PATLITE

Signal Tower INSTALLATION MANUAL

Type : LU7

Thank you for specifying the PATLITE Signal Tower for your application. Please read these instructions carefully before you perform installation, maintenance and repair. Store this manual carefully for easy reference. If you have any questions about this product, please contact PATLITE Corporation.

1. To operate this product safely, please observe the following

NOTES TO BE OBSERVED FOR SAFE OPERATION

Notes to be followed to prevent any damage to the user and other personnel or to assets are as follows:

The indications for warning are divided into the following classes according to the degree of danger or damage incurred when the warning is not taken into consideration and the product is not correctly used.

A Warning	Indicates an imminently dangerous condition: failure to follow the instructions may lead to death or serious injury.
A Caution	Indicates a potentially dangerous condition: failure to follow the instructions may lead to slight injury or property damage.

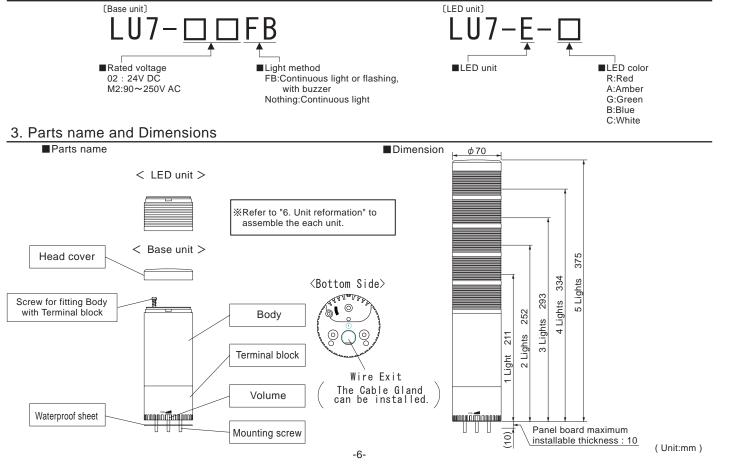
\land Warning

- Make sure the power is OFF before wiring. Wrong wiring may result in a cause of short circuit or electric shock.
- Make sure the power is OFF to avoid an electric shock or burn when repair or replace the parts.
- Do not use this product with damaged lens or leave it without the lens or head cover. That may cause an electric shock. • If installing this product requires a construction work, please ask to a specialistin order to avoid a risk of an electric shock,
- fire or fall • 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. • Be careful not to hold the product to climb any machines attached the product to also be careful not to catch the cover of
- machine on this product when you remove the cover, as it may cause of falling down or drop.

▲ 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 of units from other products. It may cause a breakdown.

2. Model No. configuration



PATLITE

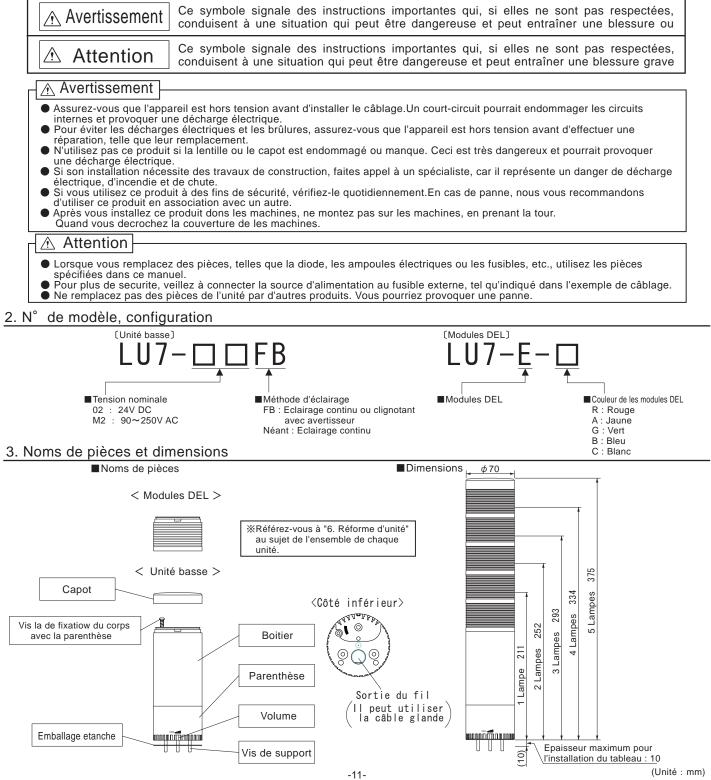
Tour de signalisation MODE D'INSTALLATION?

Type : LU7

Nous vous remercions d'avoir choisi la tour de signalisation PATLITE. Lisez attentivement ces instructions avant de proceder à l'installation, à l'entretien et aux réparations de la tour. Conservez précieusement ce manuel pour pouvoir vous y référer facilement. Si vous avez des questions concernant ce produit, contactez PATLITE Corporation.

1.POUR UTILISER CE PRODUIT EN TOUTE SECURITE, RESPECTEZ LES INSTRUCTIONS SUIVANTES

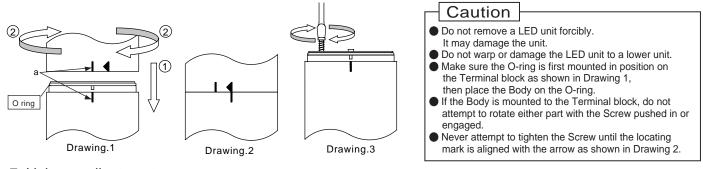
Les symboles indiqués ci-dessous apparaissent dans ce manuel et se trouvent également sur le produit. Ils visent à assurer une utilisation en toute sécurité de votre nouveau produit, à empêcher que vous-même ou que toute autre personne ne se blesse et à éviter que le matériel ne soit endommagé. La signification de ces symboles est expliquée ci-dessous.



Précautions de sécurité

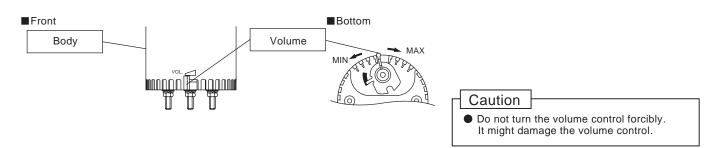
6. Unit reformation

- Turn the power OFF before performing unit reformation.
- First make sure the O-ring is mounted as shown in Drawing 1, then align the locating mark of each unit, and place the units together in the direction of the arrow (1) as shown
- Rotate the upper unit in the direction of the arrow(2).(Refer to Drawing.2)
- For 90-250V type Base Unit, tighten the Screw that secures the Body to the Terminal block.



Volume adjustment

• You can adjust the volume by turning the volume control at the bottom to the left or right.



8. To use this product in accordance with the CE marking, please observe the followings

- Please use a fuse specified by IEC 127.
- When lead wires are exposed outside the body during pole installation, etc. always provide double insulation using insulation tape and vinyl tubing, etc.
- For the 90-250V type, use shielded cable for the power supply cable and be sure to connect the shield to ground (CN5).

9. Specifications

Base unit]					l	[LED unit]			
Model	Rated voltage	Power consumption	Mass	Flashing cycle and Peak sound level		Model	Rated voltage	Power consumption	Mass
LU7-02	041/ DO		250g	FB Type 60 Flashes		LU7-E-R		1.3W	60g
LU7-02FB	24V DC	1.2W	275g	per minute		LU7-E-A		1.500	oog
LU7-M2	90~250V AC	Buzzer:2.2W	350g	Sound level		LU7-E-G	24V DC		
LU7-M2FB	(50/60Hz)	Standby power consumption:1.0W	375g	*FB type only		LU7-E-B		1.0W	60g

[Vibretion resistance]

Number of LED units	1-Lights	2-Lights	3-Lights	4-Lights	5-Lights	5-Lights
LU7-02	4.5G 44.1m/s ²	3.5G 34.2m/s ²	2.0G 19.6m/s ²	1.3G 12.7m/s ²	0.7G 6.8m/s ²	1.9G 18.6m/s ²
LU7-M2	4.5G 44.1m/s ²	4.5G 44.1m/s ²	1.9G 18.6m/s ²	1.9G 18.6m/s ²	1.0G 9.8m/s ²	1.9G 18.6m/s ²
Allowable vibration frequency		40-150Hz				

LU7-E-C

Caution

• In the event that the tower is subject to continuous, excessiv shaking, vibration may be too strong and there is a danger of breakage. Immediately stop using the tower and consult PATLITE Customer Service.

• 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.

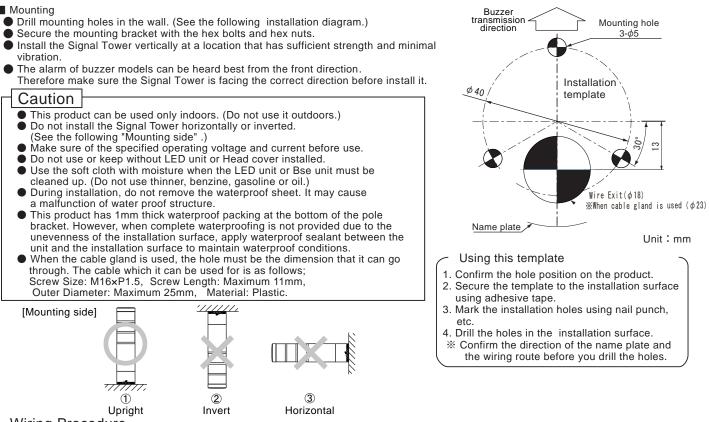
4. Installation

Mounting

- vibration

- Do not install the Signal Tower horizontally or inverted

- a malfunction of water proof structure.
- unit and the installation surface to maintain waterproof conditions.
- through. The cable which it can be used for is as follows: Screw Size: M16×P1.5, Screw Length: Maximum 11mm

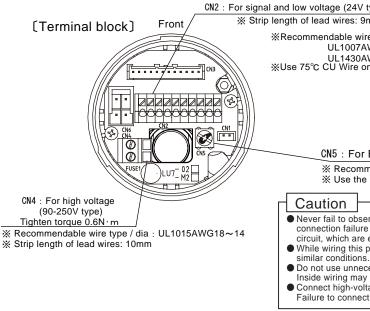


5. Wiring Procedure

- Wiring procedure (Concerning the mark %, the conditions about the product corresponding to UL are mentioned.)
- Please make wiring connection according to wiring example.
- For wiring of 5 layers or less, please make wiring connection by increasing or decreasing external contacts in each layer according to wiring example
- When using multiple LED units of the same color, make the contact capacity equal to the number of same color LED units multiplied by the contact capacity for 1 light. (This is because LED units of the same color light up for one signal line.)
- When wiring is completed, insulate the end of each unused lead wire by using insulation tape.
- * Use "Class II Circuit" for the power supply source. Concerning fuse and fuse-holder, be sure to use the products authorized by UL Inc.
- % Use the fuse conforming to the rated current of the machine. (Example : Class J type fuse)
- * For the 90~250V AC model, connect the green/yellow lead wire to the ground.
- If you have any questions about simultaneous use of multiple units or other special operations, contact PATLITE Customer Service before wiring.

5-1. Wiring example for Base unit [Terminal block]

Remove Body from Base unit.(In case of 24V type, refer to "6. Unit reformation".) • In case of 90-250V type, refer to "5-1-2. Wiring procedure for 90-250V type," Be sure to disengage the Screw before removing the Body from Terminal block.



* Fuse for protection of external contact should be installed within 305mm from the connected point of the power source wire.

Terminal	Terminal	Corresponding unit
No.	color	or operation
1	Red	LED unit Red
2	Orange	LED unit Amber
3	Green	LED unit Green
4	Blue	LED unit Blue
5	White	LED unit White
6	Gray	Buzzer1 : Pi…(Continuous)
7	Black	Buzzer2 : Pi • Pi…
8	Yellow	Power supply(Continuous COM)
9	Gray	Flashing COM
10	Black	Power supply
	No. 1 2 3 4 5 6 7 8 9	No.color1Red2Orange3Green4Blue5White6Gray7Black8Yellow9Gray

CN5 : For Earth (Tighten torgue : 1.2N m)

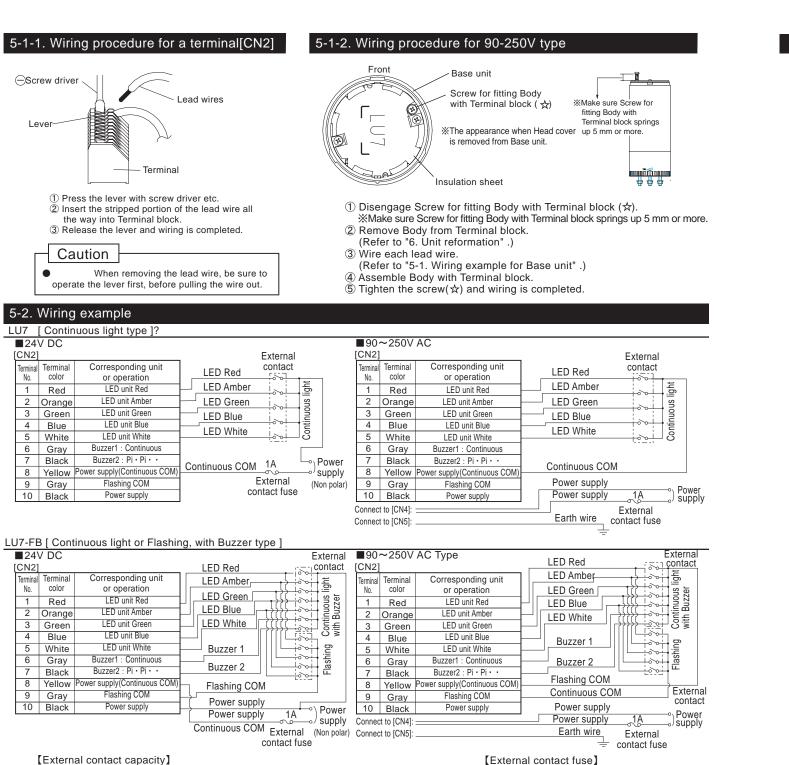
* Recommendable wire type / dia : UL1015AWG18~14

* Use the lead wire with the color of green or green/yellow for the earth wire.

 Never fail to observe the strip length of lead wire. Excessively short strip length causes connection failure and excessively long strip length gives rise to electric shock or short circuit, which are extremely dangerous While wiring this product, take care to avoid short-circuits from loose wire strands or

Do not use unnecessarily strong force to separate the Terminal block and the Body. Inside wiring may be damaged and may cause failure.

• Connect high-voltage power supply cable to the specified terminals in the Terminal block. Failure to connect this cable correctly will burn out the internal circuit.



Voltage specs. 24V DC 90~250V AC Current consumption Red · Amber : 52mA Green · Blue · White : 42mA LED unit (1-Light) Contact capacity Is≧100mA, Vs≧35VAC 50mA Current consumption Buzzei 100mA Inrush current Contact capacity <u>Is≧100mA, Vs≧35V AC</u> Current consumption 360mA 50mA Power supply Is≧500mA Is≧100mA Contact capacity Vs≧35V AC Vs≧250V AC XIs : Current capacity

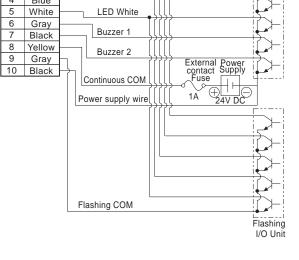
Caution

- Make sure the power is OFF before wiring. A short circuit may damage internal circuits or cause an electric shock.
- Do not apply voltage directly to signal wires and common wires. It may damage the circuit. (90~250V AC)
- Do not pull out the lead wire or push it into the pole or the body.
- 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.
- Failure to follow wiring instructions may cause damege to product or product may not operate properly.
- Do not apply voltage directly to Flashing common wire. It may cause a breakdown. (FB type)
- Do not connect Continuous common wire and Flashing common wire. It may damage the internal circuit.
- If using both flashing and continuous circuits, do not apply power at the same time as this may cause second color indicator to light. This also applies to both alarm circuits.

-8-

If you use the product with both alarms, please use external contacts for lighting and for alarms.

5-3. NPN (PNP) Transistor drive example LU7 [Continuous light] NPN Transistor (24V Type NPN Transistor (90~250V Type) Continuous I/O Unit LED Red LED Rec [CN2] [CN2] Terminal No. Color Terminal Terminal LED Amber LED Amber No. color 1 Red 1 Red LED Green LED Green 2 Orange 2 Orange LED Blue LED Blue 3 Green 3 Green 4 Blue 4 Blue LED White LED White 5 White 5 White 6 Gray 7 Black 6 Grav Continuous 1A 7 Black COM 8 Yellow 8 Yellow 9 Gray External 9 Gray 24V DC contact 10 Black 10 Black fuse Power Connect to [CN4] Connect to [CN4]. ______ Connect to [CN5]: _____Earth wire _____ External _____ ____ contact fuse Supply LU7- FB [Continuous light or Flashing, with Buzzer type] • When you use FB (Continuous light or Flashing, with Buzzer) type, you need the I/O unit respectively. NPN Transistor (24V Type) Continuous I/O Unit [CN2] LED Red Terminal Terminal No. color LED Ambe Red 1 LED Green 2 Orange 3 Green LED Blue 4 Blue



PNP Transistor (24V Type)

	. (=) [/	
[CN2]	Continuous COM	xternal tact fuse Continuous ∖
Terminal Terminal No. color 1 Red 2 Orange 3 Green 4 Blue 5 White 6 Gray 7 Black 8 Yellow 9 Gray 10 Black		Flashing I/O Unit

Ampere rating of fuse

250V 1A

XUse the fuse conforming to the rated current of

Since a maximum of 10A inrush current flows

through the power supply wires, select contacts

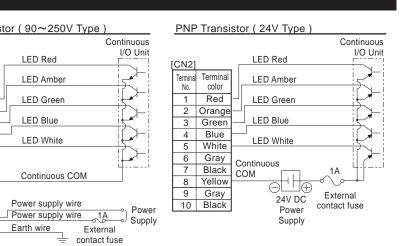
with enough capacity to handle the inrush current

the machine which you install product. (Example : UL Class J type fuse)?

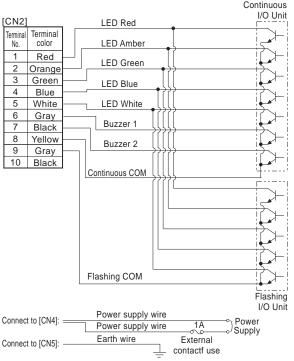
Voltage

All model

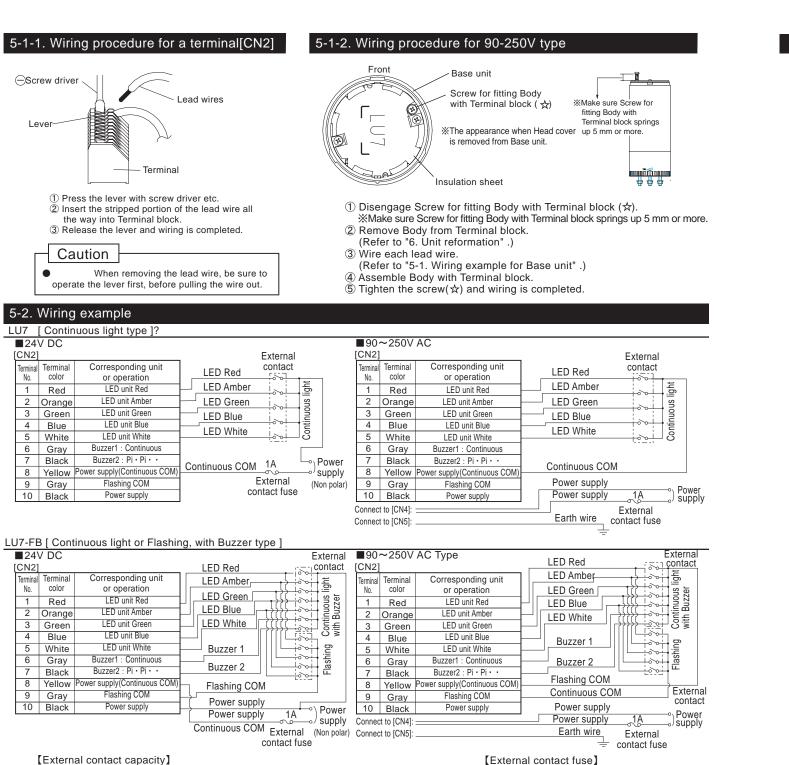
Vs : Withstand voltage



NPN Transistor (90~250V Type



Recommendation transi	stor
Current capacity	Ic≧100mA ^(LED unit) (Buzzer)
Dielectric break down strength	Vc≧35V
Leak current	IL≦0.1mA



Voltage specs. 24V DC 90~250V AC Current consumption Red · Amber : 52mA Green · Blue · White : 42mA LED unit (1-Light) Contact capacity Is≧100mA, Vs≧35VAC 50mA Current consumption Buzzei 100mA Inrush current Contact capacity <u>Is≧100mA, Vs≧35V AC</u> Current consumption 360mA 50mA Power supply Is≧500mA Is≧100mA Contact capacity Vs≧35V AC Vs≧250V AC XIs : Current capacity

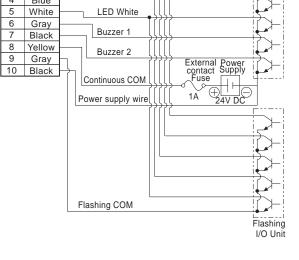
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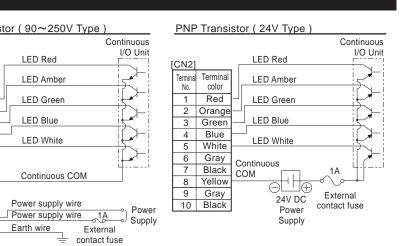
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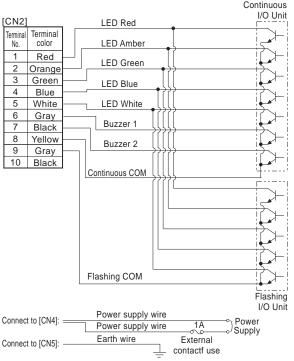
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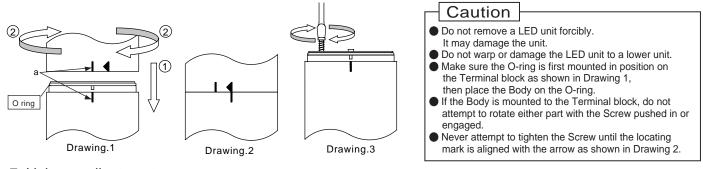
NPN Transistor (90~250V Type



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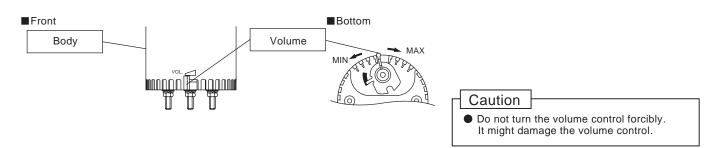
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Volume adjustment

• You can adjust the volume by turning the volume control at the bottom to the left or right.



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LU7-M2FB	(50/60Hz)	Standby power consumption:1.0W	375g	*FB type only		LU7-E-B		1.0W	60g

[Vibretion resistance]

Number of LED units	1-Lights	2-Lights	3-Lights	4-Lights	5-Lights	5-Lights
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Allowable vibration frequency		40-150Hz				

LU7-E-C

Caution

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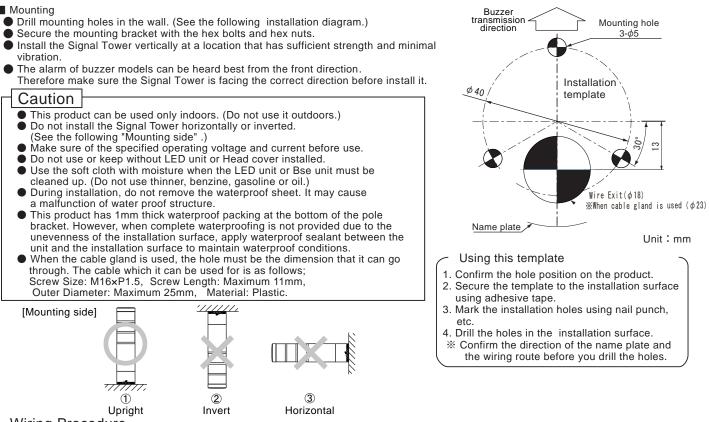
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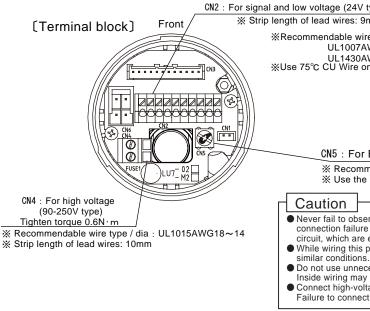


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7	Black	Buzzer2 : Pi • Pi…
8	Yellow	Power supply(Continuous COM)
9	Gray	Flashing COM
10	Black	Power supply
	No. 1 2 3 4 5 6 7 8 9	No.color1Red2Orange3Green4Blue5White6Gray7Black8Yellow9Gray

CN5 : For Earth (Tighten torgue : 1.2N m)

* Recommendable wire type / dia : UL1015AWG18~14

* Use the lead wire with the color of green or green/yellow for the earth wire.

 Never fail to observe the strip length of lead wire. Excessively short strip length causes connection failure and excessively long strip length gives rise to electric shock or short circuit, which are extremely dangerous While wiring this product, take care to avoid short-circuits from loose wire strands or

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• Connect high-voltage power supply cable to the specified terminals in the Terminal block. Failure to connect this cable correctly will burn out the internal circuit.

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