

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-24SG/SA

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.

WARNING Weist auf eine unmittelbar gefährliche Situation hin: Die Nichtbefolgung der Anweisungen kann zum Tod oder zu einer schweren Verletzung führen.

- Bitten Sie professionelles Fachpersonal um die Ausführung der Installation und Verkabelung. Wenn die Installation nicht ordnungsgemäß ausgeführt wird, kann dies zu einem Feuer, Stromschlag, zum Herunterfallen oder zu einer Fehlfunktion führen.

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. Assicurarsi 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. Assicurarsi 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.

- Richiedere 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 explains 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.

- 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.

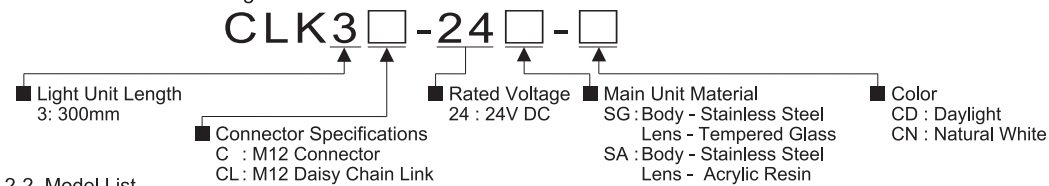
Caution

- 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.

- 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.

2 Model Number Configuration

2-1. Model Number Configuration



2-2. Model List

SG Type	Cable	Bracket
CLK3C-24SG-CD	▲CLK3C-24SG-CN	-
▲CLK3CL-24SG-CD	-	(Direct Mount)
SA Type	Cable	Bracket
▲CLK3C-24SA-CD	CLK3C-24SA-CN	0
▲CLK3CL-24SA-CD	-	(Direct Mount)

Models with ▲ in front requires an inquiry before ordering.

- The following is indicated below for the model prefixes.

M12 Connector : <input type="checkbox"/> C	Body - Stainless, Lens - Tempered Glass: SG
M12 Daisy Chain Link : <input type="checkbox"/> CL	Body - Stainless, Lens - Acrylic Resin: SA

2-3. Enclosure

CLK3C-24S□-□	Body (with M12 Plug), User's Manual
▲CLK3CL-24S□-□	Body (with M12 Plug and Socket), User's Manual

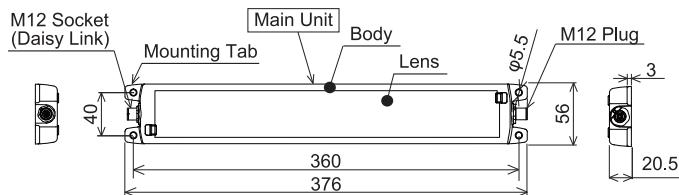
※ A cable is not attached to models C and CL.

Recommended Product : Phoenix Contact Corp. Number: 1454082, Part Number: SAC-4P-5,0-28X/M12FS OD
Number: 1454105, Part Number: SAC-4P-M12MS/2,0-28X/M12FS OD

3 Part Names and Dimensions

3-1. Part Names and Dimensions - All Models

(Unit : mm)



4 Installation

4-1. Installation Location

- Suitable for wet or damp location.

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.

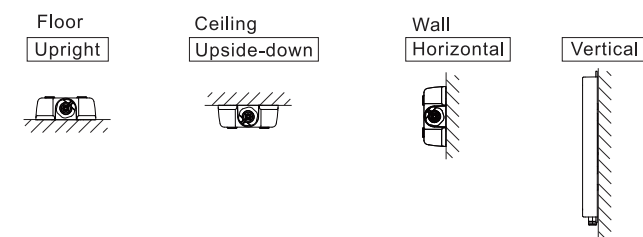
- To prevent from electrocution, disconnect power prior to mounting or performing maintenance.
- Verify the installation location is a firm location which can handle the weight of the product and has no adverse vibrations. If installed in a place where vibration is frequent and/or exceeds the specifications, 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.

Caution

- Ensure this product is securely mounted, to prevent from falling, etc.
- This product is for indoor use only. (Not for outdoor use)

4-2. Mounting Direction - All Models

- All Models; The attachment direction common to all the models is shown.



4-3. Installation Method (Recommended)

- After tapping the mounting holes to a flat and sturdy surface, use four M5 screws for mounting, as indicated in the following figure. The recommended torque for the M5 screw is 2.8 N·m. [Refer to Figure 2. Installation]

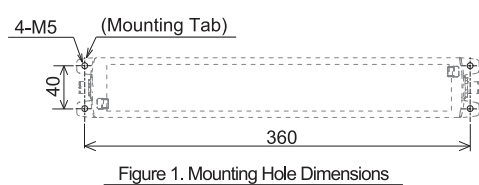


Figure 1. Mounting Hole Dimensions

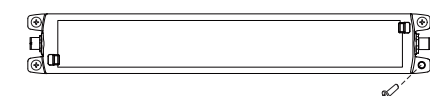


Figure 2. Installation

Recommended Screw; M5×10
Recommended Torque; 2.8 N·m

4-4. 3CL (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 ◆ Maximum Links] Exceeding the number of maximum links can cause failure.
- Linking this product requires 3C (M12 Connector) Series as the terminal link.

- When installing with option parts "M12 link-cable 4-wire 0.6m SUS" side-by-side, a gap between the ends of the Body requires a distance from 150mm to 600mm. [Refer to Figure 3. 3CL Series Connection 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 Link connection wiring example for the 3CL Series.

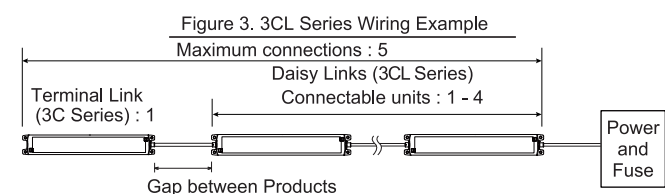
◆ Maximum Links

Maximum Connections : 5 units

[Breakdown]

Daisy Links (3CL Series) : 4 units + Terminal Link (3C Series) : 1 unit

- ※ Be sure to use maximum number of links as depicted in the figure below. Exceeding the number of maximum links can cause failure.



- ※ When installing with recommended "M12 link-cable 4-wire 2.0m SUS" side-by-side, a gap between the ends of the body requires a distance from 150mm to 2000mm.

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.
- Verify that the specified operating voltage is not exceeded.

Caution

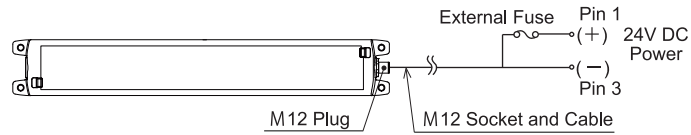
- Check that the proper voltage is connected before applying power.
- Do not pull on the cable, or try to push it inside the unit. Possible cause of failure may occur. In addition, allow a margin of slack for the wire and cable to prevent stress.
- Use a constant-voltage regulated power supply. Possible 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.

- The suitability of the luminaire supply connections shall be determined in the end use product. (3C and 3CL 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.

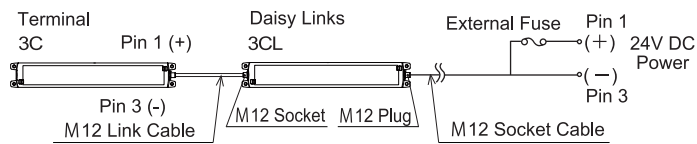
◆ 3C (M12 Connector) Series Wiring Example



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

◆ 3CL (M12 Daisy Chain Link) Series Wiring Example

- The link terminal for the product should use the 3C (M12 Connector) Series.



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

◇ Link Connection Current Rating

- Calculate the total current by adding the current rating for each link connected. [Refer to 「7. Specifications, Rated Current」]
- Be sure to use maximum number of links as depicted in the figure below.
- [Refer to 「◆ Maximum Links for 4-4. 3CL (M12 Daisy Chain Link) Series Cautionary Notes.」]

<Example> Refer to 「◆ Maximum Link」 to look up the current ratings for the following models.
Terminal Links: 3C×1 Unit, Daisy Links: 3CL×4 Units (Maximum 4 units)

Terminal Link	Daisy Links	Daisy Link Current Consumption <Example>
3C×1 unit 522mA×1 unit	+ 3CL×4 units 522mA×4 units	2610 mA

※ When using the recommended Cable, Daisy Link Current Consumption decreases by a voltage descent.

◆ M12 Connector 3C (M12 Connector) Series and 3CL (M12 Daisy Chain Link) Series Wiring



※ The 3C (M12 Connector) Series does not include an M12 Socket part.

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.

6 Specifications

Model	CLK3□-24SG		CLK3□-24SA	
	CD	CN	CD	CN
Color Code	Daylight	Natural White	Daylight	Natural White
Luminous Color	6500 K	5000 K	6500 K	5000 K
Color Temperature (typ.)	6500 K	5000 K	6500 K	5000 K
Illuminance (typ) (Center, at DC24V)	1.0m	1200 lx	1050 lx	1050 lx
	2.0m	300 lx	260 lx	260 lx
Total Luminous Flux	1300 lm			
Rated Voltage	24V DC (Polarized)			
Operating Voltage Range	24V DC ±10%			
Rated Current Consumption	522mA ±10%			
Rated Power Consumption	12.5W			
Operating Ambient Temperature	-40°C - +60°C			
Operating Ambient Humidity	90% RH or less, no condensation			
Main Unit Material	Body : Stainless Steel		Body : Stainless Steel	
	Lens : Tempered Glass		Lens : Acrylic Resin + PET Film+Tempered Glass	
Mounting Location	Indoor			
Mounting Direction	All Directions			
Protection Rating *1	IP66G/ 67G(JIS C0920)/ 69K (DIN 40050 part 9)			
Insulation Resistance	500V DC 5MΩ or more			
Withstand Voltage	500VAC for 1 minute (between terminals and chassis)			
Vibration Resistance	30Hz 19.6m/s			
	Back and Forth, Up and Down, Left and Right for 2hrs. each			
Mass (Tolerance ±10%)	1490g		1450g	

※ 1. Using the Optional Cables.

- When using the Optional Cable, total current of Link Connection decreases by a voltage descent.
- This product conforms to EN standard and shows the CE Marking. This product has been tested and found to comply with the limits for a Class A device, pursuant to EMC DIRECTIVE. 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.

Note

It has passed the oil resistant test from the following common cutting oils. The following oil was diluted by 20 times and the adhesive used for the product was immersed at 55°C for 240 hours (10 days).

Company Name (Manufacturer)	Oil Name
Hangsterfer's Laboratories Inc.	Hangsterfer's S-500
Yushiro Chemical Industry Co., Ltd.	Yushiroken Synthetic #663
Castrol	Syntilo 9954
Blasler Swissslube Inc.	Blasocut BC35LFSW

Confirmation in result of swelling, contraction, dissolution, exfoliation, separation, cracks, and discoloration by the accelerated impregnation examination with the above-mentioned oil type for diluted oil at 55°C for 240 hours (ten days) was made.

Due to the additive agents in oil, the application of oils other than the ones mentioned above may influence physical properties, therefore, please investigate before purchasing.

* The mentioned company names, product names, trademarks, etc. are the registered trademarks or trademarks in Japan for each company, and/or other countries.

Caution

- Due to the characteristics of the LED, color temperature, brightness and hue will differ for every LED and every product.
- Since all IP examinations are done according to specified conditions and regulated time, the protection rating is not guaranteed for an extended period of time.