



Liebert[®] MicroPOD

Installer/User Guide

230 V

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Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures.

Visit <https://www.vertiv.com/en-us/support/> for additional assistance.

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1 Important Safety Instructions



WARNING! Do not attempt to service this product yourself. Opening or removing the cover may expose you to dangerous voltages, even when the AC cord is disconnected from the electrical outlet. Refer all servicing to qualified service personnel.

Save these Instructions

This manual contains important instructions that should be followed during installation and operation of the Vertiv™ Liebert® MicroPOD.

This product is not intended for use with life support or other U.S. FDA designated “critical” devices.

Read all the safety and operating instructions before operating and the connected UPS system. Adhere to all warnings on the unit and follow all operating and user instructions in this manual.

Turn the UPS off and unplug the Liebert® MicroPOD before cleaning. Use only a soft cloth, never liquid or aerosol cleaners.

The UPS and Liebert® MicroPOD both are designed for data processing equipment. Do not plug laser printers or appliances, such as hair dryers, heaters, vacuum cleaners or electric drills, into the UPS output receptacles.



WARNING! Do not modify the cables in any way. Consult your local Vertiv representative, if the AC cords do not match the MAINS receptacle. The Liebert® MicroPOD must be grounded at all times while in use. Turn Off the UPS before unplugging Liebert® MicroPOD.

The UPS and the Liebert® MicroPOD are equipped with grounded plugs (plug types vary depending on the model). Do not defeat the safety purpose of this plug. If unable to fully insert the plug into the designated receptacle, contact a qualified electrician or your local dealer or Vertiv representative for assistance.

Route the power supply cords so they are not walked on or pinched in anyway.



CAUTION: Risk of electric shock, do not remove cover, no user serviceable parts inside. Refer servicing to qualified service personnel.



CAUTION: This device receives power from multiple sources. Before servicing this device, remove all connections. Follow maintenance instructions in the respective UPS user manual.



CAUTION: Risk of improper installation and operation location. Can cause equipment damage. Do not install and use the unit in a atmosphere that exceeds the ambient temperature. See **Table 7.2** on page 13 for operating and storage ambient temperature.



WARNING! When the Liebert® MicroPOD rotary switch is in MAINS position (maintenance bypass mode), the power to the connected load is not filtered or conditioned by the UPS.

1.1 Glossary of Symbols

Table 1.1 Symbols

Symbol	Description
	Indicates AC Input
	Indicates AC Output
	Consult the manual for additional information
MAINS	Amber lamp (MAINS) indicates local power is available and the load may be transferred to bypass the UPS
UPS	Indicates UPS power is available and the load may be transferred to the UPS to provide computer-grade power to the load

2 Introduction and System Description

The Vertiv™ Liebert® MicroPOD provides maintenance bypass capability as well as power output distribution. The Liebert® MicroPOD can be used on UPSs in either rack mount or tower configuration.

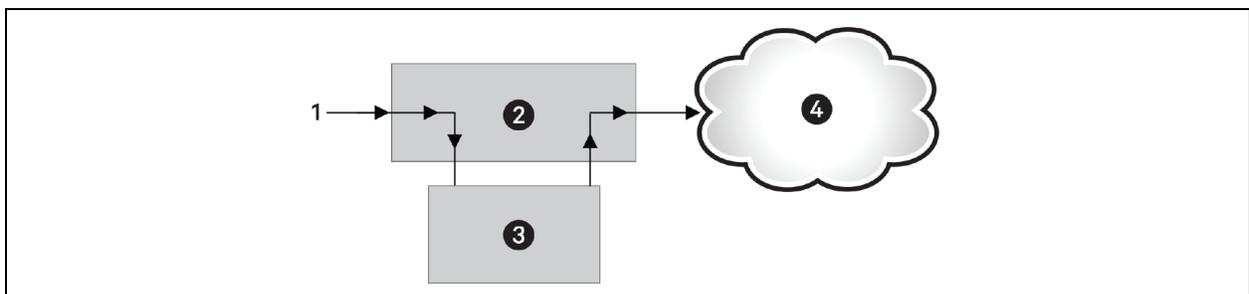
The Liebert® MicroPOD provides an isolated path of power for your UPS system for preventive maintenance or service.

2.1 System Description

The Liebert® MicroPOD has two modes of operation, UPS (UPS available) and MAINS (maintenance bypass).

- In the UPS mode, the power is routed through the UPS system delivering conditioned power to the load, as shown in **Figure 2.1** below.

Figure 2.1 UPS Mode of Operation

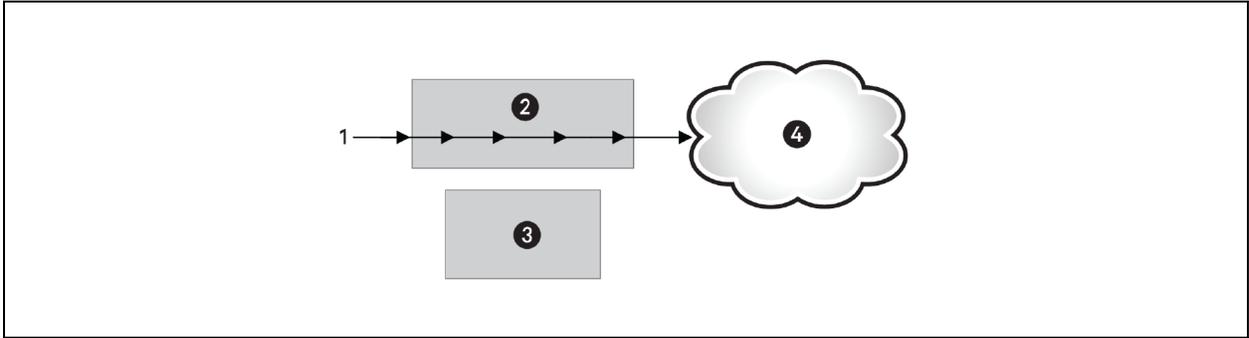


Item	Description
1	Utility
2	POD
3	UPS
4	Connected Load

- In MAINS mode, power is routed around (bypassing) the UPS system, see **Figure 2.2** on the next page. MAINS power is supplied directly to the load through the Liebert® MicroPOD.

NOTE: Battery backup and conditioned power are NOT available during the MAINS mode of operation.

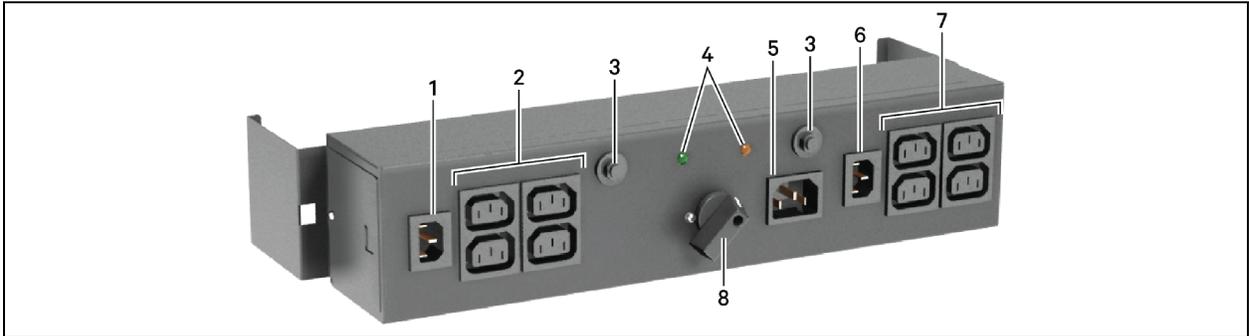
Figure 2.2 MAINS/Maintenance Bypass Mode



Item	Description
1	Utility
2	POD
3	UPS
4	Connected Load

- The UPS may be turned off and removed without affecting the load. See **Figure 2.3** below.

Figure 2.3 Vertiv™ Liebert® MicroPOD Connections



Item	Description
1	UPS Input - Connect to load receptacle on rear of UPS
2	Connect Loads
3	Output Circuit Breaker
4	Power Indicator Lamps
5	Connect UPS Input Cord
6	Utility Input - Connect to MAINS Wall Receptacle
7	Connect Loads
8	Rotary Switch

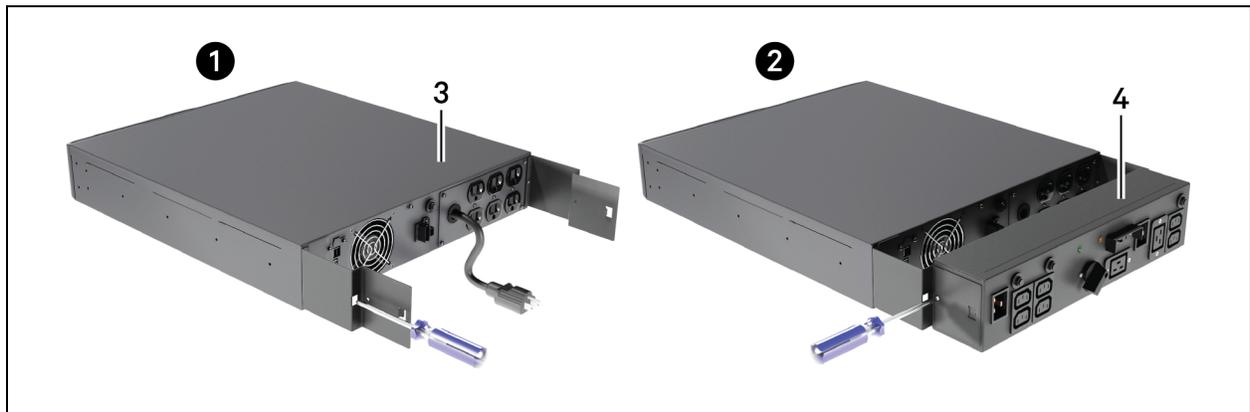
3 Installation

3.1 Installation on the Vertiv™ Liebert® Rack UPS

NOTE: This manual provides instructions for the Vertiv™ Liebert® MicroPOD only. Refer to your UPS manual for related operation and installation instructions.

1. Unpack the Liebert® MicroPOD carefully, noting the packaging method. Retain the box and packaging material for possible future shipments.
2. Inspect the Liebert® MicroPOD for freight damage. Report any damage to the carrier and your local dealer or Vertiv representative.
3. Verify that the Liebert® MicroPOD input cord, the UPS input cord and receptacle for the UPS have the same type of configuration.
4. If you already have the UPS installed, turn off all connected loads and unplug them from the UPS. Turn off the UPS and disconnect the input cord.
5. Attach the two Liebert® MicroPOD securing brackets to the rear of the UPS, see **Figure 3.1** below. You will need a M3 Phillips head screwdriver of appropriate length for this procedure (the torque is 7 in.lb, or 0.79 Nm). The Liebert® MicroPOD brackets have a hole to allow the screwdriver to reach the screw.
6. Next attach the Liebert® MicroPOD to the securing brackets, see **Figure 3.1** below.

Figure 3.1 Attaching Liebert® MicroPOD to the UPS with Securing Brackets



Item	Description
1	Attach bracket to rear of UPS refer to Step 5
2	Attach Liebert® MicroPOD to brackets refer to Step 6
3	UPS
4	Liebert® MicroPOD

3.2 Rack Mount Installation

1. Rack mount installation of the Vertiv™ Liebert® MicroPOD is possible with the use of the rack mounting brackets (shipped with the Liebert® MicroPOD). See **Figure 3.2** below.
2. The rack mount brackets allow you to rack mount the Liebert® MicroPOD in a 19 in. enclosure.
3. The Liebert® MicroPOD can be mounted to face one of four directions depending on your application, utilizing the rack mount brackets provided.
4. Determine the desired position and direction for the Liebert® MicroPOD, face it in that direction, then attach the brackets to the Liebert® MicroPOD with the screws provided.
5. Consult your rack/enclosure manufacturer's recommendations for specific rack mounting hardware that will be required.
6. The holes on the rack mount bracket are notched for easy installation. Tighten the Liebert® MicroPOD securely to the rails.

Figure 3.2 Liebert® MicroPOD Mounting Bracket Location



CAUTION: Before installing, open all branch rated circuit breakers at the nearest disconnect, turn the UPS off and disconnect all cords to and from the UPS.

4 Startup Procedure



CAUTION: This UPS must be installed by properly trained and qualified personnel and wired in accordance with local, national and regional electrical codes.



CAUTION: The MAINS input supply to the Vertiv™ Liebert® MicroPOD must be protected by a branch rated circuit breaker. The UPS output must also be protected with a circuit breaker connected to the load, rated to carry the input current and be capable of breaking the maximum expected short circuit current of this branch circuit. The breaker is to be mounted within 6 ft. (1.8 m) of the Liebert® MicroPOD and be readily accessible to the operator.

4.1 Pluggable Connections

1. Make sure the Liebert® MicroPOD rotary switch is in the MAINS position see **Figure 5.1** on page 9. Plug the Liebert® MicroPOD input cord (labeled *MAINS*) into the MAINS outlet (wall receptacle).



WARNING! The Liebert® MicroPOD is now electrically live. The MAINS lamp (amber) should be illuminated.

2. Plug the 10 ft. long (3 m) UPS input cord (factory provided) into the receptacle on top of the Liebert® MicroPOD (labeled: *CONNECT UPS LINE CORD HERE*).



WARNING! The UPS system is now electrically live.

3. Plug the 6 ft. long (1.8 m) UPS system output cord (factory-provided) into the receptacle on top of the Liebert® MicroPOD (labeled: *UPS*).
4. Plug in all loads to the output distribution receptacles, distributing them evenly on the Liebert® MicroPOD. The Liebert® MicroPOD is powering the equipment in MAINS mode.
5. Turn ON the loads following the manufacturer's instructions, ensure all are operating according to specification.
6. Start the UPS according to its user manual.
7. Verify that the UPS lamp (green) on the Liebert® MicroPOD is illuminated. If so, transfer the rotary switch from MAINS to UPS. The load is now being supplied with conditioned power through the UPS.
8. Before any operation or procedure, always verify that both the UPS lamp (green) and the MAINS lamp (amber) are illuminated before changing the rotary switch.

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5 Indicator Lamps

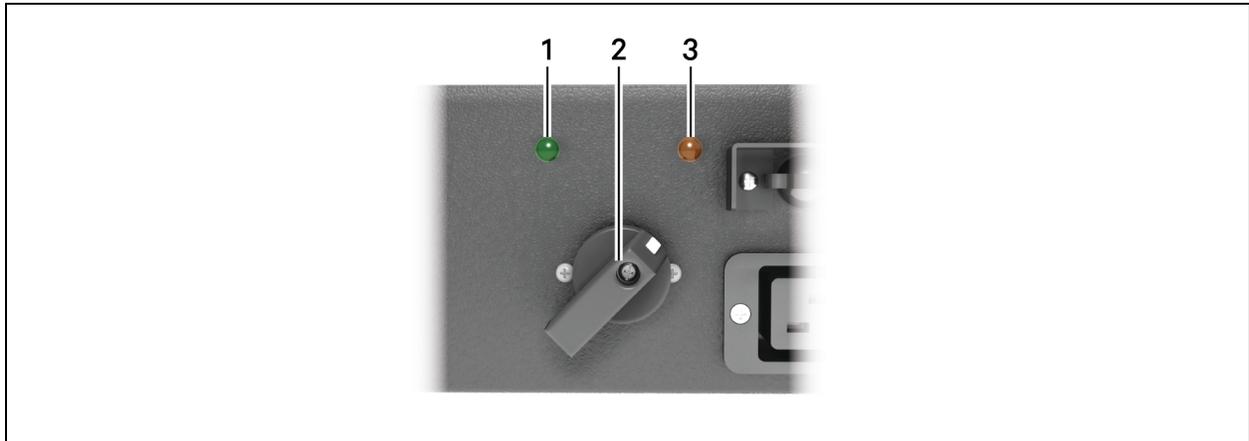
5.1 MAINS Indicator Lamp

This amber lamp is illuminated when MAINS power is present, see **Figure 5.1** below. It signals that loads can be transferred to maintenance bypass (MAINS mode) operation via the rotary switch. If MAINS power is not present, this lamp will be off and the UPS will supply battery backup power to connected loads.

5.2 UPS Indicator Lamp

This green lamp is illuminated when output power is available from the UPS, see **Figure 5.1** below. It signals that it is safe to transfer connected loads from MAINS power back to UPS output power.

Figure 5.1 Indicator Lamps on Vertiv™ Liebert® MicroPOD



Item	Description
1	Output Power Available from UPS (Green Lamp)
2	Rotary Switch
3	MAINS Power Present (Amber Lamp)

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6 Operation

6.1 Transfer to Maintenance Bypass

To transfer to maintenance bypass (MAINS) from UPS, follow the below steps:

1. Ensure the MAINS lamp (amber) is illuminated. If the lamp is not illuminated, refer to [Troubleshooting](#) on page 15.
2. Transfer the rotary switch from UPS to MAINS, provided the MAINS lamp is illuminated on the Vertiv™ Liebert® MicroPOD.
3. Turn the UPS off.
4. Disconnect the two cables connecting the UPS to the Liebert® MicroPOD.
5. The UPS is prepared for servicing.

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7 Specifications

Table 7.1 Technical Specifications

Vertiv™ Liebert® MicroPOD Models	MP2-210K	MP2-220K	MP2-220L	PD5-20AC20
UPS Output Rating Applications	1000 W/1000 VA 1500 W/1500 VA 1800 W/2000 VA	2000 W/2000 VA	2700 W/3000 VA	3000 W/3000 VA
Dimensions, W x D x H, in. (mm)				
Unit	15.51 x 3.03 x 3.46 (394 x 77 x 88)			
Shipping	18.5 x 8.27 x 6.49 (470 x 210 x 165)			
Weight, lb (kg)				
Unit	4.4 (2.0)			
Shipping	6.2 (2.8)		6.6 (3.0)	
Electrical Specifications				
AC Input	EN60320/C14 receptacle	EN60320/C20 receptacle	EN60320/C20 receptacle	EN60320/C20
Connection to UPS Input	EN60320/C13 receptacle	EN60320/C19 receptacle	EN60320/C19 receptacle	EN60320/C19
Connection to UPS Output	EN60320/C14 receptacle	EN60320/C14 receptacle	EN60320/C20 receptacle	EN60320/C20
Output Receptacles/ Protection	(4) EN60320/C13 with 10 A circuit breaker (4) EN60320/C13 with 10 A circuit breaker	(4) EN 60320/C 13 with 10 A circuit breaker (4) EN 60320/C 13 with 10 A circuit breaker	(2) EN60320/C13 with 10 A circuit breaker (2) EN60320/C13 with 10 A circuit breaker (2) EN60320/C13 with 10 A circuit breaker (1) EN60320/C19 with 16 A circuit breaker	(2) EN60320/C13 with 10 A circuit breaker (2) EN60320/C13 with 10 A circuit breaker (2) EN60320/C13 with 10 A circuit breaker (1) EN60320/C19 with 20 A circuit breaker

Table 7.2 Storage and Operating Parameters

Unit	Description
Transfer Time (to and from maintenance bypass)	< 6 milliseconds
Operating Ambient Temperature	32 °F to 104 °F (0 °C to +40 °C)
Storage Ambient Temperature	-4 °F to 140 °F (-20 °C to +60 °C)
Humidity	0 to 95% non-condensing
Compliance/Standards	UL 1778, c-UL, ISTA Procedure 1A

This Vertiv™ Liebert® MicroPOD is intended for use with the UPS meeting all the following requirements:

- The UPS input cord is compatible with the rating and type of receptacle on the Liebert® MicroPOD labeled *CONNECT UPS LINE CORD HERE*.
- The UPS output cord is compatible with the rating and type of receptacle on the Vertiv™ Liebert® MicroPOD labeled *UPS*.
- Available MAINS receptacle is compatible with the Liebert® MicroPOD input power connector labeled MAINS.

8 Troubleshooting

Table 8.1 Troubleshooting

Problem	Cause	Solution
MAINS lamp (amber) not illuminated	MAINS not present	Call qualified service personnel to restore power to receptacle
	Vertiv™ Liebert® MicroPOD input cord not connected to MAINS	Refer to Liebert® MicroPOD installation instructions in this manual: <ul style="list-style-type: none"> • Installation on the Vertiv™ Liebert® Rack UPS on page 5 and • Rack Mount Installation on page 6
UPS Available lamp (green) not illuminated	UPS output power not present	Turn on the UPS. Refer to the UPS user manual for UPS operation
	UPS input and/or output cord not connected to Liebert® MicroPOD	Refer to Liebert® MicroPOD installation instructions in this manual: <ul style="list-style-type: none"> • Installation on the Vertiv™ Liebert® Rack UPS on page 5 and • Rack Mount Installation on page 6
Liebert® MicroPOD will not start some / all connected loads	Liebert® MicroPOD output circuit breaker has tripped	Reset Liebert® MicroPOD circuit protectors
Liebert® MicroPOD circuit protectors trip after resetting	Overcurrent in Liebert® MicroPOD receptacle	Recalculate the load requirements and distribute the load among other Liebert® MicroPOD receptacles.

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Appendices

Appendix A: Technical Support and Contacts

A.1 Technical Support/Service

Australia

Vertiv Australia (Sydney NSW)

Suite 102, Level 1, 7/9 Irvine PL

Bella Vista NSW 2153, Australia

Singapore

Vertiv Asia Headquarters

151 Lorong Chuan, Lobby D New tech Park, #05-04

New Tech Park Singapore 556741 Singapore

65 6350 1131

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