



# Power Base AI

Technical Sheets – June 2016



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# Modular Electrical System

## System Overview

Haworth's Power Base AI modular electrical system provides a flexible, reconfigurable power distribution infrastructure that can support any furniture layout or office configuration.

In a typical Power Base™ AI application, home-run Metal Clad (MC) cable is connected at the electrical closet and routed to separate zones on the floor or ceiling, terminating at a Zone Distribution Box or Infeed Harness connector. Power is then distributed within each zone using plug-and-play cables and connectors.

Jumpers and Splitters are used to feed Service Modules or furniture systems' Infeed Harnesses. Service Modules can move as office locations move and Jumpers can be easily repositioned. In addition, the Power Base AI system can be expanded with additional Jumpers and Service Modules.

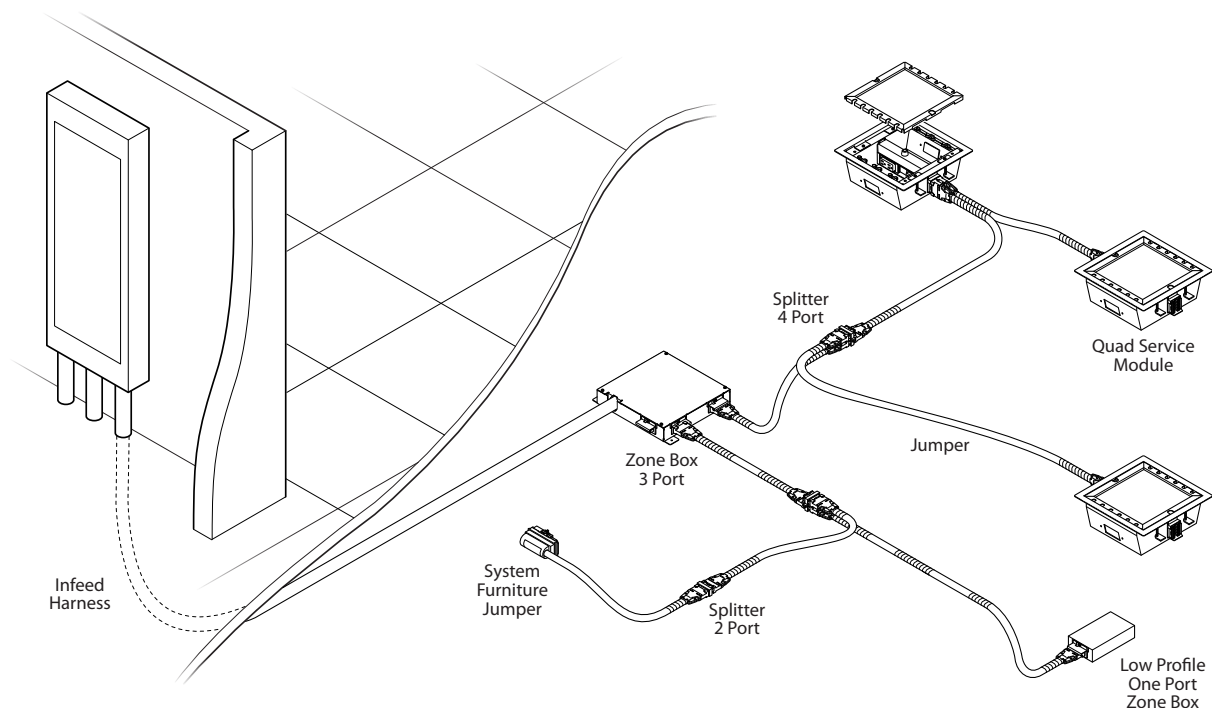
The 2 and 3 port Distribution Box is available with factory installed pre-wired conduits with three sets of circuits up to 125' and two sets of circuits up to 200'. A field-wired Zone Distribution Box is also available that can be used with locally supplied MC cable or conduit.

The Power Base AI Single Port Zone Box can be used with locally supplied MC cable to begin a zone or to transition to "hard-wire" conduit.

The Infeed Harness consists of an oval flexible metal cable terminated on one end with a modular connector and on the other with an 8-conductor pigtail. Available in lengths of up to 100', the Infeed Harness offers an alternative to a Single Port Zone Box. It can also be used as a transition from the Power Base AI system to a hardwired junction box.

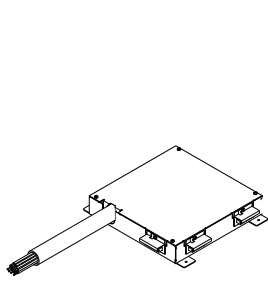
Power is routed and branched within each zone using flex conduit Jumpers and Splitters. Jumpers are fully populated with eight conductors, so all circuits are available for future moves. Jumpers are available in lengths up to 50'.

The Power Base AI Service Module provides floor-mounted access to power and voice/data. Available in either dual or quad receptacle configurations. Service Modules use snap-in receptacles; snap-in receptacles take circuit assignment out of the critical path of the construction schedule and allow fast change of circuit assignments. Service Modules can be connected to multiple jumpers, allowing for easy branching or daisy chaining within a zone.

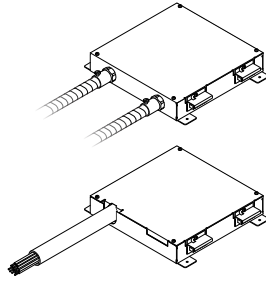


# Power Base AI Product Family

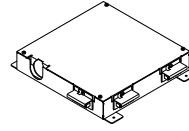
## Zone Distribution Boxes



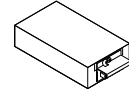
Pre-Wired 3-Port  
Zone Distribution Box



Pre-Wired 2-Port  
Zone Distribution Box

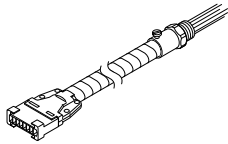


Field-Wired 3-Port  
Zone Distribution Box



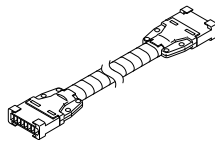
Field-Wired 1-Port  
Zone Distribution Box

## Infeed Harness



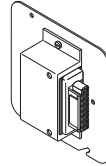
15', 10', 25', 50', 75',  
or 100' Long

## Jumper/ Extended Cable



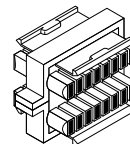
5', 10', 15', 20', 35',  
or 50' Long

## Wall Feed

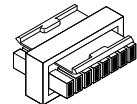


Wall Feed

## Splitters/Circuit Distributors

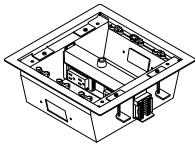


4-Port Splitter

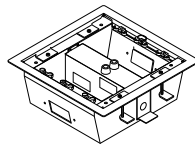


2-Port Splitter

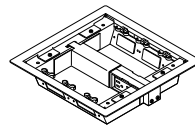
## Service Modules/Floor Boxes



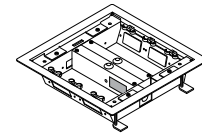
Quad Service Module



Quad Service Module  
(Field-Wired)

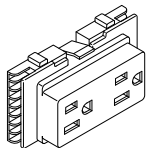


Dual Service Module

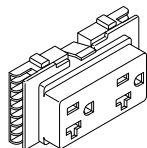


Dual Service Module  
(Field Installed)

## Modular Receptacles

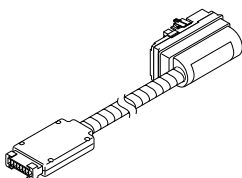


15 Amp Duplex

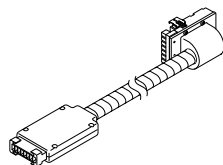


20 Amp Duplex

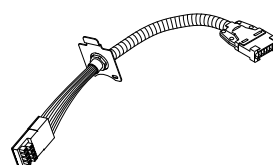
## Furniture Modular Base Feeds



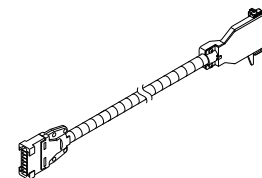
PREMISE®, Moxie®, and  
Compose™ Floor Infeed



PLACES®, UniGroup®,  
and Tactics® Floor Infeed

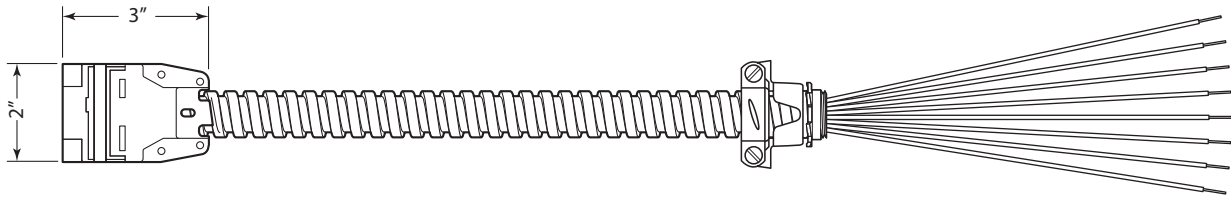


RACE® Single  
Harness Connector



Underfloor to Panel  
"Hidden" Infeed

## Infeed Harness



### Overview

- Provides transition from building electrical system to modular power distribution system.
- Can be used with a 4-Port Splitter to create a zone distribution point when a full Zone Distribution Box is not needed.
- Can also be used to bring power from the Power Base AI system to non-modular components.
- Available in either 3-Circuit/separate neutral or 4-Circuit/shared neutral 8-Wire configurations.

## Infeed Harness

### General Specifications

- 20 Amp 120V/208Y or 120V/240V 60 Hz.
- Includes flexible metal conduit with female modular connector and conduit fitting.
- Provided with 12 AWG wire (10 AWG for shared neutral) up to 50 feet, "T" version is 50', 75', or 100' available with 10 AWG wire. Excess length can be coiled.
- Conduit fitting for 1/2" knockout. Exception: "T" version uses fitting for 3/4" knockout.
- Infeed can connect directly to Service Modules; Splitter required to connect to Jumpers, base feeds, and modular wall connectors.
- 3-Circuit system provides three phase conductors, three neutral conductors, and two ground conductors.
- 4-Circuit system provides four phase conductors, one shared neutral conductor, one isolated neutral conductor, and two ground conductors.

### Listings

- UL listed manufactured wiring system rated for 20 Amp 120V/208Y or 120/240V 60 Hz and for use in "other air handling spaces" per NEC Article 604.
- UL listed manufactured wiring system per UL 183 and CSA standard C22.2 No 203-M.

### Infeed Harness Specification

- Available cable lengths: 15', 10', 25', 50', 75', and 100'
- 8-Wire/3-Circuit or 8-Wire/4-Circuit.

### Applicable Codes

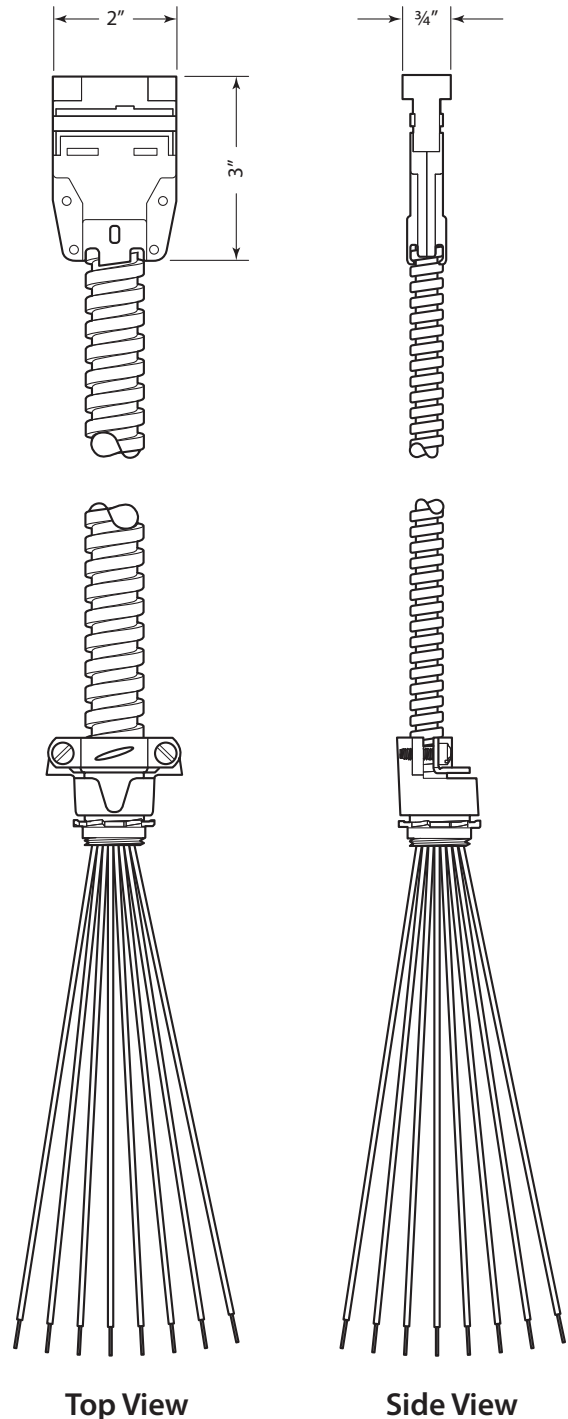
- Infeed harness must be installed in accordance with the National Electrical Code (NEC), Canadian Electrical Code (CEC), and local electrical codes.

### Complementary Products

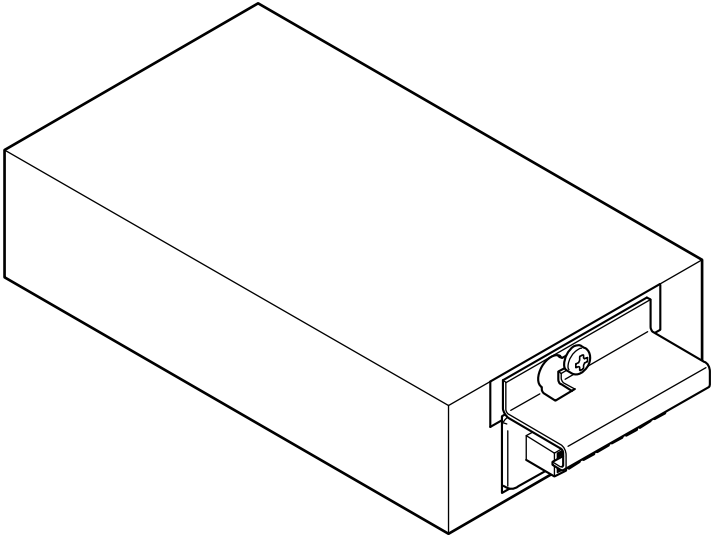
- Haworth TecCrete
- Haworth Walls, Work Systems, and Freestanding Furniture

### Typical Configuration

- Power distribution under an access floor or in a ceiling.



# 1-Port Zone Distribution Box



### Overview

- Provides transition from building electrical system to modular power distribution system.
- Can be used with MC cable or conduit from the electrical closet to begin a power zone.
- Can also be used to bring power from the Power Base AI system to non-modular components.
- Provides one female modular connector mounted in junction box.
- Available in either 3-Circuit/separate neutral or 4-Circuit/shared neutral 8-Wire configurations.
- Field wired by licensed electrician.
- Fits below a 3" high or higher TecCrete floor.

# 1-Port Zone Distribution Box

## General Specifications

- 20 Amp 120V/208Y or 120/240V 60 Hz.
- 16 gauge galvanized steel construction (see schematic).
- Zone Distribution Box supplied by Haworth, installed by a licensed electrician.
- Box shall be secured to building as per NEC, CEC, and local electrical codes.
- 3-Circuit system provides three phase conductors, three neutral conductors, and two ground conductors.
- 4-Circuit system provides four phase conductors, one shared neutral conductor, one isolated neutral conductor, and two ground conductors.

## Listings

- UL listed manufactured wiring system rated for 20 Amp 120V/208Y or 120/240V 60 Hz and for use in “other air handling spaces” per NEC Article 604.
- UL listed manufactured wiring system per UL 183 and CSA standard C22.2 No 203-M.  
1-Port Distribution Box Specification
- Includes 3” x 7” x 1.75” junction box with one female modular connector mounted to junction box. Junction box has two concentric knockouts for 1/2” and 3/4” conduit fittings.
- 8-Wire/3-Circuit or 8-Wire/4-Circuit.

## Applicable Codes

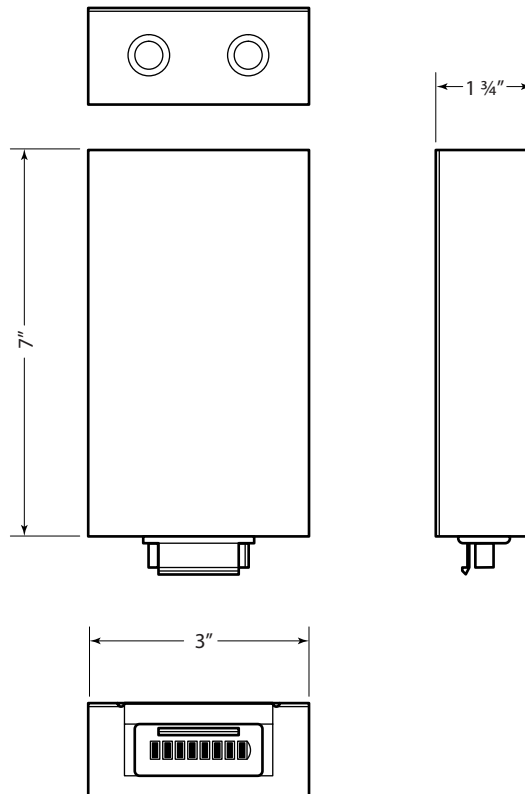
- Infeed harness must be installed in accordance with the National Electrical Code (NEC) , Canadian Electrical Code (CEC), and local electrical codes.
- May be used as a Junction Box

## Complementary Products

- Haworth TecCrete
- Haworth Walls, Work Systems, and Freestanding Furniture

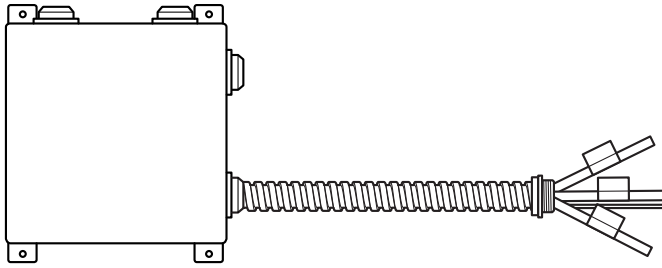
## Typical Configuration

- Power distribution under an access floor.

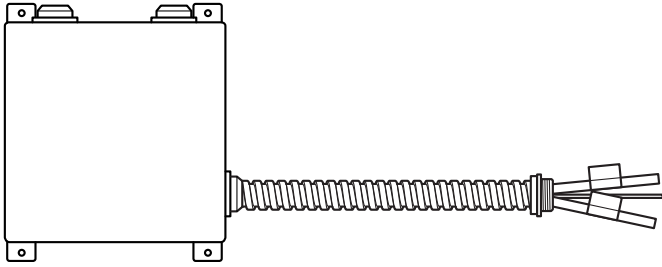




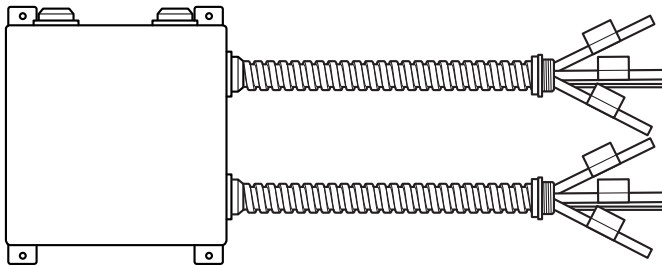
# Zone Distribution Box



3-Port Zone Distribution Box



2-Port Zone Distribution Box



Field-Wired Zone Distribution Box

## Overview

- Provides transition from building electrical system to modular power distribution system.
- Can be used with MC cable or conduit from the electrical closet to begin a power zone.
- Can also be used to bring power from the Power Base AI system to non-modular components.
- Provides one female modular connector mounted in junction box.
- Available in either 3-Circuit/separate neutral or 4-Circuit/shared neutral 8-Wire configurations.
- Field wired by licensed electrician.
- Fits below a 3" high or higher TecCrete floor.

## Zone Distribution Box

### General Specification

- 20 Amp 120V/208V or 120/240V 60 Hz.
- 16 gauge galvanized steel construction (see schematic).
- Zone Distribution Box supplied by Haworth, installed by a licensed electrician.
- Box shall be secured to building as per NEC, CEC, and local electrical codes.
- Modular assemblies are available with a pre-wired conduit feed according to specified configurations. The following are available:
  - The 3-Circuit 3-Port Zone Box delivers three circuits to each port for up to nine circuits total.
  - The 3-Circuit 2-Port Zone Box delivers three circuits to each port for up to six circuits total.
  - The 4-Circuit 3-Port Zone Box delivers four circuits to each port for up to twelve circuits total.
  - The 4-Circuit 2-Port Zone Box delivers four circuits to each port for up to eight circuits total.

### Listings

- UL listed manufactured wiring system rated for 20 Amp 120V/208Y or 120/240V 60 Hz and for use in "other air handling spaces" per NEC Article 604.
- UL listed manufactured wiring system per UL 183 and CSA standard C22.2 No 203-M.

### Specification: 3-Port Zone Distribution Box

- Includes pre-wired flexible metal conduit feed cable attached to 12" x 12" box, lid, and three sets of circuits; each set of circuits is connected to a female modular power connector mounted to the box.
- Power infeed is a single 1 1/4" flexible conduit, 8 AWG wire in lengths of 150' and 200'.

#### Specification: 2-Port Zone Distribution Box

- Includes pre-wired flexible metal conduit feed cable attached to 12" x 12" box, lid, and two sets of circuits; each set of circuits is connected to a female modular power connector mounted to the box.
- Power infeed is a single 1 1/4" flexible conduit, 8 AWG wire in lengths of 150' and 200'.

### Specification: Field-Wired 3-Port Zone Distribution Box

- Includes 12" x 12" box, lid, terminal blocks wired to three female modular power connectors. Boxes are available as field wired, for use with field supplied rigid conduit or MC cable. Box includes six 1/2" or 3/4" concentric knockouts in any combination.

### Applicable Codes

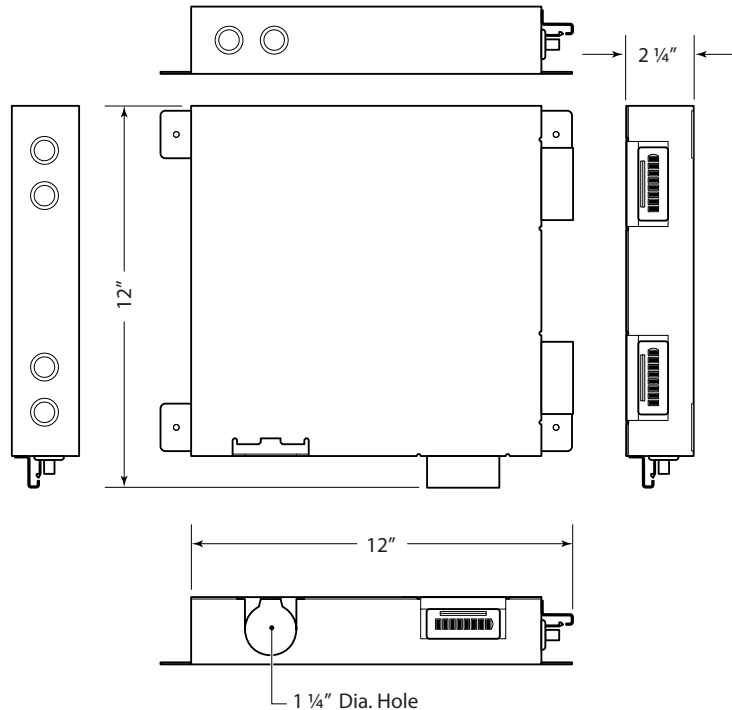
- Zone Distribution Boxes must be installed in accordance with the NEC, CEC, and local electrical codes.

### Complementary Products

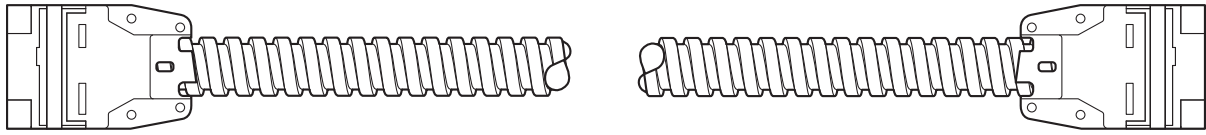
- Haworth TecCrete
- Haworth Walls, Work Systems, and Freestanding Furniture

### Typical Configuration

- Power distribution under an access floor.



## Jumpers/Extender Cables



### Overview

- Plug-and-play interconnection between Zone Distribution Boxes, Service Modules, Splitters, Haworth furniture, and wall in-feeds.
- Available in lengths up to 50 feet.
- Available in either 3-Circuit/separate neutral or 4-Circuit/shared neutral 8-Wire configurations.

## Jumpers/Extender Cables

### General Specification

- 20 Amp 120V/208Y or 120V/240V 60 Hz.
- Constructed with 12 AWG wire (10 AWG for shared neutral). Exception: 25' and 50' versions use 10 AWG wire.
- Flexible conduit with male modular connectors at both ends. Connects directly to zone box or service module. Use Service Module or Splitter to connect up to four Jumpers or base feeds. Excess length can be coiled under the floor.
- 3-Circuit system provides three phased conductors, three 3-Circuit neutral conductors, and two ground conductors.
- 4-Circuit system provides four phase conductors, one shared neutral conductor, one isolated neutral conductor, and two ground conductors.

### Listings

- UL listed manufactured wiring system rated for 20 Amp 120V/208Y or 120/240V 60 Hz and for use in "other air handling spaces" per NEC Article 604.
- UL listed manufactured wiring system per UL 183 and CSA standard C22.2 No 203-M.

### Jumper Specification

- Available cable lengths: 5', 10', 15', 20', 25', 35', and 50'.
- 8 -Wire/3-Circuit or 8-Wire/4-Circuit.
- Available in #10 or #12 gauge.

### Applicable Codes

- Jumper must be installed in accordance with the NEC, CEC, and local electrical codes.

### Complementary Products

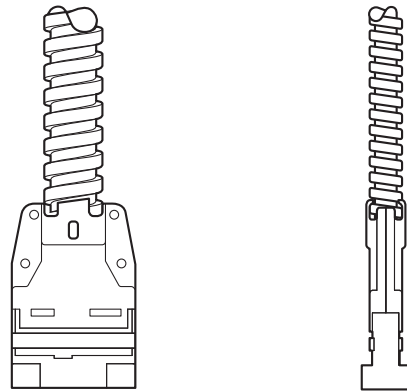
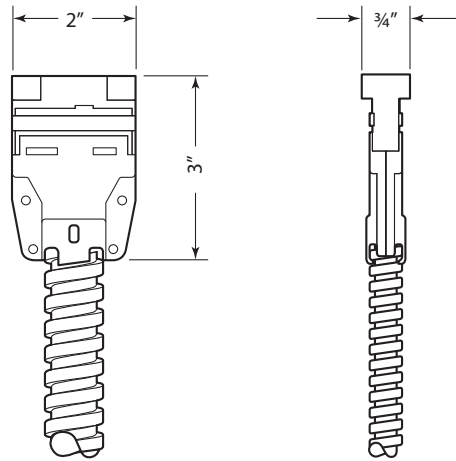
- Haworth TecCrete
- Haworth Walls, Work Systems, and Freestanding Furniture

### Typical Configuration

- Power distribution under an access floor or in a ceiling.



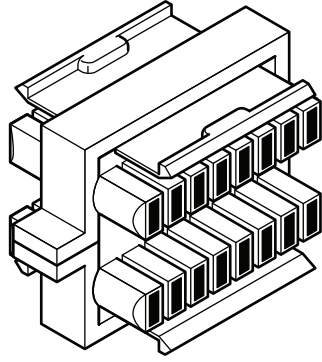
Cannot connect jumper to each other. Use splitter to join up to 4 jumpers.



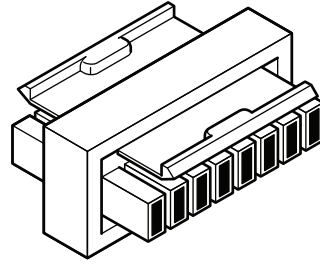
Top View

Side View

## Slitter/Circuit Distributor



4-Port Splitter



2-Port Splitter

### Overview

- Available in 4-Port and 2-Port configurations.
- 4-Port Splitter connects up to four Jumpers, allowing for branching of power within each zone.
- 2-port Splitter connects two Jumpers.
- 4-Port Splitter can be used with Infeed Harness to begin a zone distribution point.
- Connectors are color coded and have a polarity key system to prevent connection between 3- and 4-Circuit components.
- Available in either 3-Circuit/separate neutral or 4-Circuit/shared neutral 8-Wire configurations.

## Slitter/Circuit Distributor

### General Specification

- 20 Amp 120V/208Y or 120V/240V 60 Hz.
- 3-Circuit/separate neutral or 4-Circuit/shared neutral 8-Wire configurations.
- 4-Port device (one female port receives circuits/three female ports distribute circuits out).
- 2-Port device (one female port receives circuits/one female port distributes circuits out).
- Connectors are color coded and have a polarity key system to prevent connection between 3- and 4-Circuit components.
- Eight copper alloy busbars in polymeric enclosure provide two or four female connections with integral latching system.

### Listings

- UL listed manufactured wiring system rated for 20 Amp 120V/208Y or 120/240V 60 Hz and for use in "other air handling spaces" per NEC Article 604.
- UL listed manufactured wiring system per UL 183 and CSA standard C22.2 No 203-M.

### Jumper Specification

- Specify 3-Circuit or 4-Circuit configuration

### Applicable Codes

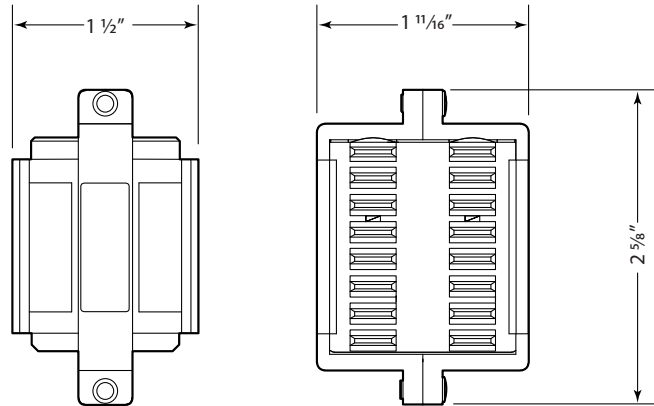
- Splitter must be installed in accordance with the NEC, CEC, and local electrical codes.

### Complementary Products

- Haworth TecCrete
- Haworth Walls, Work Systems, and Freestanding Furniture

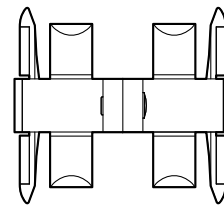
### Typical Configuration

- Power distribution under an access floor or in a ceiling.



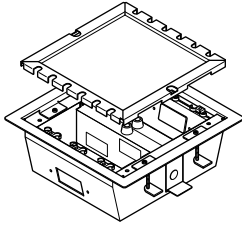
Plan View

Front View

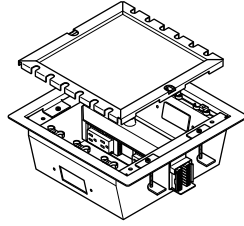


Side View

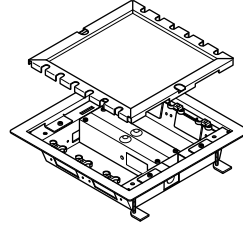
## Service Modules



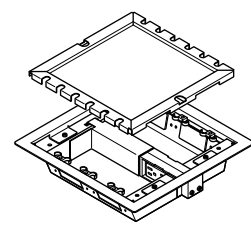
Quad Service Module  
Field-Wired



Quad Service Module  
Modular



Dual Service Module  
Field-Wired



Dual Service Module  
Modular

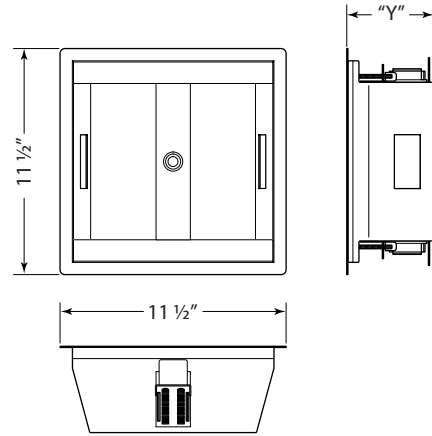
### Overview

- Service Modules provide in-floor power and voice/data access to users.
- Quad and Dual Service Module power block accepts modular snap-in receptacles allowing quick change of circuit assignments.
- Modular connectors have integral latching system for easy installation and quick reconfiguration.
- Modular connectors are color coded and have a polarity key system to prevent connection between 3- and 4-Circuit components.
- Quad Service Module has four ports, Dual Service Module has two ports, so multiple modules can be easily daisy-chained.
- Service Modules can be used with infeed harness to begin a zone distribution point.
- Hinged steel lid has a durable powdercoat finish and includes recess to receive carpet insert.
- Available in either 3-Circuit/separate neutral or 4-Circuit/shared neutral configurations.
- Quad Service Module includes two data openings for mounting furniture info plates or single gang data plates for use with all major telecommunications connector systems.
- Dual Service Module includes four openings for mounting furniture info plates or single gang data plates for use with all major telecommunications connector systems.

## Service Modules

### General Specification

- 20 Amp 120V/208Y or 120/240V 60 Hz.
- Available in 3" & 2½" deep 2-gang box or 4½" deep 4-gang box.
- 16 gauge galvanized steel construction.
- Durable powdercoat finish on lid and trim ring.
- Hinged lid with recess to accept carpet inlay (carpet by Others).
- "Indented" finger pull handle.
- Specify 15A or 20A modular receptacles separately.
- Includes openings (2.71" x 1.38") for furniture info plates.
- Each opening has a knock out to accept a single gang data plate.
- Data plate or furniture info plate provided by Others.
- Cords and cables may exit 12 small ports in lid while lid is flush to the floor.
- Mounts in 10½" x 10½" opening in raised floor tile.



### Listings

- UL listed manufactured wiring system rated for 20 Amp 120V/208Y or 120/240V 60 Hz and for use in "other air handling spaces" per NEC Article 604.
- UL listed manufactured wiring system per UL 183 and CSA standard C22.2 No 203-M.

Floor Box	"Y"
Quad Service Module	4 ¾"
Dual Service Module	3" & 2 ½"

### Quad Service Module Specification

- Includes steel box with modular connector for up to four modular duplex receptacles and an opening for two furniture info plates. Each opening has a knockout to accept a single gang data plate.
- Power connections on outside of box may be used in place of Splitter to join up to four Jumpers. Female connector has integral latching system.
- Two furniture info plate openings.

### Dual Service Module Specification

- Includes steel box with modular connector for up to two modular duplex receptacles and openings for four furniture info plates. Each opening has a knockout to accept a single gang data plate.
- Power connections may be used in place of Splitter to join up to two Jumpers. Female connector has integral latching system.
- Four furniture info plate openings.

### Field Wired Service Module Specification

- Includes steel box with junction box for hardwiring of Decora™ style duplex receptacles and conduit (not supplied). Quad service module can accept up to four duplex receptacles. Dual service module can accept two receptacles. Quad has two openings for furniture info plates; Dual has four openings for furniture info plates. Each opening has a knockout to accept a single gang data plate.

### Applicable Codes

- Zone Distribution Boxes must be installed in accordance with the NEC, CEC, and local electrical codes.

### Complementary Products

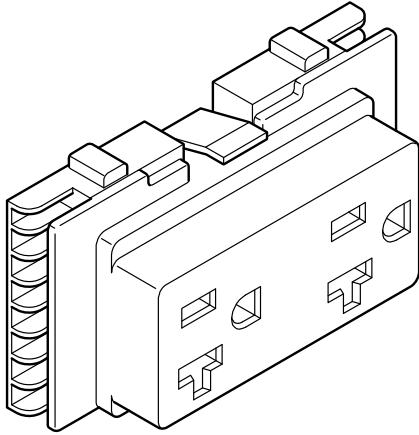
- Haworth TecCrete
- Haworth Walls, Work Systems, and Freestanding Furniture

### Typical Configuration

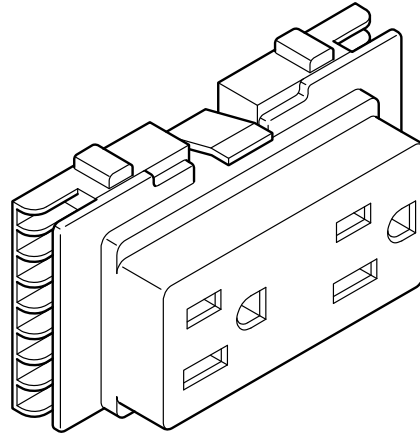
- Power distribution under an access floor or in a ceiling.



## Modular Receptacles



20 Amp Duplex  
Receptacle



15 Amp Duplex  
Receptacle

### Overview

- Modular 20 Amp or 15 Amp duplex receptacle with integral latching system.
- Fits into power block inside Service Module.
- Patented snap-in design allows Service Module receptacle circuit assignments to be changed on-the-fly, without tools.
- Takes circuit assignment out of critical path of construction schedule.
- Connectors are color coded and have a polarity key system to prevent connection between 3- and 4-Circuit components.
- Available with common ground or isolated ground configuration.

## Modular Receptacles

### General Specification

- 20 Amp 120V 60 Hz or 15 Amp 120V 60 Hz.
- 3+1 and 2+2 four-circuit wiring configurations require unique receptacles for circuit 3 access. Verify which wiring configuration is used in the application before ordering.
- Specify circuit assignment, amperage, ground type, and either 3-Circuit or 4-Circuit/3+1, 4-Circuit/2+2 configuration.
- Common ground receptacle face is black, Isolated ground receptacle face is rust red color.

### Listings: 20 Amp Duplex Modular Receptacle

- UL listed manufactured wiring system rated for 20 Amp 120V 60 Hz and for use in “other air handling spaces” per NEC Article 604.
- UL listed manufactured wiring system per UL 183 and CSA standard C22.2 No 203-M.

### Listings: 15 Amp Duplex Modular Receptacle

- UL listed manufactured wiring system rated for 15 Amp 120V 60 Hz and for use in “other air handling spaces” per NEC Article 604.
- UL listed manufactured wiring system per UL 183 and CSA standard C22.2 No 203-M.

### Applicable Codes

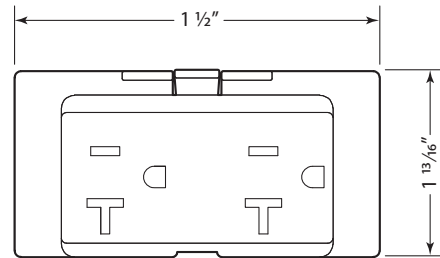
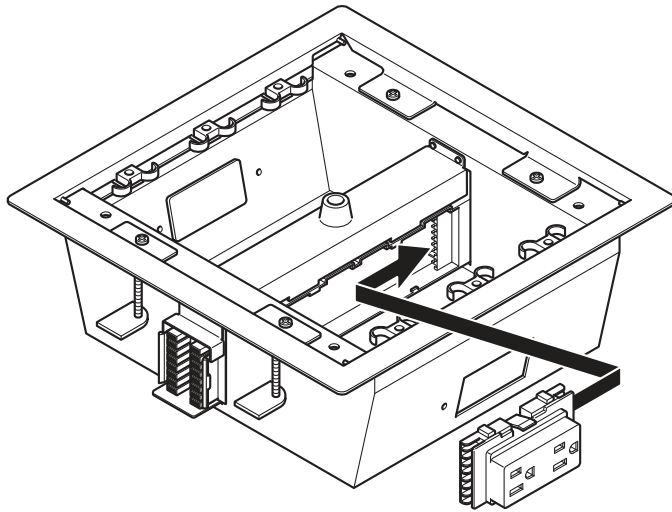
- Power Base AI system must be installed in accordance with the NEC, CEC, and local electrical codes.

### Complementary Products

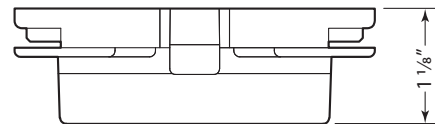
- Haworth TecCrete
- Haworth Walls, Work Systems, and Freestanding Furniture

### Typical Configuration

- Power distribution under an access floor.

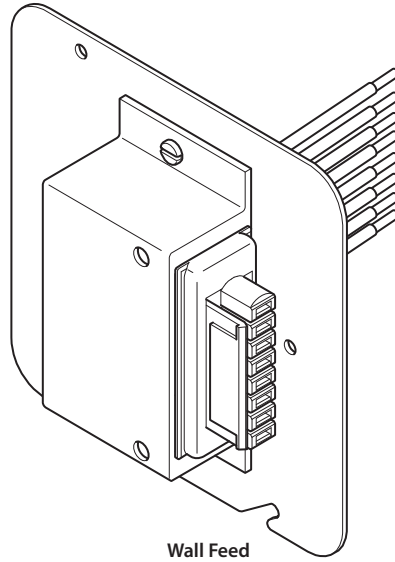


Plan View



Side View

## Wall Feed



### Overview

- Modular connector with latch mounted to 4-11/16" (119mm) steel plate
- Provides connection between field supplied 4-11/16" Junction box and modular power jumper
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations

## Wall Feed

### General Specification

- 20 Amp 120/208Y or 120/240V 60 Hertz rated circuits
- Constructed with 12 AWG wire (10 AWG for shared neutrals)
- Use to connect between 4-11/16" Junction box and modular power jumper
- 3 circuit system provides three phase conductors, three neutral conductors and two ground conductors
- 4 circuit system provides four phase conductors, two neutral conductors and two ground conductors

### Listings

- UL listed manufactured wiring system rated for 20A 120V/208Y or 120/240V 60Hz per NEC Article 604.
- UL listed per UL 183 and CSA standard C22.2 No 203-M.

### Applicable Codes

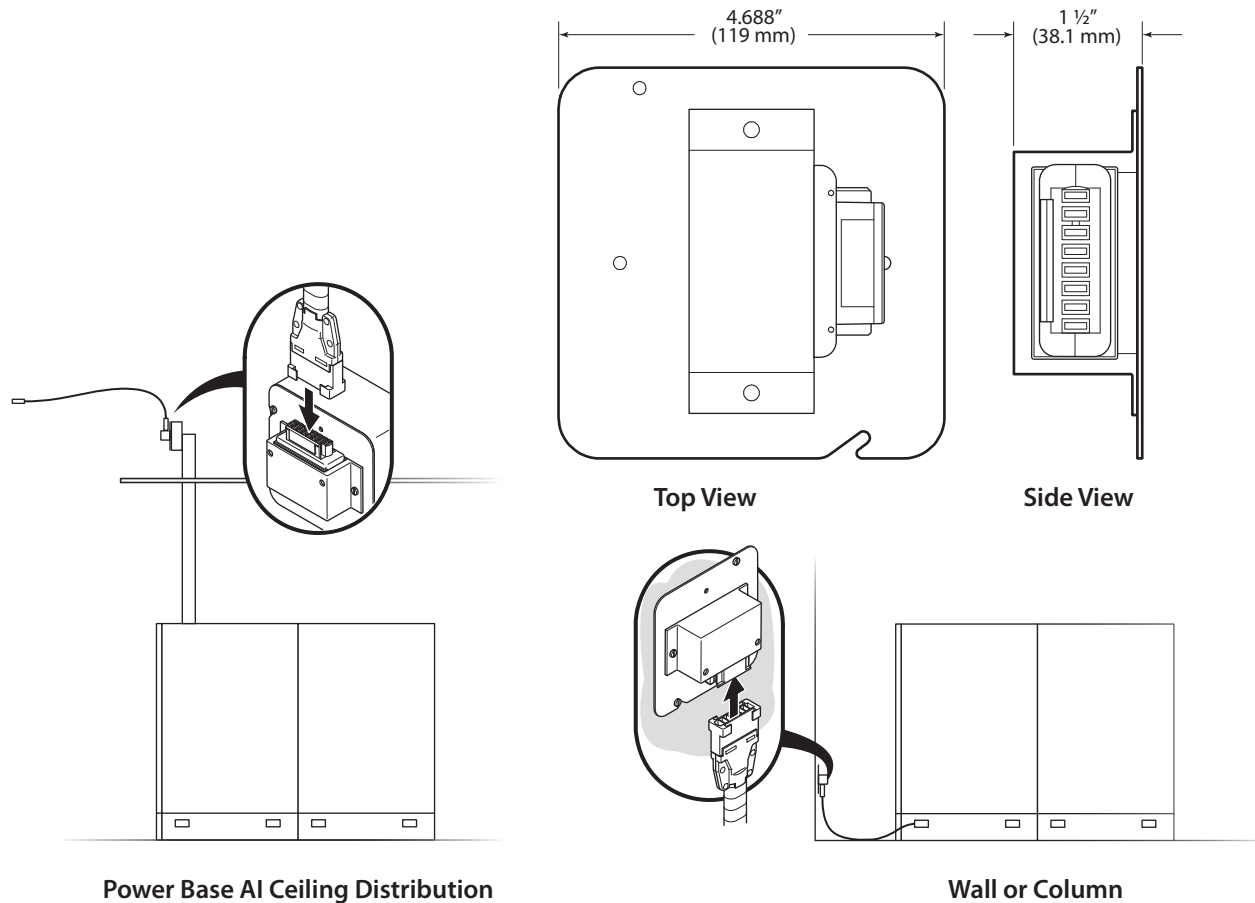
- Wall Feed must be installed in accordance with the NEC, CEC and local electrical codes

### Complementary Products

- Haworth Compose, PREMISE, and UniGroup panels systems, Tactics Tables or Enclose Moveable Walls
- Haworth Power Base AI modular power for use below raised access floors such as Haworth TecCrete or above ceilings

### Typical Configuration

- Transition from building hardwire and modular power
- Conversion of furniture top feed to modular connection

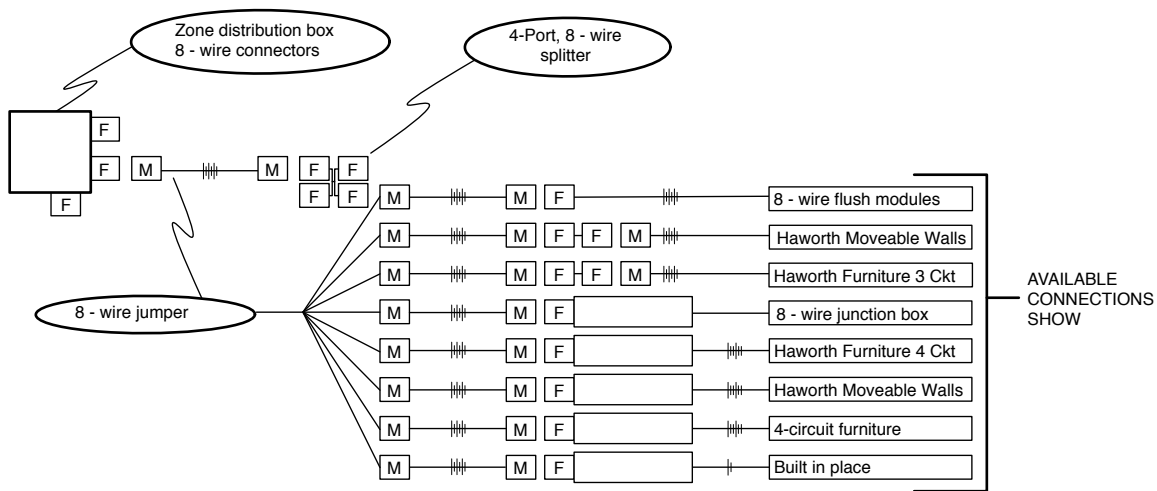


# 3-Circuit Schematics

## Overview

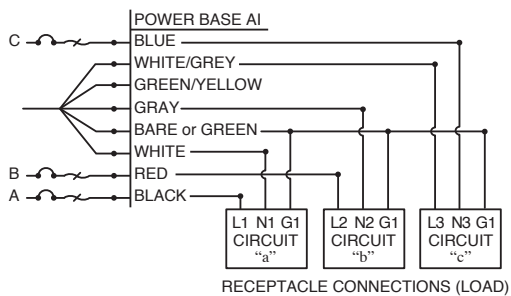
- For home-run wiring supplied by Others, note that, for full system capability, the cable from the electrical panel to the Zone Distribution Box must contain three ungrounded conductors, three neutral conductors, and two ground conductors.
- The home-run cable supplies individual circuits to the Zone Distribution Box.
- The termination of the grounding conductors determines which circuits are isolated ground circuits.

## System Schematic

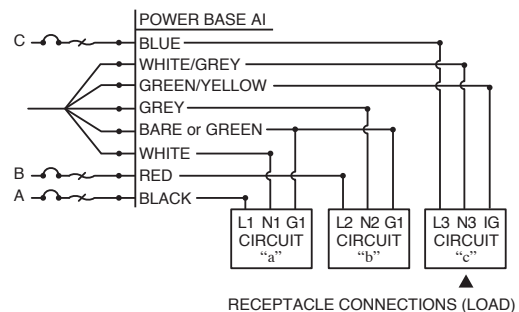


## 3 Circuit Wiring Diagram: 3-3-2 Configuration

CONNECTIONS TO A GROUNDED THREE-PHASE SYSTEM  
 RATING: 208Y/120V, 3-PH WYE  
 60Hz, 20 AMP (CSA 15 AMP)  
 WHITE RATED AT 20 AMP (CSA 20 AMP)  
 MULTIWIRE BRANCH CIRCUIT



Non-Isolated Ground Schematic



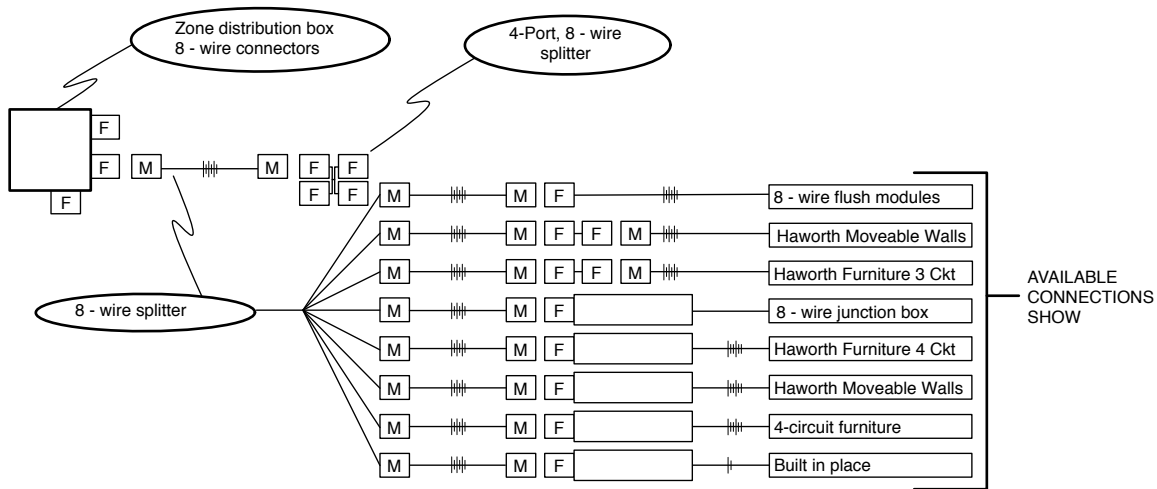
With Isolated Ground Schematic

## 4-Circuit Schematic: 2+2 Configuration

### Overview

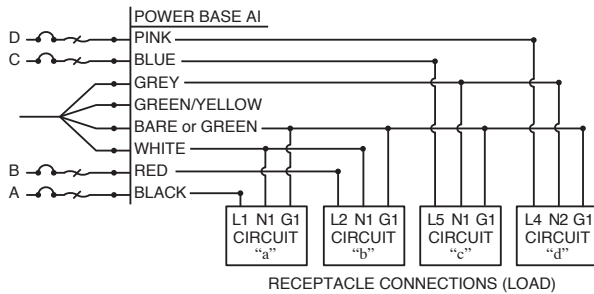
- For home-run wiring supplied by Others, note that, for full system capability, the cable from the electrical panel to the Zone Distribution Box must contain four ungrounded conductors, two neutral conductors of 10 AWG or greater, and two ground conductors.
- The home-run cable supplies individual circuits to the Zone Distribution Box.
- The termination of the grounding conductors determines which circuits are isolated ground circuits.

### System Schematic

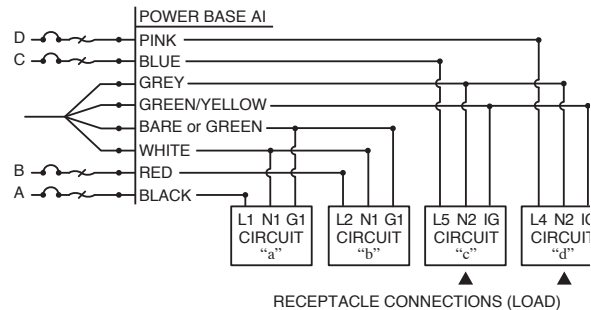


### 4 Circuit Wiring Diagram: 2+2 Configuration

CONNECTIONS TO A GROUNDED THREE-PHASE SYSTEM  
 RATING: 208Y/120V, 3-PH WYE  
 60Hz, 20 AMP (CSA 15 AMP)  
 WHITE RATED AT 35 AMP (CSA 26 AMP)  
 MULTIWARE BRANCH CIRCUIT



Non-Isolated Ground Schematic



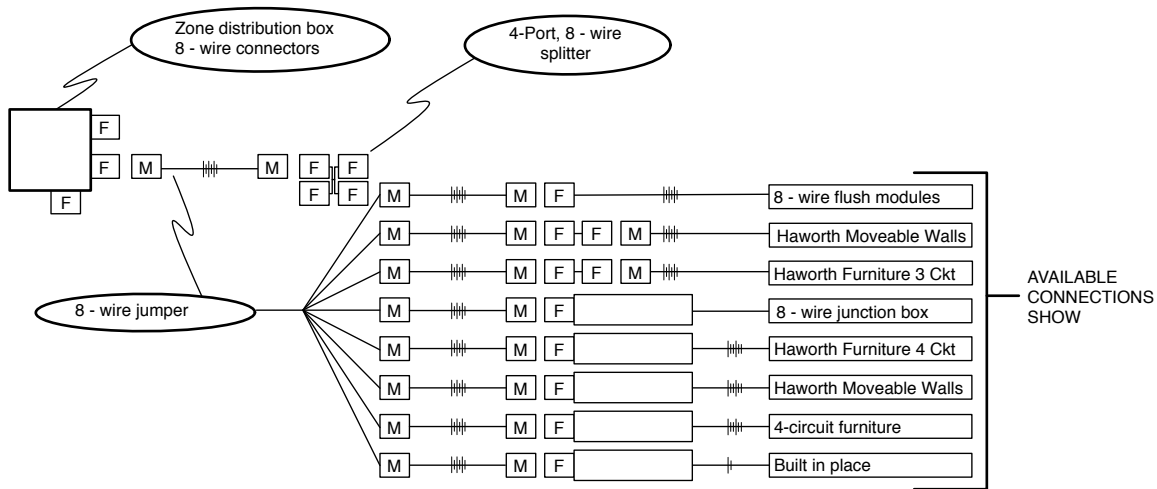
With Isolated Ground Schematic

## 4-Circuit Schematic: 3+1 Configuration

### Overview

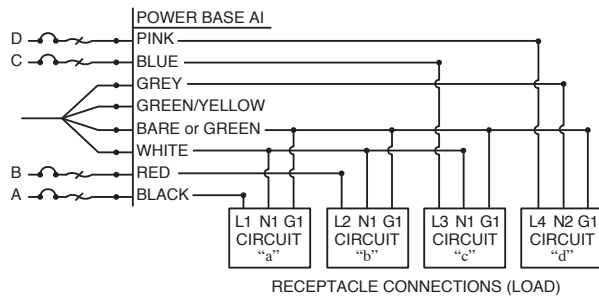
- For home-run wiring supplied by Others, note that, for full system capability, the cable from the electrical panel to the Zone Distribution Box must contain four ungrounded conductors, two neutral conductors of 10 AWG or greater, and two ground conductors.
- The home-run cable supplies individual circuits to the Zone Distribution Box.
- The termination of the grounding conductors determines which circuits are isolated ground circuits.

### System Schematic

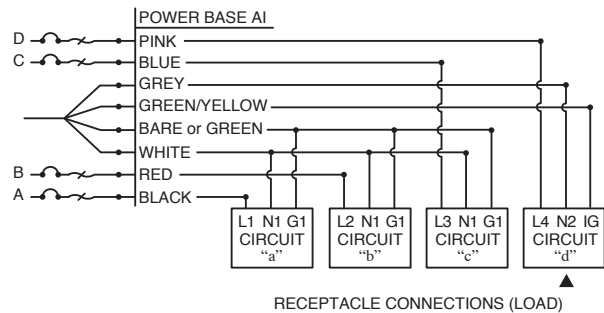


### 4 Circuit Wiring Diagram: 2+2 Configuration

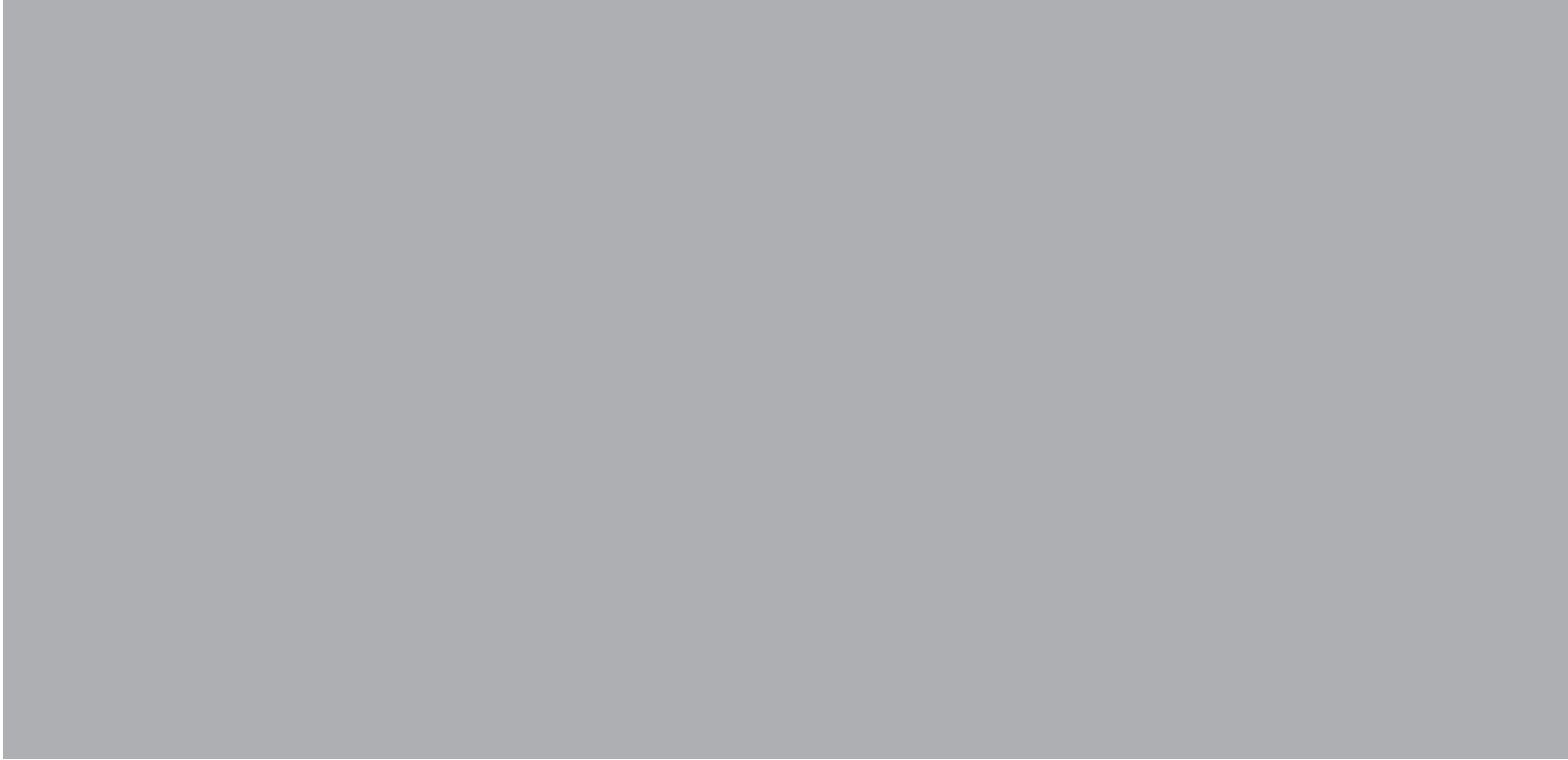
CONNECTIONS TO A GROUNDED THREE-PHASE SYSTEM  
 RATING: 208Y/120V. 3-PH WYE  
 60Hz, 20 AMP (CSA 15 AMP)  
 WHITE RATED AT 35 AMP (CSA 26 AMP)  
 MULTIWARE BRANCH CIRCUIT



Non-Isolated Ground Schematic



With Isolated Ground Schematic



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