Manuals+ — User Manuals Simplified.

PATLITE LR10-S Module
LED

PATLITE LR10-S Module LED Instruction Manual

Contents

PATLITE

PATLITE LR10-S Module LED

Notice to Customer
Thank you very much for purchasing our Patlite products.

- This product requires installation, wiring, and other related work. Be sure to ask an expert technician to perform these procedures.
- This installation manual is intended for the technician who performs the installation and wiring of the product.
- A separate user's manual is provided for customers who operate the product after installation. Be sure to read the users manual before operating the product.

⚠ WARNING
Indicates an imminently dangerous condition: failure to follow the instructions may lead to death or serious injury.

- Request the installation and wiring to be accompanied by a professional contractor. If installation is done improperly, it may result in fire, electric shock, falling, or malfunction.

⚠ CAUTION
Indicates a potentially dangerous condition: failure to follow the instructions may lead b slight injury or property damage.

- In order to avoid scratches, use a soft cloth moistened with water when the LED unit or body must be cleaned. (Do not use thinner, gasoline or oil. This may cause or alteration.)

To Installers or Contractors

- Read this manual thoroughly before using this product to ensure correct use.
- If there are any questions concerning this product, refer to the contact information at the end of USER's manual and contact your nearest PATLITE Sales Representative.

Read this First (Safety Precautions)

WARNING

To prevent from short-circuits, electric shock or damage, observe the following:

- Be sure the power is disconnected before replacement or repair, including the replacement of the fuse.
- Installation this product in a properly maintained condition. (Replace or repair if the body, LED unit, etc. are damaqed.)
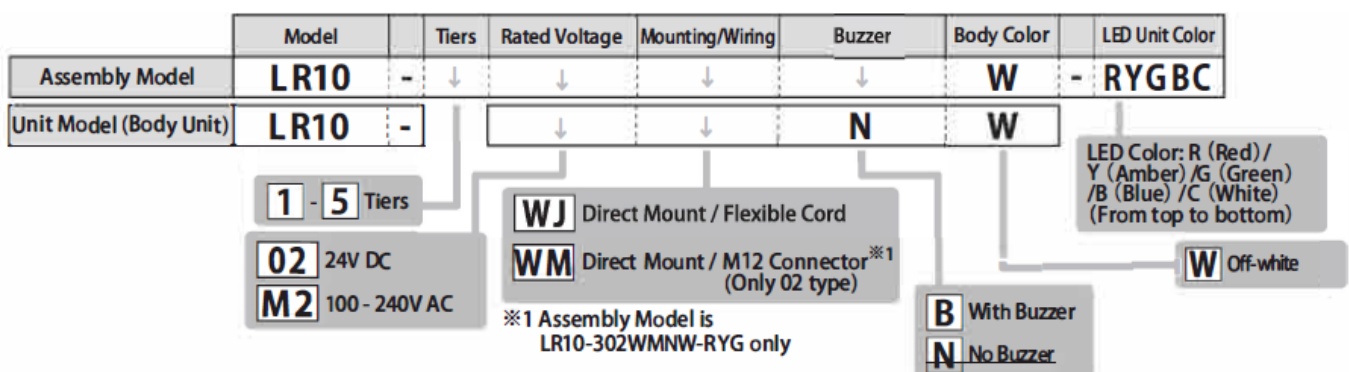
Caution

- In order to maintain protection against dust and waterproofing performance for this product, be sure to use the Head Cover, LED Unit and Buzzer Unit in the condition that it was originally attached.
- Do not operate this product without the Gasket and Mounting Gasket. Failure to comply will result in lower waterproofing performance, possibly causing failure.
- Apply voltage to the power source line only. Product failure will occur.
- When removing covers or packing from the equipment, which is attached to this product, be careful not to snag the product. Failure to comply may result in damage to the product.
- In order to avoid scratches, use a soft cloth moistened with water when the LED Unit or Body must be cleaned. (Do not use thinner, benzine, gasoline or oil. This may cause discoloration or alteration.)

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 remove parts beyond those designed to be removed from this product.
  - Do not modify or disassemble this product.
  - For repair parts, please refer to our website listed at the end of the User's Manual.
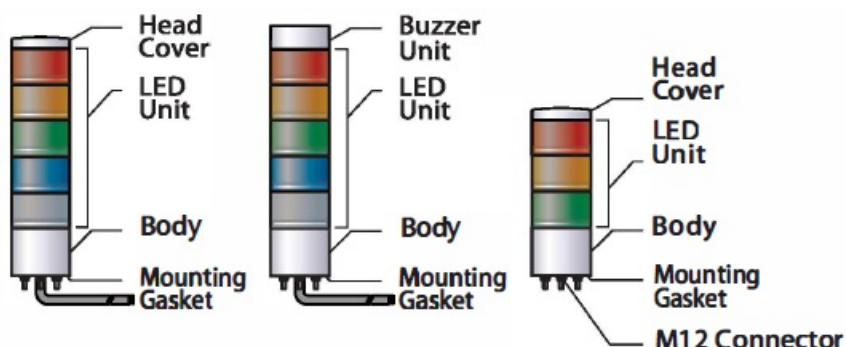
Model Number Configuration

	Model		Tiers	Rated Voltage	Mounting/Wiring	Buzzer	Body Color	LED Unit Color
Assembly Model	LR10	- ↓		↓	↓	↓	W	- RYGBC
Unit Model (Body Unit)	LR10	-		↓	↓	N	W	

| 1 - 5 Tiers |
| 02 24V DC |
| M2 100 - 240V AC |

| WJ Direct Mount / Flexible Cord |
| WM Direct Mount / M12 Connector※1 (Only 02 type) |

※1 Assembly Model is LR10-302WMNW-RYG only

| B With Buzzer |
| N No Buzzer |

| W Off-white |

LED Color: R (Red) / Y (Amber) /G (Green) /B (Blue) /C (White) (From top to bottom)

Model Number Example LRIO-502WJBW-RYGBC

- LED 5 Tiers
- 24 V DC
- Direct Mount/Flexible Cord
- With Buzzer
- Off-white
- (From top) Red
- Amber
- Green
- Blue
- White

Part Names

The name of each part is indicated as an example for the specific model.

- LR10-502WJNW
- LR10-SM2WJBW
- LR10-302WMNW

Installation

Notice

- The following requirements are necessary for proper installation. Failure to do so may result in degradation of product performance. :
  - 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.

- If the pole type requires an IP66 or IP69K rating, apply sealant to the screws, nuts and wire distribution hole when installing the signal tower onto the installation surface.
- To ensure waterproof performance, check that there are no cracks or scratches on the Mounting Gasket.
- Check the contact surface between the Mounting Gasket for foreign matter such as dust and sand, and if there is foreign matter, wipe it off with a soft, dry cloth. Waterproof performance may deteriorate due to adhesion of foreign matter.
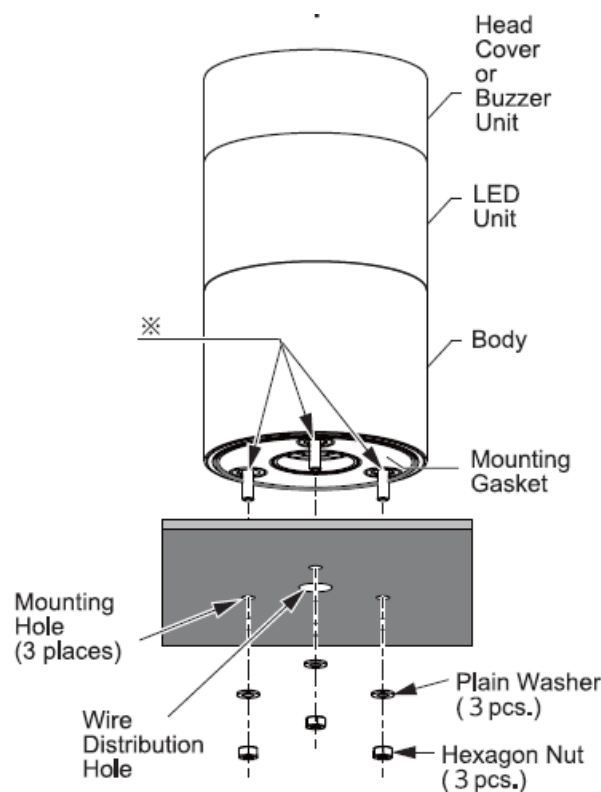
Note

- For units with an alarm, the sound pressure may drop if the Buzzer Unit gets splashed with water or snow.

Basic Mounting Instructions

1. Make holes for the mounting and wire-distribution for the product.
   (Check the Model and refer to the suitable mounting dimension figure.)
2. Connect to the product through the distribution hole.
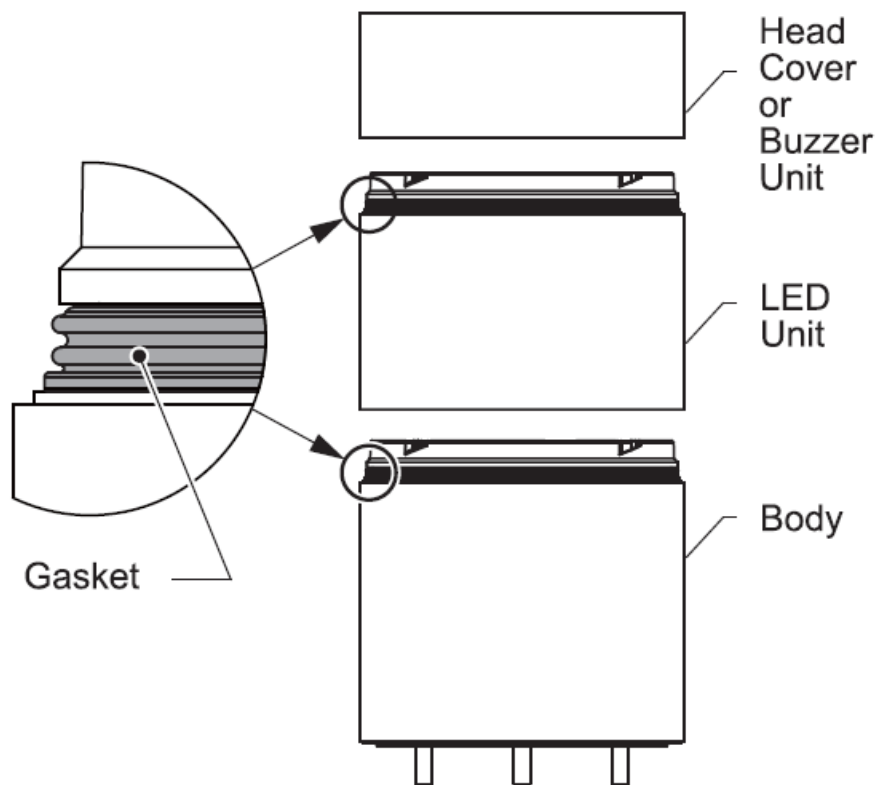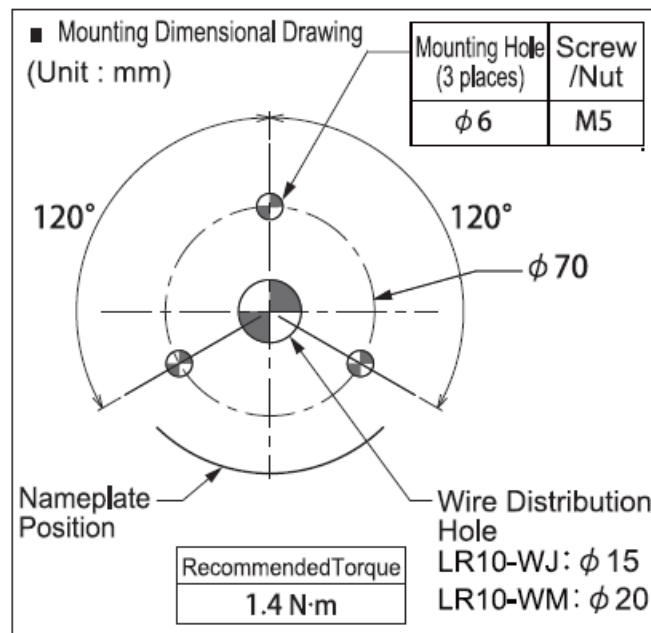3. Secure the product with the nuts.

Installation Example

- Make sure there are no cracks or scratches on the Mounting Gasket.
- Check the contact surface between the Mounting Gasket and the mounting location for dust, sand, or other foreign matter.
- Do not remove the hexagonal nuts ※ attached to the Body.
   Doing so may cause the hexagonal bolts for mounting to enter the product, making it impossible to install the product.
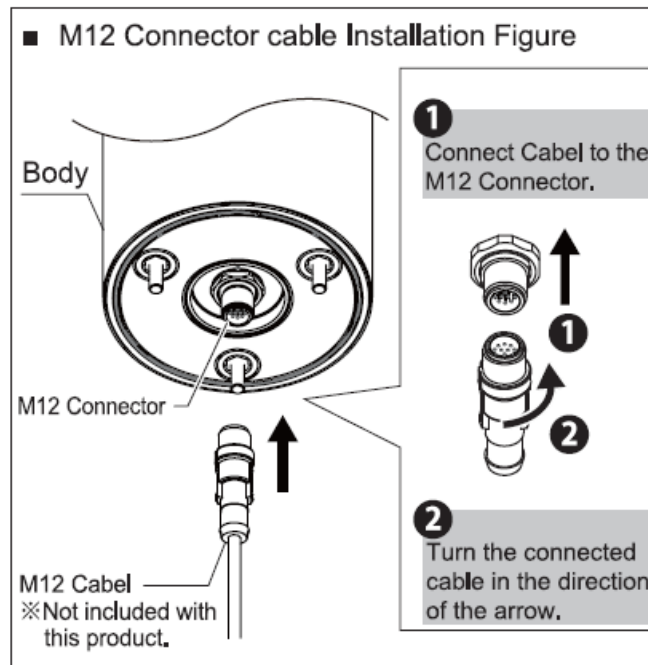
- Do not remove the Gasket and Mounting Gasket required for waterproofing.

Maximum Board Thickness of Mounting Surface : 6mm

Head
Cover
or
Buzzer
Unit

LED
Unit

Body

Gasket

For details on how to remove and install the unit, please refer to the "User's Manual" separately included in the package.

■ Mounting Dimensional Drawing
(Unit : mm)

Mounting Hole (3 places)	Screw /Nut
φ6	M5

120°   120°

φ70

Nameplate Position

Wire Distribution Hole
LR10-WJ: φ15
LR10-WM: φ20

RecommendedTorque
1.4 N·m

■ M12 Connector cable Installation Figure

Body

M12 Connector

M12 Cabel
※Not included with this product.

1 Connect Cabel to the M12 Connector.

2 Turn the connected cable in the direction of the arrow.

Warning

- Be sure the power is disconnected before wiring and changing fuses. Possible cause of short-circuiting may occur.
- Ensure the proper working voltage is used and that direct current or alternating current is properly applied. Possible cause of combustion may occur.

Caution

- Apply voltage to the power source line only.
  Product failure will occur.
- Do not control the flashing display by switching the power source ON and OFF. Product failure will occur.
- 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. Failure to comply will result in damage due to short circuiting.
- Do not pull the lead wire or push it inside the body. Product failure may occur.
- 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.

Notice

- 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 tier. (This is because LED units of the same color light up for one signal line.)
- To protect the power supply and other internal circuitry, be sure to install an external fuse.
- If wiring is extended beyond its factory length, a relevance in the length of the wire and wire gauge will cause a voltage drop.

External Contact Capacity Vs : Current Capacity Vs : Withstand Voltage IL : Leakage Current Ta : Ambient

Temperature

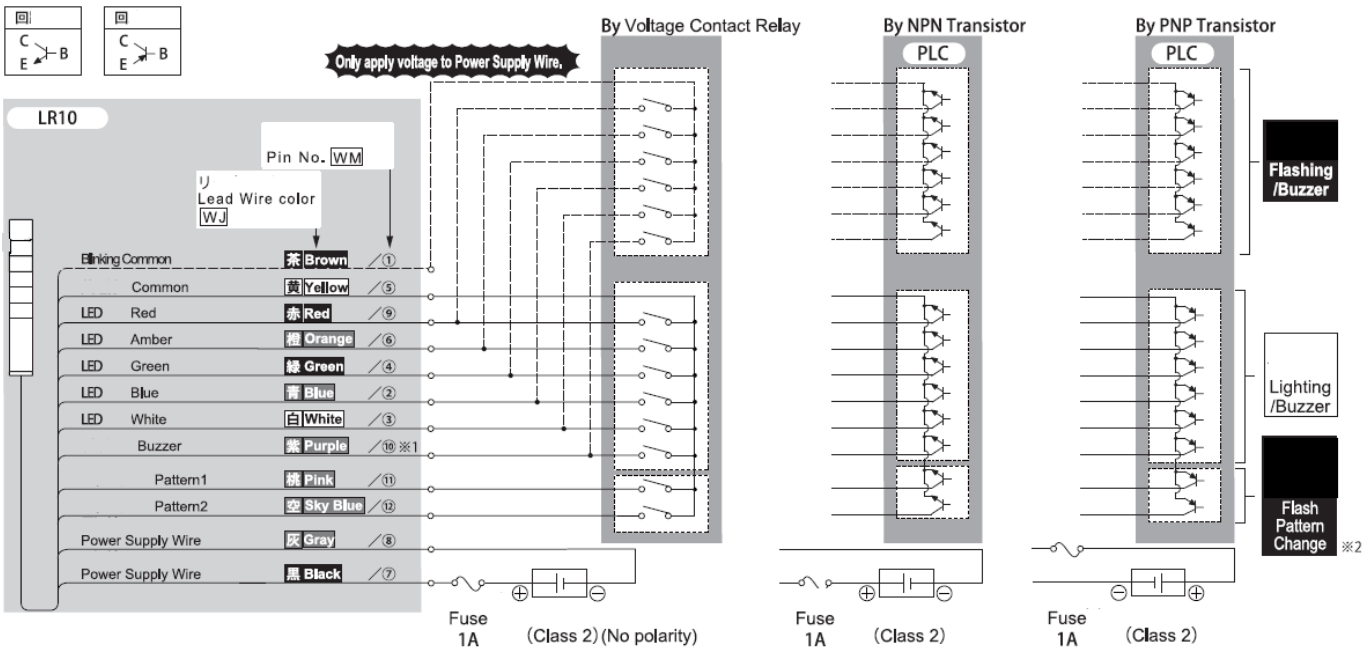|	Rated Load Voltage	**02** 24V DC	**M2** 100 – 240V AC
LED Unit (1 Tier)	Recommended Contact Capacity	$Is \geq 10\,mA$ $Vs \geq 30\,V\,DC$	$Is \geq 10\,mA$ $Vs \geq 30\,V\,DC$
Buzzer	Signal Wire Current (Max.) / Voltage Recommended Contact Capacity	$Is \geq 10\,mA$ $Vs \geq 30\,V\,DC$	$Is \geq 10\,mA$ $Vs \geq 30\,V\,DC$
Inrush Current	Signal Wire Power Supply Wire	None	50A/2ms or less(Ta=50℃)(※1)
	Leakage Current	$IL \leq 0.1\,mA$	

Measured with five LED tiers and buzzer operating.

Recommended Fuse
Fuse Ampere Ratings 250 V/ 1 A (5x20mm Fast-Actin Glass Bod Cartridge Fuse)
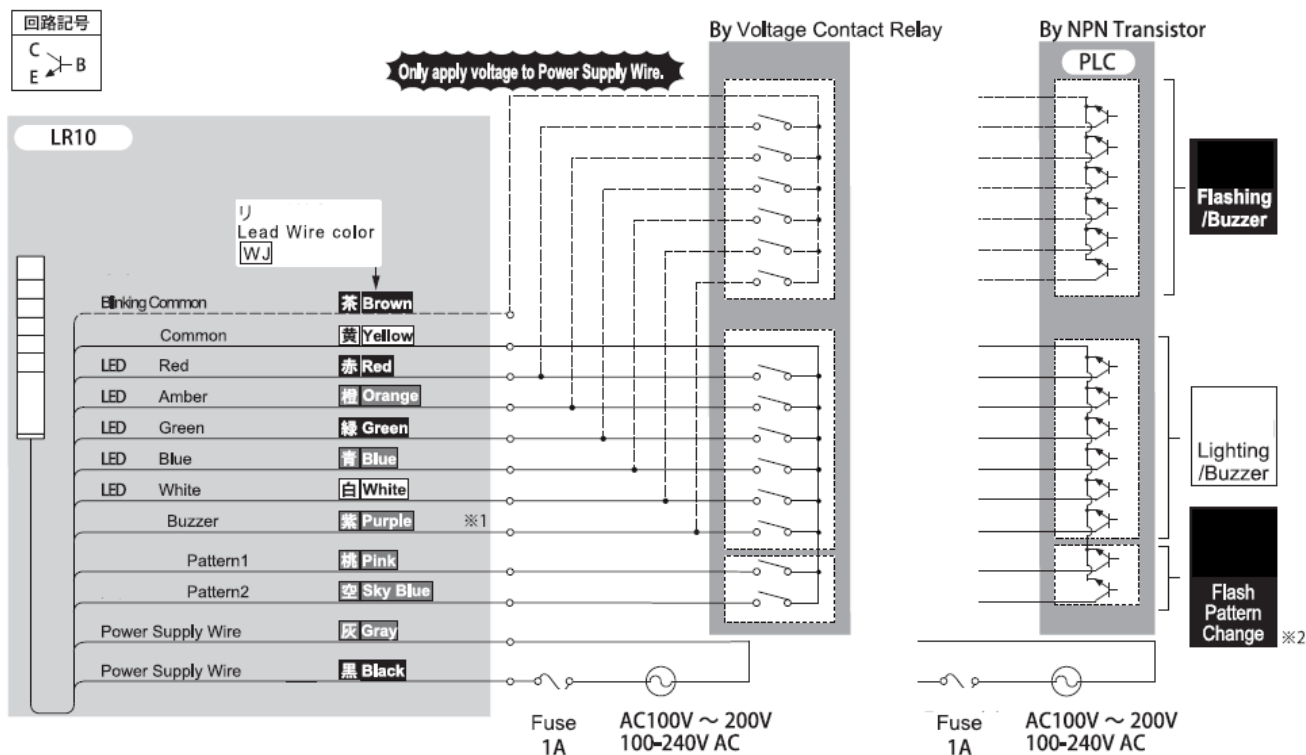
Product Specifications

- 02 DC 24 v
- 02 24 V DC

1. Used when buzzer unit is attached.
2. For more information about Flash pattern setting, see 3. Flash Pattern Setting in the User's Manual.
   If Flash pattern is "Rotating" or "Triple-Flash", and the LED units are operated using Blinking common, LED units operate intermittently according to the blinking cycle.

M2 AC 100 ~ 240 V
M2 100 – 240 V AC

1. Used when buzzer unit is attached.
2. For more information about Flash pattern setting, see 3. Flash Pattern Setting in the User's Manual.

   If Flash pattern is "Rotating" or "Triple-Flash", and the LED Units are operated using Blinking common, LED Units operate intermittently according to the blinking cycle.

Specifications

- UL 508, CSA-C22,2 No. 14 (File No.E215660)
- CE Marking, UKCA Marking (EN 61000+4, EN 61000-6-2, EN IEC 63000) (02)
- CE Marking, UKCA Marking (EN 61000-6-4, EN 61000-6-2, EN IEC 63000, EN 60947-5-1, EN 62471) (M2)
- KS C 9610-6-4, KS C 9610-6-2)
- FCC Part 15 Subpart B Class A
- ICES-003 Class A

(Conformity Standards)

- UL 508, CSA-C22.2 No. 14 (File No.E215660) • CE Marking, IJKCA Marking (EN 61000-6-4, EN 61000-6-2, EN IEC 63000) (02 Type)
- CE Marking, UKCA Marking (EN 61000-6-4, EN 61000-6-2, EN IEC 63000, EN 60947-5-1, EN 62471) (M2 Type)
- KC (KS C 9610-6-4, KS C 9610-6-2) • FCC Part 15 Subpart B Class A
- ICES-003 Class A
- When a regulated power supply is not being used, select a fuse that meets class CC or more. (M2 Type
- Conformity requirements for UL508
    - Maximum ambient temperature: 500C
    - For use on a flat surface of a Type 1, 4X indoor use only or 13 Enclosure when device is installed as intended.

- Conformity requirements for IEC/EN 60947-5-1 (M2 Type)
    - Rated impulse withstand voltage: 4kV
    - Operating ambient temperature: -200C to +500C
    - Operating ambient humidity: Less than 90 %RH (No condensation)
    - Pollution degree: 2
    - IP code: IP66

FCC Statement

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 .The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance
with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. (Responsible party in U.S.A.) PATLITE (U.S.A) Corporation, 20130 S. Western Ave. Torrance, CA90501, U.S.A., **https://www.patlite.com**
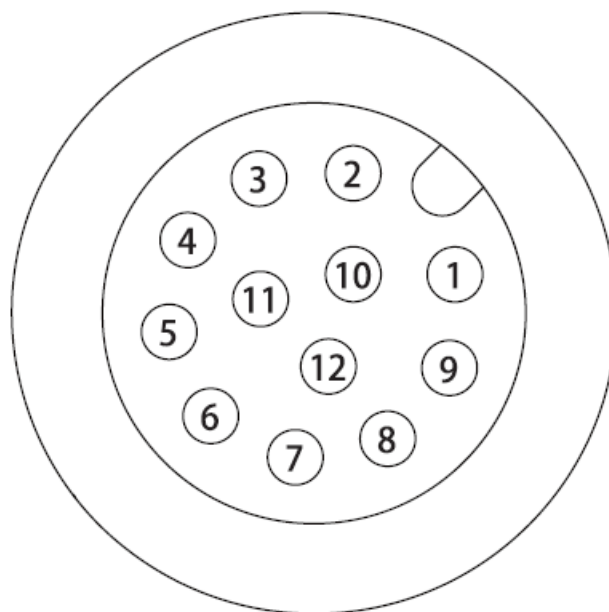This product has been tested and found to comply with the limits for a Class A device. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This product must not be used in residential areas.

Wiring Example and M12 Connector Pin Layout

The following is a basic wiring example. If there are any special applications that require asking questions concerning this product, feel free to contact your PATLITE Sales Representative. Accidental wiring will result in product failure.

Note: When lighting and flashing are used together, it is necessary to prepare an external contact for each lighting or flashing.

M12 Connector Pin Layout

Connector type : M12, 12-pins, A code

Pin 1	Blinking Common
Pin 2	LED Blue
Pin 3	LED White
Pin 4	LED Green
Pin 5	Common
Pin 6	LED Amber
Pin 7	Power Supply Wire
Pin 8	Power Supply Wire
Pin 9	LED Red
Pin 10	Buzzer
Pin 11	Pattern1
Pin 12	Pattern2

Documents / Resources

PATLITE LR10-S Module LED [pdf] Instruction Manual
LR10, LR10-S, LR10-E, LR10-S Module LED, LR10-S, Module LED, LED

References

- **User Manual**