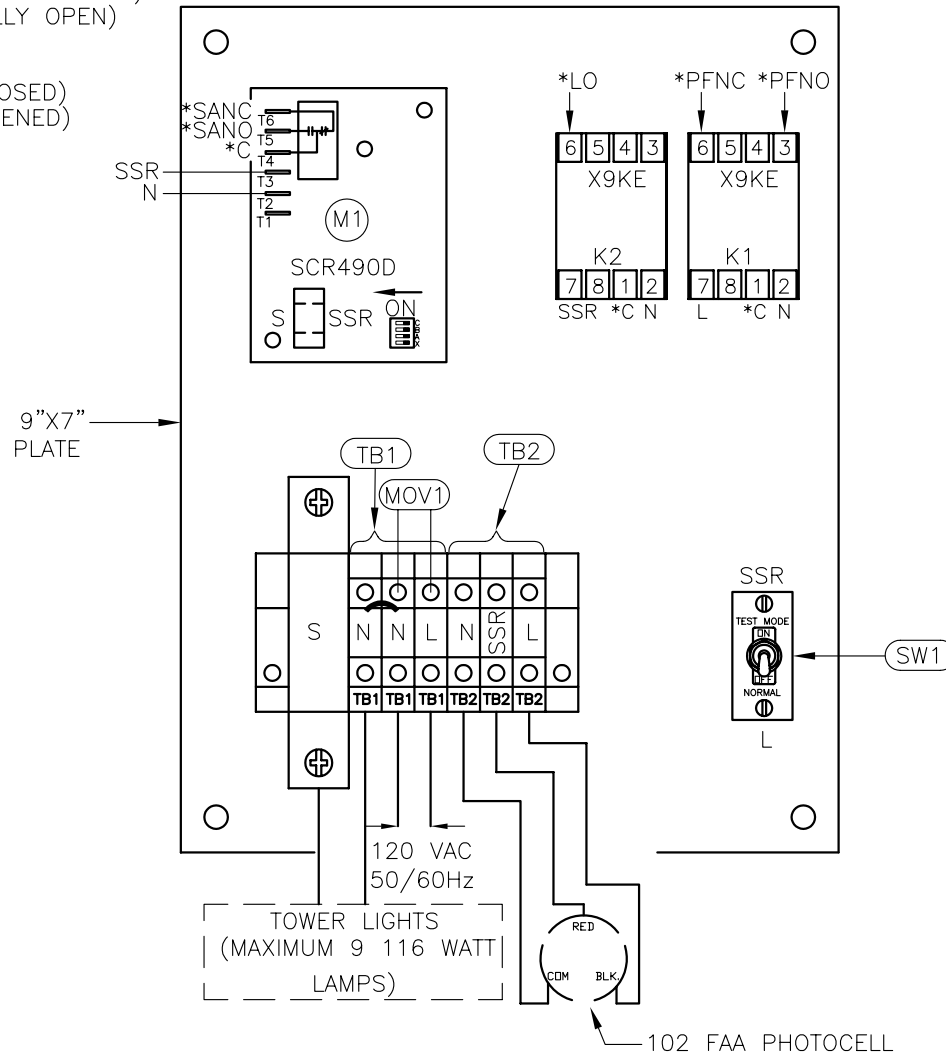
AA0M-TSS CONTROLLER

6.0 SUGGESTED SPARE PARTS LIST

QUANTITY	PART NUMBER	DESCRIPTION
1	102FAA	Photocell
1	X9KE	120V AC SPDT Relay

*CUSTOMER ALARM POINTS

SANC = SIDELIGHT ALARM (NORMALLY CLOSED)
 SANO = SIDELIGHT ALARM (NORMALLY OPEN)
 C = ALARM COMMON
 LO = LIGHTS "ON" INDICATOR
 PFNC = POWERFAIL (NORMALLY CLOSED)
 PFNO = POWERFAIL (NORMALLY OPENED)



NOTES:

1. PLUG 102 FAA PHOTOCELL INTO 43109 TWIST LOCK RECEPTACLE AND TWIST TO LOCK.
2. WIRES ARE CONNECTED LETTER TO LETTER. (EXAMPLE) N TO N...
3. CURRENT SENSOR MODULE M1 CAN MONITOR TWO THROUGH NINE LAMPS. USE THE FOLLOWING GUIDE TO CALIBRATE TO YOUR PARTICULAR NEEDS.

	TOTAL NO. OF LAMPS	SWITCHES ON
<input type="checkbox"/> X	2	NONE
<input type="checkbox"/> A	3	C
<input type="checkbox"/> B	4	B
<input type="checkbox"/> C	5	B, C
→ ON	6	A
	7	A, C
	8	A, B
	9	A, B, C

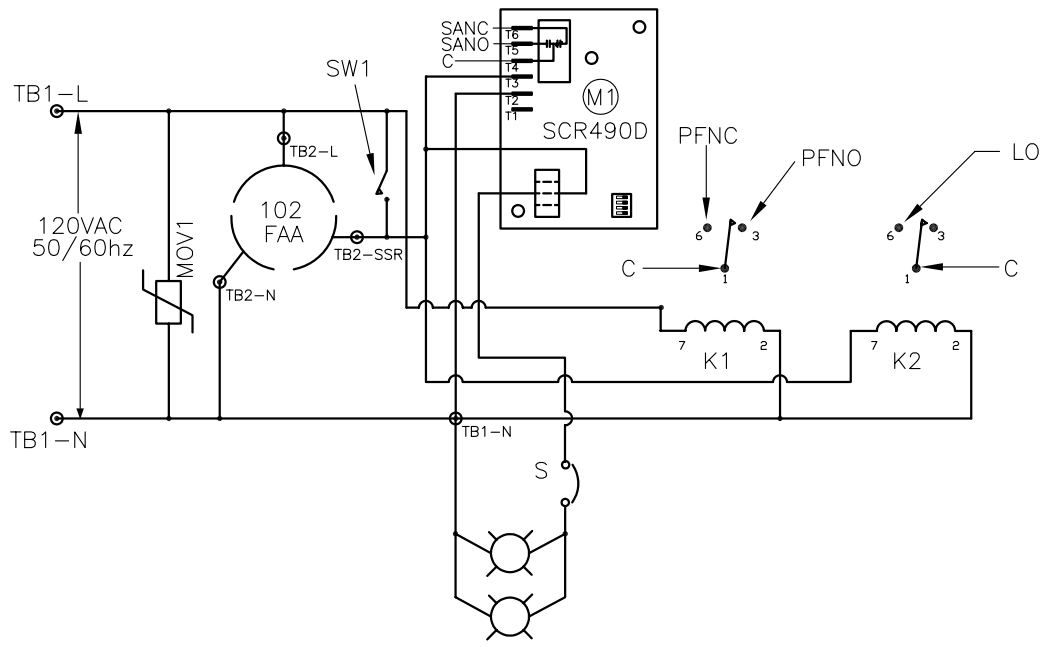
AAOM-TSS

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY	E.A.SALAZAR	SHEET SIZE SHEET QTY. B 1 OF 1
DATE	8/3/94	SCALE N.T.S. DRAWING NO. 1133-R

05/10/00(B) ADDED NOTES
 DATE: LTR. REVISION

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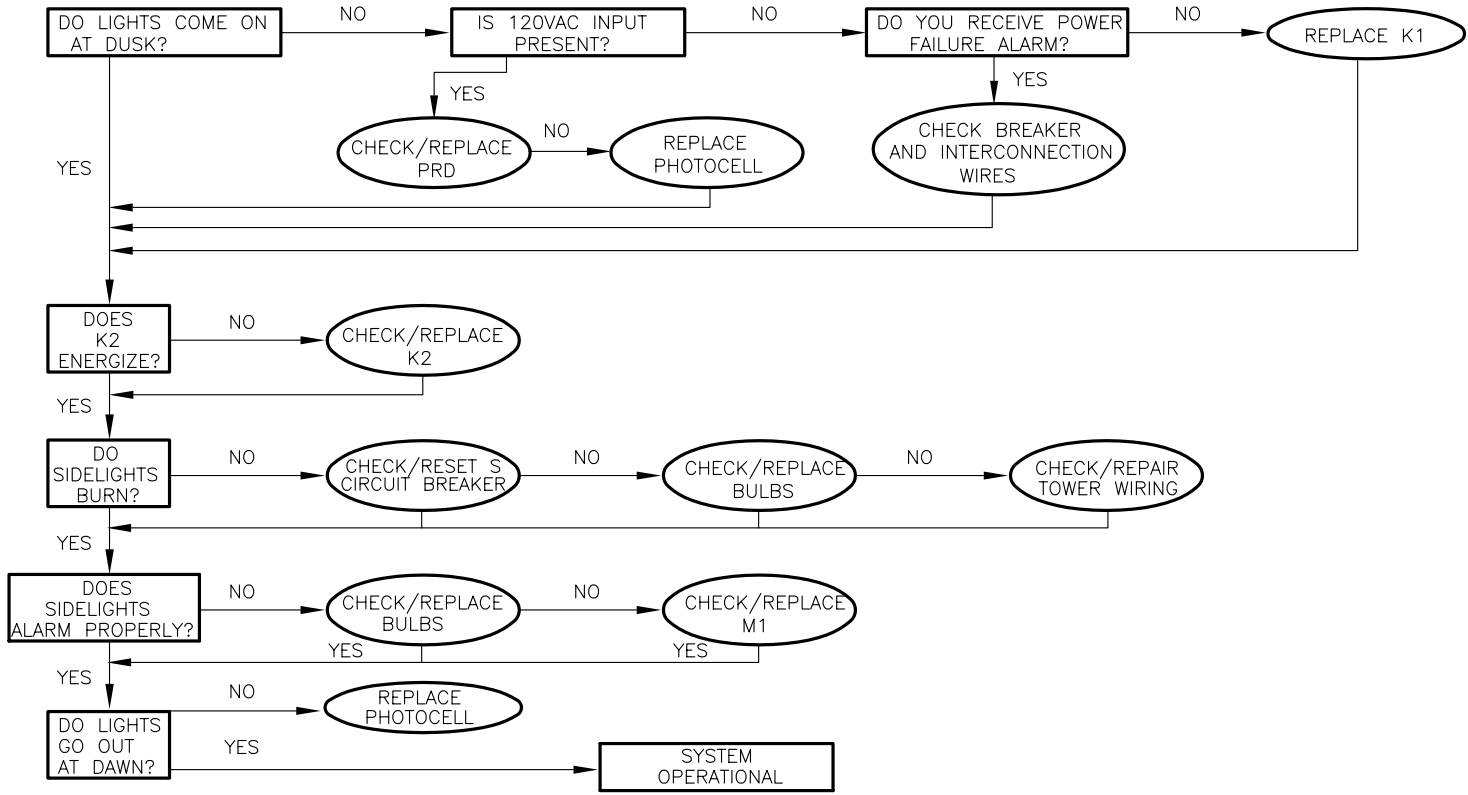


*116 WATT 120V LAMPS

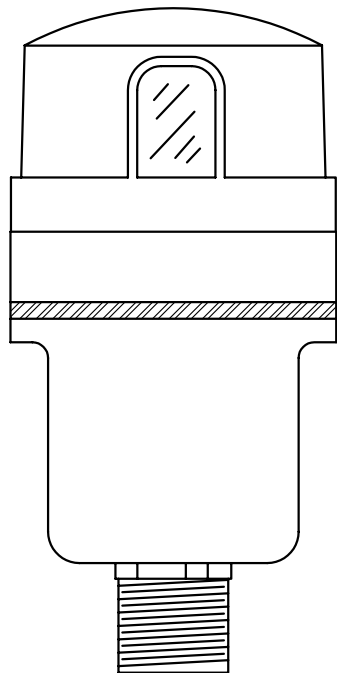
NOTES:
 * 1. NUMBER OF LAMPS MAY VARY FROM 2 TO 9. SEE NOTE 3 ON DWG. 1133-R.

<u>AAOM-TSS</u>		
TWR Lighting, Inc.		
APP'D	ENGINEER	CHK'D BY
DRAWN BY E.A.SALAZAR		SHEET SIZE SHEET QTY. B 1 OF 1
DATE 10/29/98	SCALE N.T.S.	DRAWING NO. 1133-S
10/29/98 (A) 3 CHG. FUSE TO BREAKER DATE: LTR. REVISION		

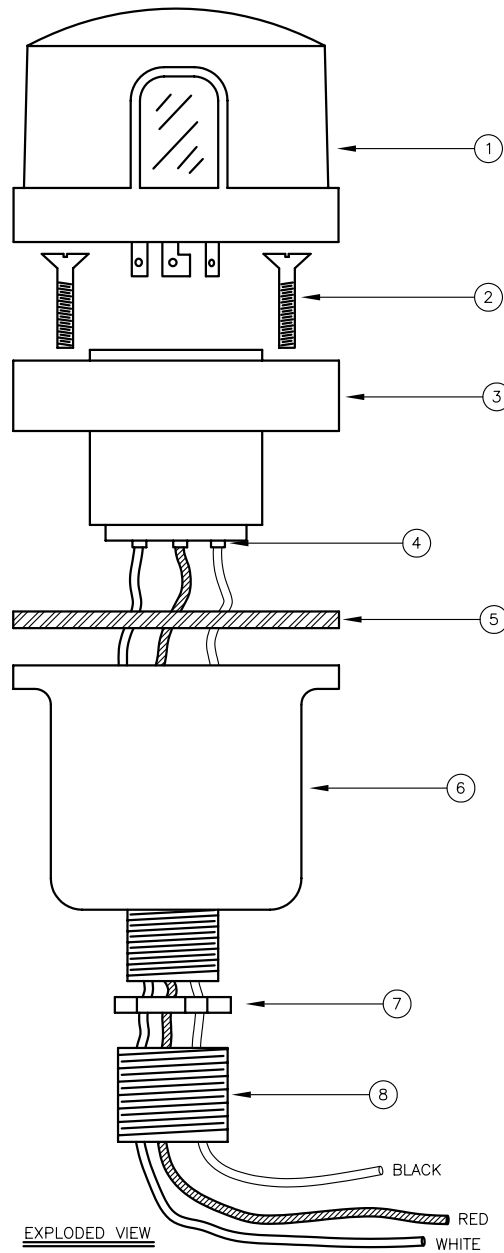
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<u>AAOM-TSS TROUBLESHOOTING</u>			
<u>FLOW CHART</u>			
TWR Lighting, Inc.			
APP'D	ENGINEER	CHK'D BY	
DRAWN BY	E.A.SALAZAR	SHEET SIZE	SHEET QTY.
DATE	10/29/98	B	1 OF 1
SCALE	(A) 1/4"	CHG. FUSE TO BREAKER	DRAWING NO.
10/29/98	10/29/98	REVISION	1133-F
<small>NOTICE: This drawing is the property of TWR Lighting, Inc. All information contained herein that is not generally known shall be confidential except to the extent the information has been previously established. This drawing may not be reproduced, copied or used as the basis for manufacture or sale without written permission.</small>			



ASSEMBLY



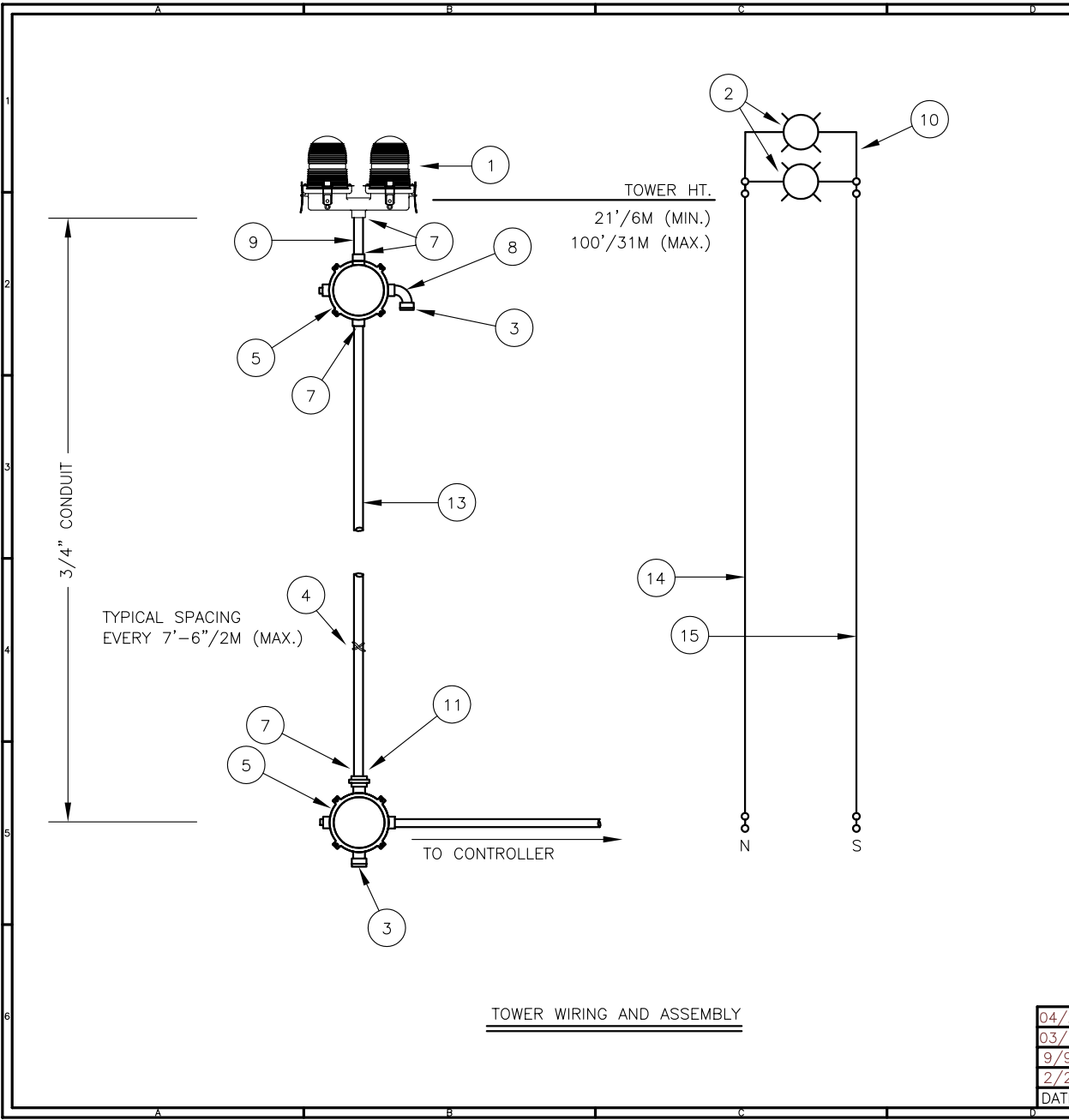
EXPLODED VIEW

ITEM	QTY.	DESCRIPTION
1	1	PHOTOCELL
2	2	6-32 x 7/8" SCREW
3	1	RECEPTACLE SOCKET
4	3	.250 SPADE CONNECTOR
5	1	RECEPTACLE GASKET
6	1	RECEPTACLE HOUSING
7	1	1/2" CONDUIT LOCKNUT
8	1	3/4" TO 1/2" REDUCER

NOTES:

- ITEM #8 CAN BE USED TO REDUCE 3/4" CONDUIT TO 1/2" CONDUIT AT THE HOUSING OR AT THE CONTROLLER ITSELF.
- IF ADDITIONAL WIRE IS REQUIRED OVER THE FACTORY 20', USE THE FOLLOWING CHART.
 21' TO 300' - 16 AWG TFFN
 301' TO 500' - 14 AWG TFFN

<u>PHOTOCELL HOUSING DETAIL</u>			
TWR Lighting, Inc.			
APP'D	ENGINEER	CHK'D BY	
DRAWN BY	E.A.SALAZAR	SHEET SIZE	SHEET QTY.
DATE	10/18/95	B	1 OF 1
SCALE	N.T.S.	DRAWING NO.	
		100239	
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BILL OF MATERIALS

ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	OL2	DOUBLE OBSTRUCTION LIGHT
2	2	116A21TS	116 WATT 120 VOLT LAMP
3	2	5012902	BREATHER
4	1	SS10012	WRAPLOCK
5	2	JB5	3/4" JUNCTION BOX
6	1	PIPDOP	4 oz. PIPE DOPE
7	5	A314	3/4" CONDUIT LOCKNUTS
8	2	EL3490	3/4" 90° SHORT ELBOW
9	1	N34T4	3/4" X 4" CONDUIT NIPPLE
10	1	OL2PIGTAIL	18" OL2 PIGTAIL
11	2	UNY205	3/4" UNION
12	1	AA0M	AA0-M ALARMED CONTROLLER

ITEM NUMBERS #13-#15 ARE NOT INCLUDED IN THE KIT BUT ARE REQUIRED FOR INSTALLATION.

13	-	CONDUIT34	3/4" CONDUIT (TWR HT. + 30'/9M)
14	-	14THHNWHT	#14 THHN WHT. WIRE (TWR HT.+40'/12M)
15	-	14THHNBK	#14 THHN BLK. WIRE (TWR HT.+40'/12M)

* = ITEM NOT SHOWN

NOTES:

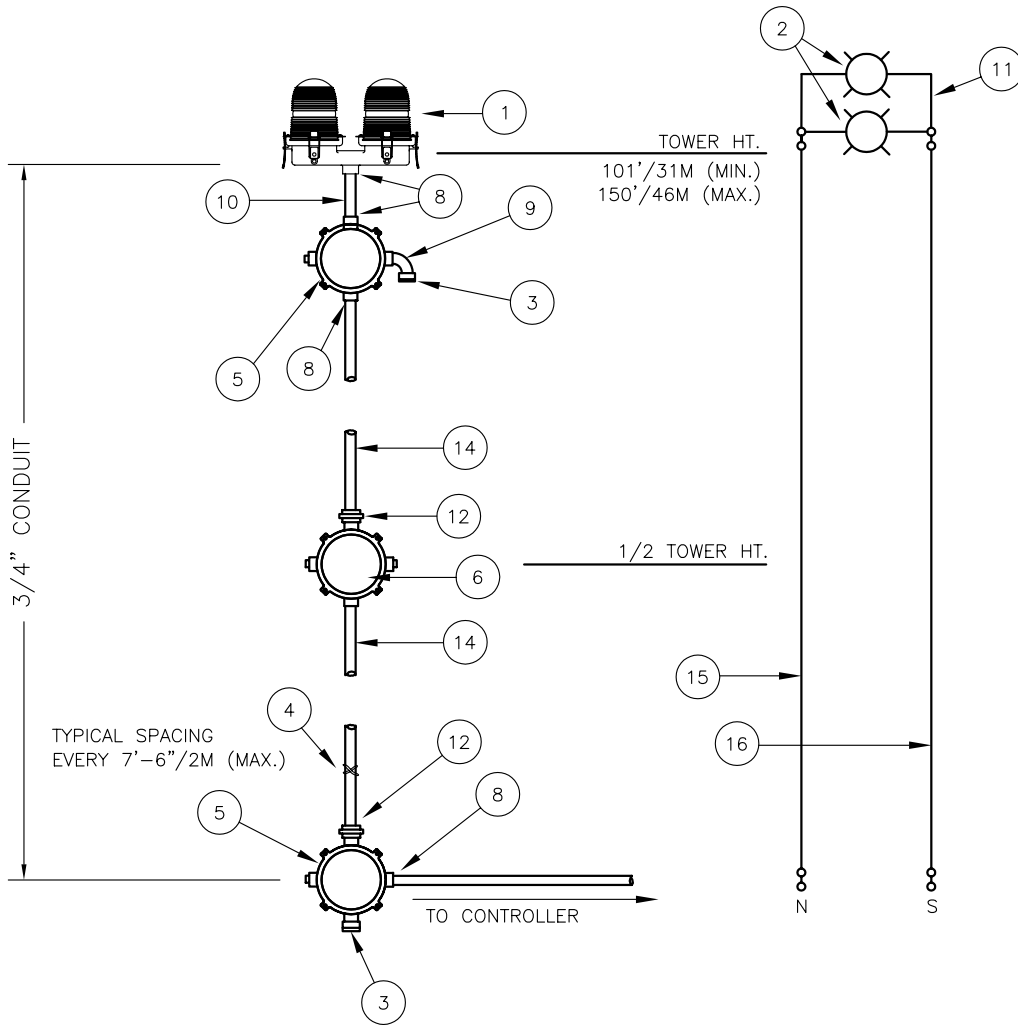
- 1) CONDUIT SIZE BASED ON USING TYPE THHN WIRE.
- 2) USE RIGID GALVANIZED STEEL CONDUIT.
- 3) BREATHERS ALLOW FOR CIRCULATION OF AIR TO PREVENT CONDENSATION.

LK1A0M & LK1CA01M LIGHTING KIT W/ALARMED CONTROLLER (TOWERS 21'/6M TO 100'/31M)

TWR Lighting, Inc.

04/24/96 (D) REVISED B.O.M.	APP'D	ENGINEER	CHK'D BY
03/18/96 (C) UPDATED B.O.M.	DRAWN BY E.A.SALAZAR		SHEET SIZE B
9/9/94 (B) REWORK KIT PARTS	DATE 1/5/93		SHEET QTY. 1 OF 1
2/25/94 (A) ADDED MATERIALS	SCALE N.T.S.		DRAWING NO. 258-01
DATE: LTR.	REVISION		

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TOWER WIRING AND ASSEMBLY

BILL OF MATERIALS

ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	OL2	DOUBLE OBSTRUCTION LIGHT
2	2	116A21TS	116 WATT 120 VOLT LAMP
3	2	5012902	BREATHER
4	1	SS10012	WRAPLOCK
5	2	JB5	3/4" JUNCTION BOX
6	1	JB0	3/4" STRAIN RELIEF BOX
* 7	1	PIPDOP	4 oz. PIPE DOPE
8	7	A314	3/4" CONDUIT LOCKNUTS
9	2	EL3490	3/4" 90° SHORT ELBOW
10	1	N34T4	3/4" x 4" CONDUIT NIPPLE
11	1	OL2PIGTAIL	18" OL2 PIGTAIL
12	3	UNY205	3/4" UNION
* 13	1	AA0MTSS	AA0-MTSS ALARMED CONTROLLER

ITEM NUMBERS #14-#16 ARE NOT INCLUDED IN THE KIT BUT ARE REQUIRED FOR INSTALLATION.

14	-	CONDUIT34	3/4" CONDUIT (TWR HT. + 30'/9M)
15	-	14THHNWHT	#14 THHN WHT. WIRE (TWR HT.+40'/12M)
16	-	14THHNBK	#14 THHN BLK. WIRE (TWR HT.+40'/12M)

* = ITEMS NOT SHOWN

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.

LK2A0M & LK2ICA01M LIGHTING KIT W/ALARMED CONTROLLER (TOWERS 101'/31M TO 150'/46M)

TWR Lighting, Inc.

APP'D	ENGINEER	CHR'D BY
DRAWN BY	G.D.SFBEK	SHEET SIZE SHEET QTY. B 1 OF 1
DATE	1/4/93	SCALE N.T.S. DRAWING NO. 258-02

02/10/2000 (E) 3 CHG. CONTROLLER
DATE: LTR. REVISION

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TWR Lighting, Inc.

FAA Approved L-810

Single Obstruction Light Side Hub

OL1

FM10018_RC.DWG

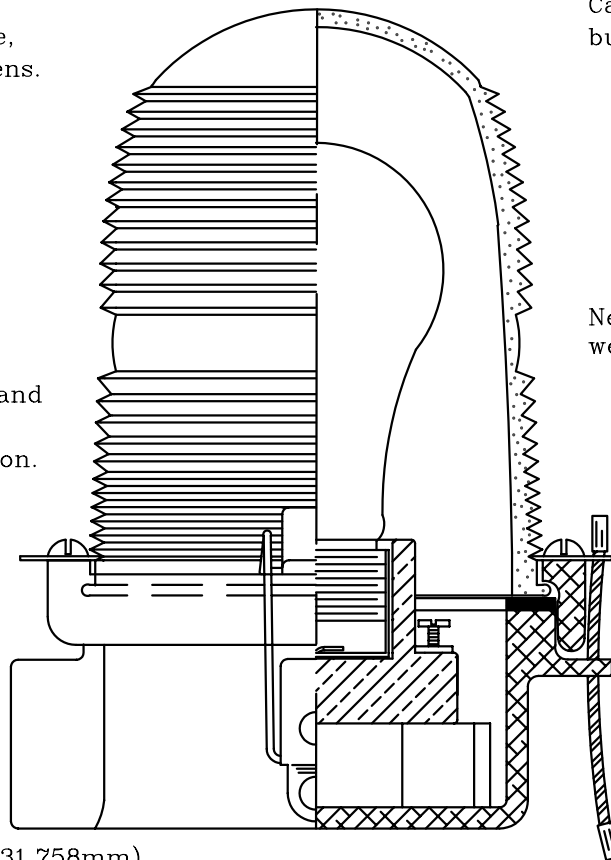
For use as an obstruction light on towers, building, bridges, cooling towers. Meets or exceeds all FAA specs as found in AC 150/5345-43 Type L-810.

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.

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

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



Can be used steady
burning or flashing.

Neoprene gasket for
weatherproofing.

High quality porcelain
receptacle.

Stainless steel
safety cable.

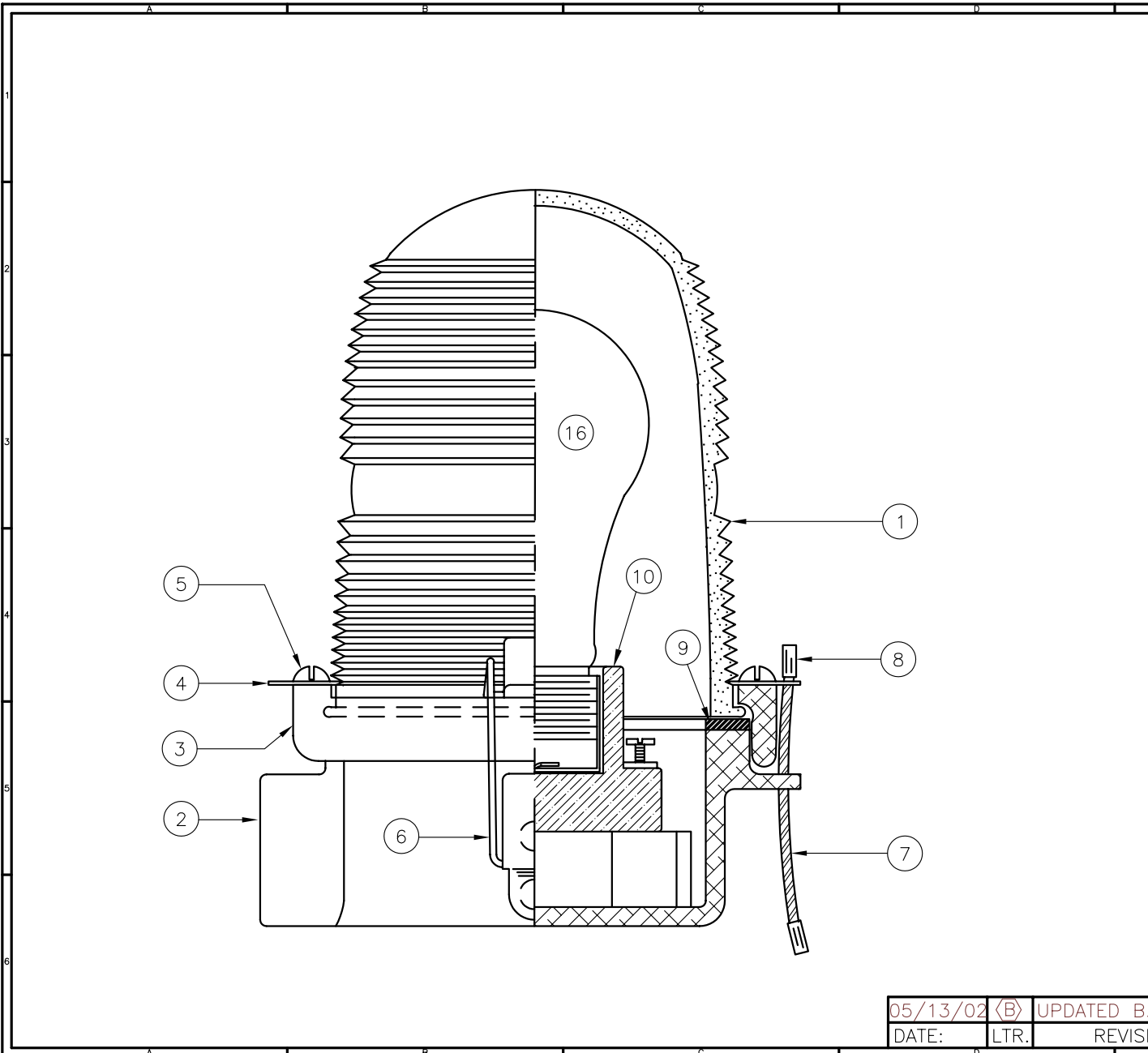
No special tools required for maintenance.

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)

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY	E.A.SALAZAR	SHEET SIZE SHEET QTY. B 1 OF 1
DATE	1/7/92	SCALE FULL DRAWING NO. 279-OL

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

TWR Lighting, Inc.

FAA Approved L-810

Single Obstruction Light Side Hub

OL1

FM10018_RC.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.

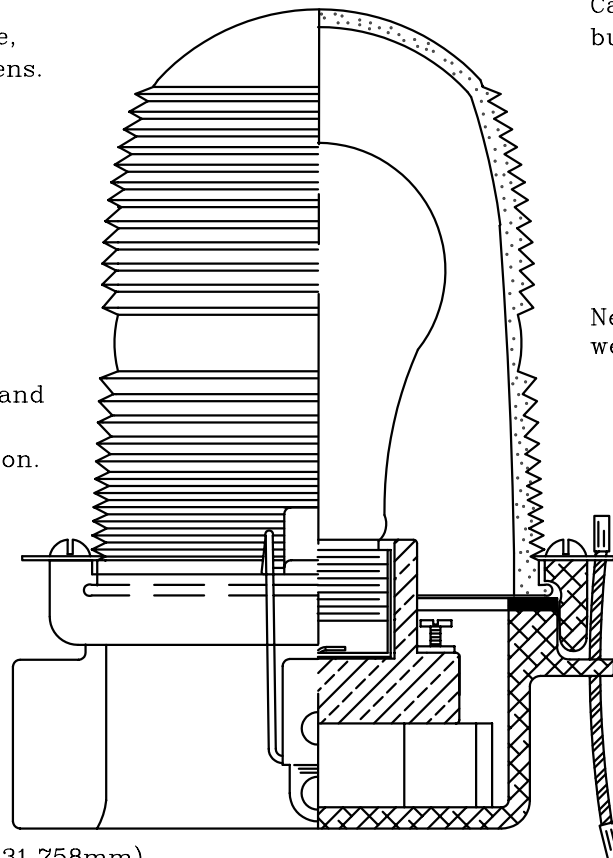
Our most popular light. The side hub allows for a straight run of conduit from the junction box for hook up.

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)

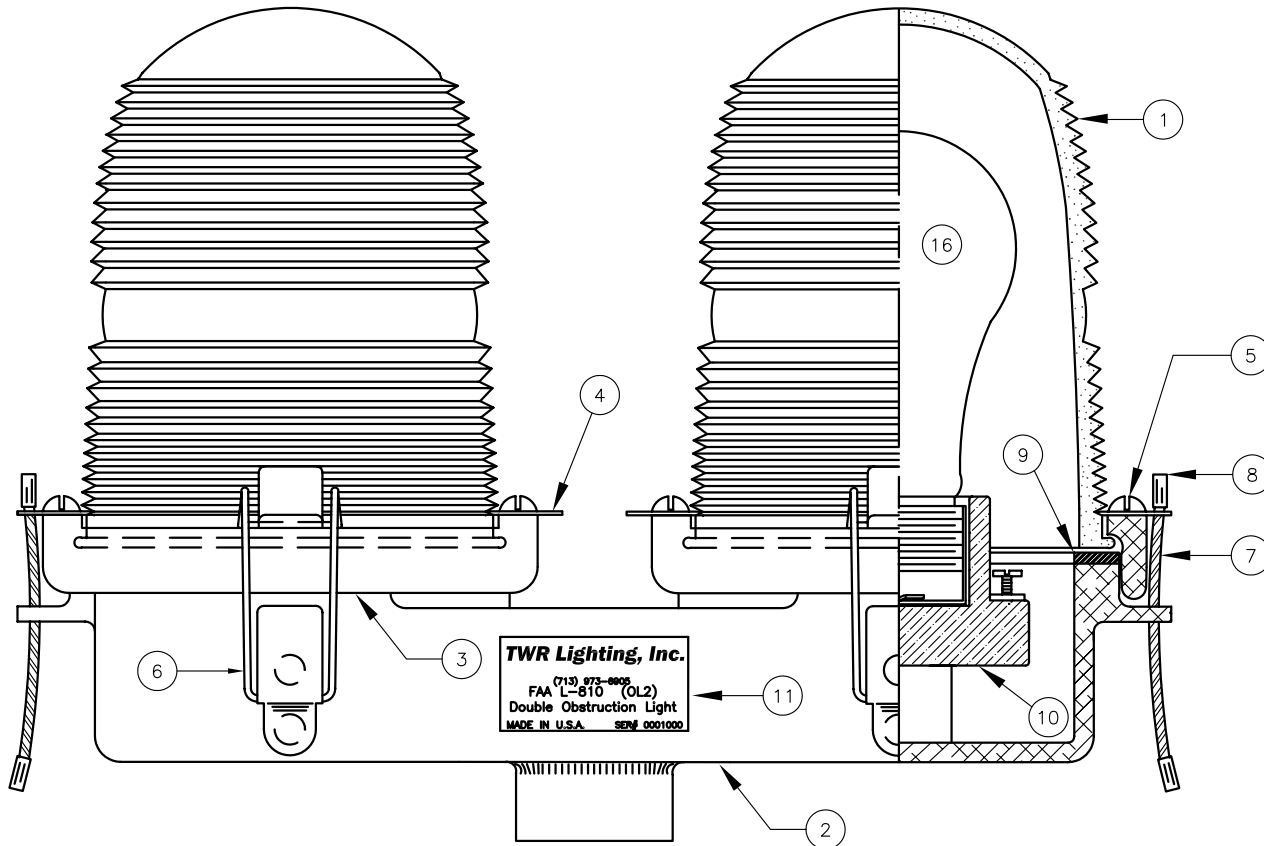
General Specifications

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

No special tools required for maintenance.

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	2	AP35222	RED SIDELIGHT GLASS
2	1	OL2C	DOUBLE SIDELIGHT BODY
3	2	106C	LENS HOLDER RING
4	4	12V245	OL LENS CLIP
5	4	832X14PH	8-32 X 1/4" PH S.S. SLOT
6	4	HC255SS	SIDELIGHT LATCHES
7	2	7X7SS	1/16 7 X 7 S.S. WIRE
8	4	A1A	STAKON CRIMP
9	2	OLG	OL GASKET
10	2	19062	SIDELIGHT RECEPTACLE
11	1	100324	OL2 SERIAL NUMBER LABEL
*	12	8	18PRSS 1/8 POP RIVETS
*	13	1	A314 3/4" CONDUIT LOCKNUT
*	14	4	104G WHITE TEFLON WASHER
*	15	4	832X34PH 8-32 X 3/4" S.S. PH SLOT
~	16	2	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.

OL2

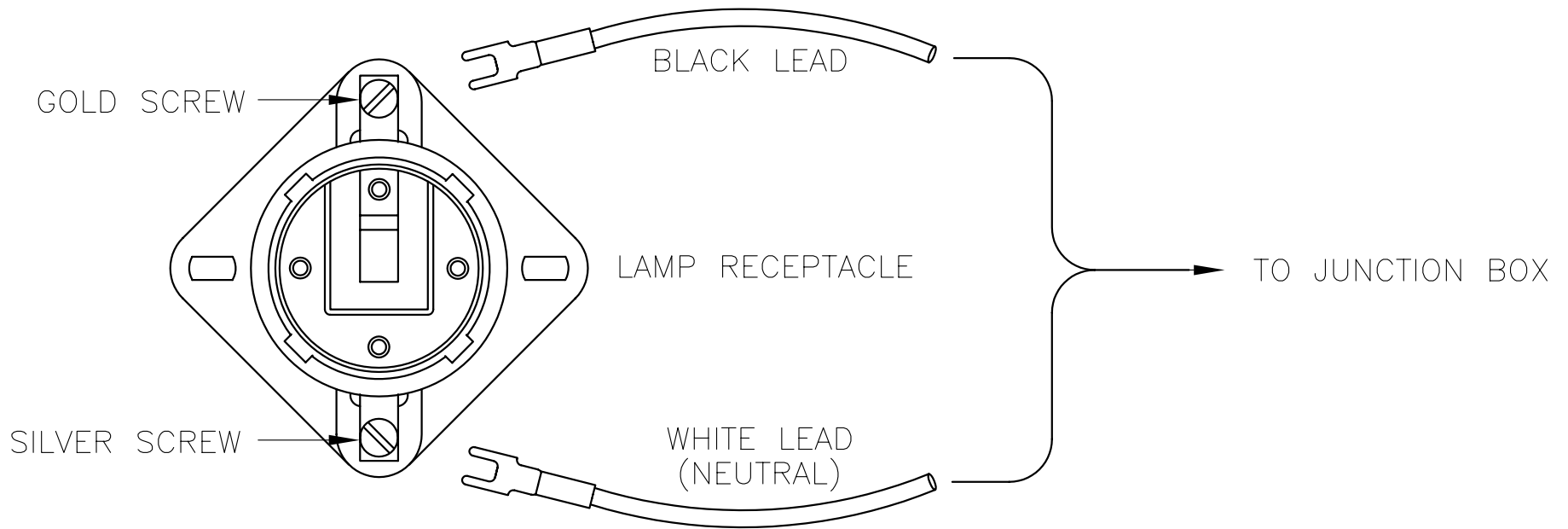
3/4" OL-2 SIDELIGHT
ASSEMBLY DETAIL (PART #OL2)

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY	E.A.SALAZAR	SHEET SIZE SHEET QTY. B 1 OF 1
DATE	10/30/96	SCALE N.T.S. DRAWING NO. 310

11/08/96 (A)	REVISED ITEM #15.#16
DATE:	LTR. REVISION

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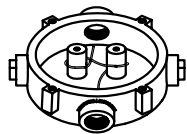
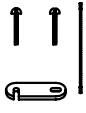
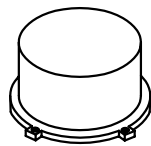
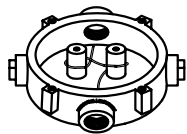
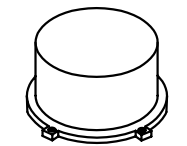
SIDELIGHT RECEPTACLE WIRING

TWR Lighting, Inc.

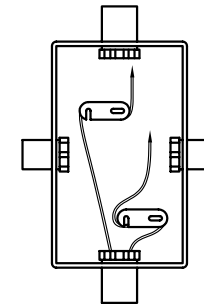
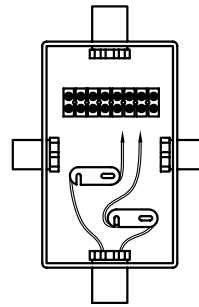
APP'D	ENGINEER	CHK'D BY	
DRAWN BY G.D.SEBEK		SHEET SIZE A	SHEET QTY. 1 OF 1
DATE 6/8/91	SCALE N.T.S.	DRAWING NO. 274-S	

7/2/98		GDS	CHANGED LABEL
DATE:	LTR.		REVISION

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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

TWR Lighting, Inc.

APP'D	ENGINEER	CHK'D BY
DRAWN BY	G.D.SFBEK	SHEET SIZE SHEET QTY. B 1 OF 1
DATE	7/26/93	SCALE N.T.S. DRAWING NO. 100089

9/29/00	(A)	UPDATED NOTES
DATE:	LTR.	REVISION

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