

<Marketing provided Philips II Format example – is required in the commercial version, not required for UL submission>

LFC8400 “Envision” Wireless Area Controller

Installation Guide

General Description

The Philips Envision Wireless Area Controller provides the essential device to integrate wireless ZigBee Luminaires and Wireless UI (UID8450, UID8451 UID8460 or UID8461) in a Connected Lighting installation.

The Wireless ZigBee Luminaires can have an integrated presence and daylight sensor.

The maximum number of Luminaires and or wireless devices (Wireless UI's) which can be linked to a single Envision Wireless Area Controller is 50. Next to these Luminaires a maximum of 25 Luminaire based sensors can be linked.

There is no limitation of number of Envision Wireless Area Controllers in a connecting lighting network.

Simple Installation – Product can be mounted straight to any flat surface using screw tabs, mounting plate or be mounted directly to DIN Rail.



Installation

We recommend that you read carefully these instructions prior to installation. Installation must be done in accordance to the local wiring code. Installation of the home and building automation and control system shall comply with HD60364-4-41 where applicable.

Check Connections

Check and tighten all screw connections prior to energizing the device.

Power Sources

This device supports any of the following three power sources:

- Ethernet PoE IEEE802.3at Type 2
- Commercial grade 12/24Vdc Class 2 / SELV power supply
- 12/24Vdc from DyNet network

This device should only be operated from the types of supply specified.

Mounting Location

Install in a dry, well-ventilated indoor location away from the sources of heat and electrical (RF) interference. It is recommended not to install within 3 meters (10 feet) distance from any Wi-Fi access point/ router or any other RF transmitting device operating in the 2.4GHz band. Keep away from large metallic objects and do not install in metal enclosures as they may affect the communication range. Ensure the distance to the nearest device on the same RF network is not exceeding 10 meters (30 feet).

Data Cable

Use approved CAT5/6 cables only. For RS485 DyNet (where required) use screened stranded STP RS485 data cable with three twisted pairs. Segregate from mains / Class 2 cables by 300mm minimum or as per the local wiring code. Connect RS485 DyNet devices in a 'daisy chain'. Do not cut or terminate energized data cables. In the installations with RS485 DyNet port used, shield terminal must be earthed on at least 1 point on the network per EIA485 requirements by terminating to the nearest grounding conductor of the supply branch circuit.

Special Programming

Once powered and terminated correctly this device will operate in a pre-determined configuration. This device is commissioned using Philips Dynamalite's EnvisionProject PC software.

WARNING



Do not connect DyNet or Ethernet to mains.

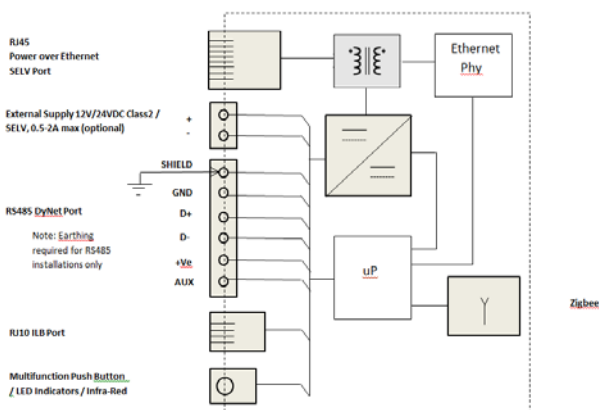
DyNet and Ethernet networks are SELV / Class 2 and they must be isolated and segregated from mains and other wiring and installed per local wiring rules. This is a Class 2 device and must only be connected to Class 2 wiring. Use Class 2 approved power supplies only.

To reduce the risk of fire or electric shock and to avoid damage to the unit, before installation or servicing, disconnect network & device power at circuit breakers or remove fuses.

Qualified licensed installers shall perform this installation only.

Do not expose this device to rain or moisture. In the installations where RS485 is used, connect the cable shield to the provided shield termination on a device connection port. RS485 cable shield must be earthed by terminating to the nearest grounding conductor of the supply branch circuit. Installation, programming and maintenance must be carried out by qualified personnel.

Electrical diagram



CE declaration Example

Philips Lighting

PHILIPS



EC Declaration of Conformity

We, Philips Lighting B.V.
Mullidijk 1,
5611 BD Eindhoven, The Netherlands

Internal Ref. Nr.: #3030-2013
Year in which CE Mark was first affixed: 2013

Declare under our responsibility for the product:

Product Range: LCN850/w
Product Code: 9137 003 99203

The designated product is in conformity with the essential requirements of the following European Directives and harmonized standards:

Radio & Telecommunications Terminal Equipment Directive (R&TTE), 1999/5/EC

- ETSI EN 301 489-17 V2.1.1
- ETSI EN 300 328 V1.7.1

Low Voltage Directive (LVD), 2006/95/EC

- EN 60550-1:2006+A11:2009+A1:2010+A12:2011
- EN 62311:2008

The Notified Body UL 0984 performed R&TTE Certificate of Conformity and issued the certificate AN13C10605-1

and are produced under a quality scheme at least in conformity with ISO 9001 or CENELEC permanent documents.

25-9-2013, Eindhoven

Mr. Peter Linsen
Quality Manager, Category Systems

Installation steps

Only qualified licensed installers shall perform this installation. Prior to commencing, ensure all power sources, power and data cables are de-energized and isolated (touch safe)

1. Ensure mains supply input for DC power supply, PoE Ethernet network and DyNet network are all de-energized before terminating.
2. Select an appropriate mounting location indoors only following recommendations from the Mounting Location section. Mount the device and power supply as required by local wiring rules. Use Philips EWAC mounting accessories as required for surface or rack installations. To mount the device on DIN rail or mounting plate, slide the two DIN clips at the bottom of the device downwards with a screwdriver. Click the device onto the rail and slide the clips back into place. This device is approved for plenum installation.
3. External PS and DyNet only:
 - a. Strip-off around 30 mm of cables outer insulation jacket
 - b. Neatly wrap the stripped area of cable with insulating tape leaving approximately 20mm of inner wires free for termination
 - c. External PS option only: Strip and terminate power supply Class 2 output wires to the SUPPLY IN terminals of EWAC. Ensure correct polarity.
 - d. Strip and terminate DyNet port wires as required. Ensure correct connection.
 - e. Where used, AUX dry contact input wiring cable length should be less than 10m (30 feet). Use of twisted pair wires is recommended to minimize noise coupling

Ensure wires are segregated and fully inserted with no exposed copper outside terminals to prevent shorts.

All Class 2 / SELV cables shall be segregated from Class 1 wiring per local wiring code.

To minimize noise coupling on long parallel cable runs, it's recommended to provide at least 300mm (1 foot) separation between data and mains cables (except for installations with steel conduits used).

4. Connect Ethernet, Supply and Data cables as required.
5. Energize supply and network and check for correct operation. If programming is required use a PC with EnvisionProject Software.

FCC/IC compliance statement

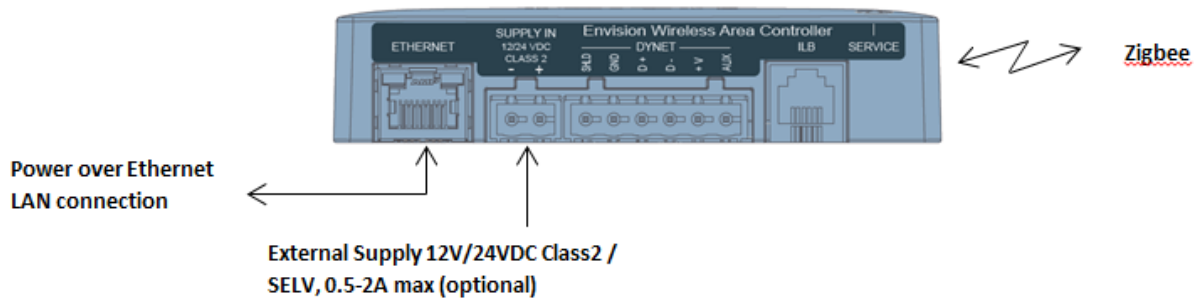
This device complies with part 15 of the FCC rules for the United States and Industry Canada (IC) license- exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by Philips could void the user's authority to operate this equipment. This product is intended for commercial use only.

DÉCLARATION DE CONFORMITÉ À LA FCC/IC

Ce dispositif est conforme à la partie 15 des règles de la Federal Communications Commission (FCC) des États-Unis et d'Industrie Canada (IC) exempts de licence RSS norme(s). Son fonctionnement est assujéti aux deux conditions suivantes: (1) Ce dispositif ne doit pas provoquer de brouillage préjudiciable, et (2) il doit accepter tout brouillage reçu, y compris le brouillage pouvant entraîner un mauvais fonctionnement. Tous les changements ou modifications non expressément approuvés par Philips, sont susceptibles d'annuler le droit de l'utilisateur à se servir de cet équipement. Ce produit est exclusivement destiné à un usage commercial.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: • Reorient or relocate the receiving antenna. • Increase the separation between the equipment and receiver. • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. • Consult the dealer or an experienced radio/TV technician for help.

Network connection



Product specifications:

- Supply options:**
- Option 1: PoE, IEEE 802.3at Class 0 Type 2, 37-57Vdc, 8W max
 - Option 2: Commercial grade Power Supply 12/24Vdc SELV/Class 2, 100mA max plus DyNet load @12Vdc / 60mA max plus DyNet load @24Vdc
 - Option 3: from DyNet network: 100mA max@12Vdc / 60mA max@24Vdc SELV/Class 2
- Contribution to DyNet network:** max 120mA load @ 12Vdc (Option 1) or 100mA load @ 24Vdc (Option 2) or 100mA load @ 12Vdc (Option 3) supply output (Option 2)
- Allowed supply ripple (Option 2 & 3):** 12/24VDC Class 2 / SELV

Power consumption: max.2W (excluding DyNet and ILB)

Communication Ports Supported Ethernet Protocols 10/100BaseT Ethernet port, RS485 DyNet serial port, ILB port, Zigbee port, Infra-RED RC5

Supported ZigBee protocols EnvisionIP/DyNet2, TFTP, xCLIP, IPv6

Input / Output Terminals ZHA/ZLO, Green Power

Ethernet PoE: RJ45

External Power Supply: 2-pole 5mm pluggable header, 1 x 2.5mmsq conductor size

DyNet: 6-pole 5mm pluggable header, 1 x 2.5mmsq conductor size

ILB: RJ10

Service / Pairing Push Button, Multifunction status LED (RGB), RC5 IR receiver, 100/100BT status LED

CE, RCM, UL, FCC, ICES

Operating Environment -5C to +50C (23F to 122F), 0-90% RH non-condensing

Transport and Storage Conditions -25C to +70 C (-13F to 158F), 0-90% RH non-condensing

Construction Low Profile Din Rail Polycarbonate (6 unit), UL94-V0 rated

Dimensions H 97mm x W 110mm x D 39mm (pluggable terminal connectors will add 9mm to the total height)

Weight Packed weight 0.23kg