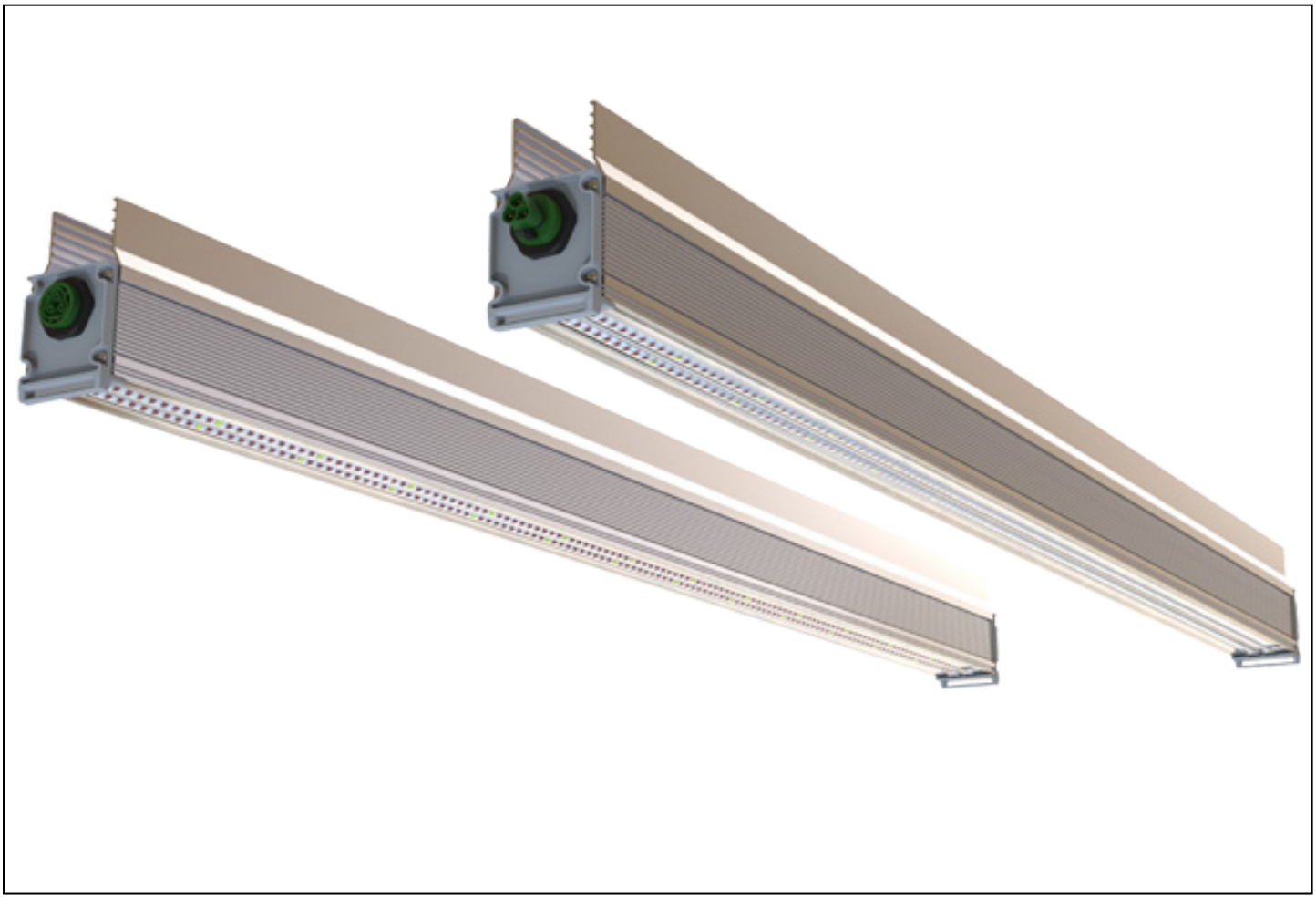
BalensBeam

EN User and Installation Manual



P.L. LIGHT SYSTEMS

THE LIGHTING KNOWLEDGE COMPANY

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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.

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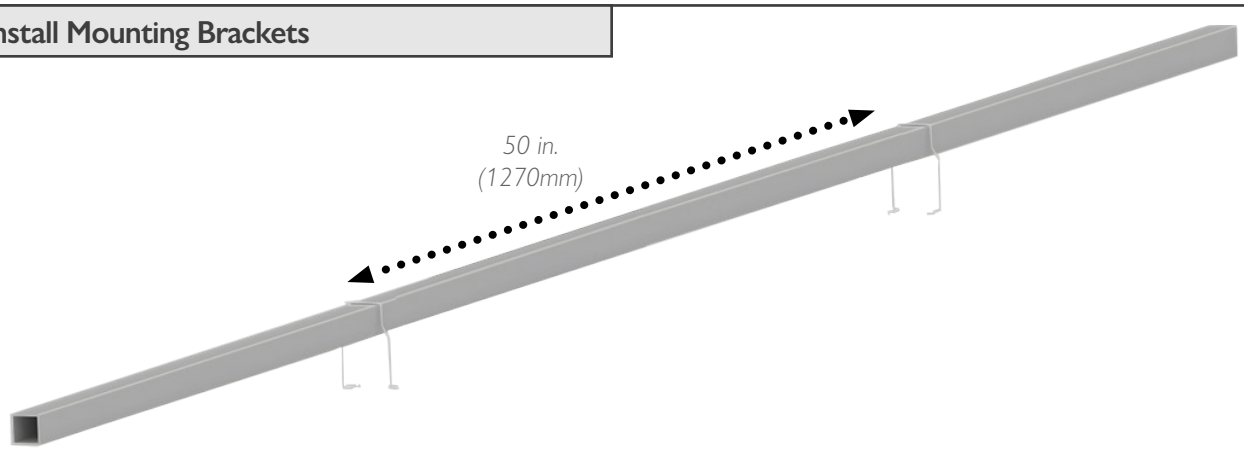
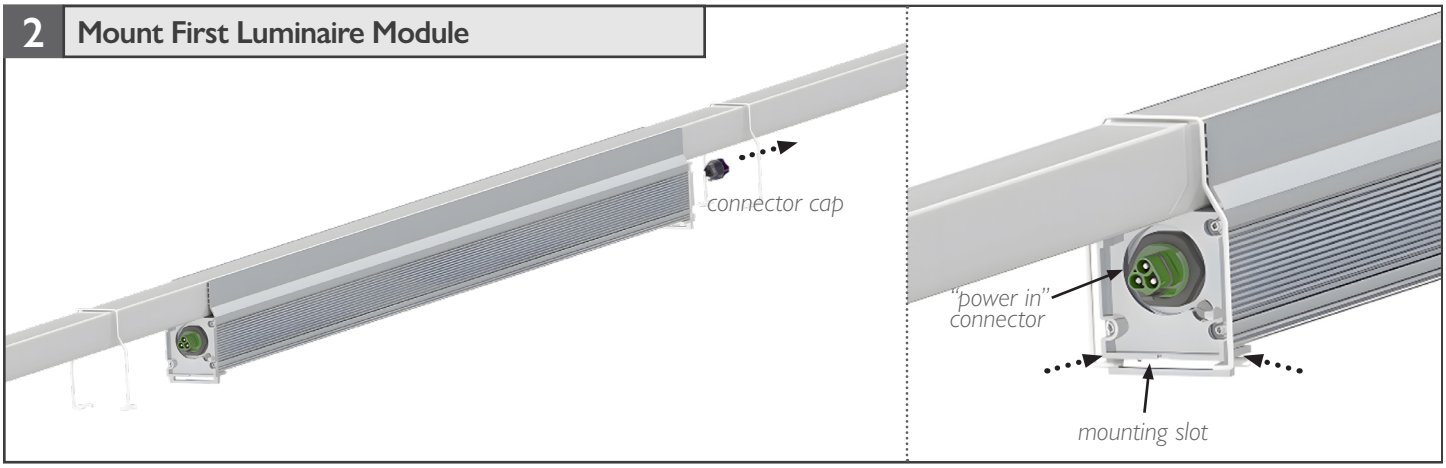
1 Install Mounting Brackets



- 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 ≤40 x 40 mm

2 Mount First Luminaire Module

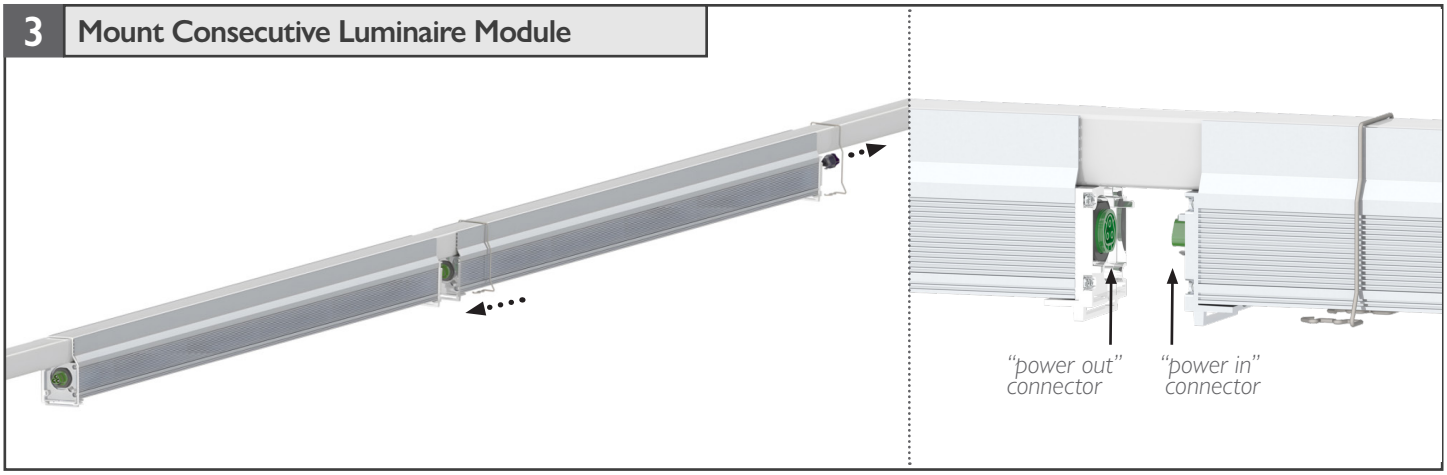


- Remove the pre-installed connector cap from 3-pin connector on "power out" side of luminaire.
- With the "power in" connector facing towards the "outside" of the daisy-chain string, raise the 1st BalensBeam module towards the mounting structure, so the top fins are positioned on either side of the 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. !

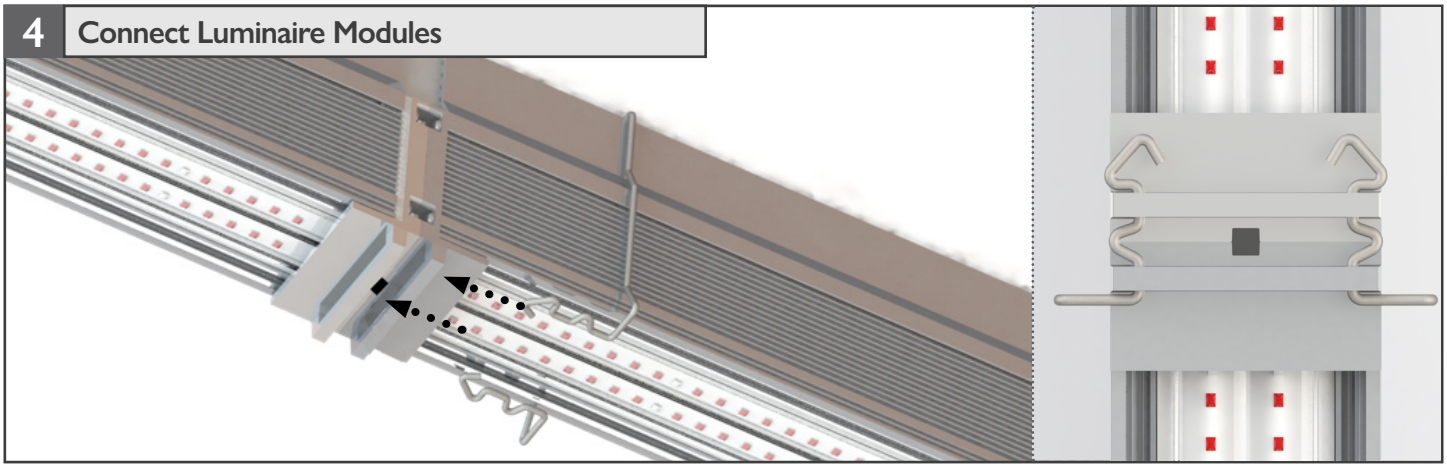
3 Mount Consecutive Luminaire Module



- 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 BalenBeam module towards the mounting structure, so that the top fins are positioned on either side of the track/truss.
- Slide 2nd BalensBeam module towards the first so that it is positioned beneath the 2nd mounting bracket. Align the 3-pin male ("power in") connector on 2nd module with 3-pin female ("power out") connector on 1st module and press together until the connector is firmly 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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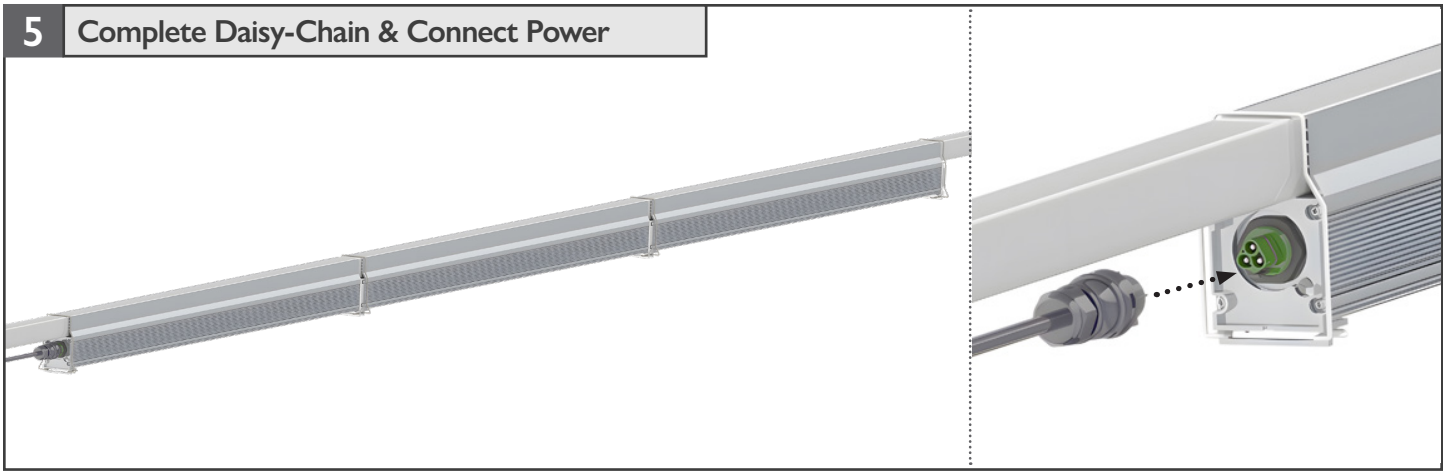
5 Complete Daisy-Chain & Connect Power

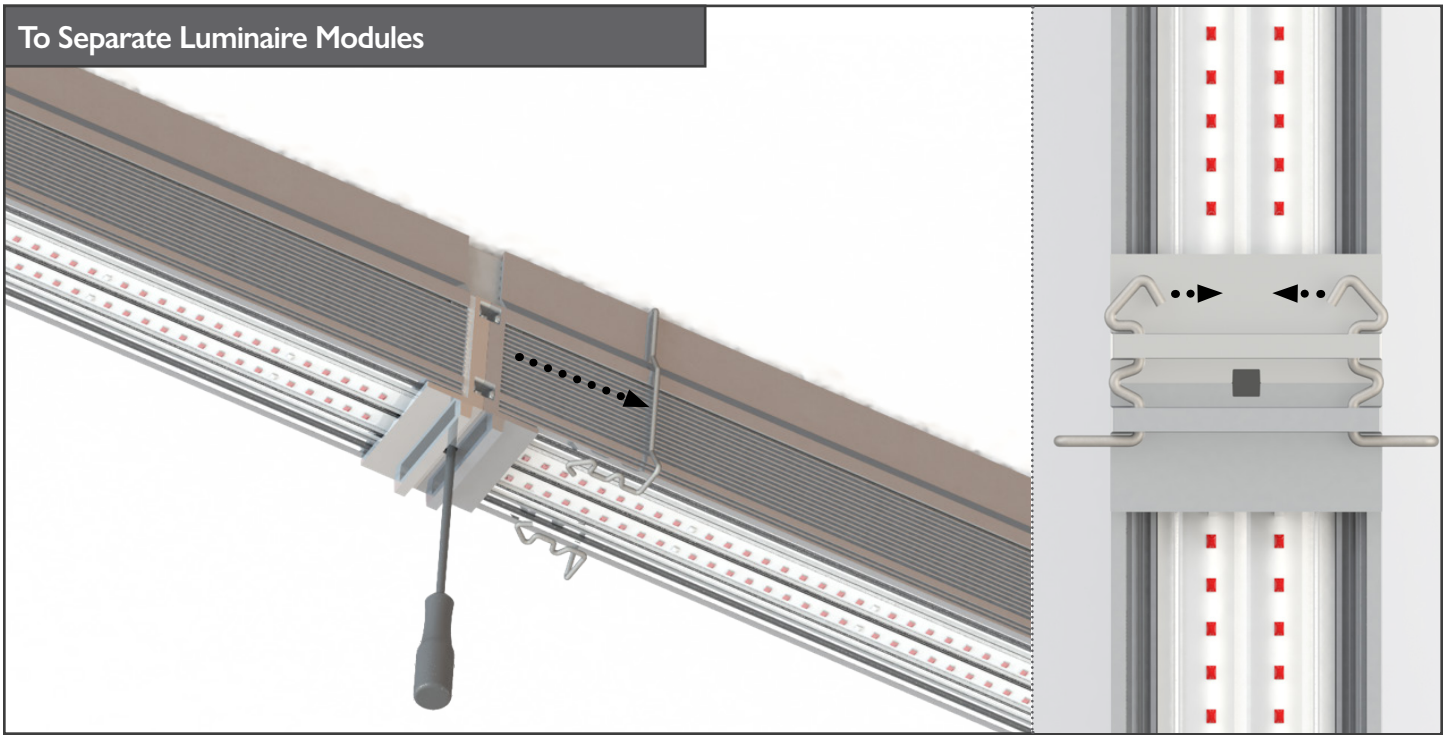


- Repeat sequence to mount remaining module(s) in continuous daisy-chain string in accordance with light plan.
- Connect the whip end of the power cord to the branch circuit. Align 3-pin female connector on power cord with 3-pin male luminaire connector of first BalensBeam module in daisy-chain string 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 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.*

To Separate Luminaire Modules



- Pinch end hooks on mounting bracket together to remove 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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Refer to 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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2. 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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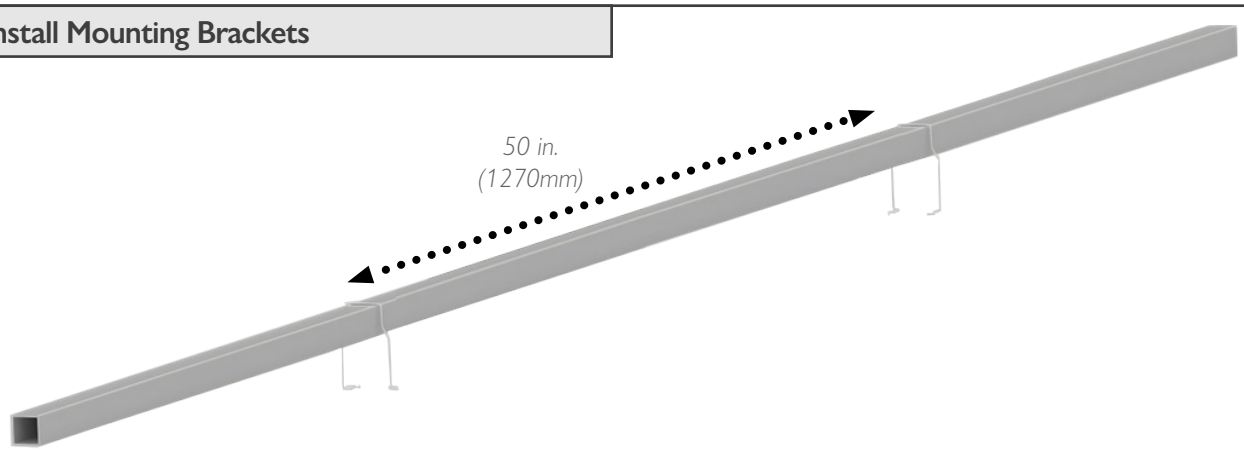
Always turn off and lock out the branch circuit before commencing installation or maintenance work.

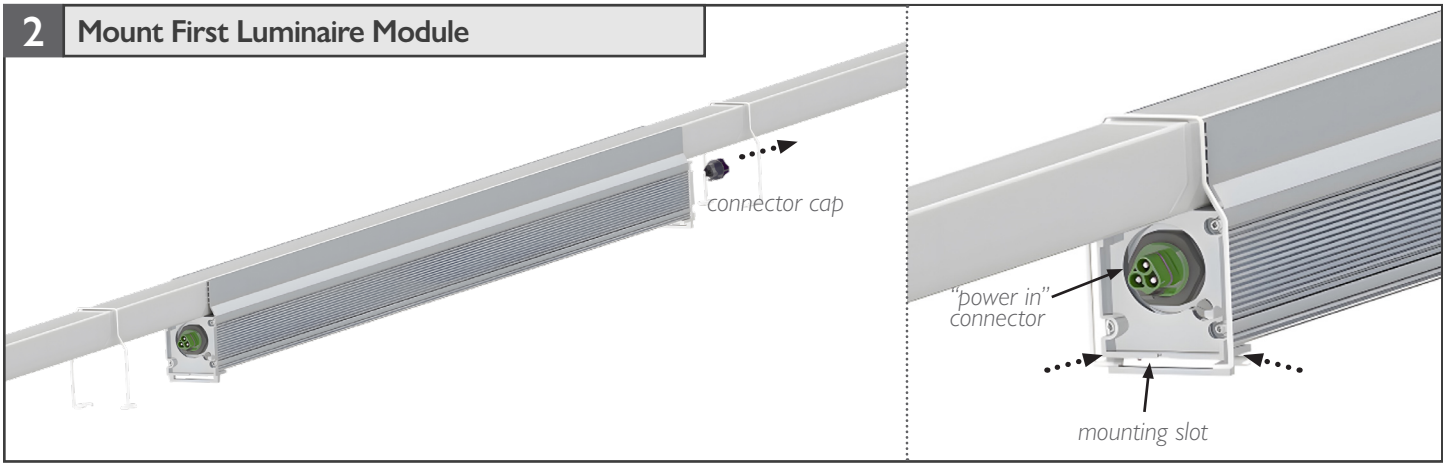
1 Install Mounting Brackets



- 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 ≤40 x 40 mm

2 Mount First Luminaire Module



- Remove the pre-installed connector cap from 3-pin 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 fins are positioned on either side of 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 a standalone application in the future.

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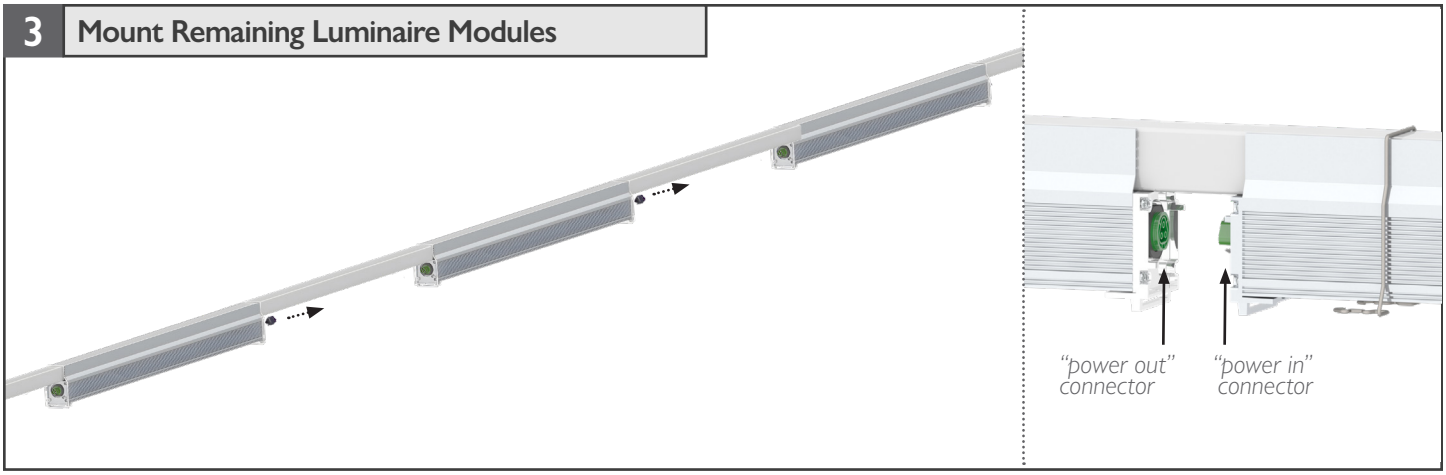
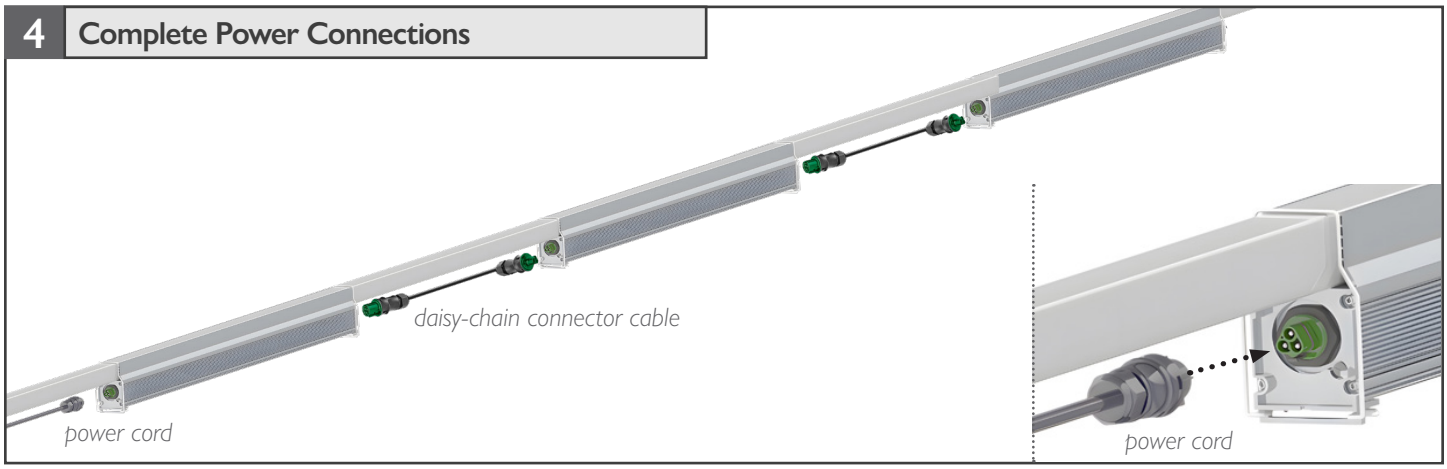
3 Mount Remaining Luminaire Modules



- Remove the pre-installed connector cap from 3-pin 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 3-pin female connector on one end, and a 3-pin male connector on the other end. The 3-pin male connector on the cord must be installed into the corresponding 3-pin female "power out" connector on the luminaire. The 3-pin female connector must be installed into the corresponding 3-pin male "power in" connector on the next luminaire in the string.
- Connect the whip end of the power cord to the branch circuit. Align 3-pin female connector on power cord with 3-pin male luminaire connector of first BalensBeam module in daisy-chain string and push until fully engaged.

NOTES:

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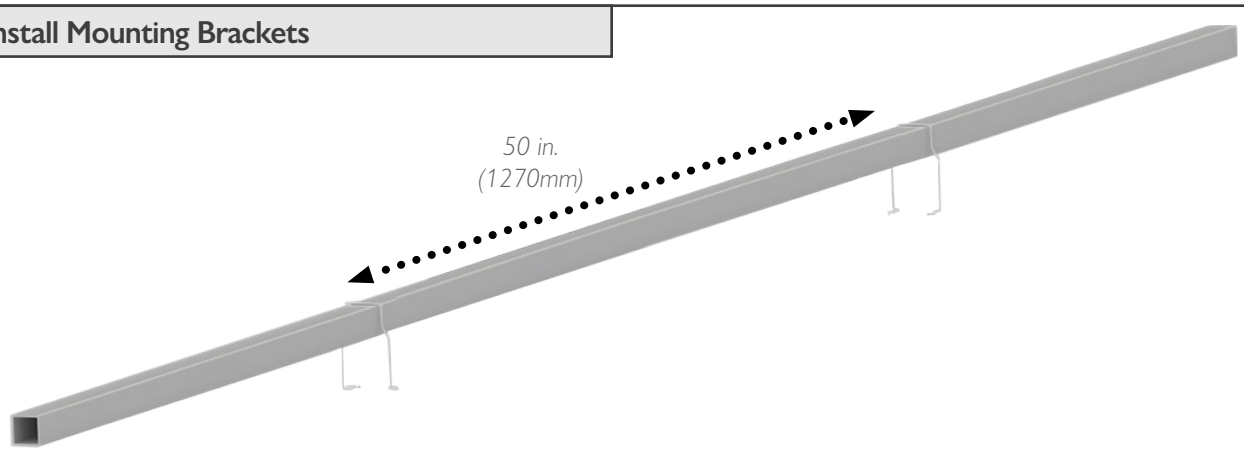

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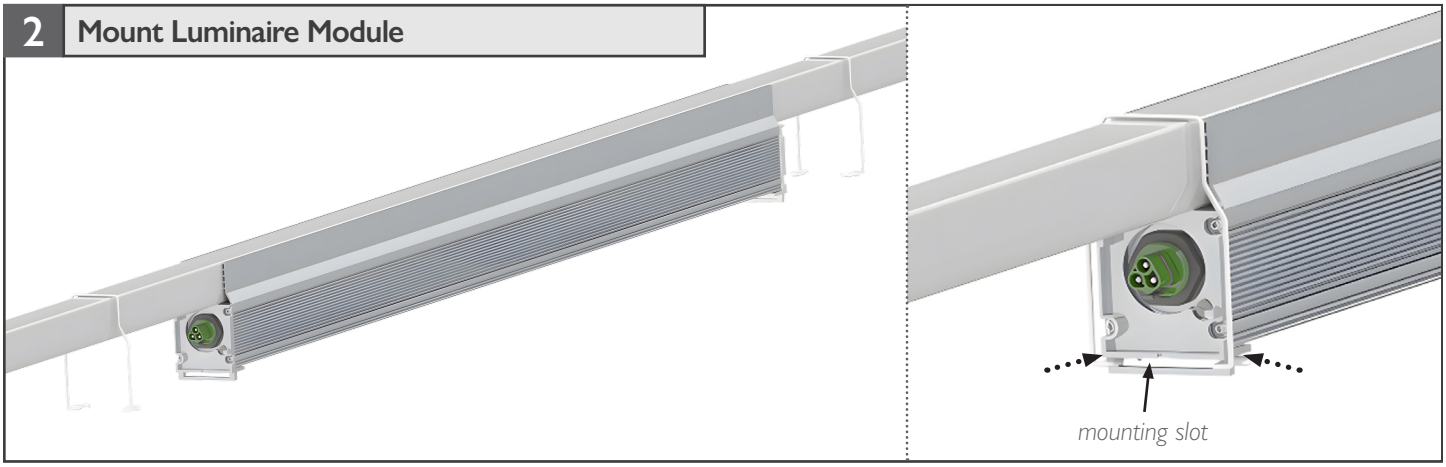

- Slide the 1st mounting bracket towards the end cap of the BalensBeam module, so the hooks pass through the mounting slot at the bottom of the endcap and snap into the "locked" position.
- Repeat with 2nd bracket at opposite end, so that BalensBeam module is securely attached to the mounting structure.

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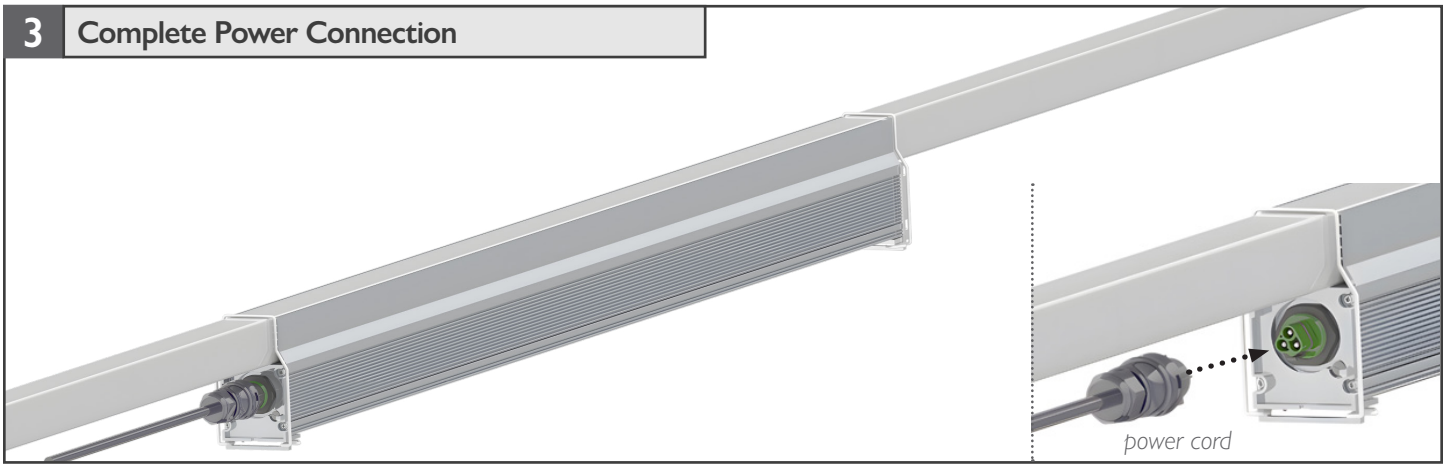
3 Complete Power Connection



- Connect the whip end of the power cord to the branch circuit. Align 3-pin female connector on power cord with 3-pin 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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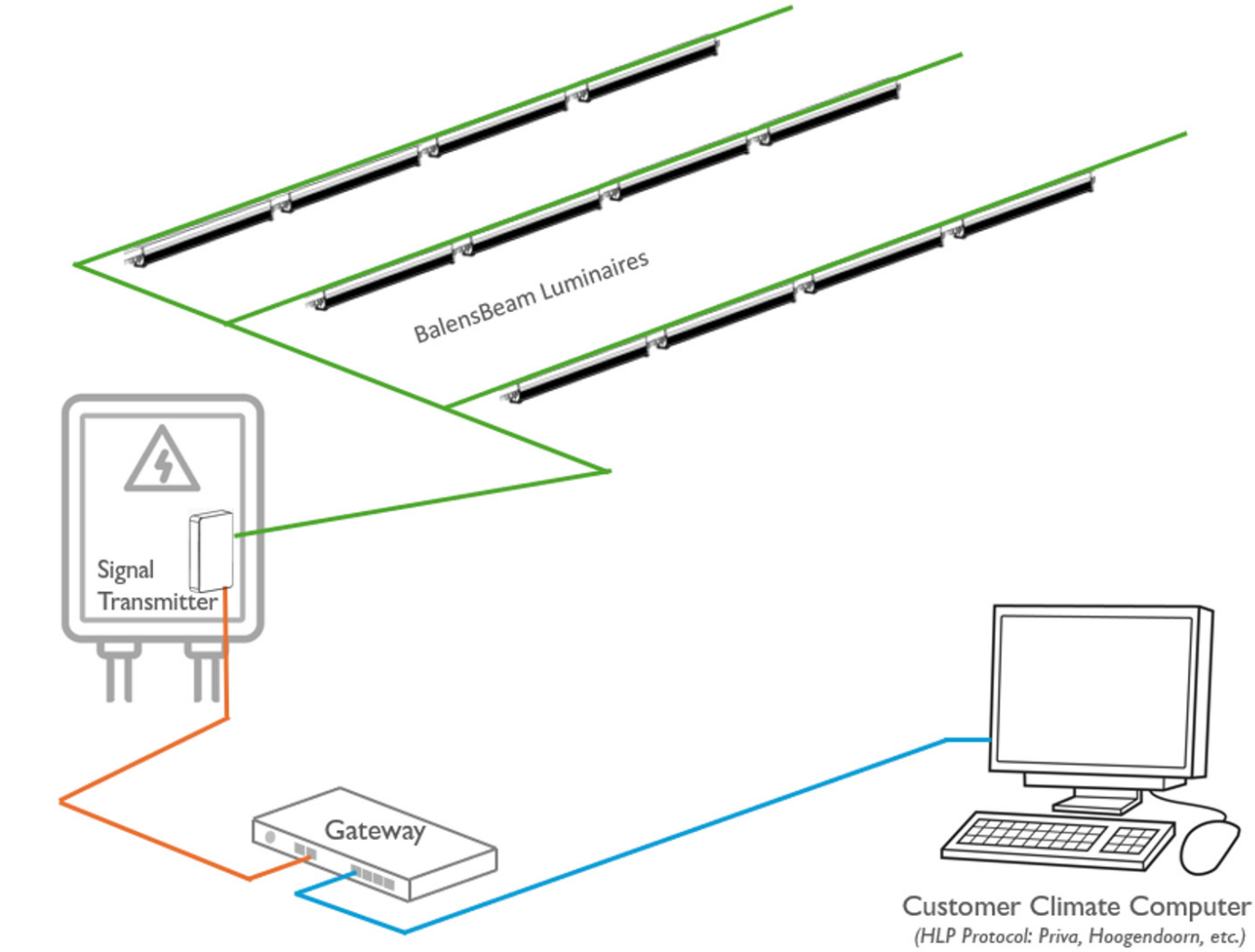
POWER LINE COMMUNICATION (PLC)



How it Works

- The Gateway (supplied by P.L. Light Systems) receives a signal from the customer's climate computer (must use HLP protocol) via a customer supplied RJ45 ethernet cable.
- This signal is then relayed to the Signal Transmitter (supplied by P.L. Light Systems) that gets installed in the electrical panel via a customer supplied RJ12 communications cable.
- The Signal Transmitter then converts the signal to relay the communication to the BalensBeam luminaires via the existing electrical cable infrastructure.
- Each Signal Transmitter can support up to 200 luminaires, regardless the of number of circuits

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P.L. LIGHT SYSTEMS

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