## Installation guide

### Philips EvoKit LED 2x4 and 2x2





This installation guide is only valid for the following Philips EvoKit models:

| This installation guide is only valid for the following | 16 1 mmps Evolvic mod |
|---|-----------------------|
| Products 2x4  |                       |
| EvoKit 2x4 P 36L 36W 835 2 0-10 7                       | G2                    |
| EvoKit 2x4 P 36L 36W 840 2 0-10 7                       | G2                    |
| EvoKit 2x4 P 36L 34W 835 1 MkI0 7                       | G2                    |
| EvoKit 2x4 P 36L 34W 840 I MkI0 7                       | G2                    |
| EvoKit 2x4 P 36L 33W 835 5 Mk10 7                       | G2                    |
| EvoKit 2x4 P 36L 33W 840 5 MkI0 7                       | G2                    |
| EvoKit 2x4 P 36L 34W 830 I MkI0 7                       | G2                    |
| EvoKit 2x4 P 36L 33W 830 5 MkI0 7                       | G2                    |
| EvoKit 2x4 P 36L 36W 830 2 0-10 7                       | G2                    |
| EvoKit 2x4 P 42L 39W 835 2 0-10 7                       | G2                    |
| EvoKit 2x4 P 42L 39W 840 2 0-10 7                       | G2                    |
| EvoKit 2x4 P 42L 40W 835 1 MkI0 7                       | G2                    |
| EvoKit 2x4 P 42L 40W 840 I MkI0 7                       | G2                    |
| EvoKit 2x4 P 42L 42W 835 5 MkI0 7                       | G2                    |
| EvoKit 2x4 P 42L 42W 840 5 MkI0 7                       | G2                    |
| EvoKit 2x4 P 42L 40W 830 I MkI0 7                       | G2                    |
| EvoKit 2x4 P 42L 42W 830 5 MkI0 7                       | G2                    |
| EvoKit 2x4 P 42L 39W 830 2 0-10 7                       | G2                    |
| EvoKit 2x4 P 52L 51W 835 2 0-10 5                       | G2                    |
| EvoKit 2x4 P 52L 51W 840 2 0-10 5                       | G2                    |
| EvoKit 2x4 P 52L 52W 835   MkI0 5                       | G2                    |
| EvoKit 2x4 P 52L 52W 840   MkI0 5                       | G2                    |
| EvoKit 2x4 P 52L 53W 835 5 MkI0 5                       | G2                    |
| EvoKit 2x4 P 52L 53W 840 5 MkI0 5                       | G2                    |
| EvoKit 2x4 P 52L 52W 830 1 MkI0 5                       | G2                    |
| EvoKit 2x4 P 52L 53W 830 5 MkI0 5                       | G2                    |
| EvoKit 2x4 P 52L 51W 830 2 0-10 5                       | G2                    |
|   |                       |

| Products 2x2                         |
|--------------------------------------|
| EvoKit 2x2 P 23L 23W 835 2 0-10 7 G2 |
| EvoKit 2x2 P 23L 23W 840 2 0-10 7 G2 |
| EvoKit 2x2 P 23L 23W 835 1 MkI0 7 G2 |
| EvoKit 2x2 P 23L 23W 840 I MkI0 7 G2 |
| EvoKit 2x2 P 23L 25W 835 5 MkI0 7 G2 |
| EvoKit 2x2 P 23L 25W 835 5 Mk10 7 G2 |
|                                      |
| EvoKit 2x2 P 23L 23W 830   Mkl0 7 G2 |
| EvoKit 2x2 P 23L 25W 830 5 Mkl0 7 G2 |
| EvoKit 2x2 P 23L 23W 830 2 0-10 7 G2 |
| EvoKit 2x2 P 32L 3IW 835 2 0-10 7 G2 |
| EvoKit 2x2 P 32L 31W 840 2 0-10 7 G2 |
| EvoKit 2x2 P 32L 32W 835 I MkI0 7 G2 |
| EvoKit 2x2 P 32L 32W 840 1 MkI0 7 G2 |
| EvoKit 2x2 P 32L 34W 835 5 MkI0 7 G2 |
| EvoKit 2x2 P 32L 34W 840 5 MkI0 7 G2 |
| EvoKit 2x2 P 32L 32W 830 I MkI0 7 G2 |
| EvoKit 2x2 P 32L 34W 830 5 MkI0 7 G2 |
| EvoKit 2x2 P 32L 31W 830 2 0-10 7 G2 |
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### **AWARNING**

FAILURE TO FOLLOW THESE INSTRUCTIONS AND WARNINGS MAY RESULT IN SERIOUS INJURY OR SIGNIFICANT PROPERTY DAMAGE.

For your protection, carefully read these warnings and instructions in their entirety before installing or maintaining this equipment. These instructions do not attempt to cover all installation and maintenance situations. If you do not understand these instructions or if additional information is required, contact your local Philips representative. Retain these instructions for maintenance reference.

### **AWARNING**

RISK OF FIRE OR ELECTRIC SHOCK

The EvoKit must be installed and maintained by a professional electrician in accordance with the applicable federal, state and local laws, regulations and electrical codes, and the installation instructions provided in this document. This professional should be familiar with the construction and operation of this product and any hazards involved. If not qualified, do not attempt installation. Contact a qualified electrician.

### **AWARNING**

RISK OF FIRE, ELECTRIC SHOCK OR PERSONAL INJURY

Do not install in a damaged fixture.

Install the EvoKit only in NEMA type G or Type NFG t-grids with a minimum troffer depth of 3".

Before installation, turn power off.

### **AWARNING**

RISK OF PERSONAL INJURY

This equipment may have sharp edges. Wear gloves to prevent cuts or abrasions when removing from carton, handling and maintaining this equipment.

### **AWARNING**

RISK OF FIRE OR ELECTRIC SHOCK

To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

### **AWARNING**

RISK OF FIRE OR ELECTRIC SHOCK

Luminaire wiring and electrical parts may be damaged when drilling for installation of LED retrofit kit. Check for enclosed wiring and components.

### **Caution**

This kit is designed for permanent installation in ordinary (Non-Hazardous) locations in accordance with the National Electrical Code and all applicable local codes. Do not use in areas of limited ventilation or in high ambient enclosures.

### **Caution**

Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation except if specifically mentioned in these installation guide.

### **Notice**

Do not use abrasive materials, glass cleaners or other solvents on cover plate or lens. To clean the faceplate, use a mild soap solution.

Do not expose the product to substances and /or materials containing sulphur, chlorine or other halogen compounds and to chemicals mentioned in below table.

| Category | Chemical Name   |
|----------|---|
| Solvents | Toluene, xylene, benzene, chloromethane, chloroform, ethyl acetate, butyl acetate, acetone, MEK, MIBK |
| Acid     | HCI, H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub>  |
| Alkali   | KOH, NaOH, LiOH, Ca(OH) <sub>2</sub>  |
| Oil      | Diesel oil, petroleum, hydro carbons  |
|          |   |

### **Notice**

Handle components with care. Do not drop, slide or scratch any of the components to prevent visual damage to the product, loss of functionality or difficulties during installation.

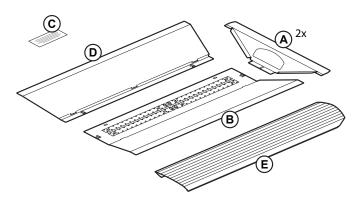
### Host lighting fixture

The Philips EvoKit is designed for installation in a wide variety of 2x4 and 2x2 indoor fluorescent based fixtures in horizontal applications.

- The Philips EvoKit is non-air handling.
- · Install the Philips EvoKit only in fluorescent based host lighting fixtures only with a minimum depth of 3".
- Install the Philips EvoKit only in combination with 15/16" NEMA G or NEMA NFG t-grids.
- Due to the wide variety in troffers and ceiling grids, it is recommended that the installer does a test install before commencing a renovation.
- Please verify voltage on the Philips EvoKit product label matches the mains voltage.

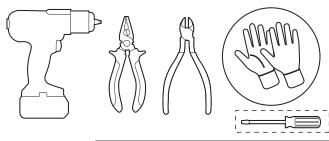
### Installation Philips EvoKit 2x4 and 2x2

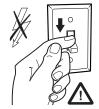
### **Set contains**



- A Side Panel
  B LED Panel
  C Troffer Label
- D Closing Panel E Diffuser

### **Tools required**



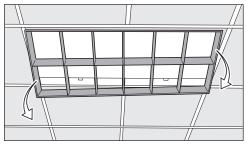


### **AWARNING**

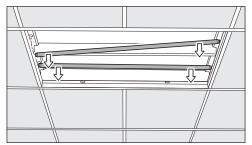
RISK OF FIRE, ELECTRIC SHOCK OR PERSONAL INJURY

Before installation, turn power off.

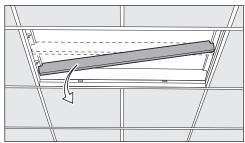
#### Remove host fixture contents



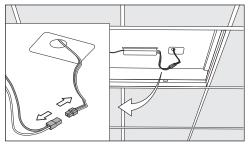
I. Turn power off and take out original cover.



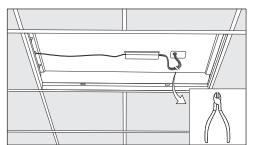
2. Take out TL tubes.



3. Remove belly pan. If remaining troffer height is limited, remove ballast.



4. Disconnect host fixture ballast from mains.



### **Notice**

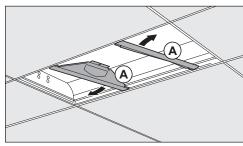
Make sure to remove packaging (except the LED protection\*), from EvoKit components before installing.

Do not install with total power input greater than power rating of original fixture.

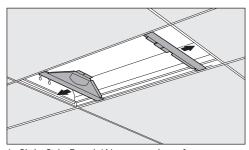
When space in the troffer is limited, remove original ballast.

\* Remove LED protection just before installing the Diffuser (E) (see step 14).

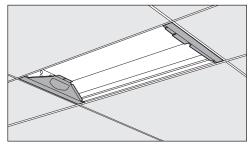
### Installation of Side Panels (A)



Install Side panels (A) in-between troffer and T-grid.



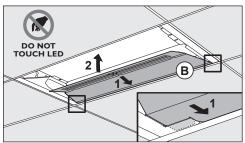
6. Slide Side Panel (A) outwards as far as possible.



### Installation Philips Bodine BSL310 (Optional)

For installation of the Philips Bodine BSL310 Emergency LED Driver, please see the emergency driver installation section from this EvoKit manual

### Installation LED Panel (B)



 Install LED panel (B) in between troffer and T-grid, making sure the tabs at each corner of the LED panel slide into the respective slots on the side panel.

# ATTENTION ESD SENSITIVE 90°

8. Push LED panel upward into position so that the tabs sits above the side panels (this may require a push up on the tabs while pushing outward on the side panels). Fixate panels and establish ground by turning each fastener 90 degrees.

THIS LUMINAIRE HAS BEEN MODIFIED FROM ITS ORIGINAL CONFIGURATION.

THIS LUMINAIRE WILL NO LONGER ACCEPT THE

ORIGINAL LAMPS STATED ON THE RELAMP LABEL

CE LUMINAIRE A SUBI DES MODIFICATIONS PAR

RAPPORT À SA CONFIGURATION D'ORIGINE.

CE LUMINAIRE N'ACCEPTERA PLUS LES AMPOULES PRÉVUES À L'ORIGINE ET REPRISE SUR L'ÉTIQUETTE RELATIVE AU REMPLACEMENT.

### **WARNING**

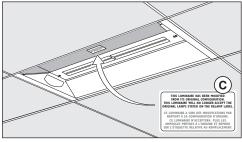
RISK OF PERSONAL INJURY

While installing the LED panel (B) and Closing Panel (D), make sure the electrical wiring is not clamped between panels.

### **Notice**

Do not touch the LEDs with hands or tooling! Touching LEDs can lead to failure of the product.

#### Installation Troffer Label (C)

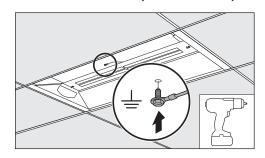


9. Place Troffer Label (C) inside original troffer.

### | Notice

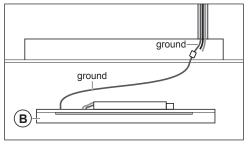
It is imperative to use the retrofit warning sticker included with the product in order to alert the end user that this luminaire will no longer operate on the originally intended lamps.

### Ground connection (Situation I - 2)



# ground — ground — B

10a. Situation I Grounding: Screw grounding cable from Led Panel (B) to original troffer if host fixture ground connection is made trough host fixture.



10b. Situation 2 Grounding: Connect to the incoming ground lead from conduit.

### **AWARNING**

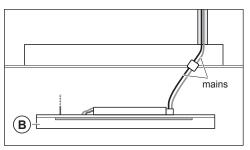
RISK OF PERSONAL INJURY

Proper grounding of EvoKit metal parts is required to ensure personal safety.

### **Notice**

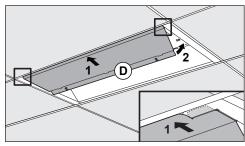
Make new electrical connections to mains by employing applicable connectors in accordance with the applicable federal, state and local laws, regulations and electrical codes.

### **Mains connection**

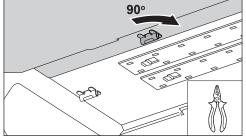


II. Connect main cables and hide connected wires behind LED Panel (B).

### **Installation Closing Panel (D)**



12. Install Closing Panel (D) in-between troffer and T-grid.



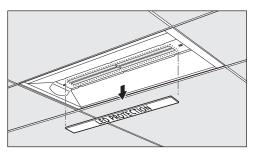
13. Fixate panels and establish ground by turning each fastener 90 degrees.

### **△WARNING**

RISK OF FIRE OR ELECTRIC SHOCK

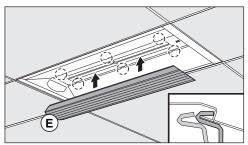
While installing the LED panel (B) and Closing Panel (D), make sure the electrical wiring is not clamped between panels.

### **Remove LED protection**

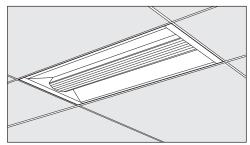


14. Tear off LED protection.

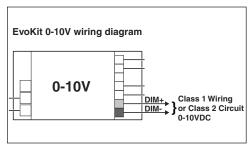
### Installation Diffuser (E)



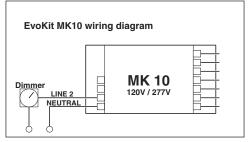
15. Slide Diffuser (E) under the tabs on one side from either Panel and press diffuser (E) over the tabs on opposite panel.



### Connection 0-10V and MK10 dimmer (Optional)



16a. Optional: For connection EvoKit 0-10V input, use indicated connections on the driver.



16b Optional: For connection a dimmer to the EvoKit Mark 10, use indicated connections on the driver.

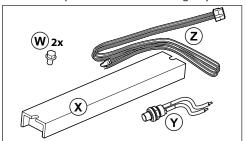
### **Notice**

Use 18 AWG Solid Copper Wire Rated>=300V. Strip Wire 3/8"

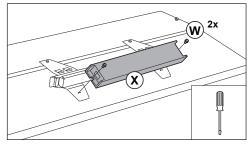
In case the EvoKit MK10 277V is installed in combination with a dimmer, use a minimum of 2 EvoKits MK10 277V per dimmer.

### Initial installation Philips Bodine BSL310 Emergency LED driver (Sold separately)

If the Philips Bodine BSL310 Emergency LED Driver is to be installed into the EvoKit retrofit fixture, please follow these instructions and the instructions provided with the Emergency driver.



Components: Screws (W), Emergency LED driver (X), Test switch (Y) Wiring harnass (Z).

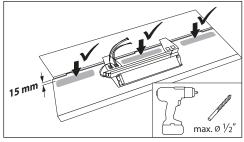


 Secure BSL310 (X) to the back side of LED Panel (B) using two screws (W).

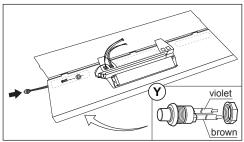
### **△WARNING**

RISK OF PERSONAL INJURY

Ensure all warning and cautionary markings given in the Philips Bodine BSL310 installation instructions are heeded.



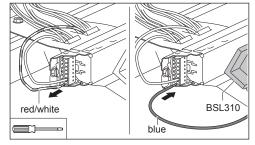
Drill I/2" hole in the LED Panel (B) for installation of LED/test switch on indicated area.



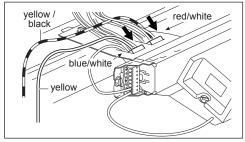
3. Install the test switch by feeding the violet and brown wires through this 1/2" hole and hand tighten the plastic nut included with the test switch/LED combo. Add connect from test switch to wiring harnass (Z) (violet - violet, brown - brown).



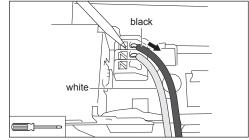
Ensure an un-switched hot circuit is available to the fixture. This is required for proper emergency fixture operation.



 Disconnect the red/white single wire from the EvoKit driver. Replace it with the blue output wire from the BSL310 (Z). Place a wire nut over the original red/white wire for proper isolation.



 Connect the yellow output wire from the BSL310 to the EvoKit blue/white wire connection block and the yellow/black output wire from the BSL310 (Z) to the EvoKit red/white wire connection block.



Disconnect black wire and insert white/black wire (Z) in the EvoKit driver.

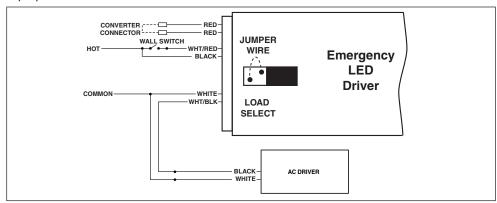


diagram.

Connect the BSL310 red to red as indicated

7. Connect WHT/RED, BLACK and WHITE

(2x) wires (Z) as per the BSL310 wiring

### **Notice**

in schematic (Z).

For the EVOkit, do not connect the jumper wire / load select (yellow/red) on BSL310.



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