Vertiv™ Liebert® MicroPod2
GUIDE SPECIFICATIONS
120, 208 and 230VAC Single Phase
Maintenance Bypass / Power Output Distribution Systems

1.0 GENERAL

1.1 Summary

This specification defines the electrical and mechanical characteristics and requirements for a continuous-duty, single-phase, maintenance bypass / power output distribution system. This system, hereafter referred to as the POD, provides high-quality maintenance bypass capability for all micro UPS products up to and including 3kVA.

1.2 Standards

The POD is designed in accordance with the applicable sections of the current revision of the following standards. Where a conflict arises between these standards and statements made herein, the statements in this specification shall govern. The POD is stand alone UL listed. The POD units can be used with any manufactures UPS that meets the UL standards listed below.

120V and 208V Units

- UL1778, c-UL, and ISTA Procedure 1A listed

230V Units

- CE compliance mark

1.3 System Description

1.3.1 Modes of Operation

The POD is designed to operate as a maintenance bypass system in the following modes:

1. **Normal** - The UPS is continuously supplied available utility power by the POD. The UPS output power is returned to the POD and distributed to the critical AC load through the POD output receptacles.
2. **Maintenance Bypass** - The bypass switch allows a transfer of the critical AC load from the UPS inverter to the utility source; to allow for service to or replacement of the UPS, without interrupting the load.

1.3.2 Performance Requirements

AC Input to POD

1. **Voltage Configuration**:
   - **120V Units**: 120 VAC nominal (range is UPS dependent), 50/60 Hz, single-phase, 2-wire-plus-ground.
   - **208V Units**: 208 VAC nominal (range is UPS dependent), 50/60 Hz, single-phase, 2-wire-plus-ground.
   - **230V Units:** 230 VAC nominal (range is UPS dependent), 50/60 Hz, single-phase, 2-wire-plus-earth.

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2. **Frequency**: 50/60 Hz nominal, UPS dependent

AC Output

1. **Voltage Configuration**:
   - **120V Units**: 120 VAC nominal (range is UPS dependent), 50/60 Hz, single-phase, 2-wire-plus-ground.
   - **208V Units**: 208 VAC nominal (range is UPS dependent), 50/60 Hz, single-phase, 2-wire-plus-ground.
   - **230V Units**: 230 VAC nominal (range is UPS dependent), 50/60 Hz, single-phase, 2-wire-plus-earth.
2. **Output Load Capacity**: Specified output load capacity of the POD is UPS dependent in normal mode, with maximum output current in either mode as follows:

POD Model	Max Load Current
MP2-115A, MP2-115HW	12A
MP2-120C, MP2-120HW, MP2-220L, MP2-220N	16A
MP2-130C, MP2-130E, MP2-130P, MP2-130HW	24A
MP2-230A	30A
MP2-210K	10A

3. **Frequency**: 50/60 Hz nominal, UPS dependent.
4. **Bypass Switch**: The bypass switch is capable of switching up to 20 or 30 amps, based on the model of the POD. The switch is a break before make type, with a maximum transfer time of 6ms.

1.4 Environmental Conditions

1.4.1 Ambient Temperature

- Operating: + 32° F to + 104° F (0° C to +40° C)
- Storage: -20 degrees C to +60 degrees C (-4 degrees F to +140 degrees F)

1.4.2 Relative Humidity

- Operating: 0 to 95% non-condensing.
- Storage: 0 to 95% non-condensing.

1.5 User Documentation

The specified POD system is supplied with one (1) user's manual. Manuals includes installation drawings and instructions, a functional description of the equipment with block diagrams, safety precautions, illustrations, step by step operating procedures, and general maintenance guidelines.

1.6 Warranty

The manufacturer warrants the POD against defects in materials and workmanship for two (2) years. The warranty covers all parts and labor.

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1.7 Quality Assurance

1.7.1 Manufacturer Qualifications

The manufacturer is certified to ISO 9001.

1.7.2 Factory Testing

Before shipment, the manufacturer fully and completely tests the system to assure compliance with the specification.

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2.0 PRODUCT

2.1 Fabrication

All materials and components making up the POD is new, of current manufacture, and has not been in prior service except as required during factory testing.

2.1.1 Wiring

Wiring practices, materials, and coding is in accordance with the requirements the standards listed in section 1.2 and other applicable codes and standards. All wiring is copper.

2.1.2 Cabinet

The 120V and 208V POD units are comprised of: utility input cord and plug, UPS output cord and plug, output receptacles, utility and UPS power indicators, and bypass switch. The 230V POD units is comprised of: input socket, UPS input and output cords and plugs, output receptacles, mains and UPS power indicators, and bypass switch. All POD cabinets are cleaned, primed, and painted black with silk-screen warnings in white. Dimensions (including switch handle and feet) are:

Model	Dimensions: W" x D" x H" (mm)
MP2-115A, MP2-115HW, MP2-120C, MP2-120HW, MP2-130C, MP2-130E, MP2-130HW, MP2-130P, MP2-210K, MP2-220L	17 x 3.5 x 3.5 (432 x 89 x 89)
MP2-220N, MP2-230A	19 x 5.24 x 5.24 (483 x 133 x 133)

2.2 Components

2.2.1 Installation Connections

The POD provides connections for utility input, UPS input, and UPS output based on model ampere rating.

- **Utility Input:** 120V and 208V units includes a line cord of 10 ft in length, with appropriate plug, for connection to utility. Hardwired units provide input terminal blocks for connection to utility. 230V units utilizes the UPS input cord for connection to mains.
- **UPS Output:** The POD is equipped with a cord of 6 ft in length; with appropriate plug for connection to UPS output.

2.2.2 Display and Controls

- **Status Indicators**

  The POD is provided with two status indicators designed for convenient and reliable user operation. The "Utility/Mains" indicator illuminates amber to indicate that utility/mains power is available for the load and UPS. The "UPS" indicator illuminates green to indicate the presence of UPS output power for the load.

- **Bypass**

  The bypass is a spring-loaded rotary switch that ensures a maximum transfer time of <6ms.

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2.2.3 Output Distribution

- **Output Receptacles/Terminal Blocks**

  The POD includes several combinations of output receptacles or terminal blocks, appropriate for the POD model, as described below.

- **Output Protection**

  The POD employs output circuit breakers, appropriate for the POD model, as follows:

Receptacle/Plug Configurations – 120V

Model Number	AC Input Plug & cord length	Connection to UPS Input	Connection to UPS Output & cord length	Output Receptacles / protection
MP2-115A	5-15P on attached 10-foot cord	5-15R	5-15P on attached 6 foot cord	• (8) 5-15R with 15A circuit breaker.
MP2-120C	5-20P on attached 10-foot cord	5-20R	5-20P on attached 6 foot cord	• (4) 5-20R (T-Slot) with 20A fuse. • (4) 5-20R (T-Slot) with 20A fuse.
MP2-130C	L5-30P on attached 10-foot cord	L5-30R	L5-30P on attached 6 foot cord	• (4) 5-20R (T-Slot) with 20A fuse. • (4) 5-20R (T-Slot) with 20A fuse.
MP2-130E	L5-30P on attached 10-foot cord	L5-30R	L5-30P on attached 6 foot cord	• (4) 5-20R (T-Slot) with 20A fuse. • L5-30R with no breaker. • (2) 5-15R with 15A circuit breaker.
MP2-130P	L5-30P on attached 10-foot cord	L5-30R	L5-30P on attached 6 foot cord	• (2) L5-20R with 20A circuit breaker. • (4) 5-15R with 15A circuit breaker.

Receptacle/Plug Configurations – 208V

Model Number	AC Input Plug & cord length	Connection to UPS Input	Connection to UPS Output & cord length	Output Receptacles / protection
MP2-220N	L6-20P on attached 10-foot cord	L6-20R	L6-20P on attached 6 foot cord	• L6-15R • (2) L6-20R
MP2-230A	L6-30P on attached 10-foot cord	L6-30R	L6-30P on attached 6 foot cord	• L6-30R • L6-20R

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Receptacle/Plug Configurations – 230V

Model Number	AC Input Plug & cord length	Connection to UPS Input	Connection to UPS Output & cord length	Output Receptacles / protection
MP2-210K	EN60320/C14	EN60320/C13 receptacle	EN60320/C14 on attached 6 foot jumper	• (4) EN 60320/C13
MP2-220L	EN60320/C20	EN60320/C19 receptacle	EN60320C20 on attached 6 foot jumper	• (4) EN 60320/C13 • (1) EN 60320/C19

Receptacle/Plug Configurations – Hardwired

Model Number	AC Input	Connection to UPS Input	Connection to UPS Output & cord length	Output Receptacles / protection
MP2-115HW	Terminal Blocks. Recommended wire 14 AWG; accepts 8 AWG max.	5-15R	5-15P on attached 6 foot cord	Terminal Blocks, accept 8AWG max. Recommended external overcurrent protection 15A.
MP2-120HW	Terminal Blocks. Recommended wire 12 AWG; accepts 8 AWG max.	5-20R	5-20P on attached 6 foot cord	Terminal Blocks, accept 8AWG max. Recommended external overcurrent protection 20A.
MP2-130HW	Terminal Blocks. Recommended wire 10 AWG; accepts 8 AWG max.	L5-30R	L5-30P on attached 6 foot cord	Terminal Blocks, accept 8AWG max. Recommended external overcurrent protection 30A.

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