

HUBBELL CIRCUIT-LOCK™

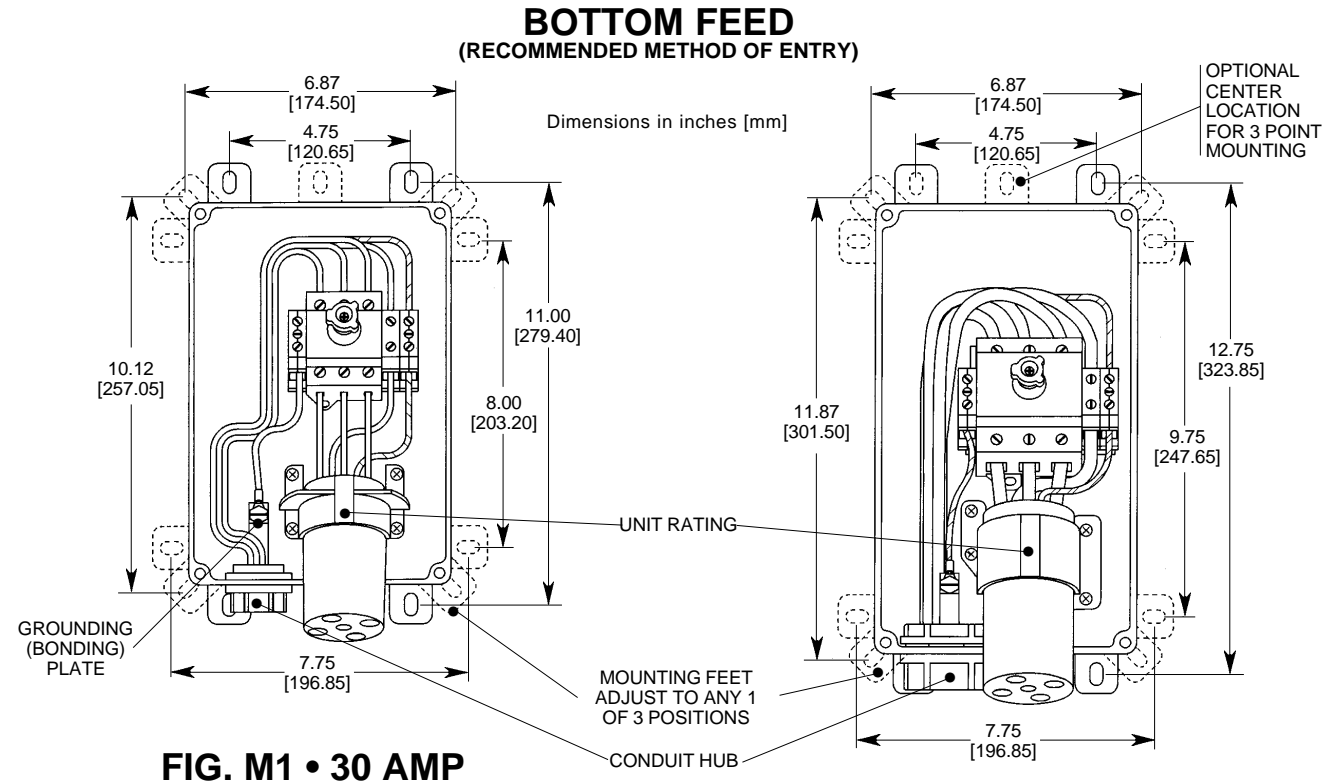
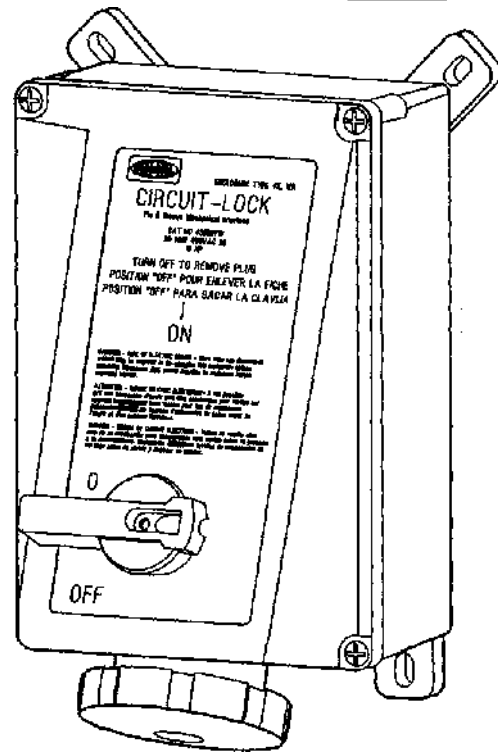
U.S. Patent No. 5,298,701

English

30, 60 & 100 AMP PIN & SLEEVE MECHANICAL INTERLOCK

GENERAL INFORMATION

- NOTICE:** For installation by a qualified electrician in accordance with national and local electrical codes and the following instructions.
- CAUTION: RISK OF ELECTRIC SHOCK. Disconnect power before installing. More than one disconnect switch may be required to de-energize this equipment before servicing. Disconnect ALL power supplies to enclosure before exposing interior.**
- NOTICE:** Separate overcurrent protection must be provided in accordance with National Electrical Code® Article 220 or Canadian Electrical Code, Section B, as appropriate. Overcurrent protection MUST NOT exceed the ampere rating of the receptacle [ref.: National Electrical Code® section 430-42(c) or Canadian Electrical Code, Part 1, Rule 28-602(3)(c)(i)].
- Suitable for use on a circuit capable of delivering not more than 10,000 rms symmetrical amperes at the voltage rating of the receptacle.
- This enclosure includes a lockout provision to isolate the receptacle and connected equipment from the power supplied to the enclosure as a method of compliance to OSHA Lockout/Tagout Regulation 29, CFR Part 1910.147. The **ON-OFF** control knob (in the **OFF** position) accepts up to 5/16 inch (8 mm) diameter shackle of a suitable padlock or Lockout device. This feature does NOT isolate the power supplied to the enclosure during internal servicing of the enclosure.
- NOTICE:** This enclosure must NOT be used as a junction box for feed-through connections.
- The pilot contact (if installed) is rated A600 pilot duty, 600 VAC 10A.
- WARNING: RISK OF ELECTRIC SHOCK.** Bonding between conduits must be provided.



INSTALLATION INSTRUCTIONS

A. Mounting Instructions:

- This enclosure must always be mounted vertically with receptacle end down.
- This enclosure may be mounted for top, bottom or back conduit entrances. Bottom feed is recommended whenever possible. Figs M1 & M2. Back feed is permitted in Type 4X applications only. Fig. M4.
- For Type 4X and Type 12 applications, enclosure must be mounted by means of mounting feet. DO NOT drill, punch or nail mounting holes through the enclosure.
- Mount the feet to the enclosure using the screws provided. Tighten to 10-12 lb•in (1.2 - 1.4 N•m).
- Mounting feet will accept up to 5/16 inch (8 mm) diameter screws (not provided). Mounting pattern is shown in Fig. M1.
- Remove the four (4) cover mounting screws and remove cover. Switch handle must be in **"OFF"** position to remove cover.
- Drill or punch hole at the desired conduit entry location:
 - 1-3/8 inch (34.9 mm) diameter for 1 inch trade size conduit hub (30 Amp).
 - 1-3/4 inch (44.4 mm) diameter for a 1-1/4 inch trade size conduit hub (60 & 100 Amp).
 Molded drill spots on the outside top, bottom and back surface show the locations. Fig. M4.

- Use **ONLY** Listed/Certified conduit hub rated for Type 4X and Type 12 applications (one supplied) such as:
 - RACO #1704 for 1 inch trade size (30 Amp)
 - RACO #1705 for 1¼ inch trade size (60 & 100 Amp)
- Install the conduit hub. Be sure that the "O" ring is properly seated in its groove.
- Install the grounding (bonding) plate under the conduit nut. Tighten nut securely for a watertight seal and grounding continuity.
- Any unused conduit entrance holes must be sealed with Listed/Certified closure plugs rated Type 4X and type 12. (Hubbell Cat. No. MICPK30 for 30A, Cat. No. MICPK60 for 60A and 100A).
- NOTE:** The metal closure plug must be grounded (bonded) back to the inside green & yellow grounding buss. Grounding (bonding) wire connection required.
- Use of user-installed conduit entrances above the switch are not recommended in applications where condensation may be present in the conduit (high humidity and extreme temperature change locations). When using the top feed conduit entrance, drip loops must always be formed as indicated in fig. M3.

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INSTALLATION INSTRUCTIONS (CONTINUED)

B. Wiring Instructions

- Select conductors having 90°C or higher rated insulation and sufficient ampacity in accordance with the 60°C column (for 30 Amp and 60 Amp devices) or the 75°C column (for 100 Amp devices) of the National Electrical Code® Table 310-16 or Canadian Electrical Code Table 2.
- CAUTION: USE COPPER CONDUCTORS ONLY.**
- DO NOT TIN CONDUCTORS.
- Make sure the connected equipment rating does not exceed the rating of this device. See General Information #4 regarding overcurrent protection.
- Terminal capacity as indicated in Table 1
- Strip conductor insulation ½ inch (13 mm).
- Select proper wiring diagram. Loosen terminal screws. Insert conductors fully into proper terminal.
- Tighten terminal screws to torque indicated in Table 2:
- TAKE CAUTION THAT THERE ARE NO STRAY WIRE STRANDS.**
- Tighten the grounding buss mounting screw to 10-12 lb•in (1.2-1.4 N•m).
- Reinstall the cover. The handle must be in the **OFF** position. Make sure the rope gasket is properly seated in the groove. Tighten the four cover screws to 10-12 lb•in (1.2-1.4 N•m).
- Consult factory for auxiliary contact availability.

| TABLE 1 | 30A | 60A | 100A |
|-------------------|---------------|---------------|-----------------|
| Switch | #4 to #12 AWG | #2 to #10 AWG | #2 to #10 AWG |
| Ground | #6 to #16 AWG | #4 to #10 AWG | #4 to #10 AWG |
| Neutral | #8 to #22 AWG | #4 to #14 AWG | #1/0 to #14 AWG |
| Auxiliary contact | #14-18 AWG | #14-18 AWG | #14-18 AWG |
| Pilot | | #12-18 AWG | P12-18 AWG |

| TABLE 2 | 30A | 60 & 100A |
|-------------------|---------------------------|---------------------------|
| Switch | 27 lb•in (3.0 N•m) | 50 lb•in (5.7 N•m) |
| Ground | 16-18 lb•in (1.8-2.0 N•m) | 22 lb•in (2.5 N•m) |
| Neutral | 13-15 lb•in (1.5-1.7 N•m) | 22 lb•in (2.5 N•m) |
| Auxiliary contact | 10-12 lb•in (1.2-1.4 N•m) | 10-12 lb•in (1.2-1.4 N•m) |
| Pilot | | 20 lb•in (2.5 N•m) |

THIS DEVICE CARRIES A MAXIMUM RATING OF:

| CAT. NOS. | AMPS | RATING | HORSEPOWER [kW] | USE PIN & SLEEVE PLUG CAT. NO. | WIRE PER FIG. |
|---------------|------|-----------------------------------|-------------------------------|--------------------------------|---------------|
| HBL330MI4W | 30 | 120VAC | 2 [1.5] | HBL330P4W | W1 |
| HBL330MI6W | 30 | 240VAC | 3 (208-240VAC) [2.25] | HBL330P6W | W2 |
| HBL330MI7W | 30 | 480VAC | 7.5 [5.62] | HBL330P7W | W2 |
| HBL430MI5W | 30 | 600VAC 3Ø | 20 [15] | HBL430P5W | W3 |
| HBL430MI7W | 30 | 480VAC 3Ø | 15 [11.25] | HBL430P7W | W3 |
| HBL430MI9W | 30 | 240VAC 3Ø | 7.5 [5.62] | HBL430P9W | W3 |
| HBL430MI12W | 30 | 120 / 240VAC | 3 (208-240VAC, L-L) [2.25] | HBL430P12W | W4 |
| HBL432MI3W | 32 | 380VAC 3Ø 50 Hz 440VAC 3Ø 60Hz | 15 (440VAC 3 Ø 60 Hz) [11.25] | HBL432P3W | W3 |
| HBL530MI5W | 30 | 347 / 600VAC 3ØY | 20 [15] | HBL530P5W | W5 |
| HBL530MI7W | 30 | 277 / 480VAC 3ØY | 15 [11.25] | HBL530P7W | W5 |
| HBL530MI9W | 30 | 120 / 208VAC 3ØY | 5 [3.75] | HBL530P9W | W5 |
| HBL360MI4W | 60 | 120VAC | 3 [1.5] | HBL360P4W | W1 |
| HBL360MI6W | 60 | 240VAC | 7.5 (208-240VAC) [5.62] | HBL360P6W | W2 |
| HBL360MI7W | 60 | 480VAC | 20 [15] | HBL360P7W | W2 |
| HBL460MI5W+ | 60 | 600VAC 3Ø | 40 [30] | HBL460P5W | W3 |
| HBL460MI7W | 60 | 480VAC 3Ø | 30 [22.5] | HBL460P7W | W3 |
| HBL460MI9W | 60 | 240VAC 3Ø | 15 [11.25] | HBL460P9W | W3 |
| HBL460MI12W | 60 | 120 / 240VAC | 7.5 (208-240VAC, L-L) [5.62] | HBL460P12W | W4 |
| HBL560MI5W | 60 | 347 / 600VAC 3ØY | 40 [30] | HBL560P5W | W5 |
| HBL560MI7W | 60 | 277 / 480VAC 3ØY | 30 [22.5] | HBL560P7W | W5 |
| HBL560MI9W | 60 | 120 / 208VAC 3ØY | 15 [11.25] | HBL560P9W | W5 |
| HBL3100MI4W* | 100 | 120VAC | 5 [3.75] | HBL3100P4W | W1 |
| | | 240VAC | 15 [11.25] | | |
| | | 208VAC | 10 [7.5] | | |
| HBL3100MI6W | 100 | 480VAC | 30 [22.5] | HBL3100P6W | W2 |
| HBL3100MI7W* | 100 | 600VAC 3Ø | 50 [37.5] | HBL3100P7W | W2 |
| HBL4100MI5W | 100 | 480VAC 3Ø | 50 [37.5] | HBL4100P5W | W3 |
| HBL4100MI7W | 100 | 240VAC 3Ø | 25 [18.75] | HBL4100P7W | W3 |
| HBL4100MI9W | 100 | 120/240VAC | 15 [11.25] | HBL4100P9W | W3 |
| | | 208VAC | 10 [11.25] | | |
| HBL4100MI12W* | 100 | 347 / 600VAC 3ØY | 50 [37.5] | HBL4100P12W | W4 |
| HBL5100MI5W* | 100 | 277 / 480VAC 3ØY | 50 [37.5] | HBL5100P5W | W5 |
| HBL5100MI7W* | 100 | 120 / 208VAC 3ØY | 20 [15] | HBL5100P7W | W5 |
| HBL5100MI9W | 100 | | | HBL5100P9W | W5 |

* Consult factory for availability

FIG. M3 • TOP FEED

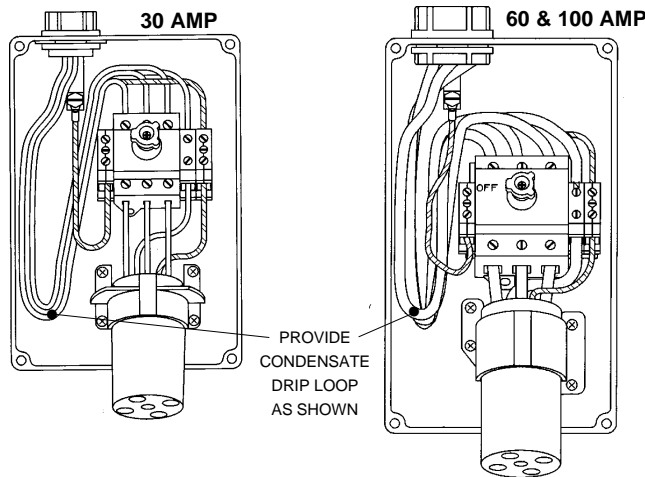


FIG. M4 • BACK FEED (TYPE 4X INSTALLATIONS ONLY)

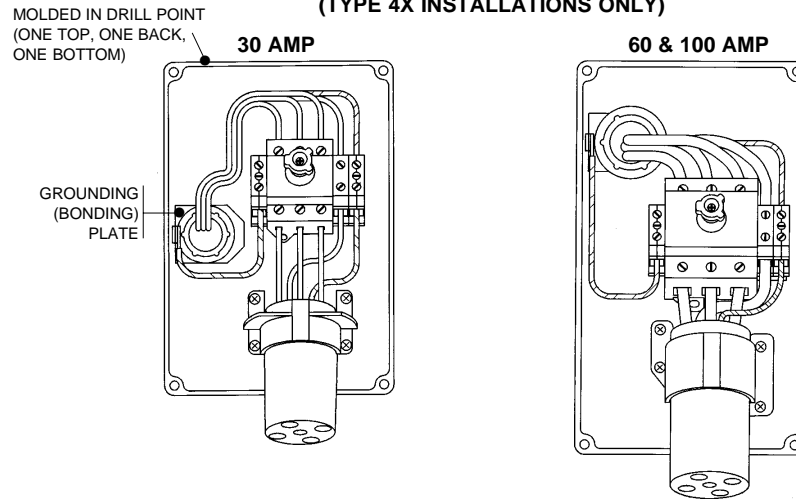


FIG. W1

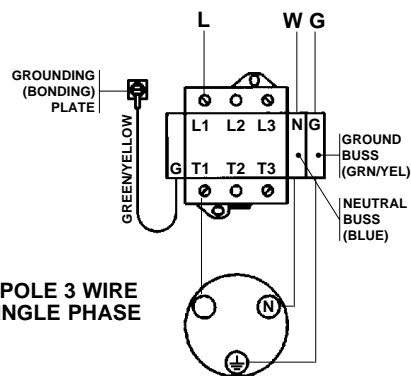


FIG. W2

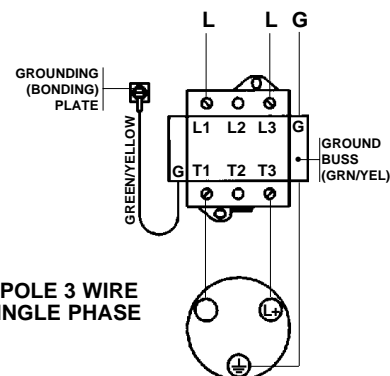


FIG. W3

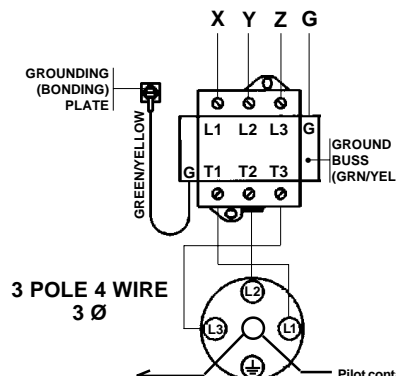


FIG. W4

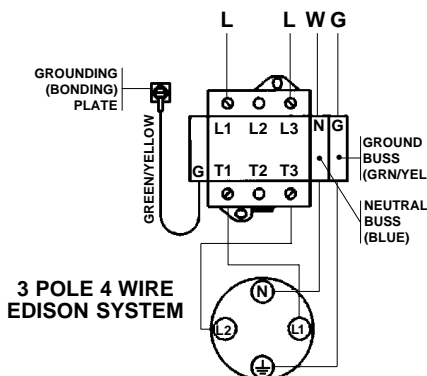
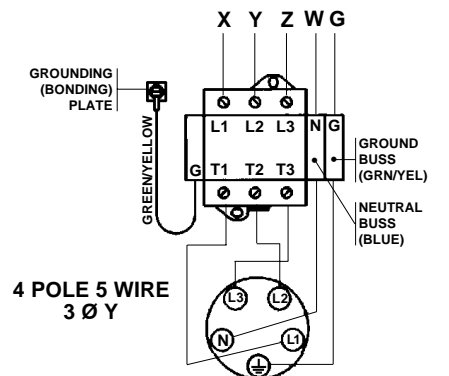


FIG. W5



WIRING DIAGRAMS