



## Liebert® PPC

Packaged Power Distribution  
for higher power quality



## FEATURES

- **Computer-grade grounding** - the Vertiv PPC automatically establishes a single point ground to meet grounding requirement major Manufacturers' recommendations and the requirements of the National Electric Code.
- **Handles non-linear loads** - fully compatible with the non-linear loads of modern computer systems and other electronic equipment.
- **Monitoring** - built-in metering and alarm annunciation with communication to Vertiv centralized monitoring & modbus for third party monitoring.
- **Space savings** - compact single cabinet conserves valuable floor space.
- **Easy installation** - single input cable connection reduces installation time and cost.
- **Location flexibility** - the unit can be easily relocated to protect your investment.

## Liebert® delivers the packaged power solution

Liebert® Precision Power Center is an affordable and reliable packaged Power management for a variety of applications, including computer rooms, LANS/WANS, communication facilities and manufacturing units.

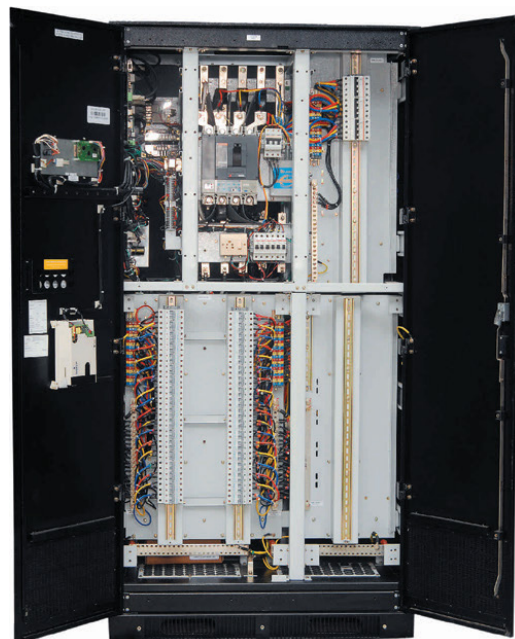
Creating high quality power is a major step towards protecting the operation of a critical facility. But don't stop there. Once you've created a better level of power, you need to make sure that it can be distributed properly to each piece of important equipment

## Critical power distribution made easy

This is why Liebert® designed the Precision Power Center (PPC) to bring you a distribution system that will close the power delivery loop in your critical facility. Liebert PPC offers the benefits of a custom-tailored power system, with the convenience and cost savings of a pre-packaged, factory-tested unit. Housed in a single, self-contained cabinet, it combines distribution, computer-grade grounding and power monitoring to provide the protection your vital computer or communications equipment demands. Available In 50-300 kVA capacity systems. The PPC offers flexible expansion capabilities to fit growing sites.

## A proven system

The packaged system approach of the Vertiv PPC is convenient and space-saving, reducing installation time and cost compared to a conventional approach using multiple interconnected components. The Vertiv PPC is built on a proven system design used in thousands of Installations, and unlike the one-of-a-kind, built-up distribution constructed at the site, it undergoes thorough factory testing as a complete system to assure reliable consistent performance.

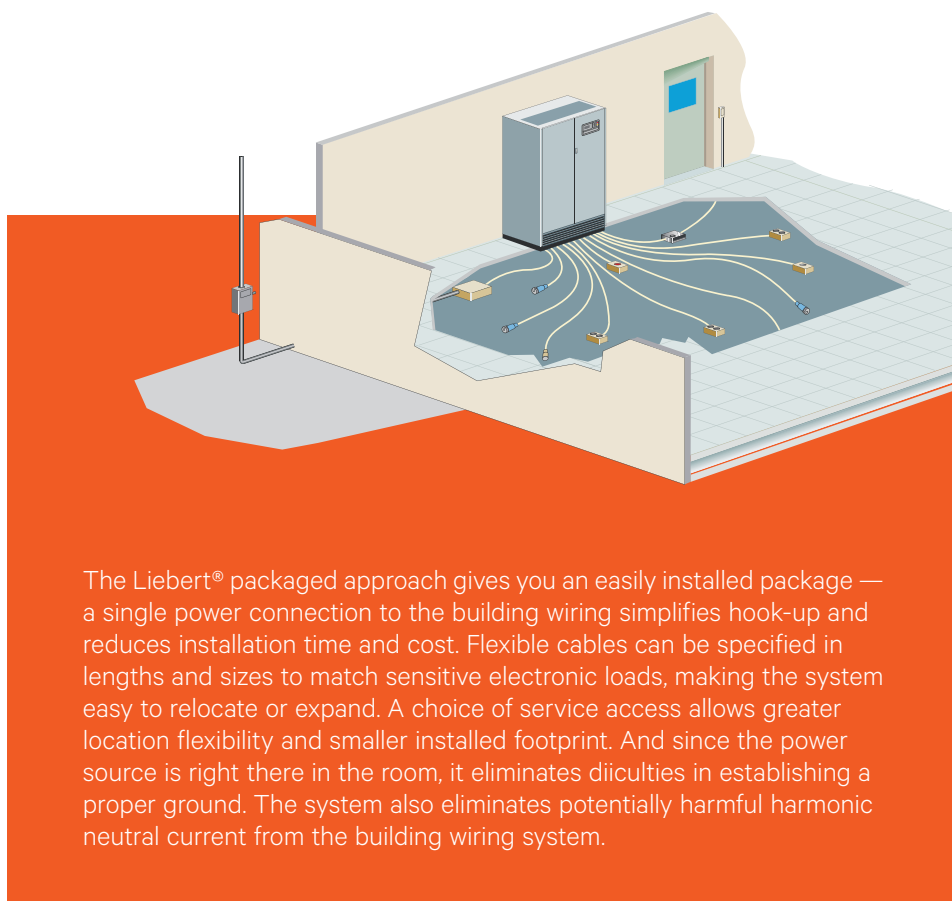
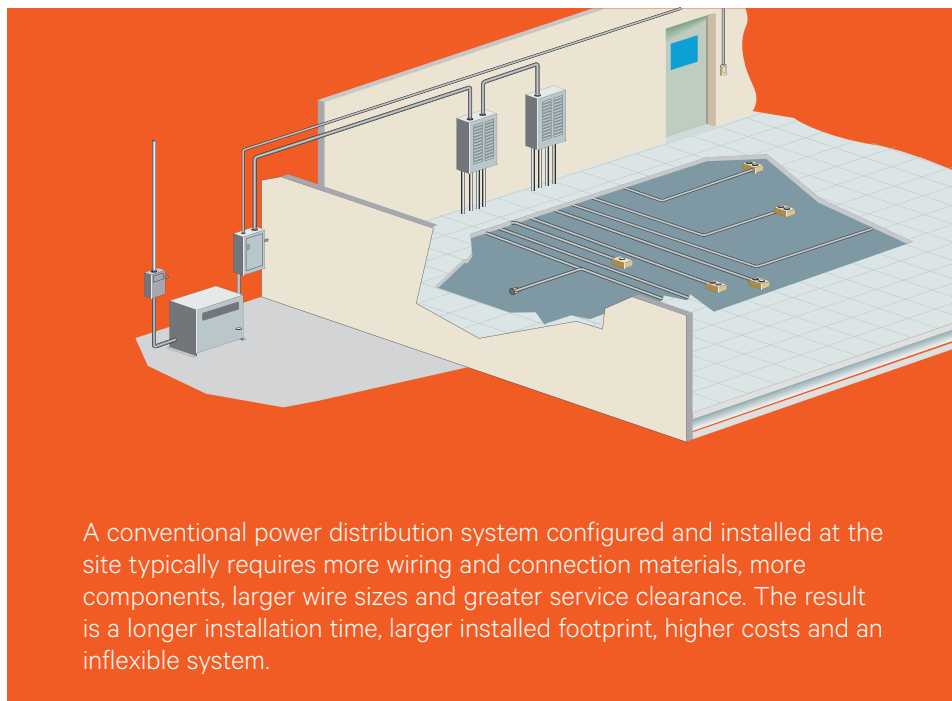


## An all-in-one power system ... all at an affordable price

### A noticeable improvement in power quality

There are a number of integral features that allow Liebert® Precision Power Centers to offer a higher quality level of electrical power for your critical applications

- The main input breaker with low voltage shunt trip accessory provides primary transformer over current protection, a power disconnecting means, and a method to interface with shutdown controls.
- Minimum 42 pole output breaker and individual isolated neutral and ground bus bars distribute power to the sensitive load equipment
- Oversized neutral components safely withstand neutral currents of least 1.73 times full load currents.
- System shutdown controls, including manual restart, over temperature shutdown and emergency power o, are included.
- Supplemental transformer protection is provided by temperature sensors in each winding to alarm abnormally high winding temperature or shutdown unit before isolation damage.
- Soft start available.
- Option of K1, K13, K20 transformer safely withstands high harmonic currents associated with electronic loads without derating.



## Designed from the ground up for effective power distribution

Several key features have allowed Vertiv to build a packaged power distribution system that combines a high level of power quality effectiveness with a cost that is less than conventional built-up systems.

### Computer grade grounding

The Vertiv Precision Power Center establishes a single point ground for the critical load. Power ground and computer ground points are identical minimizing ground-loop currents and common mode disturbances. Short output cables maintain the integrity of the isolation and conditioning.

### Secure distribution and circuit identification

Distribution panels are in the computer room which limits access to authorized personnel only. Each breaker has an adjacent identification tag for rapid circuit ID. Each output cable is labeled at each end with circuit number, length, type of receptacle and circuit identification.

### Non-linear load compatibility

The basic Vertiv PPC is designed to accommodate moderate levels of harmonic currents. Where severe levels of harmonic currents are anticipated, K-Factor transformers, and multi-output transformers options for harmonic current cancellation are available.

### On-site power monitoring

The integral power monitoring panel provides comprehensive metering and alarms for system Power parameters. Monitoring features include: True RMS measurements

- Auto scan of all parameters
- Adjustable alarm thresholds
- Programmable custom alarms
- Battery-backed alarm memory
- Summary alarm contact

### Central monitoring interface

Vertiv Precision Power Centers are compatible with our SiteScan centralized monitoring systems, allowing single point monitoring and alarm of power conditions. These microprocessor-based systems provide historical data on room conditions for future requirement Planning and troubleshooting. In addition, an isolated RS-232 ASCII port is provided for communication of monitored parameters and alarm information to other monitoring systems. OpenComms WEB interface card can also be used to enable cost-effective monitoring of a Vertiv PPC by your facility or network monitoring system.

### Optional system enhancements

A host of options enable you to design the Vertiv packaged power system to your exact needs:

- Transient voltage surge suppression (TVSS) is available for increased protection from damaging voltage surges. Very short interconnecting wiring provides superior surge clamping performance.
- BCMS for monitoring each individual branch output
- IS-Web card for web and SNMP
- IS-485 Card for Modbus over RS485
- IS-IPBMS Card for Modbus over TCP/IP



## Raising the standard of power in non-raised floor application

The innovative top-exit Vertiv Precision Power Center (PPC) takes packaged power systems to new heights... literally. By placing the input and output conduit connections at the top of the unit, the top-exit Vertiv PPC brings the benefits of high quality packaged power systems to non-raised floor applications. What's more, the unit retains the normal bottom output cable exit for easy relocation and expansion flexibility.

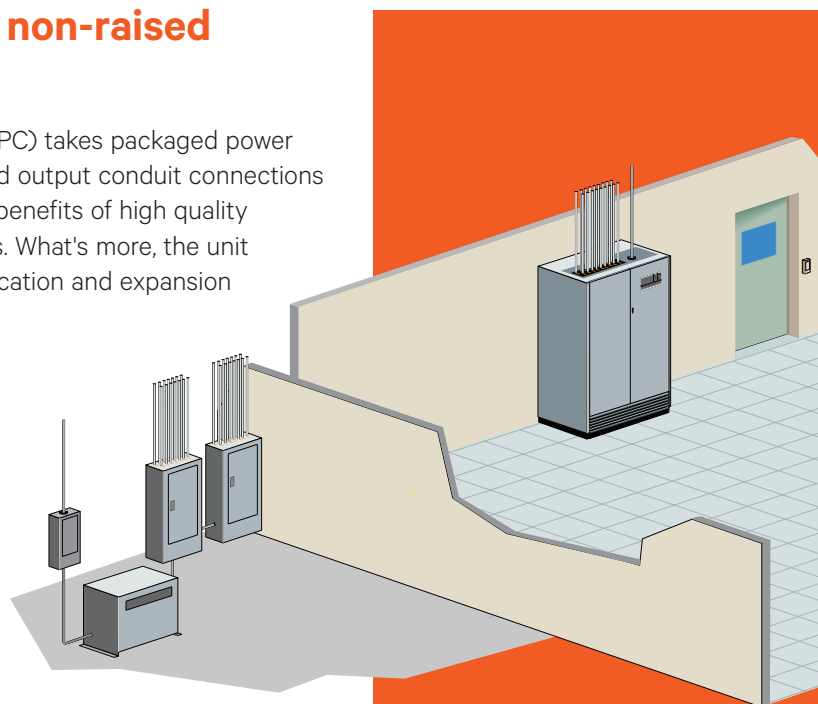
### Added flexibility enables you to bring packaged power to even more locations

Ideal for conditioned grade power distribution in applications where there is no raised floor, the top-exit Liebert® PPC brings the flexibility and space-saving benefits of a packaged power system to a variety of applications:

- Office areas
- LANS
- Laboratories
- High-tech manufacturing sites
- Process control rooms
- Medical imaging suites
- Grouped workstations

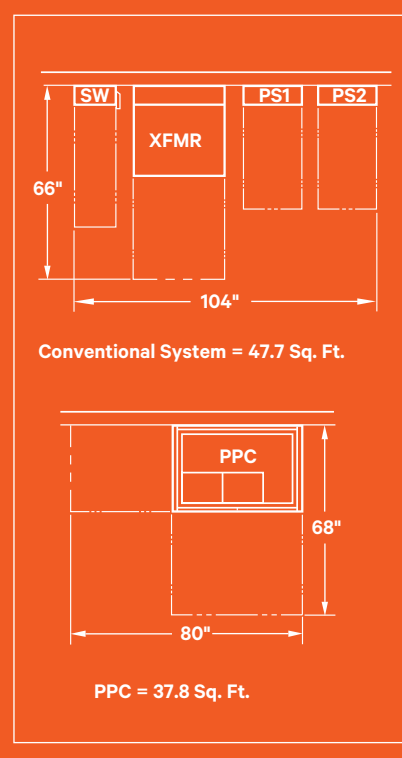
### Features and specifications

- **Ground:** Single point reference on separately derived system
- **Distribution:** Individually protected 125 Amps panel board with din rail mounted on breaker and flexible output cables
- **Cooling system:** convection / forced
- **Monitored parameters for main I/P Breaker:** I/P Voltages; Neutral & ground currents; voltage THD crest factor; kVA kW; PF; % load; kW Hrs; frequency; o/p current THD
- **Efficiency:** (96-98%) with transformer >99% transformer less system
- **Voltage Adjustment:** +2.5% of nominal in 2½% increments
- **KVA:** 50-300 kVA, 3 phase
- **Input:** 3-phase 3-wire plus ground 380, 400 or 415 volts: 50 Hz (Transformer less system require 3-phase, 4w & G)
- **Output:** 3-phase, 4-wire plus ground & 1 phase, 2 wire plus ground 220/380, 230/400 or 240/415 volts: 50 Hz
- **Alarm condition:** Transformer o/p over & under voltages; o/p overload; neutral and ground over currents; o/p voltage THD; Transformers over temperature; frequency deviation; phase sequence error; 5 customer specified alarm conditions.



### High efficiency power distribution in far less space

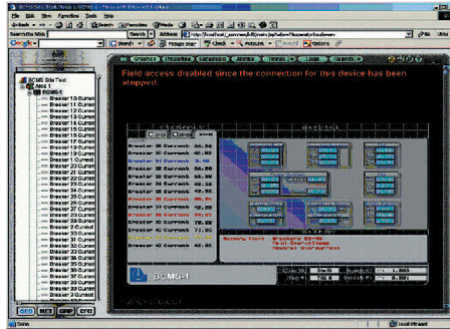
Compared to a conventional power distribution system built at the site and using multiple interconnected components, the top-exit Liebert® PPC provides a much smaller footprint, reduced installation time, less cost and easier service access.



## Monitored parameters & alarms for main I/P breaker

### Parameters

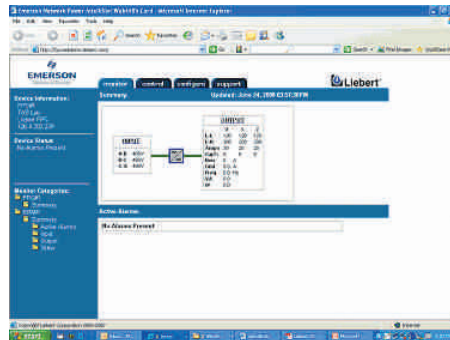
- Monitored on local lcd display
- Input volts, I-I\*
- Output volts, I-I & I-n, each phase\*
- Output voltage thd, each phase
- Output current, each phase, n & g\*
- Output current thd, each phase
- Output current crest factor, each phase
- Output kva, kw & load%\*
- Output pf
- Output frequency\*
- Output kw-hrs
- Output k-factor, each phase
- Time and date



Local Branch Monitoring

### Alarms

- Output over & undervoltage\*
- Output overload
- Output overcurrent\*
- Neutral overcurrent
- Ground overcurrent\*
- Output voltage distortion (thd)
- Frequency deviation\*
- Transformer overtemp\*
- Phase sequence error\*
- 5 Customer specified alarms\*



Web Monitoring

**\*Note:** Modbus & web monitoring of marked parameters & alarms are available

## Monitored parameters & alarms for each branch breaker

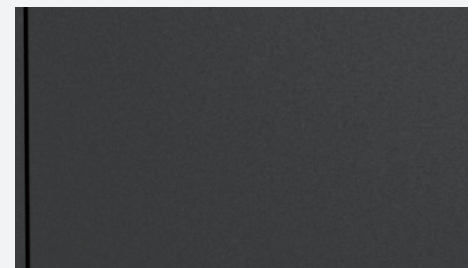
### Parameters

Current, load%, kw, kw-hrs

### Alarms

Branch circuits : over current  
2 Levels, low current.

**\*Note:** Modbus monitoring for all parameters & alarms are available



## Technical Specifications

Rated Power	50	75	100	125	150	200	225	250	300
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### Electrical parameters

Rated Input Mains Voltage <sup>1</sup>	380 - 400 - 415 Vac
Input Supply	Three phase, 3 wire and Ground
Input voltage tolerance	± 10 %
Frequency	50/60Hz
Input frequency tolerance	± 5 %
Output Supply	Three phase or Single phase
Rated Output Voltage <sup>2</sup>	220/380 - 230/400 - 240/415 Vac

### Environmental parameters

Operating Temperature	0 to 40°C, (average 35°C max)
Relative Humidity	90% at 31°C
Altitude of operation	1000m above sea level
Storage/ transport temperature	-25 to 70°C

### Mechanical parameters

Height	With transformer	2000mm	
	Without transformer		
Width	With transformer	900mm	1200mm
	Without transformer	600mm	1000mm
Depth	With transformer	1050mm	
	Without transformer	600mm	
Colour	Structured Black, Epoxy Polyester		
Cooling	By Internal Intake Fans		
Cable Entry / Exit	Outgoing cables = Bottom side; Incoming cables = Top & Bottom side		
Protection grade	IP 20		

\* 1. 380V, 400V or 415V is to configured by software.

2. Rated output voltage is as per input mains voltage.

3. Specification are subject to change without any prior notification



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