



> **POWER**SOLUTIONS

# CDU Product Family

## Power Distribution Solutions for the Data Center Equipment Cabinet

### THE WORLD LEADER IN POWER MANAGEMENT PRODUCTS & SOLUTIONS

Cabinet power distribution units and power monitoring and measurement solutions for data centers and telecommunications.

Saifor distributes CDUs from Servertech that is experts produce the highest quality rack mount power distribution and monitoring solutions that help manage power capacity, reduce downtime and improve energy efficiency. Server Technology created the intelligent cabinet PDU market and holds the largest number of patents in that industry. Serving the Data Center and Carrier markets, SAIFOR includes among its solutions, the most extensive selection of Sentry CDUs to manage power usage for servers, storage and network equipment. Based on the innovative Server Tech Quality Power Architecture (QPA), Sentry CDUs and Sentry Power Manager provide the industry's most accurate information to maximize rack density, reduce overloading and monitor energy efficiency.

All Sentry CDUs offered by SAIFOR are engineered and manufactured to meet the highest quality standards and are 100% performance tested for reliability and accuracy. Server Tech QPA eliminates single points of failure, reducing downtime and costs. The modular architecture is flexible and enables quick delivery of solutions that meet customer-specific requirements. SAIFOR solutions gives IT and Infrastructure Professionals the control to make accurate capacity planning decisions, reduce risks, and meet energy efficiency goals.

### CERTIFICATIONS, COMPLIANCE & WARRANTY

All products contained within this brochure carry one or more of the certifications below. Additional agency certifications are available based on specific market requirements.

> European Union (TUVGS mark) to EN 60950-1:2001

> EMC – EN 55022 Class A, EN 55024

> RoHS

> CE

> 2 Year Warranty

### FEATURE KEY

Sentry CDU product lines feature two or more of the following assets:



#### Flexible mounting options

Zero-U button or bracket mounting for mounting vertical CDUs in the back or on the side of the cabinet to avoid consuming valuable "U" space.



#### Branch circuit protection

All Sentry CDUs meet the UL 60950-1 requirement for branch circuit protection and use either fuses or circuit breakers to protect each branch of outlets.



#### Input current monitoring

The CDUs exclusive True RMS Current Monitoring is critical to preventing overloads in high-density computing environments. Digital LED displays on the CDU enclosure report the input current of each phase or branch circuit.



#### Environmental monitoring

External probes, with 3-meter cable, capable of measuring temperature & humidity. Receive SNMP-based or email alerts when conditions exceed defined thresholds.



#### Expansion module

Our exclusive method for linking additional outlets, on separate CDUs, together under a single IP address, and provides support for A & B power in-feeds.



#### IP access, security & communications

Web interface, SSL, SSH, Telnet, SNMP & RS-232 access, 10/100 Base T-Ethernet, SSLv3/TLSv1, SNMPv2, TACACS+, LDAP, LDAPS, RADIUS, DHCP, SMTP/Email, & Syslog.



#### Individual outlet control

Control individual outlets or groups of outlets with ON, OFF, and Reboot functionality to remotely reboot unresponsive servers and network equipment.



#### Pops™ (Per outlet power sensing)

Monitor Current Load (A), Voltage (V), Power (W), Apparent Power (VA), Crest Factor and Power Factor per outlet.



#### Pips™ (Per inlet power sensing)

Monitor Current Load (A), Voltage (V), Power (W), Apparent Power (VA), Crest Factor, Reactance, Accumulated Energy (kWh), and Power Factor per inlet.

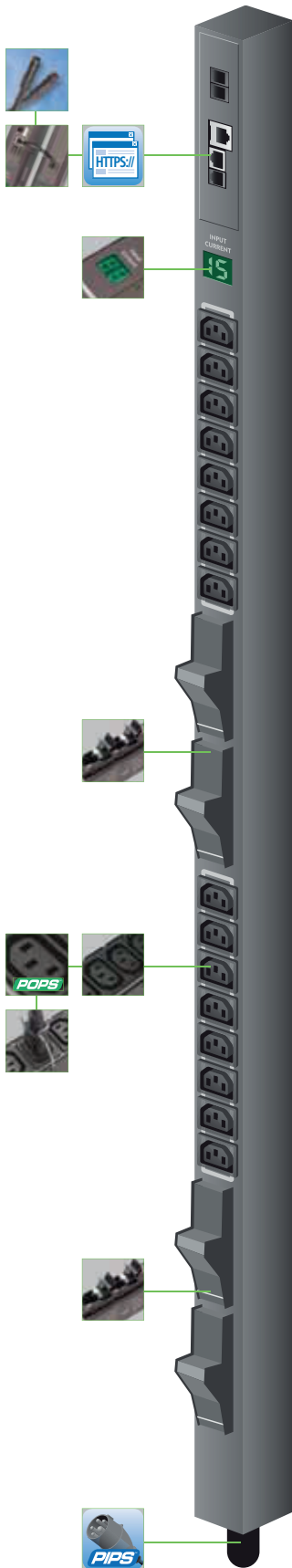


#### Cable retention clip

Ensures power cords to the connected devices are not accidentally unplugged or disconnected.

# CDU Product Family

Sentry CDU Family Delivers Power Solutions for any Data Center



## Basic CDU®



The entry level Basic CDU products provide reliable power distribution and branch circuit protection for all the devices in the equipment cabinet.

## Metered CDU®



The Sentry Metered CDU products provide branch circuit protection and reliable power distribution for all devices in the equipment cabinet.

Local input current monitoring allows the installation engineer to verify the aggregate load on the circuit or phase.

## Smart CDU®



The Smart CDU products provide reliable power distribution coupled with remote power and environmental monitoring. Use the network interface to view power, temperature and humidity levels via Web browser, or SNMP-based and email alerts when conditions exceed defined thresholds.

Add an Expansion Module CDU to Smart and Switched CDUs. Link a master and expansion unit using a single IP address.

## POPS™ Smart CDU®



Adds (POPS) Per Outlet Power Sensing to the Smart CDU. POPS provides power monitoring per an individual outlet/device. Power information per individual outlet /device includes current, voltage, power (kW), apparent power, crest factor, and power factor. Using our grouping technology, power information is available per device, groups of devices (application), individual CDU or cabinet.

## Switched CDU®



The Switched CDU products provide the capability to securely monitor and control cabinet power via a network for a data center or remote branch office.

The Switched CDU's combine networked configuration and management with power distribution and power and environmental monitoring. Reboot a single or dual power server with one command. Receive SNMP-based or email alerts when power or environmental conditions exceed thresholds. Assign access rights to user groups or individuals. Switched CDU products provide the flexibility needed for all data centers and remote sites, including power requirements for high-amperage and high-voltage, EN 60950-1:2001 Branch Circuit Protection, and SNMP traps and email alerts including current monitoring.

## POPS™ Switched CDU®



Adds Per Outlet Power Sensing (POPS) to the Switched CDU which provides power monitoring per an individual outlet/device. Power information per individual outlet /device includes current, voltage, power (kW), apparent power, crest factor, and power factor. Using our grouping technology, power information is available per device, groups of devices (application), individual CDU or cabinet.

## Fail-Safe Transfer Switch (FSTS)



The Fail Safe Transfer Switch features two input power feeds, from separate AC circuits, to supply single-power equipment with dual, redundant power sources.

If either power in-feed becomes unavailable, the FSTS auto-switches to the remaining power feed source to reestablish power to the connected equipment.

## PIPS™ CDU®



Per Inlet Power Sensing (PIPS) CDUs provide power monitoring per inlet/infeed. Power information per infeed includes current, voltage, power, apparent power, crest factor, reactance, power factor and accumulated energy. This information replaces branch circuit monitoring devices typically installed in the power distribution panel or remote power panel (RPP) with higher accuracy and lower cost monitoring of each circuit attached to the CDU.

# CDU Product Family

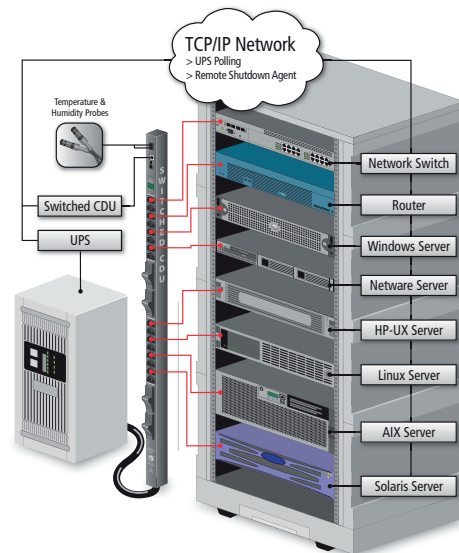
## Secure Remote Administration Interface and Smart Load Shedding

### SENTRY SMART LOAD SHEDDING

Load Management based on Temperature, In-feed Load, and UPS Status Server Technology is the first to offer datacenter managers the ability to automatically manage Switched CDU power outlets based on key operating parameters, including temperature, in-feed load, and UPS power status. Each outlet may be controlled by one or more of these parameters. Should the temperature or load current exceed defined thresholds or the UPS lose power and go onto battery, all or a portion of the loads may be automatically shed to ensure longer operational life of your critical devices.

#### FEATURES

- > Easy to use, integral, web based GUI configuration tool
- > "Auto-recovery" with a reboot delay time when conditions return to normal
- > Each CDU outlet is assigned the IP address of the connected device for shut down notification
- > Remote shutdown agent for server shut down
- > SNMP trap notifications
- > Load shedding event notifications via SNMP traps or Email alerts



### SENTRY ACCESS, SECURITY & COMMUNICATION

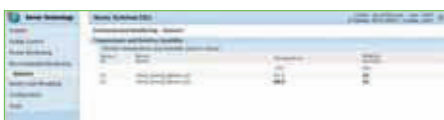
Secure Remote Administration Interface



Web Based GUI: Individual Outlet Control Screen



Web Based GUI: System Configuration Screen



Web Based GUI: Environmental Monitoring Screen

#### FEATURES

- > Secure, web based GUI configuration tool
- > Temperature Support (Celsius/Fahrenheit) and Humidity (%)
- > Logs authentications, configuration changes and system events
- > SNMP and email notifications for multiple users of log, event, power, and authorization, configuration messages
- > SYSLOG logging protocol support
- > Automatic Firmware Updates via FTP
- > Strong Password Support and Pre-Login Banner

#### POWER INFORMATION

- > Input Feed Voltage (VAC)
- > Input Feed Watts (W)
- > System Total Watts (W)
- > System Footprint (SqFt / SqM)
- > System Watts/Area (W/SqFt / W/SqM)

#### COMMUNICATION TOOLS

- > Web interface, SSL, SSH, Telnet, SNMP & RS-232 access, 10/100 Base T-Ethernet, SSLv3/TLSv1, SNMPv2, TACACS+, LDAP, LDAPS, RADIUS, DHCP, SMTP/Email, and Syslog.

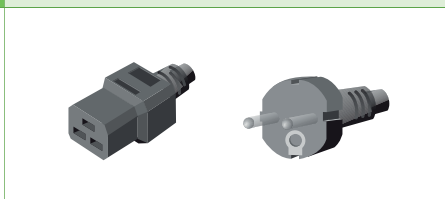
# CDU Power Cords & Accessories

## Plug and Cord Options for Sentry CDUs

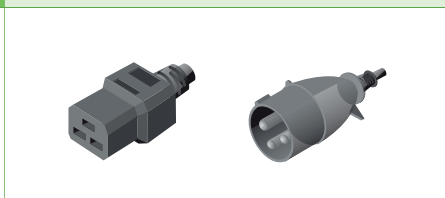
Saifor provides 16A and 32A products with a variety of input cord options available. Please refer to the Power Cords and cordset options below for different configurations. Shown below are standard power cord and cordset options.1

### 16A PLUGS & CORDS

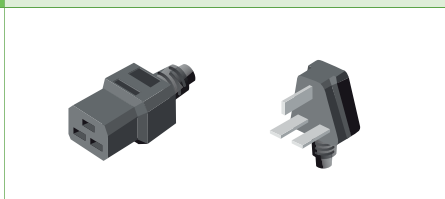
<b>MODEL</b>	PTCORD-2Outlets
<b>OUTLETS</b>	IEC60320 / C19 to SchukoAmps (A)
<b>VOLTAGE (V)</b>	230V
<b>AMPS (A)</b>	16A
<b>LENGTH</b>	3m



<b>MODEL</b>	PTCORD-3
<b>OUTLETS</b>	IEC60320 / C19 to IEC60320 / BS434 / CEE173-Phase
<b>VOLTAGE (V)</b>	230V
<b>AMPS (A)</b>	16A
<b>LENGTH</b>	3m



<b>MODEL</b>	PTCORD-4
<b>OUTLETS</b>	IEC60320 / C19 to BS 1363
<b>VOLTAGE (V)</b>	230V
<b>AMPS (A)</b>	16A
<b>LENGTH</b>	3m



### ACCESSORY OPTIONS

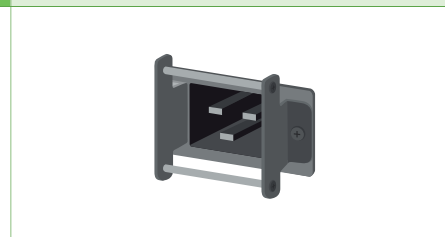
<b>MODEL</b>	EMTH-1-1
<b>DESCRIPTION</b>	Temperature & Humidity Probes
<b>FUNCTION</b>	Measures cabinet temperature & humidity
<b>LENGTH</b>	3m



<b>MODEL</b>	EMCU-1-1B
<b>DESCRIPTION</b>	Environmental Monitoring Control Unit
<b>FUNCTION</b>	Supports 2 additional EMTH-1-1, water & 4 dry contact closure door sensors
<b>LENGTH</b>	-



<b>MODEL</b>	C20 Inlet Bracket
<b>DESCRIPTION</b>	C20 Inlet Retention Bracket
<b>FUNCTION</b>	Securely fastens C20 cord to chassis
<b>LENGTH</b>	-



Saifor offers a wide range of products for global markets.

For more information on global products visit our website at [www.saifor.com](http://www.saifor.com)

# Sentry Power Manager

## Power Management Architecture

### SENTRY POWER MANAGER

Manage Multiple CDUs Across Multiple Locations

Do you have multiple Sentry CDUs in one or more locations that you would like to access from one central point? Would you like one central location where all alarms can be viewed and logged for reporting, e-mail or SNMP trap notifications? No problem! Our Sentry Power Manager (SPM) product is capable of monitoring and managing multiple Sentry devices in IP-based enterprise networks. SPM provides a global view of all Sentry CDUs with the ability to view devices based on their temperature, humidity, current and device status. Besides managing and monitoring all alarm conditions, this information can also be used to provide reporting and trending information for display within SPM or integrated with your existing Building Management System (BMS).



#### Web Based GUI:

Quickly drill down from a global view to the rack level. Users can setup custom network operation center (NOC) views for whatever they want to display from global dashboard views down to each CDU, cabinet or location.

#### Event Notification

- > Email notification via the CDU to multiple recipients when an event occurs
- > SNMP traps via the CDU when an event occurs
- > Auto-discovers each CDU for easy configuration
- > Easily create a user interface that mirrors the physical deployment of the data center
- > Quickly drill down from a global perspective to the rack's actual physical location if there is a problem (quickly identify the alarm and the physical location of the CDU)
- > Create outlet clusters to group outlets within a CDU, across linked CDUs or across enterprise locations

#### Multiple Reporting Options

- > Reporting capabilities to produce reports on critical management parameters such as temperature, humidity and current load
- > Reports on Current and Power providing the power consumption of each input, total for the rack and/or per square foot of the rack

#### On-Demand Accessibility

- > Real-time view of all active system alarms
- > Anytime, anywhere web-based views
- > Manage thousands of CDUs from a single console

#### Compatibility

- > Server Technology Sentry CDUs with firmware 5.3+

#### Web Browsers Supported

- > Microsoft Internet Explorer 7.0+
- > Mozilla Firefox 2.0+



### LINKABLE EXPANSION MODULE

The Expansion Module CDU, Smart CL or Switched CX, is our exclusive method for linking together outlets on different power circuits.

The Expansion Module CDU, CL or CX, increases the number of managed outlets on a single IP address. Each expansion module links to its parent Smart CS or Switched CW, which contains both network and serial interfaces. When linked to a Smart or Switched CDU, the CL's or CX's outlets are auto-discovered by the Smart or Switched CDUs firmware, and all available outlets are viewable through the firmware.

On the Switched CW, outlets are individually controllable, or groups of outlets can be controlled between the Switched CW & CX with one command. Each Expansion Module CDU can be a single or dual-power feed and a Zero-U or horizontal enclosure.



# Sentry Power Manager

## Power Management Architecture

### POWER INFORMATION & MANAGEMENT

#### Sentry Power Manager

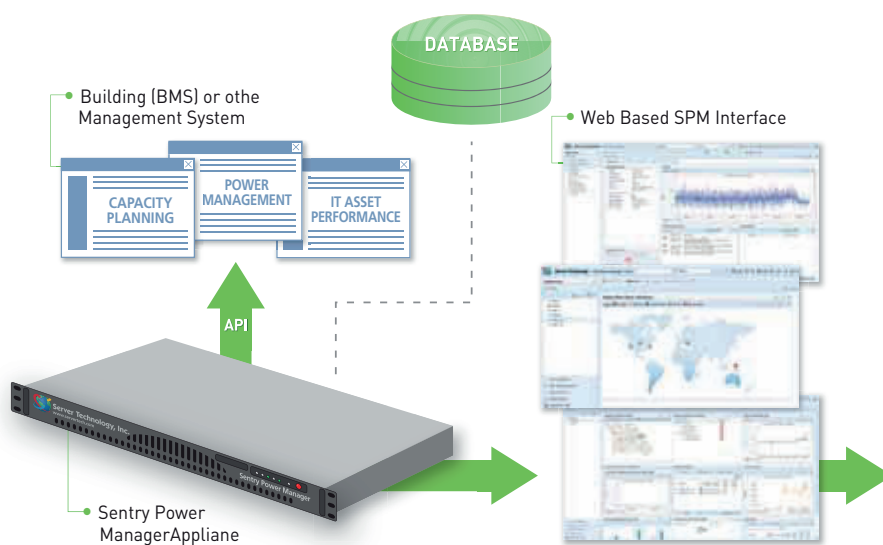
The Sentry Smart and Switched CDUs are capable of being monitored through the SPM (Sentry Power Manager) tool. Sentry intelligent CDUs, in conjunction with SPM, provide additional power information for consumption purposes and power monitoring as well as trending and power reports. An API allows power and other information to be communicated to a Building Management System (BMS) or other systems.

#### Sentry Power Manager (SPM) Solutions

- > SPM provides a global view of all Sentry CDUs with the ability to view devices based on their temperature, humidity, current and device status. Quickly drill down from global view to your facility maps to an individual CDU.
- > Manage and monitor all user-defined alarm conditions on your entire network.
- > Group and cluster outlets for remote

- reboot, power measurement information across a single CDU, a linked CDU, or across the entire network.
- > Allows measurement of power consumption and capacity planning.
- > Auto-discover all your CDUs connected to your IP network.

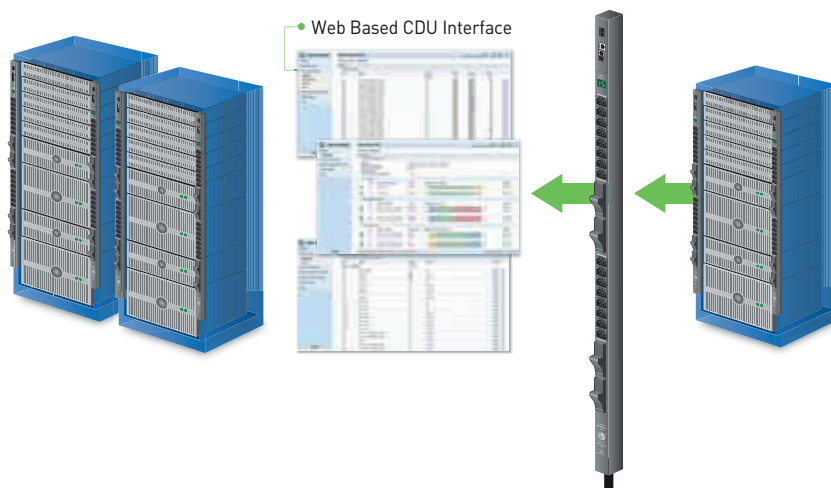
- > View Logs for user access, discovery, user actions, and alarms.
- > Multiple user levels and permissions including support for LDAP.
- > Control individual outlets on Switched CDUs.



#### Sentry Power Manager

- Enterprise Cabinet Power Management
- CDU Auto-Discovery
- Reports & Trends
- Device Monitoring
- Groups & Clusters
- Kilowatt Readings
- Alarms

#### PRIMARY ETHERNET PIPELINE



#### Smart or Switched CDU

- Rack Level Power Monitoring
- Environmental Monitoring
- Outlet Groups
- Alarms
- Outlet Management (Switched CDU)

# Smart & Switched CDU with **PIPS**

Per Inlet Power Sensing CDUs

## PIPS SMART & SWITCHED CDU

Introducing the best infeed power measurement technology on the market for data center rack-level power monitoring.

PIPS technology replaces power monitoring at the RPP (Remote Power Panel) in data centers with higher accuracy and lower cost monitoring of each power circuit attached to a CDU. This new product feature also replaces the already accurate Digital True RMS feature currently available on intelligent Smart, Switched and POPS CDUs by bringing more types of power measurements from the power infeed to the built in graphic user interface (GUI).

Expect the same quality and functionality on current intelligent CDUs, but with an increased level of information to help you make the critical decisions regarding your facility.

### PIPS Features

Sentry PIPS works in conjunction with all of the features of a Smart, Switched or POPS CDU with the ability to provide power monitoring per inlet/infeed. Power information per infeed includes current, voltage, power, apparent power, crest factor, reactance, power factor and accumulated energy. The PIPS CDU is capable of being accessed through either a secure network or serial connection. The secure integral web interface provides a simple and easy way to monitor the CDU. Configuration choices include: SNMP traps, email alerts, grouping, and all security and communication settings. Research shows that measuring at the infeed level is the most accurate place to measure power and is recommended by the Green Grid.

### Communication Tools

- > Web Interface
- > RS-232 access
- > 10/100 Base-T Ethernet
- > SMTP/Email
- > Telnet
- > SSH
- > SSLv3/TLSv1
- > SNMPv2
- > TACACS+
- > LDAP
- > LDAPS
- > RADIUS
- > DHCP
- > Syslog

## POWER INFORMATION & MANAGEMENT

Internal Web Interface



### System Configuration

Intelligent CDUs enable network access to remotely configure access, outlets, alarms, thresholds, and more.



### Easy to Read Summary Screen

The new summary screen allows users to quickly confirm the status of the rack power & environmental conditions.



### Sentry PIPS (Per Inlet/Infeed Power Information)

- > Current (Amps)
- > Power (Watts)
- > Power Factor
- > Neutral Current: Measures neutral current
- > Voltage (Volts)
- > Apparent Power (VA)
- > Accumulated Energy (kWh)



### Environmental Monitoring

No additional IP address needed to obtain temperature and humidity readings. A pair of probes (EMTH-1-1) can be added to any intelligent master CDU (Smart or Switched). Additional probes can be added using an EMCU-1-1B (page 5).



# POPS™ Switched CDU

Per Outlet Power Sensing CDUs

## POPS SWITCHED CDU

Integral Web Interface

Blade servers and high density computing power requirements continue to increase and POPS is the right CDU for that environment. With device-level output control, you can monitor, track and manage servers, IT equipment and the equipment cabinet infrastructure. With the ability to measure, monitor, and report power down to the rack or outlet level, this solution follows the Green Grid's recommendations for acquiring the most accurate power monitoring data.

### POPS Features

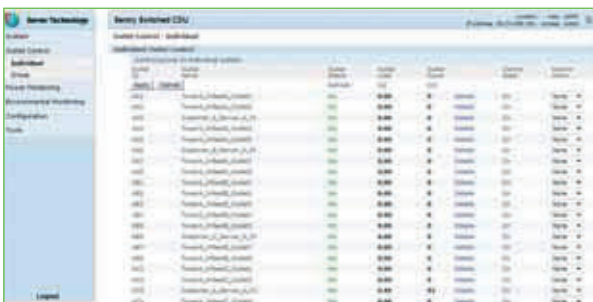
- > Simple, secure, integral web interface GUI configuration tool
- > Temperature and Humidity Support
- > Authentication logging, configuration changes and system events
- > Secure Syslog protocol support
- > Email notifications of log, event, authorization, power and configuration messages
- > Automatic Firmware Updates via FTP server
- > Strong Password Support and Pre-Login Banner
- > Ability to Ping an IP address to see if the device is responding
- > Grouping of outlets across Master & Expansion CDUs
- > SNMP: Traps based on Status, Changes, Load, Temperature and Humidity
- > Supports 104 user accounts and 18 simultaneous logins with a dedicated SNMP connection

### Communication Tools

- > Web Interface
- > SNMP & RS-232 access
- > 10/100 Base T-Ethernet
- > SMTP/Email
- > Telnet
- > SSL
- > SSH
- > SSLv3/TLSv1
- > SNMPv2
- > TACACS+
- > LDAP
- > LDAPS
- > RADIUS
- > DHCP
- > Syslog

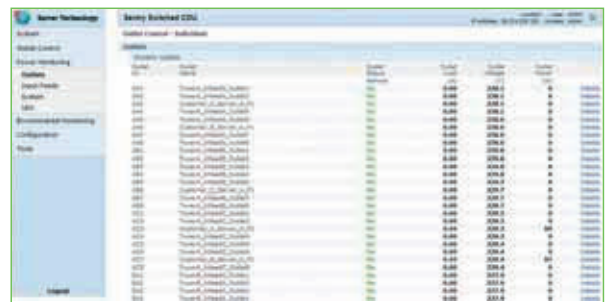
## POWER INFORMATION & MANAGEMENT

Internal Web Interface



### Outlet Control Power Monitoring

- > Individual Outlet Control
- > Current Load Monitoring
- > Power Monitoring
- > Additional Details



### Per CDU Power Information

- > Current Load
- > Infeed Voltage (VAC)
- > Input Feed Watts (W)
- > System Total Watts (W)
- > System Footprint (SqFt / SqM)
- > System Watts (W/SqFt / W/SqM)



### Grouped Outlets Power Information

- > Cabinet (single IP address using master/expansion configuration for two CDUs)
- > Device (Multiple Outlets)
- > Group of Devices (Application)
- > Individual CDU



### Sentry POPS™ (Per Outlet Power Sensing)

- > Current Load (A)
- > Voltage (V)
- > Power (W)
- > Apparent Power (VA)
- > Crest Factor
- > Power Factor

# Fail-Safe Transfer Switch (FSTS)

## Horizontal Rack Mounted Enclosures



1 No Input Current Monitoring	<b>MODEL</b>	<b>CS-2HF<sup>2</sup></b>
	<b>Outlets</b>	(2) C19
2 Internal Branch Circuit Protection	<b>Input Voltage (V)</b>	230V
	<b>Amps (A)</b>	32A
	<b>Cabinet kW</b>	7.3kW
	<b>Output Voltage (V)</b>	230V
	<b>Dimensions</b>	1U   178mm depth



CS-2HF<sup>2</sup>



1 No Input Current Monitoring	<b>MODEL</b>	<b>PTTS-H008<sup>12</sup></b>
	<b>Outlets</b>	(8) C13
2 Internal Branch Circuit Protection	<b>Input Voltage (V)</b>	230V
	<b>Amps (A)</b>	16A
	<b>Cabinet kW</b>	3.6kW
	<b>Output Voltage (V)</b>	230V
	<b>Dimensions</b>	1U   178mm Depth



PTTS-H008<sup>12</sup>



1 No Input Current Monitoring	<b>MODEL</b>	<b>CW-16HFE<sup>2</sup></b>
	<b>Outlets</b>	(16) C13
2 Internal Branch Circuit Protection	<b>Input Voltage (V)</b>	230V
	<b>Amps (A)</b>	16A or 32A
	<b>Cabinet kW</b>	3.6kW or 7.3kW
	<b>Output Voltage (V)</b>	230V
	<b>Dimensions</b>	2U   178mm Depth



CW-16HFE<sup>2</sup>

# Basic CDU

## Zero-U Vertical Enclosures

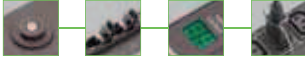


MODEL	CB-12H2	CB-24V2	CB-24VE
Outlets	(12) C13	(24) C13	(24) C13
Input Voltage (V)	230V	230V	230V
Amps (A)	16A	16A	16A or 32A
Cabinet kW	3.6kW	3.6kW	3.6kW or 7.3kW
Output Voltage (V)	230V	230V	230V
Dimensions	10U   432mm	18U   800mm	20U   862mm

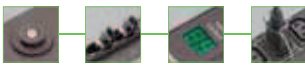


# Metered CDU

## Zero-U Vertical Enclosures



MODEL	C-12VE	C-24VE
Outlets	(12) C13	(24) C13
Input Voltage (V)	230V	230V
Amps (A)	16A or 32A	16A or 32A
Cabinet kW	3.6kW or 7.3kw	3.6kW or 7.3kw
Output Voltage (V)	230V	230V
Dimensions	18U   794mm	31U   1372mm



MODEL	C-24VDE	C-48V4
Outlets	(24) C13	(48) C13
Input Voltage (V)	230V	3-Phase 230/400V
Amps (A)	16A or 32A	16A or 32A
Cabinet kW	7.3kW or 14.7kW	11kW or 22kW
Output Voltage (V)	230V	230V
Dimensions	18U   794mm	43U   1880mm



# Metered CDU

## Horizontal Rack Mounted Enclosures

MODEL	C-4HE
Outlets	(4) C19
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	3.6kW or 7.3kW
Output Voltage (V)	230V
Dimensions	1U   178mm Depth



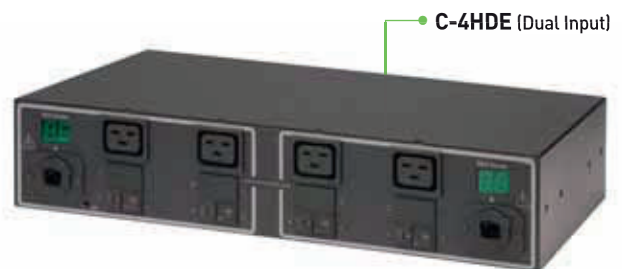
MODEL	C-12HE
Outlets	(12) C13
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	3.6kW or 7.3kW
Output Voltage (V)	230V
Dimensions	1U   127mm Depth



MODEL	C-24HE
Outlets	(24) C13
Input Voltage (V)	230V
Amps (A)	32A
Cabinet kW	7.3kW
Output Voltage (V)	230V
Dimensions	1U   127mm Depth



MODEL	C-4HDE (Dual Input)
Outlets	(4) C19
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	3.6kW or 7.3kW
Output Voltage (V)	230V
Dimensions	2U   180mm Depth



MODEL	C-12HDE
Outlets	(12) C19
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	7.3kW or 14.7kW
Output Voltage (V)	230V
Dimensions	2U   254mm Depth



# Smart CDU

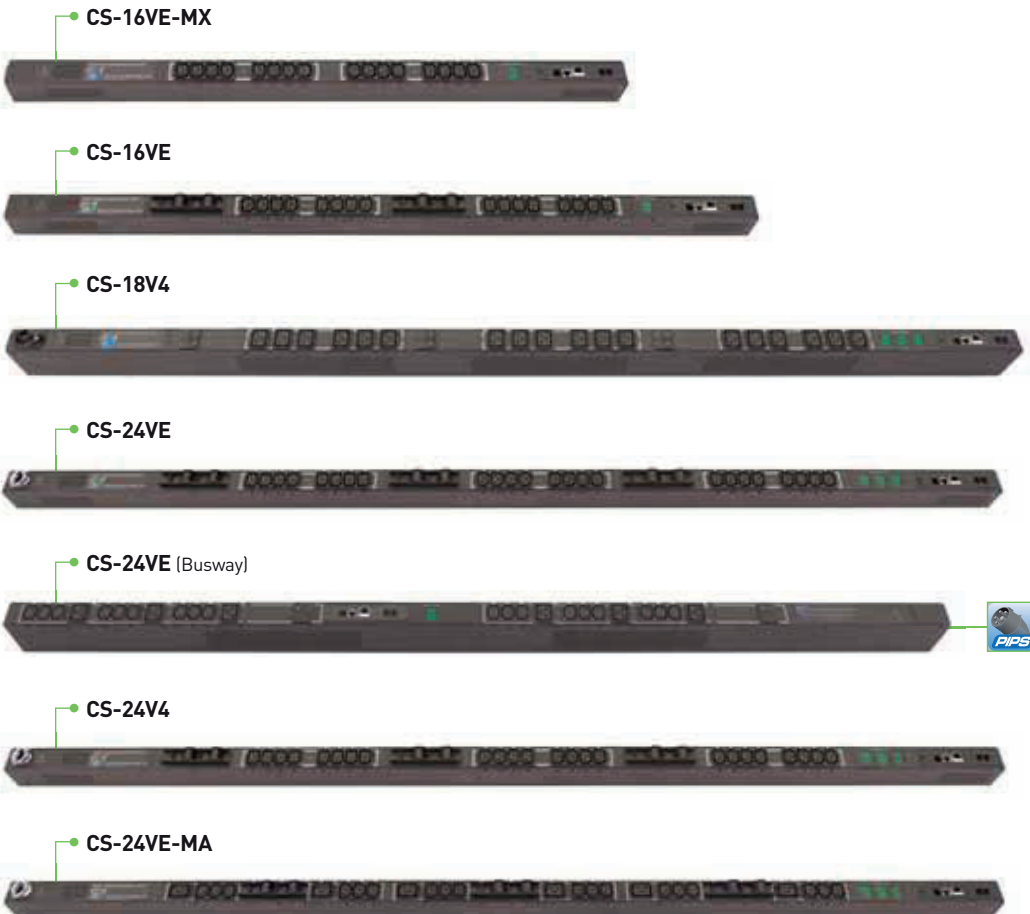
## Zero-U Vertical Enclosures



MODEL	CS-16VE-MX	CS-16VE	CS-18V4	CS-24VE
Outlets	[16] C13	[16] C13	[18] C19	[24] C13
Input Voltage (V)	230V	230V	3-Phase 230/400V	230V
Amps (A)	16A	16A or 32A	16A or 32A	16A or 32A
Cabinet kW	3.6kW	3.6kW or 7.3kW	11kW or 22kW	3.6kW or 7.3kW
Output Voltage (V)	230V	230V	230V	230V
Dimensions	23U   1003mm	29U   1257mm	40U   1753mm	40U   1753mm



MODEL	CS-24VE (Busway)	CS-24V4	CS-24VE-MA
Outlets	[18] C13 + [6] C19	[24] C13	[18] C13 + [6] C19
Input Voltage (V)	230V	3-Phase 230/400V	230V
Amps (A)	16A or 32A	16A or 32A	16A or 32A
Cabinet kW	3.6kW or 7.3kW	11kW or 22kW	3.6kW or 7.3kW
Output Voltage (V)	230V	230V	230V
Dimensions	37U   1620mm	40U   1753mm	40U   1753mm





# Smart CDU

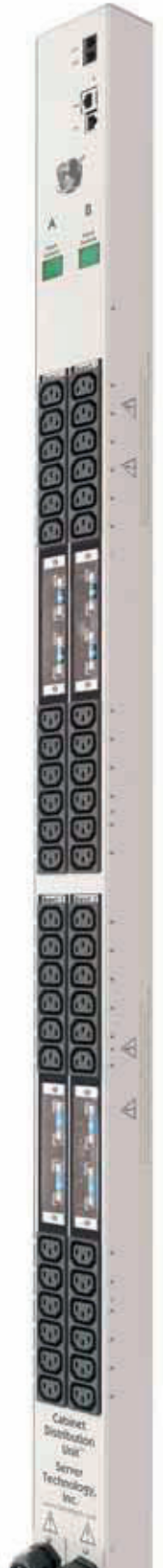
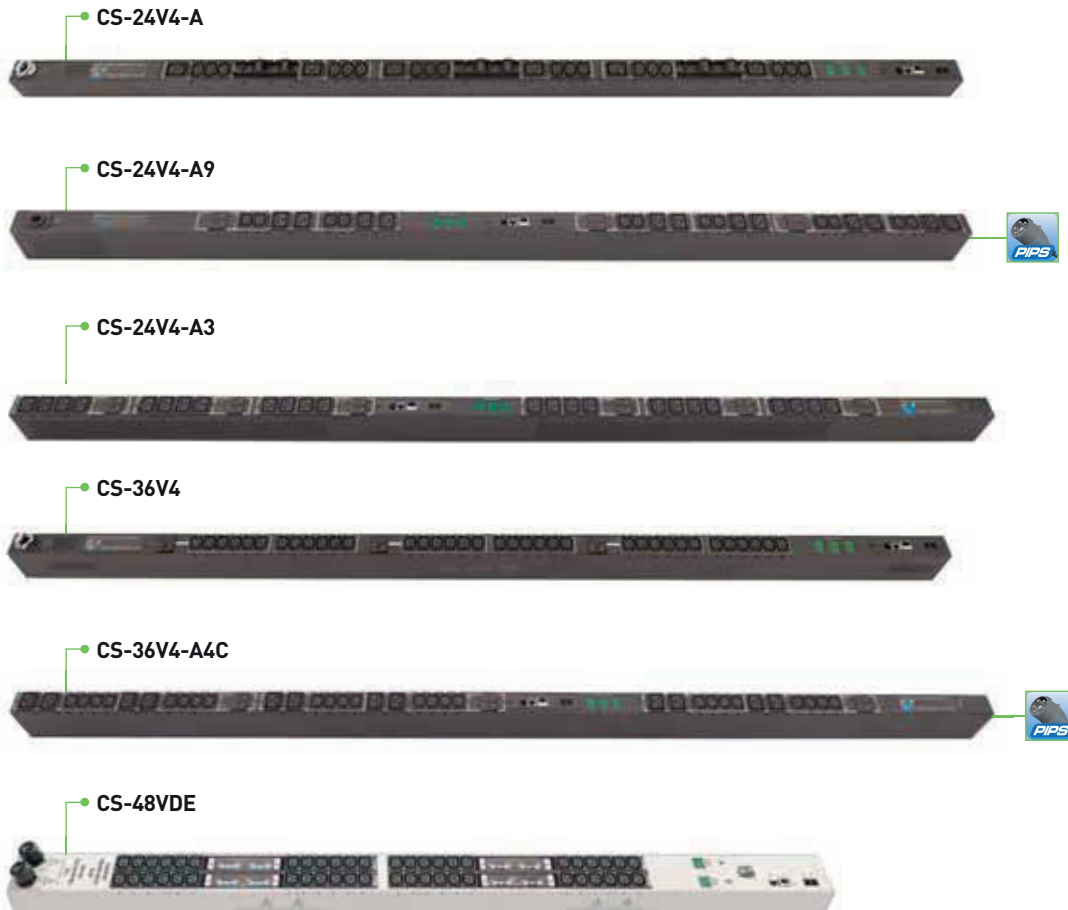
## Zero-U Vertical Enclosures



MODEL	CS-24V4-A	CS-24V4-A9	CS-24V4-A3
Outlets	(18) C13 + (6) C19	(12) C13 + (12) C19	(24) C19
Input Voltage (V)	3-Phase 230/400V	3-Phase 230/400 V	3-Phase 230/400 V
Amps (A)	16A or 32A	16A or 32A	63A
Cabinet kW	11kW or 22kW	11kW or 22kW	43.4kW
Output Voltage (V)	230V	230V	230V
Dimensions	40U   1753mm	40U   1753mm	43U   1905mm



MODEL	CS-36V4	CS-36V4-A4C	CS-48VDE
Outlets	(36) C13	(24) C13 + (12) C19	(48) C13
Input Voltage (V)	3-Phase 230/400V	3-Phase 230/400 V	230V
Amps (A)	32A	16A or 32A	16A or 32A
Cabinet kW	22kW	11kW or 22kW	7.3kW or 14.7kW
Output Voltage (V)	230V	230V	230V
Dimensions	39U   1727mm	42U   1867mm	31U   1372mm



# Smart CDU

## Smart Modular 3-Phase CDU

SAMPLE INSTALLATION



MODEL	Sample Installation
Outlets	Smart Modular 3-Phase Master
Input Voltage (V)	(CS-3VD / VY) CDU with
Amps (A)	(3) Basic Satellite CDUs
Cabinet kW	(CB-8V2-A) connected
Output Voltage (V)	—
Dimensions	—

MODEL	CS-3V4	CS-3V4
Outlets	Master	Expansion
Input Voltage (V)	3-Phase 230/400V	3-Phase 230/400V
Amps (A)	32A	32A
Cabinet kW	22kW	22kW
Output Voltage (V)	230V	230V
Dimensions	8U   347mm	8U   347mm

CS-3V4



CL-3V4



MODEL	CB-4V2	CB-8V2-A	CB-8V2-B	CB-10V2
Outlets	(4) C19	(6) C13 + (2) C19	(4) C13 + (4) C19	(10) C13
Input Voltage (V)	230V	230V	230V	230V
Amps (A)	32A	32A	32A	32A
Cabinet kW	7.3kW	7.3kW	7.3kW	7.3kW
Output Voltage (V)	230V	230V	230V	230V
Dimensions	8U   347mm	8U   347mm	8U   347mm	8U   347mm

CB-4V2



CB-8V2-A



CB-8V2-B



CB-10V2



# Smart CDU

## Smart Power Monitor & Horizontal Rack Mounted Enclosures

MODEL	CS-12HDE
Outlets	(12) C19
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	7.3kW or 14.7kW
Output Voltage (V)	230V
Dimensions	2U   254mm Depth



MODEL	CS-2HDE
Outlets	(2) C19
Input Voltage (V)	230V
Amps (A)	16A
Cabinet kW	3.6kW
Output Voltage (V)	230V
Dimensions	43U   1880mm



MODEL	CS-2HDE Smart Power Monitor
Outlets	(2) 60309
Input Voltage (V)	230V
Amps (A)	32A
Cabinet kW	14.7kW
Output Voltage (V)	230V
Dimensions	1U   (254mm) Depth



MODEL	CS-2HD4 Smart Power Monitor
Outlets	(2) 60309
Input Voltage (V)	3-Phase 230/400V
Amps (A)	16A or 32A
Cabinet kW	22kW or 44kW
Output Voltage (V)	230V
Dimensions	1U   (254mm) Depth



# Switched CDU

## Zero-U Vertical Enclosures



MODEL	CW-16VE-MX	CW-16VE	CW-24VE	CW-24VE-A1
Outlets	[16] C13	[16] C13	[24] C13	[18] C13 + [6] C19
Input Voltage (V)	230V	230V	230V	230V
Amps (A)	16A	16A or 32A	16A or 32A	16A or 32A
Cabinet kW	3.6kW	3.6kW or 7.3kW	3.6kW or 7.3kW	3.6kW or 7.3kW
Output Voltage (V)	230V	230V	230V	230V
Dimensions	23U   1003mm	29U   1257mm	40U   1753mm	40U   1753mm



MODEL	CW-24V4	CW-24V4-A1	CW-32VDE
Outlets	[24] C13	[18] C13 + [6] C19	[32] C13
Input Voltage (V)	3-Phase 230/400V	3-Phase 230/400V	230V
Amps (A)	16A or 32A	16A or 32A	16A or 32A
Cabinet kW	11kW or 22kW	11kW or 22kW	7.3kW or 14.7kW
Output Voltage (V)	230V	230V	230V
Dimensions	40U   1753mm	40U   1753mm	29U   1270mm



# Switched CDU

## Horizontal Rack Mounted Enclosures

MODEL	CW-2H2
Outlets	(2) C13
Input Voltage (V)	230V
Amps (A)	16A
Cabinet kW	3.6kW
Output Voltage (V)	230V
Dimensions	1U   140mm Depth



MODEL	CW-8HE
Outlets	(8) C13
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	3.6kW or 7.3kW
Output Voltage (V)	230V
Dimensions	1U   178mm Depth



MODEL	CW-16HE
Outlets	(16) C13
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	3.6kW or 7.3kW
Output Voltage (V)	230V
Dimensions	2U   178mm Depth



MODEL	CW-16HDE
Outlets	(16) C13
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	3.6kW or 7.3kW
Output Voltage (V)	230V
Dimensions	2U   178mm Depth



# POPS Smart CDU

## Zero-U Vertical Enclosures



MODEL	CSG-24VE	CSG-24V4
Outlets	(18) C13 + (6) C19	(12) C13 + (12) C19
Input Voltage (V)	230V	3-Phase 230/400V
Amps (A)	16A or 32A	16A or 32A
Cabinet kW	3.6kW or 7.3kW	11kW or 22kW
Output Voltage (V)	230V	230V
Dimensions	35U   1550mm	41U   1794mm



MODEL	CWG-16VE-A1	CWG-24VE-A1
Outlets	(12) C13 + (4) C19	(18) C13 + (6) C19
Input Voltage (V)	230V	230V
Amps (A)	16A or 32A	16A or 32A
Cabinet kW	3.6kW or 7.3kW	3.6kW or 7.3kW
Output Voltage (V)	230V	230V
Dimensions	29U   1256mm	40U   1753mm





# POPS Switched CDU

## Zero-U Vertical Enclosures



MODEL	CWG-VE-C1	CWG-24V4-A1
Outlets	(18) C13 + (6) C19	(18) C13 + (6) C19
Input Voltage (V)	230V	3-Phase 230/400V
Amps (A)	16A or 32A	16A or 32A
Cabinet kW	3.6kW or 7.3kW	11kW or 22kW
Output Voltage (V)	230V	230V
Dimensions	37U   1625mm	40U   1753mm



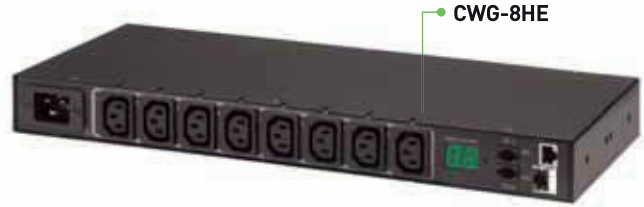
MODEL	CWG-24V4x458-A1	CWG-24V4-A9
Outlets	(18) C13 + (6) C19	(12) C13 + (12) C19
Input Voltage (V)	3-Phase 230/400V	3-Phase 230/400V
Amps (A)	16A or 32A	16A or 32A
Cabinet kW	11kW or 22kW	11kW or 22kW
Output Voltage (V)	230V	230V
Dimensions	40U   1753mm	40U   1753mm



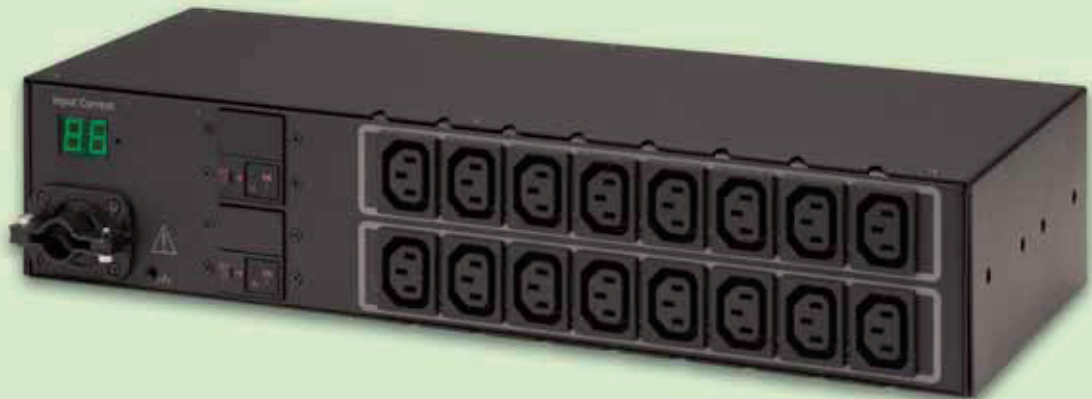
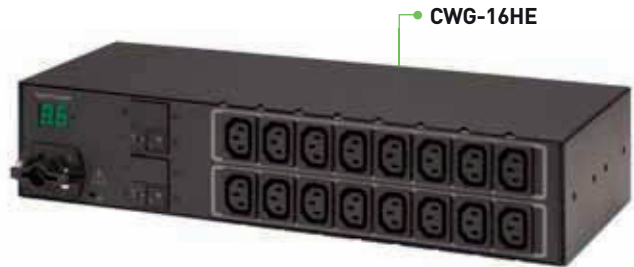
# POPS Switched CDU

## Horizontal Rack Mounted Enclosures

MODEL	CWG-8HE
Outlets	(8) C13
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	3.6kW or 7.3kW
Output Voltage (V)	230V
Dimensions	1U   178mm Depth



MODEL	CWG-16HE
Outlets	(8) C13
Input Voltage (V)	230V
Amps (A)	16A or 32A
Cabinet kW	3.6kW or 7.3kW
Output Voltage (V)	230V
Dimensions	2U   178mm Depth





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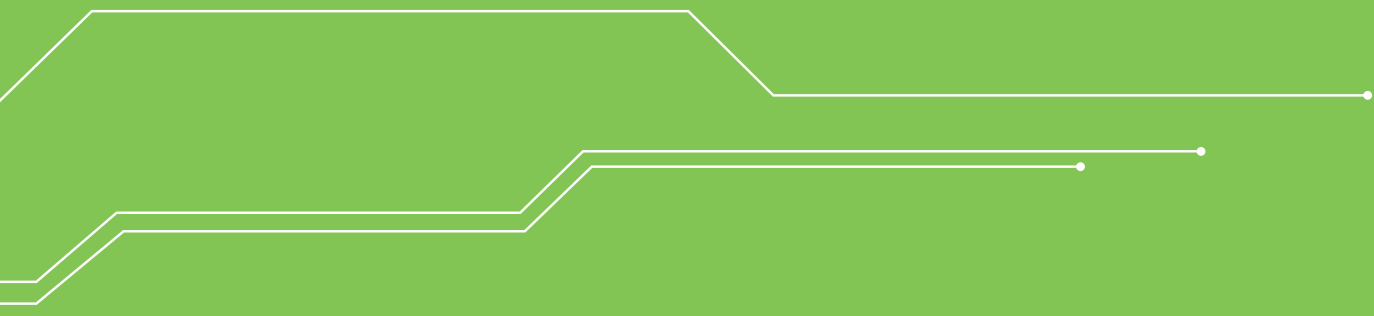
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