

400 SERIES 400 NEW CONSTRUCTION INSTALLATION INSTRUCTIONS



SCAN QR CODE FOR INSTRUCTIONS

**WARNING:** Read and understand these instructions completely before installation. Disconnect power at circuit breaker or fuse panel before installation. Always allow LED assembly to cool before servicing. To be installed by qualified electricians only. Products should be installed in accordance with these instructions, local electrical codes, and the National Electric Code (NEC). These products may represent a possible shock or fire hazard if improperly installed.

Do not install where insulation or ambient temperatures will exceed maximum values noted in product specifications. See <u>www.8lighting.com</u> for current product specifications.

**NOTE:** Number Eight Lighting fixtures are designed to meet the latest NEC requirements and are listed in full compliance with UL standards. Before attempting installation check and understand your local electrical code which sets the wiring standards and installation requirements for your locality.

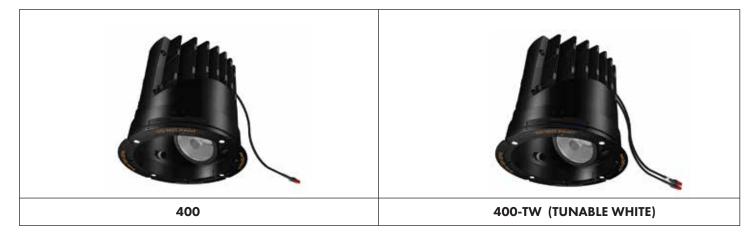
### Save these instructions.

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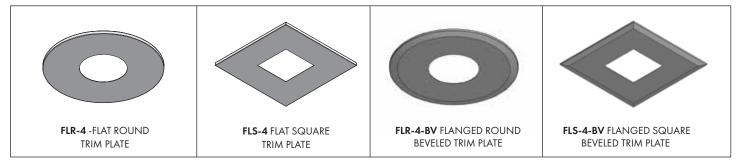
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# **400 SERIES COMPONENTS**

LED NEW CONSTRUCTION HOUSING + LIGHT ENGINE AIR-TIGHT + I.C. RATED

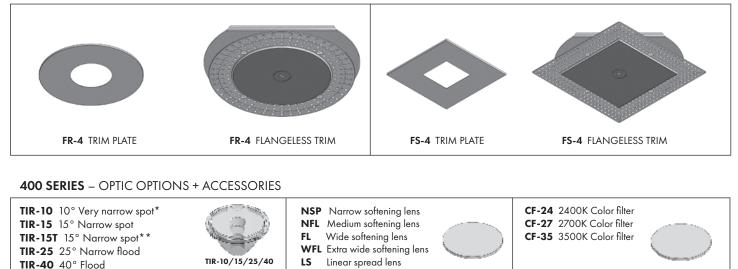


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400 SERIES - TRIMS
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### 400 SERIES – FLANGELESS TRIMS for SHEETROCK CEILING APPLICATIONS

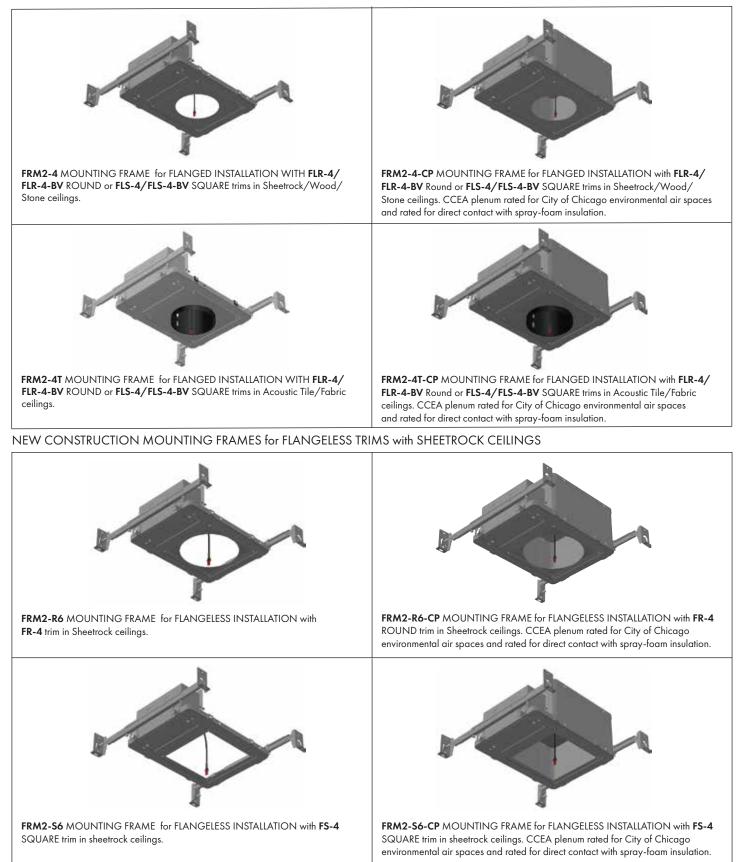
TIR-15T



\*For use with HI-2 LED option only \* \* For use with TW LED option only

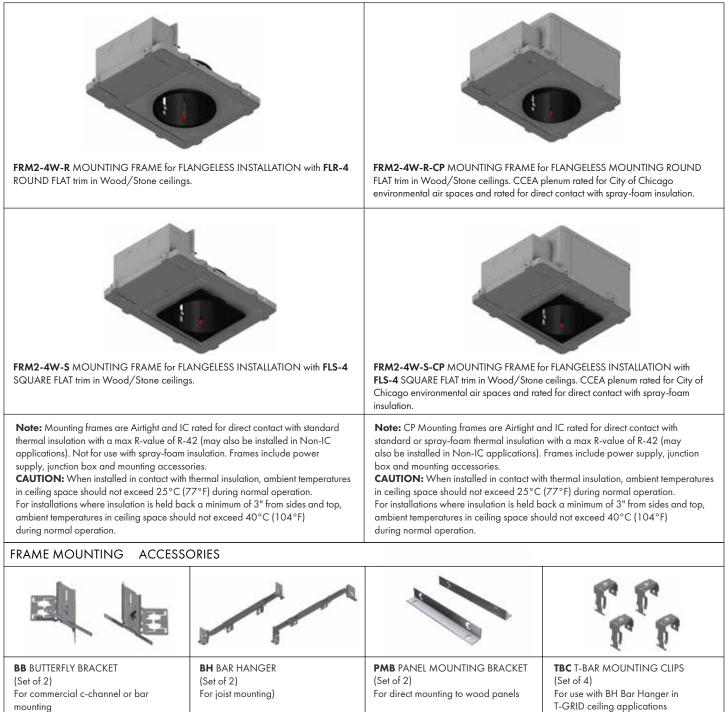
# **400 SERIES COMPONENTS**

# NEW CONSTRUCTION MOUNTING FRAMES for FLANGED TRIM INSTALLATION



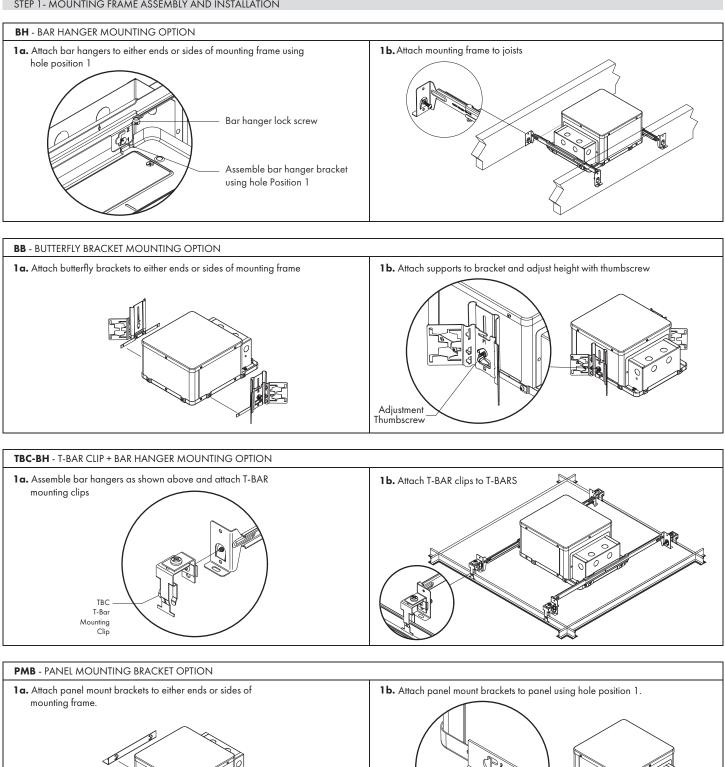
# **400 SERIES COMPONENTS**

### NEW CONSTRUCTION MOUNTING FRAMES for FLANGELESS TRIM INSTALLATION with WOOD/STONE CEILINGS

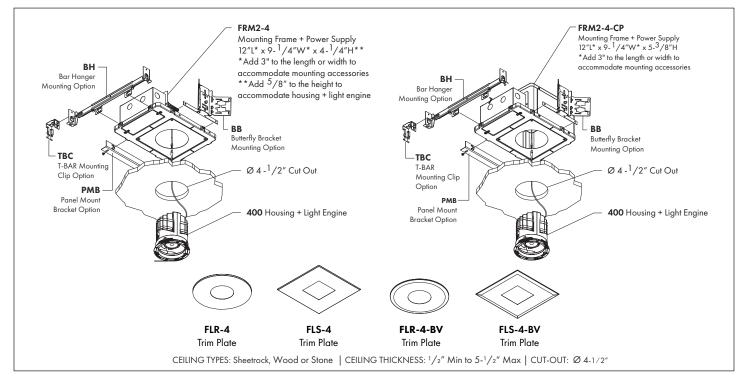


# **NEW CONSTRUCTION INSTALLATION**

STEP 1- MOUNTING FRAME ASSEMBLY AND INSTALLATION



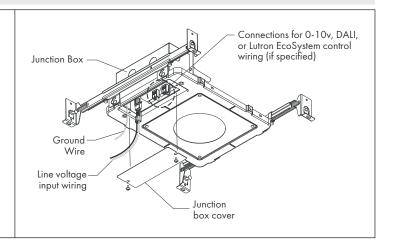
# FRM2-4 & FRM2-4-CP - FLANGED TRIM INSTALLATION with SHEETROCK/WOOD/STONE CEILINGS



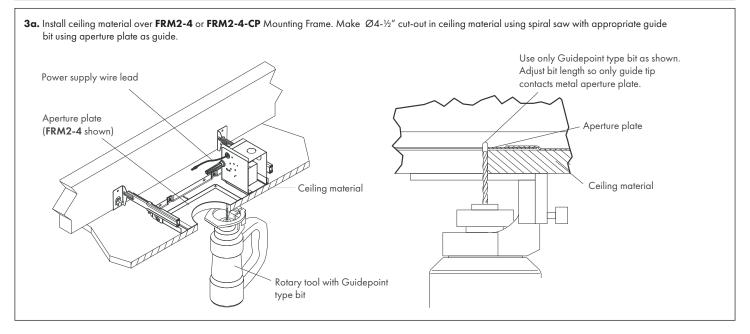
### STEP 1 - FRM2-4 AND FRM2-4-CP MOUNTING FRAME ASSEMBLY AND INSTALLATION (see page 4)

#### **STEP 2** – FIXTURE WIRING

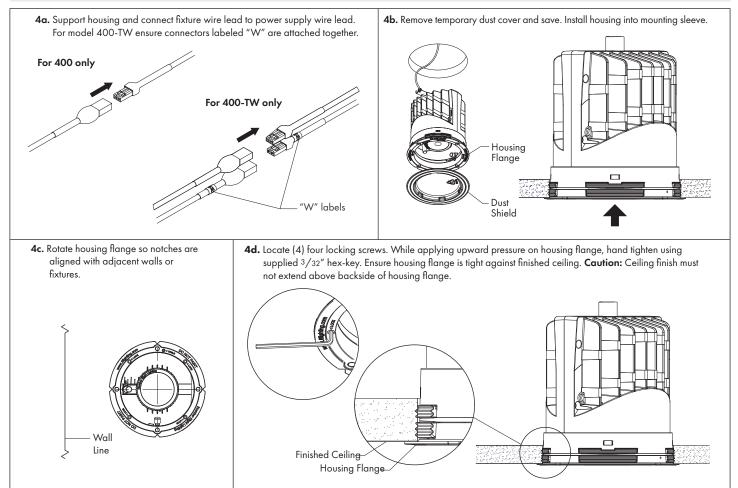
- **2a.** Disconnect power at circuit breaker.
- **2b.** Remove junction box cover and install appropriate conduit connector(s) using one or more of the provided junction box knock-outs.
- **2c.** Review wiring diagrams on **Pages 20-22**, wire fixture accordingly. Place all wiring and connectors back in junction box and replace cover.
- **Note:** 0-10v, DALI, or Lutron EcoSystem power supplies (if specified) require additional dimming control wiring.



### STEP 3 - CEILING CUT-OUT

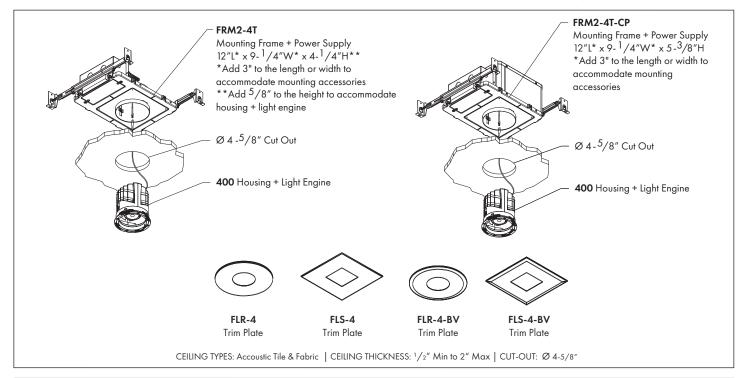


### **STEP 4** – HOUSING + LIGHT ENGINE WIRING AND INSTALLATION



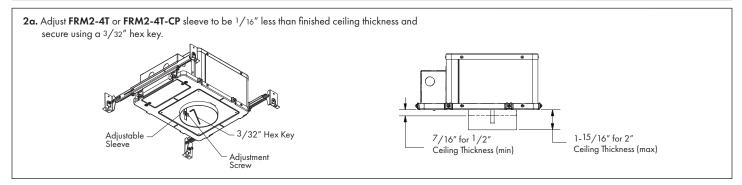
4e. Replace temporary dust cover before finishing ceiling.

# FRM2-4T & FRM2-4T-CP - FLANGED TRIM INSTALLATION with ACOUSTIC TILE/FABRIC CEILINGS



### STEP 1 - FRM2-4T AND FRM2-4T-CP MOUNTING FRAME ASSEMBLY AND INSTALLATION (see page 4)

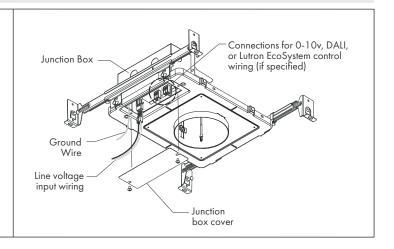
### STEP 2 - FRM2-4T AND FRM2-4T-CP MOUNTING FRAME SLEEVE ADJUSTMENT



# FRM2-4T & FRM2-4T-CP - FLANGED TRIM INSTALLATION with ACOUSTIC TILE/FABRIC CEILINGS

#### **STEP 3** – FIXTURE WIRING

- 3a. Disconnect power at circuit breaker.
- **3b.** Remove junction box cover and install appropriate conduit connector(s) using one or more of the provided junction box knock-outs.
- **3c.** Review wiring diagrams on **Pages 20-22**, wire fixture accordingly. Place all wiring and connectors back in junction box and replace cover.
- **Note:** 0-10v, DALI, or Lutron EcoSystem power supplies (if specified) require additional dimming control wiring.

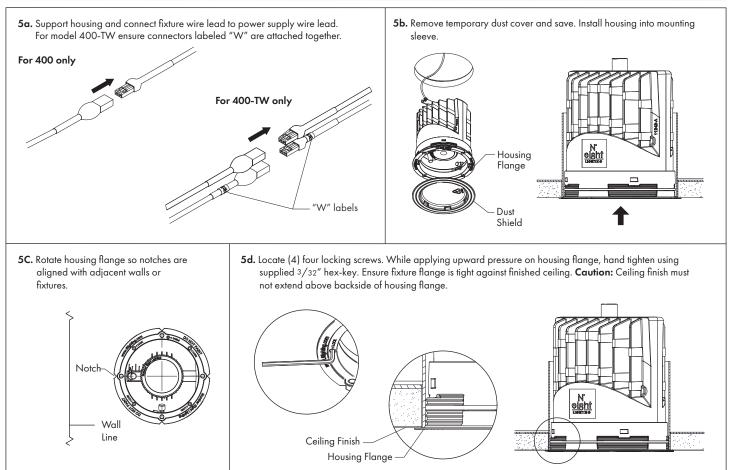


#### STEP 4 - CEILING CUT-OUT

4a. Make Ø4-5/8" cut-out in ceiling material.

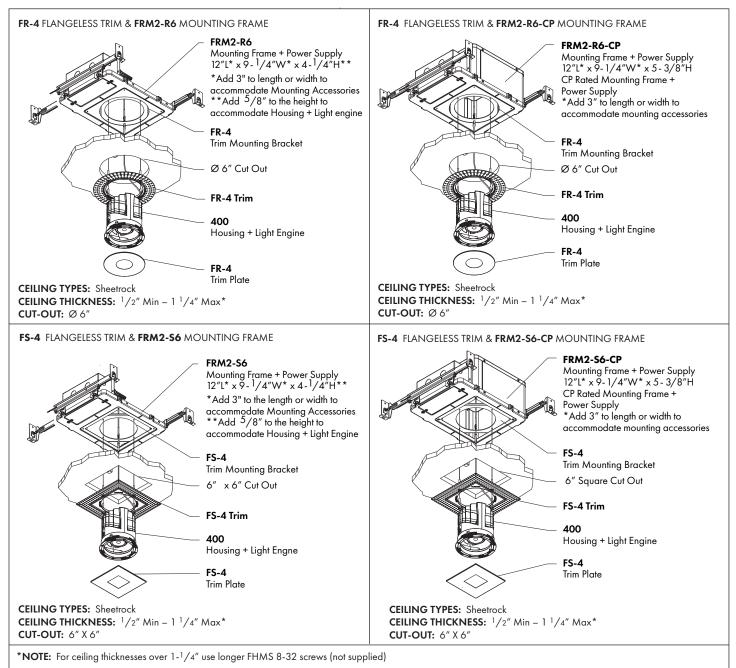
**4b.** Install ceiling material over **FRM2-4T** or **FRM2-4T-CP** Mounting Frame ensuring sleeve is centered with Ø4-5/8" cut-out in ceiling. **4c.** Adjust mounting sleeve (as shown in Steps 1 a) to be 1/16" above finished ceiling.

#### STEP 5 - HOUSING + LIGHT ENGINE WIRING AND INSTALLATION



5e. Replace temporary dust cover before finishing ceiling.

### FRM2-R/S6 & FRM2-R/S6-CP - FLANGELESS TRIM INSTALLATION with SHEETROCK CEILINGS



STEP 1 - FRM2-R/S6 AND FRM2-R/S6-CP MOUNTING FRAME ASSEMBLY AND INSTALLATION (see page 4)

# FRM2-R/S6 & FRM2-R-S6-CP - FLANGELESS TRIM INSTALLATION with SHEETROCK CEILINGS

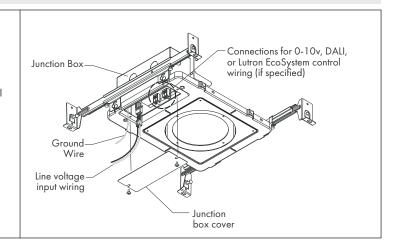
#### **STEP 2** – FIXTURE WIRING



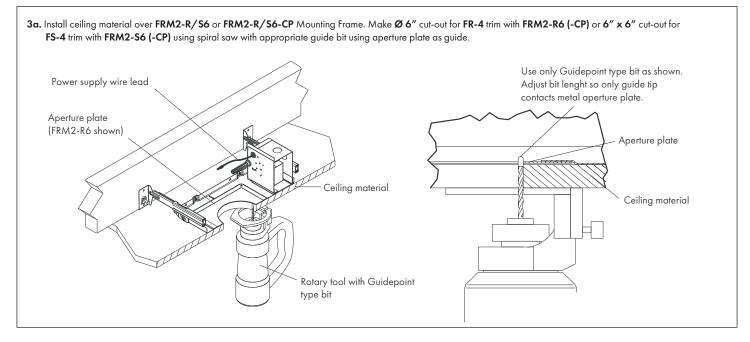
 ${\bf 2b.} \ {\rm Remove} \ {\rm junction} \ {\rm box} \ {\rm cover} \ {\rm and} \ {\rm install} \ {\rm appropriate} \ {\rm conduit} \ {\rm connector}({\rm s}).$ 

2c. Review wiring diagrams on Pages 20-22, wire fixture accordingly. Place all wiring and connectors back in junction box and replace cover.

**Note:** 0-10v, DALI or EcoSystem power supplies (if specified) require additional dimming control wiring.

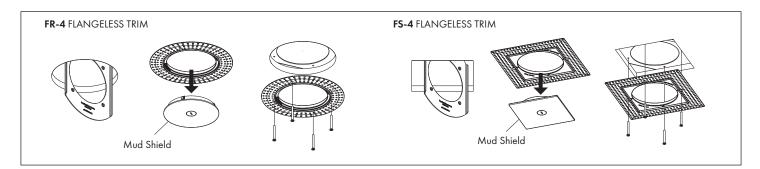


#### STEP 3 - CEILING CUT-OUT



### **STEP 4** – FLANGELESS TRIM INSTALLATION

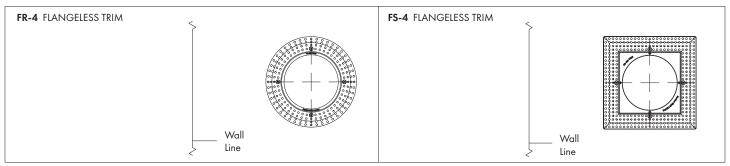
4a. Install ceiling bracket through cut-out. Remove mud shield and save. Install trim using four screws. Note: do not tighten screws until Step 4b.



### FRM2-R/S6 & FRM2-R/S6-CP - FLANGELESS TRIM INSTALLATION with SHEETROCK CEILINGS

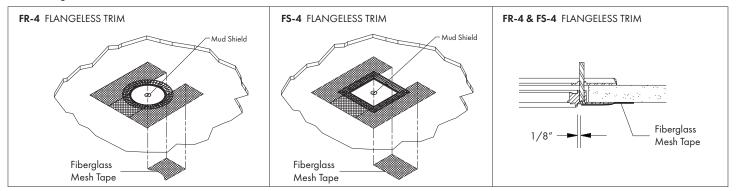
#### **STEP 4** – FLANGELESS TRIM INSTALLATION (CONTINUED)

4b. Rotate trim so screws are aligned with adjacent walls or fixtures. Caution - Hand tighten trim screws. Power driver is not recommended.



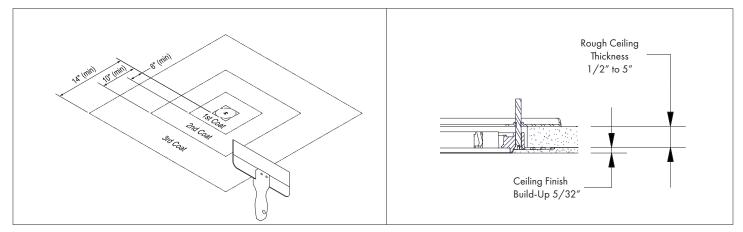
#### 4c. Re-install mud shield.

4d. Apply 6" wide fiberglass mesh tape over perforated metal trim flange leaving 1/8" cut-out around the outside edge of the raised trim lip and extending over ceiling board.



#### 4e. Apply ceiling finish FR-4 & FS-4 FLANGELESS TRIM.

Note: Minimum Level 4 or 5 finishes are recommended for optimum appearance.



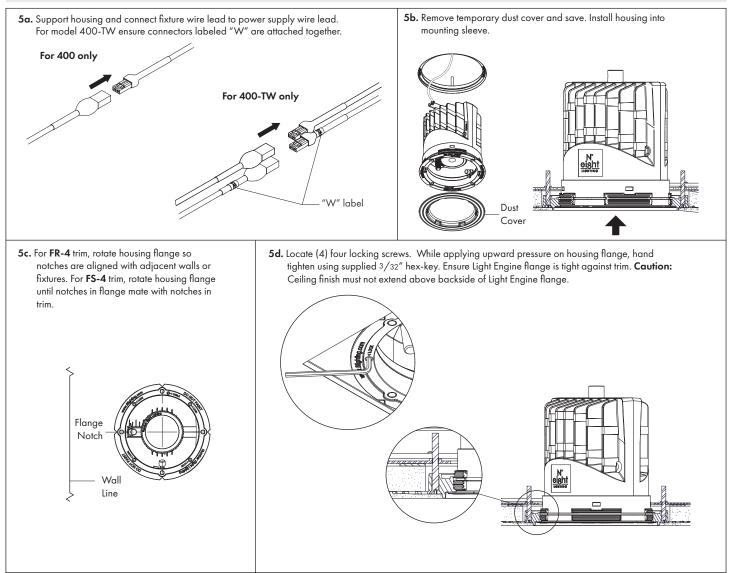
- 4f. First Coat Apply USG "Durabond" setting-type joint compound for embedding the perforated flange and fiberglass mesh tape following the manufacturer's instructions and warnings for outside corners and trim. The compound should extend a minimum of 6" from the trim edge. Allow first coat to dry completely and remove any high spots by lightly sanding before applying the second coat.
- 4g. Second Coat Apply USG general purpose ready-mixed joint compound flush to finished edge of trim, floating outward following the manufacturer's instructions and warnings. The compound should extend a minimum of 10" from the trim edge. Allow second coat to dry completely and remove any high spots by lighting sanding before applying the third coat.
- **4h.** Third Coat Apply USG ready-mixed finishing joint compound flush to finished edge of trim, floating outward following the manufacturer's instructions and warnings. The compound should extend a minimum of 14" from the trim edge. Allow third coat to dry completely before sanding.
- 4i. Sand third coat with fine grit sandpaper until mud shield and finished metal edge of trim lip are barely exposed.
- 4j. Remove mud shield knock-out and remove mud-shield by pulling outward.
- 4k. Remove excess material from inside edges of trim.

41. Apply primer (USG Sheetrock or equivalent) and paint following the paint manufacturer's instructions and warnings.

CAUTION: Do not paint inside of FR-4 or FS-4 trim surface.

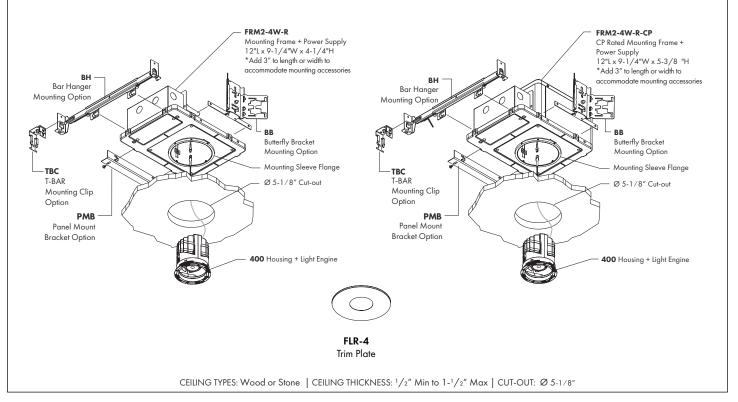
# FRM2-R/S6 & FRM2-R/S6-CP - FLANGELESS TRIM INSTALLATION with SHEETROCK CEILINGS

### STEP 5 - HOUSING + LIGHT ENGINE WIRING AND INSTALLATION

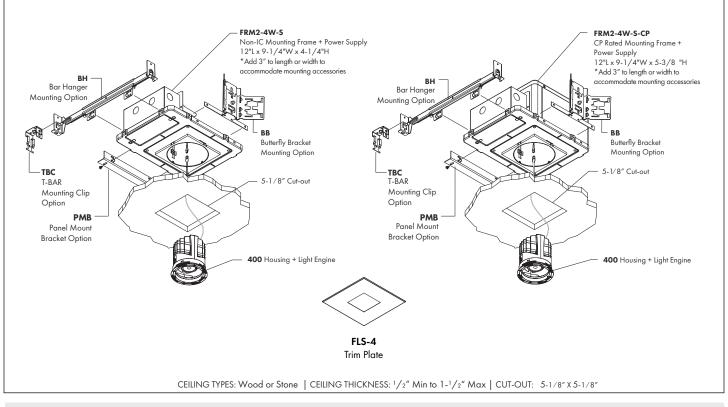


5e. Replace temporary dust cover before finishing ceiling.

# FRM2-4W-S/R & FRM2-4W-S/R-CP - FLANGELESS TRIM INSTALLATION with WOOD/STONE CEILINGS FRM2-4W-R & FRM2-4W-R-CP MOUNTING FRAMES



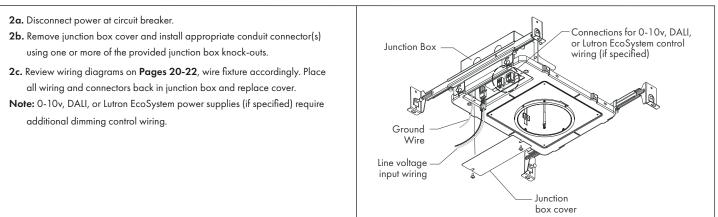






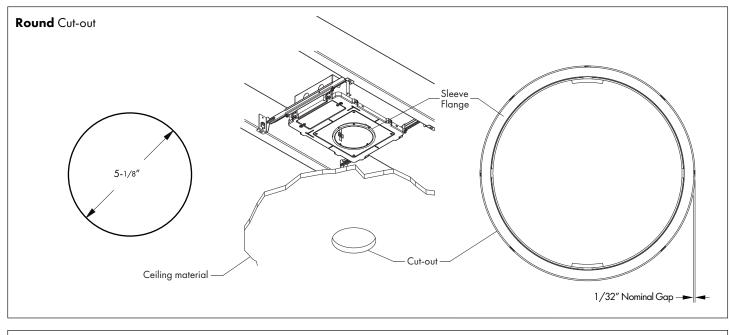
### FRM2-4W-S/R & FRM2-4W-S/R-CP - FLANGELESS TRIM INSTALLATION with WOOD/STONE CEILINGS

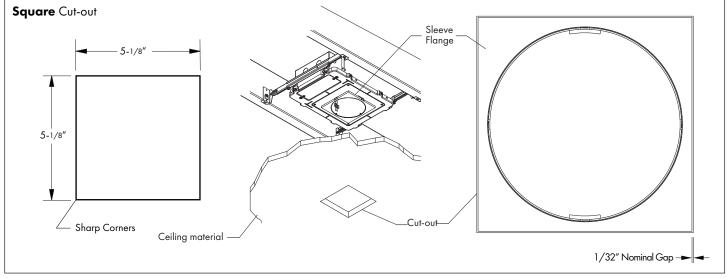
### **STEP 2** – FIXTURE WIRING



#### STEP 3 – CEILING CUT-OUT

3a. Ceiling cut-out must be precisely located & oriented to Square or Round collar location. All dimensions are +/- 1/32".

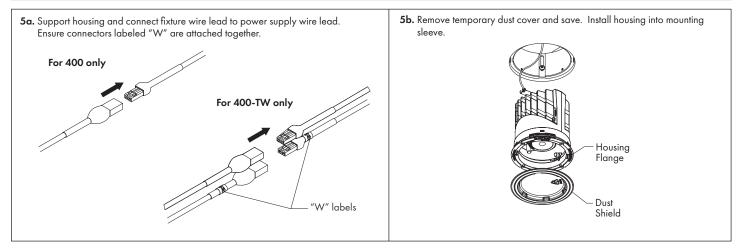




### FRM2-4W-S/R & FRM2-4W-S/R-CP - FLANGELESS TRIM INSTALLATION with WOOD/STONE CEILINGS

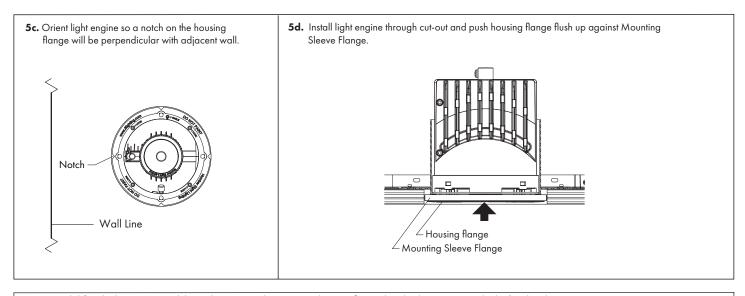
### **STEP 4** – FLANGELESS TRIM COLLAR ADJUSTMENT **Mounting Sleave** CAUTION: Accurate Collar depth is required to install trim plate flush to surface. To ensure trim plate will be flush to the mounting surface, the collar must be recessed up into 2x Adjustment screws the mounting surface by the depth of the supplied trim plate gauge tip. Use tip marked **400**. 0 Mounting Frame 4a. Loosen the collar screws and check depth of mounting sleeve at each set screw location using the trim plate gauge. Ceiling **4b.** Confirm depth using gauge. Once depth is corrected at each location, tighten the set screws to lock in the collar depth. (DO NOT OVERTIGHTEN!) 800 500 4c. Tighten 4x collar screws. Trim plate gauge Section View (use end marked 400) 4x Set screws in **Mounting Sleeve Flange** Fig 4a. Loosen Adjustment Screws, Fig 4b. Confirm depth and tighten Set Screws. Fig 4c. Tighten Collar Screws DO NOT OVERTIGHTEN. check & adjust Mounting Sleeve depth

#### **STEP 5** – HOUSING + LIGHT ENGINE WIRING & INSTALLATION

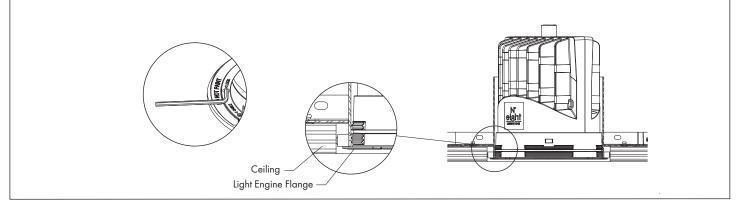


### FRM2-4W-S/R & FRM2-4W-S/R-CP - FLANGELESS TRIM INSTALLATION with WOOD/STONE CEILINGS

STEP 5 - HOUSING + LIGHT ENGINE WIRING AND INSTALLATION (continued)



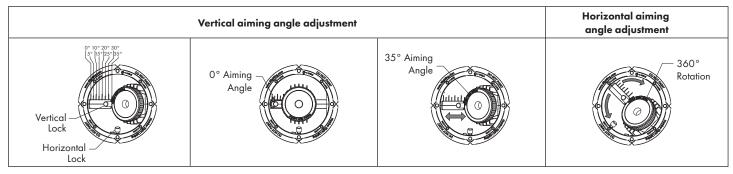
**5e.** Locate (4) four locking screws. While applying upward pressure on housing flange, hand tighten using supplied 3/32" hex-key. Ensure housing flange is tight against finished ceiling. **CAUTION:** Ceiling finish must not extend above backside of housing flange.



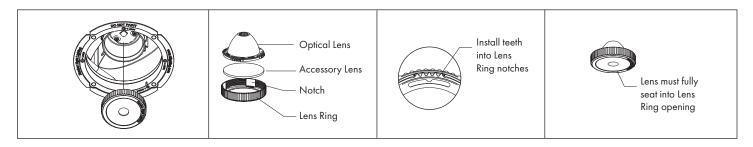
5f. Replace temporary dust cover before finishing ceiling.

# **AIMING & ADJUSTING**

- STEP 1 VERTICAL AND HORIZONTAL AIMING AND ADJUST
- 1a. After ceiling is finished, remove temporary dust cover and discard.
- **1b.** Loosen vertical and horizontal adjustment locks.
- 1 c. Adjust vertical aiming by sliding the lamp holder to desired angle (0-35°).
- 1d. Adjust the horizontal aiming by rotating the lamp holder & housing assembly to desired angle (0-360°).
- 1e. Tighten vertical and horizontal adjustment screws.



- STEP 2 LENS AND ACCESSORY REMOVAL AND REPLACE
- **2a.** Remove lens ring from lamp holder by unscrewing counter-clockwise.
- 2b. Remove optic lens (and accessory lens if installed) by gently pressing upward on the center while holding the lens ring.
- 2c. Install desired optic (and accessory lens if used) by aligning the optic lens teeth with notches in lens ring.
- $\textbf{2d.} \ \text{Re-install lens ring on to lamp holder by turning clockwise.}$



#### STEP 3 (OPTIONAL) – AIMING AND ADJUSTMENT FOR WW-4 WALL WASH LENS ACCES



# WW-4 Wall Wash Trim Adjustment and Installation

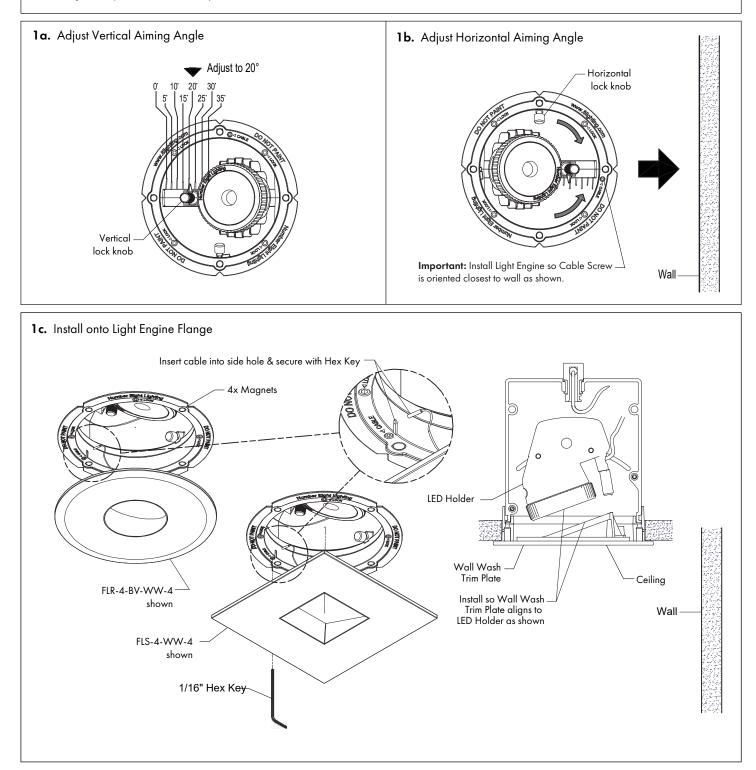
Important: For optimal performance use 40° optic with HI, HI-3, WD, WD-2, WD-4, or TW LED. Use 10° optic and FL lens with HI-2 LED.

1a. Unlock & adjust vertical aiming angle to 20°.

1b. Unlock & adjust horizontal position to aim light towards wall surface to be illuminated.

**1c.** Orient & install Wall Wash Trim Plate into Trim as shown.

**Note:** Magnets will permit Trim Plates to only be installed in 4 horizontal orientations.



# **TRIM PLATE FINISHING & INSTALLATION**

#### STEP 1 (OPTIONAL) - PAINT TRIM PLATE

1a. Remove the trim plate from packaging.

1b. Clean and prepare exposed surfaces for painting following the paint manufacturer's instructions and warnings.

1c. Paint as desired using a "dry roller" or light spray application.

Note: If applying paint by spray method, mask trim plate lens (if installed).

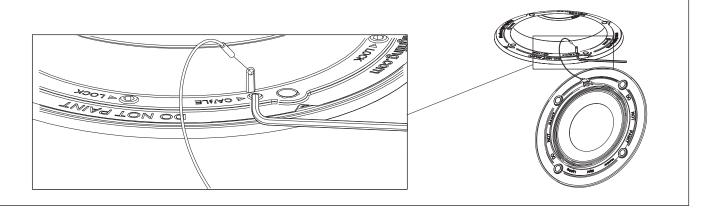
Caution: Paint must be rated for minimum 90°C (150°F). Do not paint trim plate while installed in fixture. Do not paint backside of trim plate or trim safety cable. Do not paint edges of FR-4 or FS-4 trim plate.

**1 d.** Allow trim plate to dry completely before installing.

#### **STEP 2** – INSTALL TRIM PLATE

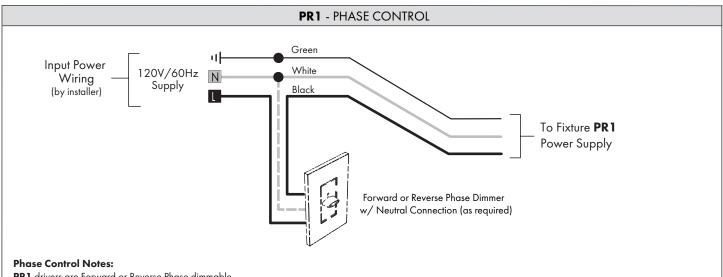
2a. Remove temporary dust cover and discard.

2b. Install trim safety cable into attachment hole on housing marked "CABLE," and secure by hand tightening set screw using supplied 1/16" hex key.



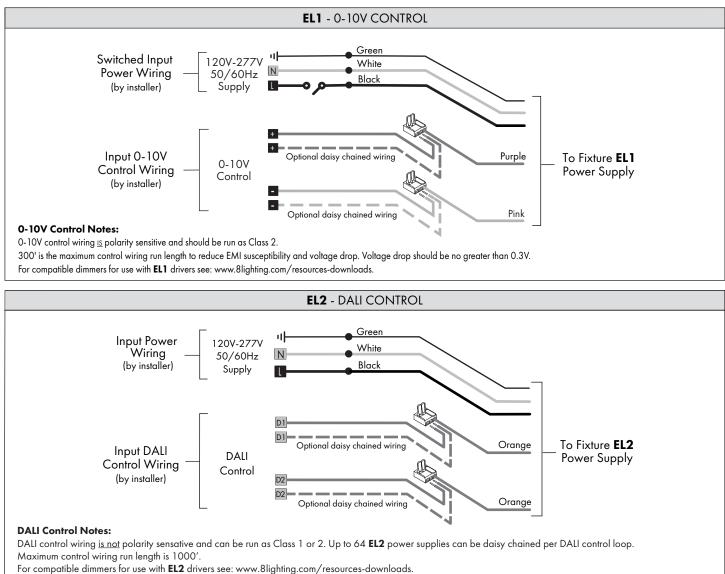
2c. Align trim plate with magnets and install.

### WIRING DIAGRAMS

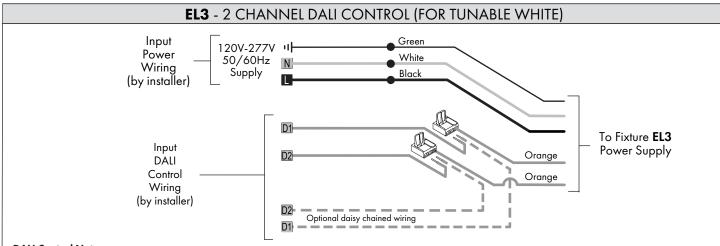


**PR1** drivers are Forward or Reverse Phase dimmable.

For compatible dimmers for use with **PR1** drivers see: www.8lighting.com/resources-downloads

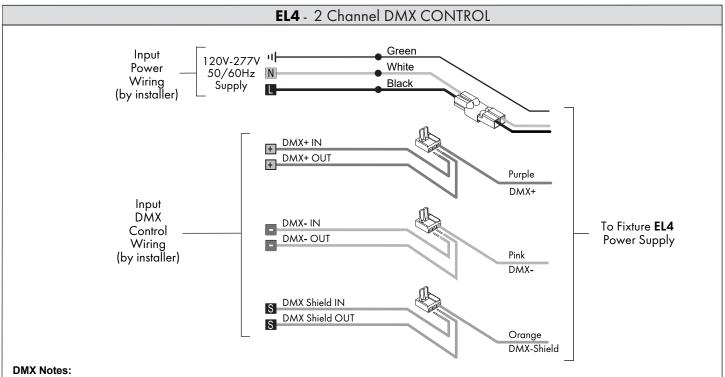


### WIRING DIAGRAMS continued



#### **DALI Control Notes:**

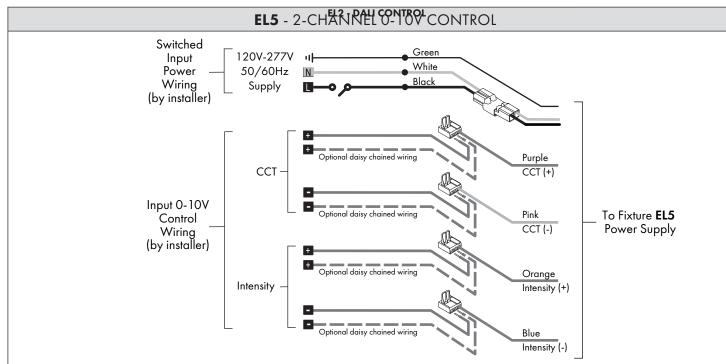
DALI control wiring is not polarity sensitive and can be run as Class 1 or 2. Each **EL3** driver will be discovered with two incremented short addresses: one for CCT and one for INTENSITY. Up to 32 **EL3** drivers can be daisy-chained per DALI control loop. Maximum control wiring run length is 1000'. For compatible dimmers for use with **EL3** drivers see: www.8lighting.com/resources-downloads.



# DMX control wiring is polarity sensitive and should be run as Class 2. Each **EL4** driver is one "unit load". DMX runs without a repeater/signal booster should be limited to no more than 32 fixtures including controller depending on the site conditions. **EL4** drivers are RDM compatible and addressable by others in the field. Termination of the DMX runs is to be done by others per DMX512A specification. Maximum control wiring run length is 1000'.

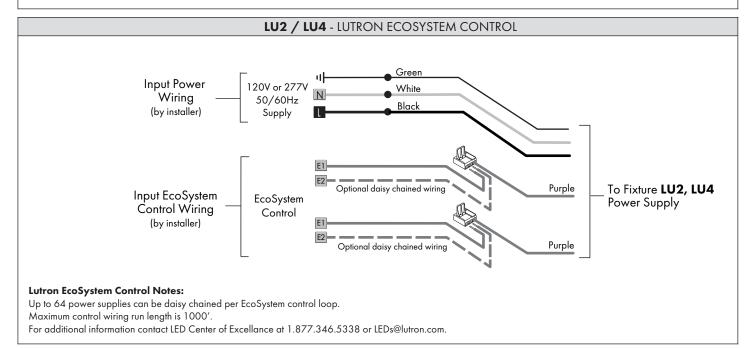
For compatible dimmers for use with **EL4** drivers see: www.8lighting.com/resources-downloads.

### WIRING DIAGRAMS



#### 0-10V Control Notes:

0-10V control wiring is polarity sensitive and should be run as Class 2. Each **EL5** driver requires two pairs of Class 2 control wires: one pair for CCT and one pair for INTENSITY. 300' is the maximum control wiring run length to reduce EMI susceptibility and voltage drop. Voltage drop should be no greater than 0.3V. For compatible dimmers for use with **EL5** drivers see: www.8lighting.com/resources-downloads.





### www.8lighting.com

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