PATLITE®

INSTRUCTION MANUAL
Rotating Beacons
TYPE SKS / SKH / SKP
Multi-function Beacons
TYPE SF08 / SF10
Flashing Beacons
TYPE SL08 / SL10 / SL15

Notice to Customer
Thank you very much for purchasing our Patlite products.
- 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.
- In addition, please store this manual for future reference when performing maintenance, repairs or inspections.
- For options and repair parts, please visit our website (https://www.patlite.com).
- If there are any questions concerning this product, refer to the contact information at the end of this document and contact your nearest PATLITE Sales Representative.

1 | Read this First (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 power is disconnected before replacement or repair, including the replacement of the fuse.
  - Use this product in a properly maintained condition. (Replace or repair if the globe, case, etc. are damaged.)
- If installing this product requires construction work, ask a specialist in order to avoid 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.
- After installation, do not use this product to climb up onto the equipment with. Failure to comply will result in product damage and/or falling off the machinery.

⚠ **Caution** Failure to comply with the following points may result in injury, physical loss or damage.

- Be sure to put a fuse in the wiring circuit between the power source and equipment for protection. If a fuse is not added, it may result in product and/or equipment failure.
- Be sure to prevent electrostatic damage due to discharge when working with this product for wiring, exchanging units, setting up parameters, etc. by discharging static electricity on your body, etc.
- Do not disassemble or detach during operation.

2 | Model Number Configuration

■ SF • SL Models

	Series		Rated Voltage	Installation • Wiring		Buzzer		LED Unit Color
Model	↓	↓	↓	−	↓	↓	↓	−	↓

Series	Rated Voltage	Installation • Wiring	Buzzer	LED Unit Color
SF **08** Ø80	**M1** 12 - 24 V DC	**M1** ...	**N** No Buzzer	**R** Red
SL **10** Ø100	**M2** 100 - 240 V AC		**B** With Buzzer *	**Y** Amber
15 Ø150 (SL only)				**G** Green
				B Blue

- **M1** 12 - 24 V DC
- **M2** 100 - 240 V AC
- **J** 3-Screw Mounting • Cabtyre Cable
- **KT** 2-point Hole Type Mounting • Terminal block / 3-point Hole Type Mounting • Terminal block (SL15 only)

* **KT** only(SL15 : No Buzzer)

Model Number Example **SF08-M1KTB-R**
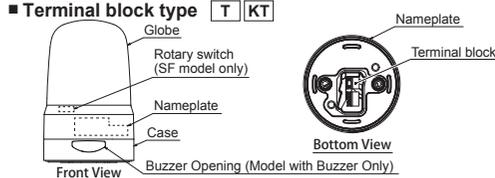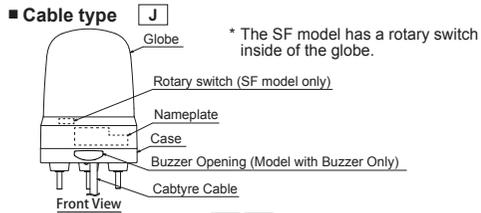- Ø80 • 12 - 24 V DC • 2-point hole type mounting • Terminal block
- With buzzer • Red color

■ SK Model

	Series	Rated Voltage	Installation • Wiring	Buzzer	LED Unit Color
Model	**SK** ↓	− ↓	↓	↓	− ↓

- **S** Ø80
- **H** Ø100
- **P** Ø150
- **M1** 12 - 24 V DC
- **M2** 100 - 240 V AC
- **J** Cabtyre Cable
- **T** Terminal block (SKH only)
- **[None]** No Buzzer
- **B** With Buzzer (SKH only)
- **R** Red
- **Y** Amber
- **G** Green
- **B** Blue

Model Number Example **SKH-M1JB-R**
- Ø100 • 12 - 24 V DC • Cabtyre Cable • With buzze • Red color

3 | Part Names

■ Cable type **J**
- Globe
- Rotary switch (SF model only)
- Nameplate
- Case
- Buzzer Opening (Model with Buzzer Only)
- Cabtyre Cable
- Front View

* The SF model has a rotary switch inside of the globe.

■ Terminal block type **T** **KT**
- Globe
- Rotary switch (SF model only)
- Nameplate
- Case
- Buzzer Opening (Model with Buzzer Only)
- Front View
- Nameplate
- Terminal block
- Bottom View

Accessory List

Model	Name	QTY
SF□□-□□KT/SL□□-□□KT	Mounting Bracket, Waterproof Sheet	1
SF08-□□J/SL08-□□J/SKS Model	M4 Nut, Plain Washer	3
SF10-□□J/SL10-□□J/SKH Model	M5 Nut, Plain Washer	3
SL15-□□/SKP Model	M8 Nut, Plain Washer	3

4 | Installation

Notice Ensure that the product is installed in an environment that meets the following conditions:
- Where excessive vibration is not present.
- On a sturdy surface.
- On a level surface.
- When it is necessary to waterproof the backside of the installation surface;
  - Provide a sealant coating around the nuts of the backside of the installation surface.
  - Waterproof the cable mounting area.
- Ensure that the product is mounted upright when installed outdoors.
- Ensure that the speaker is facing forward when installing the buzzer models.
- Depending on your operating environment, additional waterproofing may be required on the Terminal Block openings for SKH-M□T models.

■ 3-Screw Mounting Type **J** **T**
(1) Insert the bolts of the beacon into the holes of the mounting surface.
(2) Use the nuts and washer (accessory) to secure in place.

Installation Example
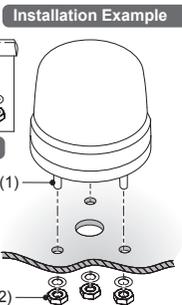
Maximum Board Thickness of Mounting Surface

Model	Maximum Board Thickness
SF08/SL08/SKS	9 mm
SF10/SL10/SKH	8 mm
SL15/SKP	10 mm

Installation Dimensions
Refer to the "Installation Manual".

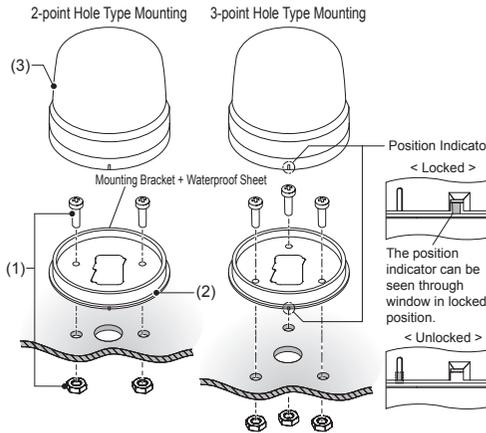### ■ 2-point Hole Type Mounting (SF • SL Models) / 3-point Hole Type Mounting (SL15 Model Only) **KT**

(1) Use the screws or bolts, nuts. to secure the mounting bracket (accessory) to the mounting surface.
(Installation screws and nuts are not included with this product. Binding head screws or pan head screws are recommended.)

Model	Screw Hole Depth of Mounting Bracket	Nominal Diameter
SF08/SL08	4.4 mm	M4
SF10/SL10	5.7 mm	M5
SL15	4.8 mm	M8

(2) Check that the O-ring is not twisted.
(3) Align the main unit of product with the positioning Indicator and turn it clockwise to lock it.

Installation Example
2-point Hole Type Mounting | 3-point Hole Type Mounting

- Mounting Bracket + Waterproof Sheet
- Position Indicator
- < Locked >
- The position indicator can be seen through window in locked position.
- < Unlocked >

Installation Dimensions
Refer to the "Installation Manual".

⚠ **Caution** Use a soft cloth moistened with water to clean the globe or case. (Do not use thinner, benzine, gasoline or oil.)

Note The type with a buzzer, if the buzzer opening is splashed with water, the Sound Pressure Level may drop.

5 | Wiring

⚠ **Caution** Make sure the power is OFF before wiring. A short circuit may damage internal circuits.
- Ensure the proper working voltage is used. Any mistake in wiring may result in damage.
- Do not pull the wire, or stuff it inside of this case.
- Be sure the wiring is done properly. Any mistake in wiring may result in damage.
- In the M2 model, do not perform blinking control by turning the power supply ON / OFF. Any mistake in wiring may result in damage.
- Do not apply a voltage to the common wire. (M1 type) Do not apply a voltage to any wire other than the power supply wire. (M2 type) Failure to comply will result in product damage.(except buzzer wire of SKH-M1)
- Do not expose the wiring from the device. If tension is applied to the wiring, the wiring may be disconnected, resulting in a short circuit or an electric shock.
- Use either a Contact Switch or Contact Relay for External Contact that power supply wire of SF, SL, SK Models and buzzer wire of SK Model. Failure comply may result in fire, product malfunction.

Notice The protection rating does not include the Cabtyre Cable ends.
If the ends of the it are in contact with water or exposed to dew or condensation, refer to the indications below to dress the wire ends for water resistance.
- Connect the it ends in a location which will not expose the ends to water.
- Use Fillers, such as silicon, etc., to seal the it ends.

[External contact capacity of power supply wire]

	M1	M2
Current Capacity (Is)	3A or more	1A or more

[External contact capacity of signal wire and buzzer wire]
SF • SL Models

	M1	M2
Current Capacity (Is)	10 mA or more	10 mA or more
Withstand Voltage (Vs)	20 V or more	20 V or more
Leakage Current* (IL)	0.1 mA or less	0.1 mA or less

* When using an NPN open-collector transistor.

SK Model

	M1	M2
Current Capacity (Is)	0.5 A or more	0.5 A or more
Withstand Voltage (Vs)	35 V or more	20 V or more

[Fuse]

Fuse Rating	250 V 1 A

Wire Type / Wire Gauge
Wire Type : UL2464
Wire Gauge : **M1** AWG22

M2 Power Supply Wire	AWG18
Excluding Power Supply Wire	AWG24

Wiring Example
Refer to the "Installation Manual".

Terminal Block Wiring
■ Recommended lead wire specifications

Wire Type	Wire Gauge (Solid Wire)	Wire Gauge (Stranded Wire)
UL1007 / UL1430	0.13 ~ 1.5 mm²	AWG28 ~ 14

- Temperature rating should be above 75°C, and the conductor material should be of copper wire.

Note
- Strip 8-9 mm of wire insulation from the lead wire to insert into the terminal block.
- Do not tug on to the lead wire to remove- always unlock the lever before removing the wires.
- The tip of the flathead screwdriver should be no more than 2mm wide and 0.5 mm thick.
- Do not put excessive force on the lever, as this may cause the lever to break.

■ Installation / ■ Removal
1 Align a flathead screwdriver to the groove of the lever. Press down to release the lock.
Lever
2 The stripped side of the lead wire is inserted in the slot. And lock.
2 Pull out the lead wire.

6 | Specifications

Model	Rated Voltage
SF08-M1/SF10-M1	12 - 24 V DC (Non-polar)
SF08-M2/SF10-M2	100 - 240 V AC (50/60 Hz)
SL08-M1/SL10-M1/SL15-M1	12 - 24 V DC (Non-polar)
SL08-M2/SL10-M2/SL15-M2	100 - 240 V AC (50/60 Hz)
SKS-M1J/SKH-M1J/SKP-M1J	12 - 24 V DC (Non-polar)
SKS-M2J/SKH-M2J/SKP-M2J	100 - 240 V AC (50/60 Hz)
SKH-M1T	12 - 24 V DC (Non-polar)
SKH-M2T	100 - 240 V AC (50/60 Hz)