

LED Work Light

LED-Arbeitsleuchte

Éclairage LED de travail

Lampada da lavoro LED

Luz de trabajo LED

Installation Manual

Installationsanleitung

Manuel d'installation

Manuale di installazione

Manual de instalación

Installation Wiring

Installation Verkabelung

Installation Câblage

Installazione Cablaggio

Instalación Cableado

**TYPE CLK-24AG/AAG**

**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 user's 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 to slight injury or property damage.

- Use a soft cloth dampened with water to clean the product. (Do not use thinner, benzene, gasoline or oil.)

**Hinweis an den Kunden** Vielen Dank, dass Sie unser Patlite-Produkt erworben haben.

- Dieses Produkt erfordert Installations-, Verkabelungs- und andere Arbeiten. Bitten Sie stets einen erfahrenen Techniker, diese Arbeiten durchzuführen.
- Diese Installationsanleitung richtet sich an die Techniker, die die Installation und Verkabelung für dieses Produkt ausführen.
- Für die Kunden, die das Produkt nach der Installation verwenden, steht eine separate Bedienungsanleitung zur Verfügung. Lesen Sie stets die Bedienungsanleitung, bevor Sie das Produkt verwenden.

**AVVERTIMENTO** Indica una situazione pericolosa imminente: la non-osservanza delle istruzioni può portare alla morte o a una grave lesione.

- Chiedete a un professionista di installare e cablare il prodotto. Se l'installazione è eseguita in modo errato, può provocare un incendio, scosse elettriche, cadute o malfunzionamenti.

**VORSICHT** Weist auf eine potentiell gefährliche Situation hin: Die Nichtbefolgung der Anweisungen kann zu einer leichten Verletzung oder einem Sachschaden führen.

- Verwenden Sie ein weiches Tuch, das mit Wasser angefeuchtet, um ein Produkt zu reinigen. (Verwenden Sie keinen Verdünnern, Benzin, Benzin oder Öl.)

**Avis au client** Nous vous remercions d'avoir acheté notre produit Patlite.

- Ce produit nécessite une installation, un câblage et d'autres travaux connexes. Assurez-vous de faire appel à un technicien expérimenté pour effectuer ces procédures.
- Ce manuel d'installation est destiné au technicien qui effectue l'installation et le câblage de l'appareil.
- Un mode d'emploi séparé est fourni aux clients qui utilisent le produit après l'installation. Veuillez à lire le manuel d'utilisation avant d'utiliser le produit.

**AVERTISSEMENT** Indique une situation dangereuse imminente: le non-respect de ces consignes peut entraîner la mort ou des blessures graves.

- Demandez à ce que l'installation et le câblage soient effectués en présence d'un professionnel. Si l'installation est réalisée de façon incorrecte, il existe un risque d'incendie, de choc électrique, de chute ou de dysfonctionnement.

**ATTENTION** Indique une situation potentiellement dangereuse: le non-respect de ces consignes peut entraîner de légères blessures ou des dommages matériels.

- Utilisez un chiffon doux imbibé d'eau pour nettoyer le produit. (N'utilisez pas de diluant, d'essence, d'essence ou d'huile.)

**Avviso al cliente** Grazie per aver acquistato il nostro prodotto Patlite.

- Questo prodotto richiede l'installazione, il collegamento elettrico e altri lavori. Assicuratevi di chiedere a un esperto tecnico di eseguire questi lavori.
- Questo manuale di installazione deve essere utilizzato dal tecnico che esegue l'installazione e il cablaggio elettrico del prodotto.
- Un manuale dell'utente separato è fornito per i clienti che utilizzano il prodotto dopo l'installazione. Assicuratevi di leggere il manuale dell'utente prima di mettere in funzione il prodotto.

**AVVERTENZA** Indica un'imminente situazione di pericolo: il mancato rispetto delle istruzioni potrebbe causare la morte o lesioni gravi.

- Richiedete l'installazione e il cablaggio ad un professionista. Se l'installazione è eseguita in modo errato, può provocare un incendio, scosse elettriche, cadute o malfunzionamenti.

**ATTENZIONE** Indica una potenziale situazione di pericolo: il mancato rispetto delle istruzioni potrebbe causare lesioni leggere o danni materiali.

- Utilizzare un panno morbido inumidito con acqua per pulire il prodotto. (Non usare diluente, benzina, benzina o olio.)

**Aviso al cliente** Gracias por adquirir nuestro producto Patlite.

- Este producto requiere instalación, cableado y otros trabajos relacionados. Asegúrese de solicitar a un técnico experto la realización de estos procedimientos.
- Este manual de instalación ha sido elaborado para el técnico que lleva a cabo la instalación y el cableado del producto.
- Se proporciona por separado un manual del usuario para los clientes que usarán el producto después de la instalación. Asegúrese de leer el manual del usuario antes de utilizar el producto.

**ADVERTENCIA** Indica una condición de riesgo inminente: no observar estas instrucciones podría causar lesiones graves o incluso la muerte.

- Solicite que la instalación y el cableado sean realizados por un contratista profesional. Si la instalación se realiza de forma incorrecta, podría causar incendios, descargas eléctricas, caídas o un fallo de funcionamiento.

**ATENCIÓN** Indica una situación potencialmente peligrosa: no observar estas instrucciones podría causar lesiones leves o daños materiales.

- Utilice un paño suave humedecido con agua para limpiar el producto. (No use diluyente, bencina, gasolina o aceite.)

**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 this manual and contact your nearest PATLITE Sales Representative.

**Für Installateure und Fachpersonal**

- Lesen Sie diese Anleitung sorgfältig, bevor Sie dieses Produkt verwenden, um die ordnungsgemäße Verwendung zu gewährleisten.
- Wenn Sie irgendwelche Fragen zu diesem Produkt haben, verwenden Sie die Kontaktinformationen am Ende dieser Anleitung und wenden Sie sich an Ihren nächstgelegenen PATLITE-Vertriebsmitarbeiter.

**Aux installateurs ou aux entrepreneurs**

- Lisez attentivement ce manuel avant d'utiliser ce produit pour garantir une utilisation correcte.
- Si vous avez des questions concernant ce produit, reportez-vous aux coordonnées figurant à la fin de ce mode d'emploi de l'appareil et contactez votre représentant de vente PATLITE le plus proche.

**Per gli installatori o gli appaltatori**

- Leggere attentamente il manuale prima di utilizzare questo prodotto per garantirne un uso corretto.
- Se vi sono domande riguardanti questo prodotto, fare riferimento alle informazioni di contatto alla fine di questo manuale e contattare il più vicino rappresentante di vendita PATLITE.

**Para instaladores o contratistas**

- Lea atentamente este manual antes de utilizar este producto para asegurar un uso correcto.
- Si tiene preguntas relacionadas con este producto, consulte la información de contacto que se encuentra al final de este manual y póngase en contacto con su representante de ventas PATLITE más cercano.

**1 Safety Precautions**

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

- ◆ The following symbols indicate and explain the nature of the information to be observed.

This symbol indicates "Prohibited", which should not be carried out by all means.

This symbol indicates "Enforced", which should be observed and carried out by all means.

**Warning**

- Do not disassemble or modify this product. Failure to comply may result in electric shock or fire.

[Prohibited]

- Request the installation and wiring to be accompanied by a professional contractor. Failure to comply may result in electric shock, fire, or falling from high places.
- When this product is used for security purposes, it should be inspected daily, and to be used in conjunction with other security products, in case a malfunction should occur.

**Caution**

- In order to avoid danger to the eyes, do not stare into the beam, do not view directly into the optical instrument, and don't turn the beam towards someone's eyes. The LED beam is hazardous to the eyes.
- Do not loosen any body screws. It will have an adverse effect on the protection rating.

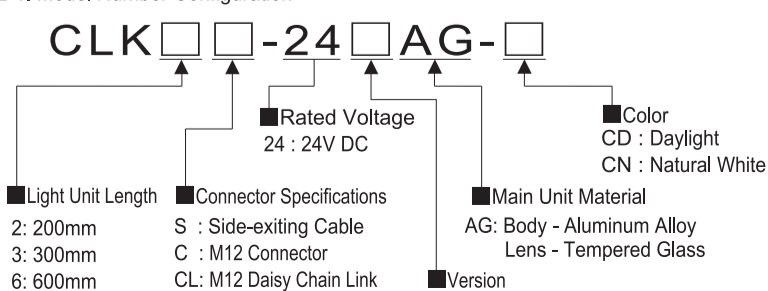
[Prohibited]

- Verify that the specified operating voltage is not exceeded.
- Avoid installation in the following locations:
  - Near space heaters or places where high temperatures are present.
  - In locations where chemical or explosive gasses, etc., are present.

[Enforced]

**2 Model Number Configuration**

2-1. Model Number Configuration



2-2. Model List

SGType	Cable	Bracket
CLK2S-24AAG-CD	500mm	1
CLK3S-24AAG-CD	500mm	1
CLK3C-24AG-CD	-	-
CLK3CL-24AG-CD	-	-
CLK6S-24AAG-CD	500mm	2
CLK6C-24AG-CD	-	-
CLK6CL-24AG-CD	-	-

● The following is indicated below for the model prefixes

Side-exiting Cable: □S	Body - Aluminum Alloy Lens-Tempered Glass: AG
M12 Connector: □C	
M12 Daisy Chain Link: □CL	

2-3. Enclosure

CLK□S-24AAG-□	Body(Cable with Cable Gland), Standard Bracket, Hex Socket Bolt, User's Manual
CLK□C-24AG-□	Body (with M12 Plug), Standard Bracket, Hex Socket Bolt, User's Manual
CLK□CL-24AG-□	Body (with M12 Plug and Socket), Standard Bracket, Hex Socket Bolt, User's Manual

※ A cable is not attached to models □C and □CL.

Recommended Product : Phoenix Contact Corp. Number: 1668124, Part Number: SAC-4P-5.0-PUR/M12FS

Number: 1668340, Part Number: SAC-4P-M12MS/0.6-PUR/M12FS

※ For the 600 mm length models, two sets of Standard Brackets with Hex Socket Bolts are included.

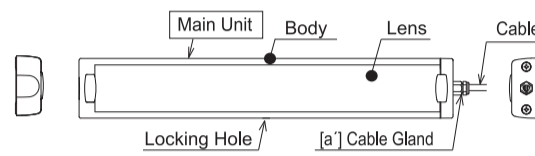
**3 Part Names and Dimensions**

3-1. Part Names and Dimensions

(Unit : mm)

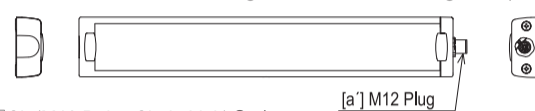
◆ □S (Side-exiting Cable) Series

→ Cable wire type. This cannot be connected as depicted in section "4-4. Figure 8. CL Series Wiring Example."



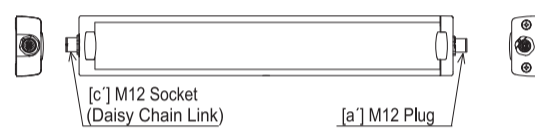
◆ □C (M12 Connector) Series

→ Power supply can be connected in the M12 connector. When an application requires linking, it is necessary to connect a link terminal connection. Refer to 4-4. Figure 8. "CL Series Wiring Example."



◆ □CL (M12 Daisy Chain Link) Series

→ It is used to connect between other units by linking them. Use it in conjunction with the C Series. Refer to 4-4. Figure 8. "CL Series Wiring Example."



◆ Common Backplate Parts

**Caution**

- Do not loosen or remove the Bracket Hook. Failure to comply will result in a decrease in waterproofing performance.

[Prohibited]

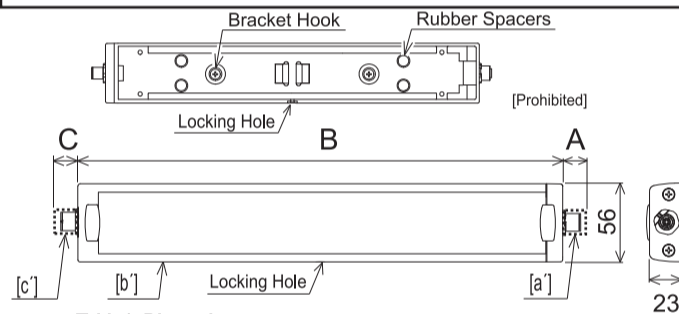
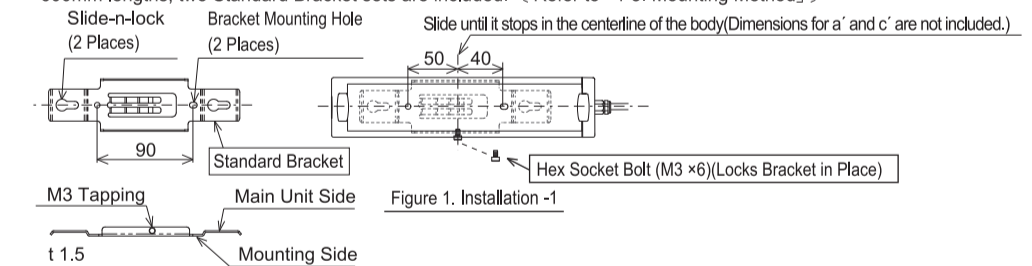


Table 1. Dimensions

Model	DimensionC	DimensionB	DimensionA
	c'	b'	a'
CLK2S-24AAG-□	-	250	(15)
CLK3S-24AAG-□	-	350	(15)
CLK3C-24AG-□	-	350	(13)
CLK3CL-24AG-□	(12)	350	(13)
CLK6S-24AAG-□	-	650	(15)
CLK6C-24AG-□	-	650	(13)
CLK6CL-24AG-□	(12)	650	(13)

◆ Standard Bracket (All Models)

- Specifications for the lens lengths of 200 mm and some 300mm include one Standard Bracket per unit, and for the 600mm lengths, two Standard Bracket sets are included. [ Refer to "4-3. Mounting Method" ]



**4 Installation**

4-1. Installation Location

- Suitable for wet or damp locations.

**Warning**

- After installing this product, be careful not to use this product to climb onto a machine, or to get anything snagged onto this product while it is mounted on equipment, etc. Failure to comply may result in falling off the machinery or product damage may occur.

[Prohibited]

- To prevent from electrocution, disconnect power prior to mounting or performing maintenance.
- Verify the installation location is a firm location which can handle the weight of the product and has no adverse vibrations. If installed in a place where vibration is frequent and/or exceeds the specifications, damage to the product may occur.
- The designated screws should be used for installation. Any parts used that are not specified may result in product damage or personal injury.

[Enforced]

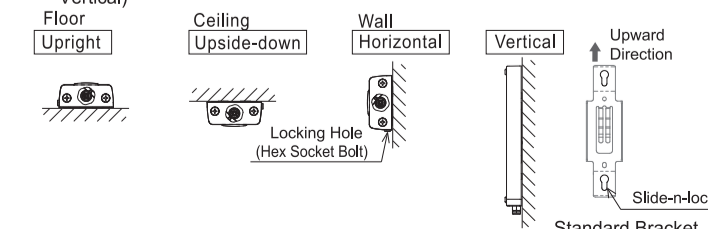
**Caution**

- Ensure this product is securely mounted, to prevent from falling, etc.
- This product is for indoor use only. (Not for outdoor use)
- Use protection to secure the standard bracket when mounting in a vertical direction.

[Enforced]

4-2. Mounting Direction - All Models

- All Models: The attachment direction common to all the models is shown.
- Beware of the following:
  1. To prevent liquid to accumulate, install with the "Locking Hole" in the downward direction, when level.
  2. Mount the Standard Bracket in the direction indicated in the following figures to prevent from falling. (When Vertical)



#### 4-3. Mounting Method

- Specifications for the lens lengths of 200 mm and some 300mm include one Standard Bracket per unit, and for the 600mm lengths, two Standard Bracket sets are included. Moreover, when sliding the Main Unit onto the Standard Bracket, allow a clearance of at least 12mm on both ends to allow attachment and removal. Refer to Figure 4. "Slide Installation -1" and Figure 7. "Slide Installation -2."
- When connecting several units for the CL (M12 Daisy Chain Link) Series, be sure to connect the maximum number of links. Refer to "4-4. CL (M12 Daisy Chain Link) Series Cautionary Notes" to verify the number of links to use.

#### ■ Lens Length: 200mm and 300mm (One Standard Bracket per unit included)

##### ① Mounting Hole Dimensions and Standard Bracket Mounting (Recommended)

Ensure the Standard Bracket is attached to a flat and sturdy surface before making any holes for installation. M5 screw is bolted in the sequence of 1 then 2 (longer hole, first) as shown in the figure below, when the Standard Bracket is fixed into place. The recommended torque for the M5 screw is 2.8 N·m. More importantly, the body cannot be attached if the screw head is larger than 4 mm.

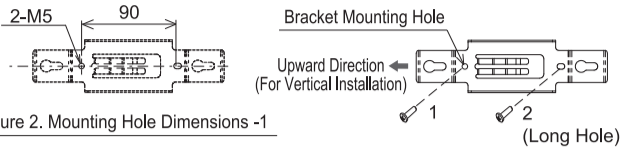


Figure 2. Mounting Hole Dimensions -1



Figure 3. Standard Bracket Mounting

##### ② Main Unit Installation

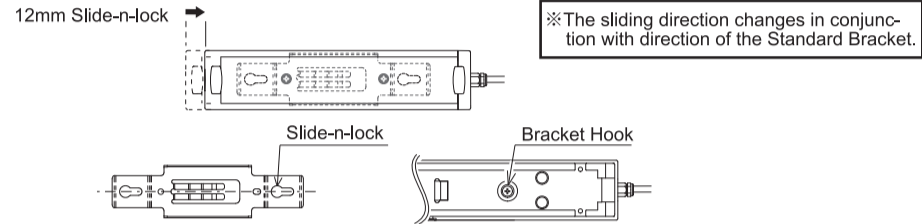
After attaching the Standard Bracket, the Main Unit is attached. Insert the "Bracket Hook" in the back of the Main Unit and insert it into the "Slide-n-lock" holes of the bracket, then slide the Main Unit until the "Locking Hole" of the Main Unit is aligned with the "M3 tapping" for the Standard Bracket.

**Caution**

● Do not loosen or remove the Bracket Hook. Failure to comply will result in a decrease in waterproofing performance.

[Prohibited]

Figure 4. Slide Installation -1



##### ③ Hex Socket Bolt Lock-down

Use the "M3 tapping" Hex Socket Bolt to lock the Standard Bracket into place. This prevents the Body from unattaching from the Standard Bracket. Tighten with a torque of about 0.6N·m.

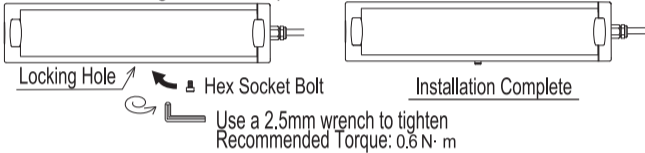


Figure 5. Installation -2

#### ■ Lens Length: 600mm (Two Standard Brackets per unit included)

① Ensure the Standard Bracket is attached to a flat and sturdy surface before making any holes for installation. Using an M5 screw, refer to "Figure 6. Mounting Hole Dimensions -2" and "Figure 3. Standard Bracket Mounting" to mount in place. Tighten the M5 screw with a torque of about 2.8 N·m.

② After attaching the Standard Bracket, the Body is attached. Insert the "Bracket Hook" in the back of the Main Unit and insert it into the "Slide-n-lock" holes of the bracket, then slide the Main Unit until the "Locking Hole" of the Main Unit is aligned with the "M3 tapping" for the Standard Bracket.

③ Use the "M3 tapping" Hex Socket Bolt to lock the Standard Bracket into place. This prevents the Body from unattaching from the Standard Bracket. Tighten with a torque of about 0.6 N·m.

##### ① Mounting Hole Dimensions and Standard Bracket Mounting (Recommended)

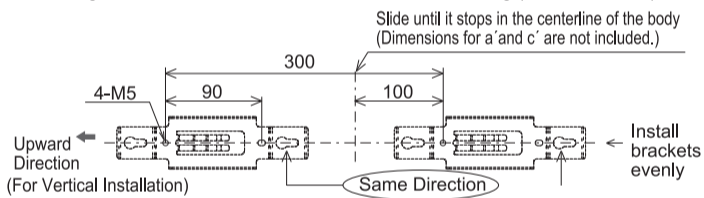


Figure 6. Mounting Hole Dimensions -2

**Caution**

● Attach the two Standard Brackets evenly for installation.

[Enforced]

##### ② 600mm Main Unit Installation and Hex Socket Bolt Lock-down

※ The sliding direction changes in conjunction with direction of the Standard Bracket.

**Caution**

● Do not loosen or remove the Bracket Hook. Failure to comply will result in a decrease in waterproofing performance.

[Prohibited]

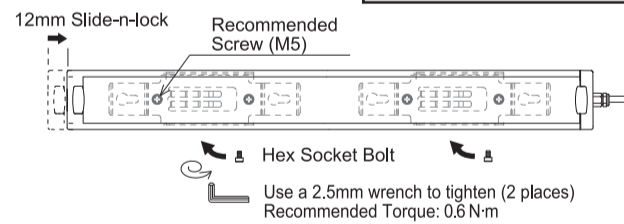


Figure 7. Slide Installation -2

#### 4-4. CL (M12 Daisy Chain Link) Series Cautionary Notes

**Caution**

● When linking together, there is a restriction on the maximum number of links. Be sure to use it within the maximum number of links. Refer to "Table 2. Maximum Links." Exceeding the number of maximum links can cause failure.

● Linking this product requires "C (M12 Connector) Series" as the terminal link.

[Enforced]

● When installing with option parts "M12 link-cable 4-wire 0.6m" side-by-side, a gap between the ends of the Body requires a distance from 150mm to 600mm. Refer to "Figure 8. CL Series Wiring Example."

● To the customer; be sure the cable is installed with the distance between products set by the corresponding cable.

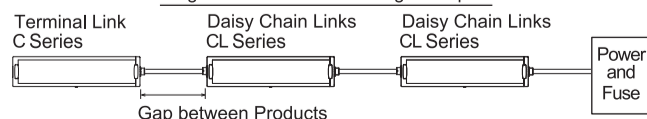
※ Refer to "5-1. Wiring" for the Daisy Chain Link connection wiring example for the "CL Series."

Table 2. Maximum Links

Combinations	Terminal Links per unit		Daisy Chain Links per unit		Maximum Connections per unit
	3C	6C	3CL	6CL	
i	1	-	1-4	-	5
ii	1	-	1-2	0-1	4
iii	1	-	-	1-2	3
iv	-	1	1-3	-	4
v	-	1	0-1	1	3

※ Refer to "Table 2. Maximum Links" for the maximum number of links. Be sure to use maximum number of links as depicted in "Figure 8. CL Series Wiring Example" below. Exceeding the number of maximum links can cause failure.

Figure 8. CL Series Wiring Example



※ When installing with option parts "M12 link-cable 4-wire 0.6m" side-by-side, a gap between the ends of the body requires a distance from 150mm to 600mm.

## 5 Wiring and Proper Use

### Warning

- Be sure to disconnect the power when wiring, mounting, exchanging, or repairing the product. Failure to comply may result in damage of the internal circuitry and the danger of electric shock due to short-circuiting.
- [Enforced]

### Caution

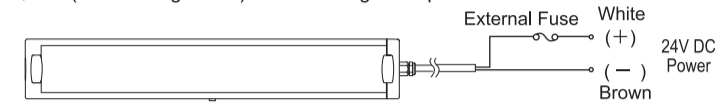
- Check that the proper voltage is connected before applying power.
  - Do not pull on the cable, or try to push it inside the unit. Possible cause of failure may occur. In addition, allow a margin of slack for the wire and cable to prevent stress.
  - Use a constant-voltage regulated power supply. Possible cause of failure may occur with the use of a constant current power supply.
  - Install a fuse to protect it from the power supply. The product can be protected by short-circuiting due to mis-wiring and overcurrents or overvoltages which can damage it.
- [Enforced]

● The suitability of the luminaire supply connections shall be determined in the end use product. (C and CL Series)

#### 5-1. Wiring

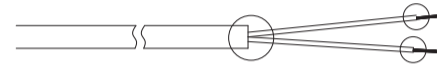
- Use a UL authenticated Class 2 power supply unit to connect power to this product. The power supply unit is constant voltage type.
- This product contains a 2A (slow-blow) fuse inside. Use an external fuse rated for the machine, which is connected to the product, to protect the machine from damage.

#### ◆ □S (Side-exiting Cable) Series Wiring Example

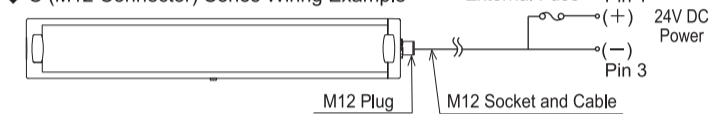


### Caution

- Do not ground the shield wire. When the wire is processed, remove unnecessary part of the shield wire.
  - The protection rating for the side exiting wire (2S, 3S, 6S) does not include the cable ends. If the ends of the cable are in contact with water or exposed to dew or condensation, refer to the indications below to dress the cable ends for water and oil resistance.
    - Connect the wire ends in a location which will not expose the ends to water or oil.
    - Use Fillers, such as silicon, etc., to seal the cable ends. Refer to the circled part of the figure below for
- [Enforced]



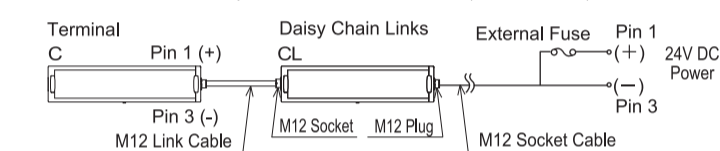
#### ◆ C (M12 Connector) Series Wiring Example



※ When using the recommended M12 socket cable "4-wire M12 socket cable-5m", the power connections are: Brown (+) / Blue (-).

#### ◆ CL (M12 Daisy Chain Link) Series Wiring Example

● The link terminal for the product should use the □C (M12 Connector) Series.



※ When using the recommended M12 socket cable "4-wire M12 socket cable-5m", the power connections are: Brown (Positive) / Blue (Negative).

#### ◇ Link Connection Current Rating

● Calculate the total current by adding the current rating for each link connected. Refer to the rated current consumption in "7. Specifications." Be sure to use maximum number of links as calculated in the figure below. Refer to "Table 2. Maximum Links" for 4-4. CL (M12 Daisy Chain Link) Series connections.

<Example> Refer to the data for "Combination ii" in "Table 2. Maximum Link" to look up the current ratings for the following models.

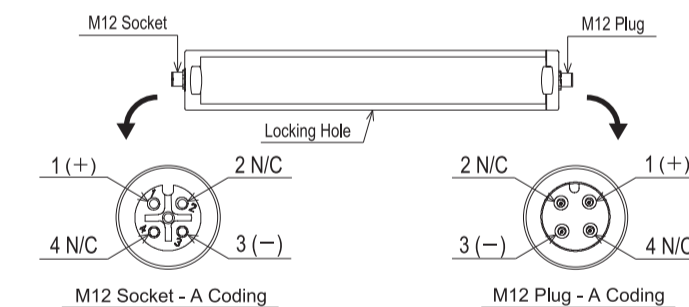
Terminal Links: 3C×1 Unit; Daisy Chain Links: 3CL×1 Unit + 6CL×1 Unit = 2088mA

Terminal Link	Daisy Chain Links		Daisy Chain Link Current Consumption
3C×1 unit	3CL×1 unit	6CL×1 unit	2088mA
522mA×1 unit	522mA×1 unit	1044mA×1 unit	

※ When using the Optional Cable, a voltage drop will cause the Daisy Chain Link Current Consumption to decrease.

#### ◆ M12 Connector

##### C (M12 Connector) Series and CL (M12 Daisy Chain Link) Series Wiring



#### 5-2. Operation

- Referring to section "5-1. Wiring" above, by applying 24V DC, the LED will turn on.
- ※ LED's will start to light-up when 0.1mA or more is applied.