Installation Manual

International Variants

Product Codes: CS22INTG, CS22INTH, CS24NAG, CS24INTH, CS12INTG, CS12INTH, CS14INTG, CS14INTH

Contents

What is in the box

1x Circadian Sky light fixture

Optional accessories available from Innerscene

22-Grid Mounting Kit:
Suitable for the following products: CS22INTG, CS24INTH, CS12INTG, CS14INTH
4x tee grid clips (compatible with Narrow 15mm or Standard 24mm exposed tees)
8x #6(3.5mm) x 1/4”(6.5mm) self-tapping screws

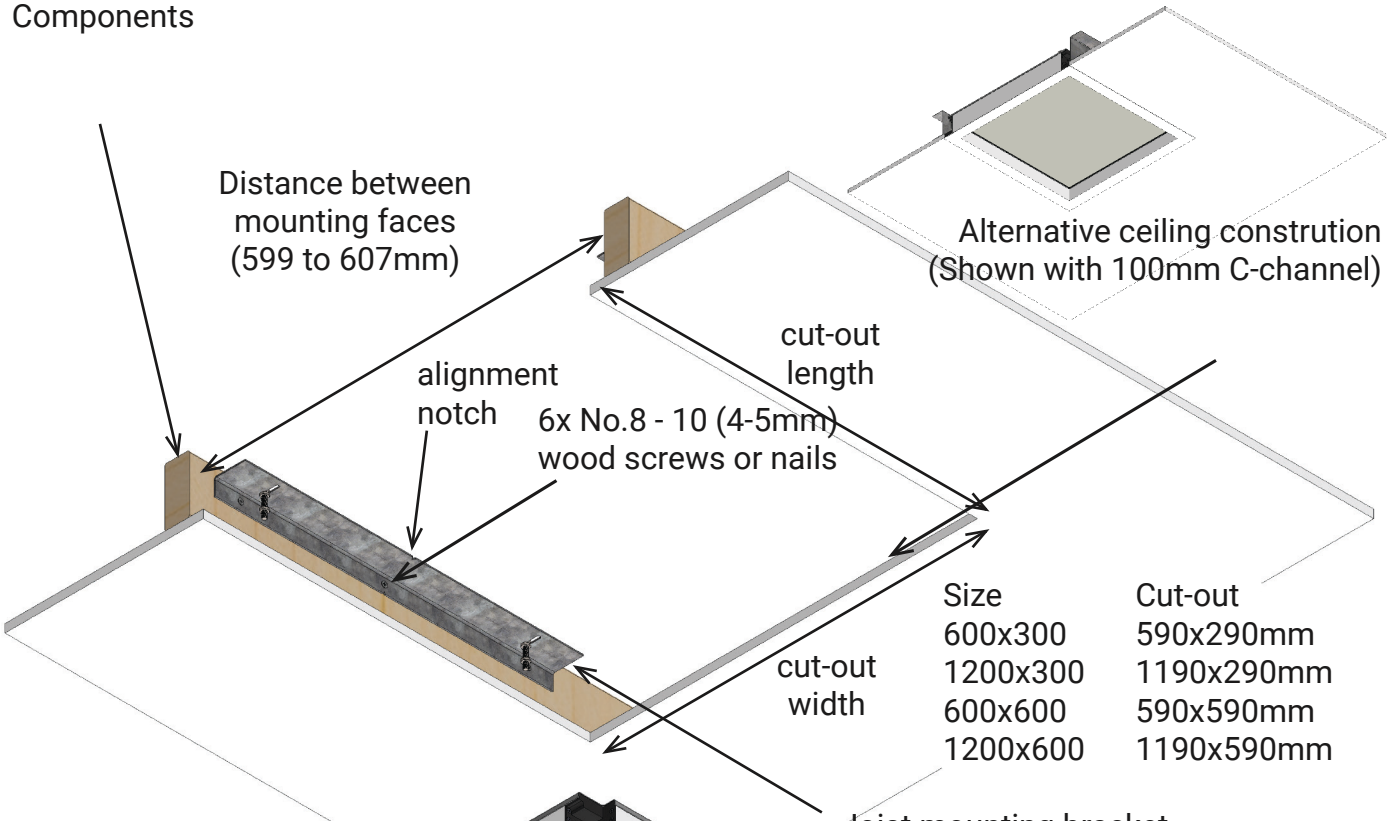
22-Joist Mounting Kit:
Suitable for the following products: CS22INTH, CS24INTH
2x 2’ Ceiling joist mounting brackets
4x M6 bolts
4x M6 hex nuts
4x M6 hex lock nuts

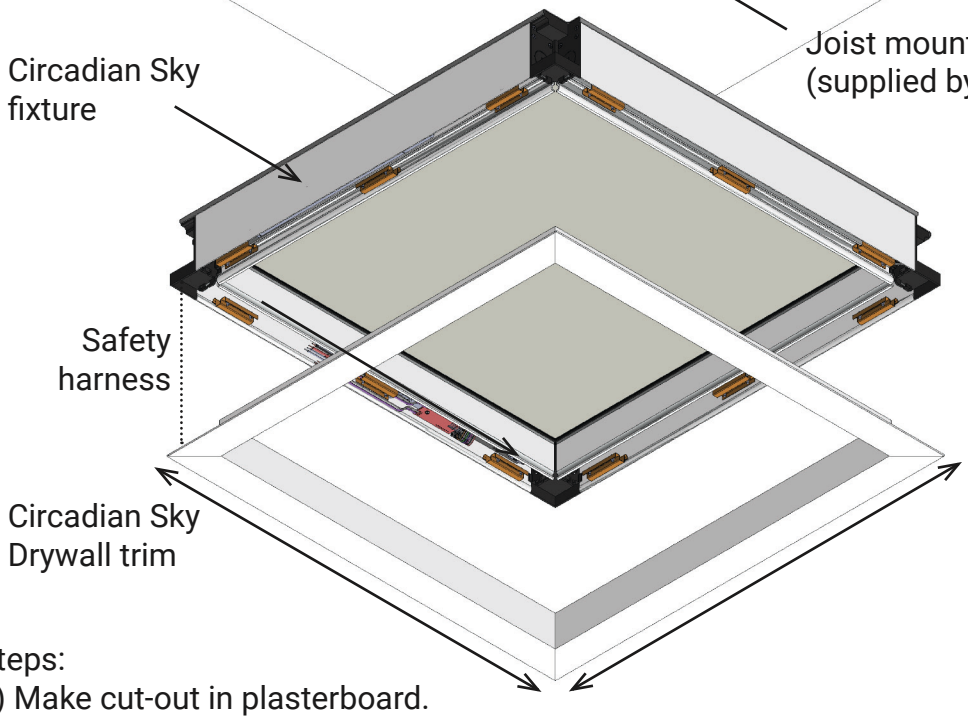
12-Joist Mounting Kit:
Suitable for the following products: CS12INTH, CS14INTH
2x 1’ Ceiling joist mounting brackets
4x M6 bolts
4x M6 hex nuts
4x M6 hex lock nuts

Recommended tools and materials for Suspended Ceiling installations (supplied by others):
1) P.P.E.
2) Side cutter or wire stripper (to cut and strip wires)
3) Large flat head screwdriver (to open 20mm K.O.)
4) Pozidriv screwdriver or Pozidriv screwdriver bit (for Grid clips screws)
5) 1.5mm suspension wire
6) 0.5-2.5mm^2 power or lighting control cables. M20 90 Degree Cable Glands are required for tight two dimensional arrays. CPR-compliant or LSZH cables may be required in some territories.

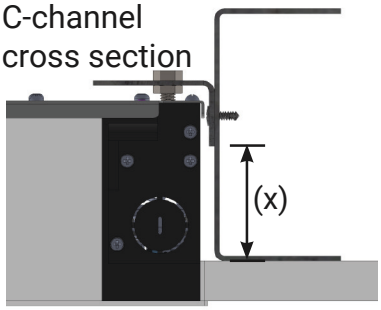
Recommended tools and materials for Plasterboard installations (supplied by others):
1) P.P.E.
2) M6 hexagonal nut driver (nut spinner) with 10mm hex size
3) Plasterboard saw
4) Laser level (to align cut-out or when installing multiple fixtures)
5) Tape measure
6) Side cutter or wire stripper (to cut and strip wires)
7) Large flat head screwdriver (to open 20mm K.O.)
8) Pozidriv screwdriver or Pozidriv screwdriver bit (for wood screws)
9) 6x #10 (5mm) countersunk wood screws for wood joists, or self-tapping/self-drilling screws (e.g. MF20 wafertek screws) for metal channels.
10) 0.5-2.5mm^2 power or lighting control cables. M20 90 Degree Cable Glands are required for tight two dimensional arrays. CPR-compliant or LSZH cables may be required in some territories.

Components

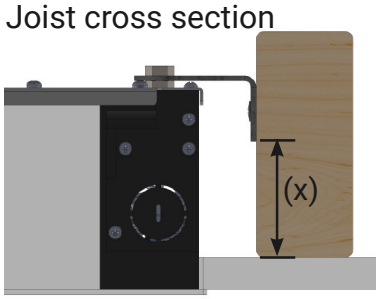




C-channel cross section



Joist cross section



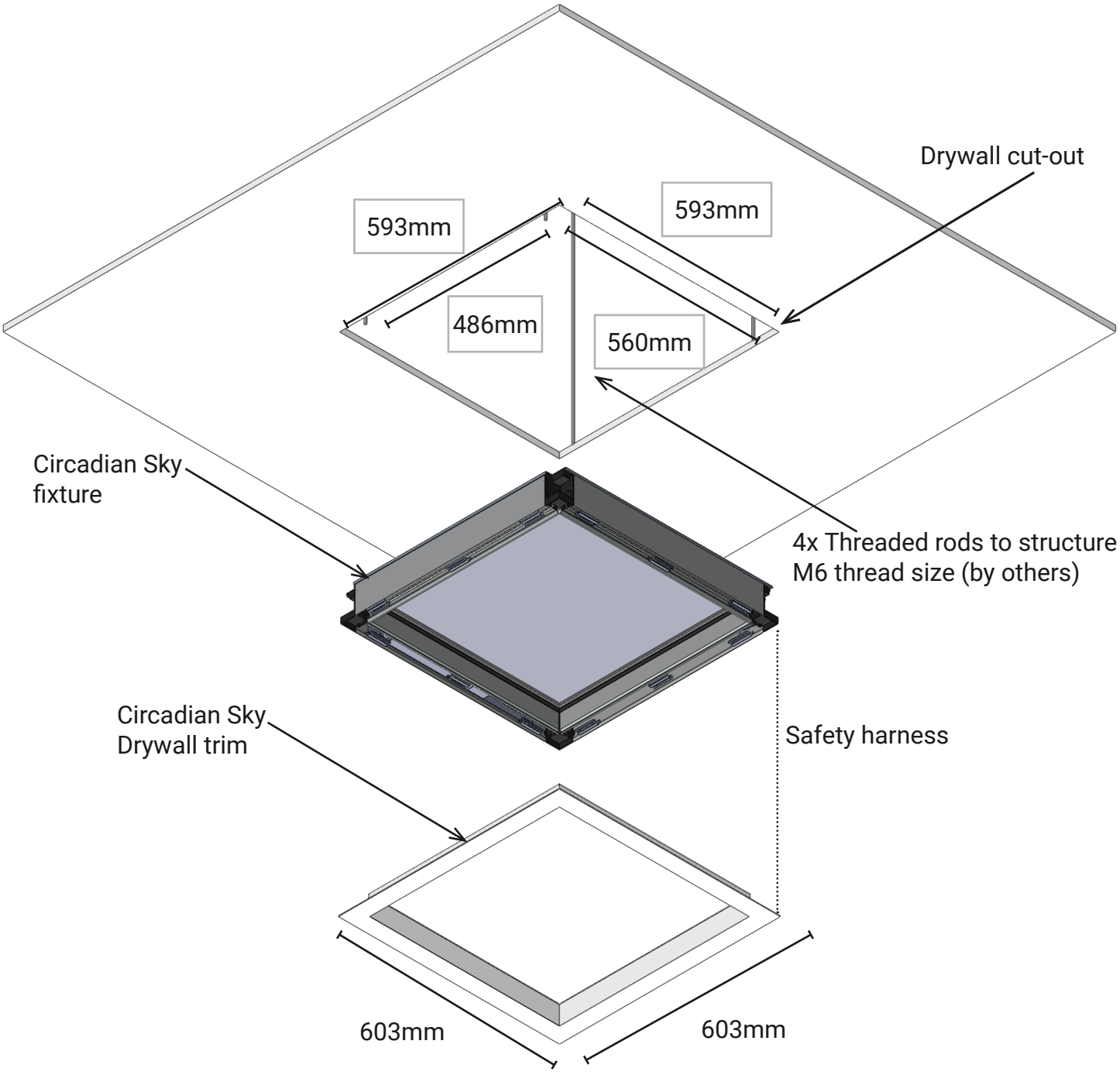
Steps:

1) Make cut-out in plasterboard.
2) For retrofit, existing joists may need to be modified with extra joist headers. Secure Joist mounting brackets to joist or channel.
4) Pull power or dimming wires to Primary fixture.
5) Route cables into cable gland and secure properly.
4) Raise fixture until bottom of fixture is level with finished ceiling.
5) Secure fixture to threaded bolts using hex nuts (M6 hex nut with 10mm AF width).
6) Clip safety harness of Drywall trim to fixture. Snap-fit Drywall trim to fixture.

Bracket offset (x)

9.5mm plasterboard = 53mm
12.5mm plasterboard = 56mm
15mm plasterboard = 58.5mm

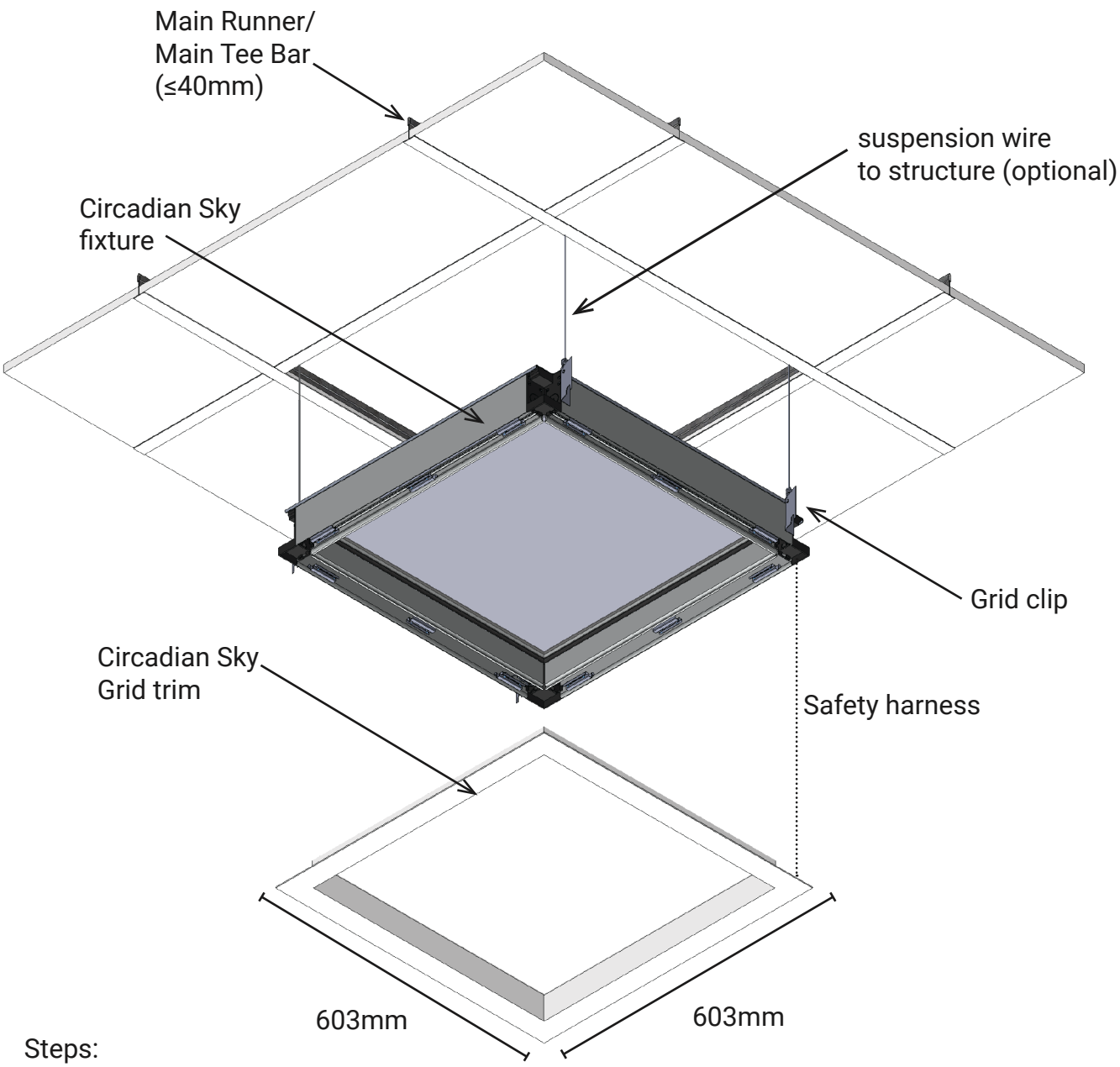
Components



Steps:

1) Make cut-out in plasterboard.
2) Install fixing points to structure (concrete ceiling / beams / structural channels etc.)
3) Connect threaded rods to fixing points. M6 threaded rods are suitable.
4) Pull power or dimming wires to Primary fixture.
5) Connect wiring and secure cable to cable gland.
6) Raise fixture until bottom of fixture is level with finished ceiling.
7) Secure fixture to threaded rods using hex nuts. Locking nuts are optional.
8) Clip safety harness of Drywall trim to fixture. Snap-fit Drywall trim to fixture.

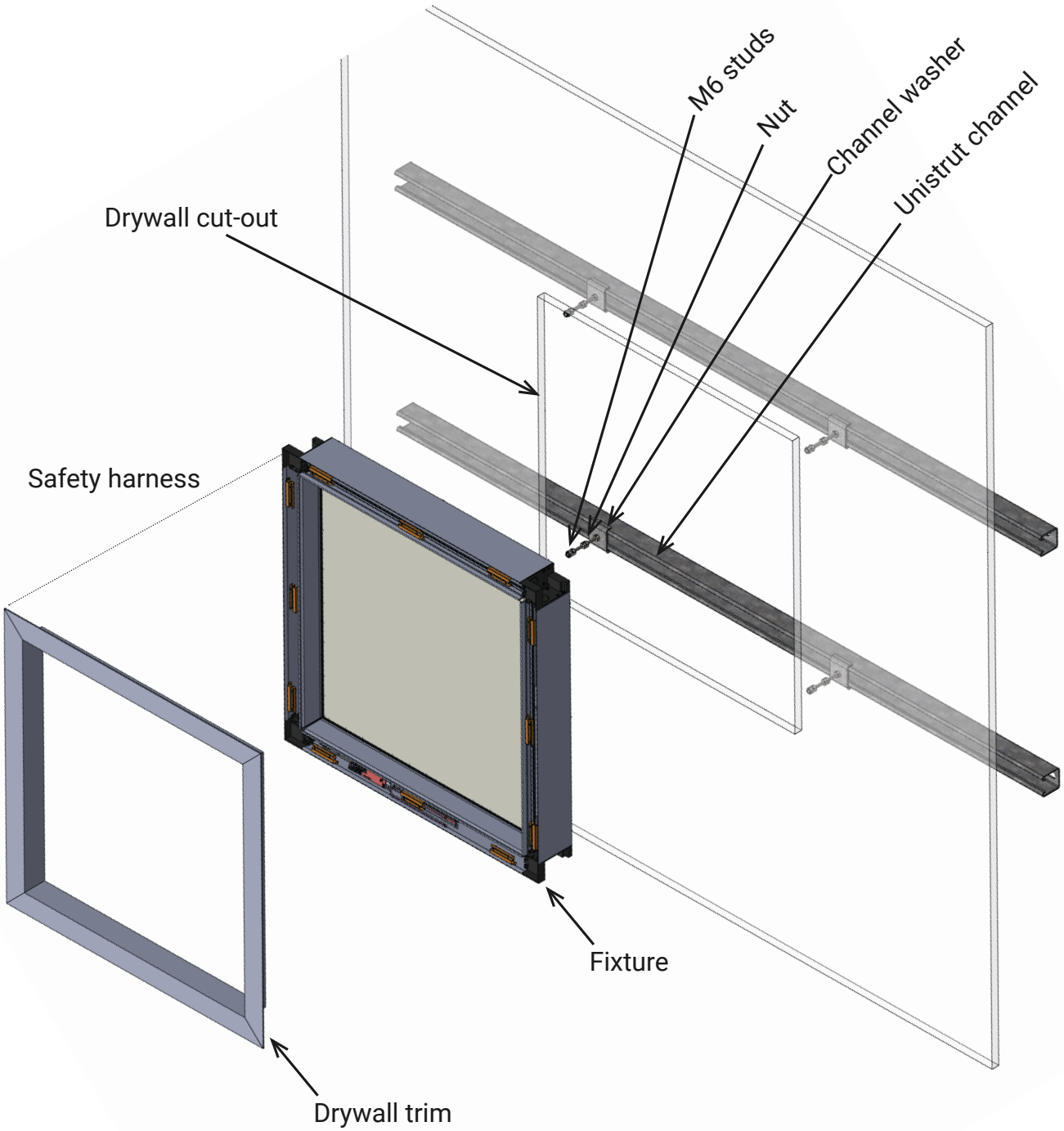
Components



Steps:

1) Remove existing mineral tiles (if applicable)
2) Screw Grid clips to back of fixture using self-tapping screws (provided)
3) Connect building power and dimming wires (primary fixture only) to fixture
4) Secure cable gland
5) Snap-in fixture trim
6) Lay-in fixture above ceiling grid, align Grid clips to bulb of main runners/beams
7) Attach suspension wires (if deemed necessary, fixture weighs 13 kg per 600x600 size)

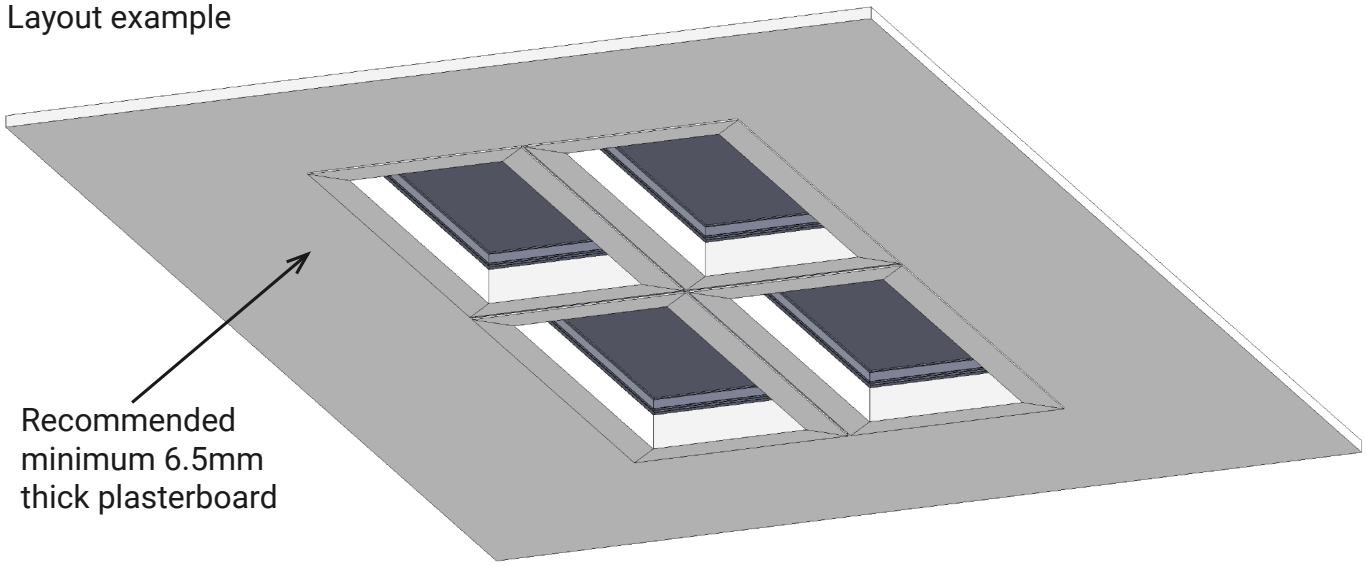
Components



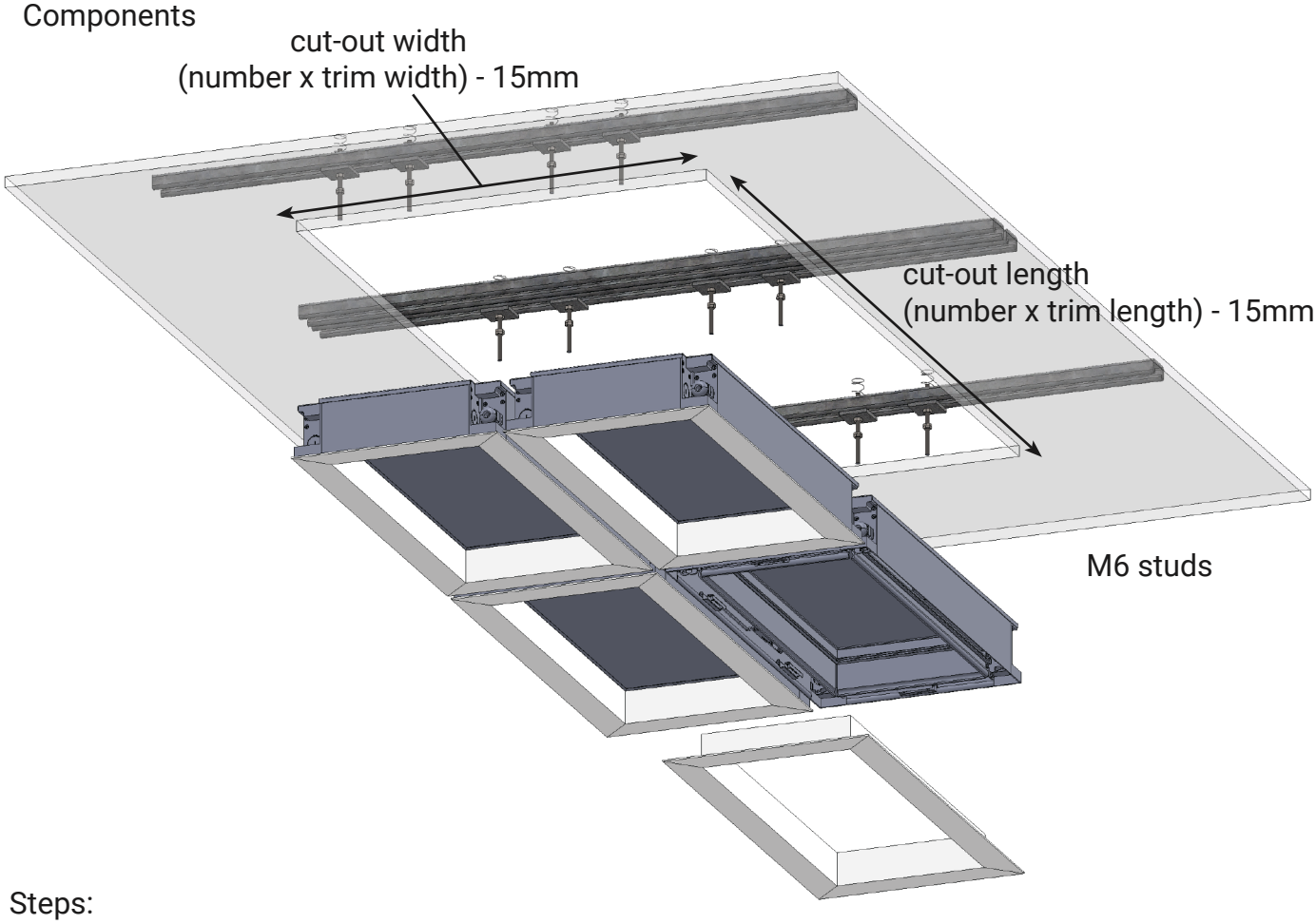
Steps:

1) Make cut-out in plasterboard.
2) Install Unistrut channels (horizontally for wall applications)
3) Install M6 threaded rod to align with mounting holes in fixure.
4) Install 2x backing nuts per threaded rod to set install depth.
5) Pull power or dimming wires to Primary fixture.
6) Connect wires and secure cables with cable gland.
7) Ease fixture into position until front is flush with finished face. Adjust backing nuts if needed.
8) Secure fixture to threaded rods using hex nuts. Locking nuts are optional.
9) Clip safety harness of Drywall trim to fixture. Snap-fit Drywall trim to fixture.

Layout example



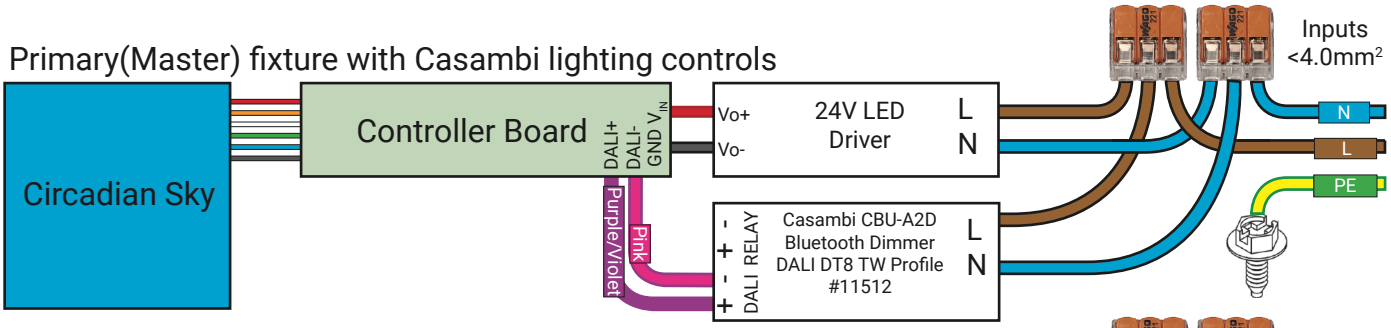
Components



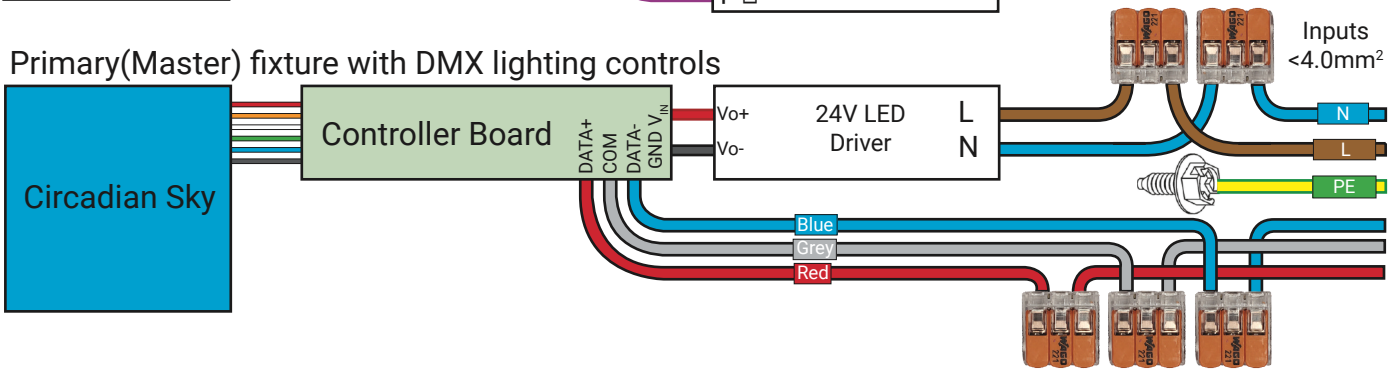
Steps:

1) Make cut-out in plasterboard.
2) Install Unistrut channels (horizontally for wall applications)
3) Install M6 studs to align with mounting holes in fixure.
4) Pull power or dimming wires to Primary fixture.
5) Connect wires and secure cables with Cable glands.
4) Raise fixture until bottom of fixture is level with finished ceiling.
5) Secure fixture to threaded rods using hex nuts. Locking nuts are optional.
6) Clip safety harness of Drywall trim to fixture. Snap-fit Drywall trim to fixture.

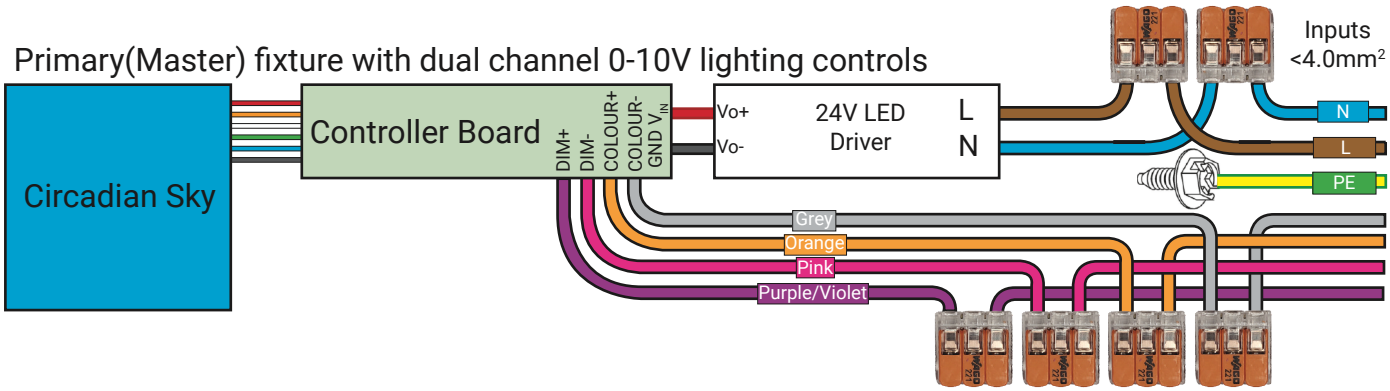
Primary(Master) fixture with Casambi lighting controls



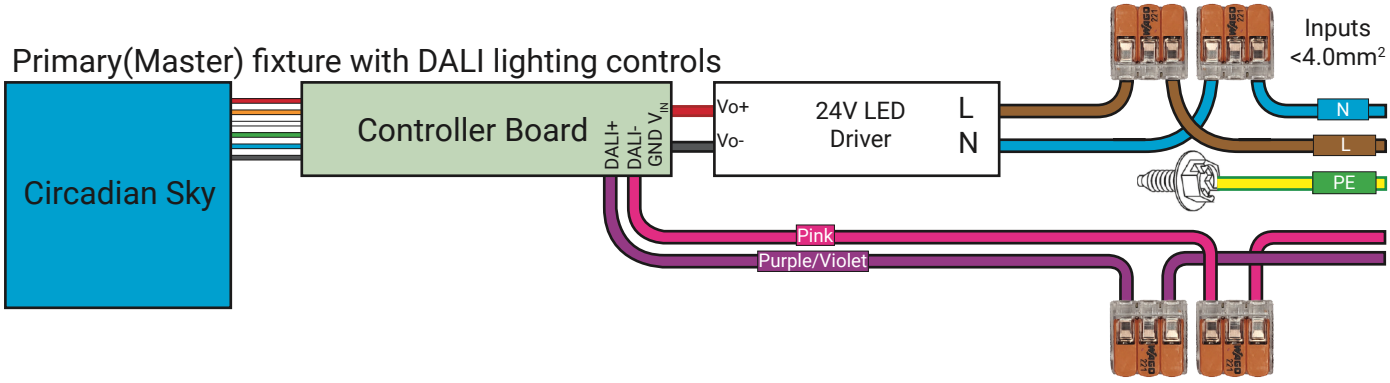
Primary(Master) fixture with DMX lighting controls



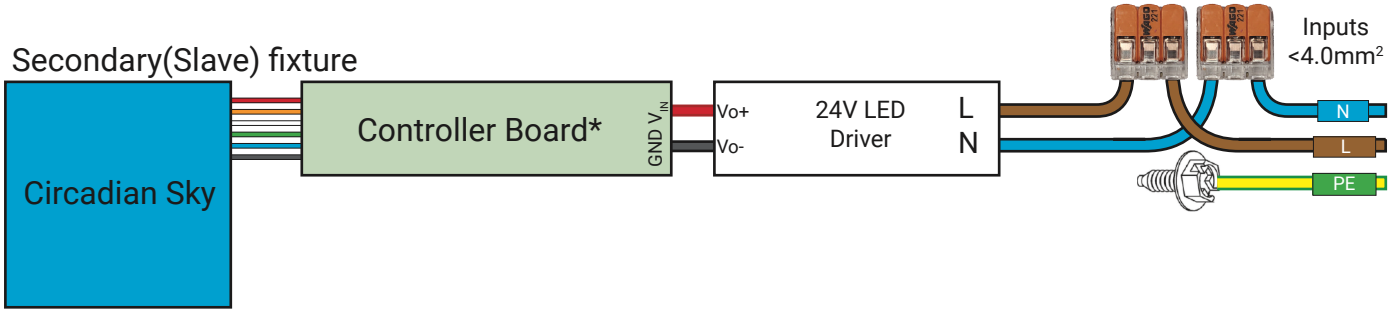
Primary(Master) fixture with dual channel 0-10V lighting controls



Primary(Master) fixture with DALI lighting controls



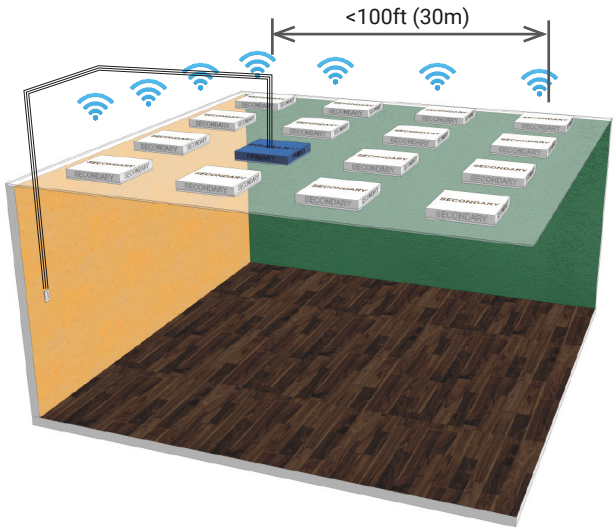
Secondary(Slave) fixture



* - only Primary(Master) fixture have lighting control pigtails. Only 1no. Primary is sold per group/zone

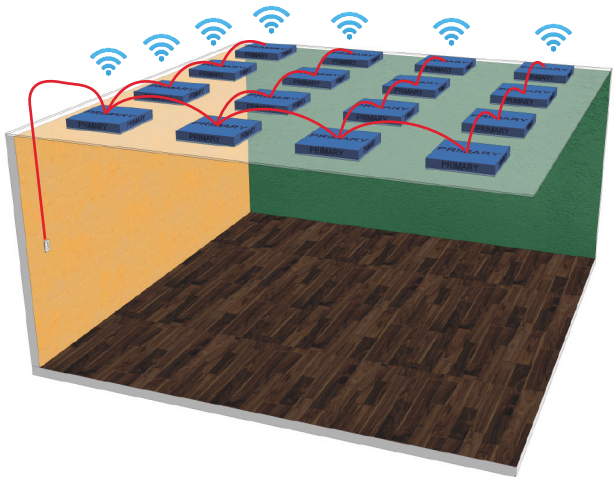
Innerscene Wireless Star Network (Recommended)

Max. range: 100ft (30m) Primary to any fixture
Max. fixtures per group/zone: 255
Recommended use: Residential, Small-Medium Commercial with open open plan.
DMX or 0-10V/1-10V or DALI or Casambi inputs at Primary fixture.
Optional Factory-ready commissioning.



Innerscene Hardwired Fixtures

Control wires to each fixture
DMX: typically up to 32 fixtures per group
0-10V/1-10V: typ. up to 20 fixtures per group
DALI: up to 64 fixtures per group
Casambi: up to 250 fixtures per network
Optional Factory-ready commissioning
Not recommended for use with multiple Innerscene Circadian Cycles within the same room.



Connect to Primary light fixture

1) Turn on power to all light fixtures in the group/zone.
2) Turn on Wifi on your phone or tablet or computer.
3) Connect to Wifi Hotspot for example “Innerscene CS Primary 25F7”.
4) Open a browser tab and type in the address “192.168.4.1”.
5) To identify the fixture, tap/click on “Identify Fixture”, the fixture will flash several times.
6) To identify existing group/zone, tap/click on “Identify Group”.
7) To add a new Secondary fixture to the group/zone, tap “Scan”
8) A list of fixtures will be shown in the Nearby Fixtures table.
9) Previously paired fixture to the current group/zone will be shown in Grey.
10) Previously paired fixture to other group/zone will be shown in Grey. Previously paired fixtures can only be unpaired from their existing group/zone within 2 minutes of powering on. To unpair a fixture, tap on Unpair next to the fixture name.
11) Unpaired fixtures will be shown in Green.
12) Other primary fixtures will be shown in Red.
13) Group/zone names are shown in bracket, for example “(25F7)”.
14) To add Secondary Fixture to the current Group/Zone, tap on Pair next to the fixture name.
15) Edit to the Group can only be done if the gateway page has been openned within the first 2 minutes of power-in on the fixture. Openning the gateway page after this time will default to the read-only mode. Accessing the gateway page with password will allow edit for 30 minutes until a time-out warning.
16) To connect to Wifi, select the Wifi icon and select nearby networks and type in password. The wifi access point must have internet access to automatically update network time.
17) To set the time without internet access, select the Time icon and change local time. Local time will be lost when the power is switched off from the fixture.

Information on existing Group/Zone (only availble from Primary fixture)

1) Group list. Display previously Paired Secondary fixtures to current Group/Zone.
2) Group maximum recorded temperature.
3) Group maximum current temperature.

Factory setting

1) If the password is unknown, when logging onto the fixture within the first 2 minutes will allow the Unpair feature. This will revert all settings to default. Press Unpair, then power off within 5 seconds, then power on again within 5 seconds.
2) If password is known, the Unpair feature will remain visible while logged on. A prompt will ask you to confirm Unpairing.

Firmware upgrades

1) Connect to primary fixture.
2) Ensure primary fixture is connected to local wireless internet (or phone hotspot).

Connect to Secondary light fixture

1) Turn on power to all light fixtures in the group/zone.
2) Turn on Wifi on your phone or tablet or computer.
3) Connect to Wifi Hotspot for example “Innerscene CS Secondary 81A3”.
4) Open a browser tab and type in the address “192.168.4.1”.
5) To identify the fixture, tap/click on “Identify Fixture”, the fixture will flash several times.

FOR END USERS
1) Install Casambi app from the Google or Apple app stores
2) Open the nearby lighting Network to synchronise local time
3) To adjust brightness/colour of light fixtures, tap on Luminaire and tap and hold a particular Luminaire. Drag the sliders to adjust brightness or colour.
4) Quick tap on Luminaire to turn on or off
5) To select a previously programmed scene, tap on the Scenes tab, then tap on a Scene.
6) To Add or Remove fixtures or scenes, please consult a Casambi installer

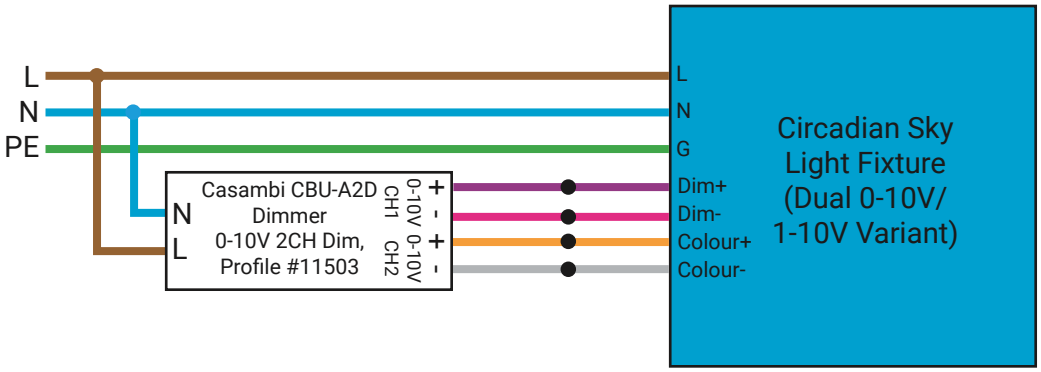
FOR INSTALLERS
1) Install Casambi app from the Google or Apple app stores
2) Make a new Network
3) Add fixtures (Luminaire) to Network
4) Group Luminaires to Groups if required
5) Add Scenes if required
6) Add Timers if required
7) Add Sensors if required (may be required under California Title 24)

HOW TO ADD/MODIFY CASAMBI DEFAULT CIRCADIAN PROFILES
1) Add new Scene
2) Go to Scene settings
3) Select Circadian Profile
4) Edit Circadian Profile to suit requirements

HOW TO ADD/MODIFY INNERSCENE CIRCADIAN PROFILES
1) Add intermediate scenes for each fixture/groups. For example: 2700K, 3500K, 6500K
2) Add new animation
3) For seasonal circadian profile to match outdoor sunrise and sunset, add transitions based on sunrise and sunset time and offsets.
4) For fixed circadian profile that does not vary with seasons, add transitions based on fixed time of day. For example: 50% 2700K at 6am. 100% 6500K at 12:00pm. 50% 2700K at 6am.

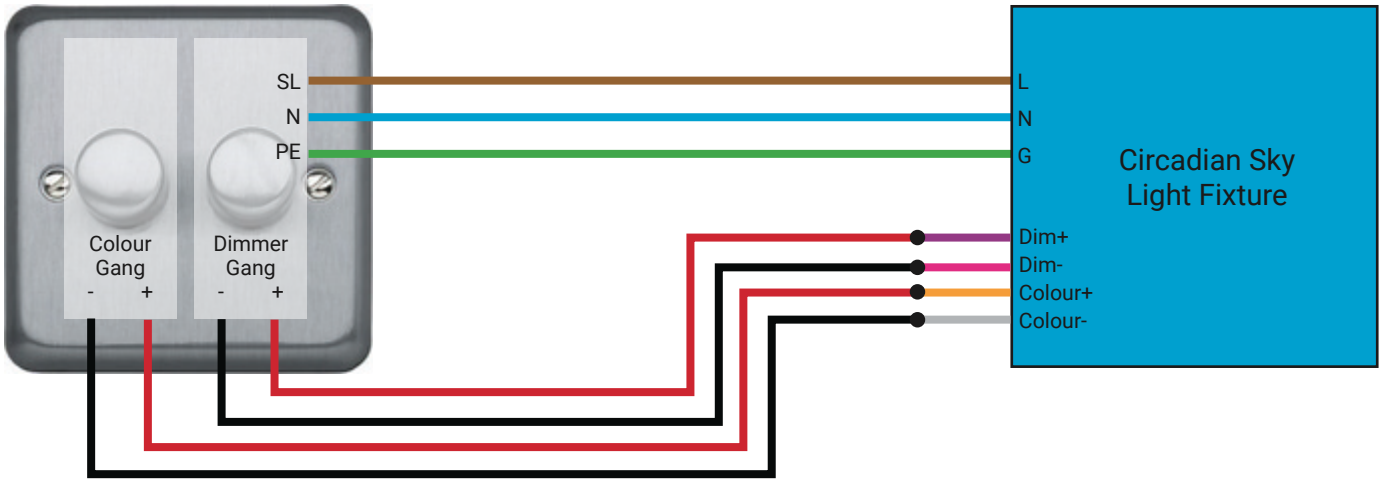
Possible dual channel 0-10V/1-10V wiring configurations

Casambi wireless dimmer (supplied by others)



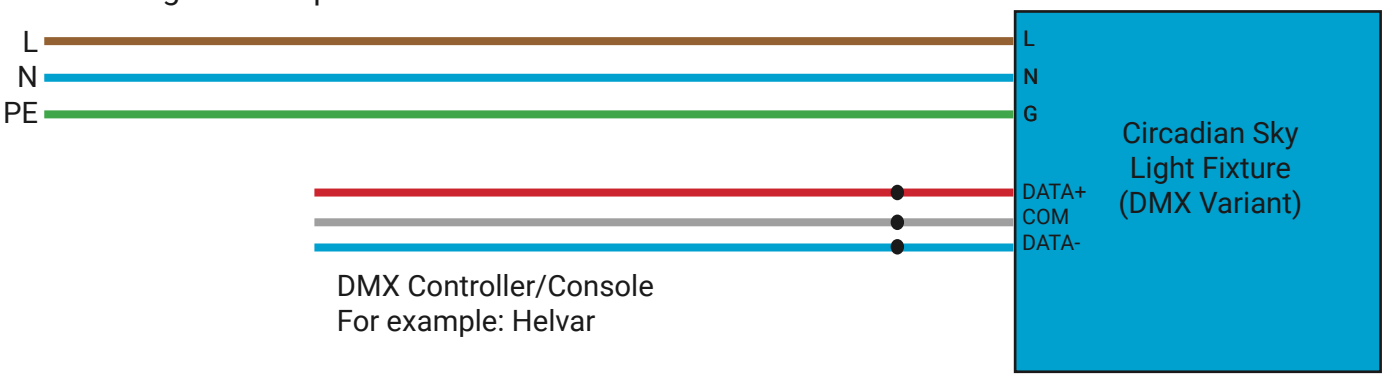
Casambi wireless wall controller (also available in black or with motion sensors to comply with Title 24)

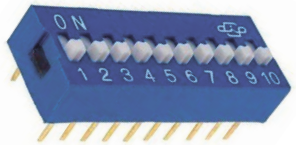
2-gang 1-10V dimmer switches (supplied by others)



compatible with sink/source dimmers

DMX Wiring and Setup





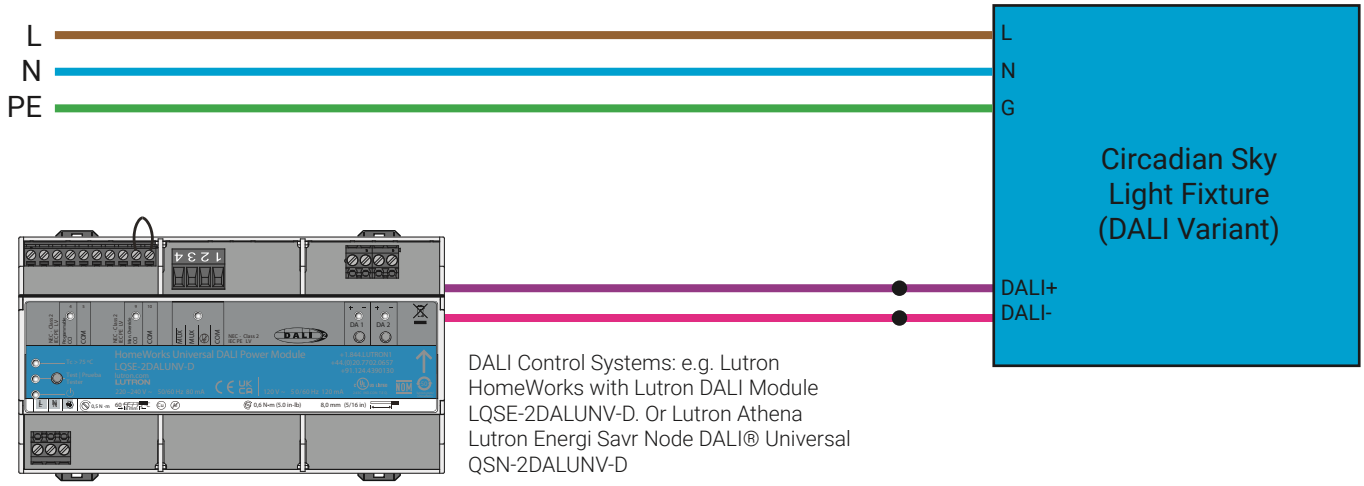
FOR INSTALLERS

1) Set the same starting channel on the fixture as the DMX controller/console using the DIP switch. The DIP switch use Binary encoding, for example, channel 17 is 0000010000. Any starting channel up to 511 is valid. Channels 512 to 1023 are invalid.

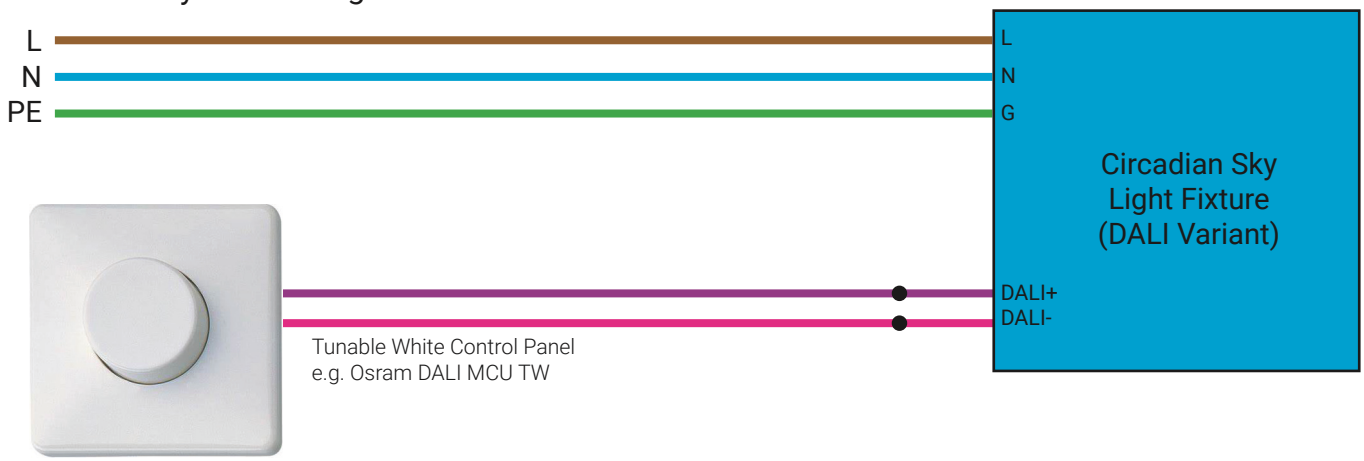
2) Default starting channel is 1. First channel is Intensity/Dimming. Second channel is Colour/Tuning. For example, if starting channel is set to 17, channel 17 is Dimming control, channel 18 is Colour control.

TERMINATION toggle
deafult - all DIP are up = FF = 255
Get picture of board

High-End DALI System Wiring



Basic DALI System Wiring



Caution: only DALI-2 DT8 Tc tunable white profile is supported.
For dual address DALI-1 please contact Innerscene support line.

Revisions

Revision 2 - 16/06/2023	Added Joist Bracket Offsets
Revision 3 - 11/07/2023	Revised text for North America, added text for International
Revision 4 - 21/07/2023	Added Array/Vertical installation
	Added wiring page
Revision 5 - 24/07/2023	Added Array installation
	Revised colour codes for wiring
Revision 6 - 20/09/2023	Change width & length
	Change DMX termination