

BalensBeam

EN User and Installation Manual



P.L. LIGHT SYSTEMS

THE LIGHTING KNOWLEDGE COMPANY

TABLE OF CONTENTS

Continuous Daisy-Chain Installation	3
Non-Continuous Daisy-Chain Installation	7
Standalone Module Installation	10

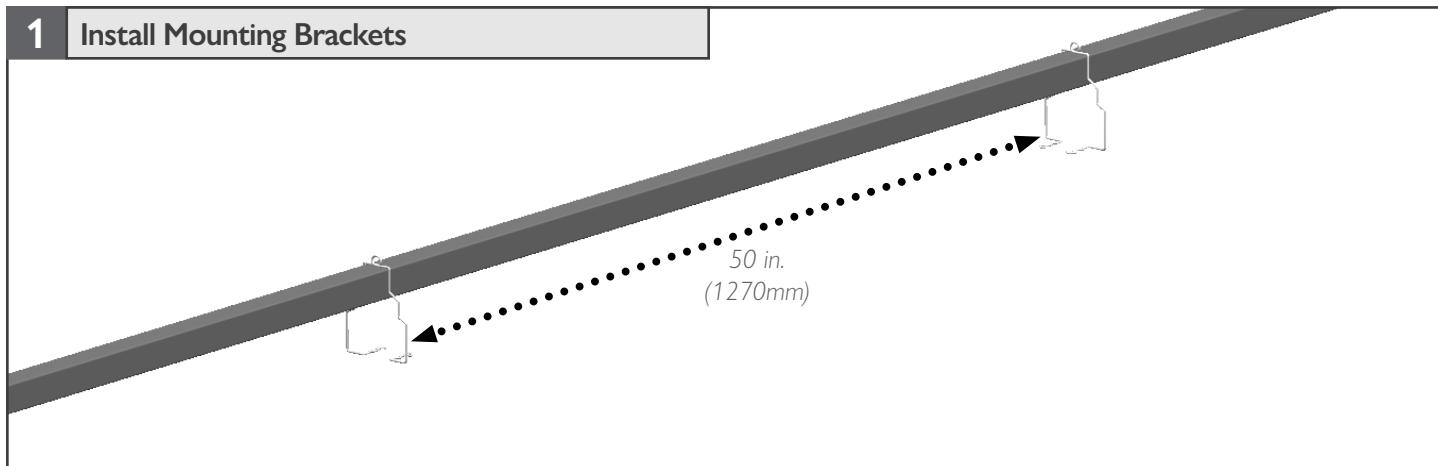
Please carefully review the instructions in this guide, before installing and/or operating the product.

An electronic version of this guide is available at www.pllight.com/resources.

Installation Instructions | BalensBeam: Continuous Daisy-Chain

Always turn off and lock out the branch circuit before commencing installation or maintenance work.

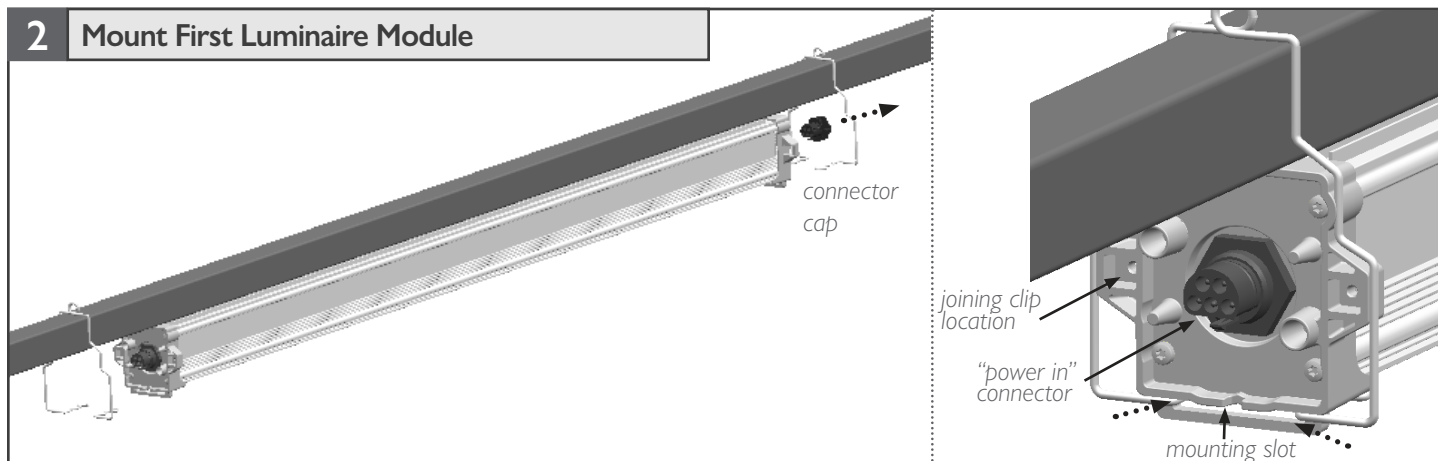
1 Install Mounting Brackets



- Unbox BalensBeam modules and place on soft surface, along with relevant accessories
- Hook two (2) mounting brackets over top of mounting structure in accordance with the module position indicated in your light plan.
- Mounting brackets should be spaced approximately 50 in. (1270mm) apart, with the hooks facing towards one another.

Note: BalensBeam modules and mounting brackets are designed to fit a track/truss measuring $\leq 40 \times 40$ mm

2 Mount First Luminaire Module



- Remove the pre-installed connector cap from connector on “power out” side of luminaire.
- With the “power in” connector facing towards the “outside” of the daisy-chain string, raise the 1st BalensBeam module towards the mounting structure, so the top of the module sits flush beneath the track/truss.
- Slide the 1st mounting bracket towards the end cap of the BalensBeam module, so the hooks pass through the mounting slot at the bottom of the endcap and snap into the “locked” position.

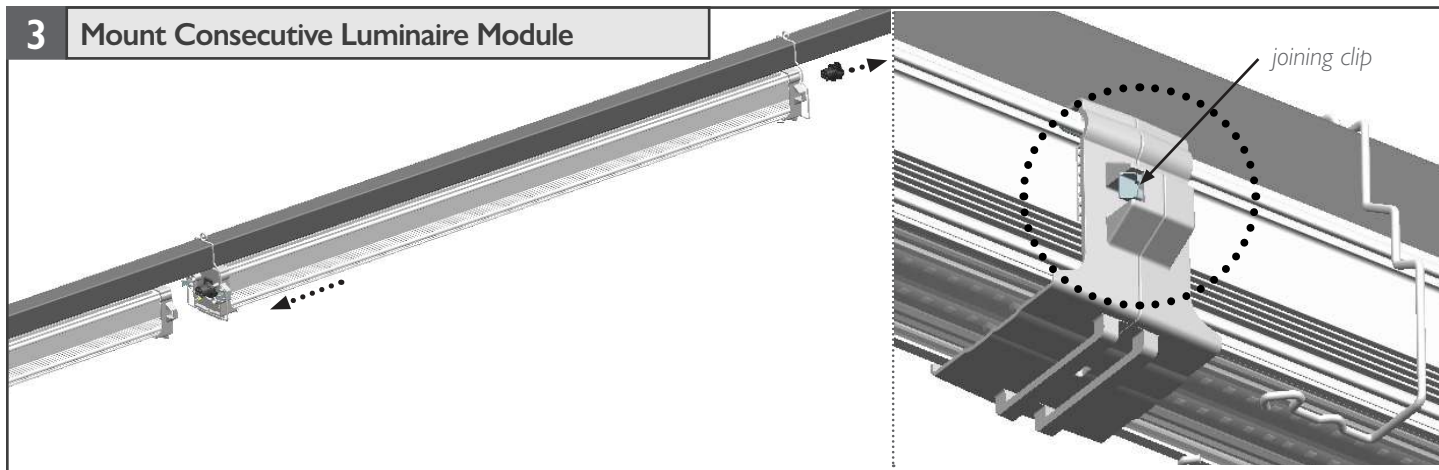
TIP: Store removed connector caps in safe place as they will need to be re-installed if luminaires are used in non-continuous or standalone applications in the future.



ATTENTION: Luminaires should only be installed by qualified individuals, and in accordance with national and local building and electrical codes.



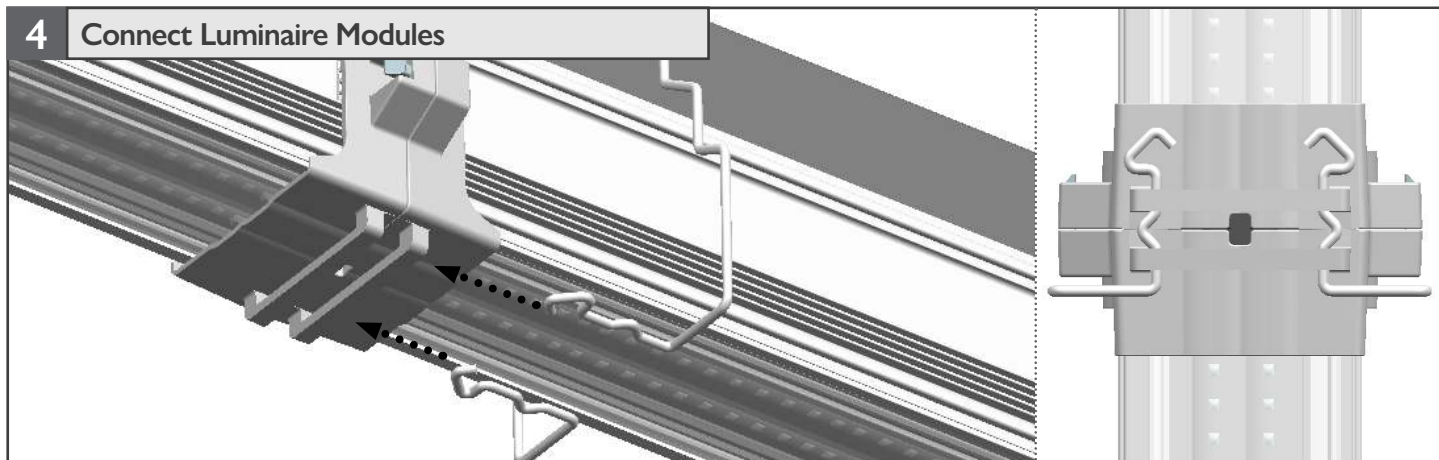
3 Mount Consecutive Luminaire Module



- Hook a 3rd mounting bracket over top of mounting structure, spaced approximately 50 in. (1270mm) from the 2nd bracket, so that the hooks are facing towards one another.
- Remove the pre-installed connector cap from 3-pin connector on “power out” side of the 2nd module in the “daisy-chain” string.
- With the “power in” connector of the 2nd module facing towards the “power out” end of the 1st module, raise the 2nd BalensBeam module towards the mounting structure and slide the “power in” end through the mounting bracket.
- Slide 2nd BalensBeam module towards the 1st so that so that the installed joining clips are aligned with the corresponding slots in the endcap of the “power out” side of the 1st BalensBeam module and press together until the power connector and joining clips are fully engaged.

Note: This connector caps should be removed between each adjacent luminaire in a daisy-chain application but must remain in place for the last module in the continuous string to maintain IP integrity of the luminaire.

4 Connect Luminaire Modules



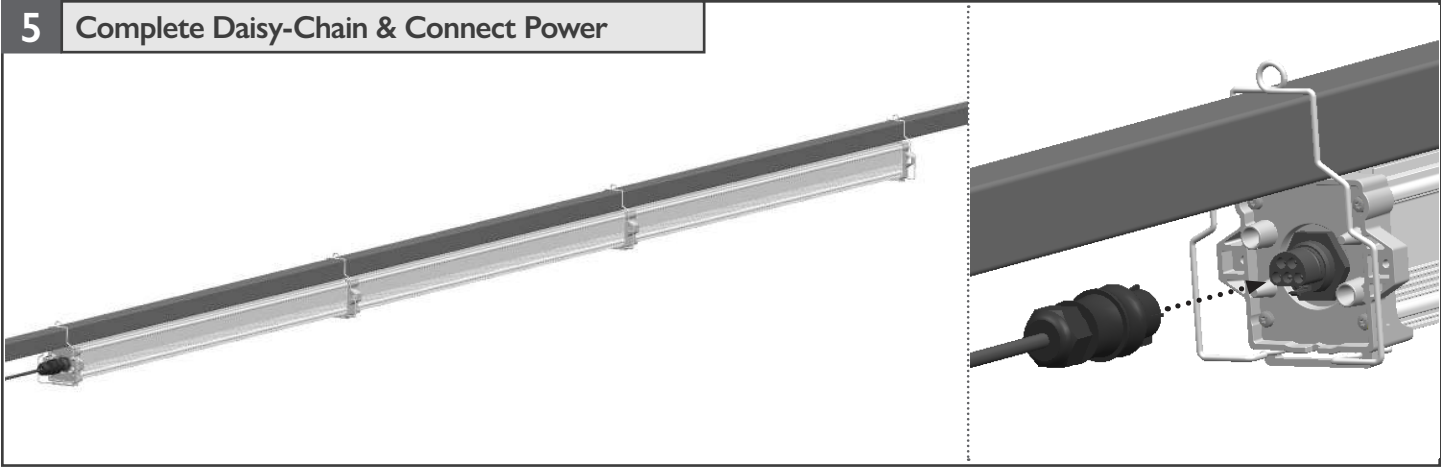
- Slide the 2nd mounting bracket towards the connection point between the two BalensBeam modules.
- Insert the hooks through the mounting slots at the bottom of the endcaps of both connected modules and press until bracket is fully engaged and has snapped into the “locked” position.



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5 Complete Daisy-Chain & Connect Power

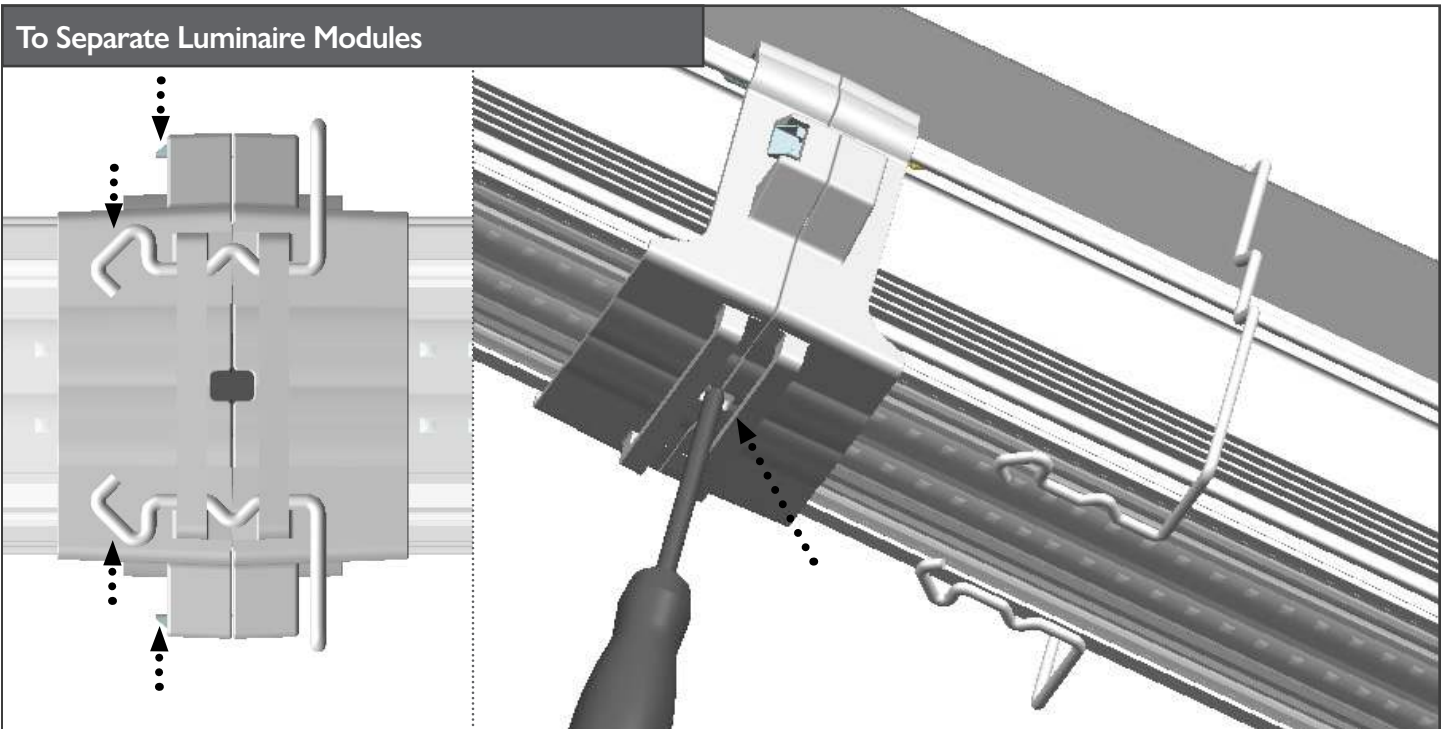


- Repeat sequence to mount remaining module(s) in continuous daisy-chain string in accordance with light plan.
- Connect the whip end of the power cord to the branch circuit. Align female connector on power cord with male luminaire connector of first BalensBeam module in daisy-chain string and push until fully engaged.

NOTES:

1. Coil and secure excess cable - allowing for drip loops to draw moisture away from connectors.
2. The BalensBeam is designed for Digital (default) or PLC dimming. Digital dimming is based on RS485 standard. Compatible with HLP protocol module enabled climate control systems. Luminaire can be dimmed to 30% of max light output. Power Line Communication (PLC) dimming requires the purchase of P.L. Light Systems supplied transmitter system, with the gateway connecting to the customer's climate computer via Modbus TCP/IP. Customer's climate computer must utilize HLP.

To Separate Luminaire Modules



- Pinch end hooks on mounting bracket together to remove from both endcaps
- Pinch the joining clips together to release the tension from both endcaps
- Insert screwdriver in hole beneath the module joining point and apply gentle pressure to the connector release clip while pulling one module away to separate the connection.



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See table below for maximum number of luminaires that can be daisy-chained per string.



DAISY-CHAIN GUIDE

POWER	SYSTEM	CIRCUIT BREAKER C-TYPE	CIRCUIT BREAKER CONFIGURATION TYPE	MAX # LUMINAIRE MODULES / PHASE PAIR
208V	P-P	16A	3P	6
208V	P-P	16A	3*2P	10
277V	P-N	16A	4P	14
347V	P-N	16A	4P	17
400V	P-P	16A	3*2P	17

N = Neutral P = Phase 2P = 2-Phase Breaker Type 3P = 3-Phase Breaker Type 4P = 3-Phase + Neutral Breaker Type



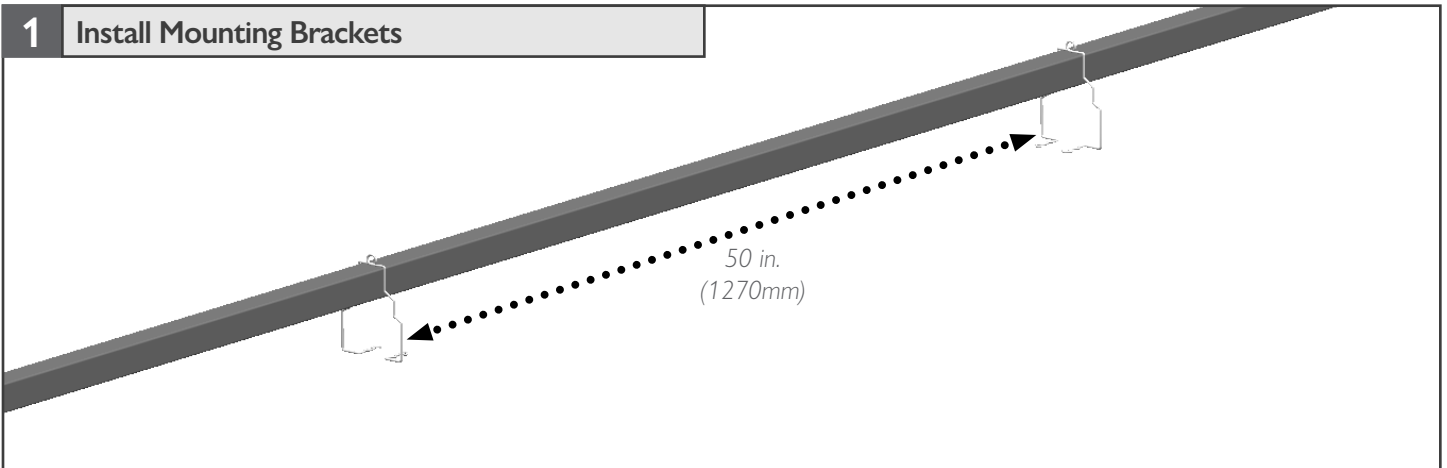
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Installation Instructions | BalensBeam: Non-Continuous Daisy-Chain

Always turn off and lock out the branch circuit before commencing installation or maintenance work.

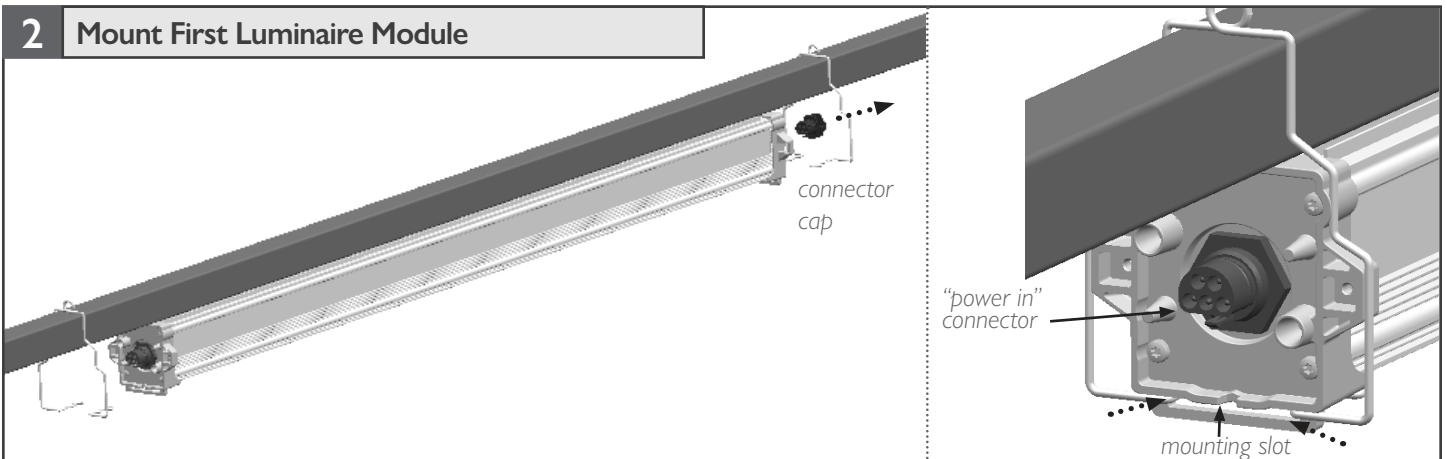
1 Install Mounting Brackets



- Unbox BalensBeam modules and place on soft surface, along with relevant accessories
- Hook two (2) mounting brackets over top of mounting structure in accordance with the module position indicated in your light plan.
- Mounting brackets should be spaced approximately 50 in. (1270mm) apart, with the hooks facing towards one another.

Note: BalensBeam modules and mounting brackets are designed to fit a track/truss measuring $\leq 40 \times 40$ mm

2 Mount First Luminaire Module

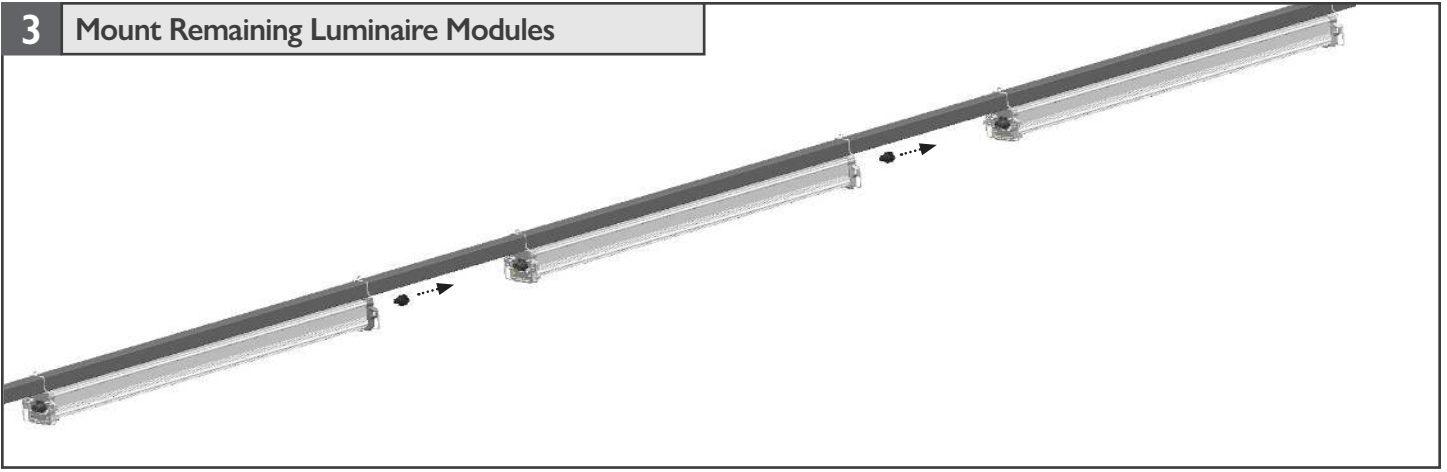


- Remove the pre-installed connector cap from connector on “power out” side of luminaire.
- With the “power in” connector facing towards the “outside” of the daisy-chain string, raise the 1st BalensBeam module towards the mounting structure, so the top of the module sits flush beneath the track/truss.
- Slide the 1st mounting bracket towards the end cap of the BalensBeam module, so the hooks pass through the mounting slot at the bottom of the endcap and snap into the “locked” position. Repeat with 2nd bracket at opposite end, so that BalensBeam module is securely attached to the mounting structure.

TIP: Store removed connector caps in safe place as they will need to be re-installed if luminaires are used in non-continuous or standalone applications in the future.

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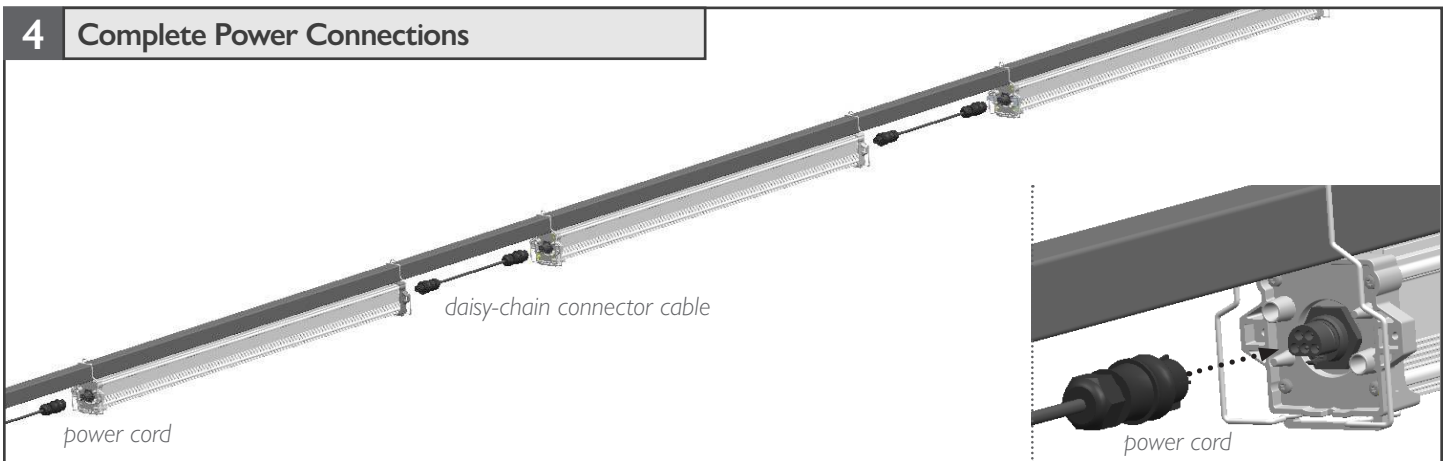
3 Mount Remaining Luminaire Modules



- Remove the pre-installed connector cap from connector on “power out” side of the 2nd module in the “daisy-chain” string.
- Mount the 2nd BalensBeam module with the “power in” connector facing towards the “power out” end of the 1st module. Each module should be positioned in accordance with the specified light plan.
- Repeat sequence to mount remaining module(s) in daisy-chain string in accordance with light plan.

Note: This connector caps should be removed between each adjacent luminaire in a daisy-chain application but must remain in place for the last module in the continuous string to maintain IP integrity of the luminaire.

4 Complete Power Connections



- Securely connect the modules with daisy-chain power connector cables (available in lengths of 3 ft / 6ft / 10 ft / 15ft). Daisy-chain connector cables have a female connector on one end, and a male connector on the other end. The male connector on the cord must be installed into the corresponding female “power out” connector on the luminaire. The female connector must be installed into the corresponding male “power in” connector on the next luminaire in the string.
- Connect the whip end of the power cord to the branch circuit. Align female connector on power cord with male luminaire connector of first BalensBeam module in daisy-chain string and push until fully engaged.

NOTES:

1. Coil and secure excess cable - allowing for drip loops to draw moisture away from connectors.
2. The BalensBeam is designed for Digital (default) or PLC dimming. Digital dimming is based on RS485 standard. Compatible with HLP protocol module enabled climate control systems. Luminaire can be dimmed to 30% of max light output. Power Line Communication (PLC) dimming requires the purchase of P.L. Light Systems supplied transmitter system, with the gateway connecting to the customer's climate computer via Modbus TCP/IP. Customer's climate computer must utilize HLP.



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N = Neutral P = Phase 2P = 2-Phase Breaker Type 3P = 3-Phase Breaker Type 4P = 3-Phase + Neutral Breaker Type

ATTENTION

- The BalensBeam is designed for Power Line Communication (PLC) dimming which requires the purchase of a P.L. Light Systems supplied transmitter system, with the gateway connecting to the customer's climate computer via Modbus TCP/IP. Customer's climate computer must utilize HLP.
- Always ensure that cords are:
 - Coiled and excess cable secured - allowing for drip loops to draw moisture away from connectors.
 - Not concealed or extended through a wall, floor, ceiling, or other parts of the building structure.
 - Not located above a suspended ceiling or dropped ceiling.
 - Not permanently affixed to the building structure.
 - Not routed so that they are not subject to strain and are protected from physical damage.
 - Visible over their entire length.
 - Used within their rated ampacity as determined for the maximum temperature of the installed environment specified in the instructions.

PHOTOBIOLOGICAL RISK GROUP 2

CAUTION Possibly hazardous radiation emitted from this product.
Do not stare at operating lamp. May be harmful to the eyes.

Product tested against IEC 62471

Photobiological risk is based on testing of the light output characteristic of a single luminaire. Increased exposure risk to facility personnel may be present, depending on number of luminaires and their placement and/or positioning within the facility. It is the responsibility of the facility management to address these risks at the facility level and to ensure that people entering the plant growth areas while the lights are on, are aware of these risks and that appropriate safeguards are in place.



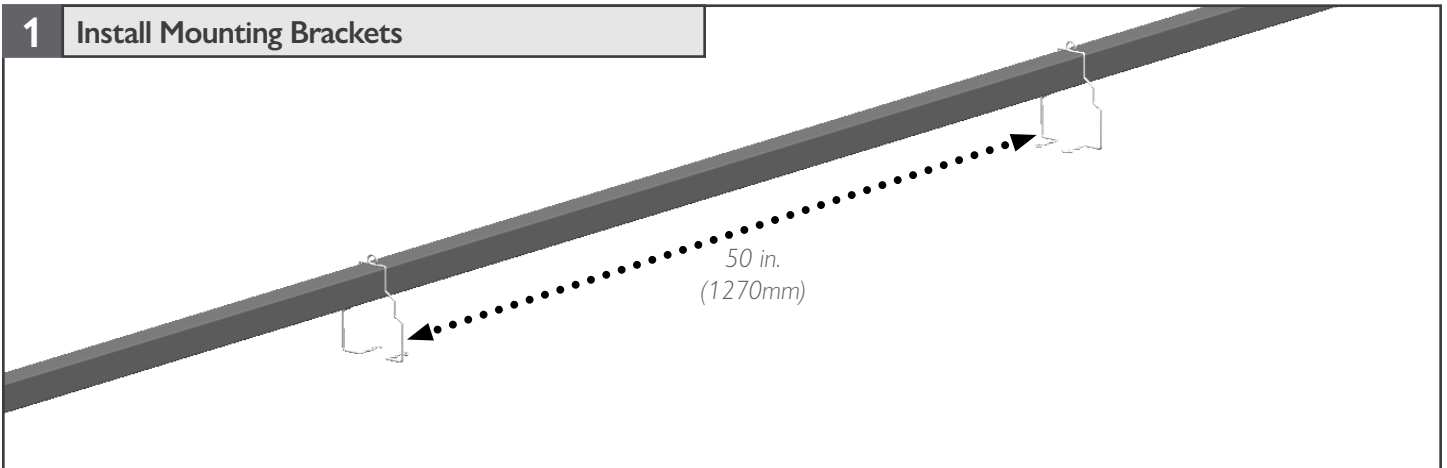
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Installation Instructions | BalensBeam: Standalone Luminaire Modules

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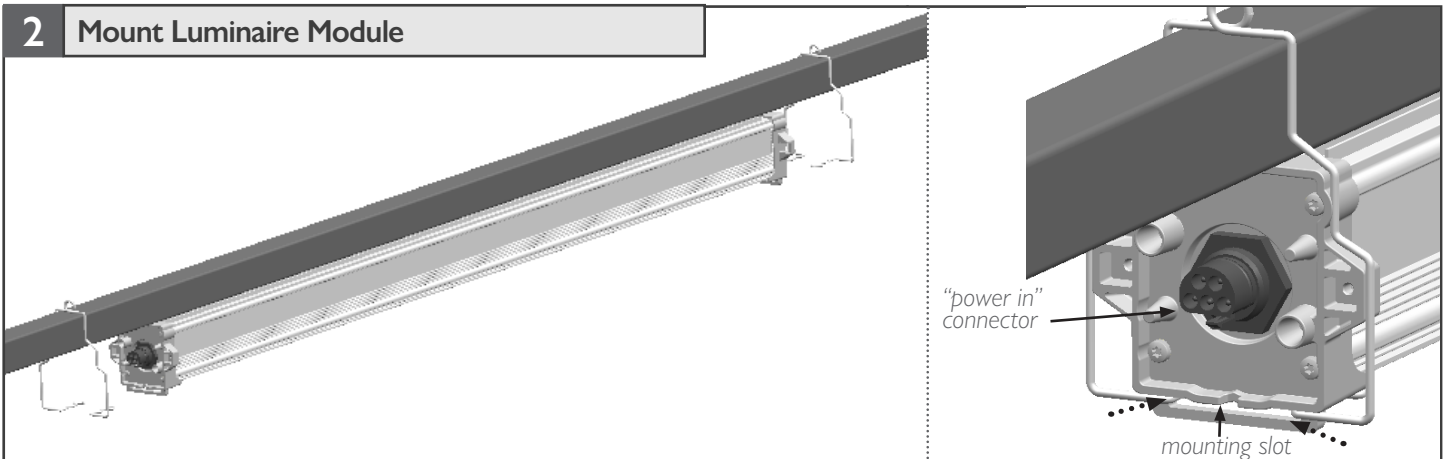
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2 Mount Luminaire Module



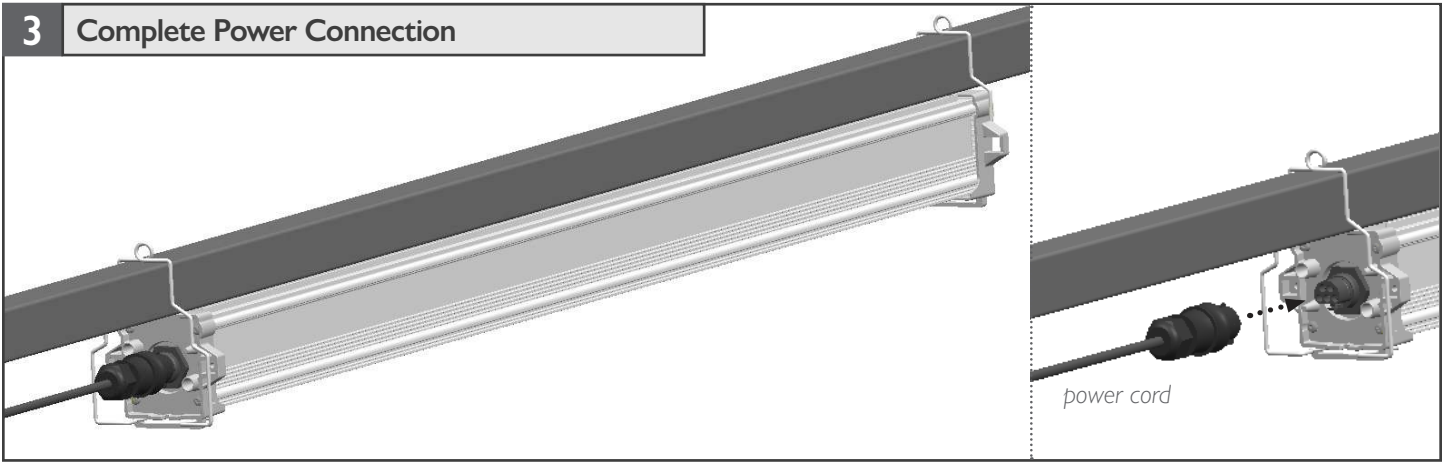
- Slide the 1st mounting bracket towards the end cap of the BalensBeam module, so the hooks pass through the mounting slot at the bottom of the endcap and snap into the “locked” position.
- Repeat with 2nd bracket at opposite end, so that BalensBeam module is securely attached to the mounting structure.



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3 Complete Power Connection



- Connect the whip end of the power cord to the branch circuit. Align female connector on power cord with male luminaire connector of BalensBeam module and push until fully engaged.
- Repeat sequence to mount remaining module(s) in accordance with light plan.

NOTES:

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