

■ AC Power
For Business-Critical Continuity™

Liebert® MB
Flexible Modular Busway



Liebert MB Modular Busway: Increase The Flexibility And Reliability Of Your Data Center Power Distribution

Emerson Network Power brings you the most flexible, robust power distribution system on the market today: Liebert MB Modular Busway.

Liebert MB is modeled on the Siemens XJ-L busway – well-known for its 50 year history of outstanding performance, providing flexible modular power distribution in high tech environments. This busway is the go-to solution for contractors and users who want to design superior electrical distribution systems that require high power distribution and more effective utilization of space.

System Compatibility

Liebert MB is compatible with the Knurr DCM rack and the entire family of Liebert power products—rack and room PDUs, UPS systems and surge protective devices—providing power distribution and protection.

- Rackmount Liebert MB installs on top of Knurr DCM rack.
- Works with Liebert MPX, Liebert MPH and Knurr DI-STRIP Rack PDUs.
- Works with row-based UPS and distribution.



Typical Data Center With Cables And Conduit

Whether under floor or overhead, datacenter power cables can tangle, restrict airflow, and create confusion as changes are made in the data center. Without vigilant management, the results are increasing costs for cable additions and cooling, and a real potential for downtime.

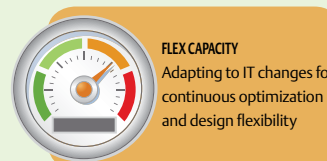


Data Center With Liebert MB Modular Busway

Power cables are replaced with Liebert MB Modular Busway. Installation is simplified. Each rack has a clearly identified breaker. Air flows freely. Installation and ongoing costs are reduced. And the solution is organized and easy to maintain.

Liebert MB Delivers Efficiency Without Compromise

Efficiency Without Compromise provides a path to optimize data center infrastructure around design, operating and management efficiencies—while maintaining or improving availability. This is achieved through the proper selection and utilization of cooling, power and monitoring technologies, supported by key services and local expertise.



Maximize Installation Simplicity And Flexibility

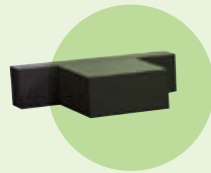


Liebert MB modular busway comprises three main components:

- Tap Box: Provides the input connection from the UPS/PDU to busway.
- Busway: Extends 3-phase power distribution over or under rows of racks.
- Bus plugs: Enable plug-n-play distribution to individual racks or rack PDUs.

Tap Box Benefits:

- Easy to install.
- Available in multiple configurations to suit site needs.



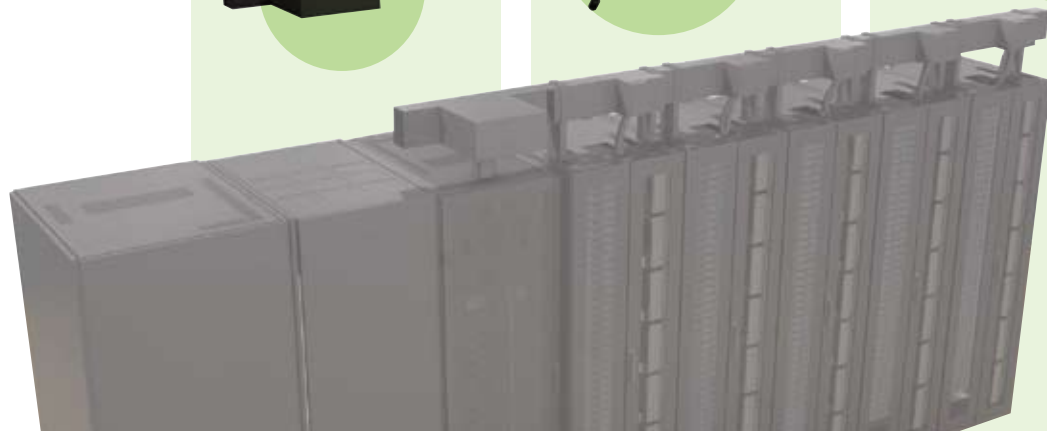
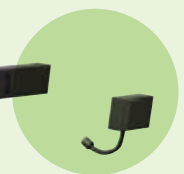
Bus Way Benefits:

- Eliminates messy cable installations.
- Easily grows by adding more busway.
- Asymmetrical Bus Port Outlets prevent improper installation.



Bus Plug Benefits:

- Change power requirements on the fly.
- Plug-n-play to rack / rack PDU.
- No interruption to existing critical loads.
- May be installed by anyone.



Flexibility

- Easy to change bus plugs.
- Available in 100, 225 & 400A ratings.
- Increases space efficiency and improves airflow.
- Integrates easily into new or existing datacenter layouts.
- Provides dual bus or single bus configurations.

Higher Availability

- Fully rated design.
- Certified to UL 857 & CSA 22.2.
- Hot swappable bus plugs keep systems up and running even during changes.

Lowest Total Cost Of Ownership.

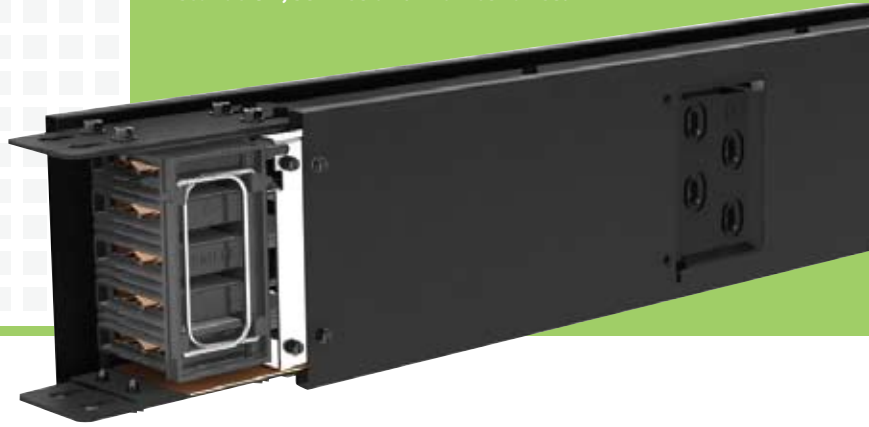
- Requires fewer and less expensive power cables.
- Installs with 15-30% less time and cost compared to cables and conduit.
- Installs with tool-less mounting to Knurr DCM Racks.
- Plug-n-play bus plugs to rack PDU's can be installed by anyone—no electrician needed.

Ideal Applications

- Data centers of any size.
- Raised and non-raised floors.
- Single or Dual bus configurations.
- Low or high-density power distribution.
- Data centers with frequent configuration changes.

The Mechanical and Thermal inspection Window is a convenient feature during installation, service and maintenance.

Flexible, Modular Components For Easy Installation And Growth



Liebert MB Busway sections provide high density distribution to the rack while eliminating cable clutter that can reduce airflow.

The system is modular, ensuring the right power configuration now, and flexible, easy changes when your power needs change.

Busway Benefits

- Eliminates messy cable installations.
- Lower installed cost compared to cables and conduit.
- Easily grows by removing End Closer and adding more busway.
- Asymmetrical Bus Port Outlets prevent improper installation for increased safety.

Liebert MB busway is available in standard and high density configurations. Ten foot high density configuration shown.

Busway Features

- 100, 225 and 400A Capacities.
- 10, 22 and 35k withstand ratings.
- Up to 600VAC.
- Standard configurations, 100A bus plugs: 10 ft. - 6 each side; 5 ft. - 3 each side; 2 ft. - 1 each side.
- High Density configurations, 60A bus plugs: 10 ft. - 12 one side; 5 ft. - 6 one side; 2 ft. - 2 one side.
- Snap-together, spring-loaded joints.
- Requires no cutting or special tools.
- Mechanical and Thermal Inspection Window.
- Recessed conductors with IP2X Finger Safe Ingress.
- Bus bars are solid copper (98% conductivity) and tin plated for superior electrical performance and corrosion resistance (optional silver plating is also available).
- Solid bus bar design provides short circuit strength up to 35 kA.
- Totally enclosed steel housing guards against incidental contact and contamination to live parts.
- Enclosed box design will not twist or distort during bus plug installation.
- 3-Ø 4-wire plus ground with 200% neutral.
- Certified to UL 857 & CSA 22.2.



Busway Component Options

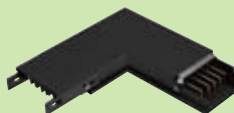
Liebert MB components are available in a variety of straight lengths, elbows, tees, crosses, and tap boxes that can be installed and then readily expanded or reconfigured to meet changing requirements.



Tee Joint



Center Cable Tap Box



90° Flat Elbow



Cross



End Closer

The Right Power Configuration, Right Where You Need It



Flexible bus plug modules fit any outlet along the busway.

Liebert MB allows data center managers the flexibility, control and peace of mind to change and adapt at the same pace as hardware requirements demand.

IT equipment demands and changes are increasing. You need a power distribution system that can adapt at the same pace with no interruption to existing critical loads and without need for electricians or intrusive breaker and power cable changeouts.

Bus Plug Benefits

- Change power requirements on the fly.
- Plug-n-play to rack / rack PDU.
- No interruption to existing critical loads.
- May be installed by anyone — no electrician required.
- Sized to meet server needs — amps and receptacles.
- Relocate and reuse bus plugs anywhere along the busway to maximize investment.
- Bolt fasteners ensure secure installation.



Bus plug with drop cord.

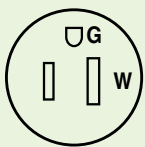


Flushmount bus plug.

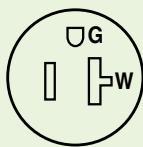
Bus Plug Features

- Up to 100A per Bus Plug.
- Up to 600VAC.
- 10, 22 and 65kAIC breakers available.
- Accommodates any UL listed Receptacle.
- Receptacles flush mounted or on a 3-10 ft. Drop Cord.
- Fits in any bus plug outlet along the busway.
- Up to twelve 100A bus plugs can be installed per 10' run, with six bus plugs per side (standard) or twelve 60A bus plugs on one side (high density).
- Bus plugs are readily installed on energized busway and are fully interchangeable between 100, 225 and 400A configurations.

Receptacle Options



NEMA – 5-15R
2P/3W 15A 125V



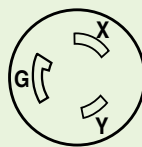
NEMA – 5-20R
2P/3W 20A 125V



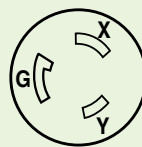
NEMA – L5-20R
2P/3W 20A 125V



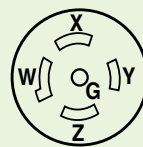
NEMA – L5-30R
2P/3W 30A 125V



NEMA – L6-20R
2P/3W 20A 250V



NEMA – L6-30R
2P/3W 30A 250V



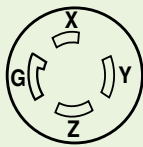
NEMA – L21-20R
3PH 20A 120/208V



NEMA – L21-30R
3PH 30A 120/208V



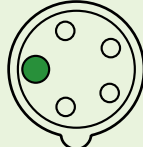
NEMA – L15-20R
3PH/4W 20A 250V



NEMA – L15-30R
3PH/4W 30A 250V



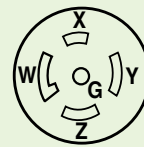
CS8364C/CS8369
3PH 50A 250V



IEC60309
3PH 60A 120/208V



NEMA – L7-15R
2P/3W 15A 125V

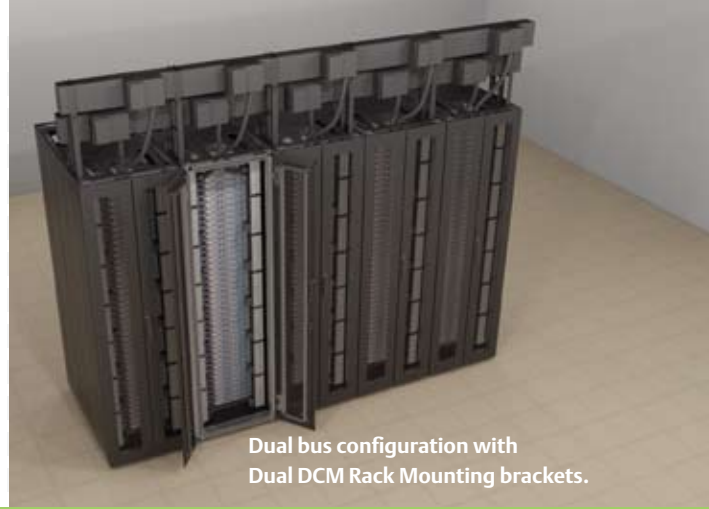


NEMA – L22-30R
3PH 30A 277/480V



IEC60309
3PH 20A 480V

Easily Configured To Meet Data Center Requirements



Dual bus configuration with Dual DCM Rack Mounting brackets.

Each data center has its own design with different limitations, configurations and requirements. To meet your unique application, the Liebert MB offers three distinct installation options.

Rackmounted



A unique mounting bracket fastens to the Knurr DCM rack without tools. This complete mounting method requires no additional components. Brackets for single or dual electrical buses are available. (Input connection to busway provided by others).

Single DCM Rack Mounting bracket



Suspended



The Liebert MB can be suspended above racks using a hanger bracket and threaded drop rods.

Hanger Bracket Features

- Easily installs on threaded drop rod.
- No special tools required.
- Located every 5ft along the busway.
- Does not interfere with Bus Plugs.

Hanger bracket



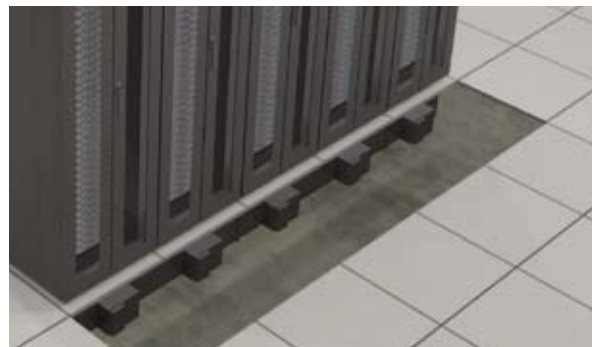
Rack Mounting Bracket Features

- Easily installs on Knurr DCM racks.
- Unique tool-less design.
- Decreases installation time & cost.
- Does not interfere with Bus Plugs.
- Single or dual electrical bus brackets available.



Dual DCM Rack Mounting bracket

Under floor



The busway can be installed vertically or rotated to lie flat under the raised data center floor for easy access to Bus Plug Ports.

Managing Power Distribution From The Rack To The Room

Effective management of power infrastructure is the key to maintaining productive IT operations. Emerson Network Power enables data center managers to monitor critical infrastructure equipment, track and trend power usage, and manage capacity requirements from the rack to the room.

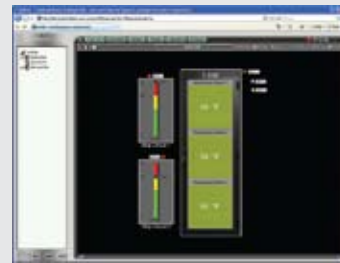
A wide variety of monitoring and management systems enable optimal performance of the IT infrastructure – from intelligent management at the Rack PDU level to sophisticated infrastructure management systems.



The Knurr DCM rack is the ideal platform for both Liebert MB Modular Busway, and Liebert and Knurr rack PDUs. This rugged rack has the industry's highest perforated area for best airflow, and has a variety of tool-less accessories for fast and easy cable management and rack deployment.



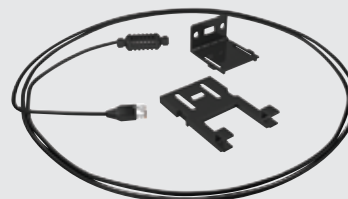
Liebert RPC-BDM Rack PDU provides local monitoring from the individual receptacle to the entire rack PDU, as well as monitoring of Liebert SN temperature/humidity sensors.



Liebert SiteScan Web centralized monitoring web-based interface provides real-time monitoring and control.



Liebert Nform provides power data trending and receptacle control.



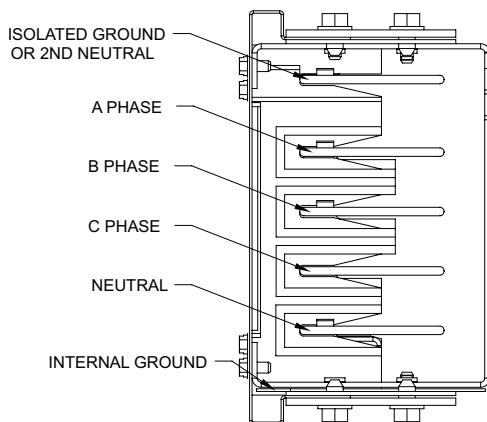
Liebert SN Rack Sensors monitor temperature and humidity. The tool-less system is auto-configured—no set-up required.

Liebert MPX Adaptive Rack PDU and Liebert MPH Managed Rack PDU provide monitoring and metering capabilities. Each may be positioned for top or bottom rack entrance, to match busway configuration.

Ensuring The High Availability Of Mission-Critical Data And Applications.

Liebert MB Specifications And Ratings

- Current Ratings: 100, 225, & 400A.
- Voltage: 600V max.
- Configurations: 3Ø3W, 3Ø4W.
- Neutral: 200%.
- Capacity: Standard, 100A bus plugs: 10 ft. - 6 each side; 5 ft. - 3 each side; 2 ft. - 1 each side. High Density, 60A bus plugs: 10 ft. - 12 one side; 5 ft. - 6 one side; 2 ft. - 2 one side.
- Short circuit withstand: from 10kA to 35 kA, based on ampacity
- Ground: Internal (G), and/or optional Isolated (IG).
- Bus bars: Solid copper (98% conductivity) and tin plated (optional silver plating is also available).
- Bus plugs: Drop cord (3-10 ft. cord) or flush mount, interchangeable between 100, 225 and 400A configurations.
- Housing: Totally enclosed, steel.
- Disconnects: Fusible or circuit breaker.
- Options: receptacles, branch circuit breakers, drop cords, power monitoring.
- Certification: ANCE NMX-J-148-ANCE, CSA 22.2 and UL857.
- Finger-safe Ingress Protection: IP2X.



Emerson Network Power.
The global leader in enabling
Business-Critical Continuity™.

- **AC Power**
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

While every precaution has been taken to ensure accuracy and completeness in this literature, Liebert Corporation assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

© 2010 Liebert Corporation. All rights reserved throughout the world. Specifications subject to change without notice.

All names referred to are trademarks or registered trademarks of their respective owners.

© Liebert is a registered trademark of the Liebert Corporation.

SL-20900 (R04/10) Printed in USA

Business-Critical Continuity, Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co. ©2010 Emerson Electric Co.