INNERSCENE

Virtual Sun
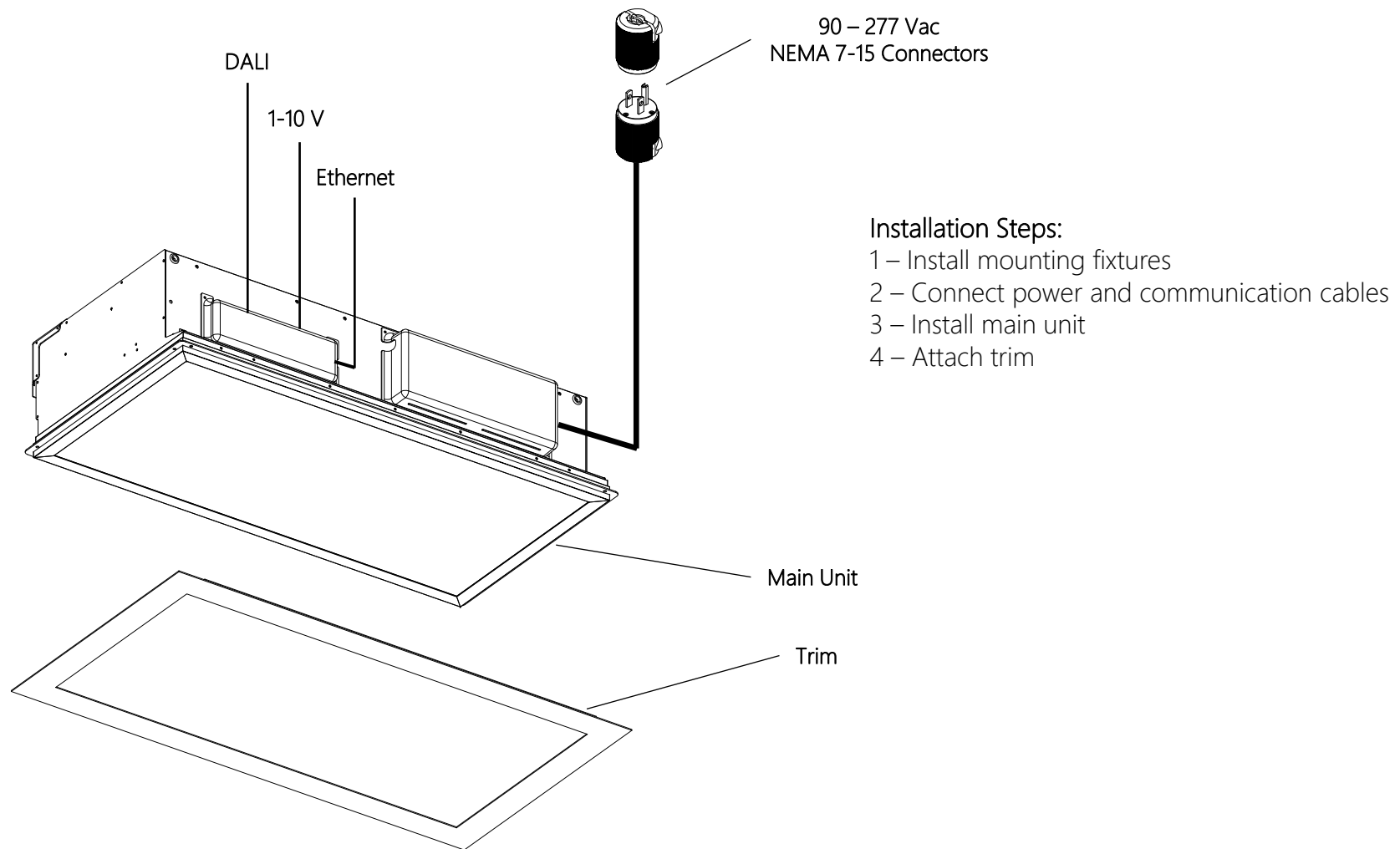
Installation Manual

INNERSCENE
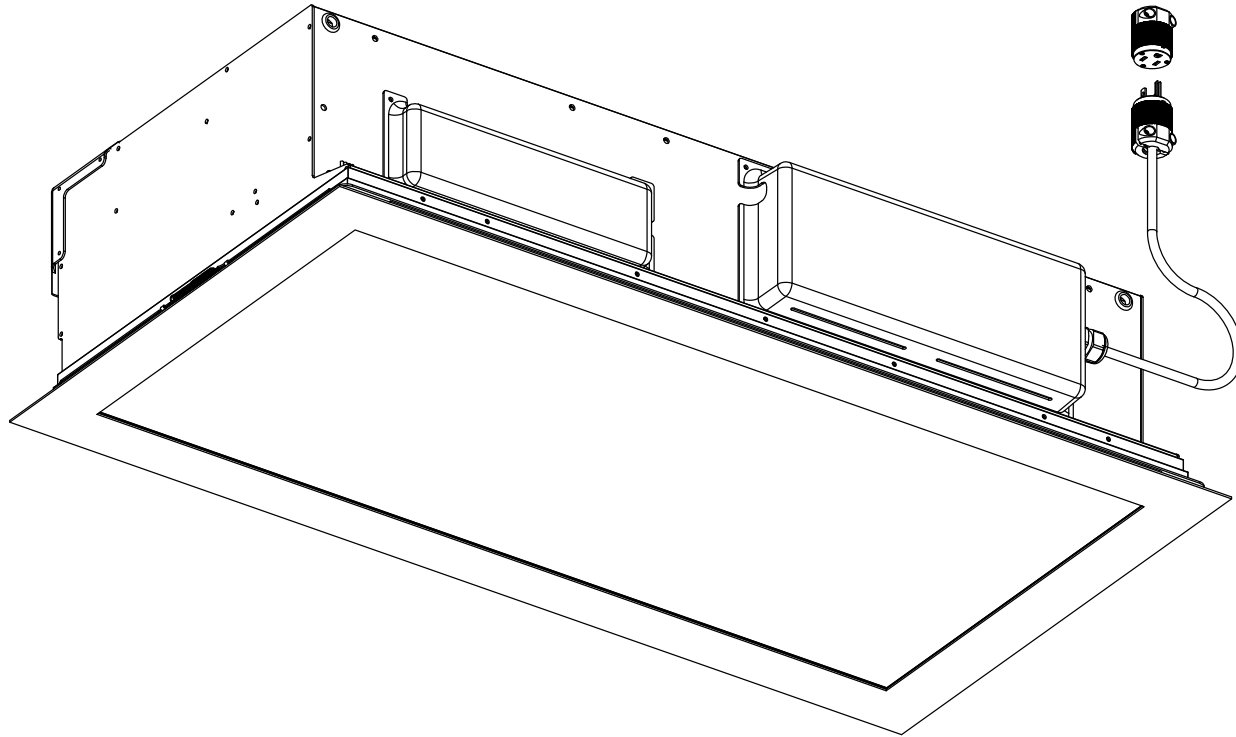
Installation At-a-Glance

DALI

1-10 V

Ethernet

90 – 277 Vac
NEMA 7-15 Connectors

Installation Steps:
1 – Install mounting fixtures
2 – Connect power and communication cables
3 – Install main unit
4 – Attach trim

Main Unit

Trim

⚠ The Virtual Sun main unit contains high precision optics that are precisely aligned. Handle with extreme care and NEVER lift the unit by the glass. Installation requires two people, due to size and weight.

⚠ Mains power supply should be installed and serviced by a qualified electrician, in accordance with local, state and federal codes.

What's Included

The Innerscene Virtual Sun VS7 comes in two mounting configurations; suspended ceiling install and joist install;

Main Unit
Weight: 39 kg (85.8 lbs)
Dimensions: 1001 x 514 x 255 mm
(39 7/16 x 20 1/4 x 10")

Joist Install:
1 x Main unit
1 x Trim assembly
1 x NEMA 7-15 socket connector
4 x M5 threaded studs
4 x Threaded stud locking clips
2 x Joist mounting brackets

Suspended Ceiling Install:
1 x Main unit
1 x Trim assembly
1 x NEMA 7-15 socket connector
4 x M5 threaded studs
4 x Threaded stud locking clips
4 x Stud-to-concrete anchor couplers

Trim
Weight: 1 kg (2.2 lbs)
Dimensions: 1041 x 550 x 2 mm
(41 x 21 5/8 x 5/64")
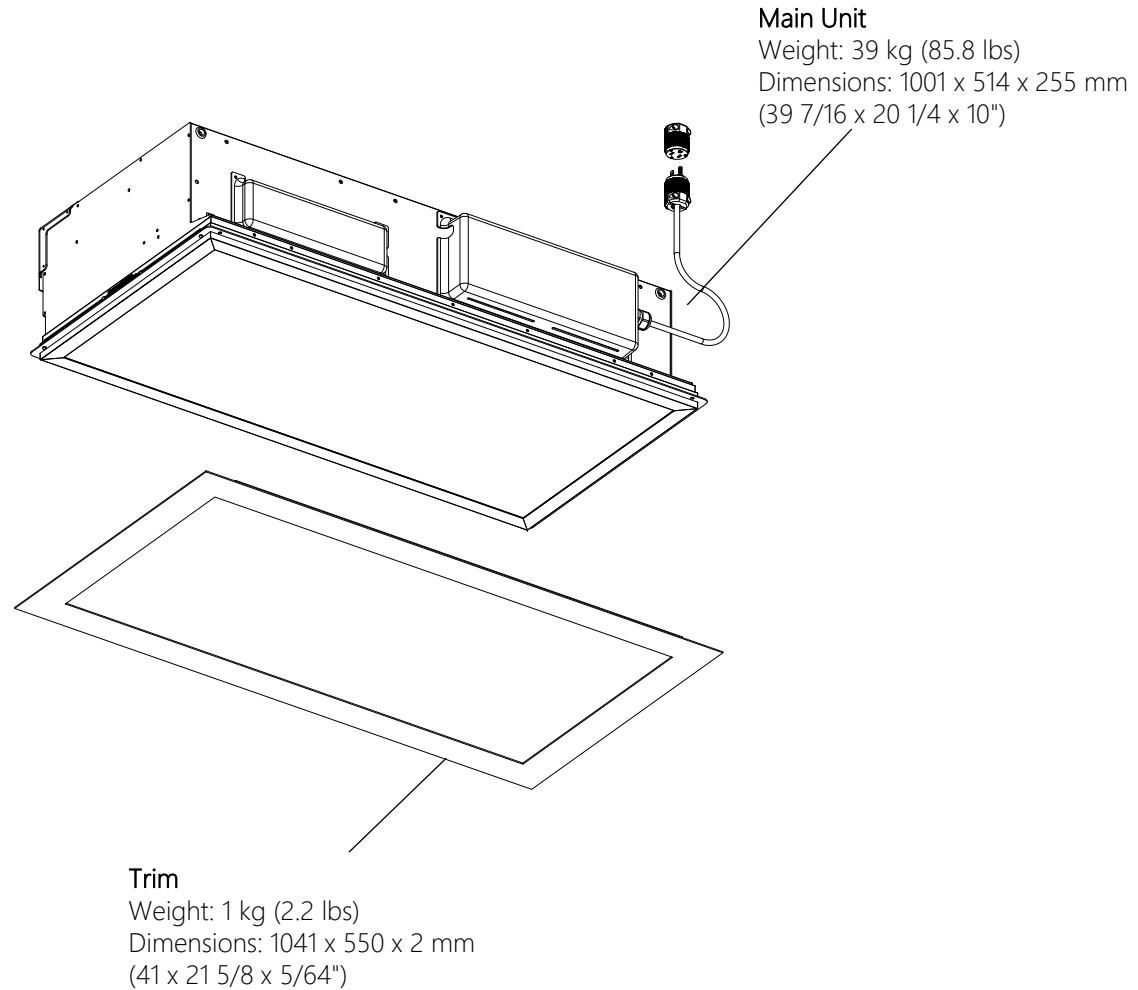
Layout Considerations

Structural Considerations

Each Innerscene Virtual Sun weighs 40 kg (98 lbs) when completely installed. Layout and structural engineering must be done by a qualified professional, in accordance with local, state and federal codes. Each unit requires a minimum of 254 mm (10") ceiling space and is **not** IC (Insulation Contact) rated.

254 mm (10")
(min.)
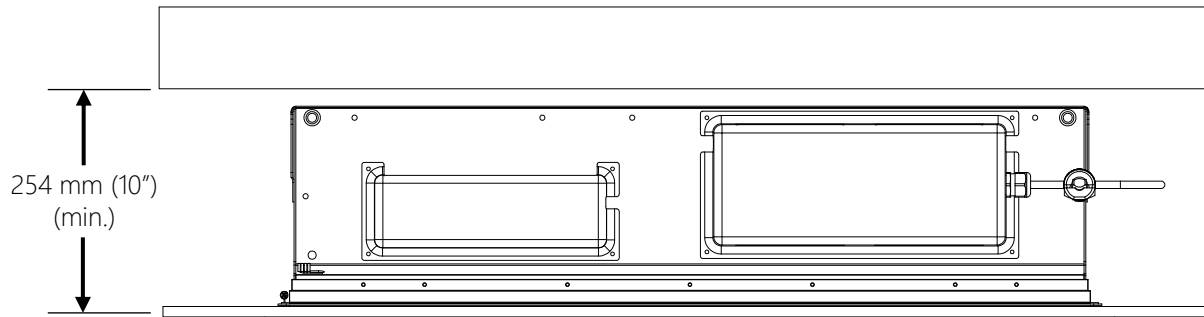
Drywall Opening

If a trim is to be used for the install, it's recommended to allow a minimum opening of 1011 x 520 mm (39 13/16 x 21 ½") in drywall, to ensure sufficient clearance for insertion of main body.


520 mm (21 1/2")
(min.)

1011 mm (39 13/16")
(min.)
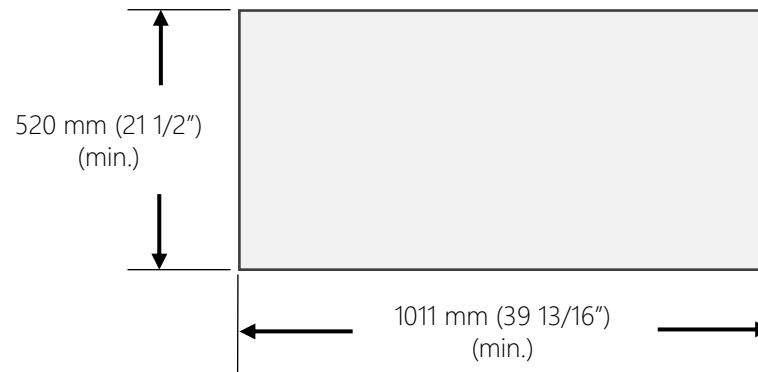
Layout Considerations (cont.)

Joist Install

For units being installed in a joist configuration, longitudinal joists should be positioned with an internal spacing of of 520 +2/-0 mm (20 ½ +1/16 / -0"). Where transverse joists are to be used, they should be positioned with an internal space of 1011 mm (39 13/16") or more. Mounting brackets should be approx. 60 mm (2 3/8") from drywall.
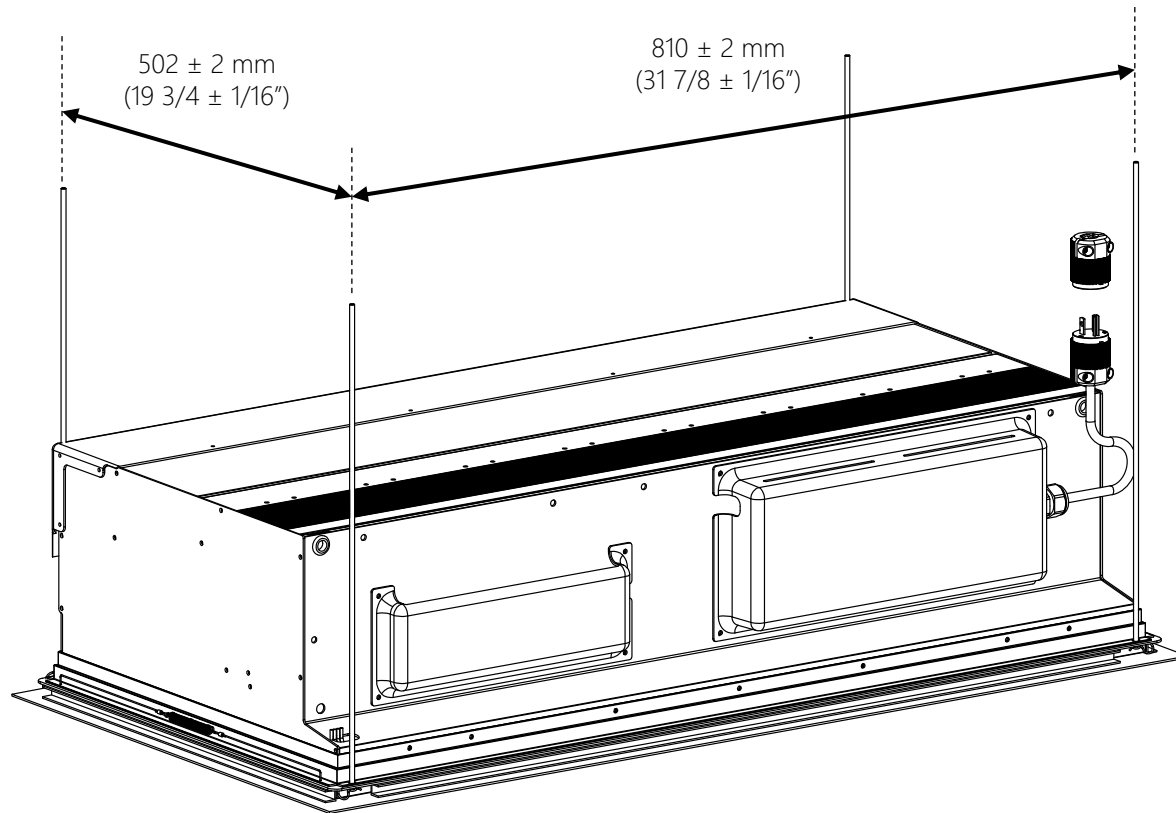
60 +/- 5 mm
(2 3/8" +/- 3/16")

1011 mm (39 13/16")
(min.)

520 +2/-0 mm
(20 1/2 +1/16 / -0")
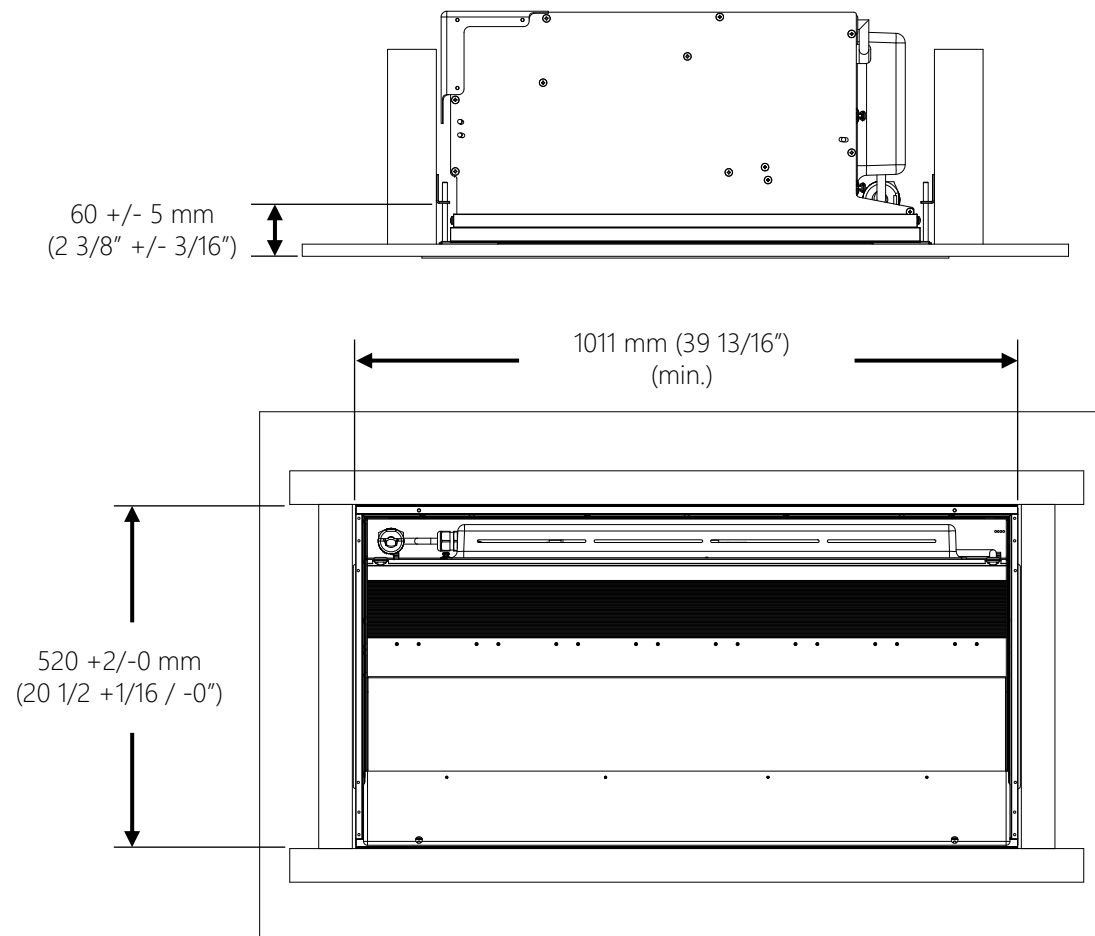
Suspended Ceiling Installation

When installing one or more units in a suspended ceiling configuration, the M5 threaded studding shall be positioned 810 ± 2 mm (31 7/8 ± 1/16") apart lengthwise and 502 ± 2 mm (19 3/4 ± 1/16") apart widthwise.
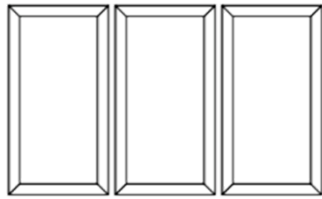
502 ± 2 mm
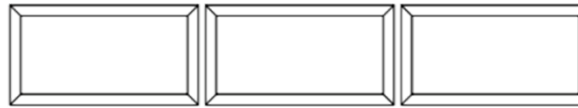(19 3/4 ± 1/16")

810 ± 2 mm
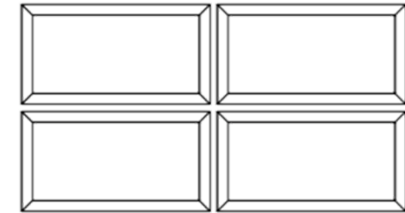(31 7/8 ± 1/16")

Arrayed Installs

Array Installation

Units can be arranged in an array, either side-by-side, end-to-end or as a grid array. The minimum recommended distance between adjacent units can be seen below.
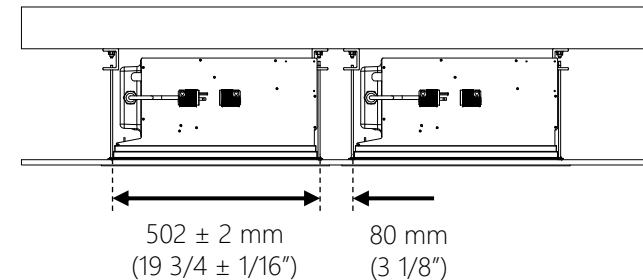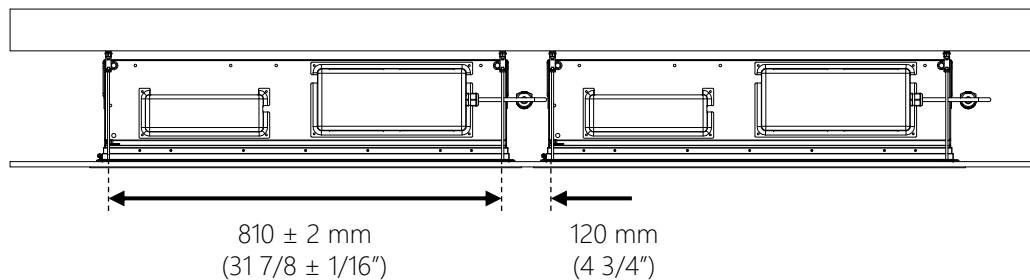
Side-by-Side Array   End-to-End Array   Grid Array

Spacing

To ensure adequate clearance for installation and adjacent trim frames, studding for adjacent units should be spaced at a minimum of 120 mm (4 3/4") lengthwise and 80 mm (3 3/16") widthwise.

810 ± 2 mm
(31 7/8 ± 1/16")

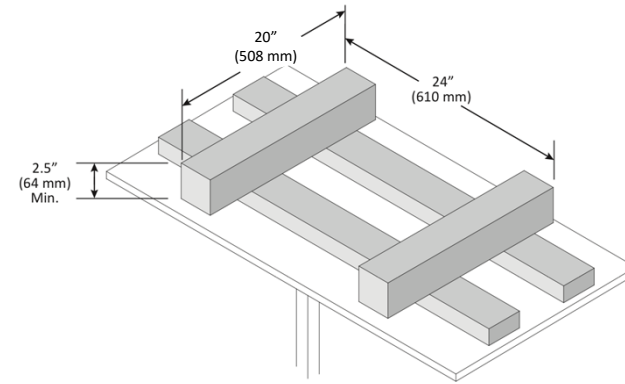120 mm
(4 3/4")

502 ± 2 mm
(19 3/4 ± 1/16")

80 mm
(3 1/8")

1 – Fix mounting brackets and studding

Fix mounting brackets (x2) to joist, using 10 x self-tapping wood screws (not provided). Once secure, insert M5 threaded stud into the stud holes on mounting brackets (x4).
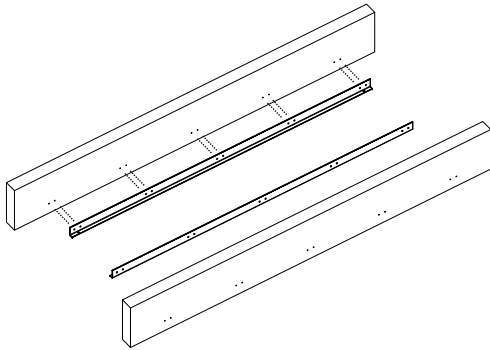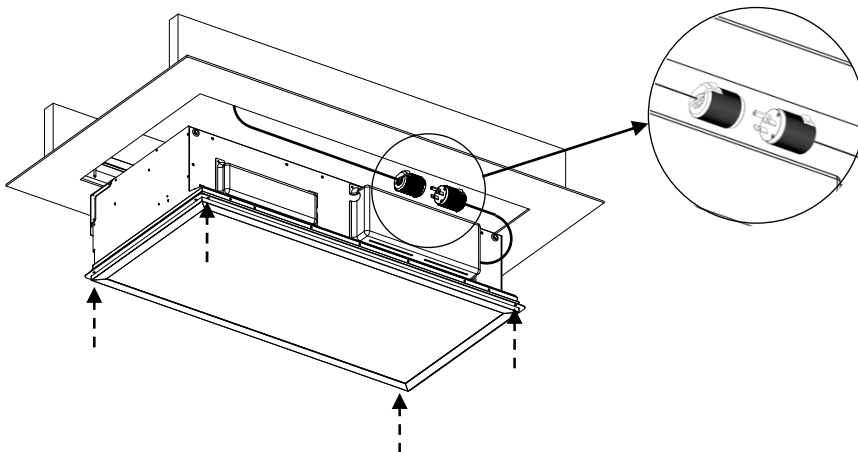

2 – Assembly drywall lift

Assemble a mounting rack and place atop a drywall lift. Ensure mounting blocks and mounting rack is secure to drywall lift.
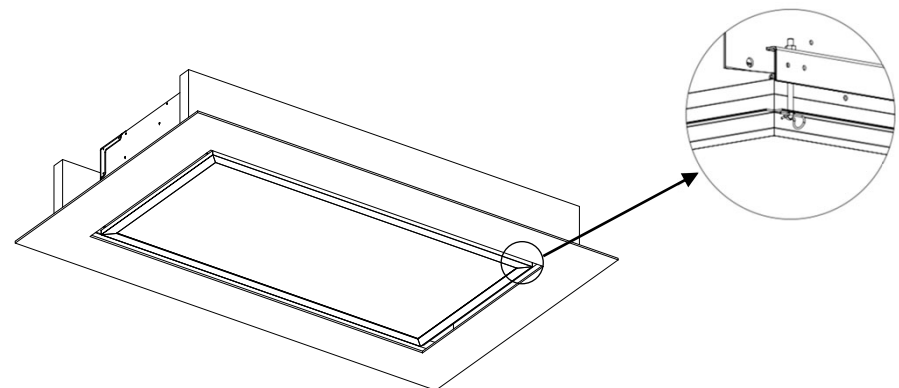

3 – Raise unit and connect cables

Using the drywall lift, raise the unit partially into the drywall opening and connect power (using NEMA connectors provided) and any communications cabling as required.

4 – Complete install of main unit

Raise main unit and align with four threaded studs. Once all four studs are through the mounting holes, lock in place using 4 x R-clips (provided). Note: studs can be adjusted to ensure unit is level.
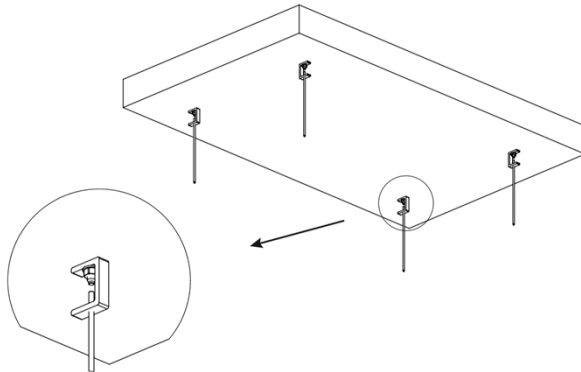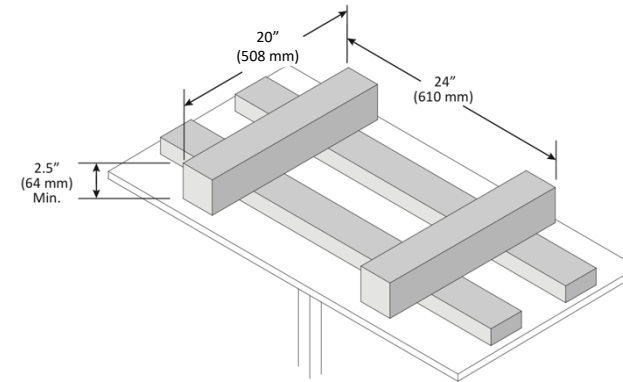
Suspended Ceiling Installation

1 – Fix couplers and studding

Fix stud couplers to ceiling, using 4 x concrete anchors (not provided). Once secure, insert M5 threaded stud into the threaded stud holes in and adjust so that they are level.
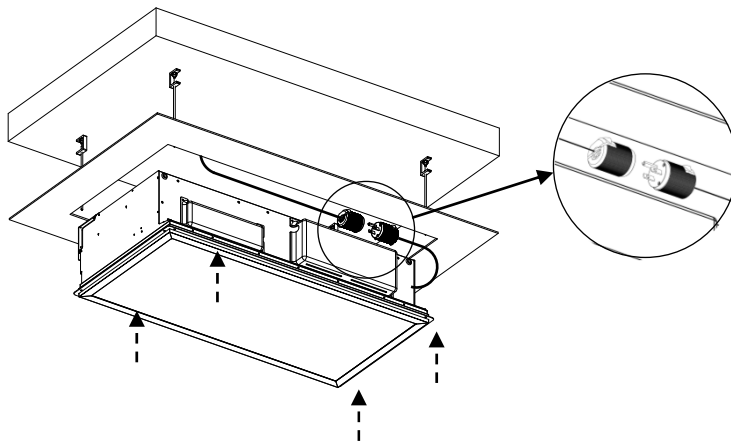
2 – Assembly drywall lift

Assemble a mounting rack and place atop a drywall lift. Ensure mounting blocks and mounting rack is secure to drywall lift.
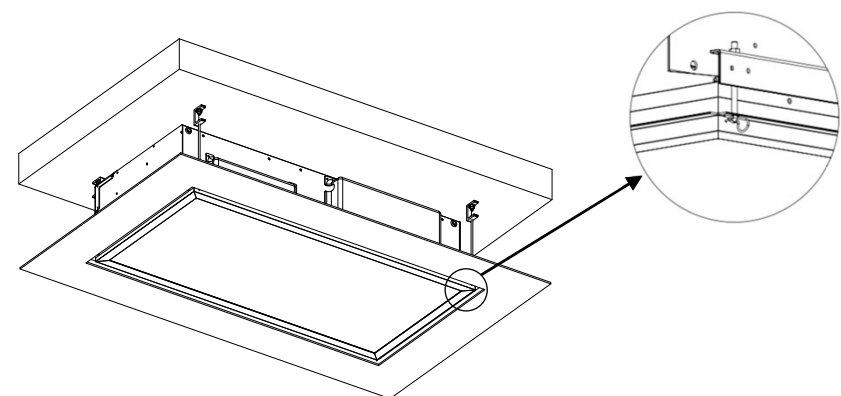
20"
(508 mm)

24"
(610 mm)

2.5"
(64 mm)
Min.

3 – Raise unit and connect cables

Using the drywall lift, raise the unit partially into the drywall opening and connect power (using NEMA connectors provided) and any communications cabling as required.

4 – Complete install of main unit

Raise main unit and align with four threaded studs. Once all four studs are through the mounting holes, lock in place using 4 x R-clips (provided). Note: studs can be adjusted to ensure unit is level.
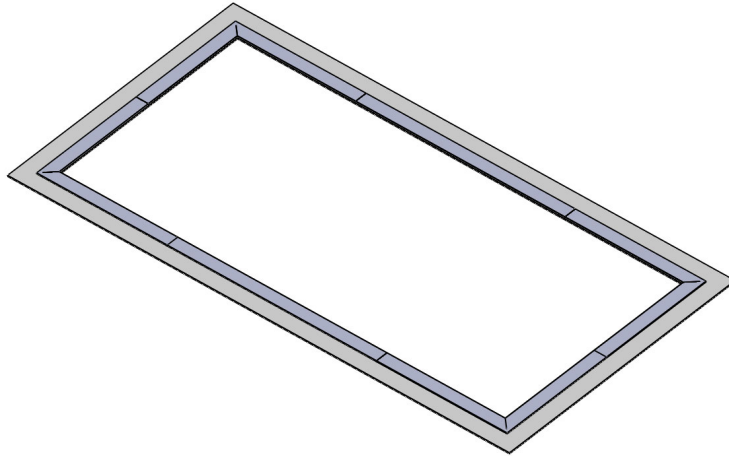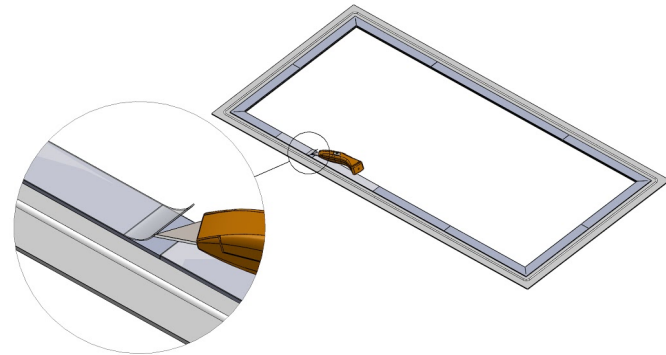
Moisture Ingress Protection (Optional)

1 – Lay up the trim

Place the trim with the back side facing up.

2 – Peel off TIM clear liner

Using a sharp knife, carefully peel off the clear liner from the dark grey coloured Thermal Interface Material (TIM). Be careful not to peel off the grey TIM that is lightly adhered to the trim.
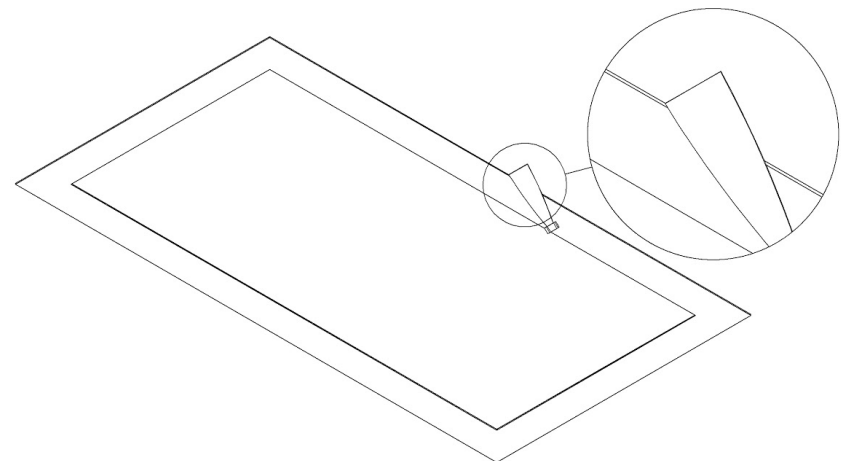
3 – Caulking

Carefully apply a small bead of sealant around the perimeter of the trim. Be sure to have one continuous bead, without breaks, as moisture will penetrate the seal.
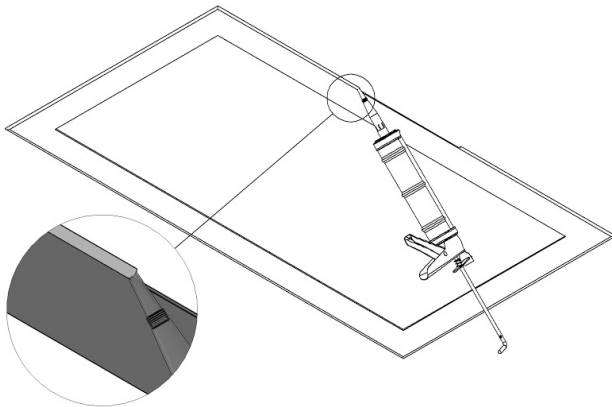
4 – Remove excess sealant

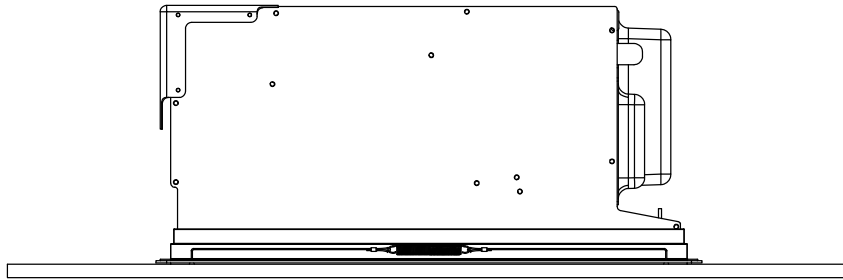When installing the trim to the housing, be sure to remove any excess sealant, to leave a clean edge finish.

Trim Installation

## 1 – Adjust main unit level to ceiling

For best appearance, ensure bottom face of main unit is flush with the ceiling. Note: adjustments to threaded stud may be required to get correct orientation of main unit.
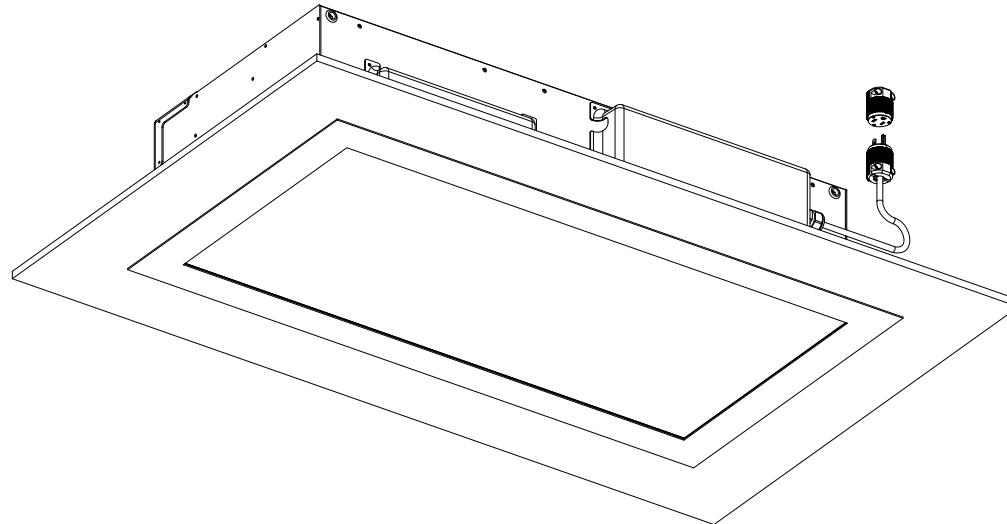

2 – Assembly drywall lift

Using needle-nose pliers, pull down on ball swage and insert into slot. Be sure that ball is fully seated in the locking hole. Repeat this process on all four corners.
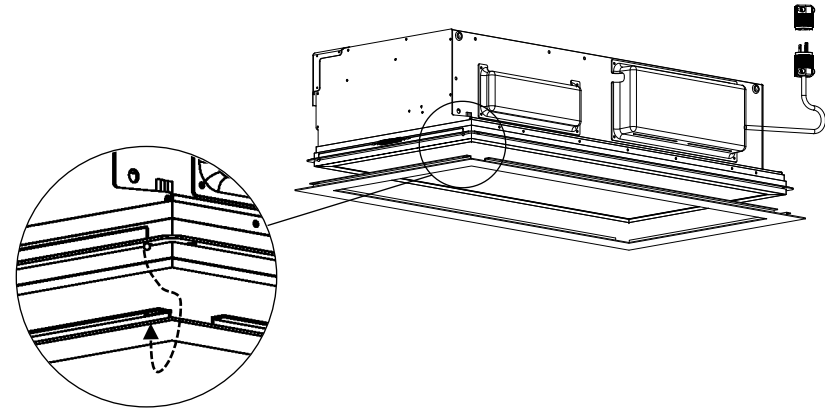

Finished Assembly

Recessed Frame Installation

The Innerscene Virtual Sun can also be recessed – as shown below. This creates the impression of a frame, or shallow well. It is achieved by inserting a spacer strip between the joist and mounting bracket. Special consideration should be given to the thickness of the spacer strip, to allow adequate clearance of the trim and any cladding / coating on the joist.
If unsure, contact Innerscene for more information.

38 mm
(2 1/2")

20 mm
(3/4")

590 mm
(23 1/4")
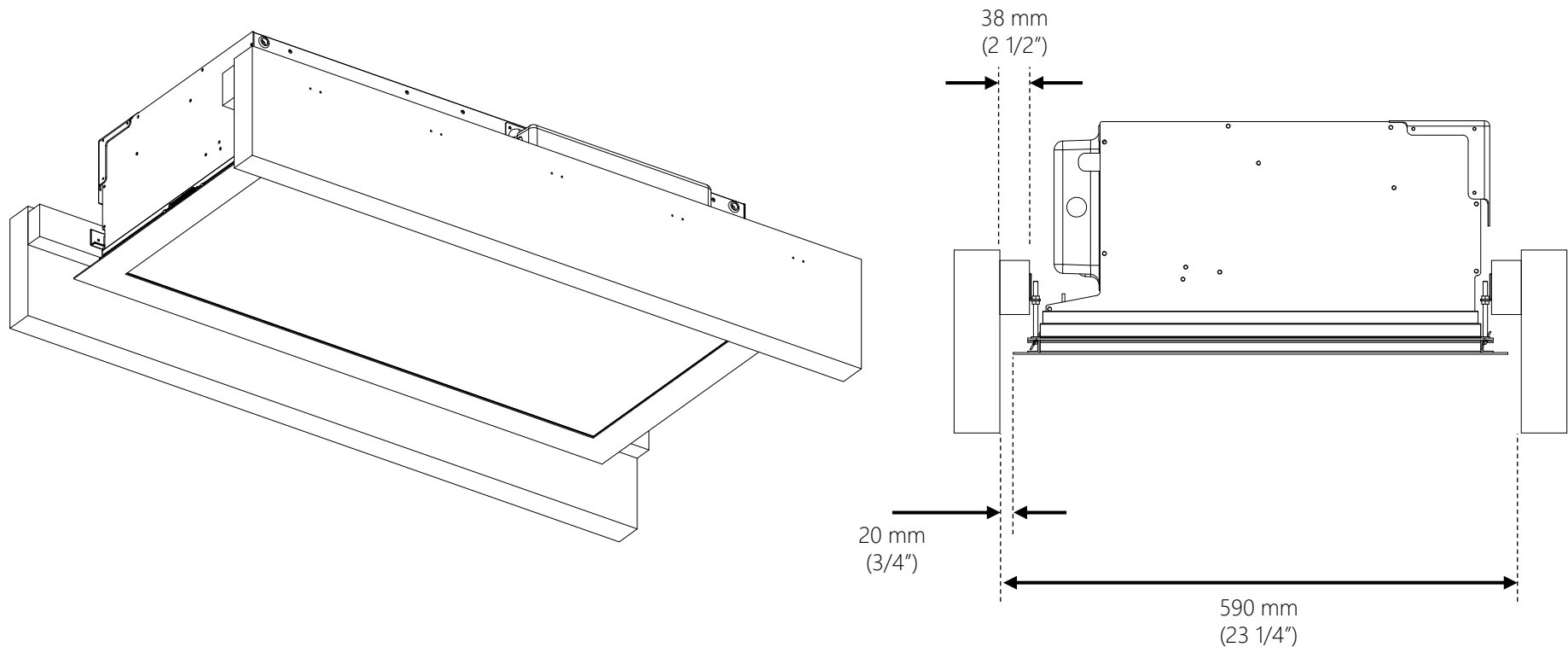
Technical Specifications

Technical Data

|	
Max Ceiling Height:	3.65 m (12 ft) Note: for taller ceilings consult Innerscene Ltd.
Light Output:	>6750 Lumens at maximum brightness
Input Power:	200 W max. @ 90-277 Vac (Class 1 power supply provided)
Cable Sizes:	1-10 V: 2-Core, 16 AWG max. DALI: 2-Core, 16 AWG max. DMX: 3-Core CAT 5 LAN: 4-Core CAT 6 or CAT 6
Max. Operating Temperature:	32 °C (90 °F)

1-10 V Installation

Each Virtual Sun unit will require its own dimmer connected directly.
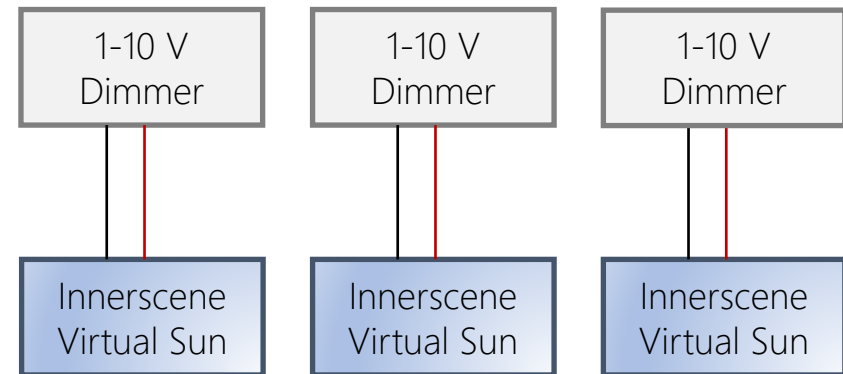
DALI Installation

Connections can either be direct to each Virtual Sun unit from the master, or daisy-chained between them. Note: DALI power supply and master not supplied.
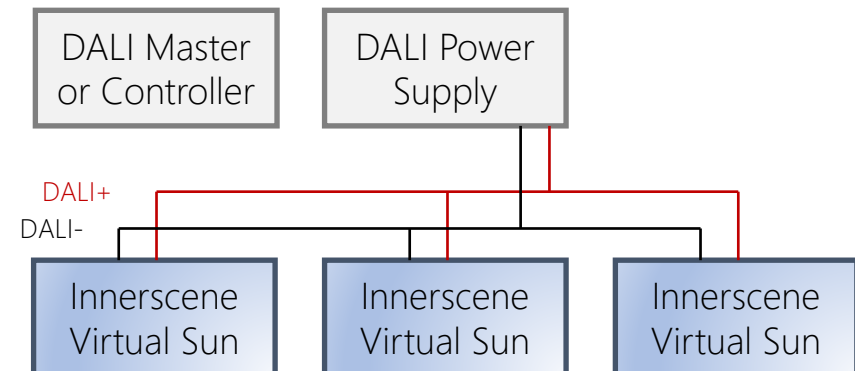
Version History

Version	Author	Date	Change
v1.0	JMP	24/04/2020	Initial release
v1.1	JMP	19/11/2020	Layout Considerations: Increased joist install centre space from 514 to 520 +2/-0 mm.
v1.2	JMP	28/01/2021	Removed IC statement, updated studding dimensions and added tolerance to joist mounted bracket-drywall dimension.
v1.3	JMP	02/02/2021	Added instruction for damp/wet locations.