INSTALLATION INSTRUCTIONS FOR HUBBELL "CONNEXION" ZONE DISTRIBUTION SYSTEM

(DO NOT DISCARD THIS INSTRUCTION SHEET (PD2188, 3/13))

GENERAL:

CAUTION: For installation and/or modification by a qualified electrician in accordance with national and local electrical codes.

CAUTION: Risk of electric shock. Disconnect power before installing and before expanding circuit capacity.

WARNING: Never wire or modify wiring of energized electrical components or wiring.

WARNING: Risk of electric shock. This system may be connected to more than one source of supply. No single circuit may be powered by more than one source of supply.

CAUTION: Risk of electric shock. Verify correctness of wiring before powering circuits.

CAUTION: Cap all unused Connector openings. Products are furnished with Connector Closures; if more Connector Closures are needed, please contact Hubbell, Inc. at (203) 882 4800 or FAX (800) 255 1031.

NOTICE: All wiring and connections to the building system are the responsibility of the electrical contractor.

ZONE DISTRIBUTION BOX (ZDB):

1. Determine the location of the ZDB from the electrical drawings.
2. Remove the ZDB lid by unscrewing the four corner screws that secure the lid in place.
3. Transfer the locations of the four (4) – ¼" holes from the bottom of the ZDB to the building's floor.
4. Drill the four (4) locations and install the appropriate anchors into the floor.
5. Determine the orientation of the ZDB to allow the correct knockouts (KO's) to correspond with the "home run" supply circuit and then fasten the ZDB to the floor with the appropriate fasteners.
6. Install power feed circuit(s) (not supplied) in the correct KO with an appropriately sized Listed/Certified fitting and terminate the conductors to the appropriate terminals inside the ZDB. See appropriate "Terminal Block Designation" pictorial schematic for your configuration.
   CAUTION: Risk of intermittent electrical continuity. Do not loosen Terminal Screws with yellow plastic surrounds unless they are being removed to increase circuit capability (See Circuit Expansion Capability section on page 2 of these instructions).
7. Mark the box, panel and circuit identification on the attached labels.
8. Refasten the lid of the ZDB using the four corner screws to secure the lid in place.

RAISED ACCESS FLOOR BOX (RAFB):

1. Determine the location of the RAFB from the electrical drawings.
2. Determine the orientation of the RAFB to facilitate its connection to the designated ZDB and fasten the RAFB to the tile using the Installation Instructions included with the RAFB.

FURNITURE FEED BOX (FFB):

1. Determine the location of the FFB from the electrical drawings.
2. Determine the orientation of the FFB to facilitate its connection to the designated ZDB and fasten it to the building's floor in the same manner as the ZDB.

EXTENDER CABLE (EC) and CIRCUIT SPLITTER MODULE (CSM):

CAUTION: Ensure that all electrical connections are fully made. Partially engaged Extender Cable connectors can cause hot, unsafe connections.

WARNING: Risk of electric shock. No single circuit may be powered by more than one source of supply. Do not connect Extender Cables from different Zone Distribution Boxes, or from different sources of supply, to one Circuit Splitter Module.

1. Determine the length and number of EC's and CSM's associated with each branch connection from the electrical drawings.
2. Install one end of the EC to the appropriate whip at the ZDB by mating the male/female connectors. Ensure that the retaining clip provided on male connectors is fully engaged to the protruding ridge on female connectors.
3. Using the electrical drawing as a guide, route the EC under the raised floor to the appropriate RAFB.
4. If required, a CSM will be shown on the electrical drawing joining two (2), three (3) or four (4) EC's. Install the CSM to the ends of the EC's and continue routing the EC's to the appropriate RAFB's. All modular connections are accomplished by mating the correct male/female connectors, ensuring that the retaining clip provided on male connectors is fully engaged to the protruding ridge on female connectors.

Repeat this procedure until all CONNEXION components are installed as shown on the electrical drawing.

CIRCUIT EXPANSION CAPABILITY (CATALOG NUMBERS PDCS42222, PDCS42231 & PDCS332):

For all other ZDB catalog numbers, consult the manufacturer.

CAUTION: Adhere to all cautions and warnings.

1. Disconnect all power sources from the ZDB.
2. Remove the ZDB lid by unscrewing the four corner screws that secure the lid in place.
3. To double the number of circuits, per Tables 1 and 2 below, remove the six (6) Line and Neutral Jumper Wires ***A*** from between the two (2) Main Terminal Blocks ***B*** and ***C*** on the DIN rails (see Terminal Block Designations Diagram for your ZDB). **WARNING: Do not remove the green Ground Jumper Wire**. **Do not remove the Isolated Ground (IG) Jumper Wire unless separate isolated grounds are provided at the service panel**. Then provide a separate power feed for each of the two (2) Main Terminal Blocks ***B*** and ***C***.
4. To triple the number of circuits, per Tables 1 and 2 below, after removing the six (6) Line and Neutral Jumper Wires (Step 3 above), remove and discard all of the Line and Neutral Terminal Screw Assemblies ***D***, with yellow plastic surrounds, from between the individual terminal blocks of Main Terminal Block ***B*** on the LEFT side of the PDB (see Terminal Block Designations Diagram for your ZDB). **WARNING: Do not remove the green Ground Terminal Screw Assemblies**. **Do not remove the Isolated Ground (IG) Terminal Screw Assemblies unless separate isolated grounds are provided at the service panel**. Then provide two separate power feeds for Main Terminal Block ***B***, on the LEFT side of the PDB, one for each of the separated circuits. Provide a third, separate power feed for Main Terminal Block ***C*** on the RIGHT.
5. To quadruple the number of circuits, per Tables 1 and 2 below, after removing the six (6) Line and Neutral Jumper Wires ***A*** (Step 3 above), remove and discard all of the Line and Neutral Terminal Screw Assemblies ***D*** and ***E***, with yellow plastic surrounds, from between the individual terminal blocks of Main Terminal Blocks ***B*** and ***C*** on both the LEFT and RIGHT sides of the PDB (see Terminal Block Designations Diagram for your ZDB). **WARNING: Do not remove the green Ground Terminal Screw Assemblies**. **Do not remove the Isolated Ground (IG) Terminal Screw Assemblies unless separate isolated grounds are provided at the service panel**. Then provide two separate power feeds for the Main Terminal Block ***B***, on the LEFT side of the PDB, one for each of the separated circuits. Provide two separate power feeds for the Main Terminal Block ***C*** on the RIGHT, one for each of the separated circuits.
   CAUTION: Risk of electric shock. Verify correctness of wiring before powering circuits.
6. Properly label all circuits in the ZDB for future reference.
7. Refasten the lid of the ZDB using the four corner screws to secure the lid in place.
8. Install additional downstream delivery devices (RAFB's, FFB, etc) as needed.

TABLE 1: Number of Circuits Available for 4-2-2 Zone Distribution Boxes*				
Homerun Source Type	**1 Power Feed**	**2 Power Feeds**	**3 Power Feeds**	**4 Power Feeds**
120/208V Wye	4 Circuits	8 Circuits	12 Circuits	16 Circuits
120/240V Delta, Open Delta or Single Phase *	3 Circuits	6 Circuits	9 Circuits	12 Circuits

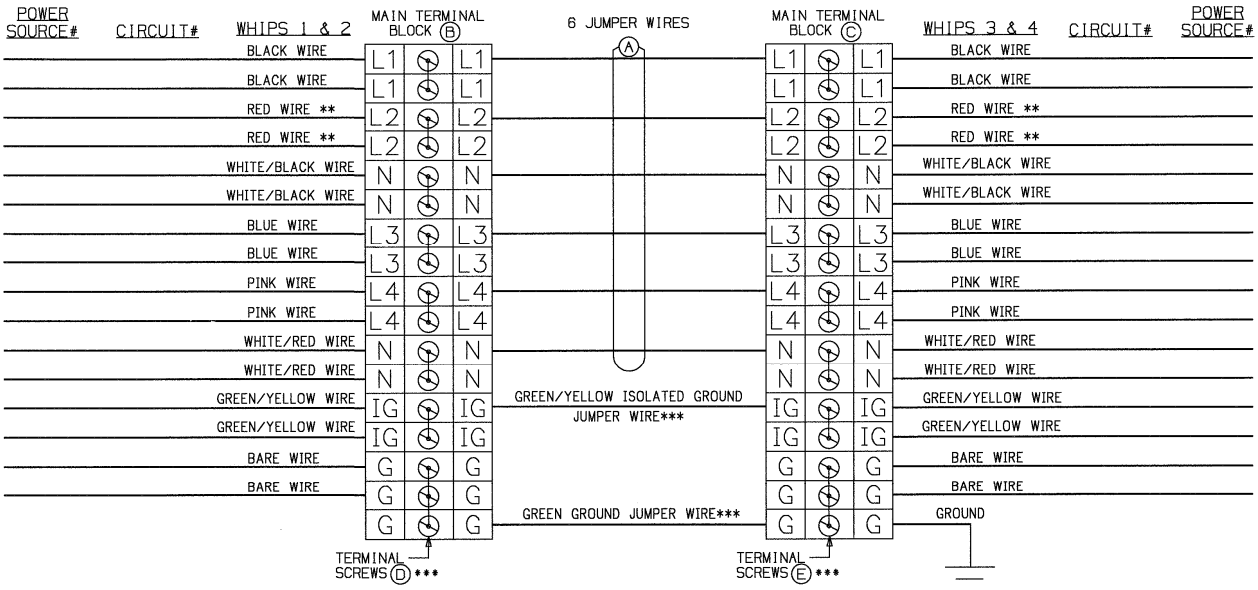
*** CAUTION: Do not power high leg (Red Wire, Line (See Terminal Block Wire Designations Diagram and Power Feed Connection Diagrams)) for Delta, Open Delta or Single Phase Circuits of any 4-2-2 Configuration.**

TABLE 2: Number of Circuits Available for 3-3-2 Zone Distribution Boxes				
Homerun Source Type	**1 Power Feed**	**2 Power Feeds**	**3 Power Feeds**	**4 Power Feeds**
120/208V Wye	3 Circuits	6 Circuits	9 Circuits	12 Circuits
120/240V Delta, Open Delta or Single Phase	3 Circuits	6 Circuits	9 Circuits	12 Circuits

TERMINAL BLOCK WIRE DESIGNATIONS DIAGRAM FOR 4/2/2 ZONE DISTRIBUTION BOX PDCS42222
(2+2) WIRING CONFIGURATION*

ZONE BOX#

COMPONENT RATING: 20A AT 120/208VAC OR 120/240VAC
8-WIRES (4 HOTS MAXIMUM**, 2 NEUTRALS, 2 GROUNDS)

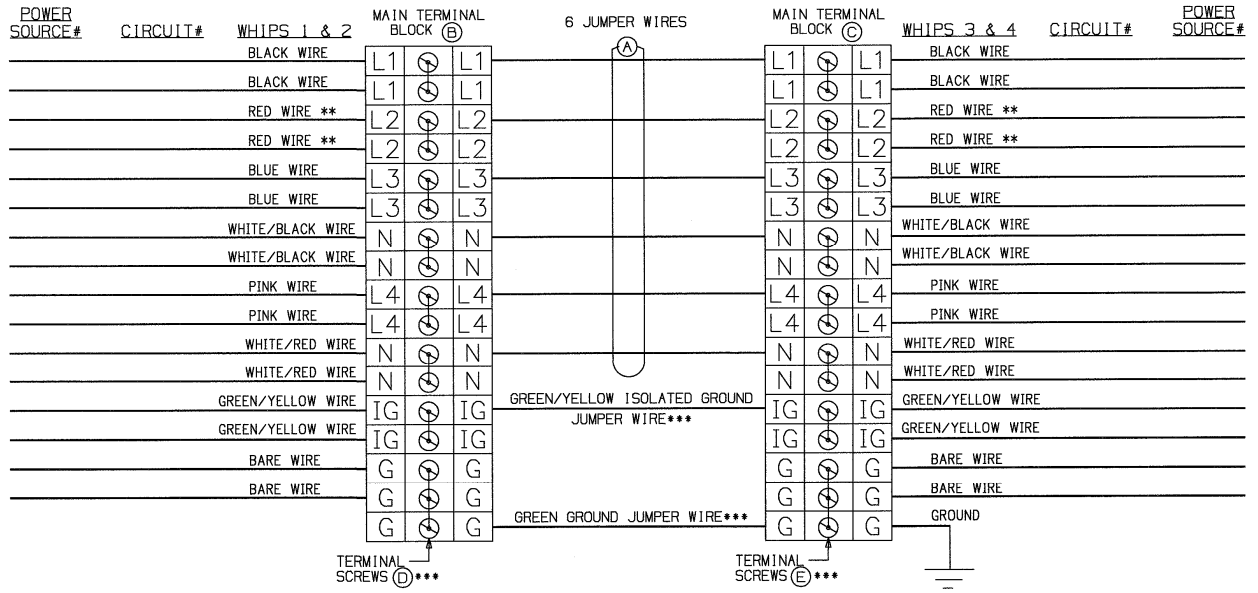


*TWO NORMAL GROUND CIRCUITS SHARE A #10 AWG NEUTRAL. TWO ISOLATED GROUND CIRCUITS SHARE A #10 AWG NEUTRAL.
**DO NOT SUPPLY POWER TO THE HIGH LEG (RED WIRES, LINE (L2)) WITH DELTA, OPEN DELTA OR SINGLE PHASE SUPPLY SOURCES. ONLY POWER RED WIRES WITH 120/208VAC WYE SUPPLY SOURCES.
***DO NOT REMOVE THE GREEN (NORMAL) GROUND JUMPER WIRE OR THE GREEN (NORMAL) GROUND TERMINAL SCREW ASSEMBLIES. DO NOT REMOVE THE ISOLATED GROUND (IG) JUMPER WIRE OR THE IG TERMINAL SCREW ASSEMBLIES UNLESS SEPARATE ISOLATED GROUNDS ARE PROVIDED AT THE SERVICE PANEL.

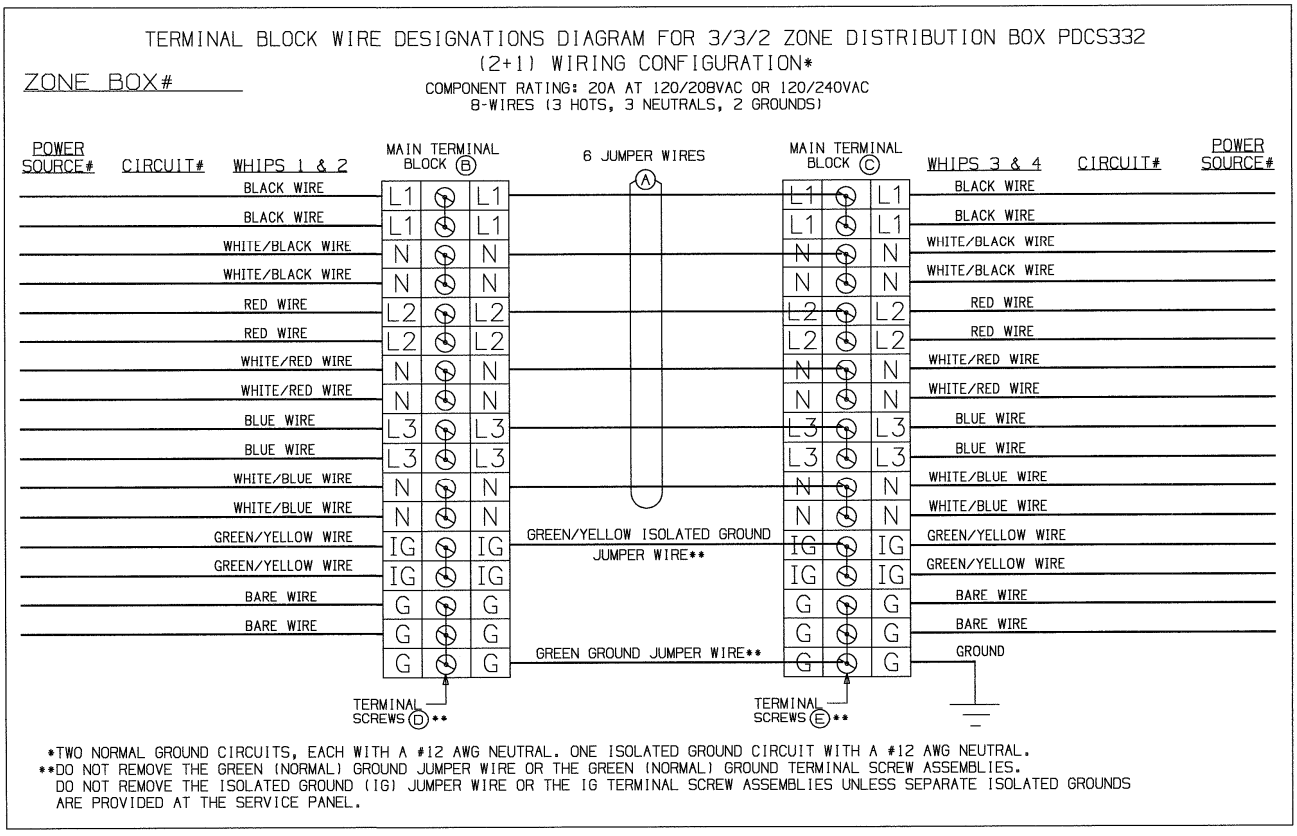
TERMINAL BLOCK WIRE DESIGNATIONS DIAGRAM FOR 4/2/2 ZONE DISTRIBUTION BOX PDCS42231
(3+1) WIRING CONFIGURATION*

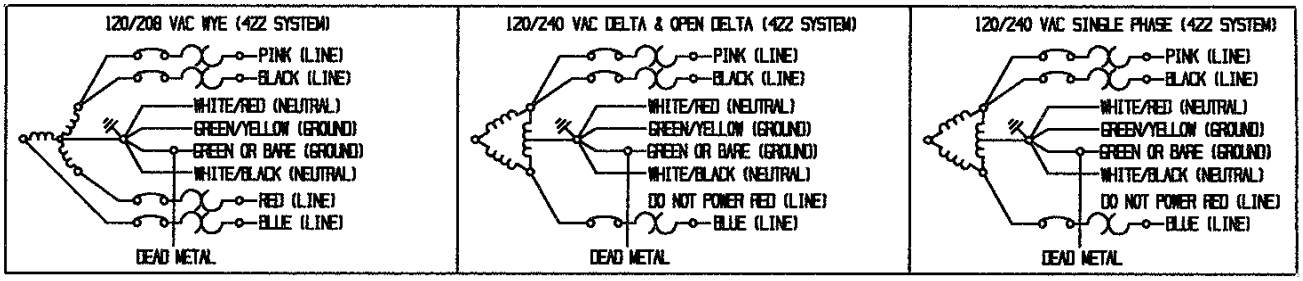
ZONE BOX#

COMPONENT RATING: 20A AT 120/208VAC OR 120/240VAC
8-WIRES (4 HOTS MAXIMUM**, 2 NEUTRALS, 2 GROUNDS)

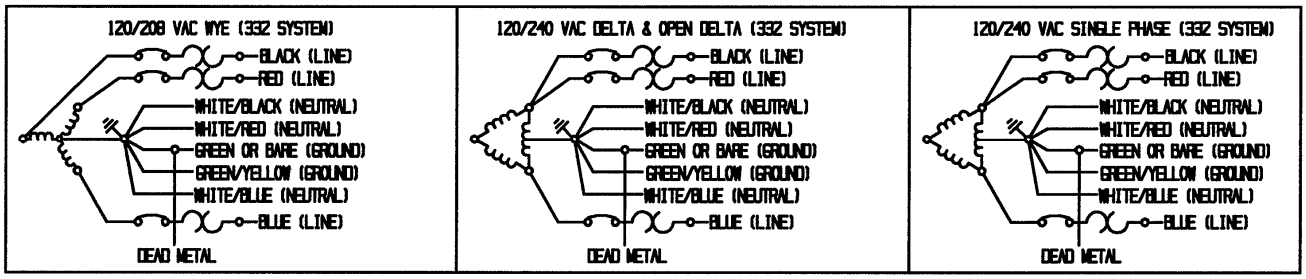


*THREE NORMAL GROUND CIRCUITS SHARE A #10 AWG NEUTRAL. ONE ISOLATED GROUND CIRCUIT WITH A #10 AWG NEUTRAL.
**DO NOT SUPPLY POWER TO THE HIGH LEG (RED WIRES (LINE (L2) WITH DELTA, OPEN DELTA OR SINGLE PHASE SUPPLY SOURCES. ONLY POWER RED WIRES WITH 120/208VAC WYE SUPPLY SOURCES.
***DO NOT REMOVE THE GREEN (NORMAL) GROUND JUMPER WIRE OR THE GREEN (NORMAL) GROUND TERMINAL SCREW ASSEMBLIES. DO NOT REMOVE THE ISOLATED GROUND (IG) JUMPER WIRE OR THE IG TERMINAL SCREW ASSEMBLIES UNLESS SEPARATE ISOLATED GROUNDS ARE PROVIDED AT THE SERVICE PANEL.



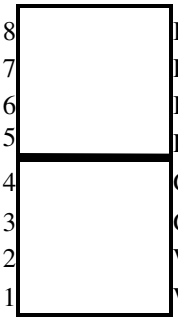


Power Feed Connection Diagrams for the 422 Zone Distribution System



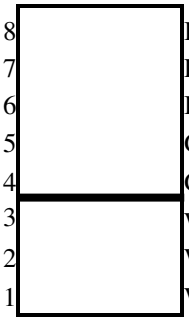
Power Feed Connection Diagrams for the 332 Zone Distribution System

422 CONFIGURATION



8 BLACK (LINE)
7 RED (LINE)
6 BLUE (LINE)
5 PINK (LINE)
4 GREEN OR BARE (GROUND)
3 GREEN/YELLOW (ISO. GROUND)
2 WHITE/BLACK (NEUTRAL)
1 WHITE/RED (NEUTRAL)

332 CONFIGURATION



8 BLACK (LINE)
7 RED (LINE)
6 BLUE (LINE)
5 GREEN OR BARE (GROUND)
4 GREEN/YELLOW (ISO. GROUND)
3 WHITE/BLACK (NEUTRAL)
2 WHITE/RED (NEUTRAL)
1 WHITE/BLUE (NEUTRAL)

Pin Positions in Extender Cable Connectors

Wiring Device-Kellems
Hubbell Incorporated (Delaware)
Shelton, CT 06484
1-800-288-6000
www.hubbell-wiring.com

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