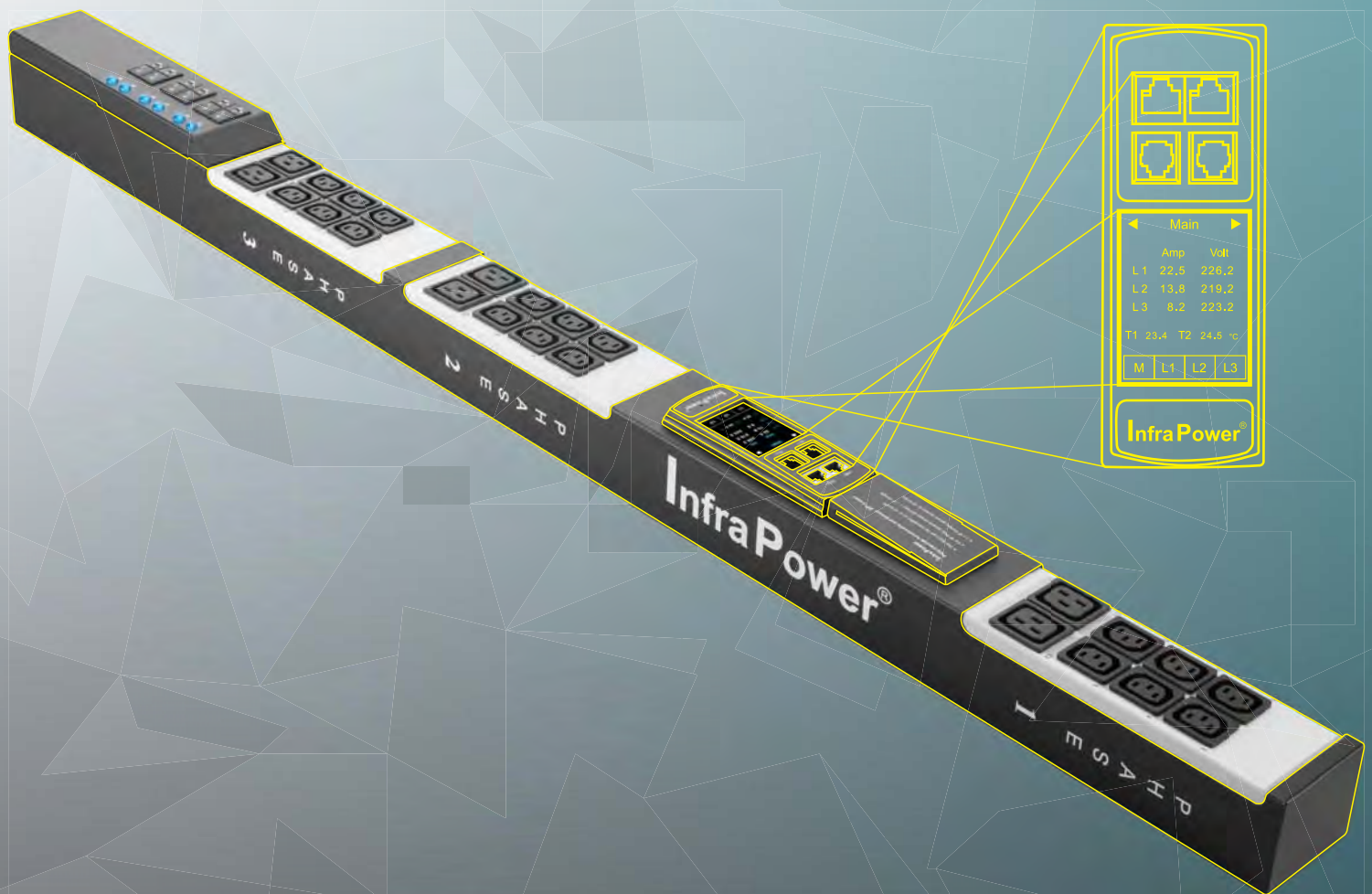


Intelligent W Series : 3 - Phase 400V



InfraPower® Inspired by Your Data Center

AUSTIN
HUGHES

Three Phase for Rising Power Usage

High power density has been implemented in applications such as high-end network switches, storage systems and supercomputing. The expansion of centralized computing causes the rack power density to steadily rise in these years. As a result, the demand of Three Phase PDUs with higher power ratings is increasing in data center field.

Infrastructure Power Management

With today's increasing demand for high technology power management solutions, PDU kWh measurement and the associated software allows data center managers to make key decisions regarding the most efficient use of power.

The ability to maximize power efficiency to reduce cost is high up on the corporate agenda. For 24x7 operation a small increase in efficiency can result in major savings in operating cost.

W series PDUs provide the kWh measurement for effective planning of power capacity. Models with outlet level kWh measurement are also available.

Uptime and Productivity Improvements

Uptime and productivity improvements are achieved through remote management.

W series PDUs support daisy chain connections allowing up to 16 PDUs to be cascaded via Cat6 cables. All the PDUs are remotely accessed via only 1 network IP address.

The free management software provides easy-to-learn tools for the remote management of up to 800 PDUs anywhere around the world. Ultimately, this can help to reduce manpower and travel costs by negating the need for staff to actually be at the equipment location.

3-Phase PDU Family	Monitored		Switched	
	W	Wi	WS	WSi
Outlet AMP - kWh Measurement		✓		✓
Outlet Switch ON / OFF			✓	✓
Hot-Swap Meter	✓	✓	✓	✓
2.8" Color LCD w/ touchscreen	✓	✓	✓	✓
Circuit / Phase Amp - kWh Measurement	✓	✓	✓	✓
Phase Balance %	✓	✓	✓	✓
Temp-Humid Sensor port x 2	✓	✓	✓	✓
16 PDU Levels in Single Daisy Chain	✓	✓	✓	✓
One IP Access up to 16 PDU Levels	✓	✓	✓	✓
SNMP Capability v2 / v3	✓	✓	✓	✓
Free Management Software	✓	✓	✓	✓
Lockable IEC Outlet Model	✓	✓	✓	✓
Individually Fused Outlet Model	✓	✓	✓	✓
63A Model	✓			
Local Meter	✓	✓	✓	✓
Tool-less Mounting for Vertical PDU	✓	✓	✓	✓
0U / 2U Form Factors	✓	✓	✓	✓
Hydraulic Magnetic Circuit Breaker	✓	✓	✓	✓
Voltage 400V - Amp 16A / 32A	✓	✓	✓	✓
Operating Temperature Range -5°C to 60°C	✓	✓	✓	✓
Outlet Types : IEC C13	✓	✓	✓	✓
IEC C19	✓	✓	✓	✓
IEC C13 + C19	✓	✓	✓	✓
IEC Lockable	✓	✓	✓	✓
IEC Individually Fused	✓	✓	✓	✓
UK / UK + IEC	✓	✓	✓	✓
SCH / SCH + IEC	✓	✓	✓	✓



REACH

Lockable IEC Outlet PDU

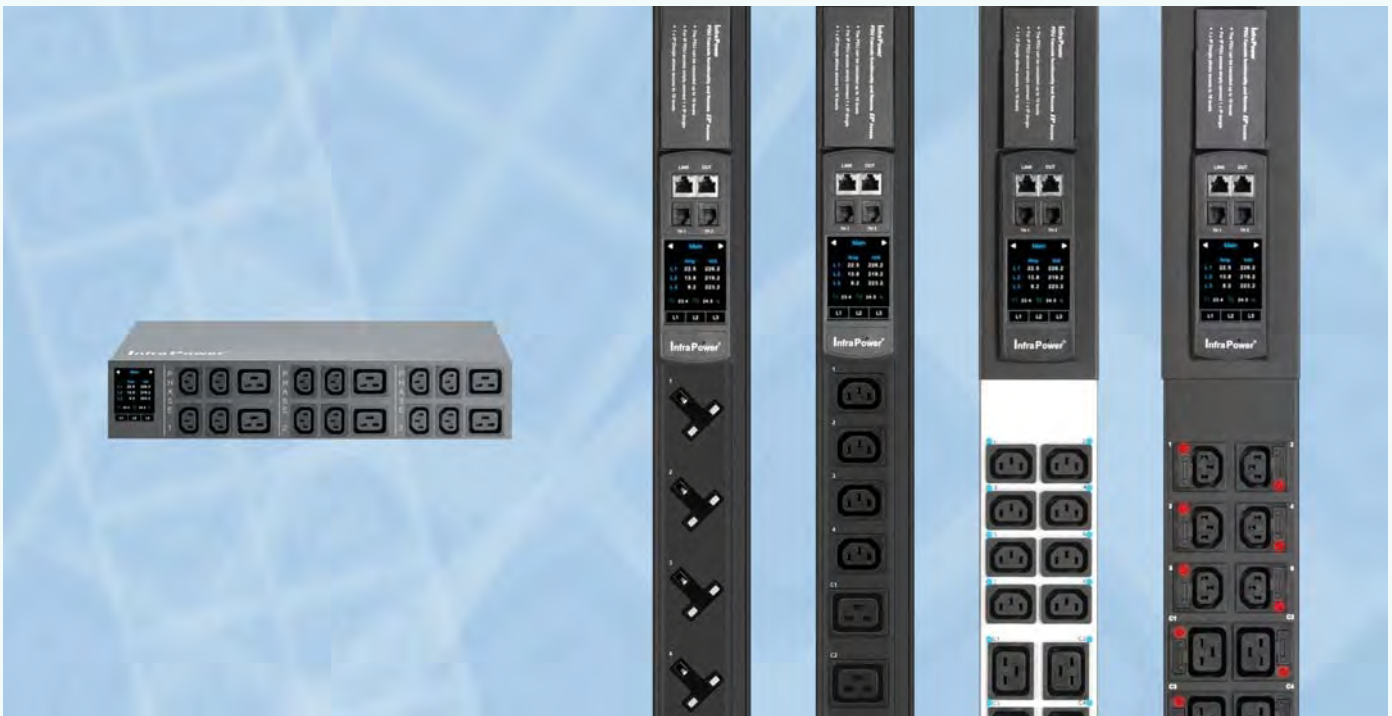


Lockable IEC Outlet PDU models are available to secure plugs and prevent accidental disconnection. It is compatible to generic IEC cords and hence cost saving in locking cables.

Fused IEC Outlet PDU



W Series PDUs are available with the option of individually fused outlets, to help prevent an overload of the active equipment and avoiding short circuiting the entire IEC outlet PDU.



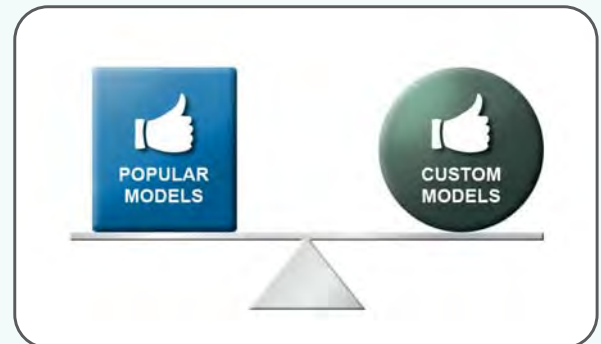
Variety of Electrical Configurations



Except for 16A / 32A, sometimes a tremendous amount of computing power is required for equipment mounted in a single rack. Some 63A* basic PDUs are designed for such high power usage requirements.

* only available for W Monitored models

Broadest Portfolio of Intelligent PDUs



In addition to supplying cost-effective standard PDU models with a great delivery schedule, competitive custom PDU configurations for specific user requirements are also available on short lead-times.

Field Replaceable Meter & Power Module



Mission critical data centers cannot allow shutdowns for equipment replacement and maintenance, therefore the W meter and power module are field replaceable units that are hot swappable without the need to power down the PDU.

High Metering Accuracy



The sharp and highly visible display of the 2.8" colour LCD with touch screen functionality provides local data of current (AMP), voltage (Volt), power (KW), energy consumption (KWh), power factor of entire PDU. This data has a metering accuracy to within +/- 1%.



External Sensors / Display Connections



Temperature sensors or temperature and humidity sensors are low profile design with magnetic based for easy installation to rack. External door mount PDU Display shows PDU amps & temperature (without needing access to the server rack).

Colored PDU Outlets & Colored Chassis



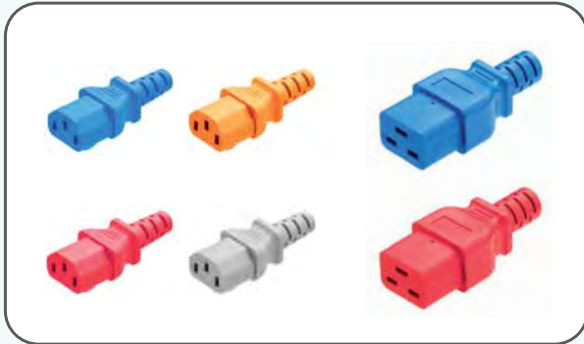
Colored PDU outlets or casings allow easy identification of power paths and simplify manageability of main and redundant power sources.

C13 / C19 outlet : Red, Blue & Grey

PDU casing : Red, Blue & Black

* Colored outlets for W or Wi series only

Colored Power Cords



Enhance cable management and visualize power sources

C13 - C14 6ft (1.0 mm²)

EC-6PC1314-B **Blue**

EC-6PC1314-R **Red**

EC-6PC1314-O **Orange**

EC-6PC1314-G **Light Grey**

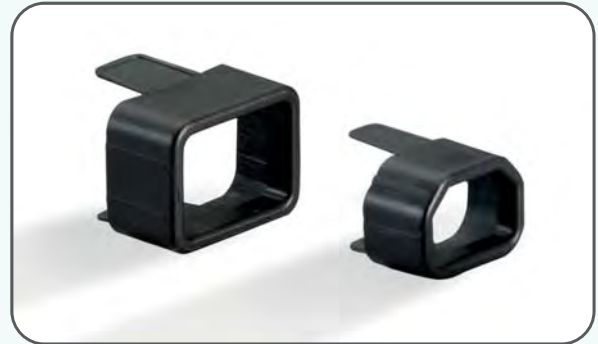
* C13 - C14 10ft (1.0 mm²) available

C19 - C20 6ft (1.5 mm²)

EC-6PC1920-B **Blue**

EC-6PC1920-R **Red**

IEC Secure Sleeves



IEC Sleeves secure the power cord connections to the PDU IEC outlets in a simple and cost efficient way.

Sleeve attached to C14 power cord inlet :

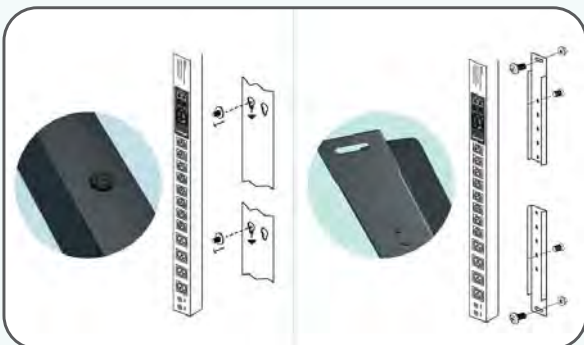
IPP-SS-C13 (pack of 200)

Sleeve attached to C20 power cord inlet :

IPP-SS-C19 (pack of 100)

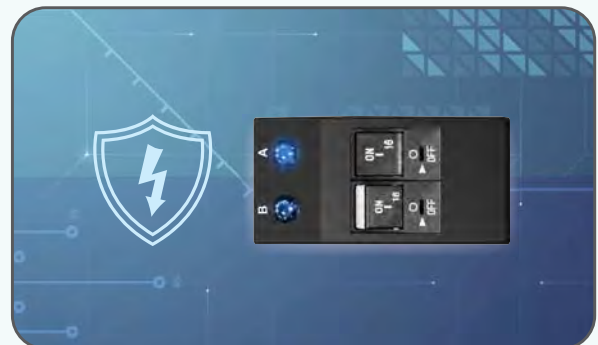


PDU Mounting Options



InfraPower PDUs are supplied with 2 types of mounting kits; Vertical Button Mounting Kit & Vertical Bracket Mounting Kit. The tool-less kits can be used on the majority of global branded racks.

Hydraulic Magnetic Circuit Breaker



MCB is essential for safety operation. Our MCB is a kind of hydraulic magnetic circuit breaker which is bundled by the InfraPower 3-Phase PDU models.

W Meter - Advanced & Sophisticated

All **W series** PDU are supplied with a W meter that allows local metering, the ports for PDU daisy chain as well as external sensor / peripheral connection.

- Single & Three Phase PDUs can be inter-cascaded in a single daisy chain.
- Simply connect 1 x IP Dongle to access up to 16 PDUs to save IP address.
- Built-in buzzer will sound when circuit or bank Amp over alarm setting.
- Field replaceable design allows meter replacement without PDU power interruption.



Cascade port

- Up to 16 PDU Levels

Sensor port x 2

- Temp. Sensor
- Temp. + Humid. Sensor
- External PDU display

2.8" color LCD

- Featured w/ Touchscreen

PDU Monitoring & Setup by Touchscreen

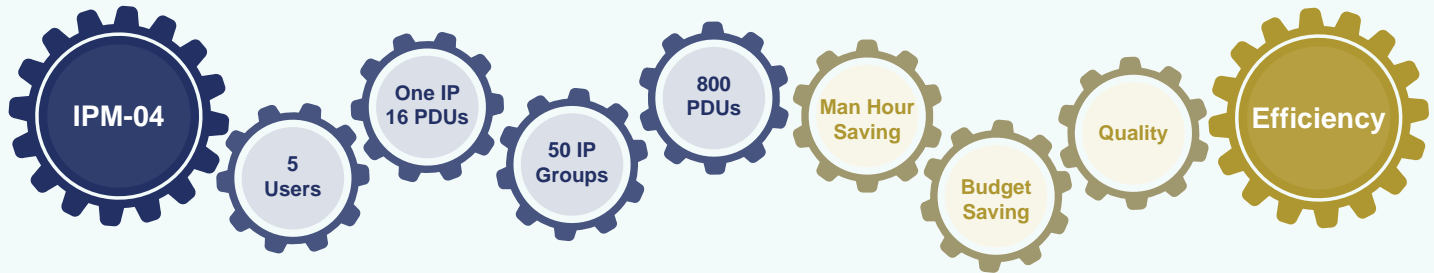
PDU Metering <ul style="list-style-type: none"> • Amp per Phase / Bank 				
PDU Metering <ul style="list-style-type: none"> • kWh / kW / KVA / Power Factor • Volt • Outlet Amp / kWh • Temperature & Humidity • PDU ID & System info 				
Phase 1 (L1) <ul style="list-style-type: none"> • Amp / Volt • kWh / kW / KVA / Power Factor • Amp for Bank 1 & 2 (32A PDU) • Amp for Bank 1 (16A PDU) 				
Phase 2 (L2) <ul style="list-style-type: none"> • Amp / Volt • kWh / kW / KVA / Power Factor • Amp for Bank 3 & 4 (32A PDU) • Amp for Bank 2 (16A PDU) 				
Phase 3 (L3) <ul style="list-style-type: none"> • Amp / Volt • kWh / kW / KVA / Power Factor • Amp for Bank 5 & 6 (32A PDU) • Amp for Bank 3 (16A PDU) 				
Local PDU Setting <ul style="list-style-type: none"> • PDU Level • Meter buzzer • Meter screen • PDU Outlet ON 				

IPM-04 - Free but Powerful

InfraPower Manager IPM-04 is the free, powerful and user friendly PDU management software provided with W Series PDUs.

The Administrator can remotely manage the PDUs and the temperature / humidity sensors via the web browser. The Windows based software consolidates management of max. 800 single & three phase PDUs via 50 IP dongles. 5 concurrent user access licences are part of the IPM-04 bundle, for achieving the demand of multi-user requirements in data center operations.

IPM-04 provides complete PDU monitoring / control and reporting functions for your data center.



Features		
Capacity	IP Dongle Group (Just 1 for 16 PDU levels)	50
	PDU Number	800
	Concurrent Users	5
Enhanced Features	Outlet Level kWh & Amp Measurement	✓
	Outlet Scheduling	✓
	Energy Consumption (kWh) Monitoring	✓
	Apparent Power (kVA) Monitoring	✓
	Power Factor Measurement	✓
	Circuit Breaker (MCB) Monitoring	✓
Basic Features	Aggregate Current (Amp) Monitoring	✓
	Individual Outlet Switch ON / OFF	✓
	Temp-Humid Monitoring	✓
	Alarm Threshold Setting	✓
	Rising Alert Threshold	✓
	Remote Access via Web	✓
	Graphic User Interface	✓
	Reporting	✓
PDU Series Support	Single & 3 Phase W - Monitored PDU	✓
	Single & 3 Phase WI - Monitored PDU (Outlet Measurement)	✓
	Single & 3 Phase WS - Switched PDU	✓
	Single & 3 Phase WSI - Switched PDU (Outlet Measurement)	✓

PDU Monitoring

1.1 - 011	Voltage: 231.8	Alarm level: 13.2
Phase amp: 8.1	Phase amp: 8.1	Phase amp: 8.1
Power: 0.04	Power: 0.04	Power: 0.04
1.2 - 012	Voltage: 237.4	Alarm level: 13.2
Phase amp: 6.2	Phase amp: 6.2	Phase amp: 6.2
Power: 0.04	Power: 0.04	Power: 0.04
1.3 - 013	Voltage: 234.0	Alarm level: 13.2
Phase amp: 6.3	Phase amp: 6.3	Phase amp: 6.3
Power: 0.02	Power: 0.02	Power: 0.02

Temp. & Humid. Monitoring

Time	Temp	Humid	Temp	Humid	Temp	Humid
2019/02/18 13:00:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:01:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:02:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:03:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:04:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:05:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:06:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:07:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:08:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:09:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:10:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:11:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:12:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:13:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:14:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:15:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:16:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:17:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:18:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:19:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:20:00	23.1	60.0	23.1	60.0	23.1	60.0

Reporting

Time	Temp	Humid	Temp	Humid	Temp	Humid
2019/02/18 13:00:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:01:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:02:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:03:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:04:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:05:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:06:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:07:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:08:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:09:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:10:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:11:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:12:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:13:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:14:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:15:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:16:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:17:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:18:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:19:00	23.1	60.0	23.1	60.0	23.1	60.0
2019/02/18 13:20:00	23.1	60.0	23.1	60.0	23.1	60.0

IP Dongle & Daisy Chain

Patented IP Dongle provides IP remote access to the PDUs by a true network IP address chain. Only 1 x IP dongle allows access to max. 16 PDUs in a single daisy chain.



Highly Efficient Application for Your PDU Management

- Patented design
- Hot pluggable for easy integration
- Allows IP remote access to the PDUs by a single network IP
- One IP dongle supports max. 16 PDUs in daisy chain
- Highly cost effective method to access the intelligent PDUs
- SNMP capability v2 / v3

IPD-02-S



Manage Your PDUs by :



Free Download



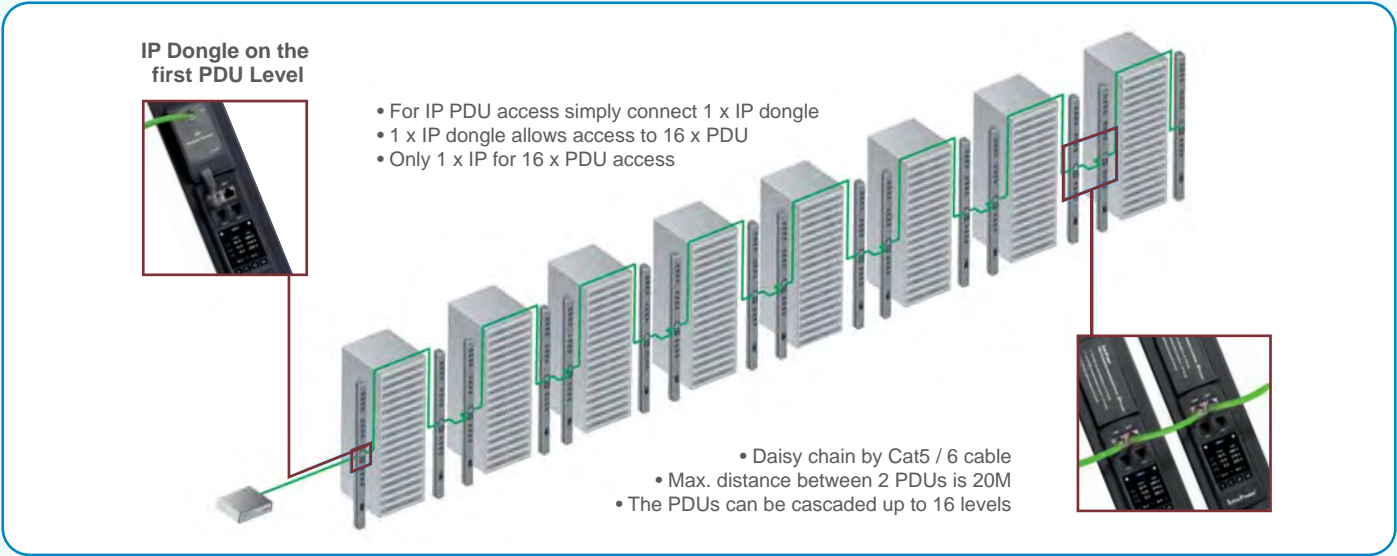
via SNMP

PDU Remote Access via Network IP
from Anywhere Around the World



High Density PDU Remote Management

W Series combines highly efficient hardware connection with software remote management for Ultra High Density PDU Remote Management.



Save the IP Address Cost of Your Data Center

Free IPM-04 :
50 x IP Group
800 x PDU
5 x Concurrent User

3rd Party DCIM (via SNMP) :
Cost-efficient PDU management
can be achieved by applying
IP dongle & daisy chain



16A / 32A

1 inch = 25.4 mm

				Length
C13	C19	UK	SCH	mm
48				1775
42				1775
36				1550
30				1550
24				1650 *
18				1650 *
12				1200 *
	24			1550
	18			1650 *
	12			1425 *
36	12			1775
36	6			1775
30	12			1775
30	6			1550
24	12			1550
24	6			1550
18	12			1550
21	3			1325
18	6			1325
12	12			1800 *
12	6			1650 *
		12		1650 *
			18	1650 *
			12	1425 *

* aluminum extrusion

Lockable		Length
C13	C19	mm
48		1925
42		1925
36		1700
30		1700
24		1900 *
18		1650 *
12		1425 *
	24	1900 *
	18	1650 *
	12	1200 *
36	12	1925
36	6	1925
30	12	1925
30	6	1700
24	12	1700
24	6	1700
18	12	1700
18	6	1900 *
21	3	1900 *
12	12	1900 *
12	6	1650 *

Individual Fused		Length
C13	C19	mm
48		1925
42		1925
36		1700
30		1700
24		1900 *
18		1650 *
12		1200 *
	24	1900 *
	18	1650 *
	12	1425 *
36	12	1925
36	6	1925
30	12	1925
30	6	1700
24	12	1700
24	6	1700
18	12	1700
18	6	1900 *
21	3	1900 *
12	12	1900 *
12	6	1650 *

63A

		Length
C13	C19	mm
48		1775
42		1775
36		1550
30		1550
	24	1550
36	12	1775
36	6	1775
30	12	1775
30	6	1775
24	12	1550
24	6	1550
18	12	1550

16A / 32A

1 inch = 25.4 mm

		Length
C13	C19	mm
48		1925
42		1925
36		1700
30		1700
24		1325
18		1325
	24	1700
	18	1325
	12	1325
	9	1325
	6	1325
36	12	1925
36	6	1925
30	12	1925
30	6	1700
24	12	1700
24	6	1700
18	12	1700
18	6	1325
21	3	1325
12	12	1325
12	6	1325

Lockable		Length
C13	C19	mm
48		1925
42		1925
36		1700
30		1700
24		1475
18		1475
	24	1475
	18	1475
	12	1475
36	12	1925
36	6	1925
30	12	1925
30	6	1700
24	12	1700
24	6	1700
18	12	1700
18	6	1475
21	3	1475
12	12	1475
12	6	1475


Individual Fused		Length
C13	C19	mm
48		1925
42		1925
36		1700
30		1700
24		1475
18		1475
	24	1700
	18	1700
	12	1700
36	12	1925
36	6	1925
30	12	1925
30	6	1700
24	12	1700
24	6	1700
18	12	1700
18	6	1475
21	3	1475
12	12	1700
12	6	1475


16A / 32A






		Height
C13	C19	U
24		2U
18		2U
	12	2U
12	6	2U



Austin Hughes has designed a simple but informative InfraPower product code builder in order to let our clients determine the desired PDU configuration to meet their needs.




Code Structure




 P  C13 -  -  /  _  /   -   



 P  C19 -  -  /  _  /   -   



 P  C13 /  C19 -  -  /  _  /   -   




VP  C13 -  -  / GF /  _  /   -   


VP  C19 -  -  / GF /  _  /   -   


VP  C13 /  C19 -  -  / GF /  _  /   -   










VP  C13 -  -  /  _  /   -    / LOCK

VP  C19 -  -  /  _  /   -    / LOCK

VP  C13 /  C19 -  -  /  _  /   -    / LOCK

VP  UK -  -  /  _  /   -   

VP  SCH -  -  /  _  /   -   

Digit	Indication	Examples
	- Form Factor	V = Vertical H = Horizontal (2U IEC only)
	- Outlet nos	IEC : C13 / C19 / C13 + C19 EURO : UK / SCH
	- Amp	16A / 32A / 63A
	- Series	W = Monitored Wi = Monitored + Outlet Measurement WS = Switched WSi = Switched + Outlet Measurement
	- Circuit Protection	CR = Hydraulic Magnetic Circuit Breaker (MCB) F = Resettable Fuse
	- Inlet	16A / 32A / 63A : EN = EN60309
	- Cordset	2 = 2M / 6.56' * Custom length on request
	- Bottom feed or top feed (only for vertical PDU)	B = Bottom feed T = Top feed
	- Colored PDU casing (only for vertical PDU)	1 = Black 2 = White 3 = Red 4 = Blue
GF	- Individually Fused	IEC outlets & vertical PDU only
LOCK	- Lockable	IEC outlets & vertical PDU only

16A Inlet



IEC 60309
6hr Red
(3P+N+E)

32A Inlet



IEC 60309
6hr Red
(3P+N+E)

63A Inlet



IEC 60309
6hr Red
(3P+N+E)

IP Dongle for Vertical PDU**IPD-02-S**

- Patented design
- Hot pluggable for easy integration
- Allows IP remote access to the PDUs by a single network IP
- One IP dongle supports max. 16 PDUs in daisy chain
- Highly cost effective method to access the intelligent PDUs
- SNMP capability v2 / v3

**Temp. & Humid. Sensor
Temp. Sensor****IG-TH01-2M / 4M
IG-T01-2M / 4M**

- External sensor with 2M or 4M cord
- Plug & Play
- Low profile design with magnetic base for easy affixing to the rack
- Pair of sensors can be connected to one single W series PDU meter

**External PDU Display****IP-ED-02**

- Plug & Play
- Support two PDU displays with amp. and temp.
- Adjustable Mounting Kit for easy installation to rack door
- Bundled 3m RJ-11 cable x 2

**IEC Secure Sleeves****IPP-SS-C13
IPP-SS-C19**

Sleeve attached to C14 power cord inlet :
IPP-SS-C13 (pack of 200)

Sleeve attached to C20 power cord inlet :
IPP-SS-C19 (pack of 100)

- Secure the power cord connections to the PDU IEC outlets
- Simple and cost efficient

**MCB**

- 16A - 1-pole 16A MCB x 3
32A - 1-pole 16A MCB x 6
63A - 1-pole 30A MCB x 6
- Hydraulic magnetic circuit breaker
- Overload switch
- Designed to prevent accidental on / off operation
- Safety Regulatory : UL / cUL / TUV / CE

**Resettable Fuse**

- 16A - 1-pole 16A Fuse x 3
32A - 1-pole 16A Fuse x 6
63A - 1-pole 30A Fuse x 6
- Protect load segments for increased reliability
- Overload reset buttons
- Safety Regulatory : UL / cUL / CSA / TUV / CCC / VDE

**Colored Power Cords**

- Enhance cable management and visualize power sources

C13 - C14 6ft (1.0 mm²)

EC-6PC1314-B **Blue**
 EC-6PC1314-R **Red**
 EC-6PC1314-O **Orange**
 EC-6PC1314-G Light Grey

**C13 - C14 10ft (1.0 mm²)**

EC-10PC1314-B **Blue**
 EC-10PC1314-R **Red**
 EC-10PC1314-O **Orange**
 EC-10PC1314-G Light Grey

C19 - C20 6ft (1.5 mm²)

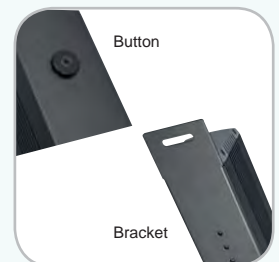
EC-6PC1920-B **Blue**
 EC-6PC1920-R **Red**

**Vertical Button Mounting Kit
Vertical Bracket Mounting Kit****VMS
VMB****VMS :**

- Quick and Tool-less integration simplifies PDU installation
- Designed for particular global branded rack with key hole type mounting holes on rear verticals

VMB :

- Universal mounting kit supports all rack models
- Easy integration by mounting the PDU to the rack cable tray



Founded in 1995, **Austin Hughes Electronics Ltd** is a design and manufacturing group that offers a broad range of solutions based around 19 inch rack mount technology. These solutions include InfraSolution remote access control and locking, InfraPower intelligent remote management power solutions, CyberView LCD Keyboard and KVM drawers & InfraCool intelligent remote cooling system.

Austin Hughes has ISO14001 and ISO9001 approved design, manufacturing, assembly and test facilities in Hong Kong and China. Austin Hughes supports a worldwide customer base, through its global locations in the Americas, EMEA and APAC and through its extensive authorized channel partner support network.

APAC

Austin Hughes Electronics Ltd.

Unit 3608-12, Cable TV Tower
9 Hoi Shing Road, Tsuen Wan
Hong Kong

Email: inquiry@austin-hughes.com

China

Austin Hughes Electronics (China) Ltd.

Hexi Road No.2, Jinxia Industrial Area
Changan Town, Dongguan City
Guangdong Province 523850
China

Americas

Austin Hughes Solutions Inc.

41320 Boyce Road, Fremont
CA 94538
USA

Email: inquiry@austin-hughes.com

EMEA

Austin Hughes Europe Ltd.

Unit 1, Chancery Gate Business Centre
Manor House Avenue
Southampton, SO15 0AE
United Kingdom

Email: info@austin-hughes.eu



Austin Hughes has an extensive distribution network,
including the Americas, EMEA and APAC.
Contact your nearest sales office for details of local representation

www.austin-hughes.com

Please ask for details of other products from Austin Hughes. Every effort has been made to ensure that the information contained herein is correct. There is a possibility that the image(s) shown may not be exactly the same as the final product. The company reserves the right to modify product specifications without prior notice and assumes no responsibility for any error which may appear in this publication.

All brand names, logo and registered trademarks are properties of their respective owners.

Copyright 2018 Austin Hughes Electronics Ltd. All rights reserved.

Distributed by:

Distributor by country on application

InfraPower-W-400V-ThreePhase-Q218V1