

# **TWR Lighting, Inc.**

*Enlightened Technology<sup>SM</sup>*

4300 WINDFERN RD #100 - HOUSTON TX 77041-8943

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

web: [www.twrlighting.com](http://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 # AA0MTSSLED2CIR

SERIAL # \_\_\_\_\_

PURCHASE DATE \_\_\_\_\_

PURCHASED FROM \_\_\_\_\_



# **TWR Lighting, Inc.**

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## **AA0MTSSLED2CIR CONTROLLER**

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## **AA0MTSSLED2CIR CONTROLLER**

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### **1.0 GENERAL INFORMATION**

The TWR Lighting, Inc. (TWR) Model AA0MTSSLED2CIR Controller is for applications for two (2) separate output circuits with two (2) through nine (9) L-810 single obstruction light fixtures.

The LED obstruction lights burn steady.

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, which is 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 230V AC.

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

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

**POWER FAILURE**                      Monitors 230V 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.

**LED OBSTRUCTION LIGHTS**  
Will give an alarm when one (1) of the group of LED sidelights fails.

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## **AA0MTSSLED2CIR CONTROLLER**

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### **2.0 INSTALLATION**

#### **2.1 MOUNTING THE CONTROL CABINET**

(Refer to Drawing 1267-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 1267-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.” 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, 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 1267-R)

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



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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 1267-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 230V 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 ground lug located to the right of TB2.

### **2.4 SIDELIGHT WIRING**

(Refer to Drawings 1267-R and T1178)

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.”

2.4.3 Connect the ground from the sidelights to the ground lug located to the left of the SL1, and SL2 circuit breakers.

### **2.5 SIDELIGHT ALARM WIRING**

(Refer to Drawings 1267-R and 1267-S)

2.5.1 Alarm relays K1, K2, and Modules M1, and M2 are provided for independent contact closures for: Power Failure, Lights “ON,” and LED Sidelight Burnout.

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**2.5.2 Alarm wiring:** To utilize all of the red light alarms, the customer will need four (4) pairs of wires to interface with the alarm device. One (1) wire from each of the four (4) pairs will terminate at the points marked common (c). The remaining wire from each pair will terminate as follows:

**SL1 Sidelight Burnout:** Connect to Module M1, terminal #18, for normally open (or) terminal #16, for normally closed monitoring.

**SL2 Sidelight Burnout:** Connect to Module M2, terminal #18, for normally open (or) terminal #16, 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.

**LED Sidelights** Trip circuit breaker on the controller panel.

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### **3.0 THEORY OF OPERATION**

#### **3.1 POWER SUPPLY**

230V AC enters the controller from the circuit breaker panel. Line sits at the 6390-FAA photocell waiting to be switched, and also keeps the power failure relay K1 energized. When the 6390-FAA 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 LED SIDELIGHTS**

Line (SSR) is also being sent to Modules M1, and M2, then to circuit breakers SL1, and SL2. Modules M1, and M2 are the current sensors for all of the LED sidelights. If one (1) LED sidelight within the group burns out, that particular module will detect it, which will cause a contact closure for LED sidelight alarm.

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### **4.0 MAINTENANCE GUIDE**

#### **4.1 RED OBSTRUCTION LIGHTING**

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

**TOOLS REQUIRED:** NONE

#### **4.2 L-810 LAMP REPLACEMENT**

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

#### **4.3 CONTROLLER**

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

#### **4.4 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**

<b>QUANTITY</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
1	6390-FAA (This replaces the 102FAA photocell)	120 – 240V Photocell
1	VJ1008HWPL1X004	Enclosure, NEMA 4x
2	PB27E122	Octal Sockets (K1 and K2)
6	8WA1204	Terminal Blocks (TB1 and TB2)
1	S261D1	1 amp Circuit Breaker (S)
2	8WA1808	End Stop
1	9KE240V	SPDT Relay (K1 and K2)
1	SSPIGTAIL	20' Photocell Pigtail
1	STJ01002	15 amp SPDT Switch (SW1)
1	RM4JA31MW	Current Sensor (M1)

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### **6.0 SUGGESTED SPARE PARTS LIST**

<b>QUANTITY</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
1	6390-FAA (This replaces the 102FAA photocell)	120 – 240V Photocell
1	9KE240V	SPDT Relay (K1 and K2)

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### **Warranty & Return Policy**

**TWR Lighting, Inc. (“TWR”) warrants its products (other than “LED Product”)** 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.

**TWR Lighting, Inc. (“TWR”) warrants its “LED Product”** against defects in design, material and workmanship for a period of five (5) years from the date of shipment. TWR, at its sole option, will, itself, or through others, repair, replace or refund the purchase price paid for “LED Product” that TWR verifies as being inoperable due to original design, material or workmanship. All warranty replacement “LED Product” is warranted only for the remainder of the original warranty of the “LED Product” replaced. Replacement “LED Product” will be equivalent in function, but not necessarily identical, to the replaced “LED Product.”

**TWR Lighting, Inc. (“TWR”) warrants its “LED Product”** against light degradation for a period of five (5) years from the date of installation. TWR, at its sole option, will, itself, or through others, repair, replace or refund the purchase price paid for “LED Product” that TWR verifies as failing to meet 70% of the minimum intensity requirements as defined in the FAA Advisory Circular 150/5345-43E dated 10/19/95. All warranty replacement “LED Product” is warranted only for the remainder of the original warranty of the “LED Product” replaced. Replacement “LED Product” will be equivalent in function, but not necessarily identical, to the replaced “LED Product.”

**Replacement parts (other than “LED Product”) 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
- **Non-OEM Parts**

**The use of non-OEM 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.**

**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 Service Representatives.

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## **AA0MTSSLED2CIR CONTROLLER**

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### **Warranty & Return Policy** (continued)

**Return Terms** – You must first contact our Customer Service Department at **713-973-6905** to acquire a Return Merchandise Authorization (RMA) number in order to return the product(s). Please have the following information available when requesting an RMA 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(s)
- The serial number(s) (if any)
- A description of the problem
- The billing information
- The Ship To address

**This RMA number must be clearly visible on the outside of the box.** If the RMA 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 RMAs must be received by TWR LIGHTING, INC., 4300 WINDFERN RD #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 product(s) returned by the customer. It is TWR's sole discretion to determine the disposition of the returned item(s).

**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 Merchandise Authorization (RMA) 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 unrepairable and covered under warranty - a credit will be issued to the customer's account.
- Product(s) 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.



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## **AA0MTSSLED2CIR CONTROLLER**

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### **Warranty & Return Policy** (continued)

**Repair & Return** – A Return Merchandise Authorization (RMA) 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 unrepairable, 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 PRODUCT(S) TO OPERATE FOR ANY TIME, AND ALL OTHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING ALL PERSONAL INJURY OR PROPERTY DAMAGE DUE TO ALLEGED NEGLIGENCE, OR ANY OTHER LEGAL THEORY WHATSOEVER. THIS WARRANTY IS MADE BY TWR EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED. WITHOUT LIMITING THE GENERALITY OF THE FORGOING, TWR MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS OF THE PRODUCT(S) FOR ANY PARTICULAR PURPOSE. TWR EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES.**

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## **AA0MTSSLED2CIR CONTROLLER**

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### **RETURN MATERIAL AUTHORIZATION (RMA) FORM**

**RMA#:** \_\_\_\_\_ **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**

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## **AA0MTSSLED2CIR CONTROLLER**

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### **RETURN MATERIAL AUTHORIZATION (RMA) FORM**

**RMA#:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**CUSTOMER:** \_\_\_\_\_

\_\_\_\_\_

**CONTACT:** \_\_\_\_\_ **PHONE NO.:** \_\_\_\_\_

**ITEM DESCRIPTION (PART NO.):** \_\_\_\_\_

\_\_\_\_\_

**MODEL NO.:** \_\_\_\_\_ **SERIAL NO.:** \_\_\_\_\_

**ORIGINAL TWR INVOICE NO.:** \_\_\_\_\_ **DATED:** \_\_\_\_\_

**DESCRIPTION OF PROBLEM:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

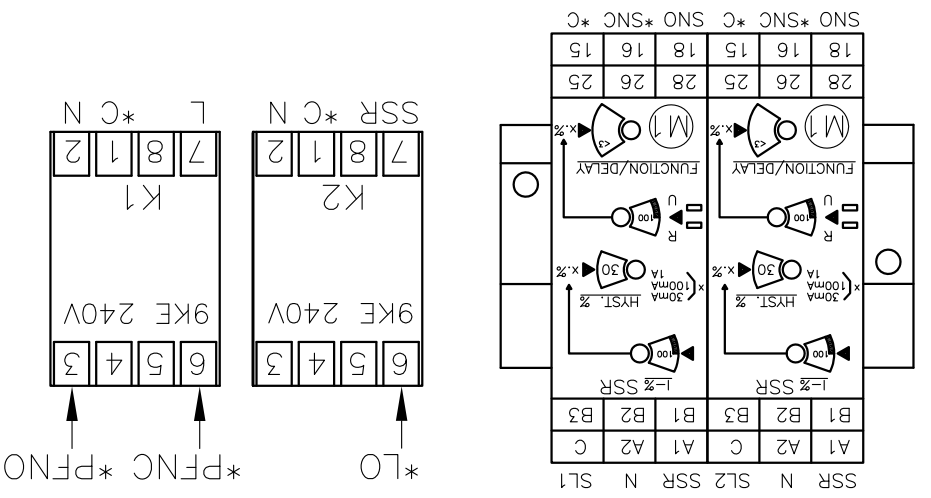
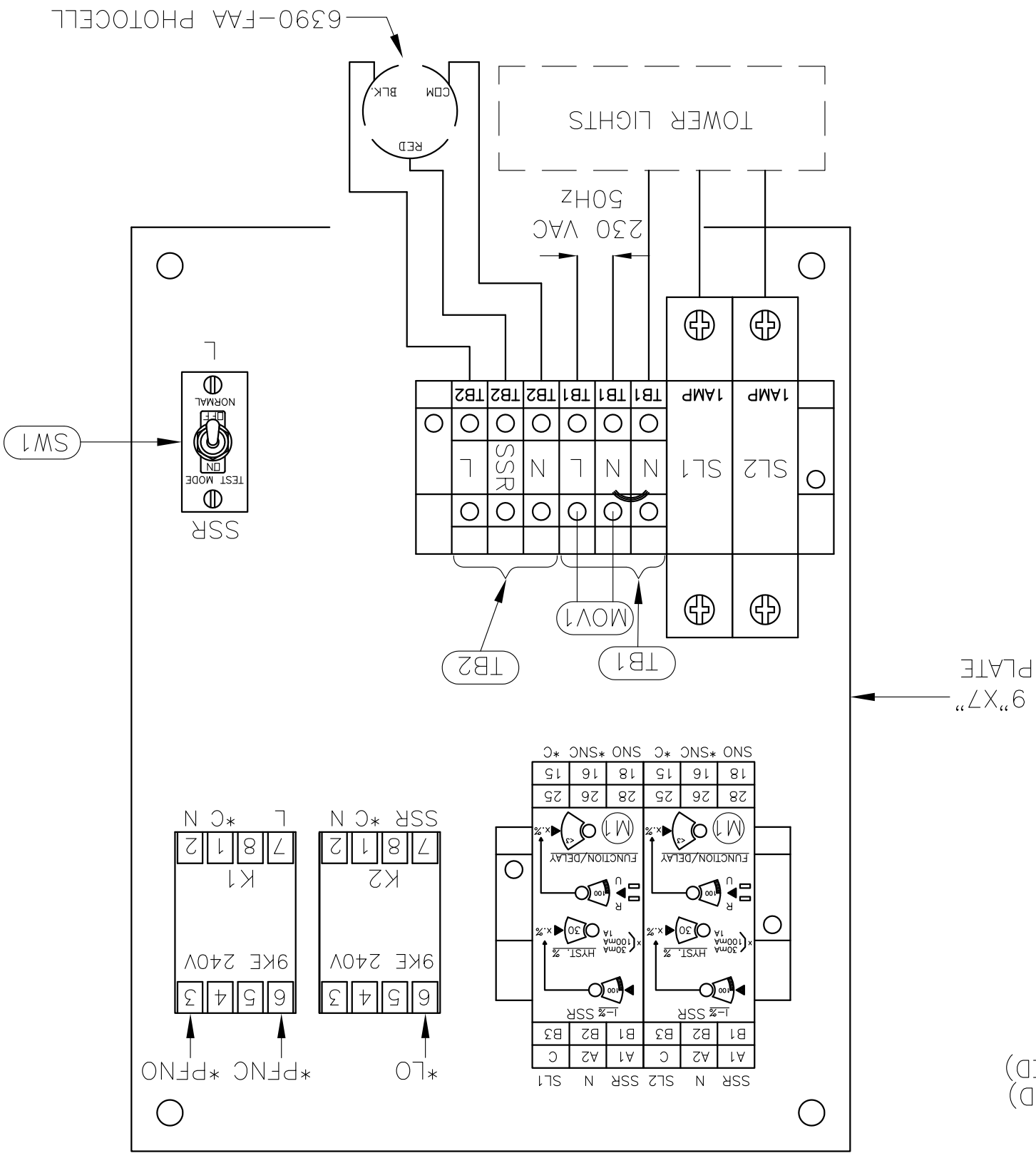
**SIGNED** \_\_\_\_\_ **DATE NEEDED** \_\_\_\_\_

**RETURN ADDRESS:** \_\_\_\_\_

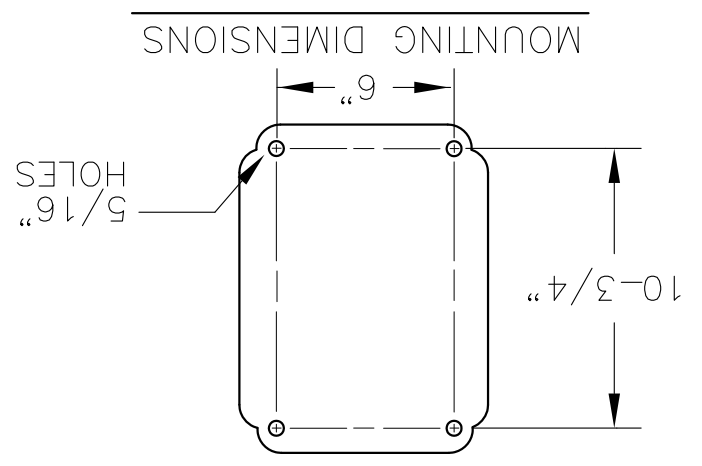
**RETURN PRODUCT TO: 4300 WINDFERN RD. #100 HOUSTON TX 77041-8943**



\*CUSTOMER ALARM POINTS  
 SNC=LED SIDELIGHT ALARM (NORMALLY CLOSED)  
 SNO=LED SIDELIGHT ALARM (NORMALLY OPEN)  
 C=ALARM COMMON  
 LO=LIGHTS "ON" INDICATOR  
 L0=POWERFAIL (NORMALLY CLOSED)  
 PFNC=POWERFAIL (NORMALLY OPENED)  
 PFNO=POWERFAIL (NORMALLY OPENED)



- NOTES:
1. PLUG 6390-FAA PHOTOCELL INTO 43109 TWIST LOCK RECEPTACLE AND TWIST TO LOCK.
  2. WIRES ARE CONNECTED LETTER TO LETTER. (EXAMPLE) N TO N...



AAOMTSSLED2CIR 230V CONTROLLER (TWO CIRCUITS)

App'D \_\_\_\_\_

CHK'D BY \_\_\_\_\_

ENGINEER \_\_\_\_\_

DRAWN BY E.A.SALAZAR

SHEET SIZE SHEET QTY. B 1 OF 1

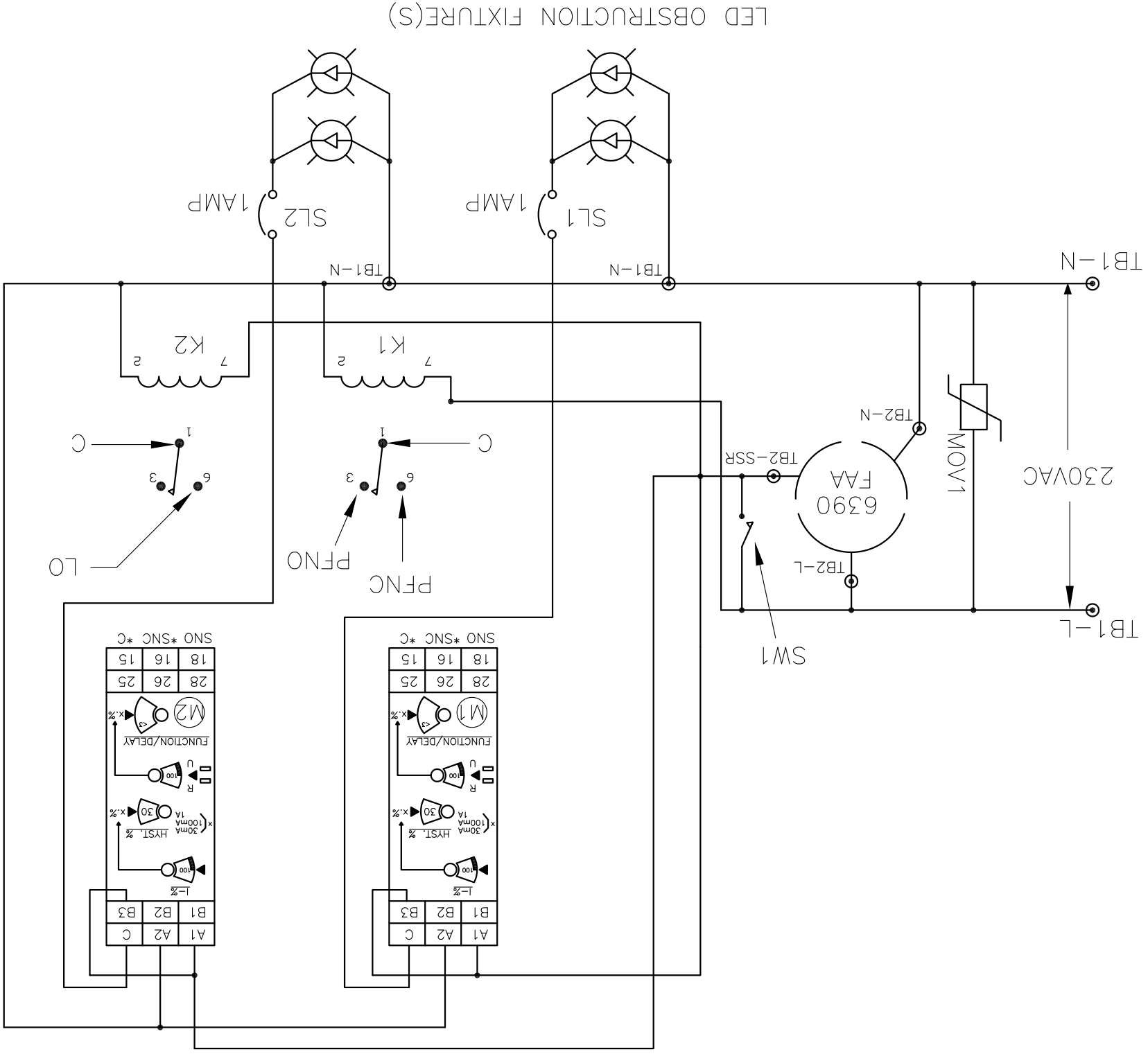
DATE 02/25/2011 SCALE N.T.S.

DWG. NO. 1267-R

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LED OBSTRUCTION FIXTURE(S)

AAOMTSSLED2CIR 230V SCHEMATIC  
(TWO CIRCUITS)

APP'D BY \_\_\_\_\_  
CHK'D BY \_\_\_\_\_  
ENGINEER \_\_\_\_\_  
**TWR Lighting, Inc.**  
*Enlightened Technology*

DRAWN BY E.A.SALAZAR  
SHEET SIZE B  
SHEET QTY. 1 OF 1  
DWG. NO. \_\_\_\_\_

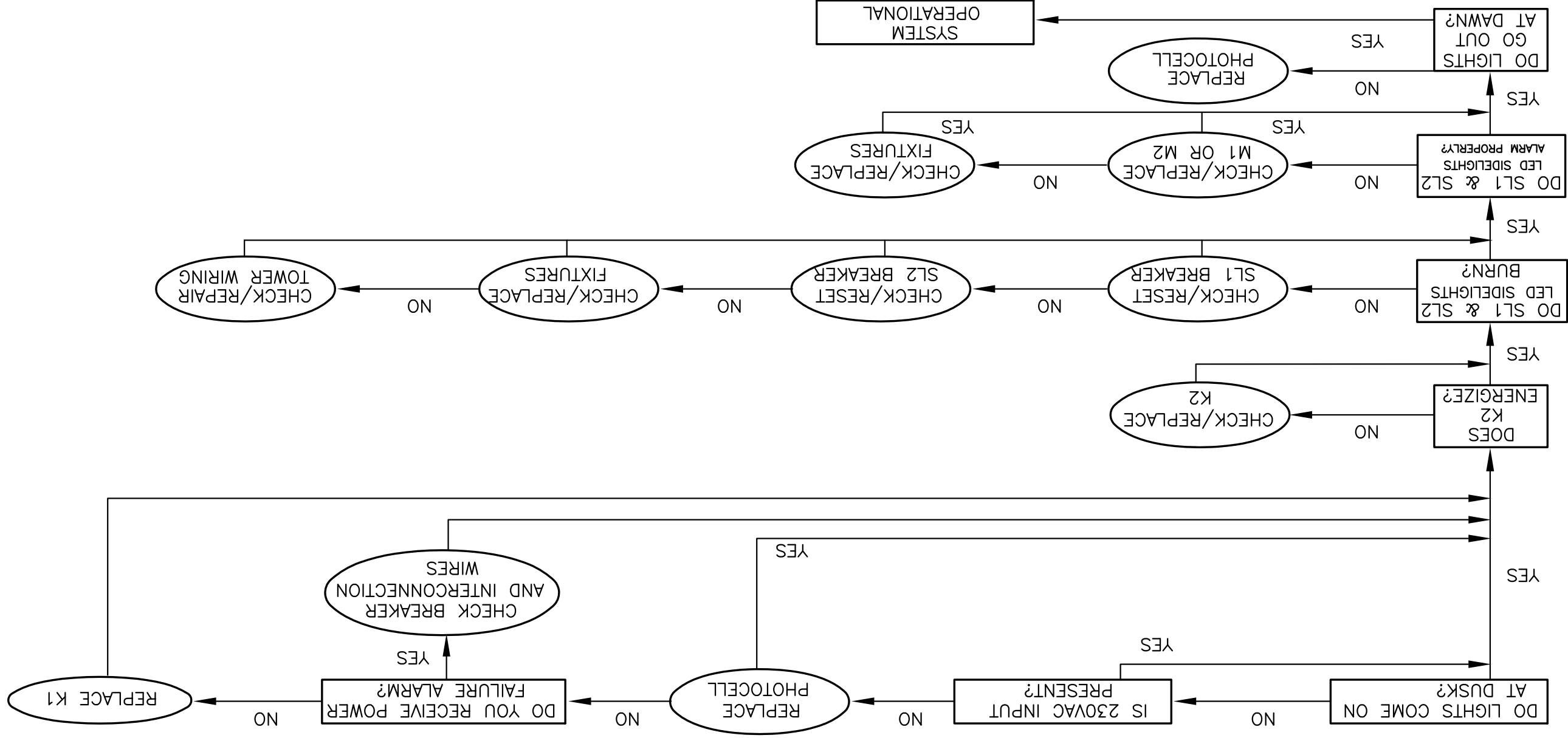
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SCALE N.T.S.  
1267-S

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NOTES:  
\* 1. NUMBER OF LAMPS MAY VARY FROM 2 TO 9 PER OUTPUT CIRCUIT.







**TROUBLESHOOTING FLOW CHART**  
**AAOMTSSLED2CIR DWR. #1267-R**

APP'D. BY \_\_\_\_\_  
 CHK'D BY \_\_\_\_\_  
 ENGINEER \_\_\_\_\_  
**TWR Lighting, Inc.**  
*Enlightened Technology*

DRAWN BY E.A.SALAZAR  
 SHEET SIZE B  
 SHEET QTY. 1 OF 1  
 DWG. NO. \_\_\_\_\_

DATE 02/25/2011  
 SCALE N.T.S.  
 1267-F

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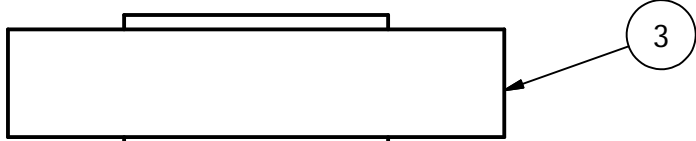
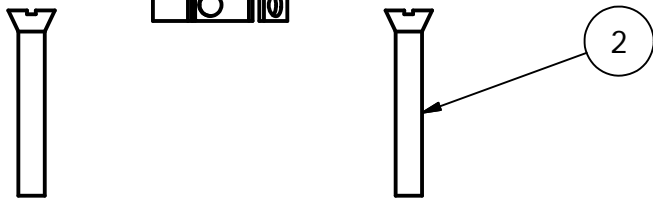
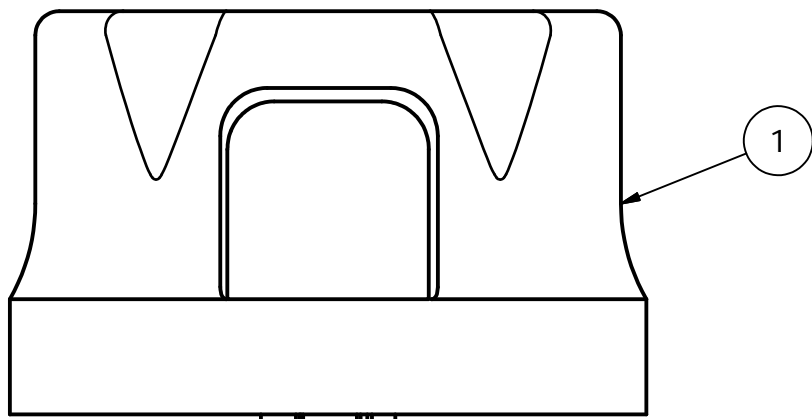
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2

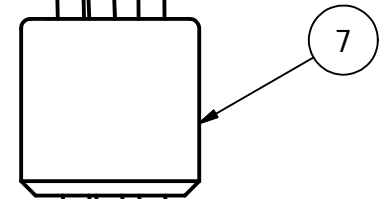
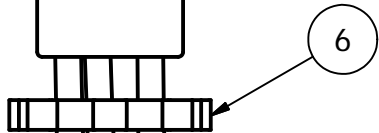
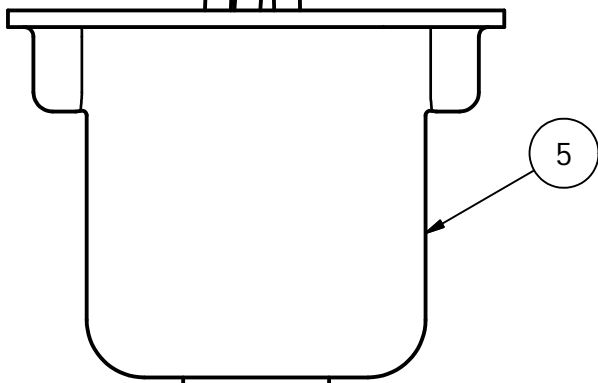
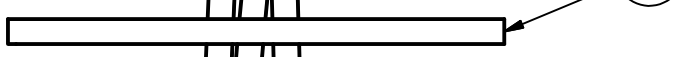
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PARTS LIST

ITEM	QTY	PART NUMBER
1	1	PHOTOCELL
2	2	6-32 x 1/2" SCREW
3	1	RECEPTACLE SOCKET
4	1	RECEPTACLE GASKET
5	1	RECEPTACLE HOUSING
6	1	1/2" CONDUIT LOCKNUT
7	1	3/4" TO 1/2" REDUCER



COM/N  
R/LO  
B/L

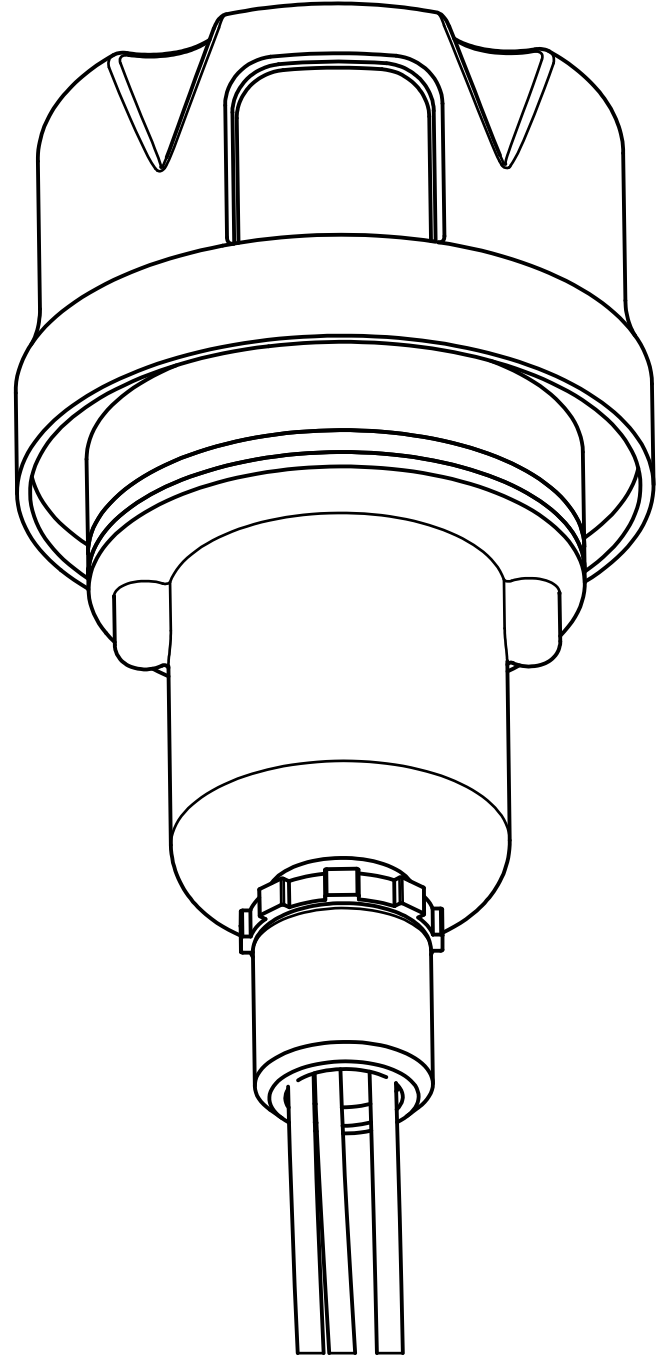


BLACK/L

RED/LO

WHITE/COM

EXPLODED VIEW



ASSEMBLY

NOTES:

1. ITEM #7 CAN BE USED TO REDUCE 3/4" CONDUIT TO 1/2" CONDUIT AT THE HOUSING OR AT THE CONTROLLER ITSELF.
2. 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
3. WIRE CONNECTIONS ARE TO BE TINNED AT ITEM 3.

DRAWN	vhernandez	10/18/1995
CHECKED		
QA		
MFG		
APPROVED		

**TWR Lighting, Inc.**  
*Enlightened Technology®*

TITLE			
PHOTOCELL HOUSING DETAIL			
SIZE	DWG NO	REV	
B	100239	E	
SCALE	1/1		SHEET 1 OF 1

4

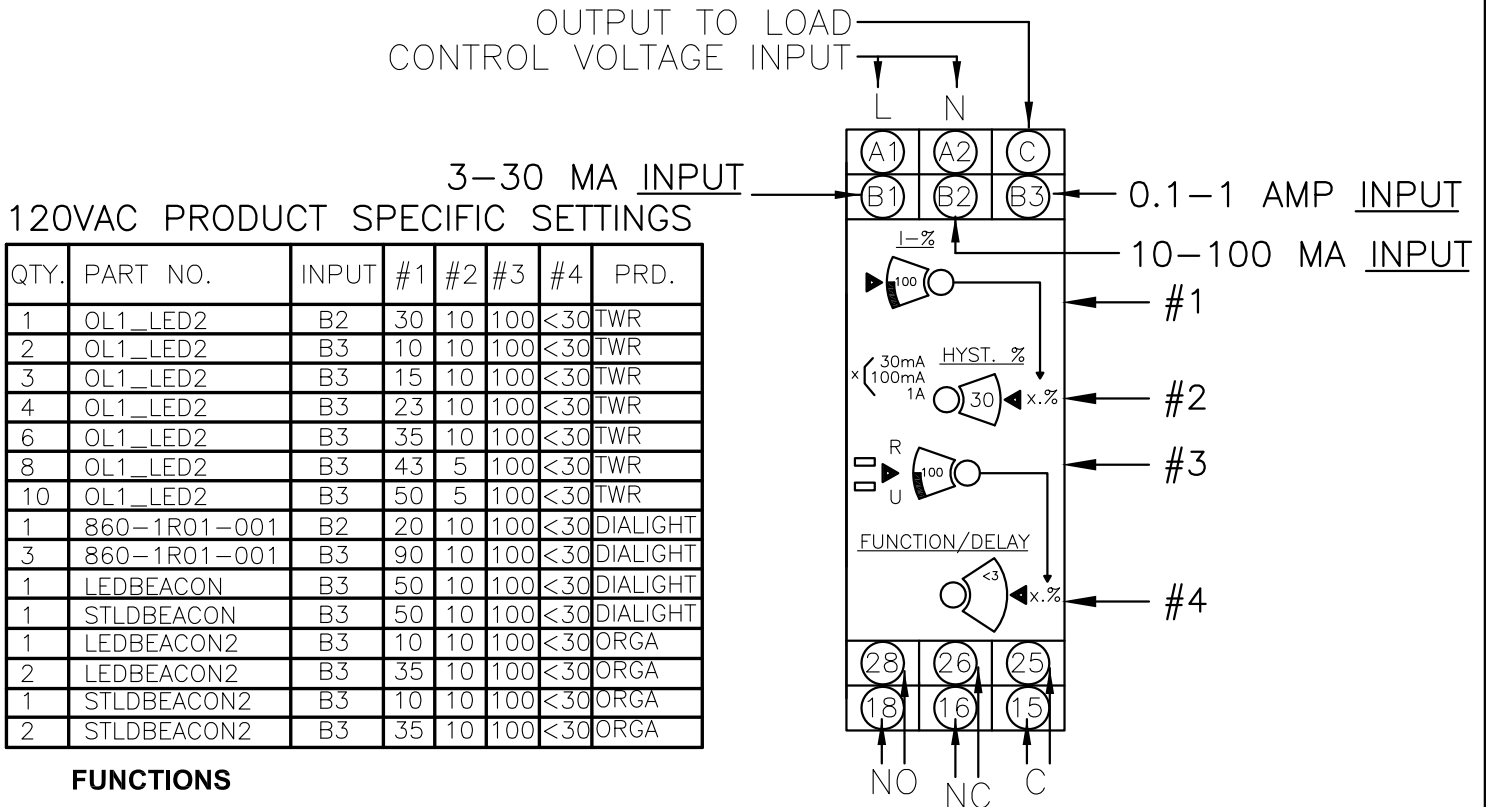
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# AC UNITS CURRENT MEASUREMENT—RM4JA31M



## 120VAC PRODUCT SPECIFIC SETTINGS

QTY.	PART NO.	INPUT	#1	#2	#3	#4	PRD.
1	OL1_LED2	B2	30	10	100	<30	TWR
2	OL1_LED2	B3	10	10	100	<30	TWR
3	OL1_LED2	B3	15	10	100	<30	TWR
4	OL1_LED2	B3	23	10	100	<30	TWR
6	OL1_LED2	B3	35	10	100	<30	TWR
8	OL1_LED2	B3	43	5	100	<30	TWR
10	OL1_LED2	B3	50	5	100	<30	TWR
1	860-1R01-001	B2	20	10	100	<30	DIALIGHT
3	860-1R01-001	B3	90	10	100	<30	DIALIGHT
1	LED BEACON	B3	50	10	100	<30	DIALIGHT
1	STLDBEACON	B3	50	10	100	<30	DIALIGHT
1	LED BEACON2	B3	10	10	100	<30	ORGA
2	LED BEACON2	B3	35	10	100	<30	ORGA
1	STLDBEACON2	B3	10	10	100	<30	ORGA
2	STLDBEACON2	B3	35	10	100	<30	ORGA

## FUNCTIONS

- 1 Adjustment of current threshold as % of setting range. ±5%
- 2 Hysteresis adjustment from 5 to 30 % ▲.
- 3 Fine adjustment of time delay as % of setting range max. value.
- 4 10-position switch combining
  - selection of the timing range: 1 s, 3 s, 10 s, 30 s, no time delay.
  - selection of overcurrent (>) or undercurrent (<) detection. See table below.
- R Yellow LED: indicates relay state (Off for de-energized relay, On for energized).
- U Green LED: indicates that supply to the RM4 is present.

<b>Overcurrent Control</b>	<b>Overcurrent or Undercurrent Control</b> ■	<b>Measuring Range</b>
Yes	Yes	3 MA - 1,000 MA

## Detailed Positions for Switch 4

Switch Position	Function	Time Delay (t)
< 0	Undercurrent detection	No time delay
< 1	Undercurrent detection	0.05 to 1 s
< 3	Undercurrent detection	0.15 to 3 s
< 10	Undercurrent detection	0.5 to 10 s
< 30	Undercurrent detection	1.5 to 30 s
> 0	Overcurrent detection	No time delay
> 1	Overcurrent detection	0.05 to 1 s
> 3	Overcurrent detection	0.15 to 3 s
> 10	Overcurrent detection	0.5 to 10 s
> 30	Overcurrent detection	1.5 to 30 s

- = Selection by switch on front face
- ▲ = Value of current between energization and de-energization of the output relay (% of the current threshold to be measured).

\*Due to current draw tolerances slight adjustments to setting #1 may be needed for proper alarming.

Sign: \_\_\_\_\_



**BILL OF MATERIALS**

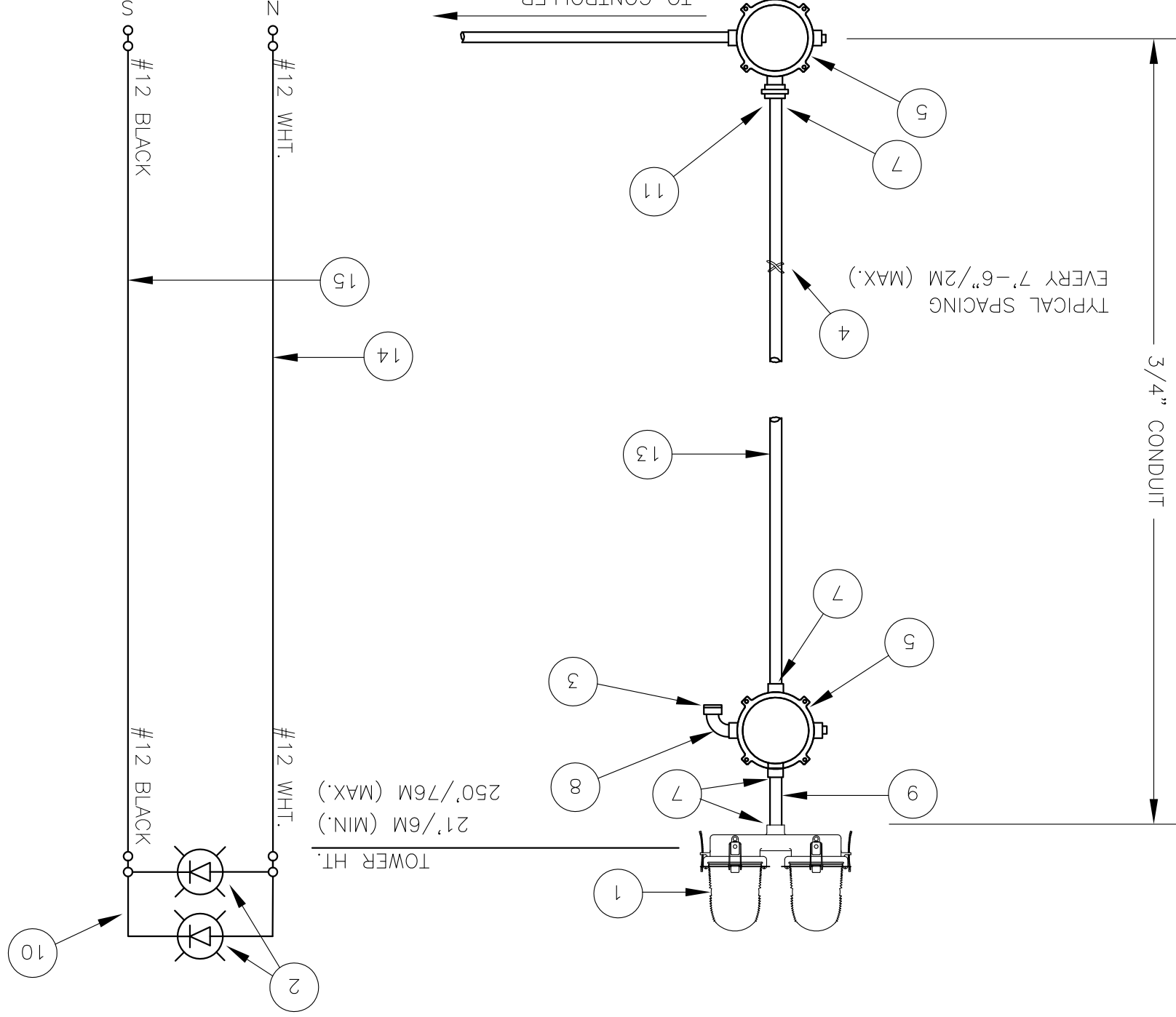
ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	0L2LED	DOUBLE OBSTRUCTION LIGHT
2	--	--	---
3	2	5012902	BREATHER
4	1	SS10012	WRAPLOCK
5	2	JB5	3/4" JUNCTION BOX
6	1	PIPDOP	4 oz. PIPE DOPE
7	5	A314	3/4" CONDUIT LOCKNUTS
8	2	EL3490	3/4" 90° SHORT ELBOW
9	1	N3414	3/4" X 4" CONDUIT NIPPLE
10	1	0L2PIGTAILG	18" 0L2 PIGTAIL WITH GROUND
11	2	UNY205	3/4" UNION
12	1	AA0M	AA0M 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	--	12THHNWHT	#12 THHN WHT. WIRE (TWR HT.+40'/12M)
15	--	12THHNBLK	#12 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.



**TOWER WIRING AND ASSEMBLY**

AA0M TOWER LIGHTING KIT (TOWERS 21'/6M TO 250'/76M)		PROD DEPT	SERV DEPT	ENGINEER
<b>TWR Lighting, Inc.</b> <i>Enlightened Technology</i>				
DRAWN BY E.A.SALAZAR		DATE 10/21/04		
SCALE N.T.S.		DWG. NO. T1178		
DATE 06/01/2009		CHG. CONTROLLER		
DATE: 06/01/2009		LTR. REVISION		

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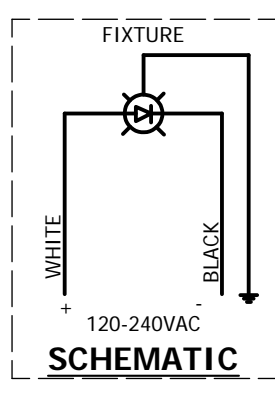
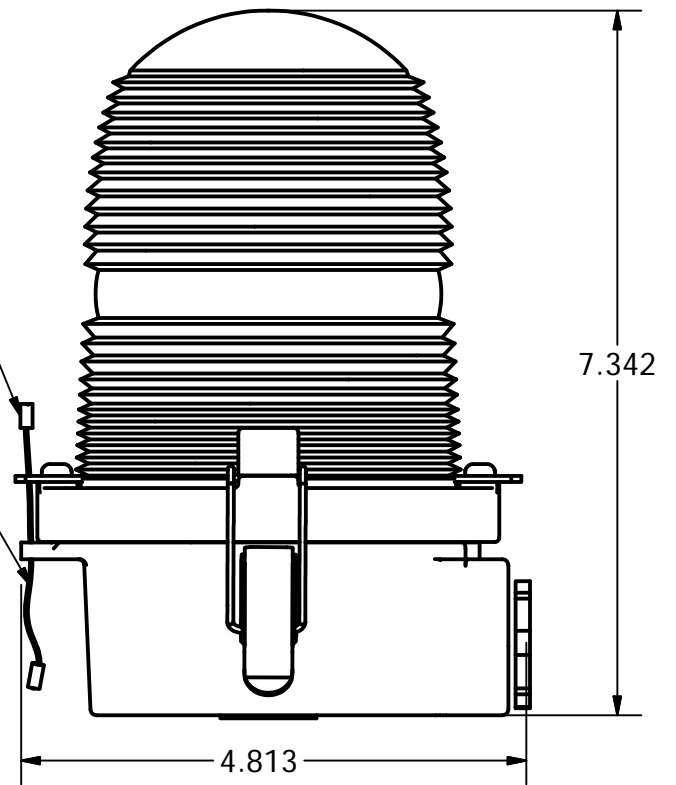
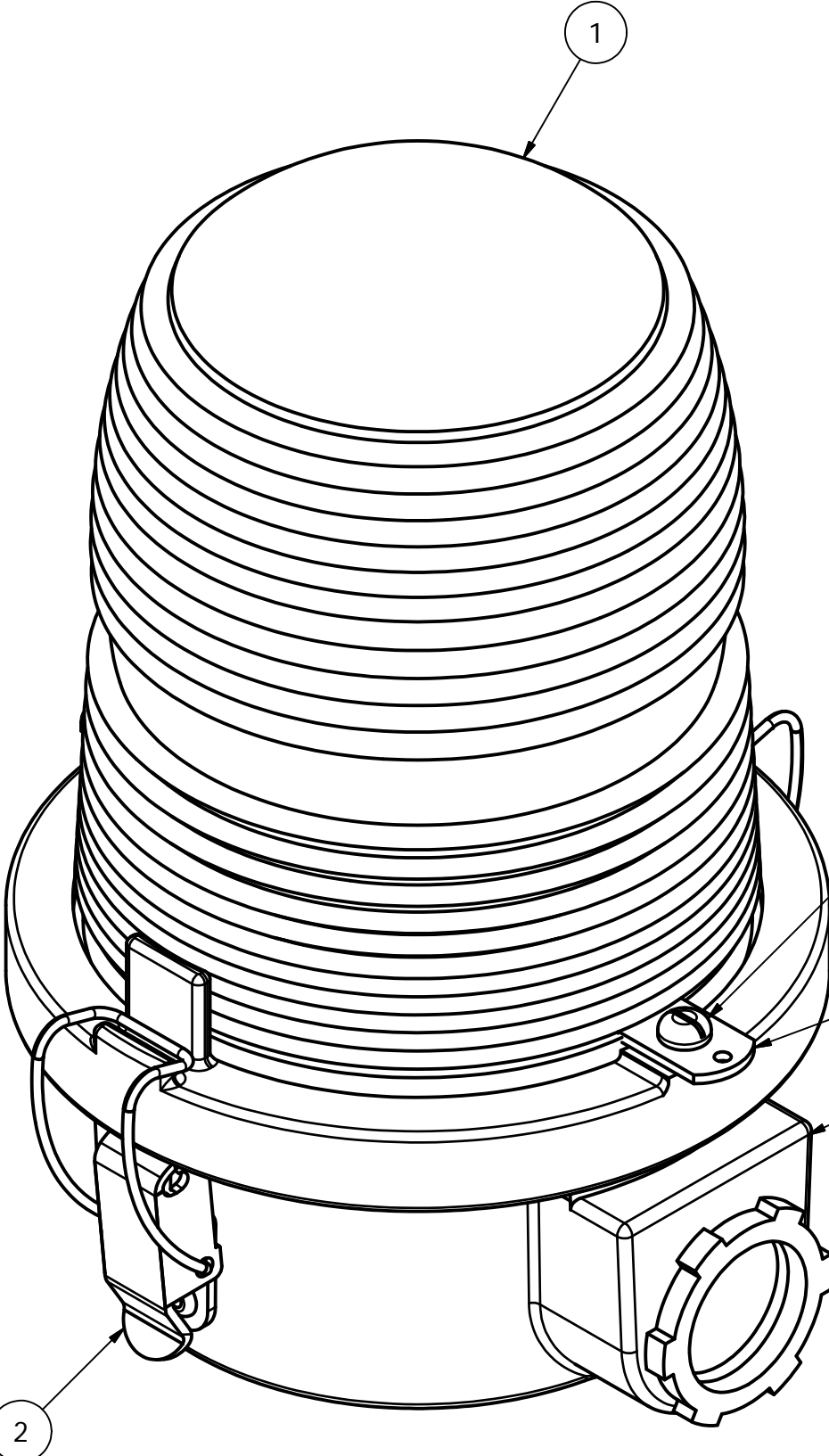
Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	OL1VLED2	L810 OBSTRUCTION LIGHT
* 1.1	1	100588_RE	OL 6LED BASE PLATE
* 1.2	1	100591	OL 6LED STAR DISK
* 1.3	1	100680	OL1/2 SERIAL # LABEL
* 1.4	1	A10290	5/32" ID RUBBER GROMMET
* 1.5	6	STD05008	LED LAMP
* 1.6	1	OLG	OL GASKET
* 1.7	1	AP100846	SIDELIGHT LENS CLEAR ACYRLIC
* 1.8	1	106V	LENS HOLDER RING
* 1.9	6	STE01-047	LED VERTICAL PCB
* 1.10	16	18PRSS	1/8 X .45 SS POP RIVET
* 1.11	1	PS90-260/24	POWER SUPPLY
* 1.12	1	20RED	#20AWG RED BELDON WIRE
* 1.13	2	WIRENUTBLU	BLUE WIRE NUT
2	2	HC255SS	SIDELIGHT LATCH
3	1	7X7SS	1/16 HOL 7X7 S.S. WIRE
4	2	12V245	OL LENS CLIP
5	1	105V	SINGLE SIDELIGHT BODY
6	2	832X14PH	8-32 X 1/4 PH SS SLOT SCREW
7	2	A1A	STAKON CRIMP
8	1	A314	3/4" CONDUIT LOCKNUT GALV.

\* = ITEMS NOT SHOWN

B

B



\* GROUND WIRE MUST BE CONNECTED TO PROPERLY PROTECT POWER SUPPLY. FAILURE TO GROUND WILL VOID ALL WARRANTIES.

A

A

DRAWN	gsebek	8/18/2004
CHECKED		
QA		
MFG		
APPROVED		

<b>TWR Lighting, Inc.</b> <i>Enlightened Technology®</i>		
TITLE OL1VLED2 120-240VAC FAA-OL16LED (L810 OBSTRUCTION LIGHT)		
SIZE B	DWG NO 100656i_RC	REV C
SCALE	SHEET 1 OF 1	

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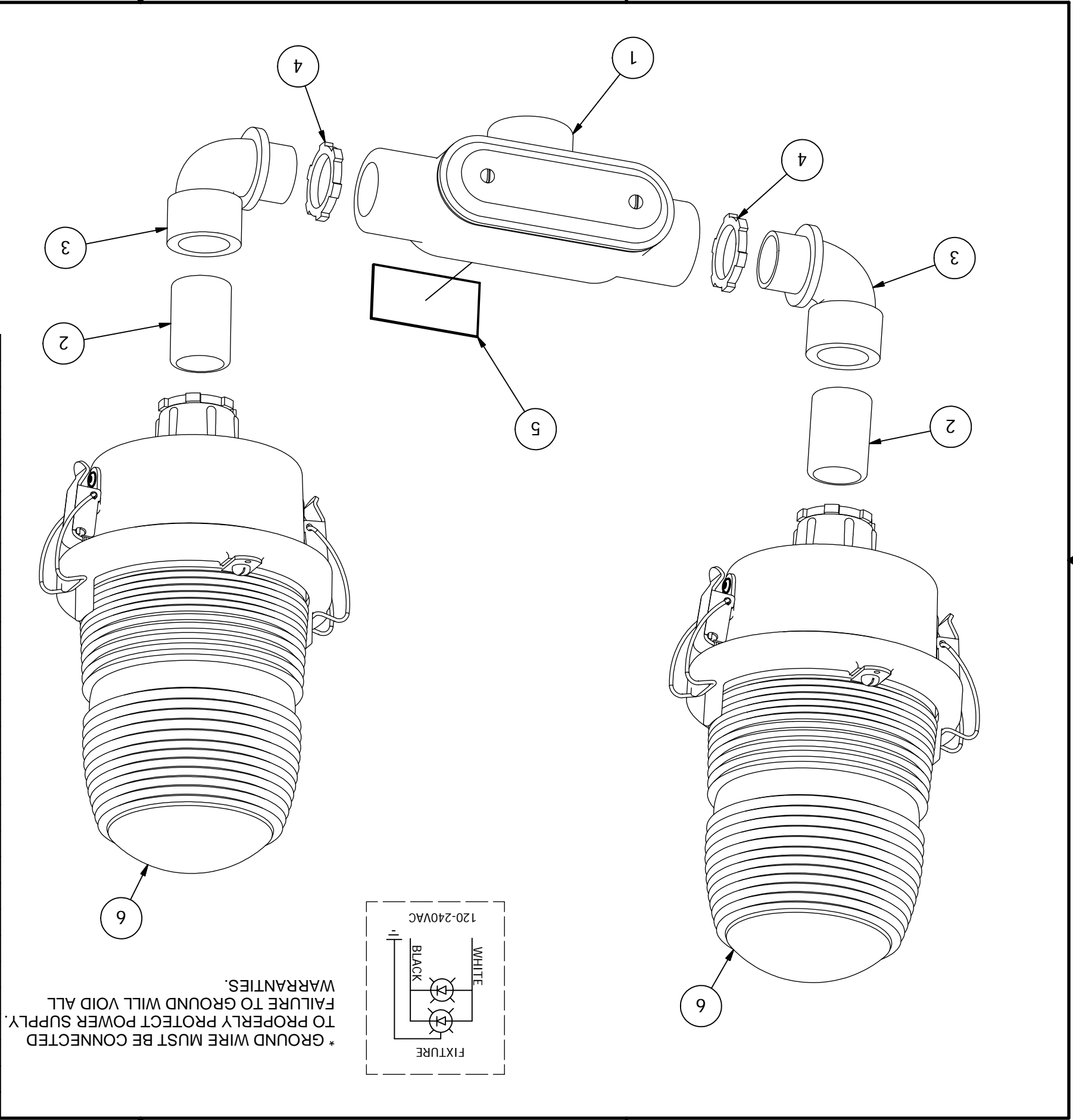
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ITEM	STOCK NUMBER	QTY	DESCRIPTION
1	T27CG	1	T27 CONDULET W/COVER & GSKT
2	34CLNP	2	3/4" GALV CLOSE NIPPLE
3	EL3490	2	3/4" 90 DEGREE SHORT ELBOW GALV
4	A314	3	3/4" CONDUIT LOCKNUT GALV.
5	100680	1	OL1/2 LED SERIAL # LABEL
6	OL1VBH34LED2	2	FAA OL16LED 120/240VAC VALOX LED BH SL 3/4
6.1	* 105RV	1	VALOX SINGLE SIDELIGHT BODY
6.2	* 106V	1	VALOX LENS HOLDER RING
6.3	* HC255SS	2	SIDELIGHT LATCH
6.4	* OLG2	1	OL1 6 LED GASKET
6.5	* 18PRSS	16	1/8 X .45 SS POP RIVET
6.6	* 7X7SS	.5	1/16 HOL 7X7 S.S. WIRE
6.7	* A1A	2	STAKON CRIMP
6.8	* A314	1	3/4" CONDUIT LOCKNUT GALV.
6.9	* 12V245	2	OL LENS CLIP
6.10	* 832X14PH	2	8-32 X 1/4" PH SS SLOT SCREW
6.11	* AP100846	1	SIDELIGHT LENS CLEAR ACRYLIC
6.12	* PS90-260/24	1	POWER SUPPLY
6.13	* STE01-047	6	LED VERTICAL PCB
6.14	* 100588	1	OL 6LED BASE PLATE
6.15	* 100591	1	OL 6LED STAR DISK
6.16	* STD05008	6	LED EMITTER
6.17	* A10290	1	5/32" X 11/32" RUBBER GROMMET
6.18	* 632X14PHH	3	6-32 X 1/4" PH PH SCREW
6.19	* 20RED	.3	#20AWG RED BELDON WIRE
6.20	* 14GREEN	1	#14AWG GREEN BELDON WIRE
6.21	* 14RB6R	1	RING TERMINAL (GROUND WIRE)
6.22	* WIRENUTRED	3	RED WIRE NUT FOR #8 TO #12 WIRE

\* = ITEMS NOT SHOWN

SCALE	
SIZE	B
DWG NO	100658_RC
REV	C
APPROVED	
MFG	
TITLE	OL2VLED2 FAA-OL16LED 120-240VAC DOUBLE VALOX LED SL (L810 LED DOUBLE OBSTRUCTION LIGHT)
QA	
CHECKED	gsebek
DATE	6/9/2005
<b>TWR Lighting, Inc.</b> <i>Enlightened Technology</i>	



A

A

B

B

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SHEET 1 OF 1

Parts List

