

Signal Tower
Type : WME-A

INSTALLATION MANUAL

Notice to Customer

Thank you very much for purchasing our PATLITE product.

- Request the installation and wiring be performed by a professional contractor if construction work is involved.
- Prior to installation, read this manual thoroughly before using this product to ensure correct use.
- After reviewing this manual, if there are any questions regarding this product, please contact the nearest PATLITE office listed on the back cover of this manual.

Notice to Contractor

- Read this manual carefully prior to installation.
- Be sure to return this manual to the customer.

Safety Precautions

In order to prevent any damage to the user and other personnel or to assets, note the following:

- The following symbols classifies the following precautions into two categories and explains the level of harm inflicted when caution is disregarded while using this product.

<p>WARNING</p>	Indicates an immediately dangerous condition: failure to follow the instructions may lead to death or serious injury.	<p>CAUTION</p>	Indicates a potentially dangerous condition: failure to follow the instructions may lead to slight injury or property damage.
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1 Safety Precautions

Safety Precautions

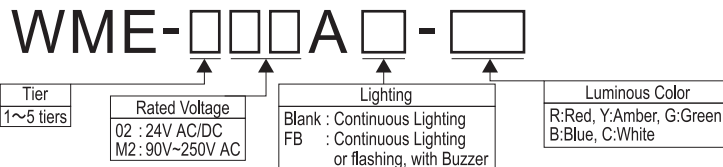
WARNING

- Make sure the power is off before wiring, repairing, or replacing parts to avoid a short-circuit, electric shock, or burn.
- Please use this product in a properly maintained condition.
(If parts such as the Head Cover or LED Unit are damaged, they should be repaired.)
- Do not use this product with the lens damaged or removed, or without the head cover in order to avoid an electric shock.
- If installing this product requires construction work, please ask a specialist in order to avoid electric shock, fire, or personal injury.
- When this product is used for security purposes, it should be inspected daily. In case a malfunction should occur, it is recommended that you use this product together with other security products.
- Do not use this product to support your weight while climbing onto a machine. Mount the product so that it is clear of any moving parts - such as a machine cover.

CAUTION

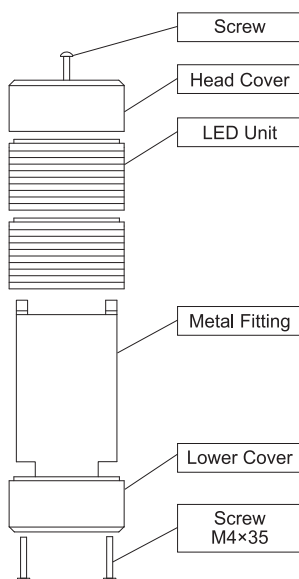
- Concerning replacement parts, such as LED unit, bulb or fuse, be sure to use those specified in this manual.
- For safety, make sure to connect an external fuse to the power source as shown in the wiring example.
- Do not substitute parts from other products as this may cause a breakdown.

2 Model Number Configuration

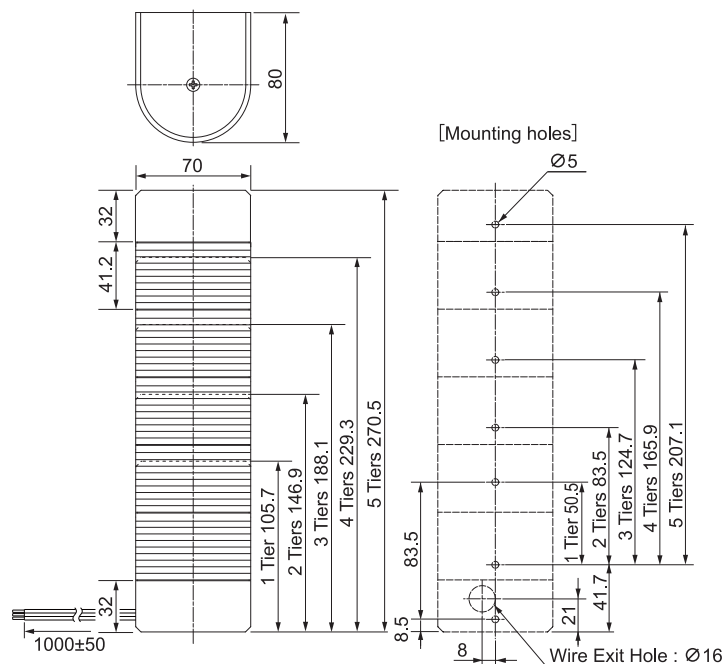


3 Part Names and Outer Appearance

Parts Names



Dimensions



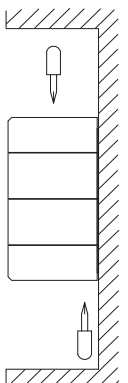
4 Installation

⚠ CAUTION

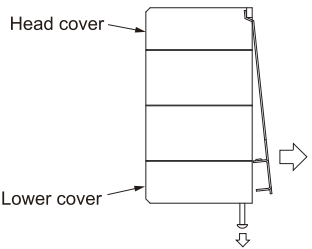
- The following requirements are necessary for proper installation.
 - Install where no excessive vibration is present.
 - Install on a strong surface.
- This product can only be used indoors. (Do not use it outdoors.)
- Use a soft cloth moistened with water when the LED Unit or Body must be cleaned up. (Do not use thinner, benzene, gasoline or oil.)

How to Install

- Drill mounting holes in the wall for L-bracket installation, or in the panel for direct mount installation.
 - Secure the Metal Fitting with hex bolts and hex nuts (not supplied).
- ※ With buzzer models, the alarm can be heard best from the front direction. Therefore, make sure the Signal Tower is facing the correct direction before installation.

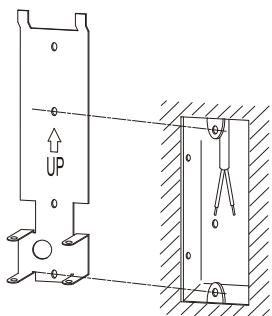
1 

※When the unit is installed on a recessed wall, leave enough space for screwdriver access at both ends as shown in the diagram above.

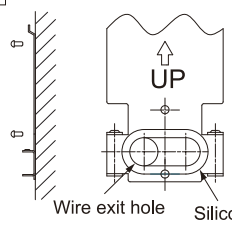
2 

• Use the Metal Fitting as a template to position the mounting holes on the wall in accordance with the installation dimensions diagram.

• Remove the Metal Fitting from the unit by removing the 2 screws from the bottom of the lower cover.

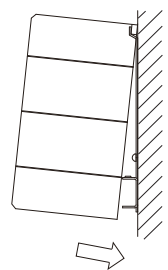
3 

※As shown in the above diagram, the Metal Fitting and wiring can be installed in a junction box (UL listed 3.5/16" pitch or JIS C8336 83.5mm pitch). However, the unit will not be water-tight.

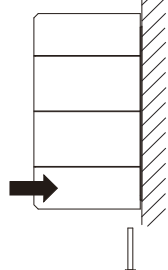
4 

• Mount the Metal Fitting on the wall. Make sure the Metal Fitting is correctly oriented, with the ^ UP mark on the bracket pointing in the direction of the head cover. Use two 4 mm screws to install the Metal Fitting.

• When the unit must be watertight, apply silicone rubber or an equivalent sealant between the wall and Metal Fitting at the wire exit hole.

5 

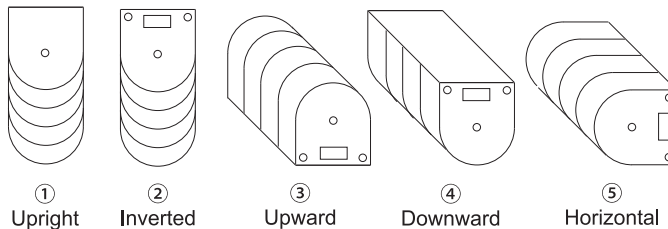
• Hook the rear of the head cover to the 2 pins of the upper bracket, push the lead wires through the thru hole, taking care not to pinch the wires. Then push the unit snug against the bracket.

6 

• Install and tighten the two screws (M4 x 35) removed in step [1] at the bottom of the lower cover. Pressing lightly in the direction indicated by the arrow will make it easier to insert the screws.

Direction	① Upright	② Inverted	③ Upward ④ Downward ⑤ Horizontal
Type			
WME-A	○	×	○
WME-AFB	○	×	△

○:Possible, △:Possible only at the place where water is not splashed with, ×:Impossible



5 Wiring

⚠ CAUTION

- Make sure the power is OFF before wiring. A short circuit may damage internal circuits or cause an electric shock.
- Enough attention shall be paid for wiring because if there is any mistakes in wiring a circuit may break down.
- Install the external contact fuse on the power supply side as shown in the wiring example in order to prevent burn in case of a wiring error.
- [90V~250V AC Type] Do not apply voltage directly to signal wires and common wires. It may damage the circuit.
- Do not apply voltage directly to the brown wire. It may cause a breakdown, (FB type)
- Do not pull out the lead wire or push it into the pole or the body.

Caution

- Simultaneously turning on the external contact for both constant lighting and flashing for the same light (color), may cause another light (color) to light up. To avoid this, provide separate switches for flashing or continuous lighting.
- When turning on the same function, such as flashing or alarms, for more than one product simultaneously, be sure to use separate external contacts for each product and function.
- When using both alarm sounds on one product, use separate contacts for the alarms and the lights.

How to perform wiring

- Turn the power OFF.
- Make wiring connection according to wiring example.
 - When wiring 5 layers or less, please make wiring connection by increasing or decreasing external contacts in each layer according to wiring example.
- When using LED units of the same color, calculate the contact current capacity to be equal to the number of the LED units multiplied by the contact capacity for 1 light. (This is because current passes through one signal line for the LED units of the same color.)
- When wiring is completed, insulate the end of each unused lead wire with insulation tape.
- Any questions regarding applications for multiple units, or other special operations, contact your nearest PATLITE Sales Representative before wiring. [To be recognized as a UL standard.]
- Fuse for protection of external contact should be installed within 305mm from the connected point of the power source wire.
- Use a "Class 2 Circuit" for the power supply source (Type:24V DC) and be sure to use the fuse and fuseholders authorized by UL, Inc.
- Use the fuse conforming to the rated current of the machine which the product was installed on. (Example : Class J type fuse)
- For the 90V~250V AC Type, connect the green/yellow lead wire to ground.

Wire Color Table

LED Unit

Luminous Color	Wire Color
Red	Red
Amber	Orange
Green	Green
Blue	Blue
White	White

Buzzer (FB Type)

Buzzer	Wire color
Buzzer1: Continuous	Purple
Buzzer2: Intermittent	Skyblue

- ※ Lead wires are only included with the flashing/buzzer option.
- ※ Buzzer 1 is priority when connected simultaneously to common with buzzer 2.

External Contact Capacity

External Contact (Transistor) Capacity

Voltage Specifications		24V AC/DC	90V~250V AC
LED Unit (Per Light)	Current Consumption	Red:22.6mA, Amber:26.6mA, Green:15.7mA, Blue·White:29.8mA	
	Contact Capacity	$I_s \geq 100\text{mA}$, $V_s \geq 35\text{V DC}$	
Buzzer	Current Consumption	40mA	
	Inrush Current	250mA	
	Contact Capacity	$I_s \geq 300\text{mA}$, $V_s \geq 35\text{V DC}$	
Power Supply	Current Consumption	200mA	160mA
	Contact Capacity	—	100V:10A, 250V:25A
	Inrush Current	$I_s \geq 500\text{mA}$, $V_s \geq 35\text{V DC}$	$I_s \geq \text{Inrush Current}$, $V_s \geq 250\text{V AC}$
Leakage Current		$I_L \leq 0.1\text{mA}$	

※ I_s :Current Capacity, V_s :Withstand Voltage, I_L :Leakage Current

External Fuse

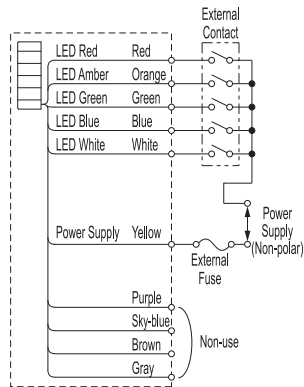
Voltage	Fuse Rating
All Model	250V 1A

※Use the fuse conforming to the rated current of the machine which the product was installed in. (Example : Class J type fuse)

Wiring Example

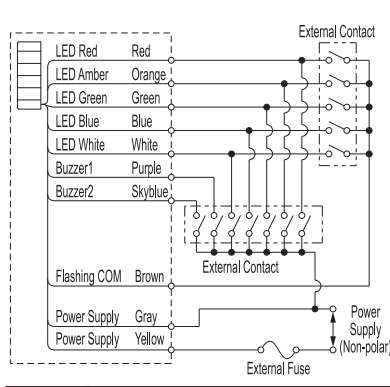
Model WME-□02A

(24V AC/DC, Continuous Lighting)



Model WME-□02AFB

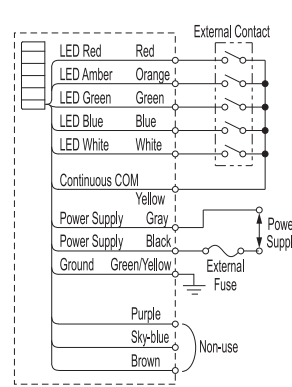
(24V AC/DC, Continuous Lighting/Flashing/Buzzer)



CAUTION Do not apply voltage to the Flashing COM (Brown) wire.

Model WME-□M2A

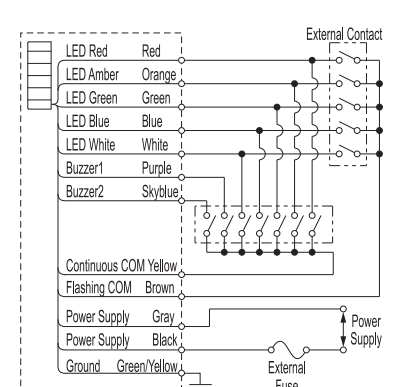
(90V~250V AC, Continuous Lighting)



CAUTION Only apply voltage to the Power Supply Wire.

Model LCE-□M2AFB(W)

(90V~250V AC, Continuous Lighting/Flashing/Buzzer)

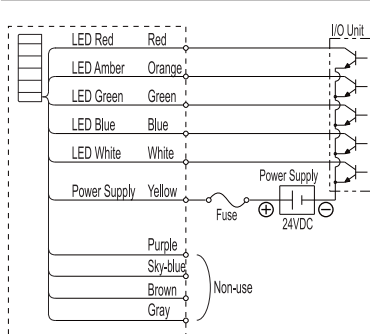


CAUTION Only apply voltage to the Power Supply Wire.

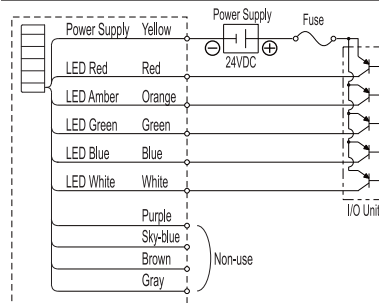
Wiring Example (NPN/PNP Transistor drive)

Model WME-□□□A (Continuous Lighting)

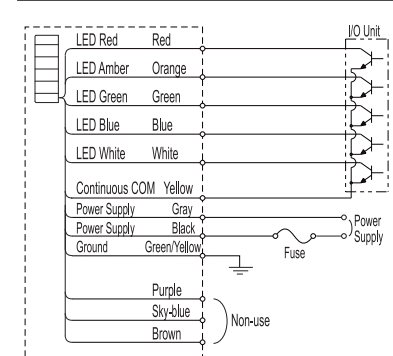
NPN Transistor (24V Type)



PNP Transistor (24V Type)



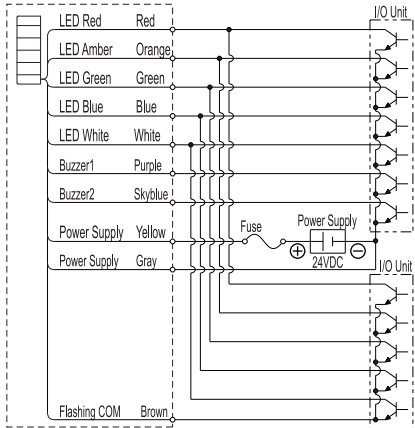
NPN Transistor (90V~250V AC Type)



CAUTION Only apply voltage to the Power Supply Wire.

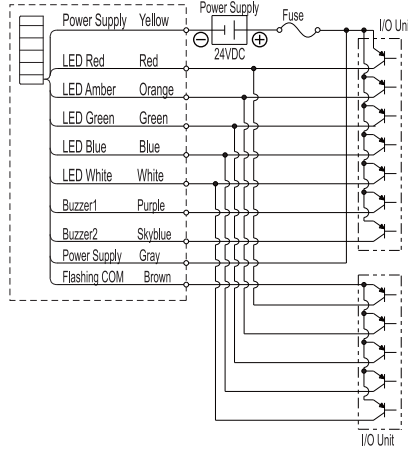
■ Model WME-□□□AFB (Continuous Lighting/Flashing/Buzzer) *When using the FB type, use a separate I/O unit for flashing.

NPN Transistor (24V Type)



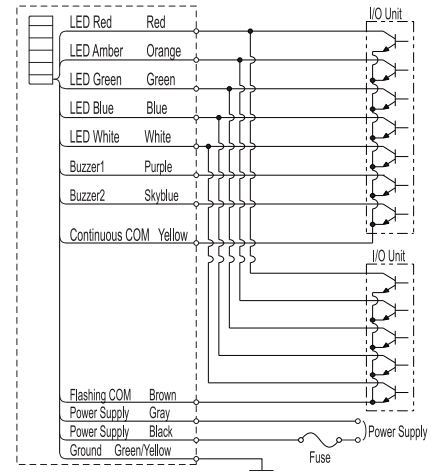
CAUTION Do not apply voltage to the Flashing COM (Brown) wire.

PNP Transistor (24V Type)



CAUTION Do not apply voltage to the Flashing COM (Brown) wire.

NPN Transistor (90V~250V AC Type)



CAUTION Only apply voltage to the Power Supply Wire.

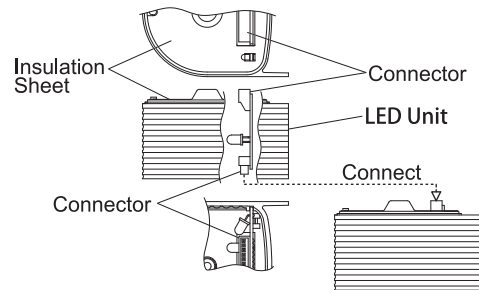
6 Changing LED Unit positions

CAUTION

- Make sure the power is off before wiring, repairing, or replacing parts to avoid a short-circuit, electric shock, or burn.
- Do not remove the LED unit forcibly as it may damage the unit.
- When the center screw is loosened or removed, the LED units become unstable and may separate. Therefore, handle carefully to avoid damage.
- Handle the LED units carefully to avoid warping or damage when changing their positions on the tower.
- Screwing the head cover too tight may damage it. The recommended torque is about 0.39N·m.

Changing LED Unit positions

- Turn the power off before changing LED unit positions.
- Unscrew the head cover and remove the LED units.
- The LED units are connected to each other by connectors. Therefore please connect the connector of the top and bottom LED units.



7 Specifications

Light style	Model	UL Registration Model	Rated voltage	Power consumption	Mass	Flash Cycle (fpm) and sound level Wire type /Dia
1 Tier	WME-102A(FB)	WME-_02A(FB)	24V AC/DC (50/60Hz)	2.5W	0.31kg	FB type 60 Flashes per minute & Sound level 90dB(at 1m) Power source wire (24V type) UL1007/AWG24 (90~250V type) UL1015/AWG18 Lead wire UL1007/AWG24 Green / Yellow wire (Connect ground) UL1015 / AWG18
	WME-1M2A(FB)	WME-_M2A(FB)	90~250V AC (50/60Hz)	4.4W	0.38kg	
2 Tiers	WME-202A(FB)	WME-_02A(FB)	24V AC/DC (50/60Hz)	3.0W	0.39kg	
	WME-2M2A(FB)	WME-_M2A(FB)	90~250V AC (50/60Hz)	6.4W	0.46kg	
3 Tiers	WME-302A(FB)	WME-_02A(FB)	24V AC/DC (50/60Hz)	4.0W	0.47kg	
	WME-3M2A(FB)	WME-_M2A(FB)	90~250V AC (50/60Hz)	8.4W	0.54kg	
4 Tiers	WME-402A(FB)	WME-_02A(FB)	24V AC/DC (50/60Hz)	5.0W	0.55kg	
	WME-4M2A(FB)	WME-_M2A(FB)	90~250V AC (50/60Hz)	10.4W	0.62kg	
5 Tiers	WME-502A(FB)	WME-_02A(FB)	24V AC/DC (50/60Hz)	6.0W	0.63kg	
	WME-5M2A(FB)	WME-_M2A(FB)	90~250V AC (50/60Hz)	12.4W	0.70kg	

- This product is recognized as a UL standard. For recognition as a UL standard;
 - Use on a flat surface with a Type 1 Enclosure.
 - Maximum surrounding air temperature is at 60°C.
- This product conforms to EN standard and shows the CE Marking. This product has been tested and found to comply with the limits for a Class A device, pursuant to EMC DIRECTIVE. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This product must not be used in residential areas.

Caution

- PATLITE Corporation disclaims all liability for any malfunction or damage occurring as a result of handling contrary to the instructions, cautions and warnings mentioned in this manual.
- Specifications may change without notice due to continual product improvement.

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