Haworth Power

Technical Sheets – December 2016

Includes Power Base
### Table of Contents

#### Power Feeds
- Base Feed Module: PB.5
- Cord Base Feed Module: PB.7
- Raised Floor Power Interface Jumper: PB.9
- Wall Feed: PB.11
- Concealed Base Feed Module: PB.13
- Top Feed Module: PB.15
- External Top Feed Module: PB.17
- Belong Top Feed Module: PB.19
- Infeed Harness: PB.21

#### Power Through
- Power Distribution Assembly: PB.23
- Flexible Power Connector: PB.25
- Extended Power Connector: PB.27
- PREMISE Vertical Power Connector: PB.29
- Compose Vertical Power Connector: PB.31

#### Power Out
- Triplex 15 Amp Receptacle: PB.33
- Triplex 15 Amp Duplex Receptacle with USB Charging Outlet: PB.35
- Triplex 20 Amp Receptacle: PB.37
- 15 Amp Duplex Receptacle: PB.39
- 20 Amp Duplex Receptacle: PB.41
- Hardwire Junction Box: PB.43
- Port Kit: PB.45

#### Wiring Schematics
- 3-Circuit and 4-Circuit Wiring Diagrams: PB.47
- 3-Circuit Wiring Schematic: PB.49
- 4-Circuit Wiring Schematic – 2+2 Configuration: PB.49
- 3-Circuit Wiring Diagram – 3+1 Configuration: PB.50
This page intentionally left blank.
Base Feed Module

Overview
- Flexible metal conduit construction for routing power to panels and tables
- Provides power connection between building and power distribution assembly
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
General Specifications

- 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
- Constructed with ½” flexible metal conduit, painted black, and 12 AWG wire (10 AWG for shared neutrals)
- Modular power head connects at receptacle location of power distribution assembly
- Use to connect between junction box of building and power distribution assembly within panel
- 3 Circuit Base Feed
  - Three line, three neutral, and two ground conductors
  - Connector head color coded black
- 4 Circuit Base Feed
  - Four line, two neutral, and two ground conductors
  - Connector head for 4 Circuit (2+2) configuration is color coded blue
  - Connector head for 4 Circuit (3+1) configuration is color coded green
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings

- ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per NEC Article 604
- ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per Article 605
- ETL listed per UL 183 and UL 1286 and CSA standard C22.2 #203 and #203.1

Applicable Codes

- Base Feed Module must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products

- Haworth UniGroup Too®, UniGroup®, PLACES®, PREMISE®, Compose® panel systems and Tactics® table

Typical Configuration

- Power distribution from building to panel systems or table
Cord Base Feed Module

Overview

• Extra hard usage cord with plug for routing single circuit to panel systems
• Provides quick connection between building and power distribution assembly
• Available with 20 Amp plug for US applications or 15 Amp plug for Canadian applications
• Available with modular connector for interface to either 3 circuit or 4 circuit style power distribution assembly
Cord Base Feed Module

General Specifications
- 20 Amp 120V 60 Hertz rating for US Configuration, NEMA 5-20P plug configuration
- 15 Amp 120 60 Hertz rating for Canadian Configuration, NEMA 5-15P plug configuration
- Not for use with isolated ground receptacles
- Constructed with extra hard usage cord with 12 AWG wire
- US configuration has 24” cord per the National Electrical Code (NEC), Canadian configuration has 72” cord per the Canadian Electrical Code (CEC)
- Modular power head connects at receptacle location of power distribution assembly
- Use to connect between outlet in building and circuit 1 of power distribution assembly within panel

Listings
- ETL listed office furnishing accessory rated for USA Version 20A, Canadian Version to 15A. 120V 60 Hz per Article 605
- ETL listed per UL 1286 and CSA standard C22.2, and USA Version to UL 1286 and CSA C22.2 #203 Canada Version to CSA C22.2 #203 only

Applicable Codes
- Base Feed Module must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
- Haworth UniGroup Too®, UniGroup®, PLACES®, PREMISE®, and Compose® panel systems

Typical Configuration
- Single circuit power distribution from building to panel systems

Cord Length

<table>
<thead>
<tr>
<th>L</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>24”</td>
<td>USA</td>
</tr>
<tr>
<td>72”</td>
<td>Canada</td>
</tr>
</tbody>
</table>

20A (USA Only) Cord Base Feed
Raised Floor Power Interface Jumper

Overview
- Flexible metal conduit construction for routing power from under raised floor to panels, tables and moveable walls
- Provides connection between Power Base Al raised floor modular power and Power Base power distribution assembly
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
Raised Floor Power Interface Jumper

General Specifications
- 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
- Constructed with galvanized flexible metal conduit 12 AWG wire (10 AWG for shared neutrals)
- Use to connect Power Base Al raised floor power components to a power distribution assembly within a panel
- One end of base feed connects to a Power Base Al jumper with the use of 2-port splitter (included), the other end connects to the receptacle connector location on a power distribution assembly with any panel
- 3 Circuit System
  - Three line, three neutral, and two ground conductors
  - Connector head is color coded black
  - Internal base feed head is color coded black
- 4 Circuit System
  - Four line, two neutral, and two ground conductors
  - Connector head for 4 Circuit (2+2) configuration is color coded blue
  - Connector head for 4 Circuit (3+1) configuration is color coded green
  - Internal base feed head is color coded blue for 4 circuit (2+2) and green for 4 Circuit (3+1)
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
- ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 120V 60Hz per NEC Article 604
- ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per Article 605
- ETL listed per UL 183 and UL 1286 and CSA standard C22.2 #203 and #203.1

Applicable Codes
- Raised Floor Base Feed Module must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
- Haworth UniGroup Too®, UniGroup®, PREMISE®, Compose® panel systems, Tactics® tables, Reside®, Beside®, Planes® Benching, Intuity and Enclose® Moveable Walls

Typical Configuration
- Power distribution from Haworth Power Base® Al to panel systems, table, or moveable walls

3 Circuit

<table>
<thead>
<tr>
<th>3+1</th>
<th>2+2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral 1</td>
<td>Neutral 1</td>
</tr>
<tr>
<td>Neutral 2</td>
<td>Neutral 2</td>
</tr>
<tr>
<td>Neutral 3</td>
<td>Neutral 3</td>
</tr>
<tr>
<td>Ground</td>
<td>Ground</td>
</tr>
<tr>
<td>Isolated Ground</td>
<td>Isolated Ground</td>
</tr>
<tr>
<td>Line 1</td>
<td>Line 1</td>
</tr>
<tr>
<td>Line 2</td>
<td>Line 2</td>
</tr>
<tr>
<td>Line 3</td>
<td>Line 3</td>
</tr>
</tbody>
</table>

4 Circuit

<table>
<thead>
<tr>
<th>3+1</th>
<th>2+2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral 1</td>
<td>Neutral 1</td>
</tr>
<tr>
<td>Neutral 2</td>
<td>Neutral 2</td>
</tr>
<tr>
<td>Isolated Ground</td>
<td>Isolated Ground</td>
</tr>
<tr>
<td>Ground</td>
<td>Ground</td>
</tr>
<tr>
<td>Line 1</td>
<td>Line 1</td>
</tr>
<tr>
<td>Line 2</td>
<td>Line 2</td>
</tr>
<tr>
<td>Line 3</td>
<td>Line 3</td>
</tr>
<tr>
<td>Line 4</td>
<td>Line 4</td>
</tr>
</tbody>
</table>

BLACK

GREEN

BLUE
Wall Feed

Overview
- Modular connector with latch mounted to 4 7/16” (119mm) steel plate
- Provides connection between field supplied 4 7/16” Junction box and Haworth raised floor power interface jumper
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
Wall Feed

General Specifications
- 20 Amp 120/208Y or 120/240V 60 Hertz rated circuits
- Constructed with 12 AWG wire (10 AWG for shared neutrals supplied by others)
- Use to connect between 4 \( \frac{3}{16} \)” Junction box supplied by others 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 #203.1

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

Complimentary Products
- Use with Systems Furniture Power Interface Jumper to connect power to Haworth Unigroup®, Unigroup®, Places®, PREMISE®, Compose® panel systems, Tactics® tables, Reside®, Beside®, Planes® Benching or Intuity®
- Use with Haworth Unigroup®, Too, Unigroup®, Places®, PREMISE®, Compose® panel systems, Tactics® tables, Reside®, Beside®, Planes® Benching or Intuity® top feed to make quick connect to Power Base Al Jumper installed above dropped ceiling.
- Use with building wiring junction box for quick connect to Power Base Al Jumpers under raised floor

Typical Configuration
- Transition from building hardwire and modular power
- Conversion of furniture top feed to modular connection
Concealed Base Feed Module

Overview
- Junction box with modular power connector mounts within panel base raceway
- Complies with New York City Code
- Provides connection between building and power distribution assembly
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
Concealed Base Feed Module

General Specifications
- 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
- Constructed with 12 AWG wire (10 AWG for shared neutrals)
- Junction box constructed of 16 gauge galvanized steel with three 1/2” knockouts
- Junction box is 37 cubic inches
- Modular power head connects at receptacle location of power distribution assembly
- Use to connect conduit from building to power distribution assembly within panel
- 3 Circuit System Concealed Base Feed
  - Three line, three neutral, and two ground conductors
  - Connector head color coded black
- 4 Circuit System Concealed Base Feed
  - Four line, two neutral, and two ground conductors
  - Connector head for 4 Circuit (2+2) configuration is color coded blue
  - Connector head for 4 Circuit (3+1) configuration is color coded green
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
- ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per NEC Article 604 (Compose Architectural base feed only)
- ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per Article 605 (PLACES®, PREMISE®, Compose®, UniGroup®, and UniGroup® base feeds)

Applicable Codes
- Concealed Base Feed Modules must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
- Haworth UniGroup Too®, UniGroup®, PREMISE®, PLACES®, Compose®, Reside®, Beside® and Intuity® and Compose®

Typical Configuration
- Power distribution from building to panel systems and benching assemblies, Reside®, Beside®, Intuity® furniture

ETL Listed per UL 1286 and CSA C22.2 #203

<table>
<thead>
<tr>
<th>Minimum Panel Width</th>
<th>Minimum Wall Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>30” UniGroup Too®</td>
<td>24” Enclose®</td>
</tr>
<tr>
<td>30” UniGroup®</td>
<td></td>
</tr>
<tr>
<td>30” PLACES®</td>
<td></td>
</tr>
<tr>
<td>36” PREMISE®</td>
<td></td>
</tr>
<tr>
<td>36” Compose®</td>
<td></td>
</tr>
</tbody>
</table>
Top Feed Module

Overview
- Vertical pole for routing power harness and communication cables from above dropped ceiling tiles to panel
- Provides power connection between building and power distribution assembly
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations or hardwire
Top Feed Module

General Specifications
- 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
- Harness is constructed with flexible metal conduit and 12 AWG wire (10 AWG for shared neutrals)
- Top feed junction box is 4 ¾” square, 2 ⅛” deep, 42 cubic inch capacity and has ½” knockouts
- Use to connect between junction box above ceiling and power distribution assembly within panel
- 3 Circuit System
  - Three line, three neutral, and two ground conductors
  - Connector head color coded black
- 4 Circuit System
  - Four line, two neutral, and two ground conductors
  - Connector head for 4 Circuit (2+2) configuration is color coded blue
  - Connector head for 4 Circuit (3+1) configuration is color coded green
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
- ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per NEC Article 604
- ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per Article 605
- ETL listed per UL 183 and UL 1286 and CSA standard C22.2 #203 and #203.1

Applicable Codes
- Top Feed Module must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
- Haworth UniGroup Too®, UniGroup®, PREMISE®, PLACES®, Compose® panel systems
- Haworth Power Base® AI modular power for use above ceilings

Typical Configuration
- Power distribution from building to panel systems

Example: Compose® Top Feed
External Top Feed Module

Overview

- Vertical pole for routing power harness and communication cables from above dropped ceiling tiles to panel
- Provides connection between building and distribution harness
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations or hardwire
External Top Feed Module

General Specifications
• 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
• Harness is constructed with flexible metal conduit and 12 AWG wire (10 AWG for shared neutrals)
• Top feed junction box is 4 ⅞” square, 2 ⅛” deep, 42 cubic inch capacity and has ½” knockouts
• Use to connect between junction box above ceiling and power distribution assembly with Premise or Compose Connections panel
• Mounts to Premise at
  – End of run
  – 90˚ corner
  – 3 way
• Mounts to Compose Connections at end of run
• 3 Circuit System
  – Three line, three neutral, and two ground conductors
  – Connector head color coded black
• 4 Circuit System
  – Four line, two neutral, and two ground conductors
  – Connector head for 4 Circuit (2+2) configuration is color coded blue
  – Connector head for 4 Circuit (3+1) configuration is color coded green
• System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
• ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 120V 60Hz per NEC Article 604
• ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per Article 605
• ETL listed per UL 183 and UL 1286 and CSA standard C22.2 #203 and #203.1

Applicable Codes
• External Top Feed Modules must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC ), and local electrical codes

Haworth Panels System
• Haworth Compose Connections panels system
• Haworth Power Base® AI modular power for use above ceilings

Typical Configuration
• Power distribution from above ceiling to Compose Connections panel system

Top View

End-of-Run
Belong Top Feed Module

Overview
- Vertical pole for routing power harness and communication cables from above dropped ceiling tiles to panel
- Provides power connection between building and power distribution assembly
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations or hardwire
Beyond Top Feed Module

General Specifications
• 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
• Harness is constructed with flexible metal conduit and 12 AWG wire (10 AWG for shared neutrals)
• Top feed junction box is 4 3/16” square, 2 1/8” deep, 42 cubic inch capacity and has 1/2” knockouts
• Use to connect between junction box above ceiling and power distribution assembly within panel
• 3 Circuit System
  – Three line, three neutral, and two ground conductors
  – Connector head color coded black
• 4 Circuit System
  – Four line, two neutral, and two ground conductors
  – Connector head for 4 Circuit (2+2) configuration is color coded blue
  – Connector head for 4 Circuit (3+1) configuration is color coded green
• System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
• ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per NEC Article 604
• ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per Article 605
• ETL listed per UL 183 and UL 1286 and CSA standard C22.2 #203 and #203.1

Applicable Codes
• Top Feed Module must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
• Haworth Reside®, Beside® and Intuity® furniture

Typical Configuration
• Power distribution from building to panel systems

Pole Cross-section for:
PREMISE®
Compose®
Belong®
Intuity®
Infeed Harness

Overview

• Flexible metal conduit construction for routing power to panels, tables and moveable walls
• Provides power connection between building and power distribution assembly
• Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
Infeed Harness

General Specifications
• 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
• Constructed of galvanized steel flexible conduit and 12 AWG wire (10 AWG for shared neutral) with ⅛" conduit fitting
• Modular power head connects to power distribution assembly (PDA)
• Use to connect between junction box of building and PDA within furniture/moveable wall
• Modular power connector is polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1) configurations
• 3 Circuit Infeed Harness
  – Three line, three neutral, and two ground conductors
  – Connector head color coded black
• 4 Circuit System
  – Four line, two neutral, and two ground conductors
  – 2+2 configuration connector head color coded blue
  – 3+1 configuration connector head color coded green

Listings
• ETL listed manufacturing wiring system component rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per NEC Article 604
• ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per NEC Article 605
• ETL listed per UL 183, UL 1286 and CSA standard C22.2 No. 203-M, #203 and #203.1

Applicable Codes
• Infeed Harness must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC) and local electrical codes.

Complimentary Products
• Use with Systems Furniture Power Interface Jumper to connect power to Haworth Unigroup®, Unigroup®, Places®, PREMISE®, Compose® panel systems, Tactics® tables, Reside®, Beside®, Planes® Benching or Intuity®.
• Use with Haworth Unigroup® Too, Unigroup®, Places®, PREMISE®, Compose® panel systems, Tactics® tables, Reside®, Beside®, Planes® Benching or Intuity® top feed to make quick connect to Power Base AJ Jumper installed above dropped ceiling.
• Use with building wiring junction box for quick connect to Power Base AJ Jumpers under raised floor.

Typical Configuration
• Power Distribution from building to panel system, furniture or moveable wall

NOTE: Polarity keys (A) are on 3 circuit connector heads only.
Power Distribution Assembly

Overview
- Mounts to panel, table, or Enclose® moveable wall panel
- Provides connector locations to connect other modular power components
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configuration
Power Distribution Assembly

General Specifications
• 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
• Constructed with 12 AWG wire (10 AWG for shared neutrals)
• Allows connections of up to four power connectors and four receptacles
• Infeeds may connect to receptacle or power connector location, see infeed for details.
• 3 Circuit System
  – Three line, three neutral, and two ground conductors
  – Color coded black
• 4 Circuit System
  – Four line, two neutral, and two ground conductors
  – Four Circuit (2+2) configuration is color coded with blue connector
  – Four Circuit (3+1) configuration is color coded with green connector
• System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
• ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 60Hz per NEC Article 604
• ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 60Hz per NEC Article 605
• ETL listed per UL 183 and UL1286 and CSA standard C22.2, #203 and #203.1

Applicable Codes
• Power Distribution Assembly must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
• Haworth UniGroup Too, UniGroup®, PLACES®, PREMISE®, Compose® panel systems, Tactics® tables, Intuity®, Planes® benching, Reside®, Beside® and Enclose® moveable walls

Typical Configuration
• Power Distribution Assembly mounted within panel systems, tables, or moveable walls

3-Circuit Shown

![Diagram of 3-Circuit Shown]

4 Circuit

<table>
<thead>
<tr>
<th>3+1</th>
<th>2+2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral 1</td>
<td>Neutral 1</td>
</tr>
<tr>
<td>Neutral 2</td>
<td>Neutral 2</td>
</tr>
<tr>
<td>Neutral 3</td>
<td>Isolated Ground</td>
</tr>
<tr>
<td>Ground</td>
<td>Ground</td>
</tr>
<tr>
<td>Line 1</td>
<td>Line 1</td>
</tr>
<tr>
<td>Line 2</td>
<td>Line 2</td>
</tr>
<tr>
<td>Line 3</td>
<td>Line 3</td>
</tr>
<tr>
<td>Ground</td>
<td>Ground</td>
</tr>
<tr>
<td>BLACK</td>
<td>GREEN</td>
</tr>
<tr>
<td>4 Circuit</td>
<td>BLUE</td>
</tr>
</tbody>
</table>
Flexible Power Connector

Overview

- Use to route power horizontally between panels
- Provides connection between two power distribution assemblies
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
Flexible Power Connector

General Specifications
• 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
• Constructed with nonmetallic raceway and 12 AWG wire (10 AWG for shared neutrals)
• Use to connect between two power distribution assemblies, panel to panel
• 3 Circuit System
  – Three line, three neutral, and two ground conductors
  – Color coded black
• 4 Circuit System
  – Four line, two neutral, and two ground conductors
  – 4 Circuit (2+2) configuration is color coded with blue connector
  – 4 Circuit (3+1) configuration is color coded with green connector
• System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
• ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per NEC Article 605
• ETL listed per UL 1286 and CSA standard C22.2 #203

Applicable Codes
• Flex Connectors must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
• Haworth UniGroup® Too, UniGroup®, PREMISE®, and Compose® panel systems

Typical Configuration
• Horizontal power distribution within panel systems.

![Diagram of 3-Circuit Flexible Power Connector](image)

See price list for specific application.
Extended Power Connector

Overview
- Flexible metal conduit construction for routing power horizontally
- Provides connection between two power distribution assemblies
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
Extended Power Connector

General Specifications
- 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
- Constructed with flexible metal conduit and 12 AWG wire (10 AWG for shared neutrals)
- Used to connect two power distribution assemblies when separated by a non-powered panel or panel to panel for architectural applications which require flexible conduit.
- Available in a variety of lengths.
- 3 Circuit System
  - Three line, three neutral, and two ground conductors
  - Color coded with black connector
- 4 Circuit System
  - Four line, two neutral, and two ground conductors
  - 4 Circuit (2+2) configuration is color coded with blue connector
  - 4 Circuit (3+1) configuration is color coded with green connector
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
- ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 120V 60Hz per NEC Article 604
- ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60Hz per NEC Article 605
- ETL listed per UL 183 and UL1286 and CSA standard C22.2, #203 and #203.1

Applicable Codes
- Extended Flexible Metal Power Connector must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
- Haworth PREMISE® and Compose® panel system, Tactics® Tables, Reside® and Beside®, Planes® Benching, Intuity® and Enclose® moveable walls

Typical Configuration
- Power distribution with in panel systems, table, or moveable walls

3-Circuit Shown
UniGroup® Too
UniGroup®, PLACES®, Compose®, Enclose®, Tactics®, Reside®, Beside®

NOTE: Polarity keys (A) are on 3 circuit connector heads only.

3 Circuit
- Neutral 1
- Neutral 2
- Neutral 3
- Ground
- Isolated Ground
- Line 1
- Line 2
- Line 3
- BLACK

4 Circuit
- Neutral 1
- Neutral 2
- Isolated Ground
- Ground
- Line 1
- Line 2
- Line 3
- Line 4
- GREEN
- BLUE
PREMISE Vertical Power Connector

Overview
• Use to route power vertically within PREMISE® stackable panels (requires Super Base panel)
• Provides connection between two power distribution assemblies within a PREMISE® stackable panel
• Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
PREMISE Vertical Power Connector

General Specifications
• 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
• Constructed with nonmetallic raceway and 12 AWG wire (10 AWG for shared neutrals)
• Use to connect between two power distribution assemblies within a PREMISE stackable panel
• 3 Circuit System
  – Three line, three neutral, and two ground conductors
  – Color coded black
• 4 Circuit System
  – Four line, two neutral, and two ground conductors
  – 4 Circuit (2+2) configuration is color coded with blue connector
  – 4 Circuit (3+1) configuration is color coded with green connector
• System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
• ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60 Hz per NEC Article 605.
• ETL listed per UL 1286 and CSA standard C22.2 #203

Applicable Codes
• Vertical Power Connector must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
• Haworth PREMISE stackable panels system

Typical Configuration
• Power distribution within PREMISE® stackable panel system

L = Length
32” Beltline
48” Standing Height

3 Circuit

<table>
<thead>
<tr>
<th>Neutral 1</th>
<th>Neutral 2</th>
<th>Neutral 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground</td>
<td>Isolated Ground</td>
<td>Line 1</td>
</tr>
<tr>
<td>Line 2</td>
<td>Line 3</td>
<td>BLACK</td>
</tr>
</tbody>
</table>

4 Circuit

<table>
<thead>
<tr>
<th>Neutral 1</th>
<th>Neutral 2</th>
<th>Neutral 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground</td>
<td>Isolated Ground</td>
<td>Line 1</td>
</tr>
<tr>
<td>Line 2</td>
<td>Line 3</td>
<td>Line 4</td>
</tr>
<tr>
<td>BLACK</td>
<td>GREEN</td>
<td>BLUE</td>
</tr>
</tbody>
</table>
Overview
- Use to route power vertically with Compose® panels
- Provides connection between two power distribution assemblies within a Compose® panel
- Available in either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
Compose Vertical Connector

General Specifications
- 20 Amp 208Y/120V, 120/240V or 120V 60 Hertz rated circuits
- Constructed with flexible metal conduit and 12 AWG wire (10 AWG for shared neutrals)
- Use to connect between two power distribution assemblies within a Compose panel
- 3 Circuit System
  - Three line, three neutral, and two ground conductors
  - Connector color coded black
- 4 Circuit System
  - Four line, two neutral, and two ground conductors
  - 4 Circuit (2+2) configuration is color coded with blue connector
  - 4 Circuit (3+1) configuration is color coded with green connector
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
- ETL listed manufactured wiring system rated for 20A 208Y/120V, 120/240V or 120V 60Hz per NEC Article 604.
- ETL listed office furnishing accessory rated for 20A 208Y/120V, 120/240V or 120V 60Hz per NEC Article 605.
- ETL listed per UL 183 and UL1286 and CSA standard C22.2, #203 and #203.1

Applicable Codes
- Vertical Power Connector must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
- Haworth Compose® panel system

Typical Configuration
- Power distribution within Compose® panel system

NOTE: Polarity keys (A) are on 3 circuit connector heads only.
Overview

- Use to access power within PREMISE® and Compose® panel systems, Tactics® table, Reside® desking, Intuity®, Planes® Benching and Enclose® moveable walls
- Provides three 15 Amp outlets
- Available for connection to either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
**Triplex 15 Amp Receptacle**

**General Specifications**
- Three outlet 15 Amp 120V 60 Hertz rated, NEMA 5-15R configuration
- Available in common ground or isolated ground configuration
- Snaps into power distribution assembly with receptacle face exposed through base raceway cover.
  - Up to 4 receptacles per power distribution assembly, maximum 2 for Moveable Walls and Tactics
- 3 Circuit Receptacle
  - Selector for access to circuit 1, 2, 3
  - Non-ground towers on rear of receptacle are color coded white
- 4 Circuit Receptacle
  - Fixed circuit access
  - Non-ground towers on rear of 4 Circuit (2+2) receptacle are color coded blue
  - Non-ground towers on rear of 4 Circuit (3+1) receptacle are color coded green
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

**Listings**
- ETL listed manufactured wiring system component rated for 15A 120V 60Hz per NEC Article 604
- ETL listed office furnishing accessory rated for 15A 120V 60 Hz per Article 605
- ETL listed per UL 183, UL 498 and UL 1286 and CSA standard C22.2, #203 and #203.1

**Applicable Codes**
- Receptacles must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

**Complimentary Products**
- Haworth PREMISE® and Compose® panel systems, Tactics® tables, Reside® desk, Intuity®, Planes® Benching and Enclose® moveable walls

**Typical Configuration**
- Power distribution within PREMISE® and Compose® panel systems, Tactics® tables, Intuity®, Planes® Benching and Enclose® moveable walls.
15 Amp Duplex Receptacle with USB Charging Outlet

Overview

• Use to access power within PREMISE® and Compose® panel systems, Tactics® tables, Reside® desking, Intuity®, Planes Benching® and Enclose® movable walls
• Provides two 15 Amp outlets and two USB charging outlets
• Available for connection to either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
15 Amp Duplex Receptacle with USB Charging Outlet

General Specifications
• Two outlet 15 Amp 120V 60 Hertz rated, NEMA 5-15R configuration and two USB 2.0 A type outlets
• 2 Amp (shared) USB Charging Capacity: 5 V DC.
• Available in common ground configuration
• Snaps into power distribution assembly with receptacle face exposed through base raceway cover. Up to 4 receptacles per power distribution assembly, maximum 2 for Moveable Walls and Tactics
• 3 Circuit Receptacle
  – Fixed circuit access-circuit 1 only
  – Non-ground towers on rear of receptacle are color coded black
• 4 Circuit Receptacle
  – Fixed circuit access-circuit 1 only
  – Non-ground towers on rear of 4 Circuit (2+2) receptacle are color coded blue
  – Non-ground towers on rear of 4 Circuit (3+1) receptacle are color coded green
  – System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
• ETL listed per UL 498 and CSA standard C22.2 #42

Applicable Codes
• Receptacles must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
• Haworth PREMISE® and Compose® panel systems, Tactics® table, Reside® desking, Intuity®, Planes® Benching and Enclose® moveable walls

Typical Configuration
• Power distribution within PREMISE® and Compose® panel systems, Tactics® tables, Intuity®, Planes® Benching and Enclose® moveable walls

<table>
<thead>
<tr>
<th>Circuit Identifier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I = Circuit 1</td>
<td>Black Towers 3 Circuit</td>
</tr>
<tr>
<td>II = Circuit 2</td>
<td>3+1</td>
</tr>
<tr>
<td>III = Circuit 3</td>
<td>2+2</td>
</tr>
<tr>
<td>A = Circuit 1</td>
<td>1</td>
</tr>
<tr>
<td>B = Circuit 2</td>
<td>2</td>
</tr>
<tr>
<td>C = Circuit 3</td>
<td>3</td>
</tr>
<tr>
<td>D = Circuit 4</td>
<td>4</td>
</tr>
<tr>
<td>Green Towers</td>
<td>3+1</td>
</tr>
<tr>
<td>1 = Circuit 1</td>
<td>Blue Towers 2+2</td>
</tr>
<tr>
<td>2 = Circuit 2</td>
<td>1</td>
</tr>
<tr>
<td>3 = Circuit 3</td>
<td>2</td>
</tr>
<tr>
<td>4 = Circuit 4</td>
<td>3</td>
</tr>
</tbody>
</table>

Non-Programmable 3 Circuit and 4 Circuit 3+1 & 2+2
Overview

• Use to access power within PREMISE® and Compose® panel systems, Tactics® table, Reside® desking, Intuity®, Planes® Benching and Enclose® moveable walls
• Provides three 20 Amp outlets
• Available for connection to either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
Triplex 20 Amp Receptacle

General Specifications
• Three outlet 20 Amp 120V 60 Hertz rated, NEMA 5-15R configuration
• Available in common ground or isolated ground configuration
• Built to access one circuit only, circuit 1, 2, 3 or 4
• Snaps into power distribution assembly with receptacle face exposed through base raceway cover. Up to 4 receptacles per power distribution assembly, maximum 2 for Moveable Walls and Tactics
• 3 Circuit Receptacle
  – Selector for access to circuit 1, 2, 3
  – Non-ground towers on rear of receptacle are color coded white
• 4 Circuit Receptacle
  – Fixed circuit access
  – Non-ground towers on rear of 4 Circuit (2+2) receptacle are color coded blue
  – Non-ground towers on rear of 4 Circuit (3+1) receptacle are color coded green
• System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
• ETL listed manufactured wiring system component rated for 15A 120V 60Hz per NEC Article 604
• ETL listed office furnishing accessory rated for 15A 120V 60 Hz per Article 605
• ETL listed per UL 183 and UL 1286 and CSA standard C22.2, #203 and #203.1

Applicable Codes
• Receptacles must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
• Haworth PREMISE® and Compose® panel systems, Tactics® table, Reside® desking, Intuity®, Planes® Benching and Enclose® moveable walls

Typical Configuration
• Power distribution within PREMISE® and Compose® panel systems, Tactics® table, Intuity®, Planes® Benching and Enclose® moveable walls
15 Amp Duplex Receptacle

Overview
- Use to access power within Unigroup Too®, Unigroup® or PLACES®
- Provides two 15 Amp outlets
- Available for connection to either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
15 Amp Duplex Receptacle

General Specifications
- Two outlets 15 Amp 120V 60 Hertz rated, NEMA 5-15R configuration
- Available in common ground or isolated ground configuration
- Snaps into power distribution assembly with receptacle face exposed through base raceway cover. Up to 4 receptacles per power distribution assembly
- 3 Circuit Receptacle
  - Selector for access to circuit 1, 2, 3
  - Non-ground towers on rear of receptacle are color coded white
- 4 Circuit Receptacle
  - Fixed circuit access
  - Non-ground towers on rear of 4 circuit (2+2) receptacle are color coded blue
  - Non-ground towers on rear of 4 Circuit (3+1) receptacle are color coded green
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
- ETL listed manufactured wiring system component rated for 15A 120V 60 Hz per NEC Article 604
- ETL listed office furnishing accessory rated for 15A 120V 60 Hz per NEC Article 605
- ETL listed per UL 183, UL 498 and UL 1286 and CSA standard C22.2, #203 and #203.1

Applicable Codes
- Receptacles must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
- Haworth UniGroup®, UniGroup®, PLACES® panel systems

Typical Configuration
- Power distribution within UniGroup®, UniGroup Too®, PLACES® panel systems

Programmable 3 Circuit only

Non-Programmable 3+1 & 2+2

Circuit Identifier
A = Circuit 1
B = Circuit 2
C = Circuit 3
D = Circuit 4
1 = Circuit 1
2 = Circuit 2
3 = Circuit 3
4 = Circuit 4
20 Amp Duplex Receptacle

Overview
- Use to access power within Unigroup Too®, Unigroup® or PLACES®
- Provides two 15 Amp outlets
- Available for connection to either 3 circuit/separate neutral or 4 circuit/shared neutral 8 wire configurations
20 Amp Duplex Receptacle

General Specifications
- Two outlet 20 Amp 120V 60 Hertz rated, NEMA 5-20R configuration
- Receptacle is circuit 1 access only
- Plugs into the receptacle location on the left side of the power distribution assembly
- 3 Circuit Receptacle
  - Receptacle connects to 3 circuit system
  - Rear of receptacle color coded black
- 4 Circuit Receptacle
  - Non-ground towers on rear of 4 circuit (2+2) receptacle color coded blue
  - Non-ground towers on rear of 4 circuit (3+1) receptacle color coded green
- System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1) configuration

Listings
- ETL listed office furnishing accessory rated for 20A 120V 60Hz per Article 605
- ETL listed per UL 1286 and CSA standard C22.2, #203 and #203.1

Applicable Codes
- Receptacles must be installed in accordance with the National Electrical Code (NEC) and local electrical codes

Complimentary Products
- Planes® and Unigroup® 20 Amp Raceway Cover

Typical Configuration
- Power distribution within UniGroup Too®, UniGroup® and PLACES® panel systems

![Diagram of 3 Circuit and 4 Circuit Receptacles]

**NOTE:** Polarity keys (A) are on 3 circuit connector heads only.
Hardwire Junction Box

Overview
• Two sided junction box with brackets to mount directly to Haworth furniture and position outlet in standard raceway cover openings.
• For use when local electrical codes or special performance requirements call for hardwired power distribution installed on site.
• Designed for use with $\frac{1}{2}$" conduit.
Hardwire Junction Box

General Specifications
• Welded and galvanized steel junction box with 35 cubic inches volume
• Junction box provided with two 1/2" knockouts at each end for branching to adjacent furniture
• Allows mounting two receptacles (NEMA 5-15R or 5-20R), one on each side
• Duplex or rectangular receptacle face plates sold separately
• Available with brackets for specific Haworth furniture, consult specific price book for proper catalog number

Listings
• UL listed for 20A 120V 60 Hz circuits
• UL listed per UL 1286 and CSA C22.2 #203

Applicable Codes
• Hardware junction box must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC) and local electrical codes

Complimentary Products
• Haworth Premise®, Compose®, Reside®, Beside® and Intuity®

Typical Configuration
• Mounted on Premise® or Compose® panels, Reside® or Intuity® power tray, Beside® cabinet

Receptacle Plate

Beltline Height
Below Worksurface
Standing Height

Back

Side

Bottom

Dia. 0.88
Port Kit

Overview

- Provides 15 Amp triplex receptacle and modular furniture telecommunications outlet opening above base raceway level for UniGroup® Too, UniGroup®, PLACES®, and PREMISE® monolithic fabric panels
- Available with modular connector for attachment to either 3 circuit or 4 circuit power distribution assembly
Port Kit

General Specifications
• 15 Amp 120V 60 Hertz rated single circuit connector and 15A triplex receptacle (NEMA 5-15R)
• Connector constructed with flexible metal conduit and 12 AWG wire
• Connector connects to right-hand receptacle location of power distribution assembly in base raceway
• Available for below work surface (PREMISE only) and above work surface panel locations
• Available with common ground or isolated ground receptacle
• Built to access one circuit only, specify circuit 1, 2, 3 or 4
• 3 Circuit
  – line, neutral, and ground conductors
  – Base connector head is color coded black
• 4 Circuit
  – line, neutral, and ground conductors
  – Base connector head for 4 Circuit (2+2) configuration is color coded blue
  – Base connector head for 4 Circuit (3+1) configuration is color coded green
• System polarity keyed for 3 circuit, 4 circuit (2+2) and 4 circuit (3+1)

Listings
• ETL listed office furnishing accessory rated for 15A 208Y/120V, 120/240V or 120V 60 Hz per Article 605
• ETL listed per UL 183 and UL 1286 and CSA standard C22.2, #203 and #203.1

Applicable Codes
• Port Kit must be installed in accordance with the National Electrical Code (NEC), the Canadian Electrical Code (CEC), and local electrical codes

Complimentary Products
• Haworth UniGroup®Too, UniGroup®, PLACES®, and PREMISE® monolithic fabric panel system

Typical Configuration
• Power access above base raceway in monolithic fabric panels
Wiring Diagram

Haworth Power Base components, are offered in three different wiring schematics to allow you to match your specific wiring strategy to any typical building wiring plan. All the components in the electrical system must use the same wiring schematic. The components are color coded and keyed to assure correct polarity.

Black = Three-circuit, separate neutrals
Green = Four-circuit, 3+1
Blue = Four-circuit, 2+2

In the three-circuit, each circuit is supported with its own neutral and a common ground (L1 & N1, L2 & N2, L3 & N3).

### Three 208Y/120V Phase Circuit Panel

*In the four-circuit, 3+1 schematic, Circuits 1, 2, and 3 are supported with one shared neutral, N1. Circuit 4 is supported with a separate neutral, N2.*

### Four-Circuit, 2+2

*In the four-circuit, 2+2 schematic, circuits 1 and 2 are distributed from two different phases and are supported with one shared neutral, N1. Circuits 3 and 4 are distributed from two different phases and supported by their own shared neutral, N2.*

---

<table>
<thead>
<tr>
<th>3 CIRCUIT</th>
<th>WIRE COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1 = WHITE (12GA)</td>
<td></td>
</tr>
<tr>
<td>N2 = WHITE RED (12GA)</td>
<td></td>
</tr>
<tr>
<td>N3 = WHITE BLUE (12 GA)</td>
<td></td>
</tr>
<tr>
<td>G1 = BARE COPPER (12GA)</td>
<td></td>
</tr>
<tr>
<td>L1 = BLACK (12GA)</td>
<td></td>
</tr>
<tr>
<td>L2 = RED (12GA)</td>
<td></td>
</tr>
<tr>
<td>L3 = BLUE (12GA)</td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>4 CIRCUIT</th>
<th>WIRE COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1 = GRAY (10GA)</td>
<td></td>
</tr>
<tr>
<td>N2 = GRAY RED (10GA)</td>
<td></td>
</tr>
<tr>
<td>G2 = GREEN YELLOW (12GA)</td>
<td></td>
</tr>
<tr>
<td>G1 = BARE COPPER (12GA)</td>
<td></td>
</tr>
<tr>
<td>L1 = BLACK (12GA)</td>
<td></td>
</tr>
<tr>
<td>L2 = RED (12GA)</td>
<td></td>
</tr>
<tr>
<td>L3 = BLUE (12GA)</td>
<td></td>
</tr>
<tr>
<td>L4 = VIOLET (12GA)</td>
<td></td>
</tr>
</tbody>
</table>
**Wiring 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 15 AMP)  
CIRCUITS 1, 2 & 3 EACH USE SEPARATE NEUTRALS

![3-Circuit Wiring Diagram](image)

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)  
MULTIWIRED BRANCH CIRCUIT  
CIRCUIT 1 & 2 SHARE NEUTRAL 1  
CIRCUIT 3 & 4 SHARE NEUTRAL 2

![4-Circuit Wiring Diagram](image)
Wiring Schematic (continued)

4-Circuit Wiring Diagram:

3+1 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)
MULTIWIRE BRANCH CIRCUIT
CIRCUIT 1, 2 & 3 SHARE NEUTRAL 1
CIRCUIT 4 USES SEPARATE NEUTRAL 2

D  VIOLET
   GRAY/RED
   GREEN/YELLOW
   BARE
   GRAY
   BLUE
   RED
   BLACK

L1  N1  G1  CIRCUIT A
L2  N1  G1  CIRCUIT B
L3  N1  G1  CIRCUIT C
L4  N2  G1  CIRCUIT D

RECEPTACLE CONNECTIONS (LOAD)
Circuit 1, 2, 3 & 4 Isolated ground receptacles also available.
This page intentionally left blank.