



# Optima™ 820 Series Power Distribution Units

## Operating Guide and Reference



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# 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 shown below:



Symbol for notices of possible life threatening danger.



Symbol for cautionary notices for personal safety, or for equipment protection.



Symbol for important operation 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. 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, 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 conditions which cause condensation.
- This product is intended for installation by a skilled person in a restricted access location.
- This product is intended for use by an instructed person.
- The equipment is approved for use only within the connection limits stated on the product label.
- The ratings for all output receptacles are marked on the enclosure. 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 820 Series (model numbers MPD 820XXX) began as a family of 48 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 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, and Marway's RCM™ networking control system to provide individual outlet switching over Ethernet®. Additionally, three options of inlet power monitoring with digital display, a remote on/off/EPO control bus, and an integral EMI filter are available in a variety of combinations.

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.



This documentation is about the hardware elements of the Optima 820 Series of PDUs. For detailed information about the software, you'll need the *Optima RCM User Guide : Software and Basic Controls Reference* located on our website at <http://www.marway.com/docs>.

## 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 one unswitched utility outlet on the front panel, and eight software switched 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 820001 and MPD 820101	NEMA 5-15P	120 Vac, 50/60 Hz 12 A continuous (15 A maximum)	NEMA 5-15R	<ul style="list-style-type: none"><li>• 12 A per outlet (15 A max)</li><li>• 12 A unit total (15 A max)</li></ul>
Group 2	MPD 820002 and MPD 820102	NEMA 5-20P	120 Vac, 50/60 Hz 16 A continuous (20 A maximum)	NEMA 5-20R	<ul style="list-style-type: none"><li>• 16 A per outlet (20 A max)</li><li>• 16 A unit total (20 A max)</li></ul>
Group 3	MPD 820003 and MPD 820103	NEMA L5-20P	120 Vac, 50/60 Hz 16 A continuous (20 A maximum)	NEMA 5-20R	<ul style="list-style-type: none"><li>• 16 A per outlet (20 A max)</li><li>• 16 A unit total (20 A max)</li></ul>
Group 4	MPD 820004 and MPD 820104	NEMA L6-20P	200–240 Vac, 50/60 Hz 16 A continuous (20 A maximum)	IEC C13	<ul style="list-style-type: none"><li>• 10 A per outlet (10 A max)</li><li>• 16 A unit total (20 A max)</li></ul>
Group 5	MPD 820005 and MPD 820105	IEC C20	110–240 Vac, 50/60 Hz 16 A continuous (20 A maximum)	IEC C13	<ul style="list-style-type: none"><li>• 10 A per outlet (10 A max)</li><li>• 16 A unit total (20 A max)</li></ul>

Continued next page.



Group	Models*	Mains Inlet	Inlet Rating	Outlets	Outlet Ratings
Group 6	MPD 820006 and MPD 820106	NEMA L5-30P	120 Vac, 50/60 Hz 24 A continuous (30 A maximum)	NEMA 5-15R	<ul style="list-style-type: none"> <li>• 12 A per outlet (15 A max)</li> <li>• 12 A total for Outlets 1–4</li> <li>• 12 A total for Outlets 5–8</li> <li>• 24 A unit total (30 A max)</li> </ul>
Group 7	MPD 820007 and MPD 820107	NEMA L5-30P	120 Vac, 50/60 Hz 242 A continuous (30 A maximum)	NEMA 5-20R	<ul style="list-style-type: none"> <li>• 16 A per outlet (20 A max)</li> <li>• 16 A total for Outlets 1–4</li> <li>• 16 A total for Outlets 5–8</li> <li>• 24 A unit total (30 A max)</li> </ul>
Group 8	MPD 820008 and MPD 820108	NEMA L6-30P	200–240 Vac, 50/60 Hz 24 A continuous (30 A maximum)	IEC C13	<ul style="list-style-type: none"> <li>• 10 A per outlet (10 A max)</li> <li>• 12 A total for Outlets 1–4</li> <li>• 12 A total for Outlets 5–8</li> <li>• 24 A unit total (30 A max)</li> </ul>

\* A complete part number follows the format of 820NNN-RRR-DDD where:

- NNN is part of the base part number from the list of models.
- RRR defines the RCM capabilities where:
  - –PSW = inlet power is monitored, outlets are switched
  - –NSW = inlet power is not monitored, outlets are switched
- DDD is a dash number where:
  - –000 = the remote EPO, if present, is a Normally Open (N.O.) type
  - –001 = the remote EPO, if present, 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 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 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

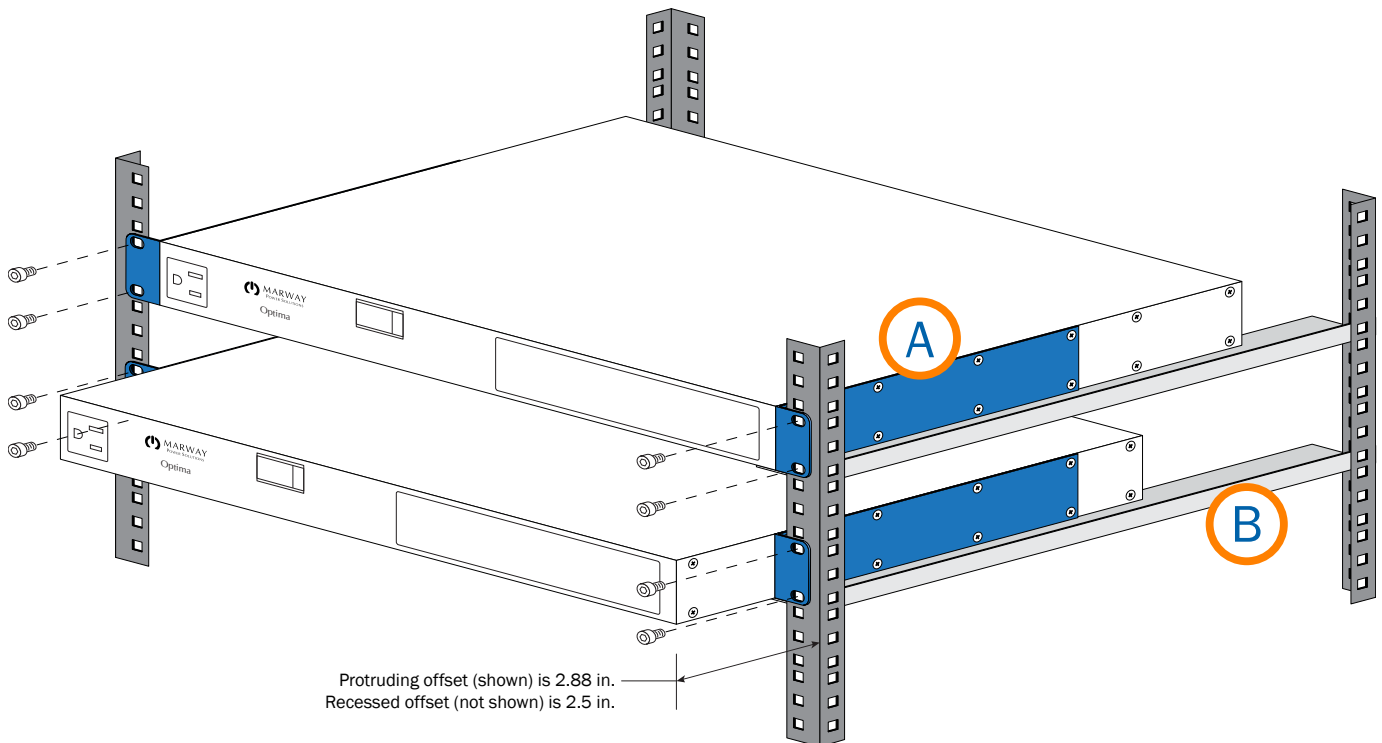


EN — These products are heavy. The flange mounting ears are designed to hold the PDU securely against the rack mounting rails, but are NOT designed to support the weight of the product vertically. The end user is responsible for ensuring the product's weight is properly supported by the rack's infrastructure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

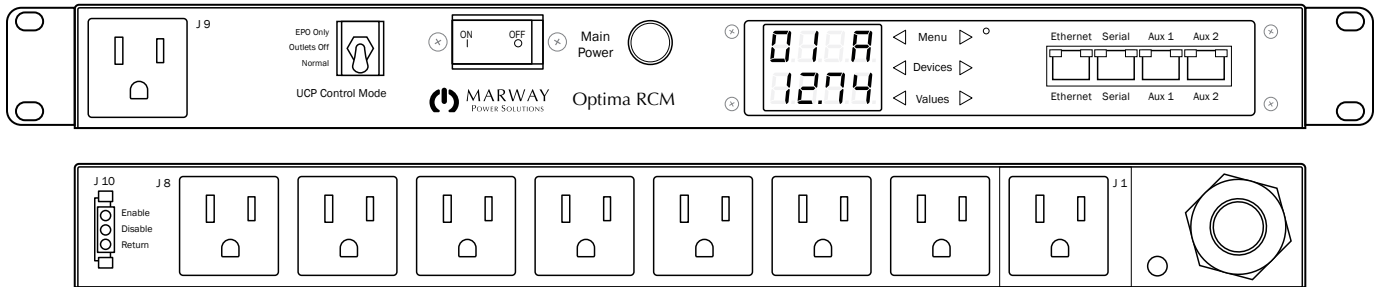
(B) The PDU should be supported by rails (not provided). The PDU is too heavy to mount only with the ears.



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

In order to monitor or control the system over Ethernet, it will need to be configured to run on your specific network. However, to perform an electrical or installation validation test, or even to run the system indefinitely without the use of the network, the unit can be run without first configuring the software.

By default, the system will enable all outlets, though it may take a minute or so before outlets are switched on after power is applied. This delay is caused by the software system starting up, and eventually setting the state of each relay according to configurable settings.

In the sections below, a startup process is described suitable for first-time network setup, or running without the software.



The **Main Power** breaker can be used to manually cut power from the outlets. However, even with the **Main Power** circuit breaker Off, as soon as the inlet of the PDU is plugged into a live facility outlet, the control system of the PDU is powered, and the software will start running.

#### 3.1.1 Startup Without Configuring the Software

It is assumed the PDU is not plugged into the facility power source.

1. Switch the breaker on the PDU control panel to the off position.
2. If the unit is equipped with the **UCP Control Mode** switch, whether there is a remote EPO panel connected to the unit or not, toggle the switch to the up position labeled **EPO Only**. (The label has changed over the years, but the up position always functions the same way.)
  - 2.1 This switch position is required if there is no EPO panel.
  - 2.2 If there is a remote panel, this puts the PDU into a local control mode, ignoring the remote On/Off controls, but allowing the EPO signal.)
3. If there is a facility disconnect switch for the PDU inlet, switch that off.
4. 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.
  - 4.1 At this point, the PDU control system is energized. Outlets will not have power, because the PDU's **Main Power** breaker is off, but the software will begin its startup process. The default factory setting configures the software to switch the outlet relays on, however, while the main breaker is off, power is not actually delivered to the outlets. Allow about a minute for the software to switch on the relays.



5. Switch the PDU's **Main Power** breaker to the On position. The internal outlet control relays, and the remote switching/EPO system are able to prevent power from reaching the outlets. However, with a factory default setup, power should now be applied to all outlets.

If the PDU has the **UCP Control Mode** toggle switch, and if there is not an EPO panel connected to the PDU, leave the switch in the up **EPO Only** position.

If there is a remote EPO panel connected to the PDU, such as Marway's Commander UCP 5000, flip the switch to the down **Normal** position. This system is discussed in detail farther down, as well as in the *Optima RCM User Guide : Software and Basic Controls Reference* located on our website.

The PDU can continue to be used in this way as long as needed. The software can be configured later, or can be left unconfigured if it will not be used.

Note that it is not required that the unit be started with the breaker in the Off position. This was done above just to have a predictable state for the description of an initial startup process.

### 3.1.2 Startup to Configure the Software

The document *Optima RCM User Guide : Software and Basic Controls Reference* located on our website at <http://www.marway.com/docs> is the complete resource for the process of configuring the network settings, and other software features of the PDU. Obtain that document, and review the Getting Started chapter.

In effect, prepare the Serial and Ethernet connections to the PDU as described in the *Software Guide*, then use the startup process described above in “3.1.1 Startup Without Configuring the Software” on page 9.

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## 3.2 Ethernet and Serial Control

The document *Optima RCM User Guide : Software and Basic Controls Reference* located on our website at <http://www.marway.com/docs> is the complete resource for how to setup, configure, and operate the Optima RCM software over serial, Telnet, SSH, HTTP, SNMP, and RESTful API.

The Ethernet connection supports 10/100 Base-T, IPv4 DHCP and manual addressing. It is recommended to use a manual address, or DHCP in conjunction with MAC ID reservations so that the IP address stays consistent.

The Serial interface is RS-232 implemented in an RJ45 connector. A protocol conversion cable with a USB connection at one end and an RJ45 at the other end is ideal for connecting a computer to the Serial port. Marway offers these cables as part number 311118-000. They can also be found on many online cable retailer web sites.

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## 3.3 Breaker Controls

### 3.3.1 Main Breaker

The **Main Breaker** enables/disables power to all PDU outlets. This breaker being On does not necessarily mean power is applied to the outlets. It simply means power is *available* to all outlets. The internal outlet control relays, and the remote switching/EPO system (if connected) are able to prevent power from reaching the outlets.

If the PDU is equipped with the **UCP Control Mode** mode switch, the **Off** position will disconnect power from the outlets even if the main breaker is on.



### 3.3.2 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.

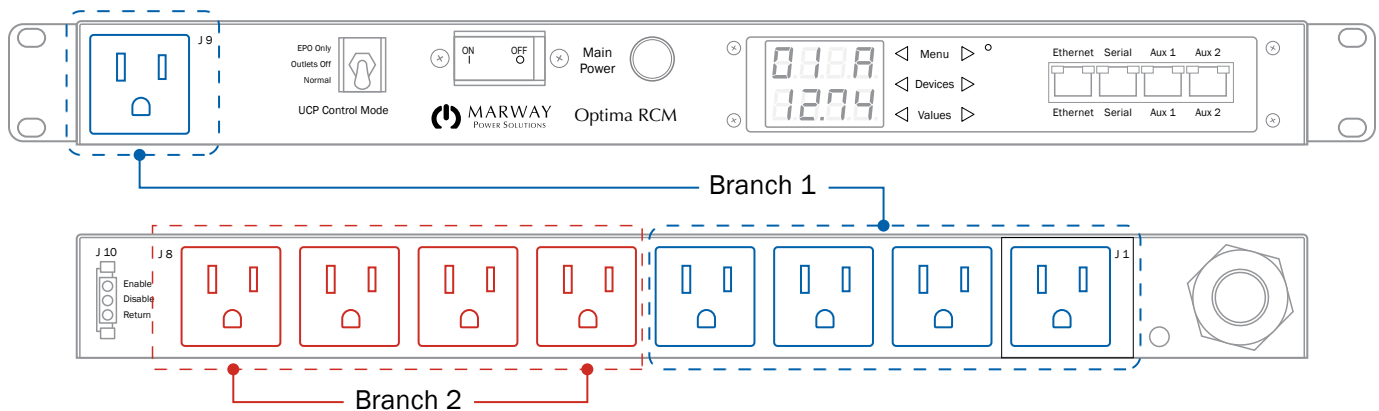
For units with C13 outlets, any one outlet can carry a continuous load up to 10 Amps (with no draw on other outlets), or a combination of outlets can draw a total of up to 16 Amps.

#### 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 — outlets 1–4, and outlet 9
- Branch 2 — outlets 5–8



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 with the sum of the branches).

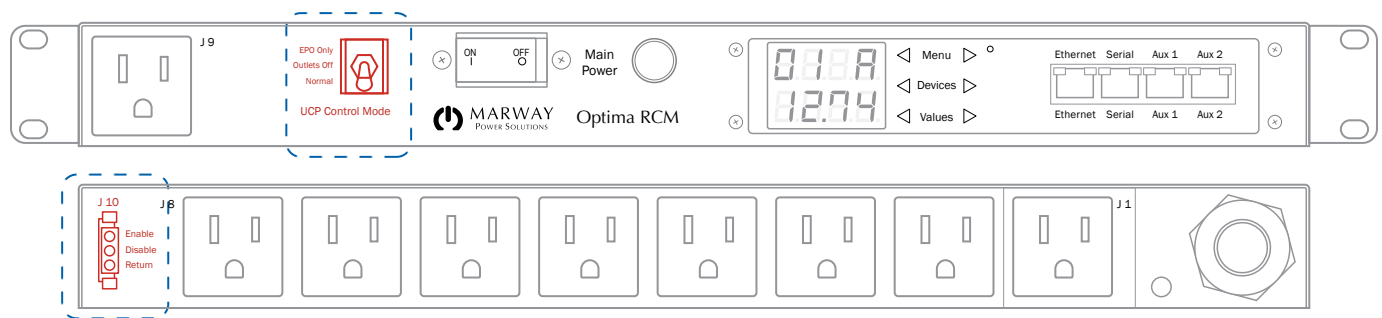
For Group 7 units with 5-20R outlets, each breaker branch is rated for 16/20 A. Any one outlet can carry a continuous load up to 16 Amps (with no draw on other outlets), or a combination of outlets on one branch can draw a total of up to 16 Amps. The total for the whole PDU is 24 amps (not 32!) which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

## 3.4 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.



### 3.4.1 Remote Mode Switch

The **UCP Control Mode** is a three-position switch used as a local override to the remote command system. The three modes are labeled **EPO Only**, **Outlets Off**, and **Normal**. These are named from the perspective of having a remote control panel connected to the system.

When there is a remote panel connected to the PDU:

- **Normal** (down position) is the normal operating mode. Outlets 1–8 are subject to the remote panel On/Off/EPO controls (and, of course, the internal software-controlled relays).
- **Outlets Off** (center position) causes an internal contactor to disengage power from outlets 1–8. Outlet 9 is not affected. The PDU will ignore the On/Off/EPO commands of the remote panel. Therefore, **Off** disconnects power to outlets 1–8 even if the main breaker is switched on, and even if the internal software-controlled relays are switched on.
- **EPO Only** (up position) causes the PDU to ignore the On/Off commands of the remote panel. The EPO signal is still allowed.

When there is not a remote control panel connected:

- **EPO Only** (up position) is the normal operating mode. Effectively, this is a Local Control mode.
- **Outlets Off** (center position) causes an internal contactor to disengage power from outlets 1–8. Outlet 9 is not affected. The PDU will ignore the On/Off/EPO commands of the remote panel. Therefore, **Off** disconnects power to

outlets 1–8 even if the main breaker is switched on, and even if the internal software-controlled relays are switched on.

- **Normal** (down position) will behave like **Off**. (With no remote control panel connected, this label is a bit of a misnomer as this would not be the normal position.)



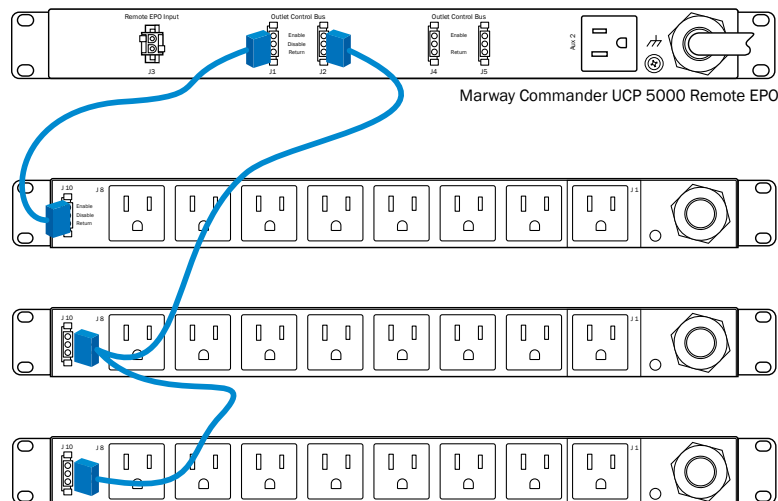
If there will not be a remote On/Off/EPO panel connected to the PDU, switch the **UCP Control Mode** mode switch to the up position labeled **EPO Only**. This is the normal operating position for any unit with no remote panel. (The other positions will prevent power from getting to the outlets.)



Whether there is a remote control panel connected or not, toggling the **UCP Control Mode** mode switch to the center position labeled **Outlets Off** will disconnect power to outlets 1–8. Outlet 9 will continue to be powered.

### 3.4.2 Remote Bus Connector

There one remote bus connector on the rear panel. Multiple PDUs can be wired in a daisy-chain fashion to be operated by a single remote panel.



#### 3.4.2.1 Remote Bus Connector Wiring

The 3-pin connector uses 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.

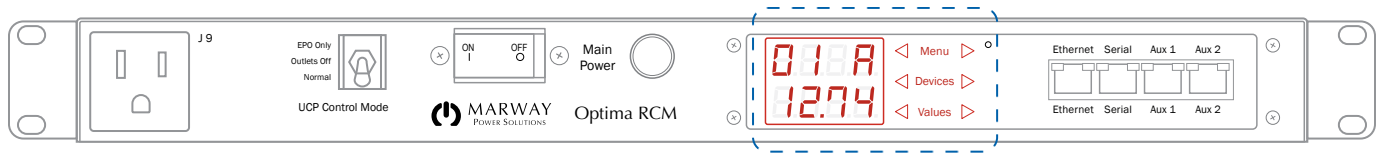
For additional information about Marway's Commander UCP remote panel, visit the web site at <http://www.marway.com/commander-epo-panels>



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## 3.5 Digital Power Meter Option

If the PDU is equipped with an inlet power monitoring system, the front control panel will include a digital display and keypad.



The display will default to showing the amperage being drawn by the system as a whole (all 9 outlets, plus the internal control system). It will update approximately every 3 seconds.

The keypad can be used to navigate through power values for volts, amps, watts, voltamps, voltamps reactive, power factor, and Hertz.

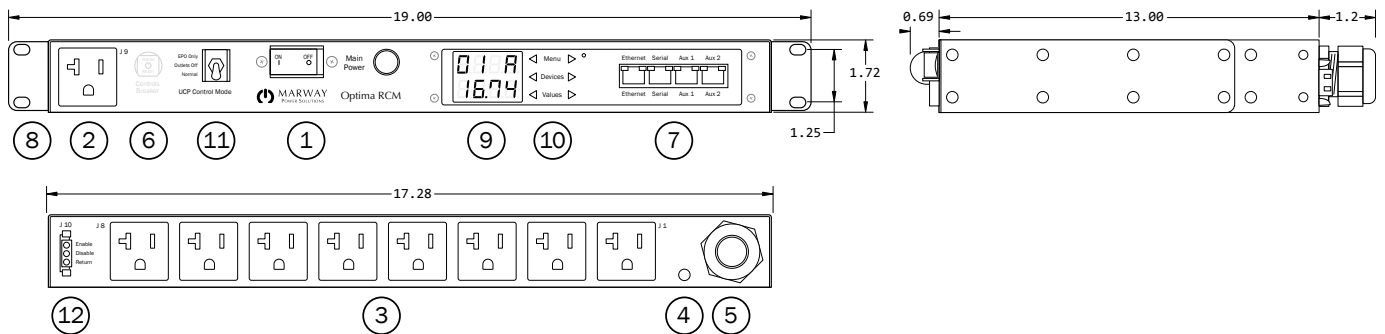
For complete display and keypad details, refer to the document *Optima RCM User Guide : Software and Basic Controls Reference* located on our website at <http://www.marway.com/docs>. Obtain that document, and review the Display and Keypad Operation chapter.

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## 3.6 EMI Filter Option

There are no control 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 (amber). The breaker will have a 15, 20, or 30 A maximum-duty rating (de-rated to 80% for continuous duty). For models 8200xx (no EPO option), the indicator is lit when the breaker is On. For models 8201xx (has the EPO option), the indicator is wired before the breaker. It is lit as soon as the system is powered from the wall.
- (2) Front-panel unswitched outlet. This outlet is always powered when the main breaker is on—that is, it is never switched or disabled by EPO even when those options are included. Power is disabled when the main breaker is off.
- (3) Rear-panel switched outlets. These outlets are controlled by the RCM switching software. All outlets are disabled by remote EPO *when that option is included* and the software state is updated to reflect the off status of the outlets.
- (4) Threaded ground lug.
- (5) 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.
- (6) Circuit breaker for internal control circuitry. Units manufactured from early 2022 onward do not have this breaker. It was replaced with internal fuses.
- (7) Ethernet, RS-232 serial console, and auxiliary connections. All are RJ-45. Auxiliary connectors are for Marway Temperature/Humidity sensors.
- (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 display when the power monitoring option is included (all “PSW” models). Displays volts, amps, watts, VA, VAR, power factor, and frequency. When item 9 is included, item 10 is also included.
- (10) Optional display keypad used to navigate values available on the display.
- (11) Optional Remote EPO mode switch to control remote EPO panel influence. When item 11 is included, item 12 is also included.
- (12) Optional Remote EPO control bus interface for interfacing to a Marway UCP.



# 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 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)

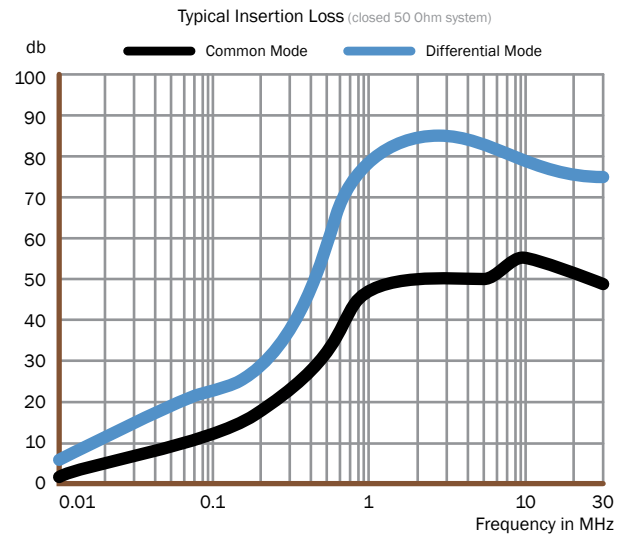
- All models include a thermally protected varistor.
- 120 Vac models have a single-pulse energy rating of 100 joules.
- 240 Vac models have a single-pulse energy rating of 170 joules.
- All models have a peak surge current rating of 10,000 A for a single pulse 8x20 $\mu$ s wave.

## Environment

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

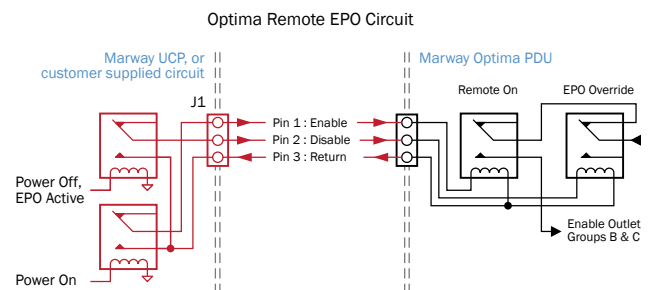
## EMI Filter (optional)

- 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).



## Networking

### Ethernet 10/100T

- IPv4: DHCP, Static

### Web Interface

- HTTP, HTTPS

### Command Line Interface

- Telnet, SSH, RS-232

### SNMP

- v2/v3
- Access to power data, alarms, outlet switching

### Alerts

- Email over SMTP
- SMS over SMTP
- SNMP v2/v3 Traps

### Scriptability

- RESTful API
- Telnet/SSH
- SNMP

### Other Protocols

- SNMP, FTP





## 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.**



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## Global Support Contacts

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

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

# Optima™ 820 Series Power Distribution Units

## Operating Guide P/N 501053-000 Rev I



Marway Power Solutions  
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