# Ruff-IN engineered-to-order assemblies

# Installation and maintenance information

## SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

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To avoid the risk of fire, explosion or electric shock, this product should be installed, inspected and maintained by <u>a</u> <u>qualified electrician only</u>, in accordance with all electrical codes.

- Remove assembly from shipping carton and perform visual checks to make sure components have not been loosened or damaged during shipping. Refer to manufacturer's documentation shipped with each assembly.
- Ruff-IN<sup>™</sup> engineered-to-order assemblies project drawings indicating assembly location accompany each shipment. Each assembly is numerically marked with a number that corresponds to the assembly number and location in the project drawings indicating where the assembly is to be installed in the room or building.
- 3. After visually inspecting framing members (previously inspected by AHJ) to be sure they are properly constructed, using #8 x 3/4" long self-tapping screws (or similar), screw assembly to framing member using at least two (2) screws in each framing member. Assemblies may be mounted in various configurations dependent on bracket type. Assemblies can be mounted between framing members, directly to a framing member or mounted on a "stud rail" near the floor using a "kick-in" type bracket. Verify that mounting to framing member is as intended based on bracket type.
- 4. If cable is attached to assembly, cut binding tie and unroll cable. Perform visual inspection of cable and connector to make sure components have not been loosened or damaged during shipping. Retighten if necessary. Refer to manufacturer's documentation shipped with each assembly.
- 5. Install cable through framing members to appropriate assembly, light fixture, equipment, etc. and support appropriately in accordance with NEC and local code requirements.
- If another cable is to connect to the assembly, remove plaster ring and/or box cover and install cable in junction box K.O. using the appropriate UL Listed fitting; support appropriately in accordance with NEC and local code requirements.
- 7. Connect wires as branch circuitry as required per plans and in accordance with NEC and AHJ requirements using UL Listed wire connectors. Ensure that device(s) and junction box is properly bonded per NEC and AHJ requirements.
- 8. After all wire connections are complete, re-attach plaster ring and/or box cover using 8-32 box screws.
- 9. Perform visual inspection of entire assembly and cable(s) to ensure they are properly installed and fastened to framing members.

## **ADDITIONAL INFORMATION:**

- During manufacturing, Eaton's Crouse-Hinds will torque device screws on wiring devices to the recommended torque range. However, due to the soft and flexible nature of copper, it is possible that changes in temperature and/ or freight transport may result in instances of loose wires on wiring devices. Field personnel must inspect connections and make necessary reconnections. Refer to manufacturer's documentation shipped with each assembly.
- Each device assembly is fabricated with no more than one (1) MC cable attached. This practice makes it easier for the field to install. Given this practice, individual hot and/or switched conductors are not connected from the MC cable to the wiring devices – only neutrals and grounds are connected. Final connections must be made in the field when all associated assemblies and light fixtures are installed.
- 3. Fire putty pads are furnished ONLY for those walls identified on the project drawings as two-hour rated walls. It is the responsibility of the installer to ensure fire putty pads are installed properly and in all locations in accordance with the NEC and local code requirements.
- 4. Fan rated junction boxes are furnished where paddle fans are to be installed or for chandelier (i.e. heavy light fixtures) applications. Fan boxes will be installed on adjustable type brackets that are intended for positioning placement purposes only. The contractor is responsible for auxiliary support requirements (i.e. threaded rod) based on specific job-site application requirements.
- 5. Every effort is made to provide mounting brackets for specific applications. There are instances, however, when there are no commercially available brackets that are suitable for every application. Examples of applications where a commercially available bracket may be unavailable include:
  - a. Studded walls that are wider (thicker) than a nominal 2" x 6" stud (1-1/2" x 5-1/2" actual size).
  - b. Studded walls that are positioned back-to-back, and as a result, create a deep wall cavity.
  - c. Studded walls that are used to encase beams and the like, and as a result, have no backing that facilitates the use of a rear junction box support.
  - d. Where studs are mounted in excess of 24" on center.
  - e. Applications less than 1-1/2" deep (i.e. that require direct mounting on concrete block).
  - f. Applications that require a plaster/tile ring deeper than 2".
  - g. When the center-to-center distance of framing members are less than 9".

- 6. Teledata boxes and/or plaster rings are shipped together with wiring devices (side mounted with screws) when plans show adjacent installation. Contractor may be required to separate the wiring device and teledata boxes and mount separately on studs as placement allows.
- 7. Shipping may result in loosening of wire connectors from conductors. Contractor must ensure that all conductors are secure at final installation. (See note 1 for additional information).
- Contractor must ensure that back supports are in proper position and/or that an auxiliary means of box support is properly installed. Estimates show that approximately 10% to 15% of all wiring devices will require adjustment after wall finish is applied. The wiring device does not require removal – the two (2) screws simply need to be backed out, a B-Line BB32 can be inserted behind the device, and the screws tightened.
- 9. Multi-gang boxes (i.e. 3, 4, 5 and 6 gang boxes) are mounted to a telescoping slider (BB216TS or BB224TS) brackets. The mounting feet for these brackets must be mounted on the inside surface of the framing members to ensure that the plaster ring only penetrates the drywall as necessary.
- 10. The contractor is responsible for any auxiliary blocking or unusual supports required. This may include "blocking" the open side of a steel stud when a bracket needs to be mounted to the inside of the stud (see #9, above). Interferences caused by other trades, such as in kitchen walls that are congested with plumbing pipes, can present challenges and the electrical contractor must make adjustments as field conditions present themselves.
- 11. Framing, including sheer walls, often differ from the exact design shown on the drawings. Eaton's Crouse-Hinds Division designs the Ruff-IN engineered-to-order assemblies based on what is shown on the drawings. It is the responsibility of the contractor to adjust as necessary and to report any variances to Eaton's Crouse-Hinds Division if adjustments are required for future shipments.

12. Ruff-IN engineered-to-order assemblies are designed in accordance with job drawings specifications in an effort to offer greater job-site flexibility. Eaton's Crouse-Hinds Division adds 2' of cable at each end and always assumes the cable will be secured to the deck even when the finished ceiling is dropped lower than the deck. If the deck is more than 3' higher than the finished ceiling, then 2' of cable is added above the finished ceiling.

It is the responsibility of the contractor to make sure that the cable whips and lengths are installed and supported as required by the NEC and any local code requirements. Modifications/site adjustments are the responsibility of the contractor. It is the responsibility of the contractor to notify Eaton's Crouse-Hinds Division if adjustments are required for future shipments.

#### MAINTENANCE

We recommend an Electrical Preventive Maintenance Program as described in the National Fire Protection Association Bulletin NFPA 70B: Recommended Practice for Electrical Equipment Maintenance (www.nfpa.org).

All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Eaton's Crouse-Hinds Division's "Terms and Conditions of Sale," and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection herewith.



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