

**FCT23 & FCT25 NEW CONSTRUCTION INSTALLATION INSTRUCTIONS**  
**- SAVE THESE INSTRUCTIONS**

**CAUTION:** Read and understand these entire instructions before proceeding.

**WARNING:** All electrical installations must be done according to local codes or the National Electric Code (NEC), whichever applies.

**WARNING: RISK OF FIRE!** MOST DWELLINGS BUILT BEFORE 1985 HAVE SUPPLY WIRE RATED FOR 60°C! Some fixtures require supply wires rated for more than 60°C. Wiring must be rated for 90°C for safe installation of this fixture.

**WARNING:** Installation must be performed by qualified personnel only!

**WARNING:** Do not install in wet locations.

**WARNING:** Disconnect power BEFORE installing or servicing the fixture.

**WARNING:** Do NOT exceed the maximum wattage rating, if applicable, or voltage rating as indicated on the fixture label.

**WARNING:** DO NOT connect this fixture to an electrical system that does not provide a means for equipment grounding.

**CAUTION:** This fixture can be used with ceilings of any type, including hung ceilings providing fixture is supported independently of the ceiling grid.

**WARNING:** This fixture is NOT Chicago Plenum Rated unless Labeled as such.

**WARNING:** This fixture is NOT IC (Insulation Contact) Rated unless Labeled as such. Do NOT install within 3" of any insulation material on the fixture sides or top, unless the fixture is Labeled as IC Rated.

**CAUTION:** Do not install this fixture on a circuit containing a dimmer. Damage to the luminaire may result.

**Note for DMX/RDM:** Make certain that the data cable wiring for the fixtures is in accordance with DMX512-A specifications.

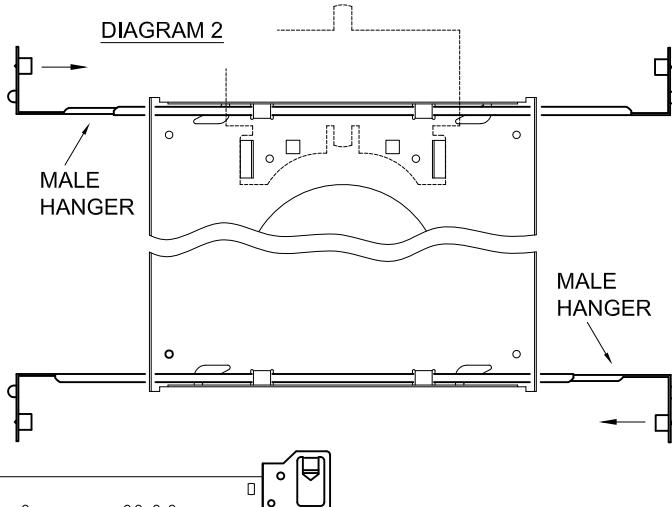
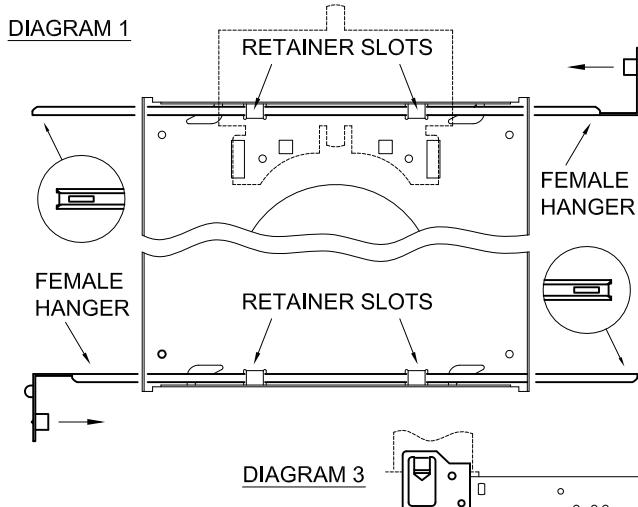
**Note for DMX/RDM:** Data cable run wiring should be limited to no more than 1000 ft. (approx. 300 meters) in length and connected in a "daisy-chain" fashion. The end of the run must be terminated with a 120 ohm resistor.

**Note for DMX/RDM:** 32 devices maximum may be placed on a single data cable run. Use splitters if more data runs are required.

## **MOUNTING THE FIXTURE PAN WITH BAR HANGERS**

### **PREPARING THE PAN FOR MOUNTING:**

The BAR HANGERS come in sets, and each set has a MALE and FEMALE HANGER. Slide the FEMALE HANGERS through the PAN RETAINER SLOTS (see Diagram 1). Now slide the MALE HANGERS into the FEMALE HANGERS (see Diagram 2). Diagram 3 is a side view of Diagram 2. The PAN is ready for mounting.



## MOUNTING THE PAN:

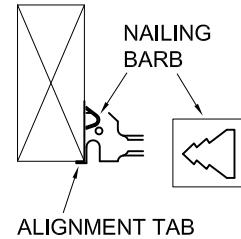
1) Place the PAN between the ceiling runners and extend each HANGER such that each HANGER BASE is flush against the ceiling runners (see Diagram, right).



\* Ceiling runners may consist of girders, beams, joists, truss, or any combination of these.

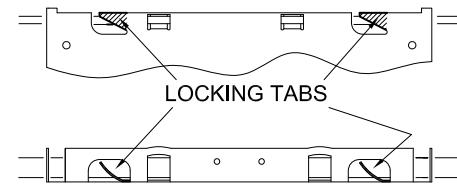
2) Adjust each BASE so that the PAN will end up at the appropriate height and parallel with the runners. NOTE: ALIGNMENT TABS on the bottom of the hanger base should be resting against the bottom of the runners (see Diagram, right).

3) With suitable hardware (screws, nails, etc) attach each BASE to the ceiling runners. NOTE: For runners comprised of wooden joists, the BASES are provided with NAILING BARBS. Simply hammer all four BARBS into the joists to secure the HANGERS (see Diagram, right).



4) Slide the PAN along the HANGERS until the fixture opening in the PAN is positioned in the desired location.

5) With pliers, bend the four LOCKING TABS upward such that they "bite" into the HANGERS. This will prevent the PAN from shifting (see Diagram, right).

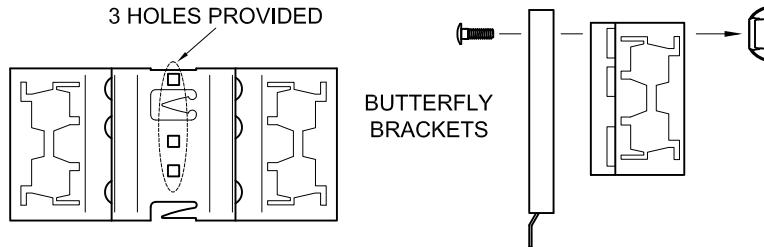


Continue to the section "MAKING ELECTRICAL CONNECTIONS."

## MOUNTING THE FIXTURE PAN WITH BUTTERFLY BRACKETS

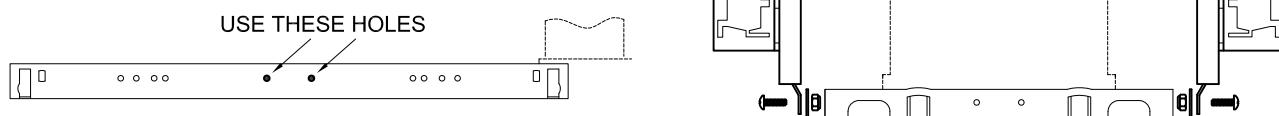
### PREPARING THE PAN FOR MOUNTING:

1) Assemble the BUTTERFLY BRACKETS with the supplied wing nuts and carriage bolts. There are 3 square holes provided. Use the hole appropriate for the height of the ceiling runners\*. Tighten the wing nuts (see Diagram, right). The far right Diagram shows just 1 of 6 possible configurations.



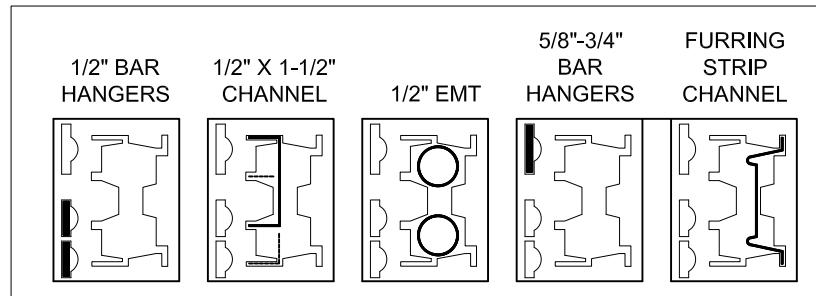
\* Ceiling runners may consist of ceiling tile grids, girders, beams, joists, truss, or any combination of these.

2) Attach the BUTTERFLY BRACKETS to the center of each long side of the PAN with the four screws and lock-nuts provided (see Diagrams below and right).



### MOUNTING THE PAN:

1) Install mounting channels\* horizontally through a pair of BUTTERFLY BRACKET slots (See Diagram below) and set the mounting channels onto the ceiling runners. NOTE: If 1/2" EMT is used, there is an arrowhead shaped tab located in line with one of the slot-pairs on the BUTTERFLY BRACKET. If that slot-pair is used, then prying the tab outward 90° will allow it to "bite" into the EMT thereby preventing the fixture from shifting. Gently squeeze the BUTTERFLY BRACKET in order to slip the EMT into the slot pair and release.



\* Mounting channels may consist of bar hangers, metal channels, 1/2" EMT, or any combination of these. Mounting channels always by others.

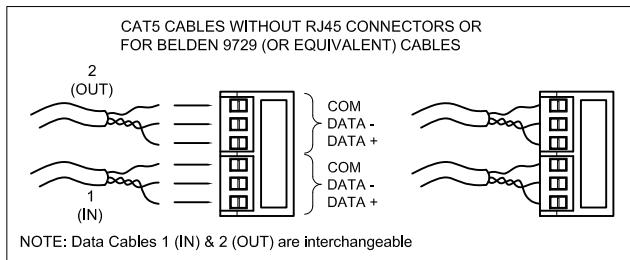
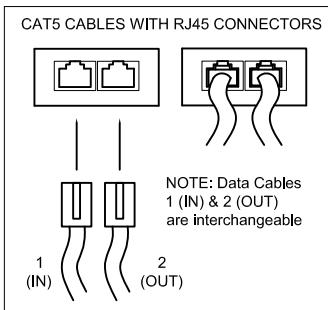
- 2) Using the wing nuts on the BUTTERFLY BRACKETS, set the PAN to the appropriate height. The bottom surface of the PAN should be flush with the bottom surface of the runners to which the finished ceiling will be attached.
- 3) Secure the BUTTERFLY BRACKETS to the mounting channels using wire tie-downs (by others).
- 4) Secure the mounting channels to the ceiling runners using wire tie-downs (by others) or some other approved method.

## MAKING ELECTRICAL CONNECTIONS

1) Remove the J-box cover and make all line-voltage electrical connections within. 1/2" & 3/4" KO's are provided for service entrance/exit. Refer to the list below for wire identification. The fixture is rated for daisy-chaining electrical connections. Replace cover after all electrical connections are made. NOTE: All factory wiring inside this enclosure has insulation rated for line voltage, and therefore may occupy the same enclosure without a voltage barrier.

BLACK (or BROWN) to HOT, WHITE (or BLUE) to NEUTRAL, GREEN to GROUND

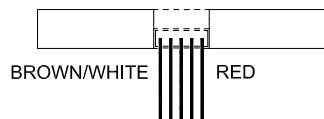
- 2) Connect data lines to the provided RJ45 or Terminal Block connectors :



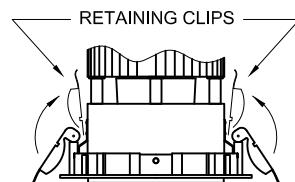
**RJ-45 ETHERNET pinout:**  
 Pin 1: Data 1+ (orange/white)  
 Pin 2: Data 1- (orange)  
 Pin 3: Data 2+ (green/white)  
 Pin 4: Data 2- (green)  
 Pin 5: Data 1 Common (brown/white)  
 Pin 6: Data 2 Common (brown)  
 All other pins not used.

## Fixture Installation

- 1) Remove the portion of the ceiling covering the fixture hole in the PAN. CAUTION! Do NOT make the ceiling hole any larger than the hole in the PAN!
- 2) Gently pull the fixture cable down from the fixture hole. Carefully, fully insert the small connector into the side of the fixture (see Diagram, right). NOTE: Small needle nose pliers may be helpful in manipulating the connector. The connector is polarized, but if forced, can be inserted incorrectly! Make certain that the connector is oriented properly! Use the color markings on the Diagram to the right as a guide.

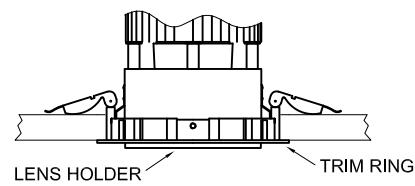


- 3) Flip the two spring-loaded RETAINING CLIPS up 180° and carefully insert the fixture up and into the hole. The two retaining clips will self-release and clamp the fixture firmly within the ceiling (see Diagram, right). Make certain that the fixture cable does not get pinched or tangled in the retaining clips.

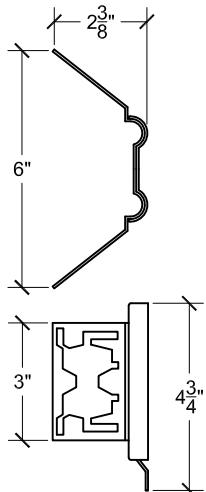


## REMOVING THE FIXTURE FOR SERVICING (see Diagram below, right)

- 1) Rotate the LENS HOLDER counter-clockwise until it falls free from the fixture (it is tethered to the fixture internally so that it will only drop about 6").
- 2) Grasping the inside of the TRIM RING at opposite sides, gently pull the fixture straight down.
- 3) To reinstall, reinsert the LENS HOLDER and see "FIXTURE INSTALLATION," Step 3 above.



BUTTERFLY BRACKETS  
(PAIR)



ADJUSTABLE BAR HANGERS (PAIR): 24"-40" EXTENSION RANGE

