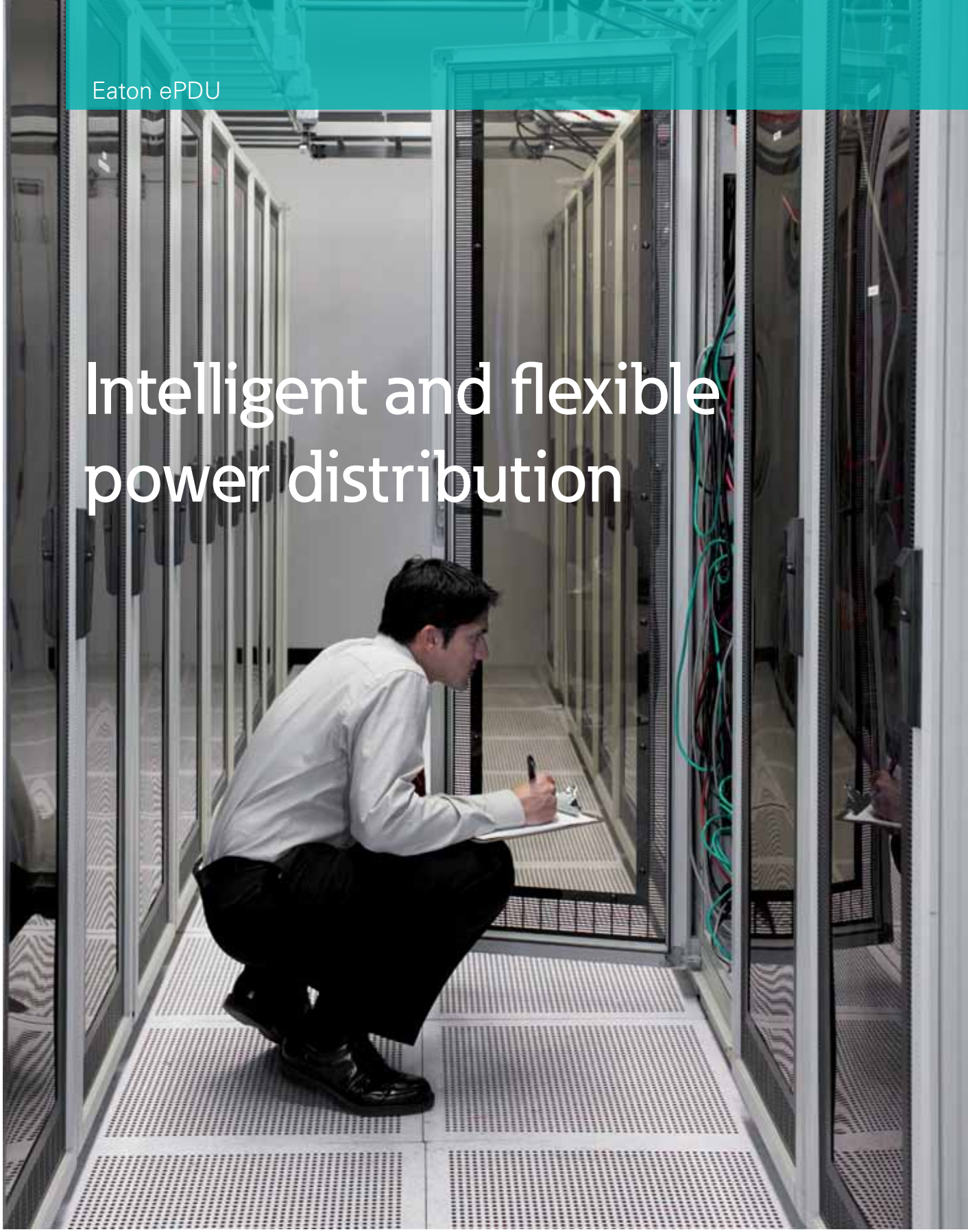
Eaton ePDU

Intelligent and flexible power distribution



Powering Business Worldwide

Introduction and overview

With today's changing technology, increasing power demands and the need for reliability, data centre professionals require sophisticated equipment to provide and monitor power. Increasing power requirements to rack enclosures means a greater understanding is needed at a server level, rack level and at the entire data centre level in order to manage and control what is happening within the infrastructure.

Eaton intelligent rack-based power distribution solutions ePDUs® provide reliable, flexible, cost effective power distribution as well as a better understanding and management of power consumption in the data centre, together with increased control.

Standard and custom models

Choose from either our standard or custom range of ePDUs:

Standard Range

Standard ePDUs feature our top sellers. These are designed to meet the most popular needs in today's data centre. Our standard range includes:

- Managed units to provide individual outlet monitoring together with outlet Switching and sequencing.
- Advanced Monitored units to provide individual outlet monitoring
- Monitored units to provide branch circuit and rack-level monitoring
- Basic units to provide reliable and flexible power distribution

Our standard units offer either IEC outlets or national outlets for the most popular models.

Custom Range

If you require something special, then we can offer custom Eaton ePDUs tailored to your needs.
Requesting a custom ePDU opens up the broadest portfolio in the industry to you, across all power densities and technologies to satisfy the needs of the most demanding data centre. Custom ePDUs allow you to specify your power density and monitoring requirements together with inputs and outputs.

Custom ePDUs are available in five different categories: Basic, Metered, Monitored, Advanced Monitored and Managed. You can select from UK, Schuko, French and IEC (C13 & C19) output sockets and local (UK or Schuko), EN 60309, IEC (C14 & C20) or unterminated cords for termination directly to the output terminals of the UPS.

The ePDU portfolio includes an extensive range of vertical Zero U products that do not occupy server space in racks as well as 1U and 2U formats. Environmental monitoring options are also available.

From single to dual corded, five technology options, the broadest power range and the ability to manufacture ePDUs with custom arrangement of outlets (number and type), Eaton ePDUs are distinguished for their quality, dependability and versatility.

Both our standard and custom ePDUs are designed for the specific application with an emphasis on safety and reliability.

User benefits:

- Eaton ePDUs are designed for mission critical reliability in server applications
- Wide choice of outlets, including UK, Schuko, French, Nema, C13, C19
- Up to 3 types of outlet on custom zero U ePDUs
- Solutions include Basic, Metered, Monitored and Managed technologies
- Choose from a standard set of products, or custom products to meet the most demanding needs.
- Vertical zero U, or horizontal 1U/2U configurations
- Isolation mounting available to provide maximum enclosure integrity
- Multi-option mounting improves installation flexibility. Have confidence that Zero U ePDUs can be adapted to suit any on-site rack configuration.

Managed ePDU

Managed ePDUs have unprecedented management and monitoring capabilities and enable your energy consumption management to the individual server level.

You can even monitor your consumption down to the individual outlet level to gain a full understanding of your data centre. User definable grouping and sequencing of outlets with time delays allow controlled remote boot-up of servers and equipment. 256-bit encryption ensures secure communication and IPMI and SMASH CLI capability provides harmonised user access to computer hardware and ePDUs.

- Monitor and control individual outlets to manage the efficiency of the data centre at server level
- Comprehensive monitoring to the outlet level (Amps, Volts, Watts)
- Individual outlet switching enables remote reboot of servers
- User defined grouping and sequencing of outlets over multiple ePDUs (for A&B feed)
- Communication using SSL, TELNET, http, https, SNMP, IPMI, SMASH CLI, Serial 256-bit encryption security and in-built firewall
- Email capability for instant alert notification
- SNMP network management protocol enables you to monitor thousands of ePDUs in the network
- Optional temperature and humidity sensors available

Advanced Monitored ePDU

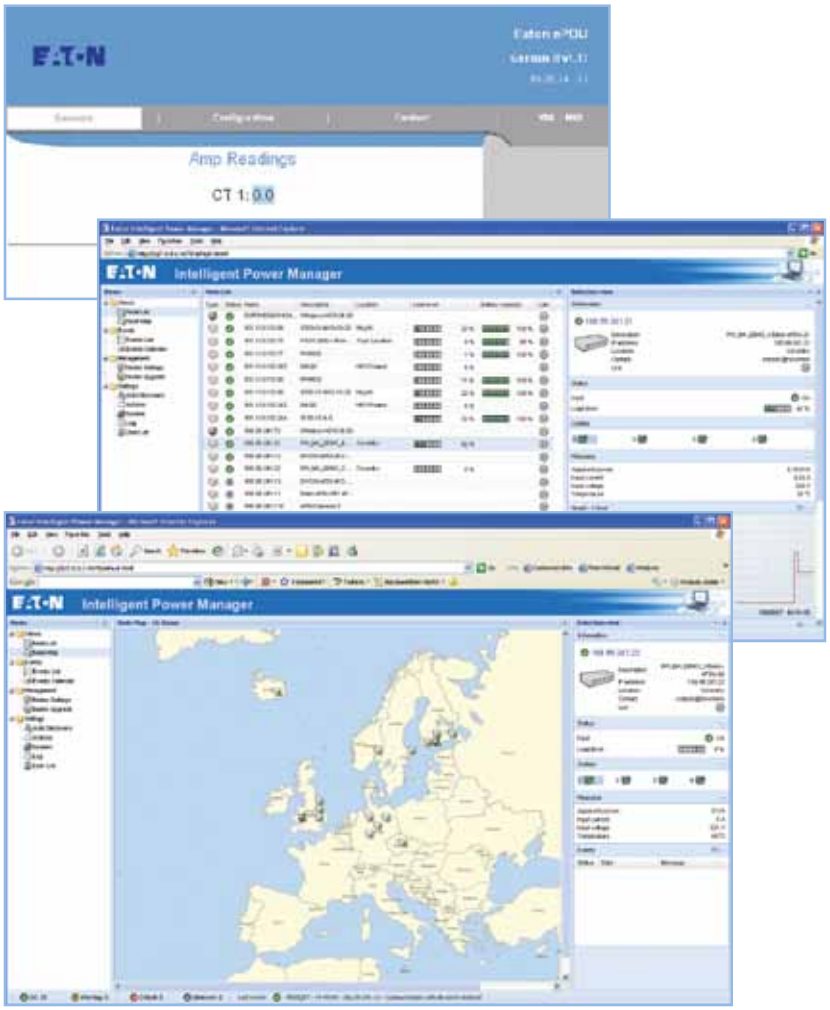
Advanced Monitored ePDUs offer customers the capabilities of the Monitored ePDUs but with each outlet individually remotely monitored over an Ethernet connection. Advanced monitored ePDUs also include an easy-read digital ammeter for local provisioning and load balancing of servers.

- Monitor current draw over an Ethernet connection
- Easy-read digital ammeter with up to 8 circuits
- Accurate load balancing
- True RMS ammeter provides accurate measurement
- Manual or auto scrolling through circuits

Monitored ePDU

Monitored ePDUs offer customers the ability to remotely monitor the current draw over an Ethernet connection. This allows the user to aggregate the information from thousands of ePDUs in one location. All monitored ePDUs also include an easy-read digital ammeter for local provisioning and load balancing of servers. The multi-channel ammeter allows the monitoring of current on input and each branch circuit to ensure accurate load balancing. The ammeter can manually or automatically scroll through circuits. Eaton Monitored ePDU's offer a reliable, scalable solution for your present and future requirements.

- Monitor current draw over an Ethernet connection
- Easy-read digital ammeter
- Accurate load balancing
- True RMS ammeter provides accurate measurement
- Manual or auto scrolling through circuits



In-Line Monitored ePDU

The In-line Monitored ePDU is a retrofit ePDU to upgrade existing PDUs without power metering, and for installation while live without downtime.

Designed for new or retrofit applications, our in-line monitoring units provide accurate single and dual fed local and remote monitoring solutions. The In-line Monitored ePDUs are available with Ethernet connectivity, as well as the easy-read digital ammeter for local monitoring.

- Adds power distribution monitoring to existing or legacy data centres
- Available in 16A & 32A, single & dual circuits
- 19" horizontal mounting or 0U vertical mounting
- Single or Dual fed – allows A and B feeds to be monitored
- Simple to add to A and B feeds without any downtime
- Fuse-less and breaker-less design: no inline break

Metered ePDU

Custom-made metered ePDUs offer an easy-read digital ammeter for easy start-up and provisioning of servers. The display is large and bright and can be viewed from afar and through perforations in the cabinets. The ePDU assures easy management and monitoring for current requirements and future expansion.

- Local ammeter display enables load balancing and load segmentation
- Easy-read digital ammeter
- True RMS ammeter provides accurate power measurement

Example 2U configurations

High Density and dual input configurations available

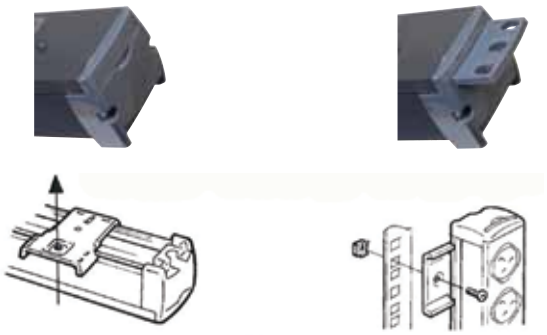
Appropriate Breaker protection, or individually fused sockets available

Basic ePDU

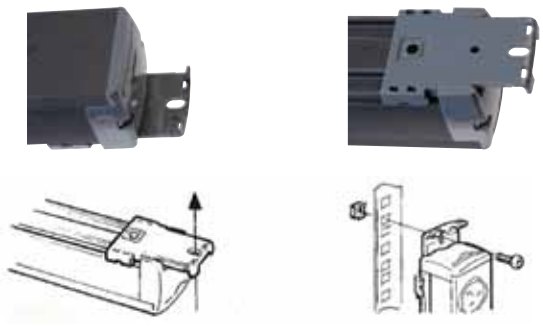
Designed for reliable and cost effective power distribution, Basic ePDUs have the form factor and outlet choices to meet your needs. All ePDUs, including basic ePDUs, are made of rugged aluminium or steel chassis and incorporate fully shrouded circuit breakers and switches.

- Rugged construction
- Data centre grade components
- Multiple mounting options
- Shrouded circuit breakers and switches
- High-density units available to support blade servers and network switches

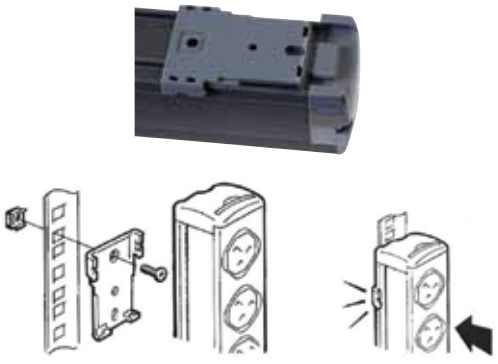
Multiple Mounting Options*



Side Mounting



End Mounting



Blind Mounting

*Mounting option may vary depending on unit type and technology

Supervise your ePDU power distribution with Intelligent Power Manager

Intelligent Power® Manager, is a new power monitoring software product from Eaton. It supports Eaton Monitored and Managed ePDU products as well as UPS, so customers can monitor and manage their power distribution via one interface and one IP address.

Benefits:

- Monitor and manage multiple ePDUs and UPS systems over an IP network using a standard web browser
- IPM provides details of ePDU parameters, measurements and settings, from any point in the network, simply using the IP address of each ePDU
- Drill down to individual devices
- User-definable alarms including E-mail and SMS alerts through a single point
- Supervision and management of a whole system though a single user interface
- Configurable views
- Automatic discovery of devices
- Free of charge for up to 10 devices (ePDU or UPS)

Intelligent Power Manager Features and Benefits

Key Feature	Benefit
Browser Based	IE 6 and 7; Firefox 2 and 3; Safari. The system can be installed locally, or on a main server and browsed to.
Auto Discovery	Fast installation - automatically detect devices on your network.
Security	Application has multiple password protected access levels and support for secure communications.
Remote access	Interface is web-based which enables remote monitoring and access to systems.
User definable tree structure	Simplifies management of multiple devices over multiple locations through grouping.
User definable graphics view	Helps in visualising physical locations of devices on maps or schematic drawings.
Aggregation of device alarms	Single interface to view all alerts. Minimise response time, reduce time to repair, maximise uptime. Alerts via mobile phones & e-mail.
Aggregated device views	Grouping of multiple 'like' devices simplifies management. Single interface accessible from anywhere on the network through a web browser.
Device firmware management	Reduce set-up and maintenance time of Network Management Cards by mass-configuring parameters and mass-upgrading firmware (not currently functional with ePDU).
Shutdown agent management	Enables safe shutdown of servers.
Automatic updates	Keeps the software at the latest version level.
Support for many device types	UPS and ePDU with network interface devices are visible and their individual web interfaces accessible for editing / configuration from a single view.
Customisable views	Lets users select the most relevant data for fast viewing and sorting on the interface.

TECHNICAL SPECIFICATIONS

Technology	Part number	Form	Rating (A)	Input Type	Outlet type: Qty	Breakers	Dimensions (HxWxD, mm)	Weight (kg)
Managed IEC								
	PW102MA0UC60	0U	10	C14	C13, 16		57x1525x52	10
	PW104MA0UC34	0U	16	IEC309 16A	C13, 16: C19, 4		57x1676x52	10
	PW104MA0UC61	0U	16	C20	C13, 16: C19, 4		57x1676x75	10
	PW107MA0UB61	0U	32	IEC309 32A	C13, 16: C19, 4	2 single pole	57x1837x75	10
	PW104MA1UB44	1U	16	IEC309 16A	C13, 8		45x482x190	5
	PW107MA2UC93	2U	32	IEC309 32A	C13, 16	2 single pole	89x440x267	5,5
Advanced Monitored IEC								
	PW322MI0UC58	0U	32 3P	IEC309 32A 3P	C19, 6	6 Single pole	57x1475x116	10
	PW104AM1UC59	1U	16	IEC309 16A	C13, 8		45x482x150	5
IP Monitored IEC								
	PW102MI0UB95	0U	10	C14	C13, 16		57x838x52	7
	PW104MI0UB96	0U	16	IEC309 16A	C13, 20: C19, 4		57x1097x52	7
	PW104MI0UB97	0U	16	C20	C13, 20: C19, 4		57x1097x52	7
	PW107MI0UB88	0U	32	IEC309 32A	C13, 20: C19, 4	2 single pole	57x1429x91	7
	PW312MI0UC07	0U	16 3Ph	IEC309 16A 3P	C13, 36: C19, 6		57x1682x52	10
Inline Monitored IEC								
	PW104IM0UC05	0U 19"	16	IEC309 16A	IEC309 16A	None	57x436x52	6,5
	PW107IM0UC04	0U 19"	32	IEC309 32A	IEC309 32A	None	57x436x52	6,5
	PW322IM0UC17	0U 19"	32 3P	IEC309 32A 3P	IEC309 32A 3P	None	57x436x75	6,5
	PW107IM0UB81	0U 19"	2x16	2x IEC309 16A	2x IEC309 16A	None	57x436x75	6,5
	PW344IM0UC18	0U 19"	2x32	2x IEC309 32A	2x IEC309 32A	None	57x573x75	6,5
Basic IEC								
	ePBZ03	0U	16	C20	C13, 16		48x635x60	1,5
	ePBZ05	0U	10	C14	C13, 16		48x635x60	1,4
	ePBZ32	0U	16	IEC309 16A	C13, 20: C19, 4		45x768x50	1,7
	ePBZ33	0U	16	C20	C13, 20: C19, 4		45x768x50	1,6
	ePBZ31	0U	32	IEC309 32A	C13, 20: C19, 4	2 single pole	45x921x50	2,7
	PW312BA0UC07	0U	16 3Ph	IEC309 16A 3P	C13, 36: C19, 6		57x1400x52	10
	PW322BA0UC56	0U	32 3Ph	IEC309 32A 3P	C13, 3: C19, 6	6 single pole	57x1200x116	10
	PW322BA0UC57	0U	32 3Ph	IEC309 32A 3P	C19, 6	6 single pole	57x1135x116	10
	ePBZ06	1U	16	C20	C13,10: C19,2		43x439x59	1,6
	ePBZ04	1U	16	C20	C13,12		43x439x59	1,6
	ePBZ01	0U	10	C14	C13, 8		43x439x59	1,4
	ePBZ02	0U	10	C14	C13, 12		43x439x59	1,4

Schuko socket

Technology	Part number	Form	Rating (A)	Input Type	Outlet type: Qty	Breakers	Dimensions (HxWxD, mm)	Weight (kg)
Basic Schuko	ePBZ25	0U, 19"	16	Schuko	schuko, 4		45x444x50	1,4
Basic Schuko	ePBZ26	0U, 19"	16	Schuko	schuko, 8		45x444x50	1,5
Basic Schuko	ePBZ27	0U	16	Schuko	schuko, 12		45x667x50	2
Monitored Schuko	PW104MI0UC72	0U	16	Schuko	schuko, 16		57x1328x52	8
Monitored Schuko	PW102MI0UC73	0U	10	C14	schuko, 16		57x1328x52	8
Monitored Schuko	PW104MI0UC74	0U	16	C20	schuko, 20: C19, 4		57x1850x52	8
Monitored Schuko	PW107MI0UC75	0U	32	IEC309 32A	schuko, 20: C19, 4	2 single pole	57x1860x116	10
Monitored Schuko	PW104MI0UC76	0U	16	IEC309 16A	schuko, 20: C19, 4		57x1850x52	8
Managed Schuko	PW104MA0UC77	0U	16	Schuko	schuko, 16		57x1425x75	10
Managed Schuko	PW102MA0UC78	0U	10	C14	schuko, 16		57x1425x75	10
Managed Schuko	PW104MA0UC79	0U	16	C20	schuko, 16: C19, 4		57x1695x75	10
Managed Schuko	PW107MA0UC80	0U	32	IEC309 32A	schuko, 16: C19, 4	2 single pole	57x1840x116	10
Managed Schuko	PW104MA0UC81	0U	16	IEC309 16A	schuko, 16: C19, 4		57x1695x75	10

TECHNICAL SPECIFICATIONS

French socket

Technology	Part number	Form	Rating (A)	Input Type	Outlet type: Qty	Breakers	Dimensions (HxWxD, mm)	Weight (kg)
Basic French	ePBZ28	0U, 19"	16	FR	FR, 4		45x444x50	1,4
Basic French	ePBZ29	0U, 19"	16	FR	FR, 8		45x444x50	1,5
Basic French	ePBZ30	0U	16	FR	FR, 12		45x667x50	2
Monitored French	PW104MI0UC82	0U	16	FR	FR, 16		57x1328x52	8
Monitored French	PW102MI0UC83	0U	10	C14	FR, 16		57x1328x52	8
Monitored French	PW104MI0UC84	0U	16	C20	FR, 20: C19, 4		57x1850x52	8
Monitored French	PW107MI0UC85	0U	32	IEC309 32A	FR, 20: C19, 4	2 single pole	57x1860x116	10
Monitored French	PW104MI0UC86	0U	16	IEC309 16A	FR, 20: C19, 4		57x1850x52	8
Managed French	PW104MA0UC87	0U	16	FR	FR, 16		57x1425x75	10
Managed French	PW102MA0UC88	0U	10	C14	FR, 16		57x1425x75	10
Managed French	PW104MA0UC89	0U	16	C20	FR, 16: C19, 4		57x1695x75	10
Managed French	PW107MA0UC90	0U	32	IEC309 32A	FR, 16: C19, 4	2 single pole	57x1840x116	10
Managed French	PW104MA0UC91	0U	16	IEC309 16A	FR, 16: C19, 4		57x1695x57	10

UK socket

Technology	Part number	Form	Rating (A)	Input Type	Outlet type: Qty	Breakers	Dimensions (HxWxD, mm)	Weight (kg)
Basic UK	ePBZ20	0U, 19"	13	UK	UK, 4		55x444x47	1,4
Basic UK	ePBZ21	0U, 19"	13	UK	UK, 6		55x444x47	1,5
Basic UK	ePBZ22	0U	13	UK	UK, 8		55x591x47	1,9
Basic UK	ePBZ23	0U	13	UK	UK, 10		55x718x47	2
Basic UK	ePBZ24	0U	13	UK	UK, 12		55x845x47	2,2
Monitored UK	PW103MI0UC62	0U	13	UK	UK, 16		57x1328x52	8
Monitored UK	PW102MI0UC63	0U	10	C14	UK, 16		57x1328x52	8
Monitored UK	PW104MI0UC64	0U	16	C20	UK, 20: C19, 4		57x1850x52	8
Monitored UK	PW107MI0UC65	0U	32	IEC309 32A	UK, 20: C19, 4	2 single pole	57x1860x116	10
Monitored UK	PW104MI0UC66	0U	16	IEC309 16A	UK, 20: C19, 4		57x1850x52	8
Managed UK	PW103MA0UC67	0U	13	UK	UK, 16		57x1425x75	10
Managed UK	PW102MA0UC68	0U	10	C14	UK, 16		57x1425x75	10
Managed UK	PW104MA0UC69	0U	16	C20	UK, 16: C19, 4		57x1695x75	10
Managed UK	PW107MA0UC70	0U	32	IEC309 32A	UK, 16: C19, 4	2 single pole	57x1840x116	10
Managed UK	PW104MA0UC71	0U	16	IEC309 16A	UK, 16: C19, 4		57x1695x75	10

Not on the list? If you require something different, please contact your local Eaton sales office for a custom quote – we have thousands of ePDU designs already engineered and ready for production.

For assistance with your power quality needs, contact your local Eaton service and sales representatives.

www.eaton.com/powerquality
www.ePDU.com

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