

SWITCHED eCONNECT™ PDU

KEY FEATURES

- Remote control of individual outlets by turning outlets on, off or cycling power
- Continuous, automated power monitoring at each breaker with $\pm 1\%$ metering accuracy
- Local display with an interactive screen that displays combined power measurements
- Remote monitoring and outlet control through a network connection using a web browser
- Easy network setup using the local display to enter the IP address for fast deployment onto your network
- User defined alarms for each circuit breaker on the PDU indicated by a flashing LED near the central display and summarized on the built-in web interface
- Connect any combination of up to 20 networked PDUs together and access all PDUs through a single IP address using the built-in web interface
- Group outlets from multiple Switched PDUs to cycle power for redundantly powered devices with one click using the built-in web interface
- Optimized for high density applications with a low profile design, universal tool-less mounting and use in ambient air temperatures up to 149°F (65°C)
- Broad selection of standard configurations that combine different power inlets/plugs with a mix of outlets to match your facility requirements
- Low profile design that fits in the zero U space at the side of your equipment cabinet and does not block access to equipment mounting rails or exhaust airflow from equipment

APPLICATIONS

- CPI's Switched eConnect PDUs allow you to turn each outlet on the PDU on and off remotely and provide continuous, automated breaker-level power monitoring with $\pm 1\%$ metering accuracy
- Provides local and remote power monitoring for the PDU and remote control for each outlet on the PDU
- Use in data center and equipment room cabinets and racks to remotely control power to each outlet, to monitor combined power use and to help balance power loads for all attached equipment

USE WITH

- CPI Cabinet Systems
- CPI Rack Systems

RELATED ACCESSORIES

- Remote Infrastructure Management (RIM-600) System
- LCD/KVM Drawers and Switches



Cord Retention Tethers –
Secure power cords to C13
and C19 outlets

Local Display – Interactive
screen with easy network set-up
shows power measurements
from each breaker

Universal Mounting –
Tool-less installation hardware

CPI'S Switched eConnect™ PDUs are a new generation of power distribution products that connect you to your evolving enterprise data center. Whether you need to connect a few pieces of equipment or to support high density computing with multiple blade servers in every cabinet, Switched eConnect PDUs provide reliable power distribution with remote per-outlet control.

Choose a Switched eConnect PDU when you need to control power at each outlet. Switched eConnect PDUs provide remote control of each outlet allowing you to turn individual outlets off, on or cycle power to the outlet and attached equipment remotely using a web browser. Set power cycle delays to prevent power problems or to allow a sequenced power-on process. Name each outlet to more easily associate the outlet with equipment. Group outlets from several linked PDUs and cycle power as one outlet to allow one button remote power cycling for redundantly powered equipment.

The Switched eConnect PDU is also equipped to measure overall power use on each rack and cabinet. Offering all the features available with Basic and Monitored eConnect PDUs, the diverse functionality of this PDU includes switching capabilities and $\pm 1\%$ metering accuracy for power measurements on each breaker. A central display on the PDU provides an easily understood and accessible point for these measurements, which include continuous, automated voltage, current, power and power factor monitoring. This information is also available remotely through the PDU's Ethernet connection, where users can utilize a web browser for detailed measurements on up to 20 PDUs from a single IP address. Complementing the Ethernet connection are two connections that support linking capabilities and an external connection for two environmental probes. When used together, these connections allow users to easily click between linked PDUs and view all alarms summarized on a separate tab. As an alternative, you can monitor the PDU with third-party software that accepts SNMP traps.

The PDUs feature a low profile design, universal tool-less mounting and can be confidently deployed in cabinets with CPI Vertical Exhaust Ducts or in hot aisle containment applications in ambient air temperatures up to 149°F (65°C). Various combinations of IEC C13, IEC C19 and NEMA 5-20R outlets are spaced and grouped for convenience, and there is an attachment point next to each C13 and C19 outlet for a snap-on power cord retention tether that is used to secure power cord connections. Most PDUs include an attached 10'L (3 m) power cord with an IEC or NEMA style plug rated for 100-125 Volt, 200-240 Volt or 380-415 Volt input. Alternately, some models have an IEC C20 inlet and the power cord should be ordered separately to match specific site requirements. Simply choose the plug and outlet combination that matches your power requirements.

See reverse for product selection or contact CPI Technical Support for configuration assistance.



CHATSWORTH PRODUCTS, INC.

+1-800-834-4969

techsupport@chatsworth.com
www.chatsworth.com





SPECIFICATIONS

- Single-input, vertical rack-mount PDUs
- For indoor use only, in environmentally controlled areas, may not be used outdoors or in harsh environments
- Power Input:
 - Specific to PDU, alternating current, 50/60 Hz (see order table)
 - Stated as a voltage range, maximum current, load and inlet/plug type
- Power Output:
 - Specific to PDU, limited by circuit breakers (see order table)
 - On single-phase units output voltage equals input voltage
 - On three-phase units output voltage through IEC C13 and C19 outlets is 208 VAC nominal and output voltage through NEMA 5-20R outlets is 120 VAC nominal
- Power Inlet/Plugs:
 - NEMA or IEC power inlet/plug
 - Specific to PDU (see order tables)
- Power Cord:
 - Standard attached cord is 10'L (3.0 m), not rated for plenum use
 - Order cord separately for models with IEC C20 inlet
- Power Outlet Receptacles:
 - NEMA 5-20R, IEC C13 and/or IEC C19 outlets
 - Specific to PDU (see order tables)
 - Includes power cord retention tethers to secure power cords at C13 and C19 outlets
- Circuit Protection:
 - UL 489 listed, two-pole, hydraulic magnetic breakers to resist effects of high temperatures
 - Low profile design minimizes size of breaker boxes on PDUs and accidental discharge
 - Number specific to PDU (see order tables)
- Network/External Connections:
 - (1) 10/100 Mbps RJ-45 Ethernet connection (IPv4 and IPv6)
 - (1) RJ11 Environmental Probe connection
 - (1) RJ45 Serial/PDU In-linking connection (RS-232)
 - (1) RJ45 PDU Out-linking connection
 - (1) USB port for firmware updates
- Internal Metering:
 - Monitors unit voltage, current, power and power factor at each breaker
 - ±1% metering accuracy
- Local Display:
 - Liquid Crystal Display (LCD) for easy viewing
 - Allows initial setup of IP and subnet addresses without computer
 - Displays unit voltage, current, power and power factor for combined equipment load
 - Separate LED flashes red on alarm
- Network Monitoring:
 - Monitor total voltage, current, power and power factor through the Ethernet using a web browser (HTTP or HTTPS) or an application that accepts alarms as SNMP v1, v2c or v3 traps
 - Monitor temperature and humidity when external environmental probes (P/N 17761-003) are attached to the PDU
 - Set and automatically monitor high and low alarm thresholds for power, temperature and humidity
- IP Consolidation (PDU Linking):
 - Use the PDU In/Out connections to link up to 20 PDUs together using standard RJ45 Cat5/6 patch cords
 - View all connected PDUs through a single network connection and IP address
- Switched Outlets:
 - Turn outlets on and off and remotely cycle power to equipment
 - Set initial power on and cycle delays to power multiple outlets on at user defined intervals
 - Link a group of outlets together to toggle power to multiple outlets using a single click
- Bonding/Grounding:
 - All PDUs have a grounded power inlet/plug and an external ground connection with a threaded M5 attachment point
 - Includes a grounding kit with a 12"L (300 mm), 12 AWG stranded copper wire jumper
- Certifications:
 - UL
 - CSA C22.2 (Canada)
 - NOM (Mexico)
 - CE (EU)
 - FCC Part 15, Class A
 - EN 55022
 - RoHS Compliant
- Operating Conditions:
 - Temperature: 32°F – 149°F (0°C – 65°C)
 - Relative Humidity: 5% – 95%, non-condensing
 - Elevation: 0 – 10,000 feet (0 – 3,000 meters)
- Storage/Non-Operating Conditions:
 - Temperature: -13 – 149°F (-25 – 65°C)
 - Relative Humidity: 5% – 95%, non condensing
 - Elevation: 0 – 50,000 feet (0 – 15,000 m)
- Installation Hardware:
 - Includes two tool-less mounting shoulder washers and installation hardware
 - The PDU can be installed with the inlet power cord near the top or bottom of the cabinet
 - Washers can be installed spaced 64.75" (1645 mm) or 61.25" (1556 mm) apart to match most rack/cabinet mounting brackets
 - The washers can also be offset 2" (51 mm) to provide additional space at the top or bottom of the cabinet for the power cord in shorter cabinets
- Rack/Cabinet Mounting Brackets:
 - Not included with PDU, order separately
 - Included with most CPI Cabinets, check cabinet specifications
- Finish: Black only



PLUG/INLET TABLE:

POWER RECEPTACLE/OUTLET TABLE:







Single-Phase/Locking

			
NEMA L5-20P 110-125 VAC/20A	NEMA L5-30P 110-125 VAC/30A	NEMA L6-20P 200-240 VAC/20A	NEMA L6-30P 200-240 VAC/30A






Split-Phase/Locking

	
NEMA L14-20P 120/240 VAC/20A	NEMA L14-30P 120/240 VAC/30A




Three-Phase/Locking

					
NEMA L15-20P 208 VAC/20A	NEMA L15-30P 208 VAC/30A	NEMA L21-20P 208 VAC/20A	NEMA L21-30P 208 VAC/30A	NEMA L22-20P 380-415 VAC/20A	50A CS8365C 208 VAC/40A*

Power Inlet
Universal/Locking

				
IEC C20 110-125 VAC/20A	IEC C20 200-240 VAC/20A	IEC 16A 2P+E 200-240 VAC/16A	IEC 32A 2P+E 200-240 VAC/32A	IEC 16A 4P+E 380-415 VAC/16A

Receptacles/Outlets

		
NEMA 5-20R 120 VAC/20A	IEC C13 UL: 120/208VAC/15A CE: 208VAC/10A	IEC C19 UL: 120/208VAC/20A CE: 208VAC/16A

* Note: 50A CS8365C is rated for 50A, but maximum input is 40A on three breaker PDUs.

ORDERING INFORMATION

Part Number	Input			Output		Dims - in (mm)		
	Amp	kW*	Plug	Breakers	Outlets	H	W	D
110-125 Volt, Single-Phase PDUs								
P5-1A1A5	20	1.9	IEC C20**	1 x 20A	(24) 5-20R	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1C0A5	20	1.9	NEMA L5-20P	1 x 20A	(24) 5-20R	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1D0A5	30	2.9	NEMA L5-30P	2 x 20A	(24) 5-20R	70.5 (1791)	2.2 (56)	2.2 (56)
110-125 or 200-240 Volt, Single-Phase PDUs								
P5-1A1A1	20	1.9 or 3.3	IEC C20**	1 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1A1C3	20	1.9 or 3.3	IEC C20**	1 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
200-240 Volt, Single-Phase PDUs								
P5-1E0A1	20	3.3	NEMA L6-20P	1 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1E0C3	20	3.3	NEMA L6-20P	1 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1F0A1	30	5.0	NEMA L6-30P	2 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1F0C3	30	5.0	NEMA L6-30P	2 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1G0A1	16	2.7	IEC 16A 2P+E	1 x 16A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1G0C3	16	2.7	IEC 16A 2P+E	1 x 16A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1H0A1	32	5.3	IEC 32A 2P+E	2 x 16A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1H0C3	32	5.3	IEC 32A 2P+E	2 x 16A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
208 Volt, Three-Phase PDUs								
P5-1L0A1	20	5.8	NEMA L15-20P	3 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1L0C3	20	5.8	NEMA L15-20P	3 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1N0A1	20	5.8	NEMA L21-20P	3 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1N0A5	20	5.8	NEMA L21-20P	3 x 20A	(24) 5-20R	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1N0C3	20	5.8	NEMA L21-20P	3 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1M0A1	30	8.6	NEMA L15-30P	3 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1M0C3	30	8.6	NEMA L15-30P	3 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1P0A1	30	8.6	NEMA L21-30P	3 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1P0A5	30	8.6	NEMA L21-30P	3 x 20A	(24) 5-20R	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1P0C3	30	8.6	NEMA L21-30P	3 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1T0A1	40	11.5	50A CS8365C	3 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1T0C3	40	11.5	50A CS8365C	3 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
380-415 Volt, Three-Phase PDUs								
P5-1Q0A1	20	11.1	L22-20P	3 x 20A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1Q0C3	20	11.1	L22-20P	3 x 20A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1W0A1	16	8.9	IEC 16A 4P+E	3 x 16A	(24) C13	70.5 (1791)	2.2 (56)	2.2 (56)
P5-1W0C3	16	8.9	IEC 16A 4P+E	3 x 16A	(18) C13, (6) C19	70.5 (1791)	2.2 (56)	2.2 (56)

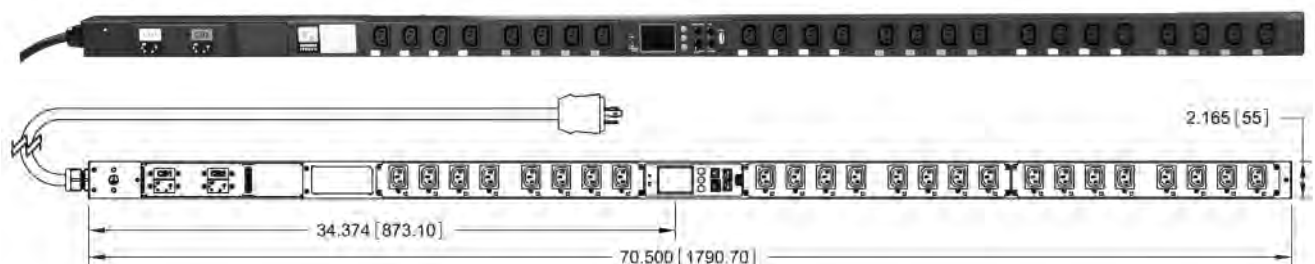
Notes: Order mounting brackets separately. Order power cord separately for PDU with C20 input. On Single-Phase PDUs, output voltage equals input voltage. On Three-Phase PDUs, 208VAC output through C13 and C19 outlets; 120 VAC output through NEMA 5-20R outlets.

* For kW column, all values are derated calculations per UL for use in North America

** Order power cord separately for PDU with C20 input.

DIMENSIONAL DRAWING:

(P5-1F0A1 shown)



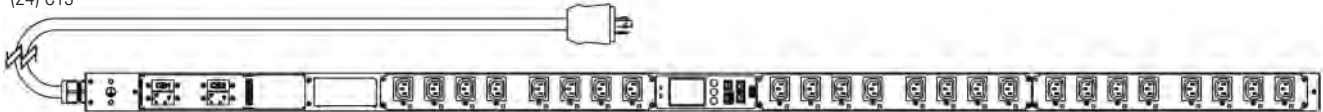
SWITCHED eCONNECT PDU OULET/CHASSIS STYLES:

(24) 5-20R:



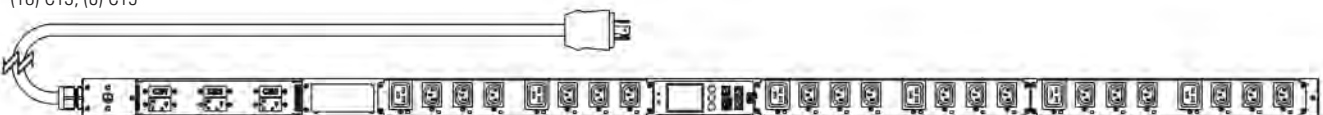
(P5-1A1A5 shown)

(24) C13



(P5-1F0A1 shown)

(18) C13, (6) C19



(P5-1L0C3 shown)

ACCESSORIES:











IEC C20 PDU Input Power Cords

Input power cords for use with eConnect PDUs that have IEC C20 inlets.

- Select power cord to match power connection in the facility
- IEC C19 Connector attaches to the C20 Inlet on the PDU
- Sold individually, order one power cord per PDU

Part Number	Description	Shipping Weight lb (kg)
17763-001	PDU Input Power Cord, 110-125 VAC or 200-240 VAC, IEC C19 Connector to IEC C20 Plug, 10'L (3 m)	3 (1.4)
17763-002	PDU Input Power Cord, 110-125 VAC, IEC C19 Connector to NEMA 5-15P Plug, 8'2"L (2.4 m)	3 (1.4)
17763-003	PDU Input Power Cord, 110-125 VAC, IEC C19 Connector to NEMA 5-20P Plug, 8'2"L (2.4 m)	3 (1.4)
17763-004	PDU Input Power Cord, 200-240 VAC, IEC C19 Connector to NEMA 6-15P Plug, 8'2"L (2.4 m)	3 (1.4)
17763-005	PDU Input Power Cord, 200-240 VAC, IEC C19 Connector to NEMA 6-20P Plug, 8'2"L (2.4 m)	3 (1.4)
17763-006	PDU Input Power Cord, 110-125 VAC, IEC C19 Connector to NEMA L5-15P Plug, 10'L (3 m)	3 (1.4)
17763-007	PDU Input Power Cord, 110-125 VAC, IEC C19 Connector to NEMA L5-20P Plug, 10'L (3 m)	3 (1.4)
17763-008	PDU Input Power Cord, 200-240 VAC, IEC C19 Connector to NEMA L6-15P Plug, 10'L (3 m)	3 (1.4)
17763-009	PDU Input Power Cord, 200-240 VAC, IEC C19 Connector to NEMA L6-20P Plug, 10'L (3 m)	3 (1.4)
17763-010	PDU Input Power Cord, 200-240 VAC, IEC C19 Connector to IEC 16A 2P+E Plug, 10'L (3 m)	3 (1.4)

Power Cord Plug Table:

Locking Plugs (Single-Phase)	 110-125VAC/15A	 110-125VAC/20A	 200-240VAC/15A	 200-240VAC/20A
Straight Plugs	 110-125VAC/15A	 110-125VAC/20A	 200-240VAC/15A	 200-240VAC/20A
IEC Plugs	 110-240VAC/20A	 200-240 VAC/16A		

Environmental Probes with Temperature and Humidity Sensor

Monitored, Monitored Pro, Switched and Switched Pro eConnect PDUs include a single external connection that can attach up to two Environmental Probes using a splitter. When attached, the PDU will report temperature and humidity measurements for each probe on the local display and remotely through the built-in web interface.

- Sold individually or in a kit with two probes and a splitter
- Each probe is a combination temperature and humidity sensor with attached 10'L (3.0 m) cord allowing the sensor to be positioned appropriately within the cabinet

Part Number	Description	Shipping Weight lb (kg)
17761-003	(2) Environmental Probes with (1) Temperature and (1) Humidity Sensor Kit with splitter 120"L (3048 mm) x 2"H (50 mm) x 2"W (50 mm)	1 (0.5)
17761-001	Environmental Probe with (1) Temperature and (1) Humidity Sensor 120"L (3048 mm) x 1"H (25 mm) x 1"W (25 mm)	1 (0.5)
17761-002	Environmental Probe Splitter 6"L (152 mm) x 2"H (50 mm) x 2"W (50 mm)	1 (0.5)

Note: You can attach one probe directly to the PDU; the splitter is required to attach two probes.

SERVICE PARTS:

eConnect PDU Service Parts

Order eConnect PDU Service Parts as replacement parts.

- Cord Retention Tethers are used with cable ties to secure power cords next to C13 and C19 outlets and to C20 power inlets. The tethers snap onto a small stud next to each outlet/inlet on the PDU. Order cable ties separately.
- Ground Wire Kit includes a ground strap and installation hardware to create an external ground connection for the PDU chassis
- Tool-less Mounting Hardware Kit includes shoulder washers and installation hardware used to mount the PDU on rack and cabinet mounting brackets; mounting brackets are sold separately

Part Number	Description	Shipping Weight lb (kg)
17762-003	Cord Retention Tethers, Pack of 50	1 (0.5)
17762-002	Ground Wire Kit	1 (0.5)
17762-001	Tool-less Mounting Hardware Kit, Pack of 2	1 (0.5)

Note: Each PDU includes the components above. Order these components as replacement/service parts.

Vertical PDU Mounting Bracket Kit

Used to attach Vertical PDUs to CPI Cabinet and Rack Systems.

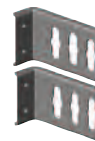
- Each Mounting Bracket Kit includes a pair of mounting brackets to support the PDU
- Select the kit to match the cabinet or rack mode.

Part Number	Description	Shipping Weight lb (kg)
13780-C01	For F-Series TeraFrame Cabinet System	2 (0.9)
25140-701	For GF-Series GlobalFrame Cabinet System	2 (0.9)
13762-701	For M-Series MegaFrame Cabinet System or C-Series SlimFrame Cabinet System	2 (0.9)
35700-701	For Rack Systems	2 (0.9)

Note: Mounting Bracket Kits are included with CPI Cabinet Systems.



13780-C01



25140-701



13762-701



35700-701