PATLITE®

Signal Tower
TYPE L A 6

INSTRUCTION MANUAL
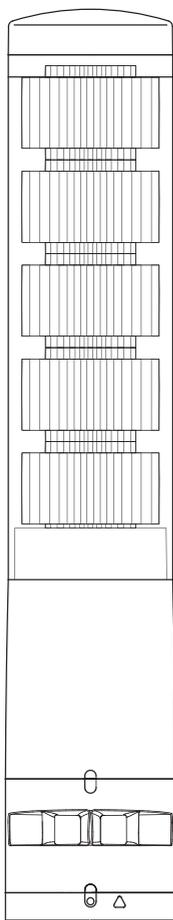[Maintenance Version]

Installation   Operation   Maintenance

Thank you very much for purchasing our PATLITE product.

Notice to Customer

● 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.
● Visit our homepage (http://www.patlite.com/) and download the "Complete Operation Manual" to find more about the operating method and features.
● 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

⚠ Warning Failure to observe the following may result in death or serious injury.
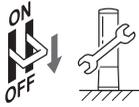
To prevent from **short-circuits or damage**, observe the following:

- Be sure the signal tower is disconnected from the power supply before wiring or performing repair work.
- Use the signal tower in a **properly maintained condition**. (If parts such as the base or outer cover lens are cracked, they should be repaired.)
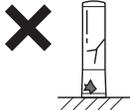
Request the installation and wiring be performed by **a professional contractor** if construction work is involved.
Failure to comply may result in **fire, electric shock or falling** from high places may occur.

To ensure safety when this product is installed onto equipment, observe the following.

- Do not Use the signal tower as leverage when climbing up onto the equipment. Failure to comply will result in **falling from a high place, or damage to the product.**
- When performing tasks such as opening the covers of the equipment, be careful not to snag anything on the signal tower. Failure to comply will result in **product damage.**

⚠ Caution Failure to comply with the following points may result in injury, physical loss or damage.
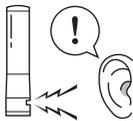
Avoid long exposure to the alarm sound from a close distance. Failure to observe this may lead from irritation to permanent damage to the ears.
(B Flashing/Alarm Type)
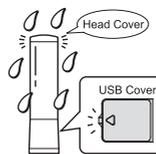
To maintain the dust and waterproof performance for this product, observe the following:

- Keep the Head Cover attached at all times.
- Ensure the USB Cover is closed at all times.

By all means, **do not apply voltage to the external lead for tiers.**
Failure to comply may result in **product damage.**
(A 100V - 240V AC Type)

Do not connect power to the external lead for tiers.
Failure to comply may result in **product damage.**
(A 100V - 240V AC Type)

Do not remove parts beyond those designed to be removed from this product.
Failure to comply may result in **product damage.**
(Refer to 3 Part Names and Outer Appearance (P. 20) for parts which can be removed)

Notice

To ensure proper safety while using the signal tower, observe the following:

- Perform periodic pre-maintenance.
- As a precaution against problems occurring, use this product together with other equipment.
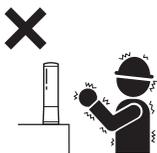
Be sure to discharge any static electricity from the body before handling static sensitive parts of this product.
(To prevent damage from static electricity, touch hands or other body parts to metals or an earth ground to discharge the body from static charge.)

To ensure safety when this product is installed onto equipment, observe the following.

- Do not modify or disassemble this product.
- Use only the specified replacement parts listed in this manual.

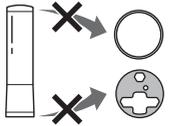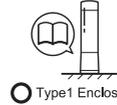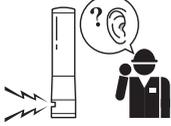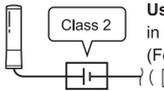| Notice			
	Do not operate this product without the waterproof packing material. Failure to comply will result in lower waterproofing performance.	Type1 Enclosure	This product is designed for use on a flat surface of a **Type 1 Enclosure**. (For UL Standard Compliance)
	The alarm sound is unidirectional, therefore it is most easily audible in the direction from the source. Position the signal tower so that the alarm sound is facing in the desired sound direction. (For B Flashing/Alarm Type)	Flashing/Pulse Enable Common line	By all means, **do not apply voltage to the Flashing/Pulse Enable Common line.** Failure to comply may result in malfunction. (B Flashing/Alarm Type) (D 24V DC Type)
		Power Supply / Flashing/Pulse Enable Common line	**Do not connect power to the Flashing/Pulse Enable Common line.** Failure to comply may result in malfunction. (B Flashing/Alarm Type) (D 24V DC Type)
	Sound pressure may change in accordance to the surrounding environment.	Class 2	**Use a "Class 2" power supply** specified in the guidelines under UL1310. (For UL Standard Compliance) (D 24V DC Type)

Main Unit

This product is a multipurpose signal tower, designed principally for giving notifications of the operating status for FA (Factory Automation) equipment in factories, etc., using LEDs and alarms※ .

※ B Flashing/Alarm Type

This product operates the same as the conventional Signal Tower in its "Signal Tower mode", in addition to new functions called the "Smart Mode".
In its "Smart Mode", a diverse display of a pattern flow is used, and when prepared beforehand, all the LEDs can be used to display a bar graph, etc.

Instruction Manual Objective

- The images in this manual may vary in comparison to the actual product and are only for the purpose of illustration.
- Store this manual in a location for future reference.
- Visit our homepage (http://www.patlite.com/) and download the "Complete Operation Manual" to find more about the operating method and features.

2 Model Number Configuration

Model	LED Tiers	Rated Voltage	Mounting/Wiring Installation	Body Color	Flashing/Alarm (Option)	Color
Model Number **LA6-**	↓	↓	↓	↓	↓	**-RYGBC**

3 or **5** Tiers

D 24V DC

WJ Direct mount with cable connection
TN Direct mount with Screwless Terminal Block connection
LJ Mounting angle and steel pole with cable

W Off-white
U Silver ※
※ **U** is not available for **LJ** .

B With Flashing/Alarm
N Without Flashing/Alarm

Color for each tier in Signal Tower Mode (Factory default setting).
R(Red)・Y(Amber)・G(Green)・B(Blue)・C(White)
(The LED light color for each tier can be changed after purchase.)

Model	LED Tiers	Rated Voltage	Mounting/Wiring Installation	Body Color	Flashing/Alarm (Option)	Color
Model Number **LA6-**	↓	↓	↓	↓	↓	**-RYGBC**

5 Tiers

A 100V ～ 240V AC

WJ Direct mount with cable connection

W Off-white

B With Flashing/Alarm

Color for each tier in Signal Tower Mode (Factory default setting).
R(Red)・Y(Amber)・G(Green)・B(Blue)・C(White)
(The LED light color for each tier can be changed after purchase.)

Outer Appearance List

The full product appearance is indicated according to its model number. Refer to the model numbers as a reference to its appearance.

Number of Lens Tiers	3 Lens Tiers			5 Lens Tiers			
Rated Voltage	D						A
Mounting/Wiring Installation	WJ	TN	LJ	WJ	TN	LJ	WJ
Body Color	W Off-white / U Silver (Not available for the LJ Type)						W
Flashing/Alarm (Option)	B N	B N	B N	B N	B N	B N	B

Part Names and Outer Appearance

Each figure contains 5-lens tiers 5 , with flashing/alarm B functions.
For 3-lens tiers 3 , the overall height will be shorter. Also, for specifications not including the flashing/alarm N functions, the product will not include a buzzer case and the overall height will be shorter.

■ WJ Direct mount with cable connection

■ TN Direct mount with Screwless Terminal Block connection

(Unit:mm)

D 24V DC Type

16

＜Overall Height＞
5 - B : 320
3 - B : 254
5 - N : 280
3 - N : 214

70

40

10

8.5 ※1

φ60

Wire length: (1360)
Wire style: UL2464/AWG24x11C

(Max.∅8.05)

D 24V DC Type

16

＜Overall Height＞
5 - B : 330
3 - B : 264
5 - N : 290
3 - N : 224

70

40

20

※2 8.5 ※1

φ60

※1 Maximum Board thickness: 4 mm
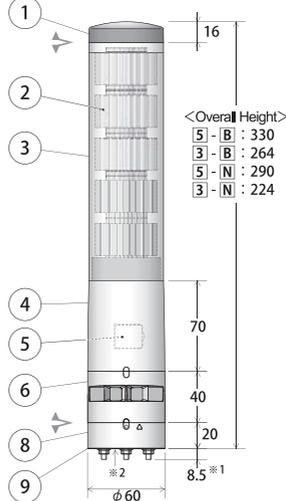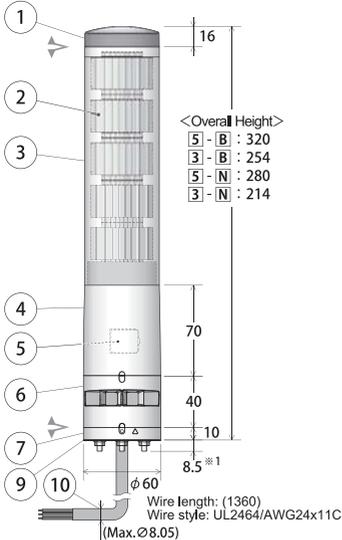
※2 TN Spec. Underside View

Threaded hole for cable gland attachment
(M16×1.5   Effective screw length 12mm)

Cable gland

<Note> The cable gland is not included with this product.

14 Accessory Assembly WJ TN

Screw
(M4x20)

3pcs.

Flanged nut（M4）

3pcs.

■ **LJ** Steel pole with mounting angle and cable
D 24V DC Type

16

<Overall Height>
5 - **B** : 320
3 - **B** : 254
5 - **N** : 280
3 - **N** : 214

70

40

10

284
≀
294

313.5

φ60

※3

Wire length: 1060
Wire style: UL2464/AWG24x11C
(Max.∅8.05)

※3 Maximum Board Thickness: 16 mm

■ **WJ** Direct mount with cable connection(LA6-5A)
A 100V - 240V AC Type

16

<Overall Height>
5 - **B** : 390

70

110

10

8.5 ※1

φ60

(Max.∅8.5)

Wire length: (1360)
Wire sytle: UL2464
(Power Supply Wire): AWG18x2C
(Signal Wire): AWG24x10C

※1 Maximun Board thickness 4mm
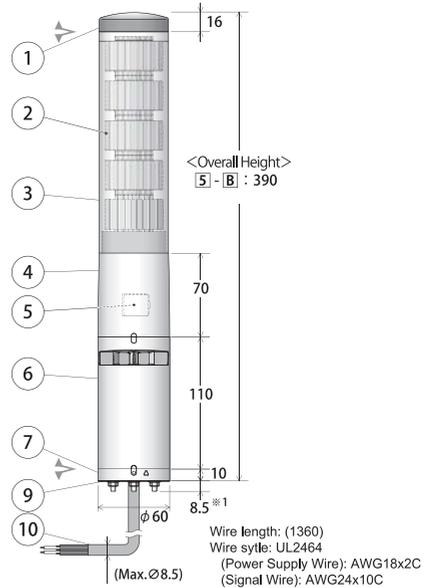
Number	Name	Material	Number	Name	Material
1	Head Cover	ABS	8	Terminal Block Bracket	ABS
2	Lens	PMMA	9	Waterproof Packing	Urethane Foam
3	Outer Lens	PC	10	Cable	PVC
4	Body	ABS	11	Pole	Steel Pipe
5	USB Cover	ABS	12	Mounting Angle	Steel Plate
6	Buzzer Case	ABS	13	Multi-function Button	ABS
7	Direct-mount Bracket	ABS	14	Accessory Assembly	Steel

〈Note〉 ► The arrow mark (stackable mark) shows the part of the Main Unit
(upper portion of bracket) which can be removed.
Do not disassemble any parts other than the parts indicated above.

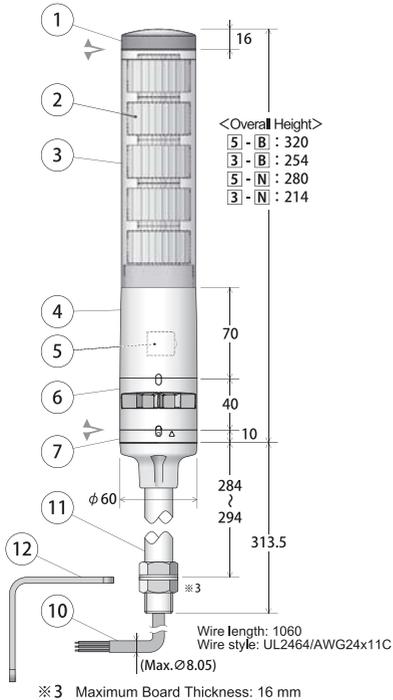⑬ Multi-function Button（Remove Head Cover）

Remove the head cover by turning it to the left to release it from the locked
position.（To re-assemble, perform the steps in the reverse order.）

〈Note〉 This connector
is not used.
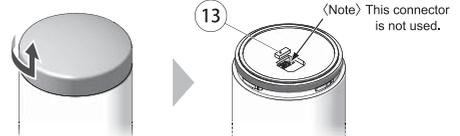
⑤ USB Cover (Detailed Parts)

(Cover in opened position)

18.8

22.2

Micro-USB connector
(Micro-B Female)
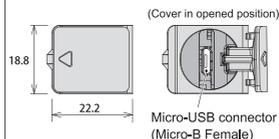
〈Note〉 - To open the USB Cover, insert a
minus driver (blade-edge width of 3
mm, thickness of 0.5 mm or less) in
the indented part and lightly pry it
open.
(Use an object made of ceramic to
avoid scratching or damaging the
Body.)
- Ensure the USB Cover is closed at
all times. If not securely closed, its
waterproof performance will
decrease.

21

Part Names and Outer Appearance (Mounting Angle)

L The following are the dimensions for the mounting angle attachment.

Top View

(Unit: mm)

'L' Bracket

$\phi 22.5$ $\phi 5$ 20   5   32

60

81

Side View

4.5

Rear View

31   66   81

$2\text{-}\phi 11$

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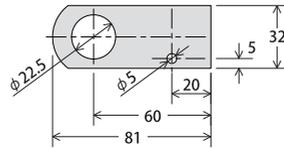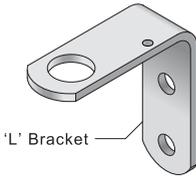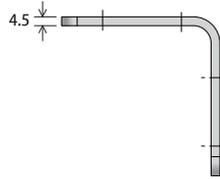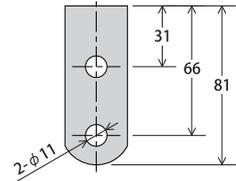
4 | How to Install

⚠ Caution
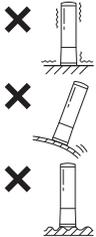
The following requirements are necessary for proper installation.

- Install the Signal Tower where excessive **vibration is not present**.
- Install the Signal Tower on a **sturdy surface**.
- Install the Signal Tower on a **level surface**.

Only install the Signal Tower in **an upright or inverted position**.

Do not remove parts beyond those designed to be removed from this product. (Refer to **3** "Part Names and Outer Appearance" (P. 20) for parts which can be removed)

Use a soft cloth, etc., dampened with water to wipe the Lens and Body.
(Do not use cleaners containing chemicals such as those indicated below.)

- Thinner
- Benzine
- Gasoline
- Oil

FCC
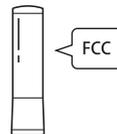
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
(D 24V DC Type)

This product must not be used in residential areas.
(Conformity requirements for CE Marking.)
(D 24V DC Type)

General Installation

① Verify the signal tower installation position.
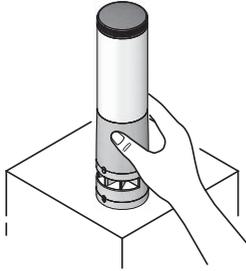
Use the following tips to check the installation position:
- Will it obstruct other equipment?
- Can the wiring be routed properly?
- Is there space available to open and close the USB cover?
- Where is the alarm direction (with B Flashing/Alarm) facing?

② Mark holes for wiring and installation.

<Note> Figure is for WJ or TN installations.

Punch etc.

Installation Template (→P.33)
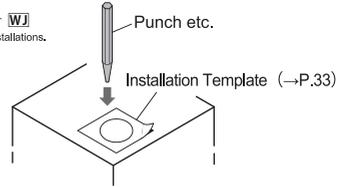
Use the installation template located on Pg. 33 and a punch, etc. to mark the places to make the holes.

③ Make holes for wiring and installation
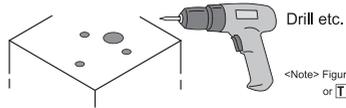
Drill etc.

<Note> Figure is for WJ or TN installations.

Use a drill, etc., to make holes for installation and wiring.

To continue from procedure ④ , refer to the model type (WJ), (TN), (LJ) for their mounting and wiring installation.

Model WJ   Direct mount and Cable
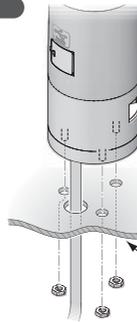
④ Thread the wires through the wiring hole.
Insert a mounting bolt into the installation hole.

⑥ Use waterproof sealant if needed.
(→ Point 1 Below)

⑤ Attach the mounting nut from the back-side.

Recommended Torque	0.75 N·m (Standard)

Model TN   Direct Mount/Screwless Terminal Block

With the body (N type), or alarm unit (B type), turn it to the right to remove.

⑤

⟨Notes⟩ Do not pull the lead wire connected to the Terminal Block bracket and body (or alarm unit).

Fix the Terminal Block bracket in place with a nut.

④

Recommended Torque	0.75 N·m (Standard)

⑦ Assemble the body (N type) or alarm unit (B type) is attached.

⑥ Attach the wires
(→ 5 Wiring Example (P.25))

Threaded hole for cable gland attachment
(Effective Screw Length for M16x1.5 is 12 mm in length)

⑧ Use waterproof sealant if needed.
(→ Point 1 Below)

23

Model **LJ** Steel pole with Mounting angle and Cable

④ Drill Hole (∅11mm in two places)
Installation Template (→P.33)

35mm

Mounting Surface

Feed the wiring through the hole and set the pole in place to install.
⑥

Recommended Torque
30 N·m（Standard）

When not using an attachment angle, make a fitting hole of ∅22-23mm.

Recommended Torque
12.2 N·m（Standard）

⑤ Use commercially available bolt nuts (M10) to fasten with.

If the installed environment exposes water, etc., to the back-side of the mounting surface, be sure to Use sealant on the mounting and distribution holes.
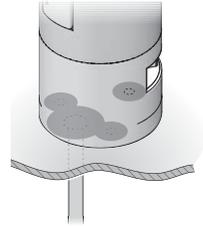
Use sealant to prevent water intrusion. (from the mounting back-side)

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5 | Wiring

⚠ Warning
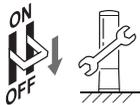
Be sure the **power is disconnected** before replacement or repair. Failure to comply will result in damage due to **short-circuiting**.

DC? AC?
What voltage?
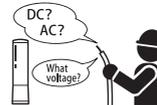
Ensure the **proper working voltage** is used and that **direct current** or **alternating current** is properly applied. Failure to comply may result in damage.

Power Supply

When transferring data via USB connection, **do not allow** the supply voltage from this product to contact with the personal computer, or it's peripheral devices. Failure to comply will result in product damage due to combustion or fire.
- For example, in cases where you ground + terminal of the power source supplied to a product (plus grounding), FG (housing) of the personal computer which makes USB connection with this product should not be grounded, and please make.

⚠ Caution
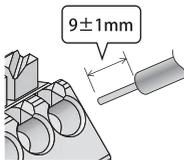
Strip 9±1mm of wire insulation from the wire to insert it in the Screwless Terminal Block. If the wire is shorter than 9mm, a poor connection may occur, and if the wire is too long, there is a possibility of electric shock or short-circuiting.
（ **T N** Direct Mount/Screwless Terminal Block Type）

9±1mm

It is not necessary to connect to an external lead for tiers not used.
When an extra lead is not connected, it **should be individually insulated** with electrical tape or something similar.

Not used

Wire the product so that the **lead wire** does not **protrude** from the **Screwless Terminal Block**. Failure to comply may result in short-circuiting.
（ **T N** Direct Mount/Screwless Terminal Block Type）

Do not **pull** the lead wire or **push** it inside the body.
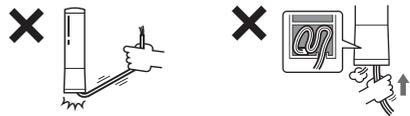
⚠ Caution	
By all means, **do not apply voltage to the external lead for tiers.** Failure to comply may result in **product damage.** (**A** 100V – 240V AC Type)	**Do not connect power to the external lead for tiers.** Failure to comply may result in **product damage.** (**A** 100V – 240V AC Type)
Do not control the flashing display by switching the power source ON and OFF for the A type. Possible cause of failure may occur.	

Notice

If wiring is extended beyond its factory length, a relevance in the length of the wire and wire gauge will cause a voltage drop.

Wiring Example

The wiring example indicates how to connect to external contacts for every classification.
If there are any special applications that require asking questions concerning this product, feel free to contact your PATLITE Sales Representative.

Wiring Example Index

LED Tier 1 / Input 1   Red / ①

Function Name
[Signal Tower] mode/[Smart Mode]

PIN No.
(**T N** Direct Mount/ Screwless Terminal Block Type)
→ Refer to the "Screwless Terminal Block connector PIN arrangement" figure on the right.

Lead Wire Color
(Cable Specification)

<Note> The lead wire color does not indicate the LED luminescence color.

Screwless Terminal Block Connector PIN Arrangement
(**T N** Direct Mount/Screwless Terminal Block Type)
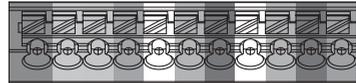
1	2	3	4	5	6	7	8	9	10	11
Red	Orange	Green	Blue	White	Gray	Black	Yellow	Gray	Black	Purple
LED1/Input1	LED2/Input2	LED3/Input3	LED4/Input4	LED5/Input5	Alarm1/Input6	Alarm2/Input7	Power Wire	Power Line Common (Signal-Line Side)	Flashing/Pulse Enable	Mode Change

■ Alarm Sound Pattern (Factory Default)

Alarm 1	Alarm Sound No. 1
Alarm 2	Alarm Sound No. 2
Alarm 1 and Alarm 2 Entered Simultaneously	Alarm Sound No. 9

■Recommended lead wire specifications

Wire Type	Wire Gauge (Solid Wire)	Wire Gauge (Frayed Wire)
UL1007 / UL1430	0.5～1.5mm^2	AWG20～16

• Temperature rating should be above 75ºC, and the conductor material should be of copper wire.

■ About Mode Switch-over

When entering the "Mode Change", the operating mode can be changed to the "Smart Mode." In the "Smart Mode", various lighting and alarm patterns can be arranged. Visit our homepage (http://www.patlite.com/) and download the "Complete Operation Manual" for further details.

Screwless Terminal Block wiring method (**T N** Direct Mount/ Screwless Terminal Block Type)

3 The driver is removed to release the lever. (Check to make sure the lead wire has been locked in place.)

1 A minus driver etc. is used to pry the lever slot of the Terminal Block open, by pushing straight onto the lever slot.

Lever

2 The stripped side of the lead wire is inserted in the slot.

Point
• The minus driver blade should be at least 2.5mm by 0.4mm in size.
• Do not forcibly push the lever more than necessary with the driver. Failure to comply may damage the unit.
• Strip 9mm (±1mm) of wire insulation from the wire to insert it in the Terminal Block.
• When removing the lead wire, do not just pull to remove. (Be sure to operate the lever to release the lock.)

⚠Caution	When an extra lead wire is not connected, it should be individually insulated with electrical tape or something similar.

〈Note〉 When lighting and flashing are used together in the "Signal Tower" mode with a PLC, it is necessary to separate the flashing and non-flashing circuit outputs on the PLC side.

D

External Contact Classification
Voltage Contact Relay

LA6

Do Not Apply Voltage!

| N | Without Flashing/Alarm | B | With Flashing/Alarm |

For Flashing/Pulse Enable
External Contact

Flashing/Pulse Enable
Common line — Brown / ⑨

LED Tier 1 / Input 1 — Red / ①
LED Tier 2 / Input 2 — Orange / ②
LED Tier 3 / Input 3 — Green / ③
LED Tier 4 / Input 4 — Blue / ④
LED Tier 5 / Input 5 — White / ⑤
Alarm 1 / Input 6 — Purple / ⑥
Alarm 2 / Input 7 — Skyblue / ⑦
Mode Change — Pink / ⑪

For Lighting
External Contact

Power Supply Wire — Gray / ⑩
Power Supply Wire — Yellow / ⑧

24V DC (Class 2) (No polarity)

External Contact Classification
PLC(NPN Transistor)

LA6

Do Not Apply Voltage!

PLC

| N | Without Flashing/Alarm | B | With Flashing/Alarm |

For Flashing/ Pulse Enable
Output Unit 2

Flashing/Pulse Enable
Common line — Brown / ⑨

LED Tier 1 / Input 1 — Red / ①
LED Tier 2 / Input 2 — Orange / ②
LED Tier 3 / Input 3 — Green / ③
LED Tier 4 / Input 4 — Blue / ④
LED Tier 5 / Input 5 — White / ⑤
Alarm 1 / Input 6 — Purple / ⑥
Alarm 2 / Input 7 — Skyblue / ⑦
Mode Change — Pink / ⑪

For Lighting
Output Unit 1

Power Supply Wire — Gray / ⑩
Power Supply Wire — Yellow / ⑧

24V DC (Class 2)

Circuit Schematic
C
E — B

External Contact Classification
PLC (PNP Transistor)

LA6

| N | Without Flashing/Alarm | B | With Flashing/Alarm |

〈Note〉 Since flashing and intermittence are uncontrollable with the PNP type transistor, do not connect it. Control flashing and intermittence with PLC programming.

Flashing/Pulse Enable
Common line — Brown / ⑨

Do Not Apply Voltage!

PLC

LED Tier 1 / Input 1 — Red / ①
LED Tier 2 / Input 2 — Orange / ②
LED Tier 3 / Input 3 — Green / ③
LED Tier 4 / Input 4 — Blue / ④
LED Tier 5 / Input 5 — White / ⑤
Alarm 1 / Input 6 — Purple / ⑥
Alarm 2 / Input 7 — Skyblue / ⑦
Mode Change — Pink / ⑪

Power Supply Wire — Gray / ⑩
Power Supply Wire — Yellow / ⑧

24V DC (Class2)

Circuit Schematic
C
E — B

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⚠ Caution — When Gray / ⑩ power supply wire is not connected, inrush current still flows.

D

External Contact Classification

Voltage Contact Relay or PLC

※ There is no inrush current on the Pink wire for "Mode Change."

LA6

N Without Flashing/Alarm B With Flashing/Alarm

Flashing/Pulse Enable Common line — Brown / ⑨

Each LED/Alarm Input 1-7 — Each color / ① ~ ⑦

Mode Change※ — Pink / ⑪

Power Supply Wire — Gray / ⑩

Power Supply Wire — Yellow / ⑧

Do not connect!

Relay | PLC (NPN) | PLC (PNP)

24V DC (Class2) (No polarity) | 24V DC (Class2) | 24V DC (Class2)
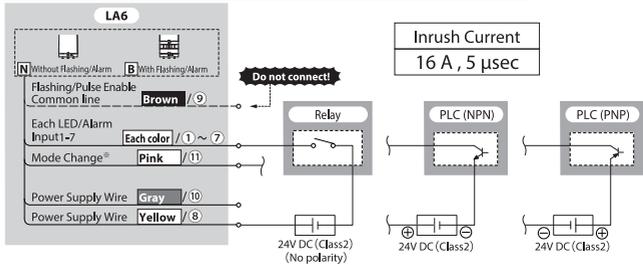
Inrush Current

16 A , 5 μsec

A

External Contact Classification

Voltage Contact Relay

LA6-5A

Do Not Apply Voltage!

B With Flashing/Alarm

Flashing/Pulse Enable Common line	Brown
LED Tier 1 / Input 1	Red
LED Tier 2 / Input 2	Orange
LED Tier 3 / Input 3	Green
LED Tier 4 / Input 4	Blue
LED Tier 5 / Input 5	White
Alarm 1 / Input 6	Purple
Alarm 2 / Input 7	Skyblue
Mode Change	Pink
Lighting Common line	Yellow
Power Supply Wire	Gray
Power Supply Wire	Black

Fuse 1A   L N   100 ~ 240V AC

For Flashing/Pulse Enable — External Contact

For Lighting — External Contact

External Contact Classification

PLC(NPN Transistor)

LA6-5A

Do Not Apply Voltage!

PLC

B With Flashing/Alarm

Flashing/Pulse Enable Common line	Brown
LED Tier 1 / Input 1	Red
LED Tier 2 / Input 2	Orange
LED Tier 3 / Input 3	Green
LED Tier 4 / Input 4	Blue
LED Tier 5 / Input 5	White
Alarm 1 / Input 6	Purple
Alarm 2 / Input 7	Skyblue
Mode Change	Pink
Lighting Common line	Yellow
Power Supply Wire	Gray
Power Supply Wire	Black

Fuse 1A   L N   100 ~ 240V AC
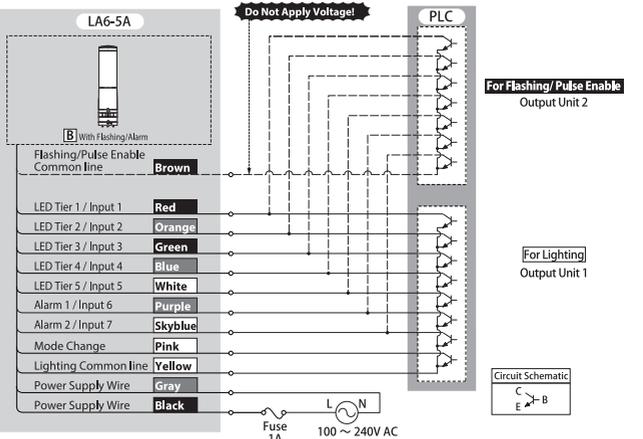
For Flashing/ Pulse Enable — Output Unit 2

For Lighting — Output Unit 1

Circuit Schematic

Fuse Ampere Ratings
250 V / 1 A
5x20mm Fast-Acting Glass Body Cartridge Fuse

Power Supply Inrush Current	
Ambient Temp. 25℃	16 A / 2 ms
Ambient Temp. 50℃	50 A / 2 ms

Notice

When a regulated power supply is not being used, select a fuse that meets class CC or more.

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Signal Contact Capacity	
Current Capacity	100 mA or more
Withstand Voltage	DC 35 V or more
Leakage Current	0.1 mA or less
ON Voltage (V_{sat})	1 V or less

6 | Setup Data Transmission Method

⚠ Warning
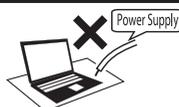
✕ Power Supply When transferring data via USB connection, **do not allow** the supply voltage from this product to contact with the personal computer, or it's peripheral devices.
Failure to comply will result in product damage due to combustion or fire.
- For example, in cases where you ground + terminal of the power source supplied to a product (plus grounding), FG (housing) of the personal computer which makes USB connection with this product should not be grounded, and please make.

This chapter explains the application of the "Smart Mode." It is necessary to create a set pattern data beforehand.
For more detailed explanation on the creation and setup data for patterns, refer to the help section in the software for creation of setup data.
※ To find out about the software for creation of setup data, visit our homepage (http://www.patlite.com) for further details.

■Preparation …… - This product
- Personal Computer with the software for creation of setup data installed (Windows[®] 7 / 8 / 8.1 / 10)
- Micro-USB Cable (USB A-Male to USB Micro-B Male)
  Note > The Micro-USB cable should be able to charge batteries and transmit data.
  (The Micro-USB cable is not included with this product.)

■Transfer Procedure
1 Change the product to the standby mode (all signal inputs are off).
  (The power supply input can either be ON or OFF, whichever is easier.)
2 Open the USB Cover on the product. (Right figure)
3 A micro-USB Cable is connected to a personal computer and the product.
  (Right figure)
4 Click the "Transfer" button in the software for creation of setup data.
5 When data transfer is completed, a "Transfer was completed" message will be displayed.
6 Remove the Micro-USB cable and close the USB Cover on the product.
  (Ensure the USB Cover is closed.)

LA6 (back) — Personal Computer
Micro-USB cable (Not included with this product.)
USB Cover
Micro-USB Connector (Micro-B Female)
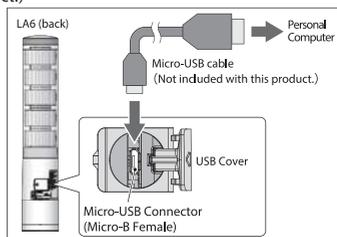
Point

If the product's power supply is on, the Multi-function Button in the software for pattern creation data can be clicked to test the setup data operation.

7 | How to use the "Multi-function Button"

The product contains a Multi-function Button (Refer to 3 Part Names and Outer Appearance (P. 20)) under the Head Cover in the upper section, which can be operated as follows:
- Alarm Sound Control …… Adjustable up to four steps.
- LED Color Change …… The luminescence color of each tier can be changed.
- Version Confirmation …… The current version of the product can be checked.
- Product Initialization …… The memory contents of the product can be cleared and returned to factory default values.
  (Returns to the Signal Tower setup mode. The alarm sound pattern and the "Smart Mode" setup data have not changed.)

■ Multi-function Button Operation for Alarm Sound Control

Standard Mode

Push Button → Maximum Volume → Push Button → Medium Volume → Push Button → Minimum Volume → Push Button → Mute → Push Button
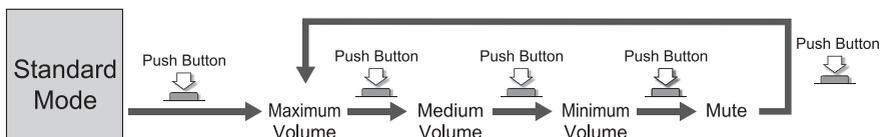
To find out more about Multi-function Button operations like the "Alarm Sound Control" indicated above, visit our homepage (http://www.patlite.com/) and download the "Complete Operation Manual" for further details.

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8 | Troubleshooting

If a problem occurs, check the following table to remedy the problem before calling for service.

No.	Problem	Where to Check	Inspection Repair
1	The LED does not light up.	Is the electric wiring connected correctly?	Refer to " **5** Wiring" on pgs. 24, 25 to verify wiring is correct.
		Is the power properly supplying the correct voltage?	Check the Rated Voltage.
2	A different LED tier from what I thought lights up when I make it turn on.	Is the electric wiring connected correctly?	Refer to " **5** Wiring" on pgs. 24, 25 to verify wiring is correct.
		Is the setup data correct?	Check that the contents of the setup data is correct.
3	The alarm does not sound.	Is the electric wiring connected correctly?	Refer to " **5** Wiring" on pgs. 24, 25 to verify wiring is correct.
		Is the power properly supplying the correct voltage?	Check the Rated Voltage.
		Check that the product type has a alarm included or not.	Only products with **B** added to the part number include the alarm function.
		Is the setup data correct?	Check that the contents of the setup data is correct.
4	The alarm volume is too low.	Is the alarm volume set to minimum?	Refer to " **7** How to use the Multi-function Button" on pg. 28 to adjust the volume.
		Is the setup data correct?	Check that the contents of the setup data is correct.
5	The LED does not flash.	Is the electric wiring connected correctly?	Refer to " **5** Wiring" on pgs. 24, 25 to verify wiring is correct.
		Are the external contacts for lighting turning on?	Priority is given to the lighting input over the flashing input when simultaneous signals are applied.
		Check that the product type has a alarm included or not.	Only products with **B** added to the part number include the alarm function.
		Is the setup data correct?	Check that the contents of the setup data is correct.

If the problem is not solved, even after the above-mentioned symptoms were checked, fill out the "Product Specification Details for Inquiry" before contacting your nearest Patlite Sales Representative or our Technical Support.

<Product Specification Details for Inquiry>

Product Name	Signal Tower		Purchase Date	Year/Month/Day
Model	(→ **2** Model Number Configuration" (P. 19))		Problem Symptoms	Describe as much detail as possible

9 | Specifications

Specifications

Model	LA6-□□□□-□ (Refer to "2. Model Number Configuration")							
Rated Voltage	24V DC						100 ～ 240V AC (50Hz/60Hz)	
Operating Voltage Range	±10% of Rated Voltage						90 ～ 250V AC (50Hz/60Hz)	
Rated Power Consumption	Typ.	LA6-5D□□N-RYGBC	5W	LA6-5D□□B-RYGBC	6.5W	LA6-5AWJWB-RYGBC		6.5W
		LA6-3D□□N-RYG	3.5W	LA6-3D□□B-RYG	4.5W			
	Max.	LA6-5D□□N-YYYYY	7W	LA6-5D□□B-YYYYY	8W	LA6-5AWJWB-YYYYY		7.5W
		LA6-3D□□N-YYY	4.5W	LA6-3D□□B-YYY	5.5W			
Environmental Condition	Alarm Sound No.1 at Maximum Volume							
Signal Wire Current	Max. 70mA						Max. 20mA	
Standby Current	Max. 15mA							
Standby Power							Max. 0.6W	
Operating Ambient Temperature	- 25℃ ～ + 60℃							
Operating Ambient Humidity	Less than 90% (No Dew or Condensation)							
Storage Ambient Temperature	- 25℃ ～ + 60℃							
Storage Ambient Humidity	Less than 90% (No Dew or Condensation)							
Mounting Location	Indoor Only							
Mounting Direction	Upright		Horizontal			Inverted		
Protection Rating	IP65 (Alarm specification: IP54) IEC 60529							
Environmental Condition	Upright Installation							
Vibration Resistance	LA6-□□LJ□□	Sweep Durability; Amplitude: 0.30mm p-p(10～58.1Hz), Acceleration: 20m/s^2(58.1～150Hz) Fixed Pitch Durability; Acceleration: 20m/s^2(58.1～150Hz)						
	LA6-□□WJ□□ LA6-□□TN□□	Sweep Durability; Amplitude: 0.30mm p-p(10～58.1Hz), Acceleration: 20m/s^2(58.1～150Hz) Fixed Pitch Durability; Acceleration: 10m/s^2(58.1～150Hz)						
Environmental Condition	JIS C 60068-2-6：2010							
	Upright Installation							
Insulation Resistance	More than 1MΩ at 500VDC						More than 3MΩ at 500VDC	
	between live part and non-current carrying metallic part							
Withstand Voltage	500VAC applied for 1 min						4000VAC applied for 1 min	
	between live part and non-current carrying metallic part without breaking insulation							
Display Color (Typical Luminous Intensity)	Red (1000mcd); Amber (1700mcd); Green (2600mcd); Blue (1000mcd); White (1250mcd)							
	Purple (800mcd); Pink (850mcd); Lemon/Yellow (2150mcd); Cyan (2150mcd)							
Flashing Rate	60±2 Flashes Per Minute							
Alarm Sound (Typical Frequency)	No.1	2400Hz, Continuous beep sound		No.2	2400Hz, Intermittent at 0.05sec			
	No.3	2400Hz, Intermittent at 1.5 sec		No.4	2400Hz, Intermittent at 0.5sec			
	No.5	3600Hz, Continuous beep sound		No.6	3600Hz, Intermittent at 0.05sec			
	No.7	3600Hz, Intermittent at 1.5 sec		No.8	3600Hz, Intermittent at 0.5sec			
	No.9	2400Hz&3375Hz, 0.25sec/0.25sec		No.10	2400Hz&3600Hz, 0.25sec/0.25sec			
	No.11	4000Hz&4800Hz, 0.5sec/0.5sec						
Sound Level	Max. 85dB							
Environmental Condition	Alarm Sound No.1 measured from the front direction of the alarm opening at 1m							
Volume Control	4-step volume selection from Multi-function Button (Factory Default: Max.)							
	Max. → - 5dB from Max. (APPROX.) → -10dB from Max. (APPROX.) → OFF							
Data Transmission Interface	Main Unit	USB micro-B Female Interface: USB2.0/1.1; Transmission Speed: USB2.0/1.1/1.0						
	Transfer Cable	Micro-USB Cable (Not included), Data Transfer/Charge Cable Connector Type: USB Male (Type: A) to USB Male (Type: Micro-B)						
Data Programming Application Software	Exclusive "EDITOR for LA series" Application Software (Downloadable from Homepage)							
Mass (±10%)	LA6-3DTN□B	480g	LA6-5DTN□B	590g	LA6-5AWJWB	740g		
	LA6-3DTN□N	420g	LA6-5DTN□N	530g				
	LA6-3DWJ□B	450g	LA6-5DWJ□B	560g				
	LA6-3DWJ□N	400g	LA6-5DWJ□N	510g				
	LA6-3DLJ□B	980g	LA6-5DLJ□B	1090g				
	LA6-3DLJ□N	930g	LA6-5DLJ□N	1040g				
Conformity Standards	UL508, CSA-C22.2 No. 14	EMC Directive (EN 61000-6-4, EN 61000-6-2)				EMC Directive (EN 61000-6-2, EN 61000-6-3)		
	FCC Part15 SubpartB Class A	KC (KN 61000-6-4, KN 61000-6-2)				Low Voltage Directive (IEC/EN 60947-5-1, EN 62471)		
	RoHS Directive (EN 50581)					RoHS Directive (EN 50581)		
Operating Mode	"Signal Tower" mode/"Smart Mode"							
Remarks	CE Marking Compliant UL Recognized Component (File No.E215660), Maximum Surrounding Temperature Rating of 60℃					CE Marking Compliant		

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10 Replacement Parts

The following replacement parts for this product are available for the customer to change or replace.

Head Cover	USB Cover	Waterproof Ring B Set
		x 2
The Head Cover is a single article.	The USB Cover is a single article.	Waterproof Ring B set has 2 pcs.

Pole Bracket Set
(D For 24V DC type)

The Pole Bracket set includes: Pole bracket, Waterproof Ring and Screw (2 pcs.).

Direct-mount Bracket

The Direct-mount Bracket is a single article.

Terminal Block Bracket
(B For flashing/alarm type)
(D For 24V DC type)

The Terminal Block Bracket is a single article.

Pole Waterproof Ring
(D For 24V DC type)

The Pole Waterproof Ring is a single article.

LA6 取付型紙〔Installation Template〕

TN仕様の場合
〔For WJ TN type〕

製品正面〔Front of product〕
（ブザー開口部〔Alarm output〕※1 ）

取付穴〔Mounting Hole〕（∅5）

製品外形〔Product outline〕

∅40

120° 120°

取付穴〔Mounting Hole〕（∅5）

(10) 6〜17 10

取付穴〔Mounting Hole〕（∅5）

銘板位置〔Name Plate Location〕

(34.6)

取付穴〔Mounting Hole〕（∅5）

配線穴〔Wire Exit Hole〕（∅12※2）（TN仕様〔TN type〕）
※2 ケーブルグランド使用の場合はφ23〔Cable grand is used：φ23〕

〔Wire Exit Hole〕（∅12）〔WJ type〕

⚠注意〔CAUTION〕
コピーして使用する場合や、データからプリントアウトした場合は、製品の取付ボルトや取付アングルと位置合わせするか、寸法確認用スケールを計測し、実寸になっていることを確認してください！〔If using a copier machine, Ensure that it is actual size.〕

0 10 20 30 40 50
＜寸法確認用スケール〔Scale for dimensions check〕＞

LJ仕様の場合
〔LJ type〕

35

取付穴〔Mounting Hole〕（∅11）

※1 B仕様のみ〔B type only〕
本図は実寸大です。〔This figure is full scale〕（単位〔Units〕：mm）

メモ Memo

（取付型紙）

書込みなどしないでください。

(Installation template)

Do not write here.

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株式会社 パトライト J2D

http://www.patlite.co.jp

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平日12:00〜13:00及び土・日・祝日・
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