

Remote Monitoring & Control



19" Horizontal and Zero U Vertical PDU's with IEC C13, IEC C19, UK BS1363 and European Schuko sockets.

Remote Monitoring options include:

- Aggregate PDU Current (Amps) Monitoring
- Aggregate PDU Power Monitoring (Volts / Amps / Power Factor & KW/hrs*)
- Per Socket Control (On / Off / Timed Delayed / Reboot & Sequential StartUp)
- Per Socket Monitoring (Amps)*
- Environmental sensors (Temperature / Humidity / Airflow)

All Remote Monitoring/Control PDU's include an integrated web browser (HTTP) for remote viewing as well as SNMP for integration into a Building/Network Management tool such as HP Open View / Aperture VISTA / Ipswitch What's Up etc.

A simultaneous XML output is also given for integration into 3rd Party Database/SQL software for automatic logging and data processing.

Automated alarms with thresholds for High/Low values of each monitored component using email and SNMP.

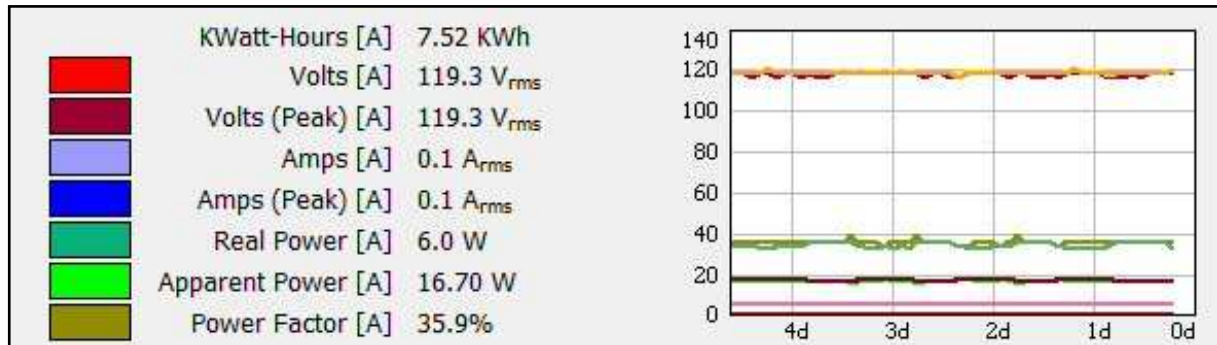
Support of public and private SNMP with Get/Set & Trap commands.

Support for viewing with a PDA and through a WAP enabled device.

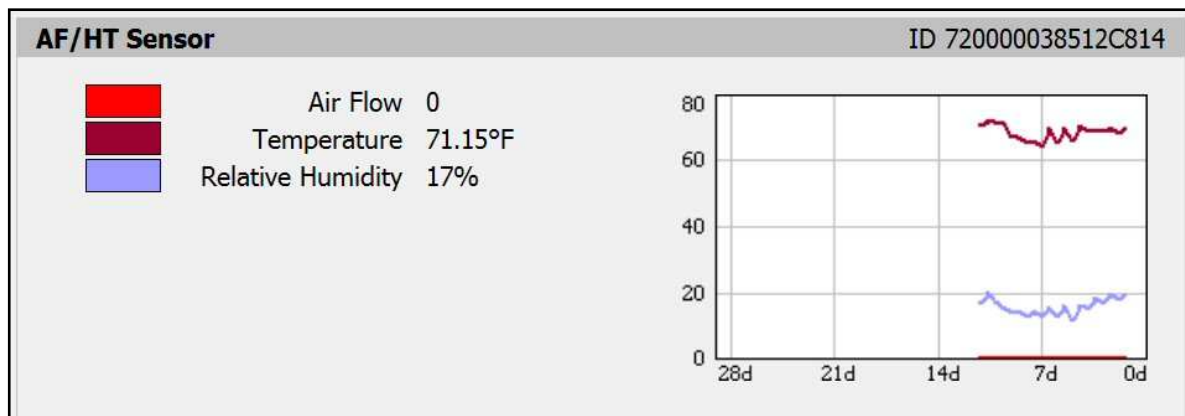
*Certain models only

The Complete Picture:

Remotely monitor and log the every aspect of the PDU. These monitored components can be polled through 3rd party NMS software using SNMP or through a Database with the XML data output and embedded in to charts/graphs (*see Guess Watt*).



Monitor Temperature/Humidity/Airflow as part of a comprehensive automated monitoring system whereby SNMP/Email and optional audible local alarms can be triggered when any value exceeds or drops below your chosen value. *Max 2 x sensors per PDU*



Don't use NMS software or an XML Database?

If automated remote monitoring over SNMP or XML isn't an option, then you can use the simple yet powerful internal log* which also monitors each aspect of the PDU. This log is downloaded via the inbuilt web server in the common .CSV format. This data can then be quickly imported into most standard database programs. (**logging time varies – user configurable – max 32 days*)

date/time	KWahr	Volts	Amps	Real Power	Apparent Power	Power Factor	4KW Sensor
9-Dec-2008 15:16:15	34.05	242	0.7	162.9	171.7	94.9	25.37
9-Dec-2008 15:16:30	34.12	242	0.7	164	171.7	95.5	25.37
9-Dec-2008 15:16:45	34.56	242	0.7	164	174.13	94.2	25.37
9-Dec-2008 15:17:00	34.65	246.7	0.7	164.9	177.53	92.9	25.5
9-Dec-2008 15:17:15	34.78	250.2	0.7	165.9	180.08	92.1	25.37
9-Dec-2008 15:17:30	35.13	245.5	0.7	165.9	176.68	93.9	25.37
9-Dec-2008 15:17:45	35.24	244.3	0.7	165.9	173.37	95.7	25.37
9-Dec-2008 15:18:00	35.35	246.2	0.7	165.9	180.08	92.1	25.37

Warnings & Alarms:

User configurable automated warnings and alarms is built into the Web Browser. Each monitored area of the PDU can be configured with unique High and Low values which when passed will automatically send alarms via Email, SNMP and local Buzzer*.

RCU Monitor					ID 01B3497310000013
Sensor	Current	Low Trip	High Trip	Alarm State	
Volts	243.4 V _{rms}	229	249	Send E-Mail	
Volts (Peak)	250.6 V _{rms}	250	250	Buzzer, E-Mail, Trap	
Amps	0.0 A _{rms}	5	15	Send SNMP Trap	
Amps (Peak)	0.0 A _{rms}	16	16	Send SNMP Trap	
Real Power	0.0 W	0	0	Disabled	
Apparent Power	0.00 W	0	0	Disabled	
Power Factor	100.0%	80	100	Send E-Mail and Trap	

RCU Group Amps					ID 434C497310000013
Sensor	Current	Low Trip	High Trip	Alarm State	
Amps Group-A	0.0 A _{rms}	29	30	Buzzer, E-Mail, Trap	

4KW Heat Bank Sensor					ID 6C000001B8117C28
Sensor	Current	Low Trip	High Trip	Alarm State	
Temperature	25.88°C	-20	50	Buzzer, E-Mail, Trap	

3KW Heat Bank Sensor					ID A4000001B7EAFE28
Sensor	Current	Low Trip	High Trip	Alarm State	
Temperature	26.12°C	-20	50	Buzzer, E-Mail, Trap	

(*through remote display).

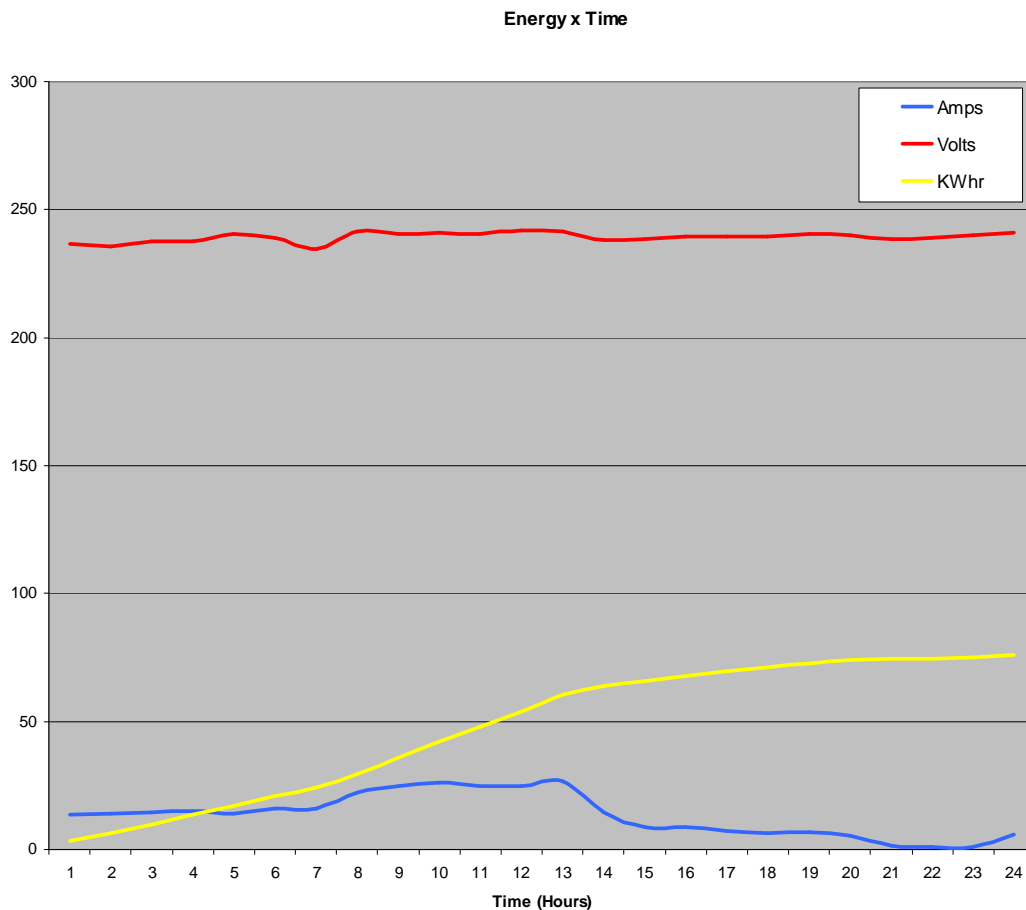
Enhanced Visibility:

You can embed the output of up to 2 x IP Security cameras into the Web browser of your PDU. View your rack as you power on / off your equipment to ensure it is working.



Guess Watt:

Who's picking up the bill? This is a very important question for both owners/operators of Data Centres as well as customers. Working on assumptions is no longer necessary, with an intelligent Remote KWh Power strip / Splitter box, you can know exactly what is being used and when; right at the rack level!



As no additional Hardware or Software is required so it is very quick and easy export the exact data you require from the Power strip / Splitter box using both the SNMP and XML outputs.

The above graph shows how over a 24hr period we can track and chart both the Voltage and Amps being used during this period as well as an accumulated value for KWh's.

For Data Centre owner/operators you can now not only be sure that your customers are not exceeding their Amps/KWh threshold, but enable a new revenue stream through implementing a billing tariff based on exact energy usage rather than by assumed usage.

For customers of Date Centres/Collocation sites, you can now keep track of your own Energy consumption as well as record your Voltage & Amps levels to ensure you are getting the best quality supply of power. You can also monitor & track the Rack environment with the optional sensors.

Socket Control & Sequential Boot:

Controlling your sockets couldn't be easier. Through the inbuilt web server you can configure multiple stages of Control for each socket:

- Configure Boot up sequence following Power loss:

Outlet	Name	Delay (seconds)	Action		
			Off	On	Last
1	Outlet 1	0	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2	Outlet 2	0	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3	Outlet 3	0	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
4	Outlet 4	0	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Program each outlet to respond in a desired way should the undesirable happen and your PDU loses power. This way you can easily prevent surge Currents triggering another loss of power through overloading the distribution board when power is restored.

- Configure a phased start-up/power-down sequence for mutually exclusive equipment:

Outlet	Name	URL	Delay (seconds)		
			Power-On	Power-Off	Reboot
1	Outlet 1		0	0	0
2	Outlet 2		0	0	0
3	Outlet 3		0	0	0
4	Outlet 4		0	0	0
5	Outlet 5		0	0	0
6	Outlet 6		0	0	0

If one piece of your equipment relies upon one or more of another to successfully boot and operate (or visa versa), it is straight forward to add power On / Off delays as well as reboot times to ensure that each piece of equipment starts up successfully in relation to one another.

Here individual outlets can also be re-named to simplify operation.

- Control individual outlets singularly or in groups:

Outlet	Name	Status	URL
<input type="checkbox"/>	1	Outlet 1	On
<input type="checkbox"/>	2	Outlet 2	On
<input type="checkbox"/>	3	Outlet 3	On
<input type="checkbox"/>	4	Outlet 4	On
<input type="checkbox"/>	5	Outlet 5	On
<input type="checkbox"/>	6	Outlet 6	On
<input type="checkbox"/>	7	Outlet 7	Off
<input type="checkbox"/>	8	Outlet 8	On
<input type="checkbox"/>	9	Outlet 9	On
<input type="checkbox"/>	10	Outlet 10	On
<input type="checkbox"/>	11	Outlet 11	On

Sockets can be individually switched or selected in groups and then switched.

All Switching PDU's come with an In-built "relay failure alarm" that will report back if for any reason a socket does not switch ensuring a reduction in time spent fault finding especially important for unmanaged installations.