MARWAY
POWER SOLUTIONS

Optima™ 520 Series Power Distribution Units

Operating Guide and Reference

Mar 2025 : P/N 501021-000 Rev G

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 520 Series (model numbers MPD 520XXX) began as a family of 96 power distribution units (PDUs) designed for use with a single-phase supply power of either 120 Vac, 110–240 Vac, or 200–240 Vac. As of early 2025, many models have shifted to legacy status, but this manual continues to describe all original 96 models.

Each PDU receives mains power through an inlet located at the rear. Power is distributed to all outlets on one or two branches depending on the model. A variety of inlet and outlet connectors is available.

All models include a circuit breaker, indicator, surge suppression. Additionally, four options in a variety of combinations are available including an integral EMI filter, a remote-switching/remote-EPO control bus, a multi-function power meter, and delayed on sequencing of two outlet groups.

All models are constructed of a steel chassis, and designed for fixed mounting within a 1U rack space in an EIA-310 compliant rack enclosure.

1.6 Product Models and Ratings

Models are primarily organized by what type of power inlet they have. Then by the outlet configurations. All models have two outlets on the front panel, and ten outlets on the rear panel. Marway's Standard Products Catalog includes more detailed tables with exact model number configurations with inlets, outlets, and options identified.

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.

Group	Models*	Mains Inlet	Inlet Rating	Outlets	Outlet Ratings
Group 1	MPD 520001 through MPD 520012	NEMA 5-15P	120 Vac, 50/60 Hz 12 A continuous (15 A maximum)	NEMA 5-15R	• 12 A per outlet (15 A max) • 12 A unit total (15 A max)
Group 2	MPD 520013 through MPD 520024	NEMA 5-20P	120 Vac, 50/60 Hz 16 A continuous (20 A maximum)	NEMA 5-20R	• 16 A per outlet (20 A max) • 16 A unit total (20 A max)
Group 3	MPD 520025 through MPD 520036	NEMA L5-20P	120 Vac, 50/60 Hz 16 A continuous (20 A maximum)	NEMA 5-20R	• 16 A per outlet (20 A max) • 16 A unit total (20 A max)
Group 4	MPD 520037 through MPD 520048	NEMA L6-20P	200–240 Vac, 50/60 Hz 16 A continuous (20 A maximum)	IEC C13	• 10 A per outlet maximum • 16 A unit total (20 A max)

Continued next page.

Group	Models*	Mains Inlet	Inlet Rating	Outlets	Outlet Ratings
Group 5	MPD 520049 through MPD 520060	IEC C20	110–240 Vac, 50/60 Hz 16 A maximum	IEC C13	• 10 A per outlet maximum • 16 A unit total
Group 6	MPD 520061 through MPD 520072	NEMA L5-30P	120 Vac, 50/60 Hz 24 A continuous (30 A maximum)	NEMA 5-15R	• 12 A per outlet (15 A max) • 12 A total across Group B plus Group A Front • 12 A total across Group C plus Group A Rear • 24 A unit total (30 A max)
Group 7	MPD 520073 through MPD 520084	NEMA L5-30P	120 Vac, 50/60 Hz 242 A continuous (30 A maximum)	NEMA 5-20R	• 16 A per outlet (20 A max) • 16 A total across Group B plus Group A Front • 16 A total across Group C plus Group A Rear • 24 A unit total (30 A max)
Group 8	MPD 520085 through MPD 520096	NEMA L6-30P	200–240 Vac, 50/60 Hz 24 A continuous (30 A maximum)	IEC C13	• 10 A per outlet maximum • 12 A total across Group B plus Group A Front • 12 A total across Group C plus Group A Rear • 24 A unit total (30 A max)

* 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

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 acheived 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 single-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 5-15P	12 A	15 A
NEMA 5-20P	16 A	20 A
NEMA L5-20P	16 A	20 A
NEMA L6-20P	16 A	20 A
IEC C20	16 A	20 A
NEMA L5-30P	24 A	30 A
NEMA L6-30P	24 A	30 A

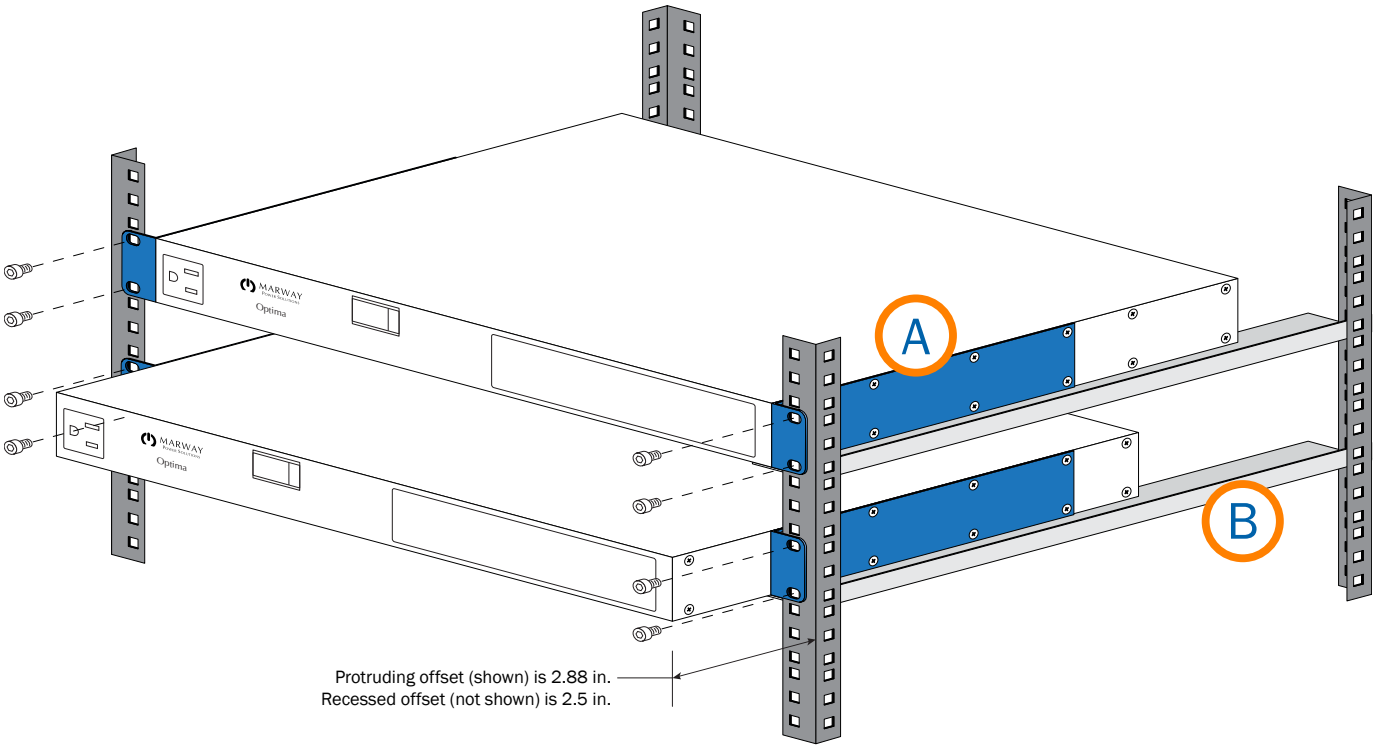
2.2 Installation Mounting

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).

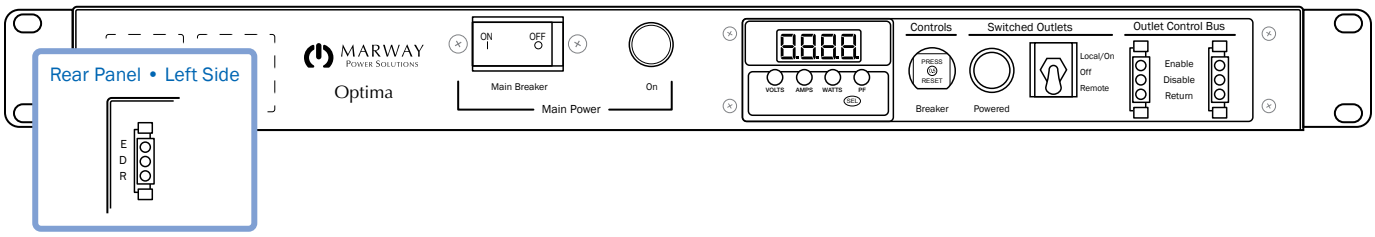
(A) The mounting ears, highlighted in blue, can be positioned flush with the front, or recessed from the front, or even protruding from the front (to recess the PDU). They can also be flipped (not shown) to mount the rear panel flush or recessed from the rear of the PDU.

(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 the breaker on the PDU control panel to the off position. If the unit is so equipped, switch the **Switched Outlets** 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 the indicator lamp will be off.

Switch the PDU's **Main Breaker** to the On position, and the indicator will be lit. All outlets are now powered.

If the PDU has the **Switched Outlets** toggle switch, and 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 switch to the down **Remote** position. This system is discussed in detail farther down.

3.2 Breaker Controls

3.2.1 Main Breaker

The **Main Breaker** enables/disables power to all PDU outlets. When **Main Breaker** is switched on, the **Main Power** indicator labeled will be lit. If the PDU is equipped with the **Switched Outlets** mode switch, the **Off** position will disconnect power from the outlets even if the main breaker is on.

3.2.2 Branches

All models use a 2-pole main breaker. However, that breaker is used a couple of different ways across the product line. The following descriptions should help to explain the ratings table above.

12/15 A Rated Units (Group 1)

All models with a 12/15 A inlet rating have both line and neutral connected to the breaker. All outlets are on a single branch. Therefore, the total continuous load for the whole PDU is 12 Amps. With 5-15R outlets, any one outlet can carry a continuous load up to 12 Amps (with no draw on other outlets), or a combination of outlets can draw a total of up to 12 Amps for the whole PDU.

16/20 A Rated Units (Groups 2, 3, 4, 5)

All models with a 16/20 A inlet rating have both line and neutral connected to the breaker. All outlets are on a single branch. Therefore, the total continuous load for the whole PDU is 16 Amps.

For units with 5-20R outlets, any one outlet can carry a continuous load up to 16 Amps (with no draw on other outlets), or a combination of outlets can draw a total of up to 16 Amps.

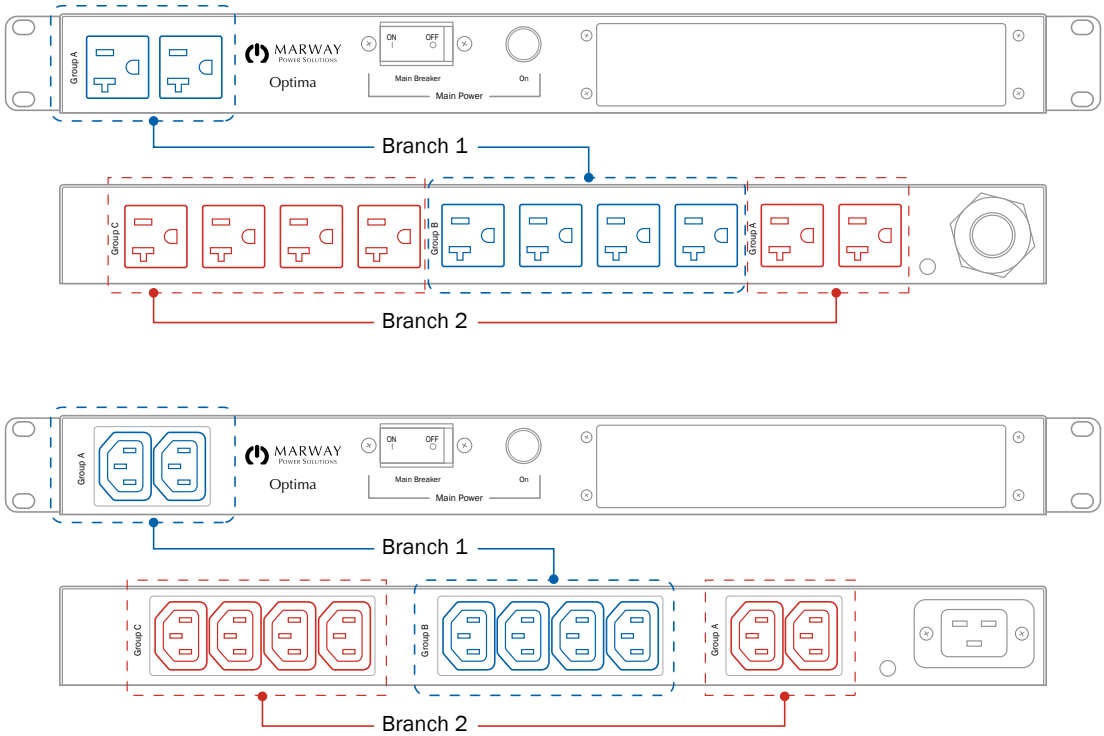
For units with C13 outlets, any one outlet can carry a continuous load up to 10 Amps (with no draw on other outlets), or a combination of outlets can draw a total of up to 16 Amps.

24/30 A Rated Units (Groups 6, 7, 8)

All models with a 24/30 A inlet rating use the two breaker poles to power the line of two branches. Outlets are divided between the two branches to provide greater total capacity. The total continuous load for all these models is 24 amps for the whole PDU.

The two branches are mapped as follows:

- Branch 1 — outlet Group B, plus the front outlets of Group A
- Branch 2 — outlet Group C, plus the rear outlets of Group A



For Group 6 units with 5-15R outlets, each breaker branch is rated for 12/15 A. Any one outlet can carry a continuous load up to 12 Amps (with no draw on other outlets), or a combination of outlets on one branch can draw a total of up to 12 Amps. The total for the whole PDU is 24 amps (the rating of the inlet connector, which happens to coincide withe the sum of the branches).

For Group 7 units with 5-20R outlets, each breaker branch is rated for 16/20 A. Any one outlet can carry a continuous load up to 16 Amps (with no draw on other outlets), or a combination of outlets on one branch can draw a total of up to 16 Amps. The total for the whole PDU is 24 amps (not 32!) which is the rating limit of the inlet connector.

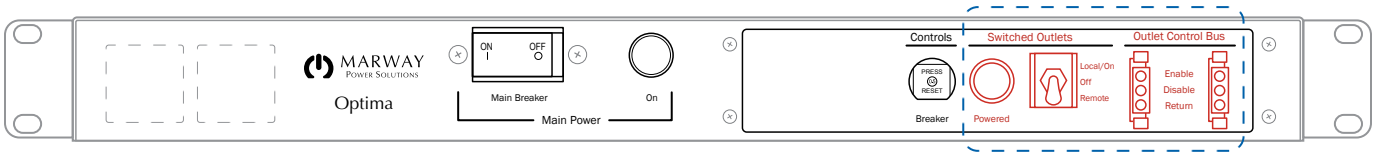
For Group 8 units with C13 outlets, each breaker branch is rated for 12/15 A. Any one outlet can carry a continuous load up to 10 Amps (with no draw on other outlets), or a combination of outlets on one branch can draw a total of up to 12 Amps. The total for the whole PDU is 24 amps (the rating of the inlet connector, which happens to coincide withe the sum of the branches).

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 Remote Switching / EPO Option

The Remote Switching / EPO option includes 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. Refer to Marway's Standard Products Catalog for a list of the specific models which include this option.



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 Group B and Groups C outlets. Group A outlets continue to be powered. Therefore, **Off** disconnects power to almost all outlets even if the main breaker is 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 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 main breaker will then be in sole control of the outlets.
- **Off** (center position) causes an internal contactor to disengage power from all Group B and Groups C outlets. Group A outlets continue 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 main breaker is switched on.

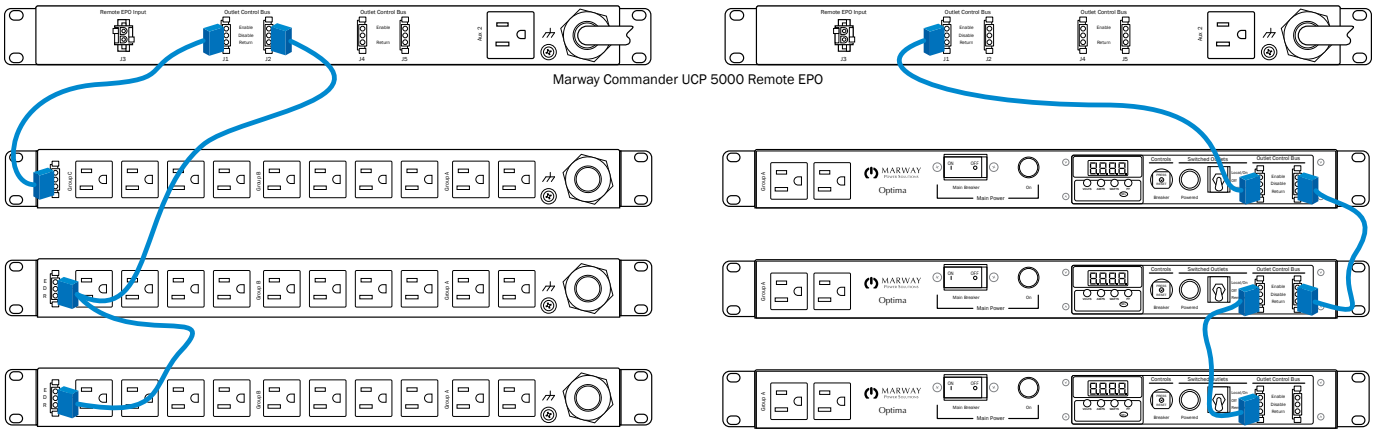
If there will not be a remote On/Off/EPO panel connected to the PDU, switch the **Outlet Control Bus** mode switch to the up position labeled **Local/On**. This is the normal operating position for any unit with no remote panel. (The other positions will prevent power from getting to the outlets.)

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 Group B and Group C outlets. Group A outlets will continue to be powered.

3.3.2 Remote Bus Connectors

There are a total of three remote bus connectors two at the front, and one at the rear. All connectors are wired in parallel.

Multiple PDUs can be wired in a daisy-chain fashion to be operated by a single remote panel. It does not matter which connectors are used for “in” vs. “out” purposes.



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

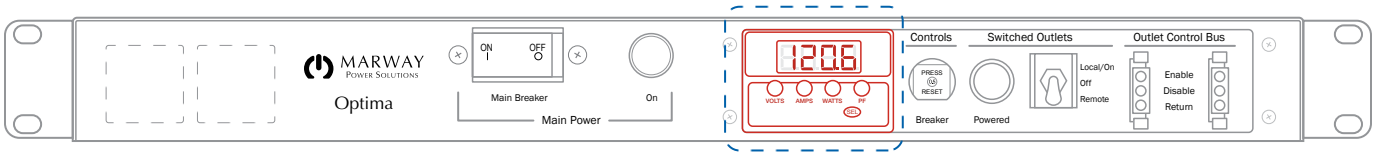
3.4 Outlet Sequencing Option

The Outlet Sequencing option requires that the remote switching/EPO option be present as well. Note that the remote option alone does not necessarily include sequencing, but sequencing can be configured at the time of purchase. Refer to Marway’s Standard Products Catalog for a list of the specific models which include the sequencing option.

With the sequencing option, Group A outlets are powered when the main circuit breaker is turned on, Group B outlets are powered upon Enable, and Group C outlets are powered about 2 seconds after Group B.

3.5 Digital Power Meter Option

The digital power meter displays the voltage, amperage, active power (watts), and power factor as monitored at the inlet of the PDU. A selector-switch provides two modes of operation: a fixed reading of any of the four parameters, or a continuous cycling through all four measurements.



When the PDU starts up, the power meter will first perform a self-test routine, then continuously display ac volts with the **VOLTS** indicator on. The display will remain in the volts mode as long as the front panel **SEL** button is not touched.

After the unit powers up to normal operation, to cycle through **VOLTS**, **AMPS**, **WATTS**, and **PF,** briefly press the **SEL** button once for each measurement.

To have the display continuously auto-cycle through all four measurements, hold the **SEL** button down for 3 seconds. Each measurement will display for 3 seconds in sequence.

When the auto-cycling mode is initiated, the unit will briefly display Auto On before cycling begins. During cycling, if the **SEL** button is pressed, the unit will display Auto OFF then switch to displaying **VOLTS**.

Configuring the power up mode

Any one of the four display modes can be selected as the default power-up mode. For example, it may be desirable to configure the unit to always power up in the **AMPS** mode.

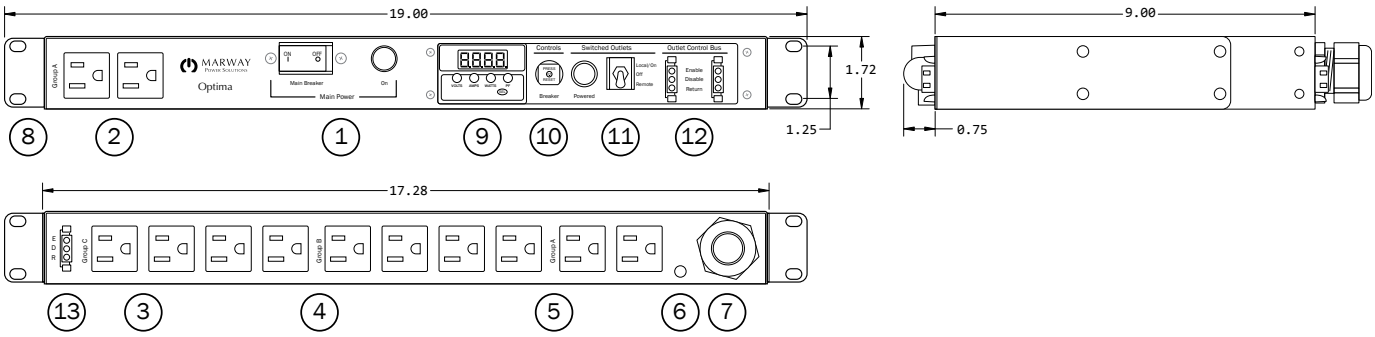
To set the unit to always read **AMPS** on power up, tap the **SEL** switch until the **AMPS** mode is displayed, and then leave the unit in this mode for at least 60 seconds. As long as the **SEL** switch is not pressed again during the 60 second interval, the unit will configure itself to always power up displaying the chosen mode, which is **AMPS** in this example.

This capability also applies to the auto-cycle mode. Place the display in auto-cycle mode, and leave it there for at least 60 seconds. The next time the PDU is power cycled, the display will start up with the auto-cycle mode.

3.6 EMI Filter Option

There are no controls associated with the EMI filter. It is a passive device working at all times to reduce common mode and differential mode noise on the incoming power lines.

4 Reference



Standard Features

(1) Main Power breaker and indicator. The breaker will have a 15, 20, or 30 A maximum-duty rating (de-rated to 80% for continuous duty). Indicator is amber.

(2) Front-panel Group A outlets. These outlets are always powered—that is, they are never switched or sequenced even when those options are included.

(3) Rear-panel Group A outlets. These outlets are always powered—that is, they are never switched or sequenced even when those options are included.

(4) Rear panel Group B outlets. These outlets are controlled by remote switching/EPO *when that option is included*. Otherwise, they are always powered like Group A. When the sequencing option is included, all four Group B outlets are powered together before Group C outlets.

(5) Rear panel Group C outlets. These outlets are controlled by remote switching/EPO *when that option is included*. Otherwise, they are always powered like Group A. When the sequencing option is included, all four Group C outlets are powered together after Group B outlets.

(6) Threaded ground lug.

(7) Power inlet. Most models include a strain-relieved cable as shown. The plug will vary by model. Some models include a panel-mounted C20 connector.

(8) Mounting brackets. May be mounted in one of three locations to yield a “flush,” recessed, or rear-facing position of the chassis relative to the rack’s mounting flanges. May also be removed for table top operation, or adaptation of end user’s own custom brackets.

Optional Features

(9) Optional power meter can display volts, amperes, watts, and power factor. When item 9 is included, item 10 is also included.

(10) Circuit breaker for internal control circuitry. Included when either the optional meter is included, or when the optional remote switching/EPO circuit is included.

(11) Optional Remote Switching/EPO mode switch and indicator. The remote switching package always includes items 10, 11, 12, and 13. The three-position toggle provides manual control over the remote switching mode. When Local/On, all outlets are powered, and only remote EPO will have impact. When Off, Groups B and C outlets are disabled, and any remote circuit will have no impact. When Remote, Groups B and C outlets are subject to the remote/EPO control bus. Group A outlets are always powered regardless of remote mode. Whenever the main circuit breaker is On, the Powered indicator is illuminated to indicate that power is *available* to the switched outlets.

(12) Optional front panel Remote Switching/EPO control bus interface. Two connectors allow the PDU to be daisy chained between a Remote EPO panel (such as Marway’s UCP) and another PDU, or even between two PDU’s (when one of the others is connected to a remote EPO panel). Either connector can be used for either connection.

(13) Optional rear panel Remote Switching/EPO control bus interface. This is a third connector provided for when a rear connection is more convenient. It always accompanies the remote switching/EPO option package of items 10, 11, and 12.

5 Specifications

Inlet Voltage Options

- 120 Vac, 50/60 Hz, single phase
- 200–240 Vac, 50/60 Hz, single phase
- 100–240 Vac, 50/60 Hz, single phase
- All voltages are listed as nominal input sources.

Current Capacity Options

- 12 A continuous load / 15 A maximum
- 16 A maximum
- 16 A continuous load / 20 A maximum
- 24 A continuous load / 30 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.

Overload Protection (standard)

- All models include a two-pole UL 489 circuit breaker.
- 12/15 A models are wired with both line and neutral passing through the circuit breaker.
- 16/20 A models are wired with both line and neutral passing through the circuit breaker.
- 24/30 A models in Groups 6 and 8 use a 15 A breaker with the main line branched to each pole of the breaker (creating two 15 A sub-circuits).
- 24/30 A models in Group 7 use a 20 A breaker with the main line branched to each pole of the breaker (creating two 20 A sub-circuits).

Surge Suppression (standard)

- All models include a thermally protected varistor.
- 120 Vac models have a single-pulse energy rating of 100 joules.
- 240 Vac models have a single-pulse energy rating of 170 joules.
- All models have a peak surge current rating of 10,000 A for a single pulse 8x20µs wave.

Outlet Sequencing (optional)

- Requires the Remote EPO option.
- Group A outlets are powered at startup.
- Group B outlets are powered upon Remote Power On.
- Group C outlets are powered about 2 seconds after Group B.

Environment

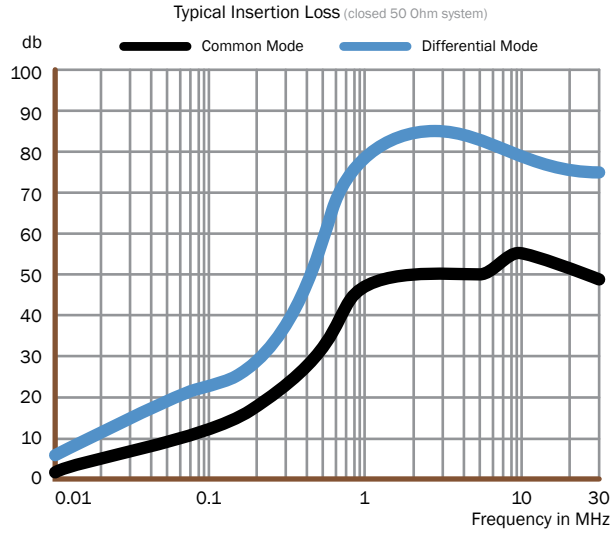
- Operating Temperature: 32 °F to 122 °F
- Maximum Altitude: 6,562 feet
- Relative Humidity: 5% to 85% non-condensing

Power Meter (optional)

Display Value	Min	Max	Accuracy
Voltage (volts RMS)	85.0	264.0	± 1%
Current (amperes RMS)	0.00	32.00	± 1%
Active Power (watts RMS)	0.0	9999	± 2%
Power Factor	0.00	1.00	± 3%
Sample Rate (per second)	2	3	—

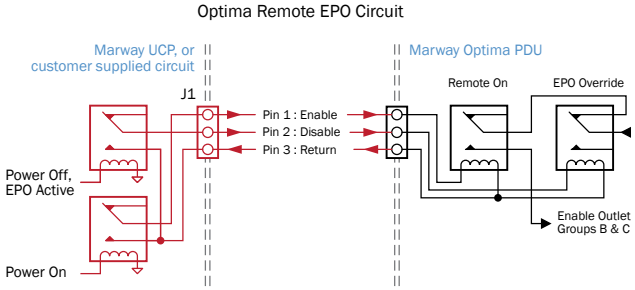
EMI Filter (optional)

- 120 Vac models have < 0.5 mA leakage.
- 240 Vac models have < 1.0 mA leakage.



Remote EPO (optional)

- Panel connector: AMP #1-480304-0, 250 Vac, 4 A maximum.
- Mating cable connector: AMP #1-480305-0.
- All outlets other than J9 are managed by the Remote Control Bus.
- J9 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 autorization 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 warrenty 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 occurences 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.**

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™ 520 Series Power Distribution Units

Operating Guide P/N 501021-000 Rev G

MARWAY
POWER SOLUTIONS

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