



Optima™ 532 Series Power Distribution Units

Operating Guide and Reference



Mar 2025 : P/N 501034-000 Rev F

1 General 3

1.1 Documentation Symbols (EN).....	3
1.2 Safety Notices (EN).....	3
1.3 Symboles de Documentation (FR).....	4
1.4 Avis de sécurité (FR).....	4
1.5 General Description	5
1.6 Product Models.....	5
1.7 Product Ratings	6

2 Installation 7

2.1 Installation Notes.....	7
2.2 Installation Mounting	8

3 Operation 9

3.1 Startup	9
3.2 Breaker Controls.....	9
3.2.1 Main Breaker	9
3.2.2 Branch Breakers	9
3.2.3 Controls Breaker	10
3.3 EPO Controls	10
3.3.1 Remote Mode Switch	10
3.3.2 Remote Bus Connectors	11

4 Reference 12

5 Specifications 13

6 Contact and Support 14

6.1 Repairs	14
6.2 Contact Options	14
6.3 Two Year Warranty	14



1 General

1.1 Documentation Symbols (EN)

Safety and warning notices as well as general notices in this document are shown in a box with a symbol as follows:



Symbol for a life threatening danger.



Symbol for general safety notices (instructions and damage protection bans) or important information for operation.



Symbol for general notices.

1.2 Safety Notices (EN)

Mortal danger - Hazardous voltage



- This product is classified as pluggable equipment. The mains inlet plug serves as the disconnect device. The mains inlet plug shall be installed so that it is easily accessible.
- This product is equipped with a safety ground connection through the mains inlet plug, as well as a redundant chassis ground screw on the rear panel. Ensure that the product is properly grounded before applying power.
- Disconnect all power to the product prior to servicing control signal cabling.
- Do not open this product as it contains no user serviceable parts inside. All service concerns should be directed to Marway Power Solutions.
- If this product is used in a manner which does not comply with this instruction manual, the protection provided by the equipment may be impaired.
- All work on connections must be carried out under zero voltage (output disconnect), and may only be performed by qualified and informed persons. Improper actions can cause fatal injury as well as serious material damage.



- This product is intended for indoor use only and should not be exposed to excess moisture. Avoid any use of liquids near the equipment, and condition which cause condensation.
- This product is intended for installation in a restricted access location by a skilled person.
- This product is intended for use by an instructed person.
- The equipment is only approved for use within the connection limits stated on the product label.
- The ratings for all output receptacles are marked on the chassis. Be sure to observe the ratings for all connected load equipment.

1.3 Symboles de Documentation (FR)

Les consignes de sécurité et avertissements, ainsi que les avis généraux figurant dans ce document sont présentés dans un encadré avec un symbole, comme illustré ci-dessous.



Symbole pour les avis de danger potentiellement mortel.



Symbole pour les avis de mise en garde pour la sécurité personnelle ou pour la protection de l'équipement.



Symbole pour les avis importants concernant le fonctionnement.

1.4 Avis de sécurité (FR)



Danger de mort – Tension dangereuse

- Ce produit est classé comme un équipement enfichable. La prise d'alimentation secteur sert de dispositif de déconnexion. La prise d'alimentation secteur doit être installée de manière à être facilement accessible.
- Ce produit est équipé d'une mise à la terre de sécurité via la prise d'alimentation secteur, ainsi que d'une vis redondante de mise à la terre du châssis. Assurez-vous que le produit est correctement mis à la terre avant de le mettre sous tension.
- Débranchez toute alimentation électrique du produit avant d'effectuer l'entretien du câblage des signaux de commande.
- N'ouvrez pas ce produit, car il ne contient aucune pièce réparable par l'utilisateur. Tous les problèmes de service doivent être adressés à Marway Power Solutions.
- Si ce produit est utilisé d'une manière non conforme au présent manuel d'instructions, la protection fournie par l'équipement peut être compromise.
- Tous les travaux sur les connexions doivent être effectués sous une tension nulle et ne doivent être effectués que par des techniciens qualifiés et compétents. Des actions inappropriées peuvent entraîner des blessures mortelles et des dommages matériels graves.



- Ce produit est conçu pour une utilisation à l'intérieur uniquement et ne doit pas être exposé à une humidité excessive. Évitez toute utilisation de liquides à proximité de l'équipement et les conditions susceptibles de provoquer de la condensation.
- Ce produit est destiné à être installé par une personne qualifiée dans un endroit à accès restreint.
- Ce produit est destiné à être utilisé par une personne qui a reçu des instructions appropriées.
- L'utilisation de l'équipement est approuvée uniquement dans les limites de connexion indiquées sur l'étiquette du produit.
- Les valeurs nominales de toutes les prises de sortie sont indiquées sur leur boîtier. Assurez-vous de respecter les valeurs nominales de tous les équipements de charge raccordés.

1.5 General Description

The Optima 532 Series (model numbers MPD 532XXX) began as a family of thirty power distribution units (PDUs) designed for use with 120/208 Vac 3-phase supply power. As of early 2025, many models have shifted to legacy status, but this manual continues to describe all original 30 models.

Each PDU receives mains power through a NEMA L21-30P inlet located on either the front or rear panel depending on the model. Power is distributed as 120 and/or 208 Vac through four branch circuits, each outfitted with a variety of optional outlets.

All models include an EMI filter, surge suppression, and remote-EPO feature. Circuit 1 of all models includes one unswitched NEMA 5-20R duplex receptacle (J1) which is not controlled by the remote-EPO feature. Circuits 2–4 are a combination of either a 5-20R or 6-20R duplex, along with one twist lock receptacle (L5, L6, or L21).

All models are constructed of a steel chassis, and designed for fixed mounting within a 2U rack space in an EIA-310 compliant rack enclosure.

1.6 Product Models

Models are primarily organized by what type of power inlet they have. Then by the outlet configurations. All models have a continuous duty rating of 24 A per phase at the inlet (30 A maximum).



Be aware that as of early 2025, many models have been shifted to legacy status. That is, only a few models (as found in our [Standard Products Catalog](#)) are generally stocked. Support and service is continues to be available for all models. This manual continues to describe all original models.

Inlet Configurations			Outlet Configurations						
Front Panel Straight*	Front Panel Angled*	Rear Panel Straight*	Straight Blade Duplex		Twist Lock				
			5-20R	6-20R	L5-20	L5-30	L6-20	L6-30	L21-30
532000	532010	532020	4		3				
532001	532011	532021	4			3			
532002	532012	532022	4				3		
532003	532013	532023	4					3	
532004	532014	532024	4						3
532005	532015	532025	1	3	3				
532006	532016	532026	1	3		3			
532007	532017	532027	1	3			3		
532008	532018	532028	1	3				3	
532009	532019	532029	1	3					3

* Each model has one of two “dash number” designators:

- -000 = the remote EPO is a Normally Open (N.O.) type
- -001 = the remote EPO is a Normally Closed (N.C.) type



1.7 Product Ratings

By model number, the following are the corresponding inlet and outlet ratings.

Inlet Rating	Outlet Ratings
NEMA L21-30P 120/208VAC 3 ϕ 4P5W 50/60Hz 24 A continuous 30 A maximum	120 Vac, 1 ϕ , 16 A continuous (20 A max.) per NEMA 5-20R duplex receptacle
	208 Vac, 1 ϕ , 16 A continuous (20 A max.) per NEMA 6-20R duplex receptacle
	120 Vac, 1 ϕ , 16 A continuous (20 A max.) per NEMA L5-20R receptacle
	120 Vac, 1 ϕ , 24 A continuous (30 A max.) per NEMA L5-30R receptacle
	208 Vac, 1 ϕ , 16 A continuous (20 A max.) per NEMA L6-20R receptacle
	208 Vac, 1 ϕ , 24 A continuous (30 A max.) per NEMA L6-30R receptacle
	120/208 Vac, 3 ϕ , 24 A continuous (30 A max.) per NEMA L21-30R receptacle
	24 A continuous (30 A max.) total per phase regardless of receptacle combination
	(Outlet combinations are for connection flexibility, not for increased current capacity.)



2 Installation

2.1 Installation Notes

The following guidance must be followed for proper installation of the product.

1. **Mounting:** This product is designed for mounting in an EIA-310 compliant 19" rack. The user is responsible for ensuring the mounting method provides adequate structural support at the front and rear of the unit, and for any attached cables. Inadequate or uneven support may create a hazardous mechanical or electrical condition over time.
2. **Ventilation:** The user is responsible for ensuring the mounting location provides adequate ventilation to dissipate heat generated during operation of the product. Ensure the product is securely mounted before applying power. If the unit has ventilation holes, slots, screens, or fans, these must not be blocked. The unit's specified maximum ambient temperature rating must not be exceeded.
3. **Chassis ground:** Grounding should be achieved through the main inlet power cable, assuming that cable is properly grounded at the source end. For additional protection, the rear of the chassis includes a redundant chassis ground screw and ground wire. If desired for your installation location, connect the chassis ground wire to the rack cabinet using an appropriate fastener.
4. **Optionally, connect the appropriate cables between the PDU outlets and the equipment being powered by the PDU.** This may be done later according to the startup procedures suitable to the end-user's equipment and application.
5. **If applicable, connect the cabling between the PDU and remote EPO control panel.**
6. **PDU Main Breaker:** Ensure the Main Breaker on the front of the PDU is in the off position before connecting the PDU's inlet cable to the facility power source.
7. **Facility Power Source:** The three-phase facility power source for these product must include an overcurrent protective device capacity as defined in the table below.

Main Inlet	Continuous Current Rating	Mains Protection Required
NEMA L21-30P	24 A	30 A



2.2 Installation Mounting

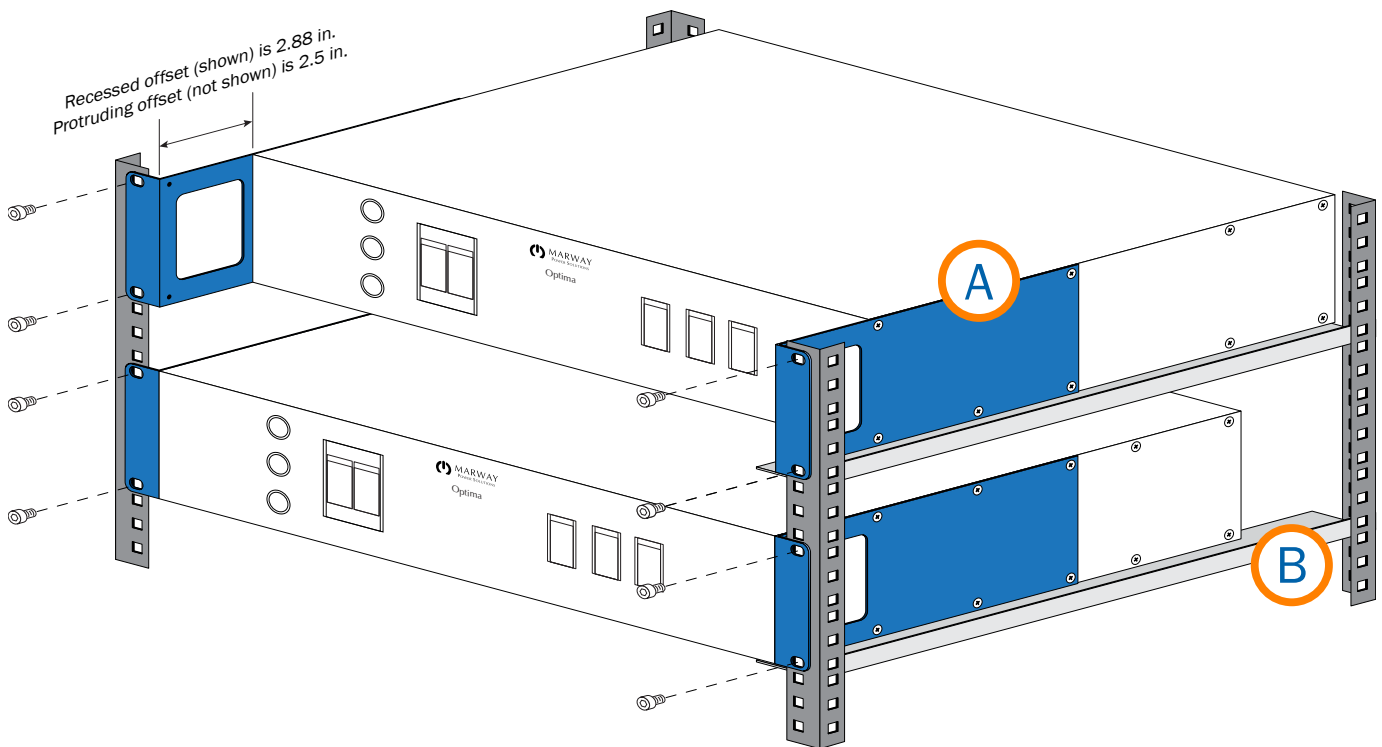


EN — These products are heavy. The flange mounting ears are designed to hold the PDU securely against the rack mounting rails, but are NOT designed to support the weight of the product vertically. The end user is responsible for ensuring the product's weight is properly supported by the rack's infrastructure (which may require adding support rails).

FR — Ces produits sont lourds. Les oreilles de montage à bride sont conçues pour maintenir solidement l'unité de distribution de l'alimentation contre les rails de montage, mais NE sont pas conçues pour soutenir le poids du produit verticalement. Il incombe à l'utilisateur final de s'assurer que le poids du produit est correctement supporté par l'infrastructure du bâti (ce qui peut nécessiter l'ajout de rails de support).

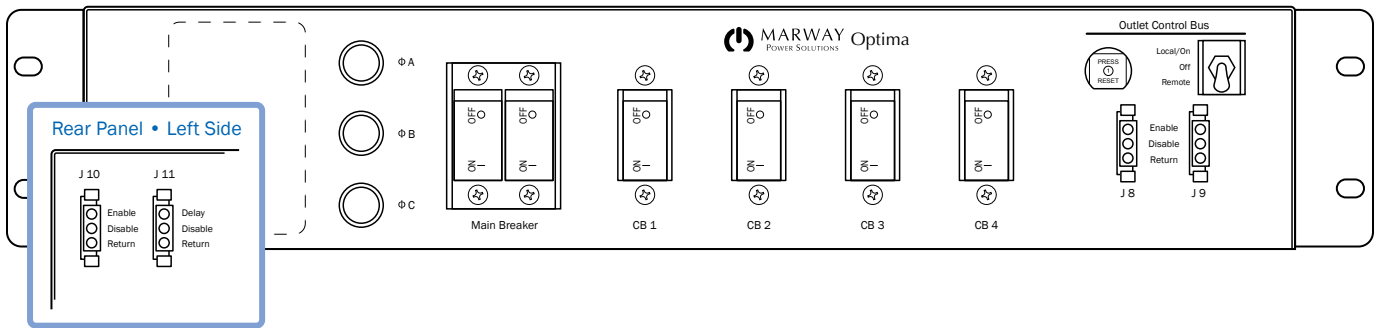
(A) The mounting ears, highlighted in blue, can be positioned in one of three ways relative to the front. (1) Flush with the front (bottom unit). (2) With the PDU recessed from the front (top unit) which may be useful for units with front power inlets to allow the inlet power cable to route through the side access hole. (3) With the PDU protruding beyond the front of the brackets (not shown) for cabinet with deeply inset rails. The mounting brackets can also be flipped (not shown) to mount flush with the rear of the PDU.

(B) The PDU should be supported by rails (not provided). The PDU is too heavy to mount only with the ears.



Note the illustration is conceptual, and not intended to depict any specific model, chassis size, or exact bracket hole pattern.

3 Operation



3.1 Startup

Switch all breakers on the PDU control panel to the off position. Switch the **Outlet Control Bus** mode switch to the up position labeled **Local/On**. (This forces the PDU into local mode, ignoring any existing remote panel for now.)

Insert the PDU's inlet connector into the facility mains power source. If there is a facility power disconnect, switch that to the On position. At this point, the PDU is energized, though all indicator lamps will be off.

Switch the PDU's **Main Breaker** to the On position, and the ΦA , ΦB , ΦC indicators will be lit. All branch circuits are ready for use.

If there is not an EPO panel connected to the PDU, leave the switch in the up **Local/On** position. If there is remote EPO panel connected to the PDU, such as Marway's Commander UCP 5000, flip the **Outlet Control Bus** switch to the down **Remote** position.

3.2 Breaker Controls

The PDU has three distinct groups of controls: the main breaker, the branch breakers, and the remote EPO system.

3.2.1 Main Breaker

The **Main Breaker** prevents or enables power to all PDU outlets. When **Main Breaker** is switched on, the indicators labeled ΦA , ΦB , ΦC will be lit.

This breaker includes a breaker guard with a lockout feature. Attaching a small padlock (not included) through the guard hole will prevent the breaker from being switched on.

3.2.2 Branch Breakers

All Optima 532 models include four branch breakers. All are rated at 16 A continuous load (20 A maximum). CB1 is for J1 (both outlets of the duplex). CB2 is for J2, et cetera.

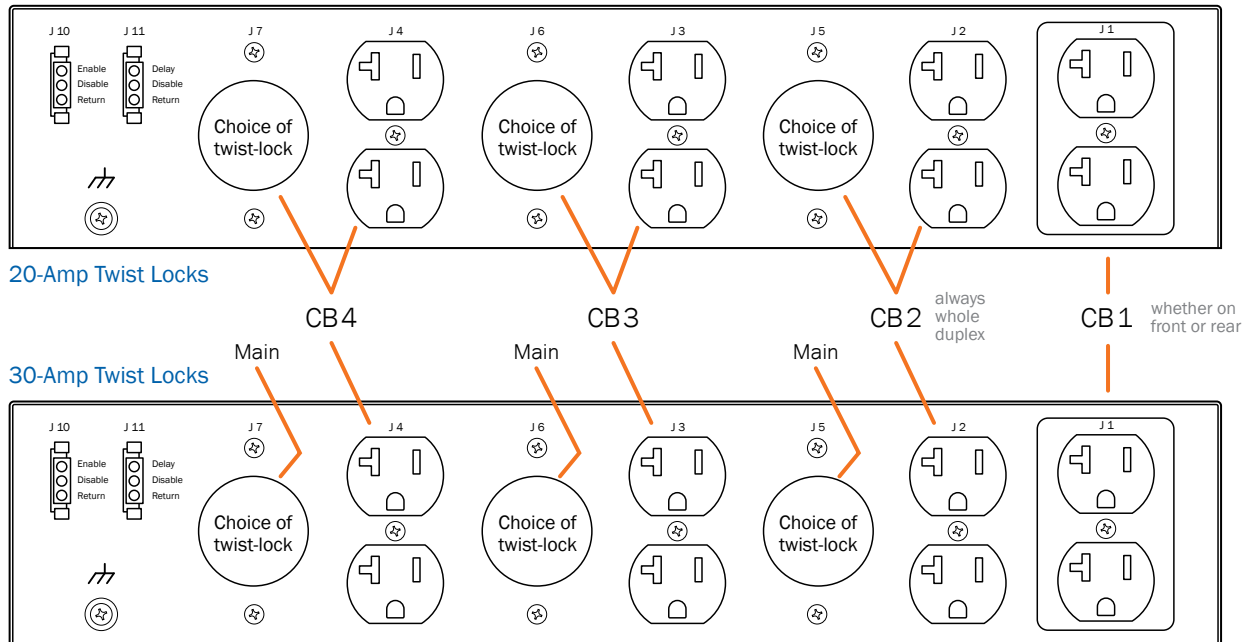
Branch breakers do not have indicators. However, note that as each breaker is switched on, the top of the switch button reveals as a white, helping to identify that it is on.



Note how the tops of the branch breakers are white when switched on.



If the twist lock outlets J5, J6, and J7 are the L5, 20 Amp types, they will be wired to the circuit breakers for J2, J3, and J4 respectively. If the twist locks are 30 A rated, they are wired directly to the main breaker.



3.2.3 Controls Breaker

There is a small pop-out breaker protecting the control system components. This isn't used during normal operation. If it were to pop out, try pressing it back in. If it fails to stay in, there may be failure in one of the controls which is shorted, or is drawing excessive current. This would likely indicate the need for an RMA repair. Contact Marway support.

3.3 EPO Controls

All Optima 532 PDUs include the controls to interface to Marway's Commander UCP 5000 Remote On/Off/EPO panels and similar compatible panels. This panel is not required to operate the PDU.

3.3.1 Remote Mode Switch

The **Outlet Control Bus** has a three-mode switch which is used as a local override to the overall remote command system. The three modes are labeled **Local/On**, **Off**, and **Remote**.

When there is not a remote control panel connected:

- **Local/On** (up position) is the normal operating mode.
- **Off** (center position) causes an internal contactor to disengage power from all branches except for the CB1/J1 branch which continues to be powered. Therefore, **Off** disconnects power to almost all outlets even if the breakers are switched on.
- **Remote** (up position) will behave like **Off**.

When there is a remote panel connected to the PDU:

- **Remote** (down position) is the normal operating mode. Outlets are subject to the branch breakers, the main breaker, and the upstream remote panel On/Off/EPO controls.



- **Local/On** (up position) causes the PDU to ignore the On/Off/EPO commands of the remote panel. The local breakers will then be in sole control of the outlets.
- **Off** (center position) causes an internal contactor to disengage power from all branches except for the CB1/J1 branch which continues to be powered. The PDU will ignore the On/Off/EPO commands of the remote panel. Therefore, **Off** disconnects power to almost all outlets even if the breakers are switched on.



If there will not be a remote On/Off/EPO panel connected to the PDU, switch the **Outlet Control Bus** mode switch to the up position labeled **Local/On**. This is the normal operating position for any unit with no remote panel. (The other positions will prevent power from getting to the outlets.)



Whether there is a remote control panel connected or not, toggling the **Outlet Control Bus** mode switch to the center position labeled **Off** will disconnect power to almost all outlets even if the breakers are switched on. The **Off** mode causes an internal contactor to disengage power from all branches except for the CB1/J1 branch which continues to be powered.

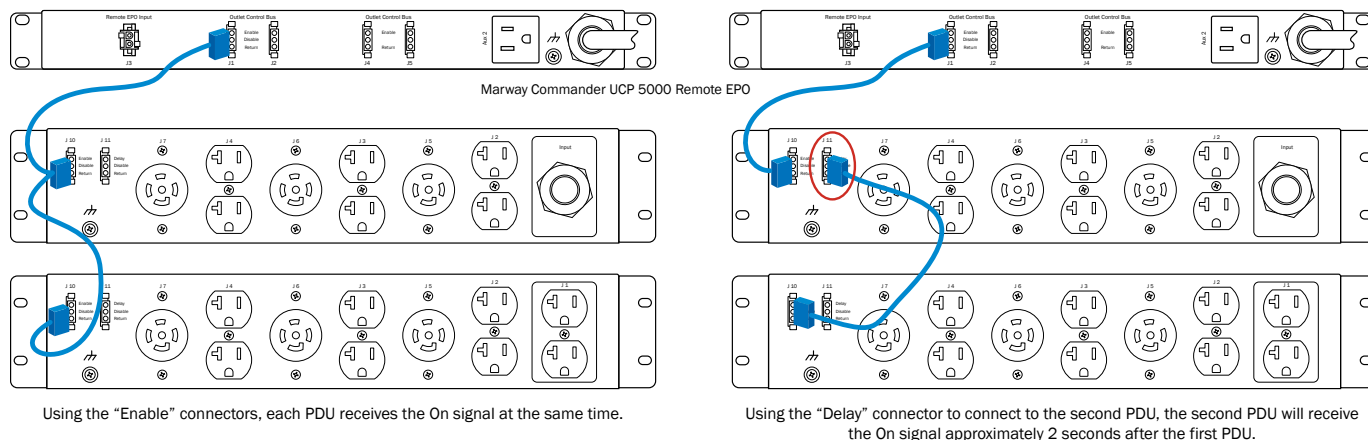
3.3.2 Remote Bus Connectors

There are a total of four connectors, but note that there are two types of connectors. Based on the label of the top pin, we call the two types the standard “enable” type, and the alternative “delay” type. There are three of the standard type (2 front, 1 back), and one of the delay type (on the back).

Multiple PDUs can be wired in a daisy-chain fashion to be operated by a single remote panel.

The standard enable connectors are J9, J10, J11. These are all wired in parallel.

The delay connector is J12. When used, the On signal from the remote panel is delayed by about 2 seconds.



3.3.2.1 Remote Bus Connector Wiring

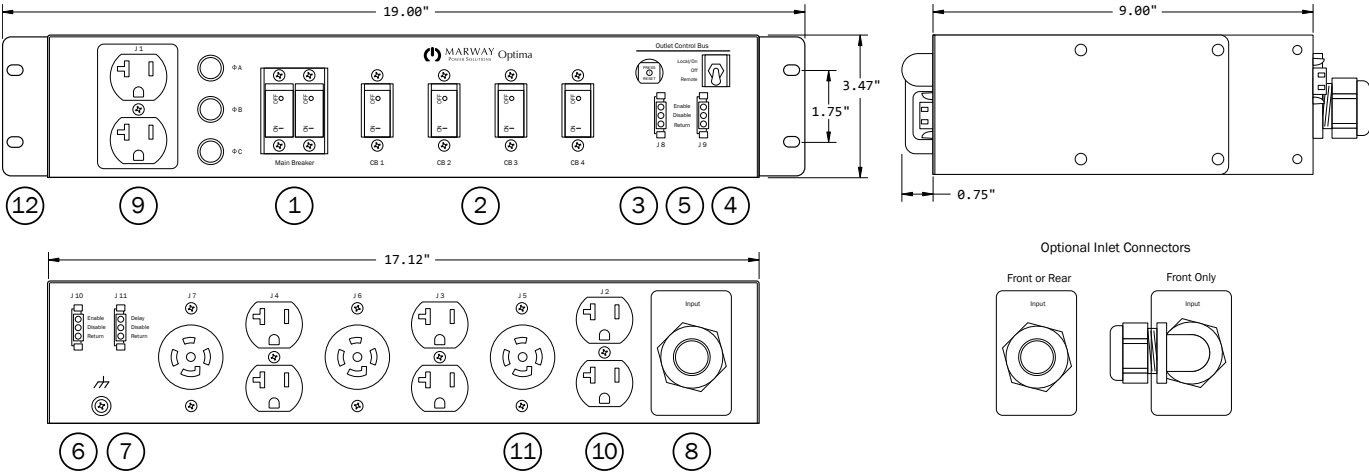
The 3-pin connectors use two low-voltage signals as follows:

- Shorting the **Enable** pin to the **Return** pin with a dry contact will trigger the remote bus Enable signal.
- Shorting the **Disable** pin to the **Return** pin with a dry contact will trigger the remote bus Disable signal.
- Note that the Disable signal has priority, so that if both signals are triggered at the same time, the net result will be Disable.

For additional information about Marway’s Commander UCP remote panel, visit the web site at <http://www.marway.com/commander-epo-panels>



4 Reference



Standard Features

- (1) Main 24/30 A breaker and phase-power indicators.
- (2) Branch 16/20 A circuit breakers for outlets. CB1 is for J1. CB2 is for J2 (and J5*). CB3 is for J3 (and J6*). CB4 is for J4 (and J7*). * Only when J5, J6, J7 are 20 A rated.
- (3) Internal controls 1 A, push-type breaker.
- (4) Remote EPO mode switch. A three-position toggle provides manual control over the remote EPO mode. The Local/On position forces all outlets powered on, and only the remote EPO button will have affect (not the remote on/off). The Off position forces all outlets off, and the remote panel has no affect. The Remote position allows full control of the outlets by the remote panel.
- (5) Front panel remote EPO control bus interface. Two connectors enable the PDU to be daisy chained between a remote EPO panel (such as Marway's UCP) and another PDU, or between two PDUs.
- (6) Rear panel remote EPO interface. A third connector for when a rear connection is more convenient.
- (7) Rear panel remote EPO delay interface. When the Enable signal of a remote panel is triggered, the signal is propagated immediately to all downstream devices through the connectors identified by (5) and (6). This connector (7) introduces a delay of 2 seconds before forwarding the Enable signal. By daisy chaining PDUs with the delay connectors, a staggered start can be created between each downstream PDU.

- (12) Mounting brackets. May be mounted to yield a “flush,” front-recessed, rear-facing, or rear-recessed position of the chassis relative to the rack’s mounting flanges. The brackets include a cutout to allow an inlet cable to be directed into the interior of the rack when the brackets are mounted for a recessed-chassis position. The brackets may also be removed for table top operation, or adaptation of the end user’s own brackets.

Optional Configurations

- (8) Power inlet. All models include a strain-relieved 9-foot cable with an L21-30 plug. Some models include a straight connector as shown. Some models include a right-angled connector. See the description of the mounting brackets (12).
- (9) A 5-20R duplex at J1 is standard on all models. The location of the J1 duplex and the Inlet connector (8) are swapped on some models. Therefore, the inlet can be located on the rear panel or the front panel.
- (10) All models include 5-20R or 6-20R duplexes at J2, J3, and J4 on the rear panel.
- (11) All models include twist-lock connectors at J5, J6, and J7. All three will be of the same type with a choice from L5-20, L5-30, L6-20, L6-30, and L21-30.

5 Specifications

Inlet Voltage and Current

- All models 120/208 Vac, 50/60 Hz, three-phase wye
- All models 24 A continuous load / 30 A maximum

Overload Protection (standard)

- All models include a four-pole main circuit breaker wired with all three phases and neutral passing through the breaker.
- All branch breakers are UL 489, 16 A continuous load (20 A maximum)
- Based on NEC regulations, traditional load ratings are de-rated to 80% for continuous duty. For example, a traditional 30 A maximum rating is now interpreted and labeled as a 24 A continuous duty rating. Optima current ratings are shown with continuous/maximum rating values.

Surge Suppression (standard)

- All models include a thermally protected varistor on each phase with a single-pulse energy rating of 120 joules.
- All models have a peak surge current rating of 10,000 A for a single pulse 8x20μs wave.

Environment

- Operating Temperature: 32 °F to 122 °F
- Maximum Altitude: 6,562 feet
- Relative Humidity: 5% to 85% non-condensing

EMI Filter (standard)

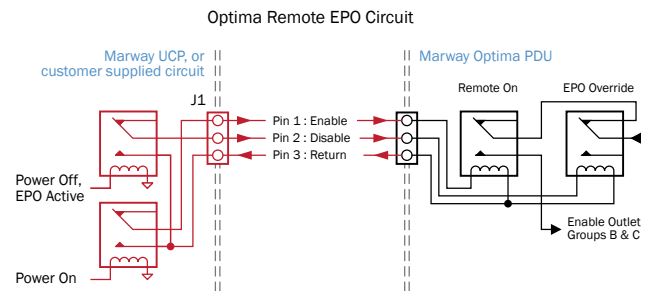
- All models have < 1.0 mA leakage.

Typical Insertion Loss (closed 50 Ohm system)

Frequency (MHz)	0.15	0.5	1	10	30
Common Mode (dB)	55	62	65	50	45
Differential Mode (dB)	36	55	60	60	50

Remote EPO (standard)

- Panel connector: AMP #1-480304-0, 250 Vac, 4 A maximum.
- Mating cable connector: AMP #1-480305-0.
- Connectors J8, J9, J10 are wired in parallel. J11 delays the enable signal.
- All outlets other than J1 are managed by the Remote Control Bus.
- J1 outlets are always powered relative to the Main Breaker state (regardless of remote state).



6 Contact and Support

6.1 Repairs

If not otherwise arranged between Marway and the customer, repairs must be carried out by Marway. The unit must be returned to Marway clearly labeled with a Return Materials Authorization (RMA) number. Contact Marway Support to obtain an RMA. Package the equipment adequately and send it, together with a detailed description of the problem, and if still under warranty, a copy of the invoice, to the address below.

6.2 Contact Options

Problems with or questions about operation of the unit, use of optional components, with the documentation or software, can be addressed to technical support either by telephone or email.

Address	Email	Telephone
Marway Power Solutions 1721 S. Grand Ave. Santa Ana, CA 92705	Technical support: support@marway.com All other issues: info@marway.com	714-917-6200

6.3 Two Year Warranty

Marway Power Solutions warrants each of its manufactured units to be as described in its specifications, made with quality materials and good workmanship, but also limited by this warranty and no other.

Two Year Warranty — For a period of two years following the date of shipment, Marway will repair or exchange, at Marway's sole discretion, any unit purchased shown to be defective in materials or workmanship when used for its intended purpose. This will be done at no charge to the purchaser. Purchaser will return unit(s) at its own expense and only with prior authorization from the factory. Instructions will be given by an authorized factory representative at the time an inquiry is made. All repairs will be made at Marway Power Solutions' corporate headquarters.

Transferability — This warranty is fully transferable to the end user if the purchaser is an original equipment manufacturer and the Marway unit is a component of their product or system sold to an end user.

Further Limitations — Marway's liability under the terms of this warranty and the purchase and sale of its units is limited to the repair or replacement of its units. Marway shall in no situation be liable for any special, consequential damages or other damages of any kind or nature. Marway's warranty does not cover units damaged by accident, abuse, misuse, unauthorized repair and such-the-like occurrences out of Marway's control.

Exclusion of all Implied Warranties — **There are no warranties which extend beyond description on the face hereof. There are no warranties that any unit is fit for any particular purpose nor that they are merchantable.**



© 2021–2025, Marway Power Systems, Inc. All rights reserved.

Optima™, Optima RCM™, Commander™, TwinPower™, mPower™, and mPower DC™ are trademarks of Marway Power Systems, Inc. All other trademarks are the property of their respective owners.

Global Support Contacts

Web: www.marway.com
Email: support@marway.com
sales@marway.com
Phone: 800-462-7929 (7am–5pm PST)

There may be updates to this documentation at:
<http://www.marway.com/docs>

Optima™ 532 Series Power Distribution Units

Operating Guide P/N 501034-000 Rev F



Marway Power Solutions
1721 S. Grand Ave., Santa Ana, CA 92705
800-462-7929 • marway@marway.com