

## INSTALLATION INSTRUCTIONS | 2" Trimless Square Downlight RN2SQRM Series

**Note:** Before attempting installation please refer to your local electrical code.

### INSULATED and NON-INSULATED CEILING APPLICATIONS

- 8W Series 05 and 10W Series 1 housings can be installed in direct contact with insulation (either as a remodel or when used with new construction optional mounting frame, NCSQFN1).
- 12W Series WD1 (warm dimming) and 14W Series 2 housings CAN NOT be installed in direct contact with insulation. Do not install insulation within 3" of fixture sides or wiring compartment, nor above fixture in such a manner to entrap heat (either as a remodel or when used with new construction optional mounting frame, NCSQFN1).

### REMODEL TYPE INSTALLATION PROCEDURES:

- Ensure you have the proper location for the housing. The flexible electrical cable above the ceiling needs to be in close proximity to the hole that will be drilled in the ceiling for easy access.
- The housing requires a precision fit with the gypsum ceiling opening. This opening needs to be a 4-1/8" x 4-1/8" square. It is highly recommended that the ceiling opening is accurate to ensure a secure installation.
- Once the ceiling opening has been created, the mud frame can then be installed. It's important to note, the deep side of the mud frame collar gets inserted up into the ceiling, so the shallow side is room facing (Figure 1). Self-drilling screws will not be required.
- ConTech **STRONGLY** recommends using four (4) 1/8" toggle bolts, 2" minimum length (supplied by others) to secure mud frame to gypsum board, as the mud frame will support the fixture. Create the smallest holes possible to allow the toggles to pass through, to maintain the integrity of the ceiling.
- Joint compound can now be applied to ceiling and mud frame.
- After finish coat paint has been applied to ceiling, ensure inner groove in mud frame is clear from excess joint compound and paint, so housing and reflector will seat properly.
- Pull flexible cable through ceiling opening of mud frame to wire housing.
- Make all electrical connections (See "Electrical Connection").
- Push housing through the hole in the mud frame until it snaps into a fully seated position. The housing is held securely in place with spring and ball detents located in the mud frame.
- Push reflector into the installed housing until it is fully seated and flush with ceiling.

### NEW CONSTRUCTION TYPE INSTALLATION PROCEDURES

Using Accessory NCSQFN1 Mounting Frame:

- Install hanger bars to NCSQFN1 mounting frame; ensure end tab is facing outward. (Figure 2)
- Extend bar hangers to fit between joists and position fixture by hammering nail on bars into the joists. Hangers should be level with bottom of the joists.
- Insert the flexible electrical cable above the ceiling into the cable-clip (2-provided) on the mounting frame. The clips will keep the cable in close proximity to the hole that will be cut in the ceiling for easy access. (Figure 3)
- If you are in a region that requires a seismic tether to support the housing when installed into the mounting frame, ensure that it is in close proximity to the opening in the mounting frame for easy access. (Figure 3)
- If housing square aperture is slightly out of desired position, minor adjustments can be made by loosening the two wing nuts located on the top of the housing frame. (Figure 3). Once aperture is in position, the wing nuts should be securely tightened so aperture cannot be moved out of position.
- When ceiling material is installed, verify that the mounting frame opening location is identified.
- Create an opening in the gypsum ceiling as close to the outer perimeter of the return flange on the mounting frame. If the cut isn't exact, it's ok, the mud frame will cover it.
- Once the ceiling opening has been created, the mud frame can then be installed. It's important to note, the deep side of the mud frame collar gets inserted up into the ceiling, so the shallow side is room facing (Figure 1).
- Align mud frame with mounting frame return flange.

- Using the four (4) self-drilling screws provided, drive them through the holes in the mud frame and up through the mounting frame above the ceiling.
- Joint compound can now be applied to ceiling and mud frame.
- After finish coat paint has been applied to ceiling, ensure inner groove in mud frame is clear from excess joint compound and paint, so housing and reflector will seat properly.
- Pull flexible cable through ceiling opening of mud frame to wire housing.
- Make all necessary electrical connections (See "Electrical Connection").
- If required, locate seismic tether and attach it using the screw at the seismic anchor point. (Figure 3)
- Push housing through the hole in the mud frame until it snaps into a fully seated position. The housing is held securely in place with spring and ball detents located in the mud frame.
- Push reflector into the installed housing until it is fully seated and flush with ceiling

### ELECTRICAL CONNECTION

- Remove the two screws on the junction box cover to allow wiring. (Figure 4)
- A convenience 2-in-1 duplex connector is provided if daisy-chaining housings is desired.
- Follow Wiring Diagram 1 for electrical/dimming option MVD and Wiring Diagram 2 for option MVD4. (Wiring Diagrams - Page 3)
- Ensure all wires are safely within junction box. Close junction box and reinstall screws.

### HOUSING REMOVAL AND LED DRIVER REPLACEMENT:

**NOTE:** LED Driver should be replaced by a qualified electrician. Turn off power at fuse or circuit breaker box before replacing the LED Driver.

- Pull trim straight down out of housing.
- Pull housing straight down out of ceiling.
- Remove driver cover. (Figure 4)
- Disconnect LED driver from line voltage input wiring in J-Box. Open up the LED driver enclosure and disconnect the LED driver from the LED leads (leads are terminated by crimp connectors).
- Reinstall factory approved LED driver by reversing above procedure.

### IMPORTANT SAFETY INSTRUCTIONS:

- Read all the instructions before installation. Save instructions for later use.
- Turn off power at fuse or circuit breaker box before installation or before doing any maintenance work.
- Product must be grounded to avoid potential electric shock and any other potential hazards.
- Product must be mounted in locations and at heights and in a manner consistent with its intended use, and in compliance with National Electrical Code and local codes. Use of accessory equipment is not recommended.
- Installing contrary to instructions may cause unsafe conditions.
- Do not block light from the trim aperture, in whole or in part, as this may cause unsafe conditions.
- **Warning:** Risk of fire. Most dwellings built before 1985 have supply wire rated at 60°C. Consult a qualified electrician before installation.
- Avoid hazards to children: account for all parts and properly dispose of all packing materials.
- Call the Technical Support department at ConTech Lighting with any installation questions: 847.559.5500.

### WARRANTY:

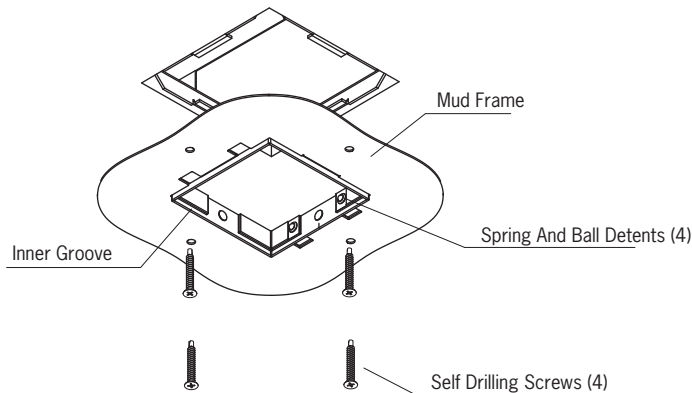
- Energy Star products are covered for three (3) years by a full replacement guarantee after date of installation. In addition, ConTech LED products carry a five (5) year limited warranty from date of purchase.

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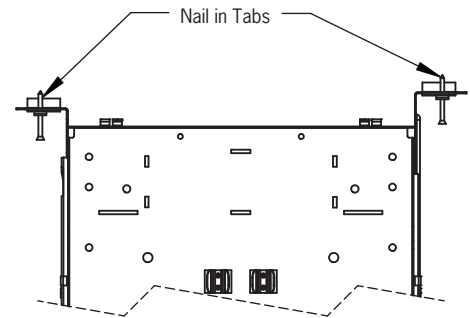
## FIGURE 1

The deep side of the mud frame collar gets inserted up into the ceiling, so the shallow side is room facing. Self-drilling screws will not be required.



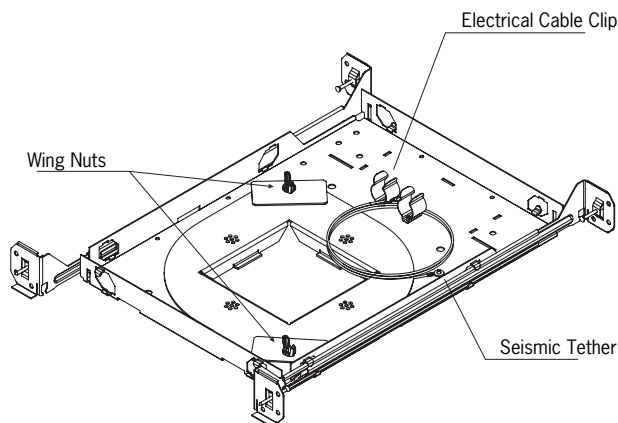
## FIGURE 2

Install hanger bars to NCSQFN1 mounting frame; ensure end tab is facing outward.



## FIGURE 3

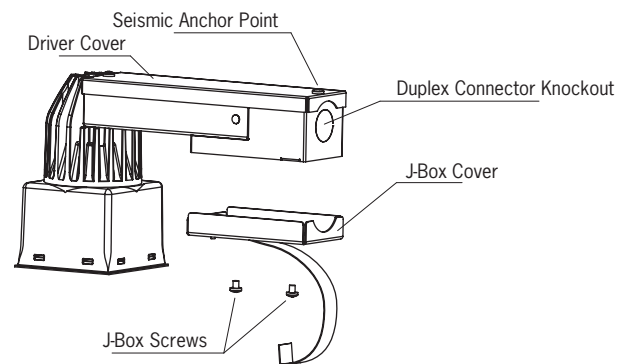
If you are in a region that requires a seismic tether to support the housing when installed into the mounting frame, ensure that it is in close proximity to the opening in the mounting frame for easy access.



NCSQFN1 Mounting Frame

## FIGURE 4

A convenience 2-in-1 duplex connector is provided if daisy-chaining housings is desired. The duplex connector must be installed in the knockout located opposite the pre-wired low voltage harness.



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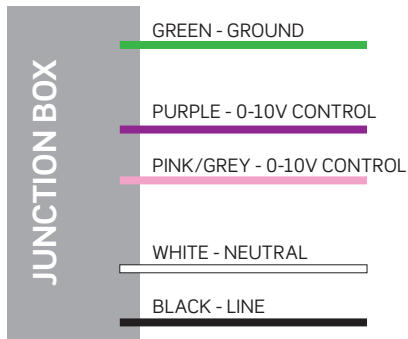
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## WIRING DIAGRAMS

### DIAGRAM 1

#### MVD OPTION 120V-277V

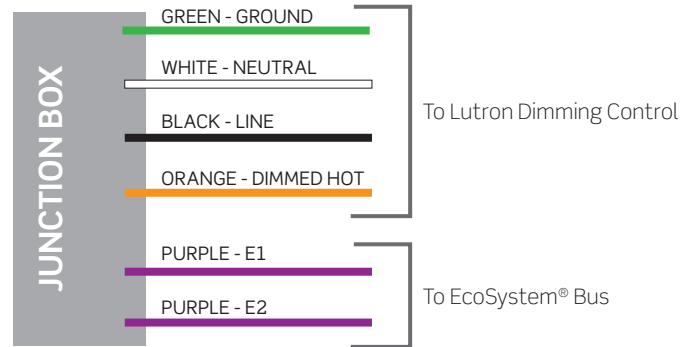
Electrical/Dimming (Triac, ELV & 0-10V)  
 Triac & ELV 120V Dimming Only  
*Triac and ELV Require Purple and Pink/Grey wires to be capped*



### DIAGRAM 2

#### MVD4 OPTION

120V or 277V  
 Lutron EcoSystem® Dimming



All specifications subject to change without notice. For ConTech's limited product warranty, go to [www.contechlighting.com](http://www.contechlighting.com). For a printed copy of the warranty, call 1-847-559-5500.