InfraPower®

Inspired by Your Data Center

User Manual IPM-04 PDU management software

W series PDU : Single Phase (Meter with 2.8” touch LCD)

Designed and manufactured by Austin Hughes

FC CE RoHS REACH

Legal Information

First English printing, June 2023

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

Safety Instructions

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40º Celsius (104º Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labelled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - ☐ Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - ☐ Repair or attempted repair by anyone not authorized by us.
  - ☐ Any damage of the product due to shipment.
  - ☐ Removal or installation of the product.
  - ☐ Causes external to the product, such as electric power fluctuation or failure.
  - ☐ Use of supplies or parts not meeting our specifications.
  - ☐ Normal wear and tear.
  - ☐ Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in business, industrial and commercial environments.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Unpacking

The equipment comes with the standard parts shown on the package contents. Check and make sure they are included and in good condition. If anything is missing, or damage, contact the supplier immediately.

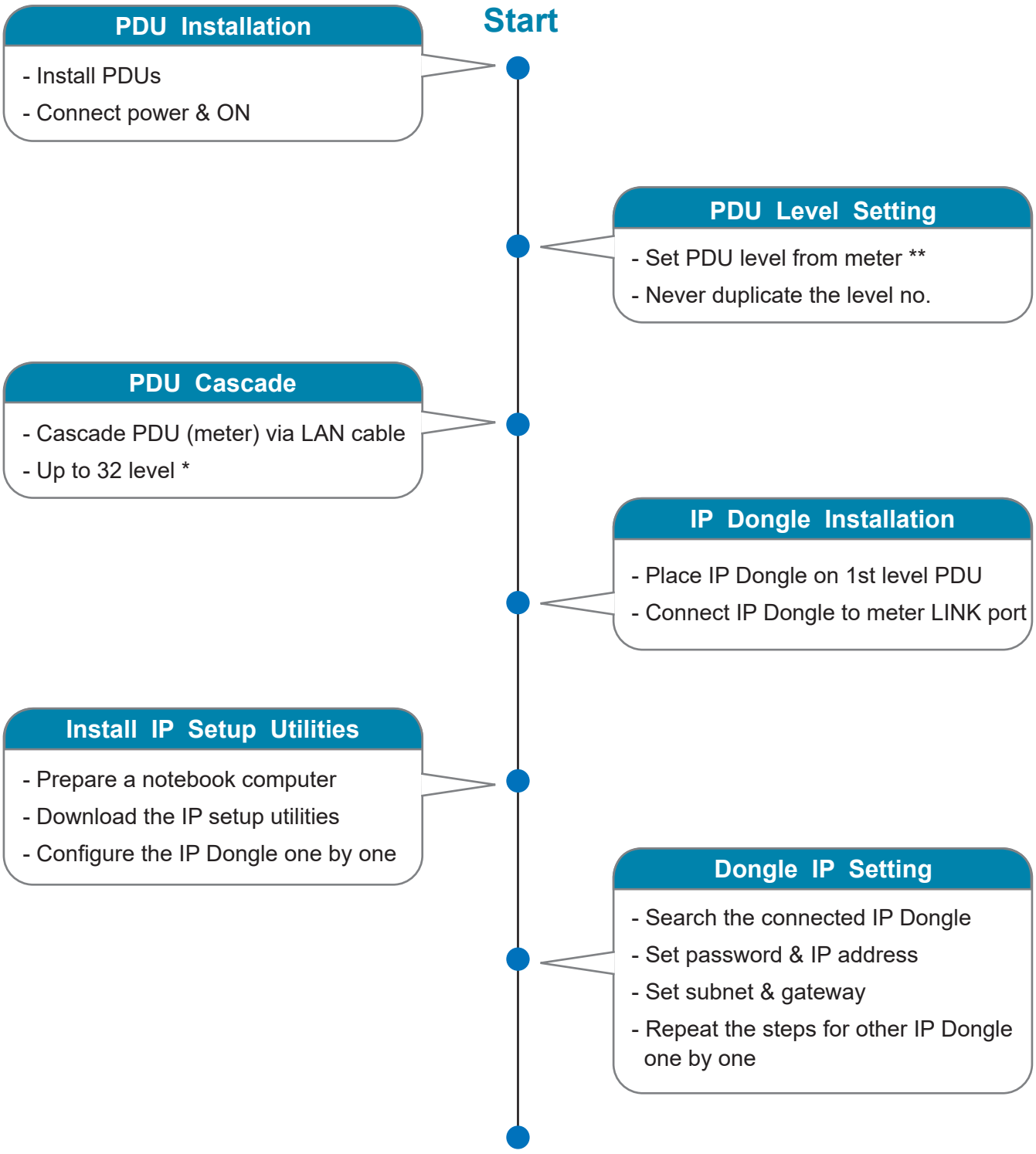
All electrical power and power control wiring must be installed by a qualified electrician and comply with local and national regulations.

Don’t exceed the outlet, branch or phase limitations

Power ON

- Connect the PDU into an appropriately rated receptacle
- When the PDU is power on, the LED display will light up. That means all outlets are activated
- Keep the equipments in the power off position until it is plugged into the PDU

Tips for hardware Installation



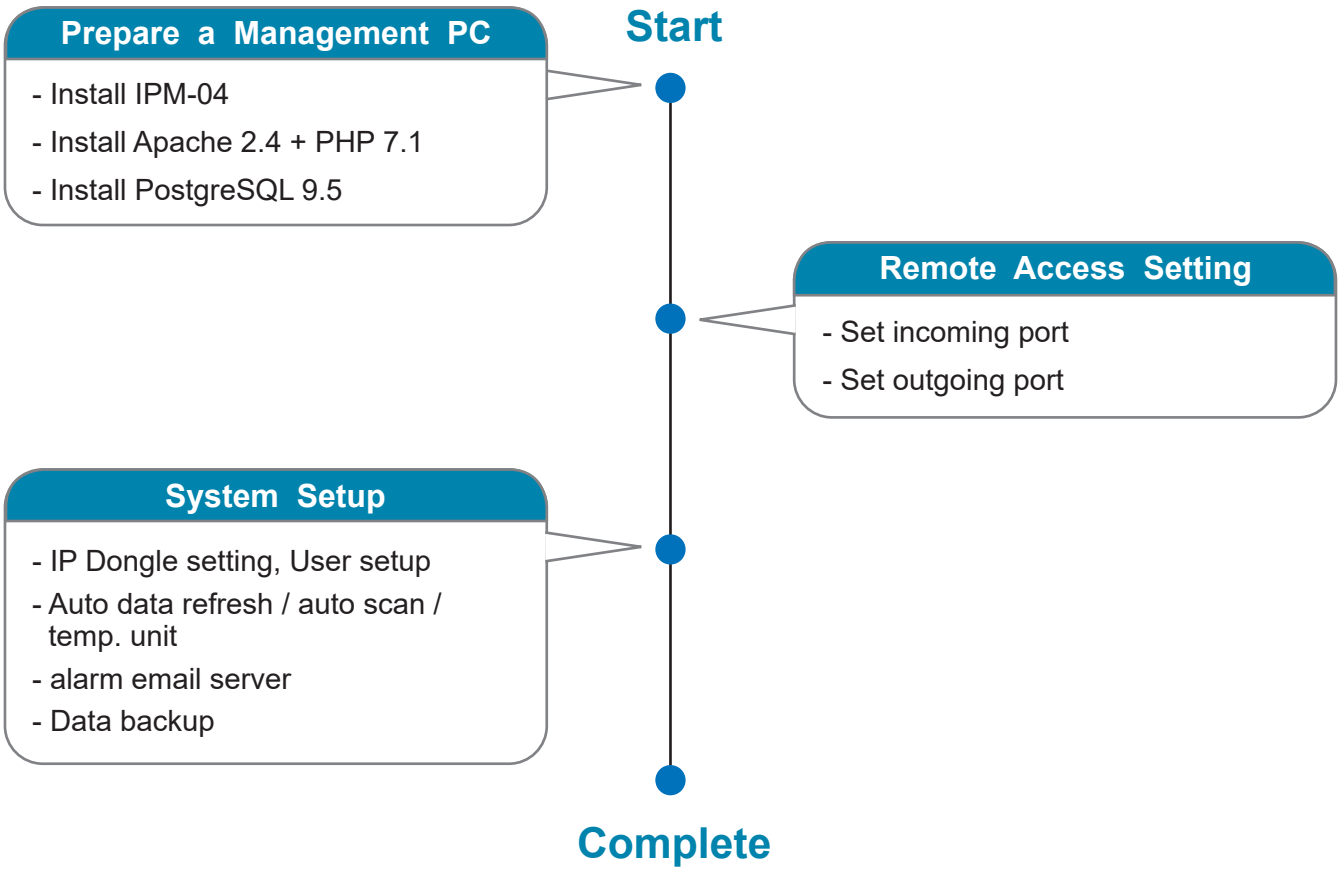
* - Only IPD-03-S / IPD-H-03-S supports PDU level up to 32

** - PDU with touchscreen LCD meter (firmware version V37 or above) supports PDU level setting from 1 to 32

- PDU with touchscreen LCD meter (firmware version V37 or above) supports remote PDU level & ID setting via IPD-03-S WEBUI. Details refer to PPS-03-S user manual :

(https://www.austin-hughes.com/resource_cat/product-resources/rack-power-resources)

Tips for System Setup



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Part I. " W " Meter

< 1.1 > Meter Key Features

Four intelligent PDU series covering single & three phase equipped with W Meter :

Monitored PDU :
① W PDU
② Wi PDU - Outlet Measurement

Switched PDU :
③ WS PDU
④ WSi PDU - Outlet Measurement

InfraPower®	Monitored PDU		Switched PDU	
	W	Wi	WS	WSi
Outlet Amp + kWh Measurement		✔		✔
Outlet Switch ON / OFF			✔	✔
Field Replaceable Meter	✔	✔	✔	✔
2.8" Color LCD (featured w/ Touchscreen)	✔	✔	✔	✔
Circuit / Phase Amp + kWh Measurement	✔	✔	✔	✔
Support Single & Three Phase PDU	✔	✔	✔	✔
Phase Balance % (3 Phase PDU only)	✔	✔	✔	✔
Temp-Humid Sensor port x 2	✔	✔	✔	✔
32 PDU Levels in Single Daisy Chain	✔	✔	✔	✔
One IP Access up to 32 PDU Levels	✔	✔	✔	✔
Tool-less Mounting for Vertical PDU	✔	✔	✔	✔
SNMP Capability v2 / v3	✔	✔	✔	✔
Free Management Software (via PDU IP Dongle, IPD-03-S)	IPM-04	IPM-04	IPM-04	IPM-04

W series PDU is equipped with a highly advanced component - “ W “ Meter .

- Single & Three Phase PDU can be inter-cascaded in a single daisy chain.
- Simply connect 1 x IP Dongle to access up to 32 PDUs.
- SNMP Capability v2 / v3 via IP Dongle
- Built-in buzzer will sound when circuit or bank Amp over alarm setting.
- Field replaceable design allows meter replacement without PDU power interruption.

1 **Cascade port**

Up to 32 PDU Level

2 Sensor port x 2

- Temp. Sensor
- Temp. + Humid. Sensor
- Door Sensor
- Smoke Sensor

3 **2.8” color LCD**

Featured w/ Touchscreen

4 Reset button

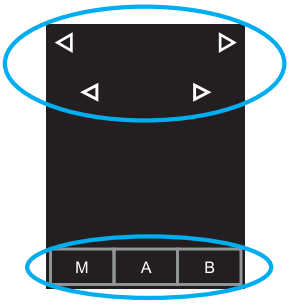
To re-power the meter if necessary but won’t cause any change on settings and memories.

< 1.2 > Meter Reading & Setting

Reading

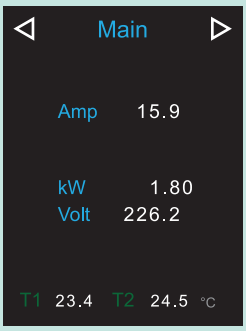
- Amp, Voltage & Power Factor
- kWh Energy Consumption
- Active & Apparent Power
- Temp. & Humidity

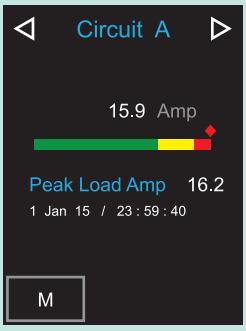
Touch Button
(Single & Dual Circuit)



Single Circuit

1 - 3





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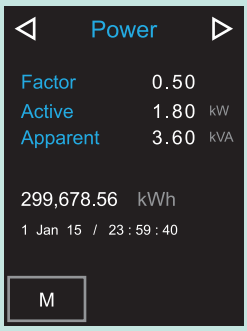
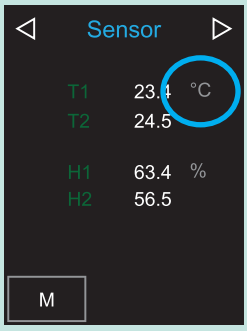
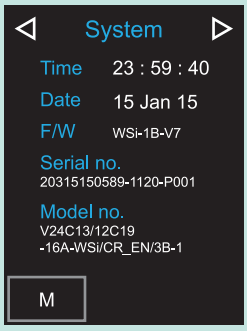
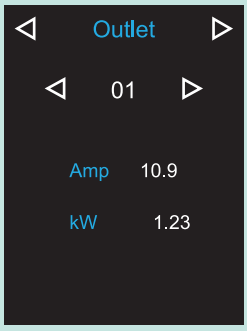






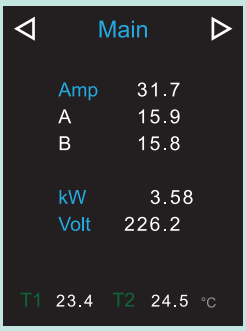


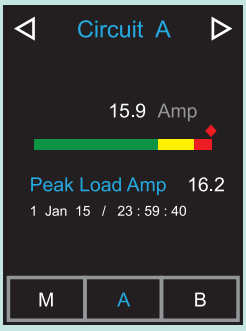
Page no.5
Touch °C / °F to change temp. unit

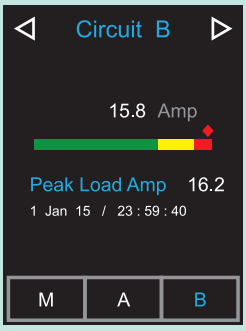
Page no.7
Wi / WSi outlet measurement PDU only

Dual Circuit

1 - 4







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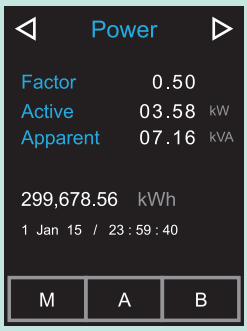
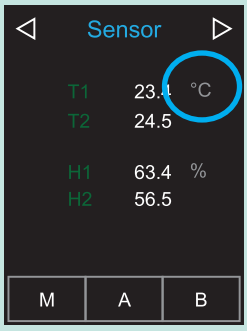
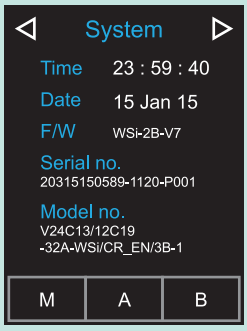
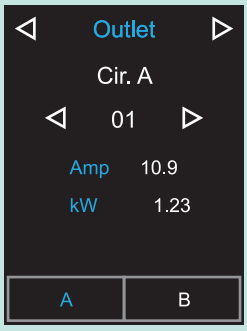






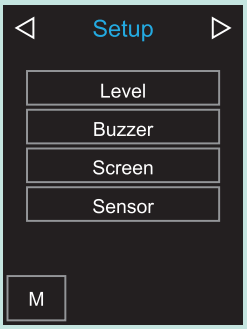


Page no.6
Touch °C / °F to change temp. unit

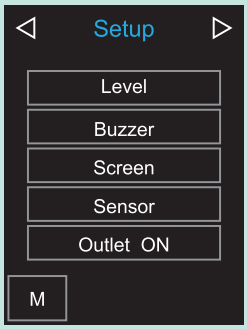
Page no.8
Wi / WSi outlet measurement PDU only

< 1.2 > Meter Reading & Setting

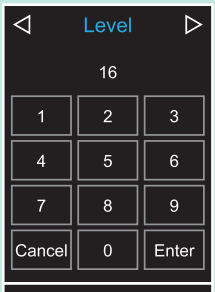
Setting



Monitored PDU

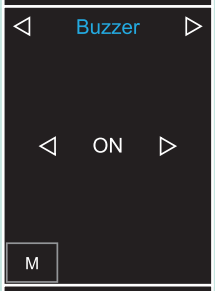


Outlet Switched PDU



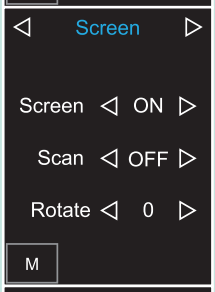
PDU Level Setting

Default no. : 16



Buzzer ON / OFF

Default : ON



Default : Screen < ON > Scan < OFF >

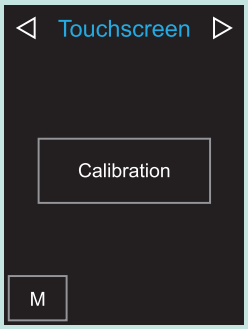
* **OFF Screen** :
- Screen OFF in 30 seconds
- If want to turn on the screen just touch it
- OFF in 30 seconds if no any further touch

* **ON Scan :**
- Scanning starts in 30 seconds
- Then scan each page per 3 seconds

Outlet ON / OFF

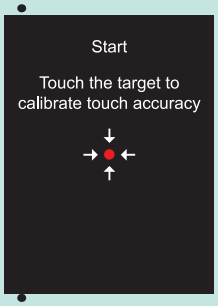
Default : ON

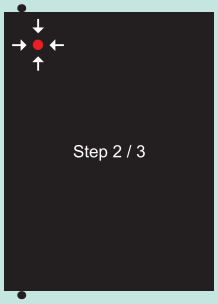
WS / WSi Outlet Switched PDU only

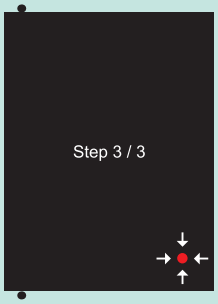


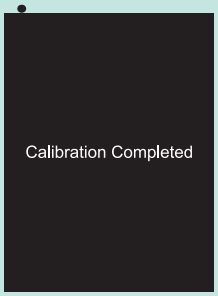
Touchscreen Calibration

If no any calibrate touch in 30 seconds, it will return to Touchscreen page



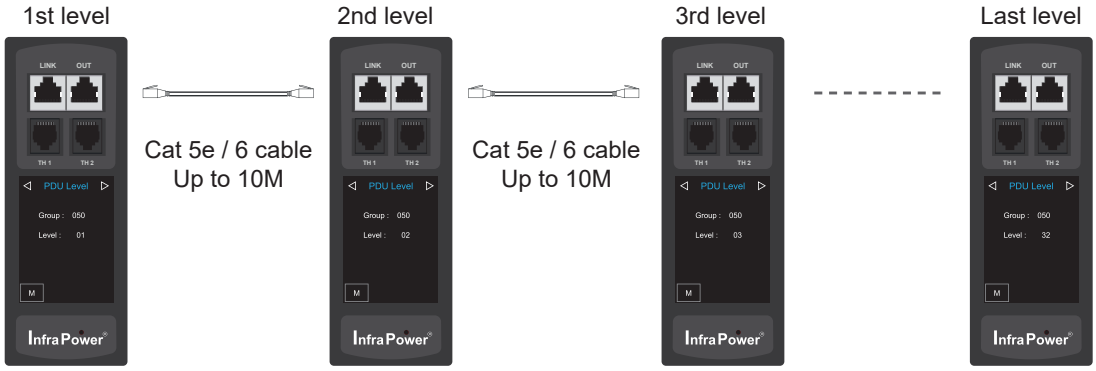




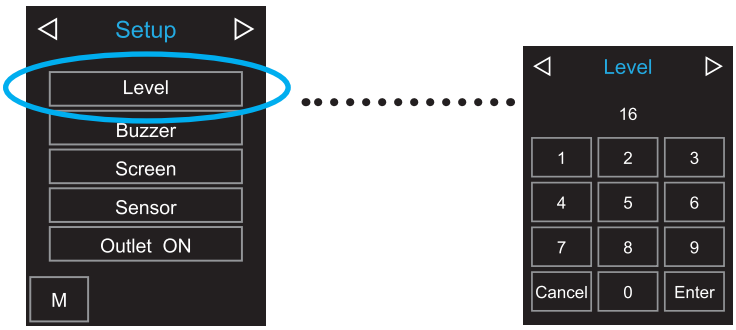


< 1.3 > Meter (PDU) Cascade

- The PDU can be cascaded up to 32 levels
- For IP PDU access simply connect 1 x IP Dongle - IPD-03-S
- 1 x IP Dongle allows access to 32 levels
- Single & 3 Phase PDU can be inter-cascaded in the single daisy chain



To setup page for **PDU level setting** as below :



< 1.4 > Dual Lan IP Dongle

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. 32 PDUs in a single daisy chain - which is a highly efficient application for saving not only the IP remote accessories cost, but also the true IP addresses required on the PDU management.

Hot-Pluggable design facilitates the IP Dongle installation. Simply integrate the IP Dongle to the 1st PDU, then the entire daisy chain group can be remote over IP.

IP Dongle for vertical PDU

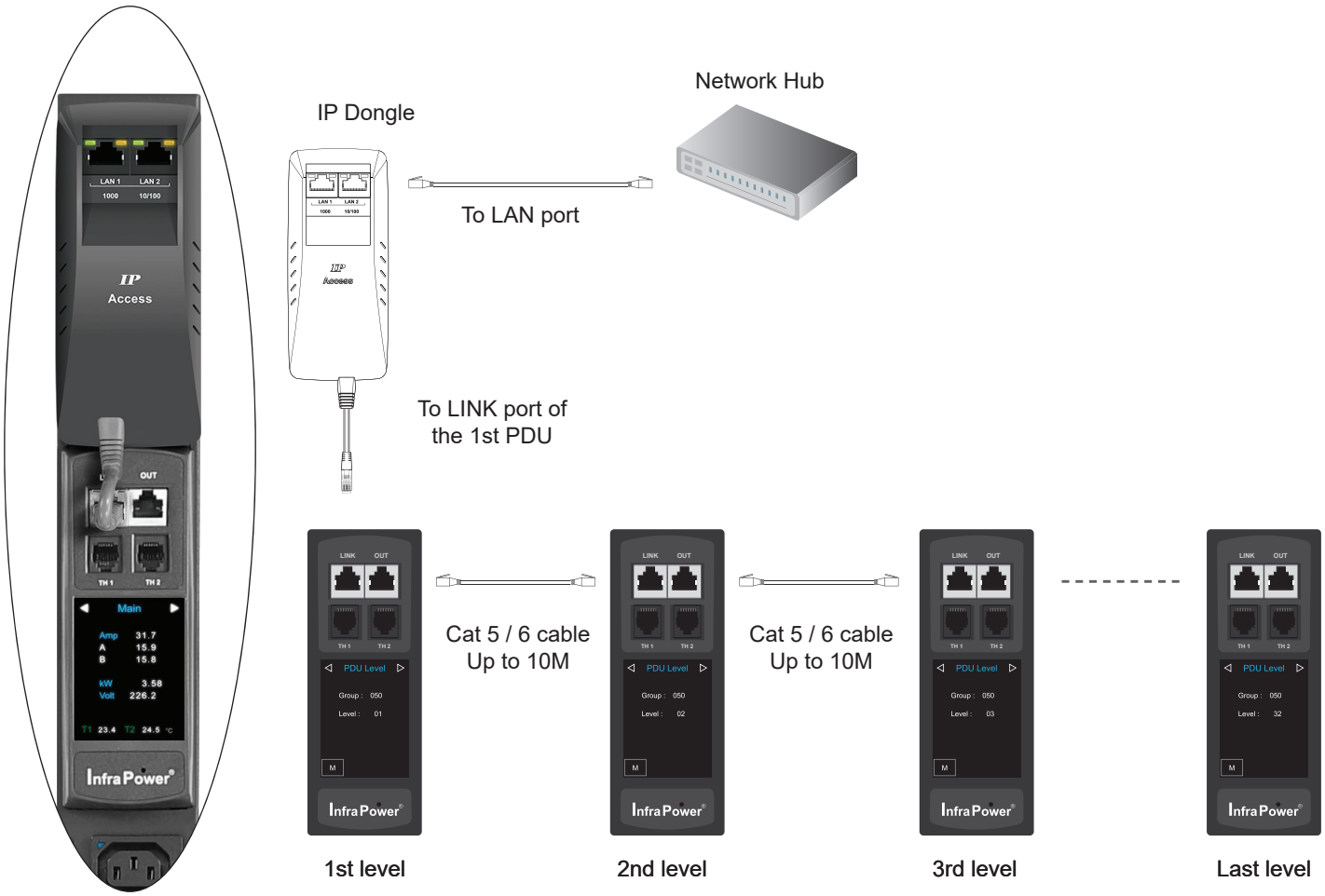
- SNMP capability v2 / v3

Part no.
IPD-03-S

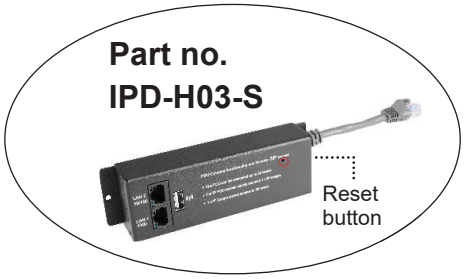
- Press the reset button and release instantly to reboot IP dongle.
- Press and hold the reset button until Green LED off to reset IP dongle to factory default

Installation steps :

- slide and fix the IP Dongle on the plate over the meter
- plug its RJ-45 connector into the LINK port of the 1st level PDU meter
- connect IP Dongle to network device via CAT. 5 / 6 cable



< 1.5 > IP Dongle Installation



IP Dongle for rackmount PDU

- SNMP capability v2 / v3

- Press the reset button and release instantly to reboot IP dongle.
- Press and hold the reset button until Green LED off to reset IP dongle to factory default

Installation steps :

- fix the IP Dongle on the rear side of rackmount PDU with 4 screws
- plug its RJ-45 connector into the LINK port of the 1st level PDU meter
- connect IP Dongle to network device via CAT. 5 / 6 cable

< 1.6 > Meter System Timer

Each PDU comes with a system timer to show the current date & time.
It will be synchronized with the system time of the management PC under circumstances below:

- When the PDU connected to IPM-04 at the first time
- When the PDU is reconnected to IPM-04 after disconnection
- At 00:00:00 (hh:mm:ss) daily

The system timer will be frozen when the PDU is powered OFF.

< 1.7 > Optional Accessory

Temp. / Temp. + Humidity / Door / Smoke Sensor

W meter provides 2 sensor ports for Temp. / Temp. + Humidity / Door & Smoke sensor monitoring. The default sensor type for the 2 sensor ports is Temp. / TH sensor. You can select different sensor type you installed to the sensor port of W meter.

Temp. & Humid. Sensor

Part no. :
IG - TH01 - 2M (2M cord)
IG - TH01 - 4M (4M cord)

Temp. Sensor

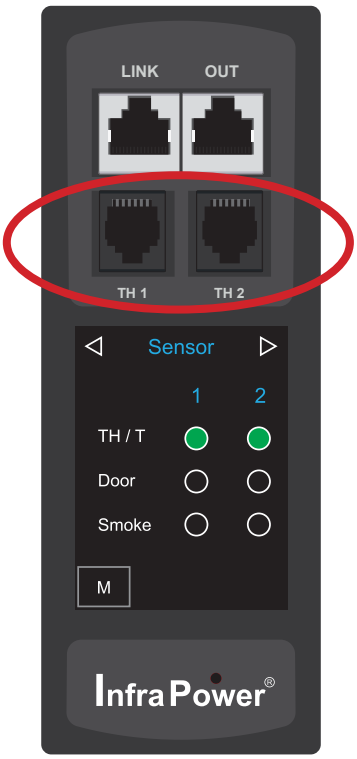
Part no. :
IG - T01 - 2M (2M cord)
IG - T01 - 4M (4M cord)

Door Sensor

Part no. :
IP - DSW - 2M (2M cord)
IP - DSW - 4M (4M cord)

Smoke Sensor

Part no. :
IP - S01 - 1M (1M cord)
IP - S01 - 3M (3M cord)



< 1.7 > Optional Accessory

Temp. / Temp. + Humidity Sensor

		Temp. & Humid. Sensor	Temp. Sensor
Part no.		**IG - TH01**	**IG - T01**
Temperature Sensitivity	Range	0 to 80°C (32 to 176°F)	
	Accuracy	±1.0°C typical (±2°F)	±1.5°C (±3°F)
	Resolution	0.1°C (0.2°F)	
	Response Time	5 to 30 sec	
Relative Humidity Sensitivity	Range	0 to 100% R.H	/
	Accuracy	0 to 100, ±8.0% R.H 20 to 80, ±4.5% R.H.	/
	Resolution	1% R.H.	/
	Response Time	8 sec	/
Power Requirement	Voltage	3.3VDC, powered by PDU sensor port	
	Current Consumption	70mA	
	Power consumption	0.24 Watt	
	Power on indicator	Red LED	Green LED
Housing	Chassis & Cover	Plastic	
	Color	Dark gray	
	Installation	Magnetic base for unrestricted installation	
Cable	Cable Length	TH sensor w/ 2m cable (standard) TH sensor w/ 4m cable (option)	T sensor w/ 2m cable (standard) T sensor w/ 4m cable (option)
	Cable Specification	4-wired 3.5mm to RJ11	
	Cable Color	Black	Beige
Environmental	Operating	0 to 80°C Degree	
	Storage	-5 to 80°C Degree	
	Humidity	0~100%, non-condensing	
Dimensions	Product	30L x 25Wx 18H mm	
Weight	Net	10g	
Compatibility	InfraPower	Single & 3 Phase W / WS / Wi / WSi series PDU	
	InfraSolution	X-2000 series	
	InfraGuard	Rack sensor system	
Safety Regulatory		FCC & CE certified	
Environmental		RoHS3 & REACH compliant	

< 1.7 > Optional Accessory

Door Sensor

		Door Sensor
Part no.		**IP-DSW**
Sensitivity	Actuation	3.00 mm
	Travelling Distance	9.25 mm
	Operating Force	3.5±1 N
	Sensing distance	/
	Sensing object	/
Power Requirement	Voltage	/
	Current Consumption	/
Housing	Material	Plastic
	Color	Gray
Connection	Cable Length	2m / 4m (option)
Environmental	Operating	-20 to 60°C Degree
	Storage	-30 to 70°C Degree
	Relative Humidity	5~90%, non-condensing
Dimensions	Product	52W x 22.5L mm (with metal plate)
	Packing	/
Weight	Net / Gross	14g (with metal plate)
Supply includes	1	Mechanical door sensor
	2	Metal plate
	3	4-wired 3.5mm to RJ-11 cable (2m)
Compatibility	InfraPower	Single & 3 Phase W / WS / Wi / WSi series PDU Dual feed Single & 3 Phase W / WS / Wi / WSi series PDU
Safety Regulatory		FCC & CE certified
Environmental		RoHS3 & REACH compliant by SGS

< 1.7 > Optional Accessory

Smoke Sensor

Smoke sensor comes with a RED LED. When smoke alarm triggers, the RED LED lights on with beep sound continuously.

		Smoke Sensor
Part no.		**IP-S01**
Sensitivity	Smoke sensitivity	0.15 ~ 0.3 dB/m
Alarm Output	Solid State Relay	24VDC@1A
	Alarm LED	Red
	Audio Alarm	80 dB
	Audio Alarm Pattern	Continuous beeps
Power Requirement	Voltage	3.3VDC, powered by PDU sensor port
	Current Consumption	720uA
	Power ON LED	Red LED flashes every 6 seconds
Housing	Chassis & Cover	ABS plastic
	Color	Ivory White
Connection	Cable Length	1m / 3m (option)
Environmental	Operating	-5 to 50°C Degree
	Storage	-10 to 60°C Degree
	Humidity	5~90%, non-condensing
Dimensions	Product	103L x 103W x 55H mm
Weight	Net	165g
Supply includes	1	Smoke Sensor with 1m cable
Compatibility:	InfraPower	Single & 3 Phase W / WS / Wi / WSi series PDU Dual feed Single & 3 Phase W / WS / Wi / WSi series PDU
Safety Regulatory	FCC & CE certified	
Environmental	RoHS3 & REACH compliant by SGS	

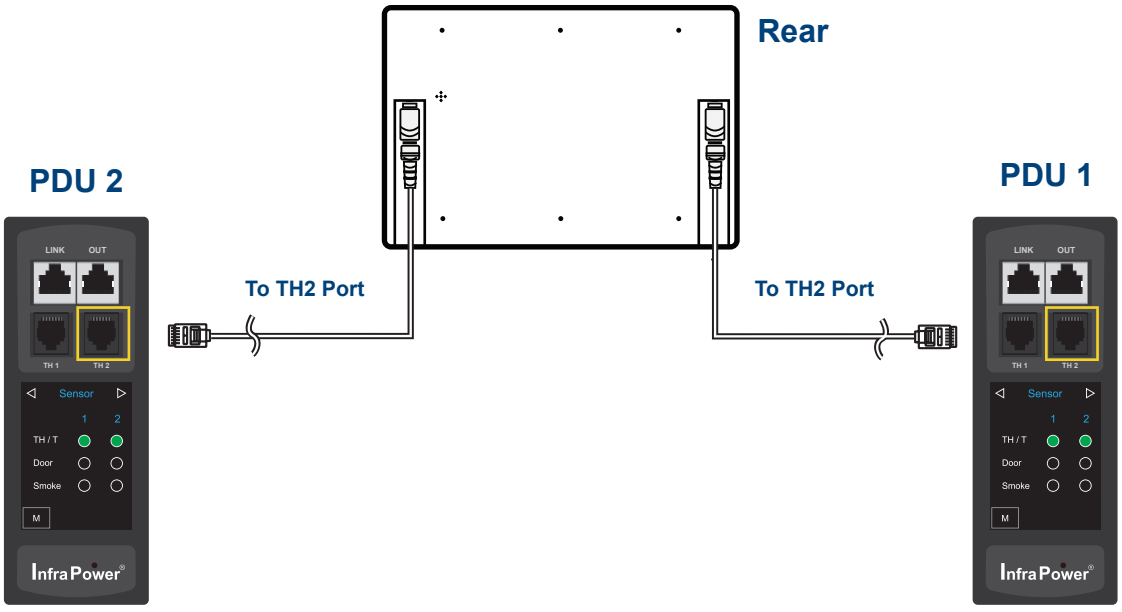
< 1.7 > Optional Accessory

4.3” Door Mount PDU Panel

4.3” Door Mount PDU Panel (IP-ED-01) provides RJ-11 port x 2 for PDU voltage, amp., power & sensor monitoring. Once connected, the data shows on the 4.3” door mount PDU panel.
For details, please refer to user manual of 4.3” Door Mount PDU Panel :
https://www.austin-hughes.com/resource_cat/product-resources/rack-power-resources/#tab-product-series-resources-table-manuals

IP-ED-01

4.3” Door Mount PDU Panel



Part II. Software

< 2.1 > Key Features

InfraPower Manger IPM-04 is a free but powerful and user friendly PDU mangement software. The Windows based software consolidates management of max. 1600 Dual Feed single phase , single & 3 Phase PDUs via 50 IP dongles.

5 concurrent user access are bundled for achieving the demand of multi-user / multi-tasking in nowadays' time-sharing data center operation.

InfraPower IPM-04

Features		
Capacity	IP Dongle Group (Just 1 for 32 PDU levels)	50
	PDU number	1600
	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 Setting	✔
	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)	✔
	Single Phase Dual Feed **W** Monitored PDU	✔
	Single Phase Dual Feed **Wi** Monitored PDU (Outlet Measurement)	✔
	Single Phase Dual Feed **WS** Switched PDU	✔
	Single Phase Dual Feed **WSi** Switched PDU (Outlet Measurement)	✔

< 2.2 > IP Dongle Configuration

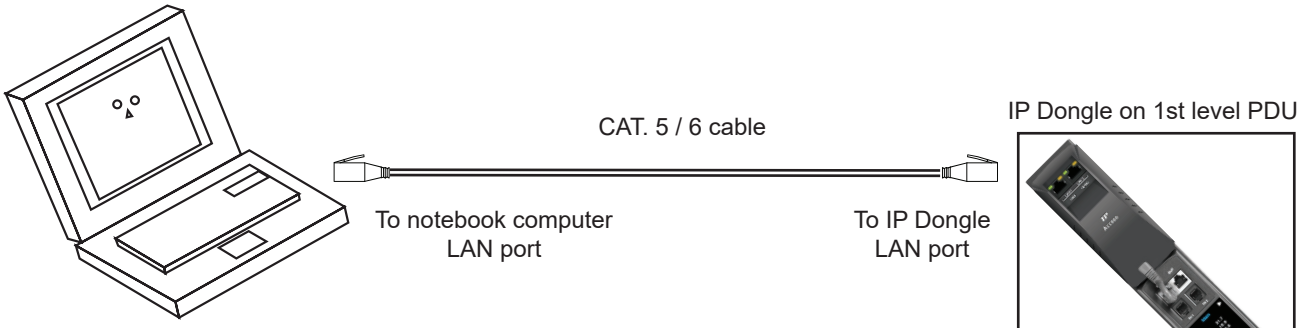
The following steps show the static IP setting only. For DHCP setting, please refer to < **7.3** > DHCP Setting

After the completion of IP Dongle connection, please take the following steps to configure the IP Dongle :

Step 1. Prepare a notebook computer to download the IP setup utilities from the link :
http://www.austin-hughes.com/support/utilities/infrapower/IPdongleSetup.msi

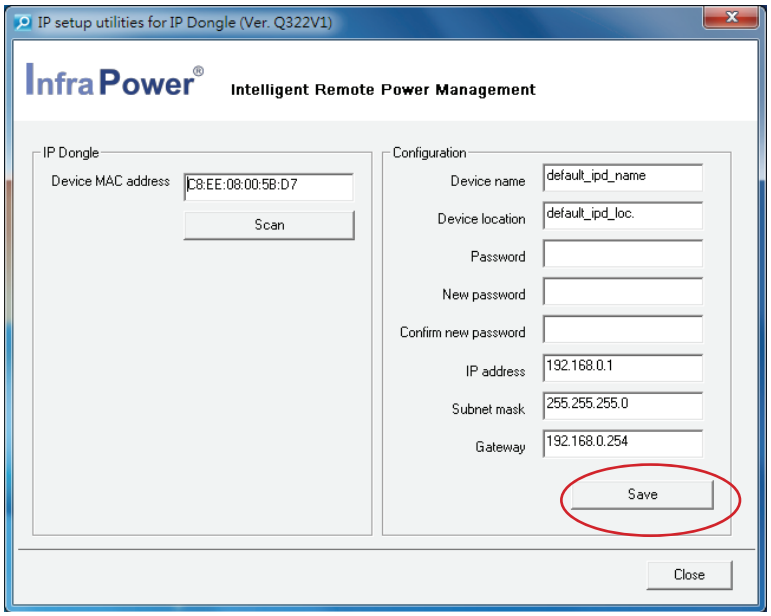
Step 2. Double Click the IPDongleSetup.msi and follow the instruction to complete the installation

Step 3. Go to each first level PDU with the notebook computer & a piece of CAT. 5 / 6 cable to configure the IP Dongle by IP setup utilities as below. Please take the procedure for all IP dongles **ONE BY ONE**



Reconnect the IP Dongle with the network device (router or hub), after finish IP Dongle configuration.

Ensure the PDU in power ON status



1. If the IP dongle is in factory default setting or the password is " 00000000 ", you MUST change the password for security purpose .
2. The password MUST contain at least three of the following four character groups :
   - English uppercase characters (A through Z)
   - English lowercase characters (a through z)
   - Numerals (0 through 9)
   - Non-alphabetic characters (such as !, @, #, %). [`] , [$] , ["] , [\ ] are NOT supported.

Step 4. Click **" Scan "** to search the connected IP dongle
Step 5. Enter device name in " **Device name** " (min. 4 char. / max. 16 char.). Default is " **default_ipd_name** "
Step 6. Enter device location in " **Device location** " (min. 4 char. / max. 16 char.). Default is " **default_ipd_loc.** "
Step 7. Enter password in " **Password** " for authentication (min. 8 char. / max. 16 char.) Default is **" 00000000 "**
Step 8. Enter new password in " **New password** " (min. 8 char. / max. 16 char.)
Step 9. Re-enter new password in " **Confirm new password** "
Step 10. Change the desired " **IP address** " / " **Subnet mask** " / " **Gateway** ", then Click **" Save "** to confirm the changes

Lan 1. The default IP setting is as below:

IP address :	192.168.11.1
Subnet mask :	255.255.255.0
Gateway :	192.168.11.254

Lan 2. The default IP setting is as below:

IP address :	192.168.0.1
Subnet mask :	255.255.255.0
Gateway :	192.168.0.254

Step 11. Repeat **Step 4 & Step 10** for **Lan 2** Port of IP dongle if you will use LAN 2 as well. Otherwise, ignore this step.

< 2.3 > Hardware Requirements of the Management PC

Please prepare a management PC with the hardware requirements as below for InfraPower Manager - IPM-04

Recommended hardware requirements :

- Processor: Dual Core 2GHz or above
- Memory: 4GB RAM
- Available Disk Space: 500GB
- Display: For the best view, display resolution 1920 x 1080 recommended

- The default service port of web server is 80.

- A dedicated PC to run InfraPower Manager - IPM-04 is recommended.

- Make sure the management PC is POWER ON & IPM-04 is under operation. Otherwise, daily data backup will NOT be proceeded.

< 2.4 > Supported OS Platform & Language

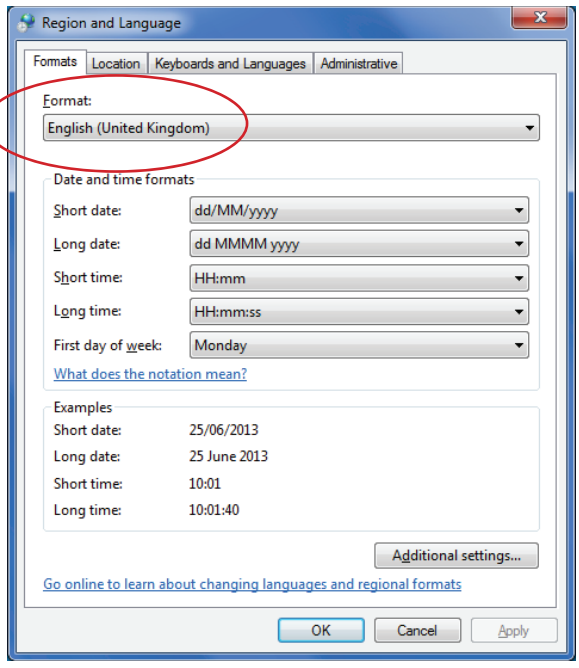
InfraPower Manager – IPM-04 supports the OS platforms & languages as below:

- MS Windows 10 Pro
- MS Windows 7 Professional with SP1
- MS Windows Server 2012 R2 Standard Edition
- MS Windows Server 2008 Standard Edition SP2
- MS Windows Server 2008 R2 Standard Edition SP1
- MS Windows Server 2003 R2 Standard Edition with SP2

Ensure the user logins in the management PC as a member of "Administrators" Group before IPM-04 Installation and execution.

User can select the following languages under Control Panel > Region and Language in English Edition OS:

1) Arabic (Saudi Arabia)
2) Chinese (Traditional, Hong Kong S.A.R.)
3) Dutch (Netherlands)
4) English (Australia)
5) English (United Kingdom)
6) English (United States)
7) French (France)
8) German (Germany)
9) German (Switzerland)
10) Italian (Italy)
11) Japanese (Japan)
12) Korean (Korea)
13) Norwegian (Norway)
14) Portuguese (Portugal)
15) Russian (Russia)
16) Spanish (Spain)
17) Turkish (Turkey)



< 2.5 > Software Download

InfraPower Manager, IPM-04, is a **PDU** management software to enhance the features and benefits of all Dual Feed single phase , single & 3 Phase PDUs by providing a centralized and remote management platform, and total reporting with detailed logs & event occurrences.

IPM-04 supports max. 5 concurrent login users and manage multi- IP Dongle groups max. 50, hence the concurrent login users can access & remote PDUs max. 1600 (50 IP dongles x 32 level PDUs).

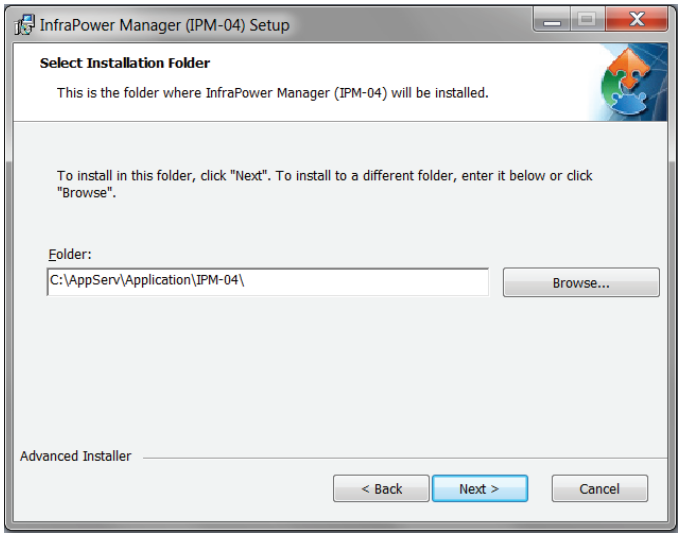
Software download

Please download the InfraPower Manager - IPM-04 to the management PC
from the link **http://www.austin-hughes.com/support/software/infrapower/IPM-04.msi**

You must have the administrator right of the management PC to install the IPM-04 .

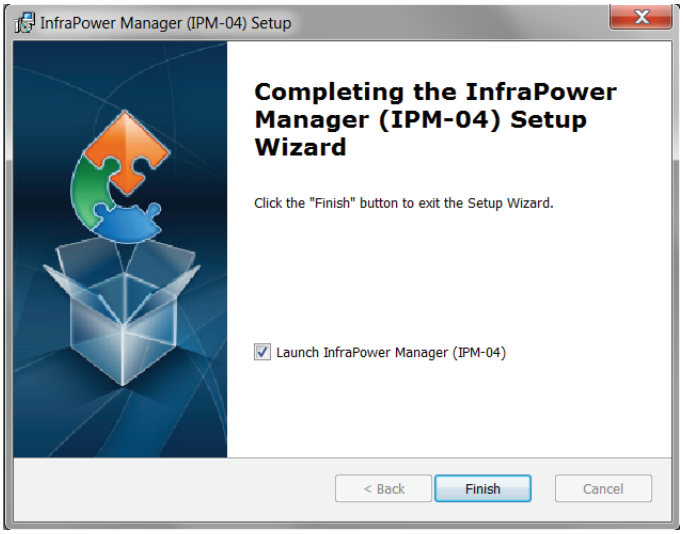
Double click the IPM-04.msi and follow the instruction to complete the installation.

click " **Next** "



click " **Install** "

< 2.5 > Software Download



click " **Finish** "

Complete

< 2.6 > First Time Start-up Setting

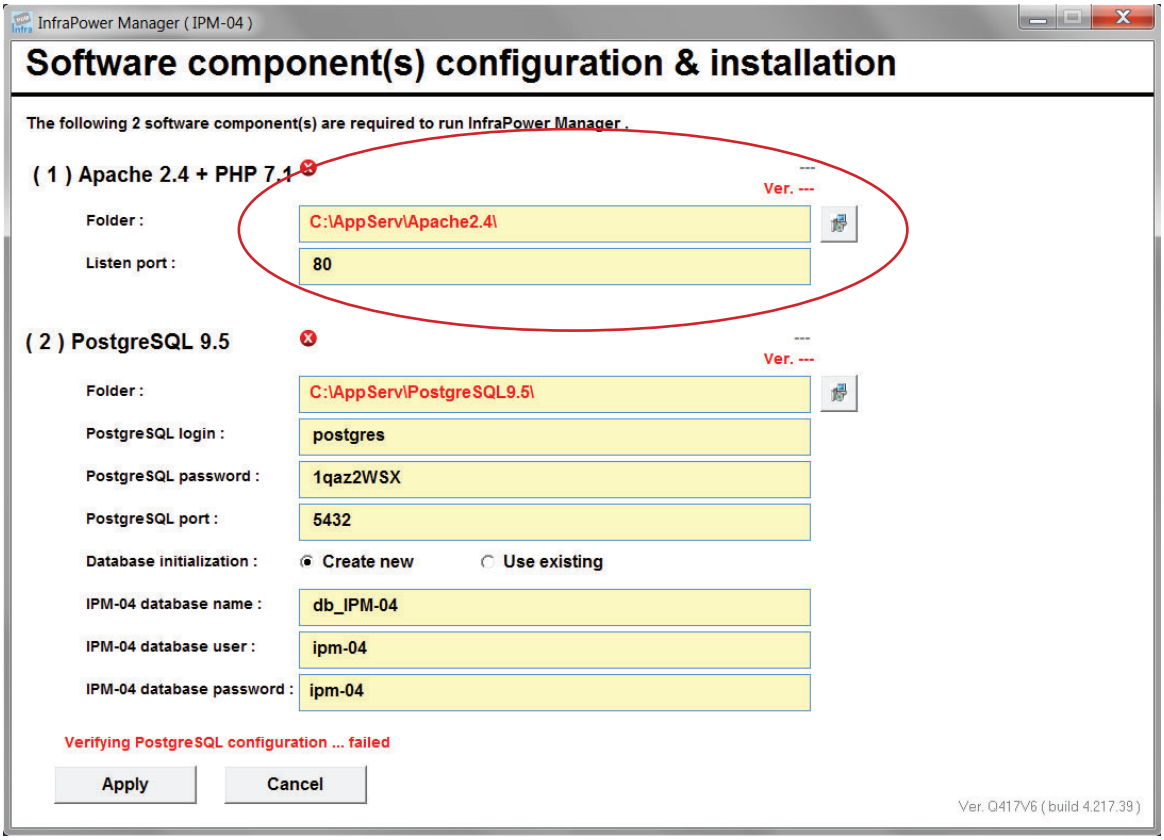
Step 1. Double Click the InfraPower Manager - IPM-04 and follow the instruction to complete start-up setting.

IPM-04
InfraPower Manager

Step 2. Click " **Next** " in " **InfraPower Manager start-up setting** " box

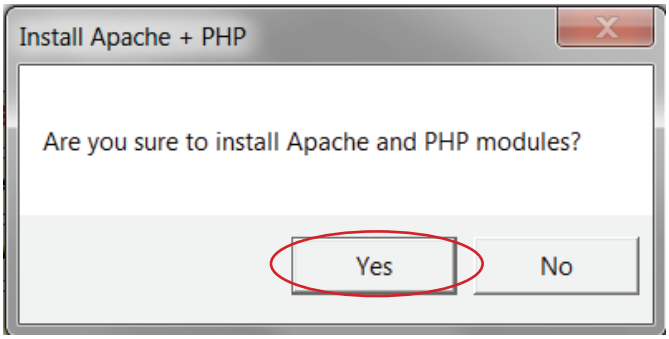
< 2.6 > First Time Start-up Setting

Step 3. Apache 2.4 + PHP 7.1 installation

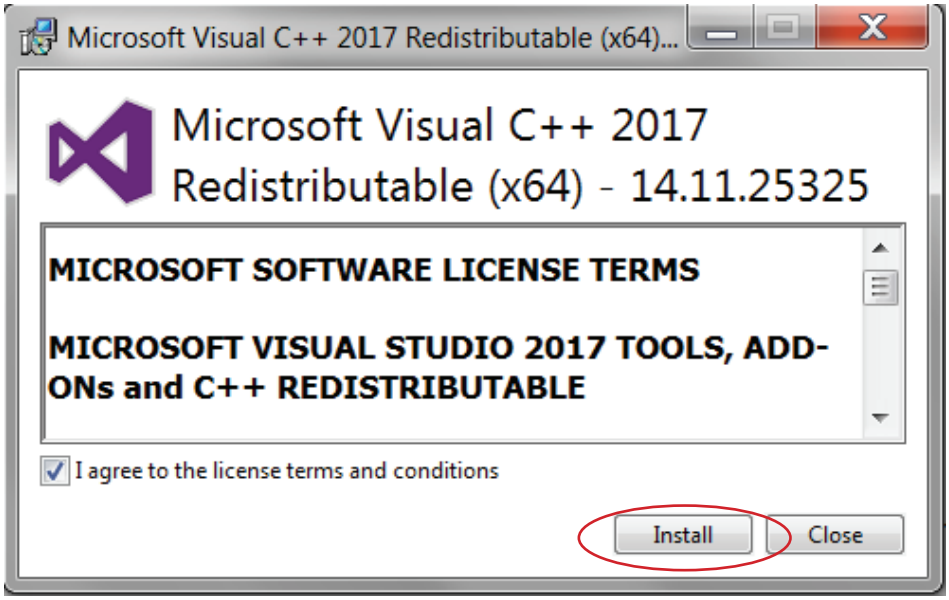


- Input the Apache 2.4 +PHP 7.1 installation path in " **Folder** " (Default : **C:\AppServ\Apache2.4**)
- Input the port no. in " **Listen port** " (Default : **80**)
- Click  to install Apache 2.4 + PHP 7.1

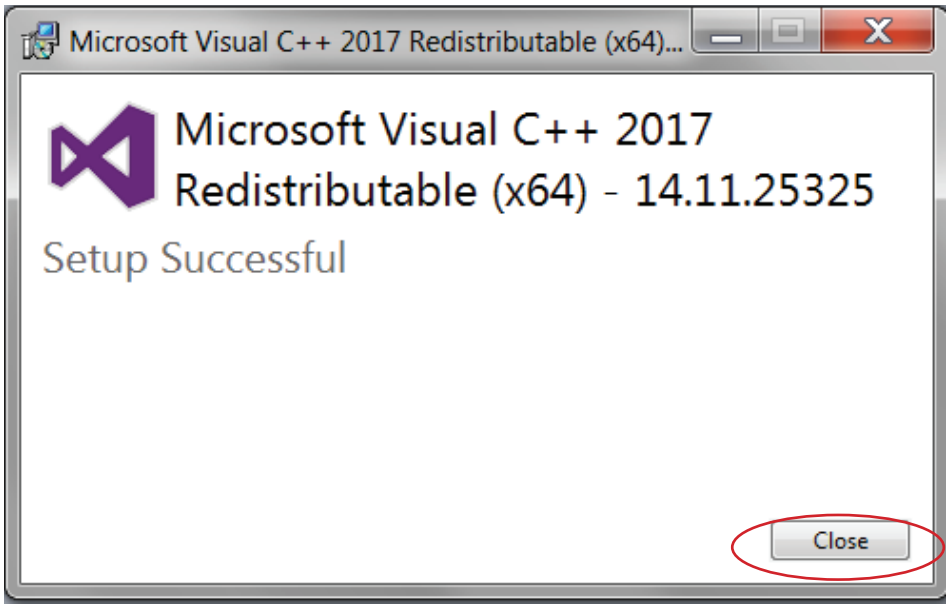
Step 4. Click " Yes " to start the installation



Step 5. Click " Install " to install the Microsoft Visual C++ 2017 Redistributable package.

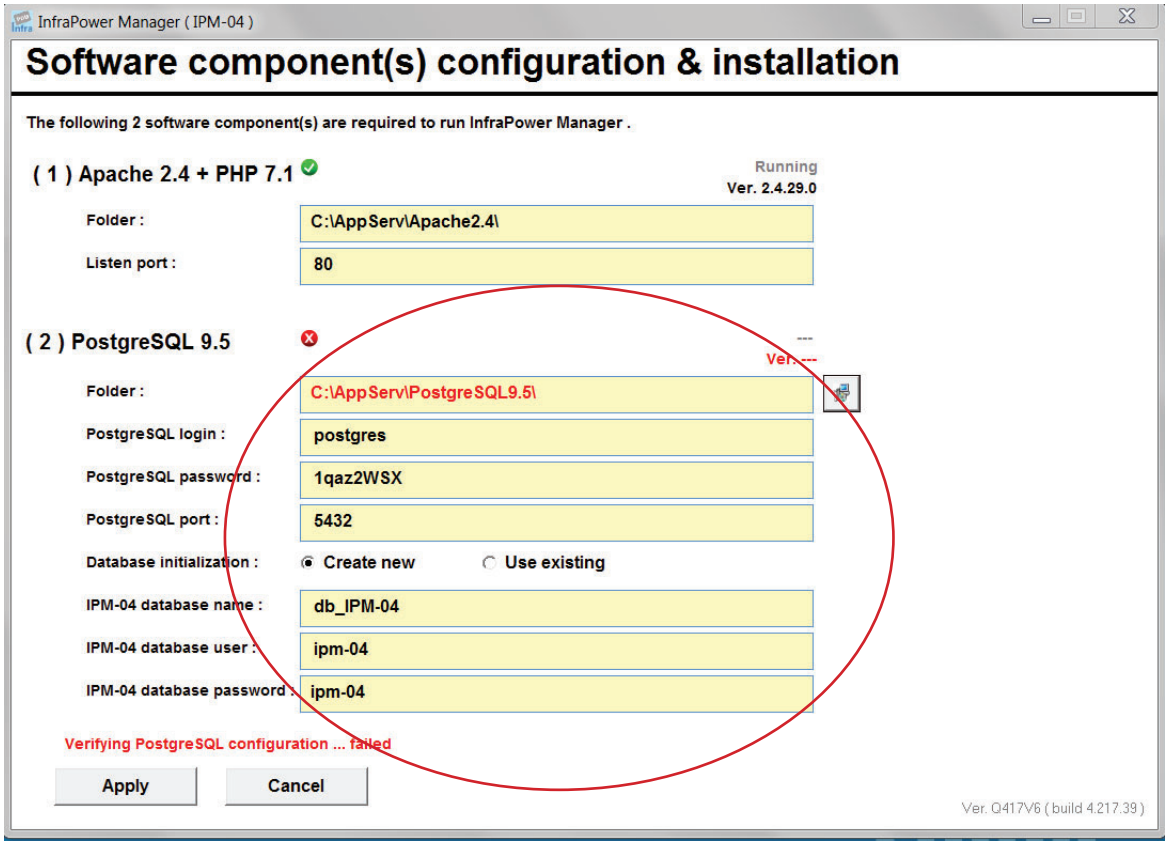


Step 6. Click " Close " to complete the installation.



< 2.6 > First Time Start-up Setting

Step 7. PostgreSQL 9.5 installation



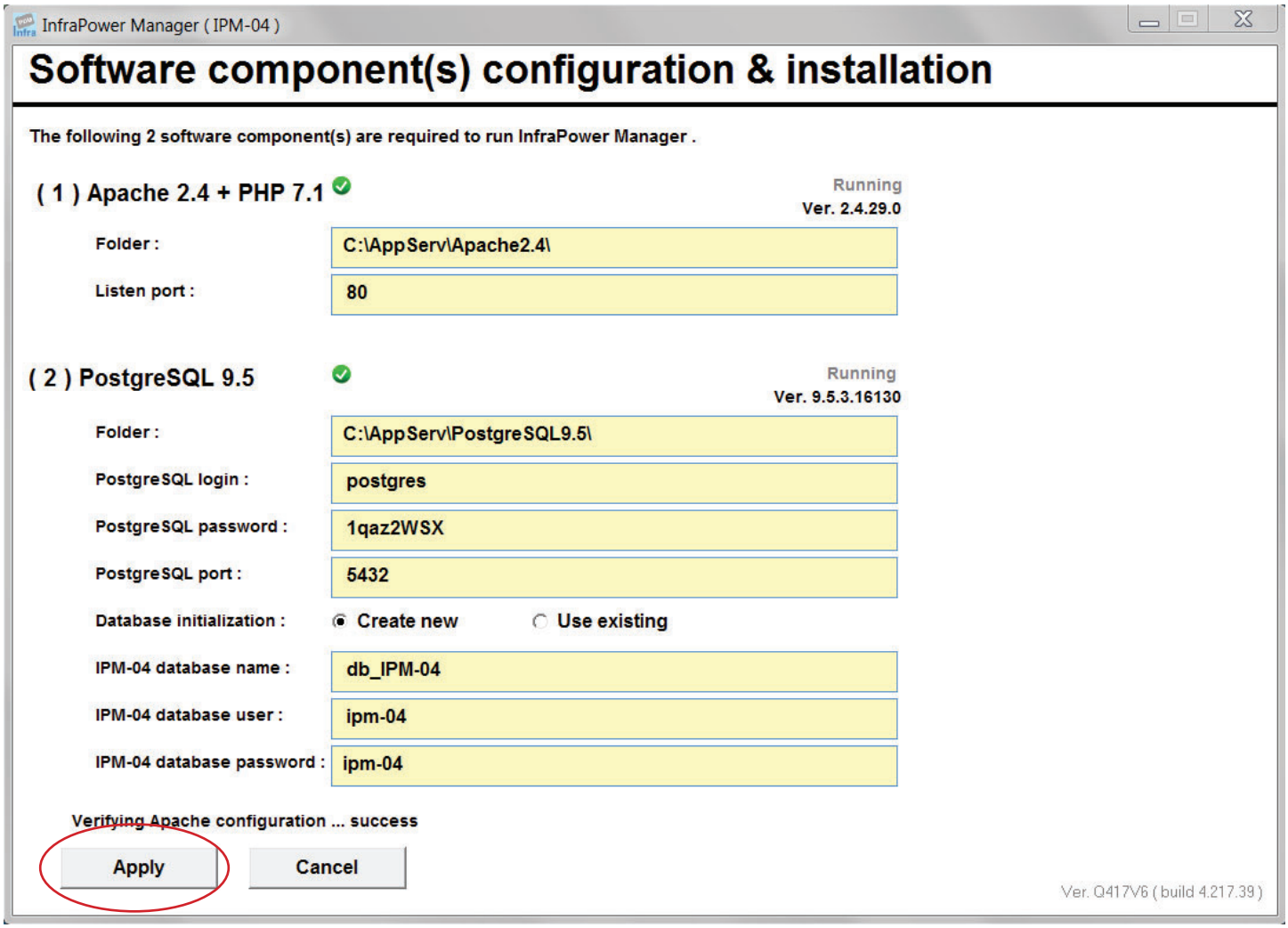
- Input the PostgreSQL 9.5 Installation path in " **Folder** " (Default : **C:\AppServ\PostgreSQL9.5**)
- Input the PostgreSQL login name in " **PostgreSQL login** " (Default : **postgres**)
- Input the PostgreSQL password in " **PostgreSQL password** " (Default : **1qaz2WSX**)
- Input the PostgreSQL port in " **PostgreSQL port** " (Default : **5432**)
- Select " Create new " **in** " **Database initialization** " for first time installation
- Input IPM-04 database name in " **IPM-04** database name " (Default : **IPM-04**)
- Input IPM-04 database user in " **IPM-04 database user** " (Default : **ipm-04**)
- Input IPM-04 database password in " **IPM-04 database password** " (Default : **ipm-04**)

The password **MUST** contain at least three of the following four character groups:
- English uppercase characters (A through Z)
- English lowercase characters (a through z)
- Numerals (0 through 9)
- Non-alphabetic characters (such as !, $, #, %)

- Click  to install PostgreSQL 9.5

< 2.6 > First Time Start-up Setting

Step 8. Click " **Apply** " to complete the first time start-up setting



Complete

< 2.7 > Web Server Port no. Change

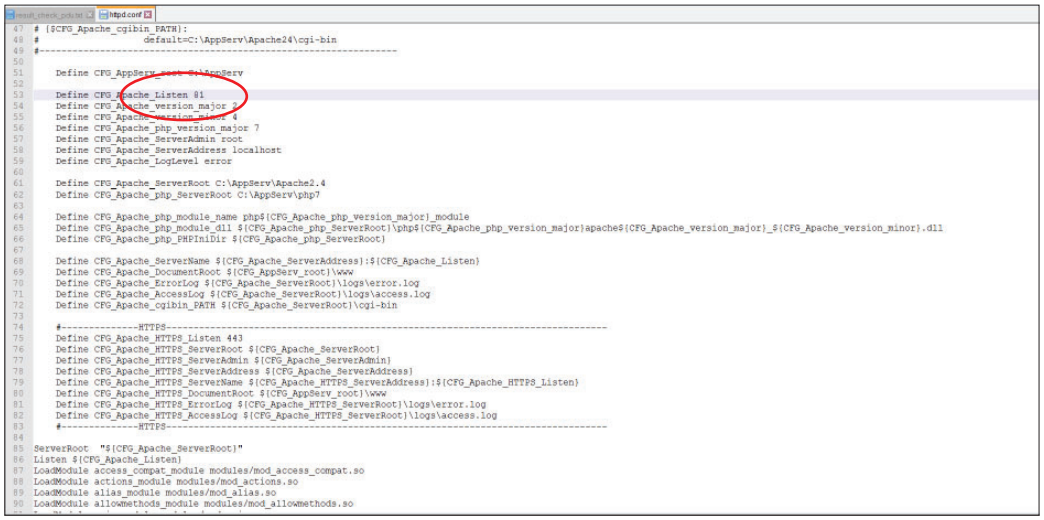
Web server port no. change

If users want to use another port no. instead of 80, please take the following steps after InfraPower Manager IPM-04 " **First time start-up setting** " is completed.

Step 1. Go to the path of web server being installed. (Default : **C:\AppServ\Apache2.4\conf**)

Step 2. Open " **httpd.conf** " & change " **Listen 80** " to " **Listen xx** " where xx means that the port no. will be selected by the user

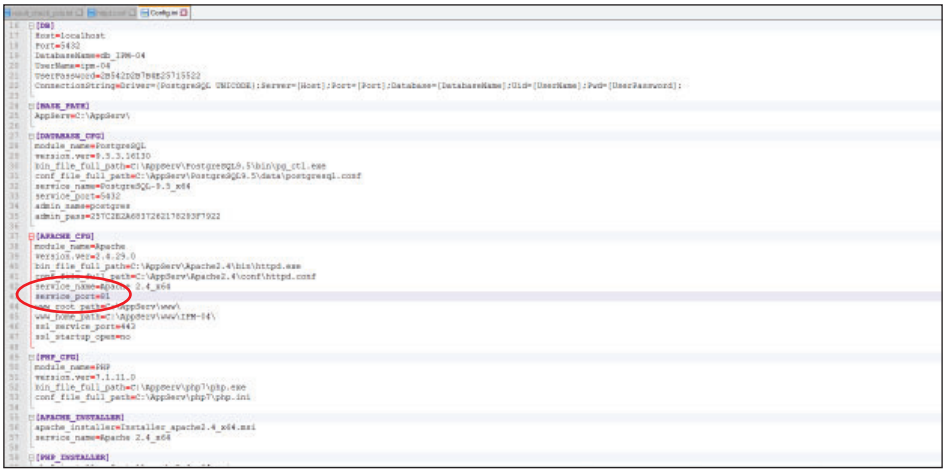
Step 3. Save the change of " **httpd.conf** "



Step 4. Open the config.ini of IPM-04 installation path.
(Default : **C:\AppServ\Application\IPM-04**)

Step 5. Change " **service_port=80** " to " **service_port=xx** " where xx must be the same as the one changed in httpd.conf

Step 6. Save the change of " **config.ini** "



Step 7. Restart Apache services.
Go to Control Panel > Administrative Tools > Services > Apache2.4 & Click " **Restart** "

Complete

Part III. System Setup & Remote Access

< 3.1 > System Setup

Users can follow below step 1 - 3 to access the management PC and InfraPower Manager IPM-04

Step 1. Open Internet Explorer (I.E.), version 11.0

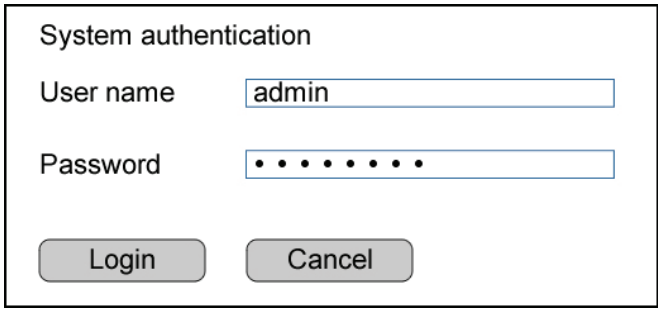
Step 2. Enter the URL of management PC into the address bar

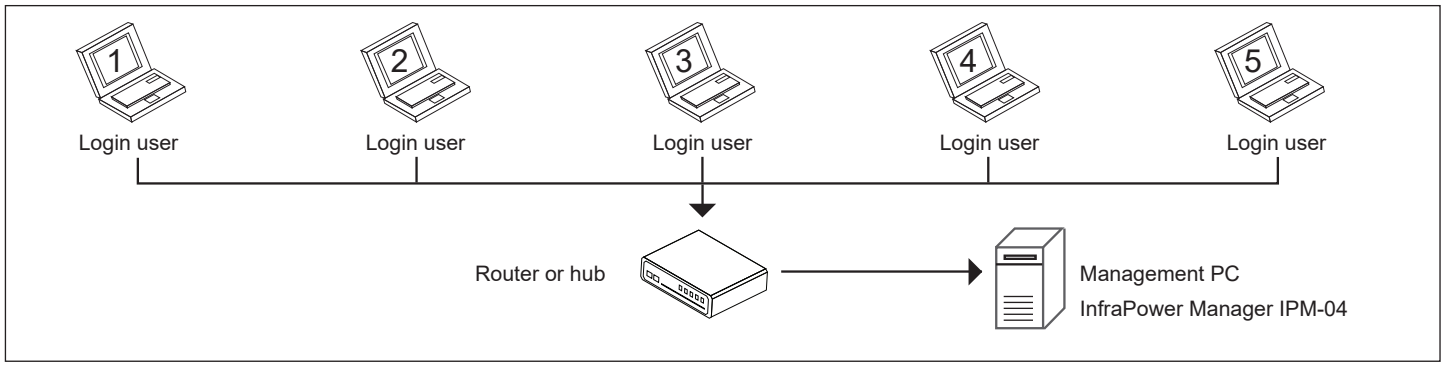
(If fail to access, please ask MIS to check if the port for web server is enable. Default port : 80)

e.g. http://192.168.0.1/IPM-04/

Step 3. Enter " **User name** " . Default is " **admin** "

Enter " **Password** " . Default is " **00000000** "





Only one administrator among 5 concurrent users

Only Administrator is authorised to access :

< **User** >, < **Setup** >, < **Alarm** >, < **General** >, < **Backup** > & < **Global** >

< 3.1 > System Setup

In < **User** >, administrator can create 4 more operators (concurrent users).

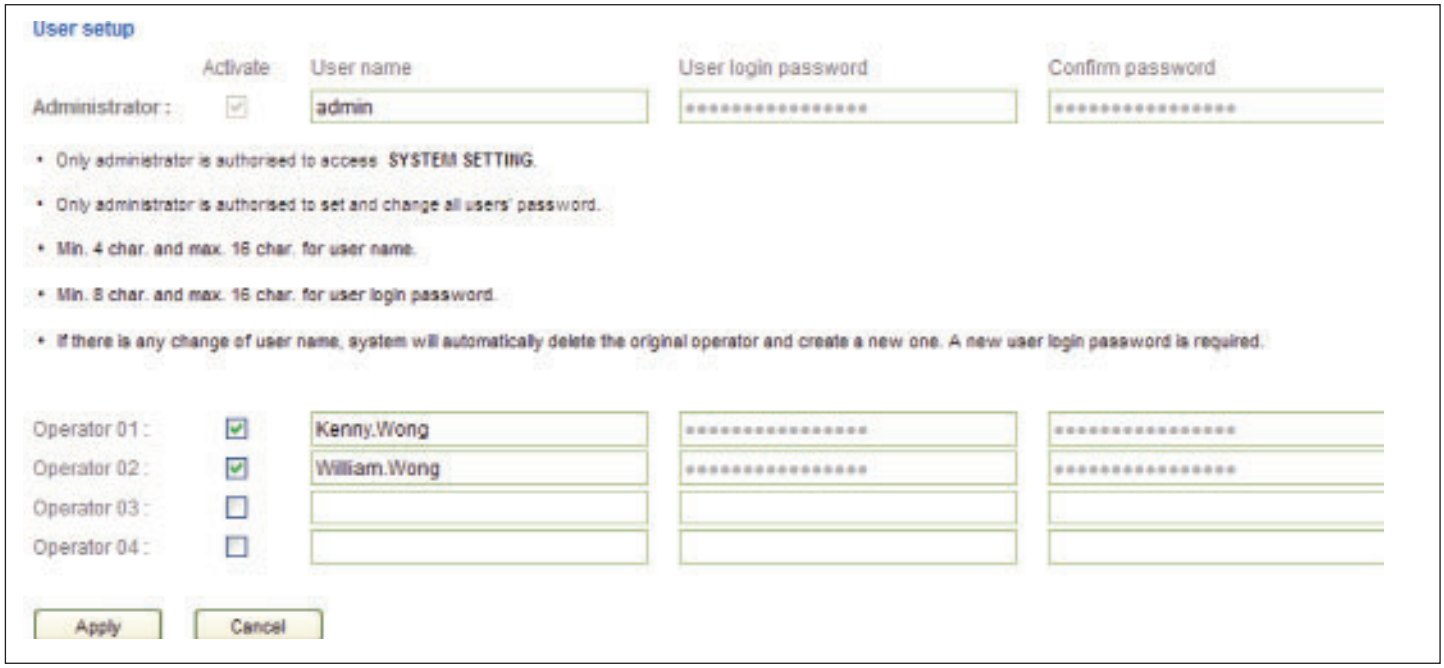
Step 1. Tick " **Operator 1:** "

Step 2. Input " **User name** " & " **User login password** "

Step 3. Input user login password in " **Confirm password** " again

Step 4. Repeat Step 1 to 3 for other operators

Step 5. Click " **Apply** " to finish the user setup



< 3.1 > System Setup

In **< Setup >**, administrator can activate max. 50 IP Dongle groups & set the group command password

Step 1. **“ Activate “** IP Dongle group 01

Step 2. Input **“ IP address “** & **“ password “** of the IP Dongle.

Please refer to Step. 10 & 7 of < 2.2 > IP dongle configuration respectively.

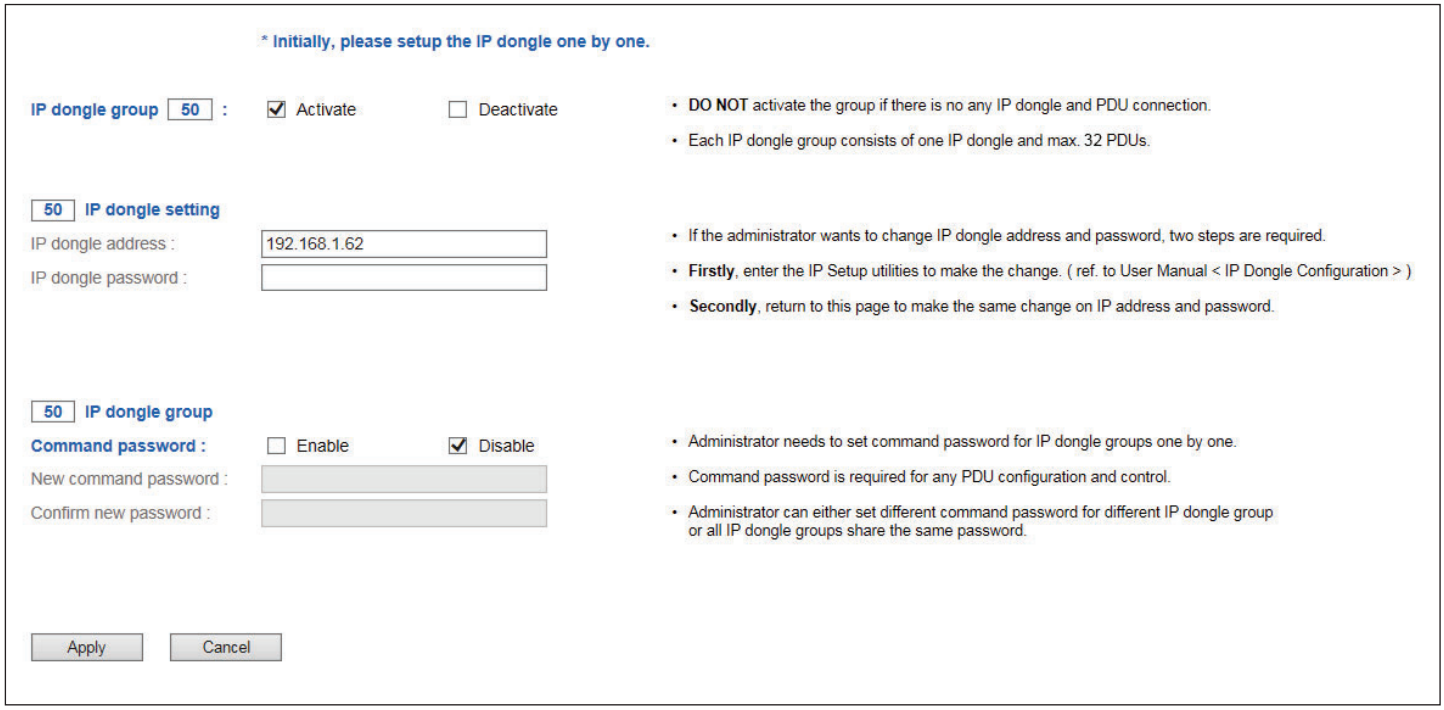
Step 3. “ **Enable** “ Command password

Step 4. Input “ **New command password** ”. Default is “ **00000000** “

Step 5. Input new command password in “ **Confirm new password** “ again.

Step 6. Click “ **Apply** “ to finish the IP Dongle group setup

Step 7. Repeat step 1 to 6 for other IP Dongle groups



< 3.1 > System Setup

In < **Alarm** >, administrator can configure the alarm email server & max. 5 email recipients to receive alarm notifications from the software

Default is **“Disable”.**

Step 1. “ Enable “ alarm email

Step 2. Input **“ SMTP server ”** and **“ SMTP port “**

Step 3. Input **“ User email “**

Step 4. “ Enable “ or **“ Disable “** the **“ SMTP authentication “**

Step 5. Input **“ User name “** and **“ Password “**

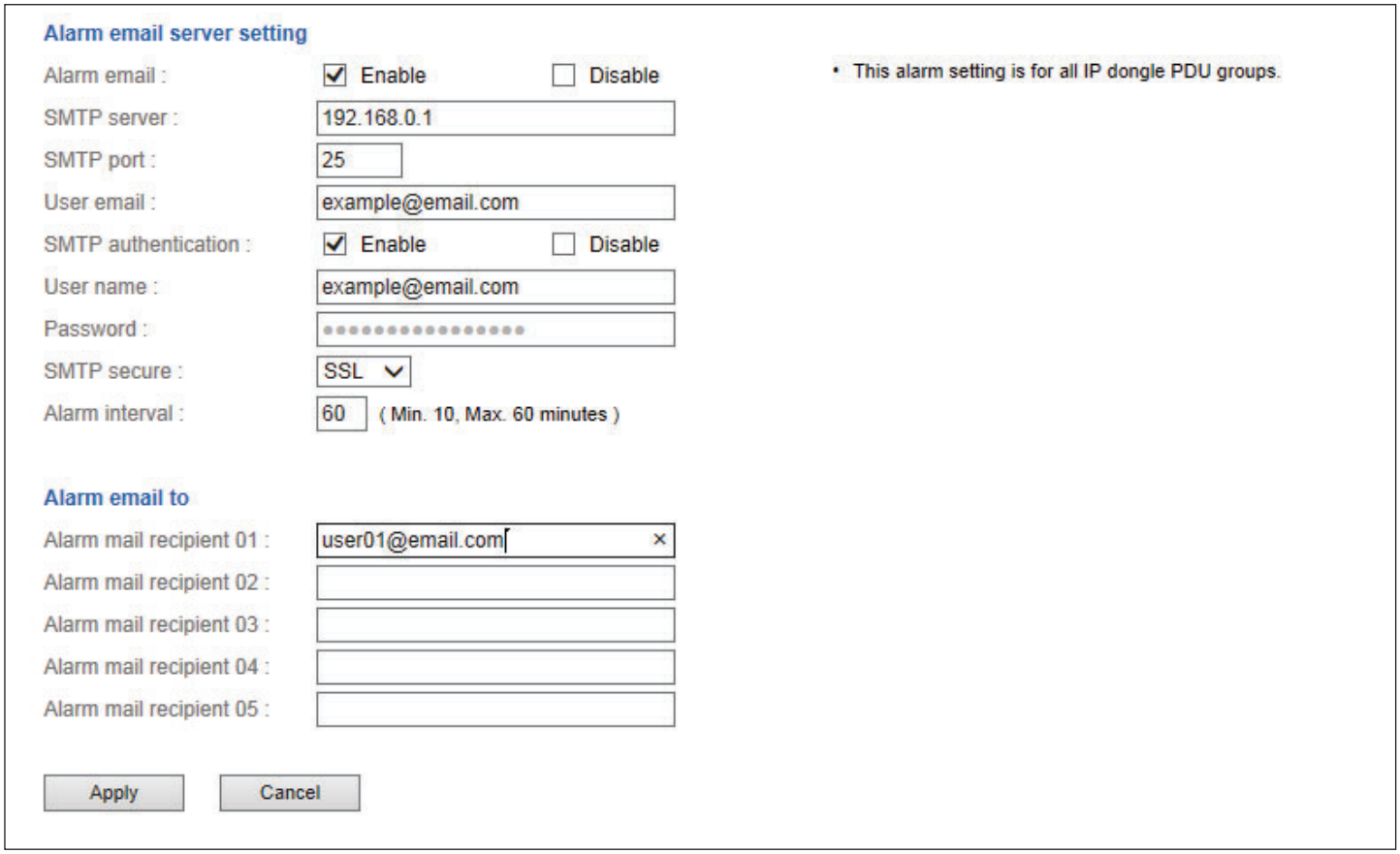
Step 6. Select the **“ SMTP secure “** (None / SSL / TLS)

Step 7. Input the **“ Alarm interval “**

Step 8. Input the alarm recipient email account in **“ Alarm mail recipient 01 “**

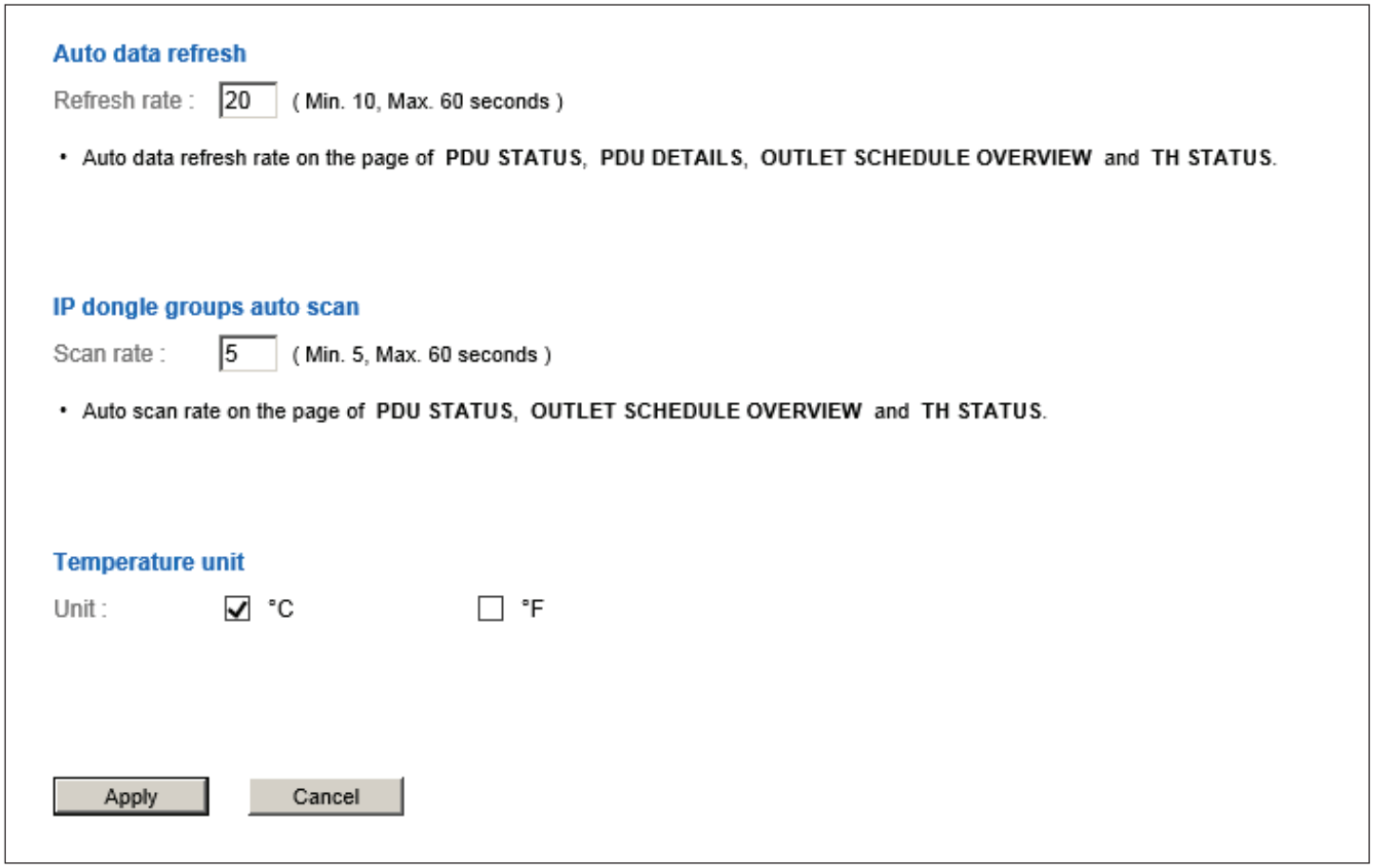
Step 9. Repeat step 8 for other alarm recipients

Step 10. Click **“ Apply “** to finish the alarm email server setting

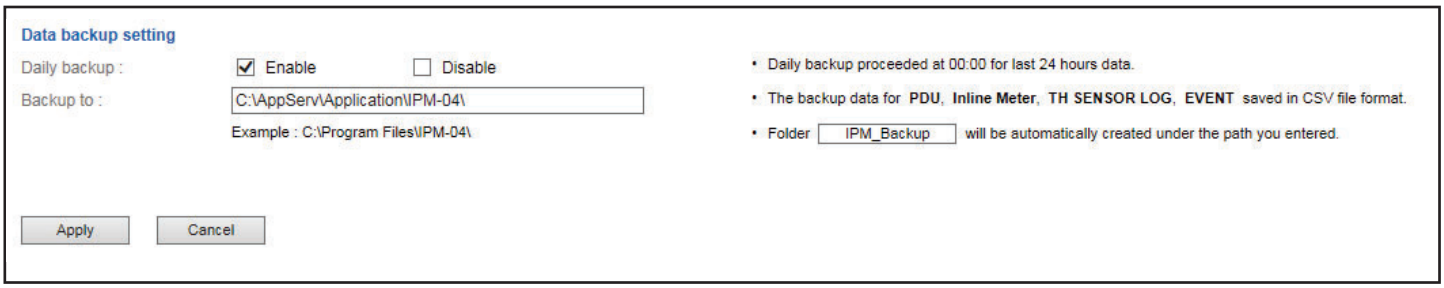


< 3.1 > System Setup

In < **General** >, administrator can change the “ **Refresh rate** “ , “ **Scan rate** “ & “ **Temperature unit** “ across all IP Dongle groups



In < **Backup** >
Default is “ **Enable** “
Default Backup Path : “ **C:\AppServ\Application\IPM-04** “

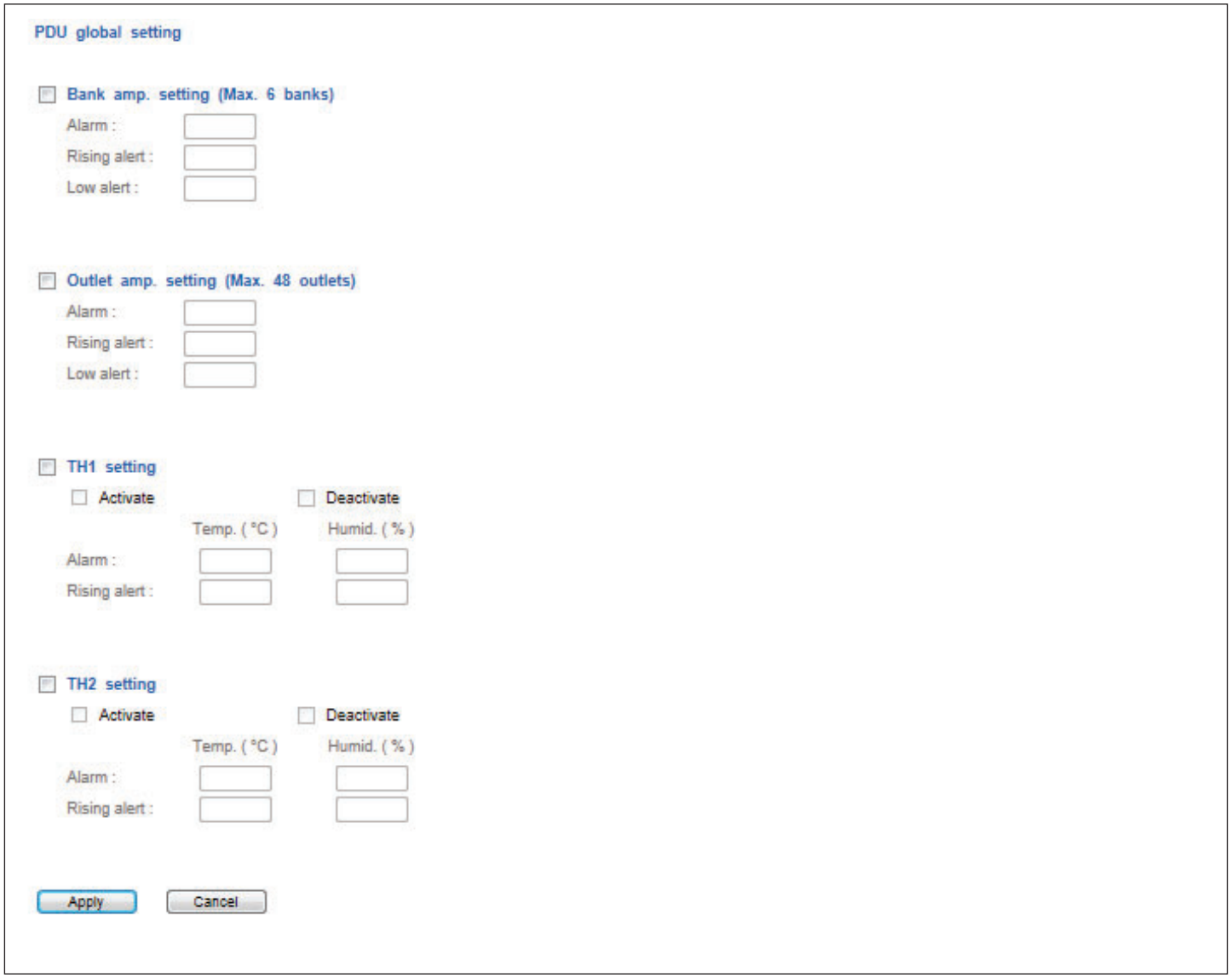


< 3.1 > System Setup

In < Global > , you can configure the settings of all the connected PDUs.

- Edit the PDU bank / circuit level Alarm amp. , rising alert amp. & low alert amp. Threshold
- Edit the PDU outlet level Alarm amp. , rising alert amp. & low alert amp. Threshold (Outlet Measurement PDU only)
- Activate / Deactivate the TH1 & TH2 sensor. When activated, you can edit the Temp. / Humid alarm & rising alert threshold.

Before you do the PDU global setting , please search the connected PDUs of each IP dongle group first.



< 3.1 > System Setup

In **< Sys log >**, it provides past 2000 event records of :

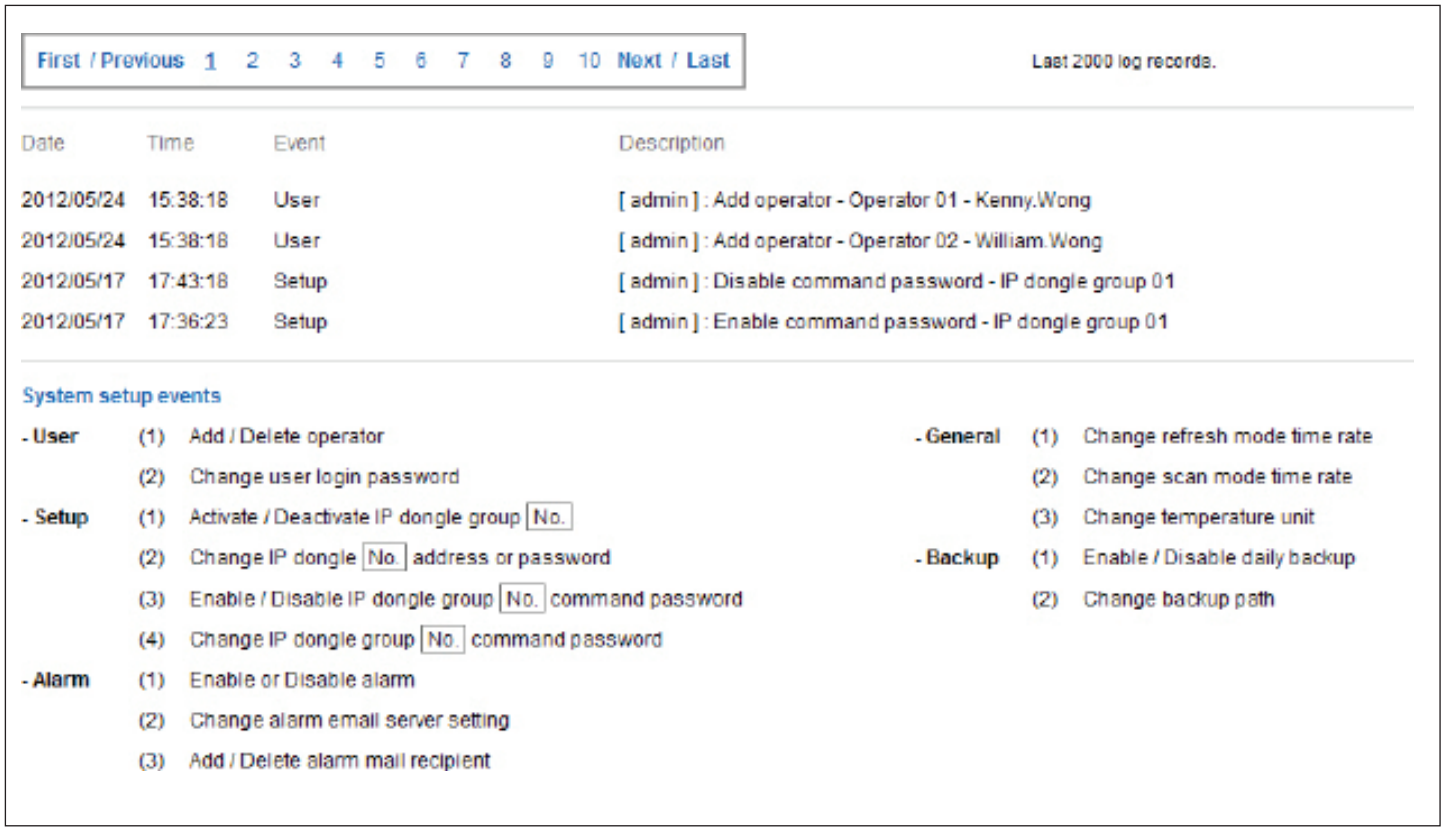
- < User >

- < Setup >

- < Alarm >

- < General >

- < Backup >



< 3.2 > Remote Access

After the completion of < **System Setup** > administrator and 4 concurrent users can access the management PC remotely. All of them can follow the steps below to access management PC & IPM-04

Step 1. Add the port of web server in the firewall settings of the management PC.

- Open " **Control Panel** "
- Select " **Windows Firewall** "
- Select " **Advanced settings** "
- Right Click " **Inbound Rules** " & select " **New Rule…** "
- Select " **Port** " & Click " **Next>** "
- Select " **TCP** " then " **All local port**s " & Click " **Next>** "
- Select " **Allow the connection** " & Click " **Next>** "
- Tick all three options & Click " **Next>** "
- Input the " **Name** " & " **Description** " of the port & Click " **Finish** "

Step 2. Open the web browser of remote client PC

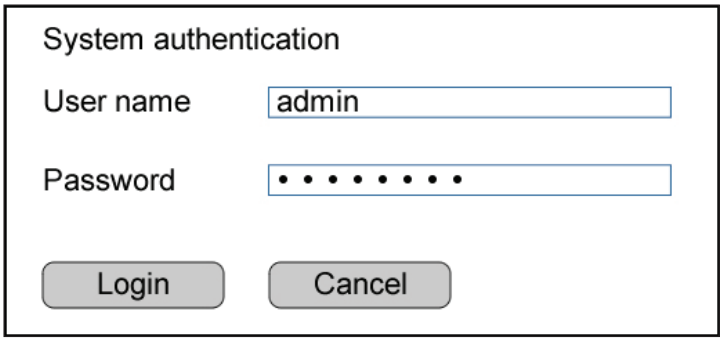
Step 3. Input the URL of InfraPower Manager IPM-04 in the address bar

e.g. http://192.168.0.1/IPM-04/

If the port no. of web server is not 80, please enter the appropriate port no. follow the IP address e.g. http://192.168.0.1:81/IPM-04/

Step 4. System authentication page pops up automatically.

Input " **User name** ", " **Password** " & Click " **Login** "



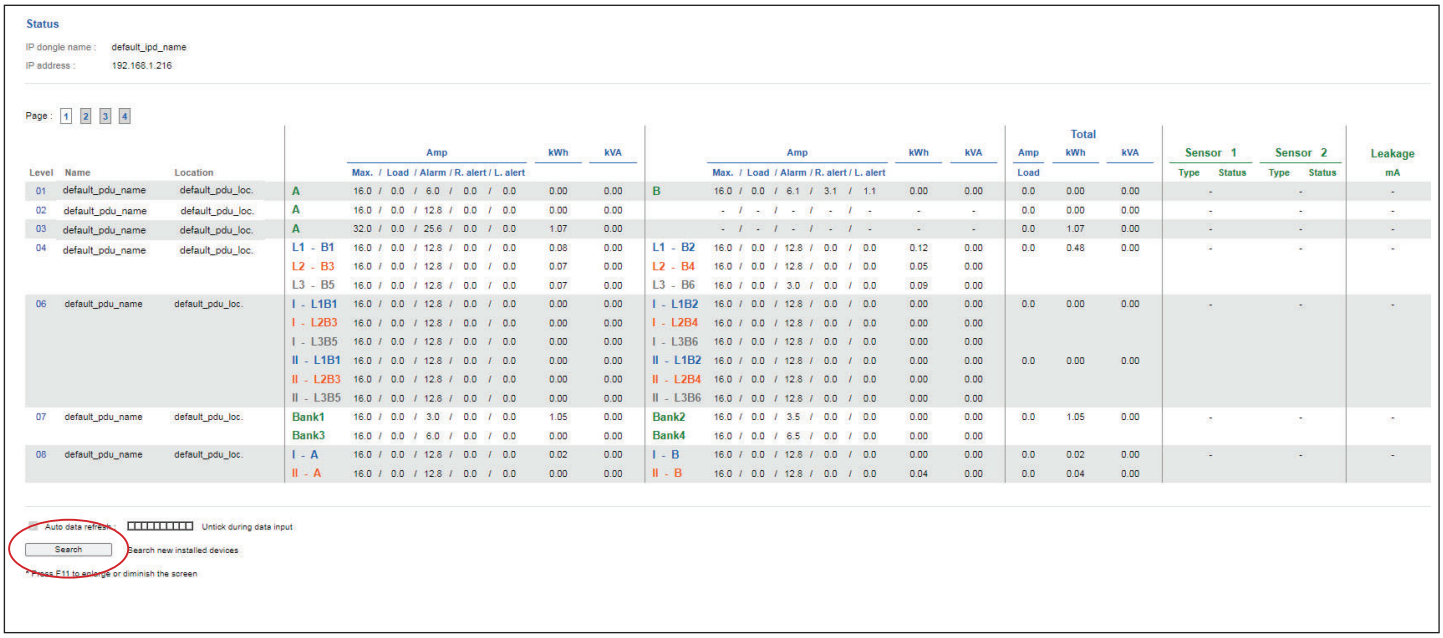
Part IV. Software Usage & Operation

< 4.1 > Status

< Status > provides

- **Search** function to search new installed PDUs in each IP Dongle group. **
  During searching process, the PDU system timer will be synchronized from the management PC
- **Scan** function to monitor the PDUs' status of each IP Dongle group **ONE by ONE**
- View latest loading on each PDU's banks / circuits
- View aggregate current & energy consumption on each PDU
- View status & reading of Temp. & Humid sensors connected to each PDU
- View status of Door / Smoke sensors connected to each PDU

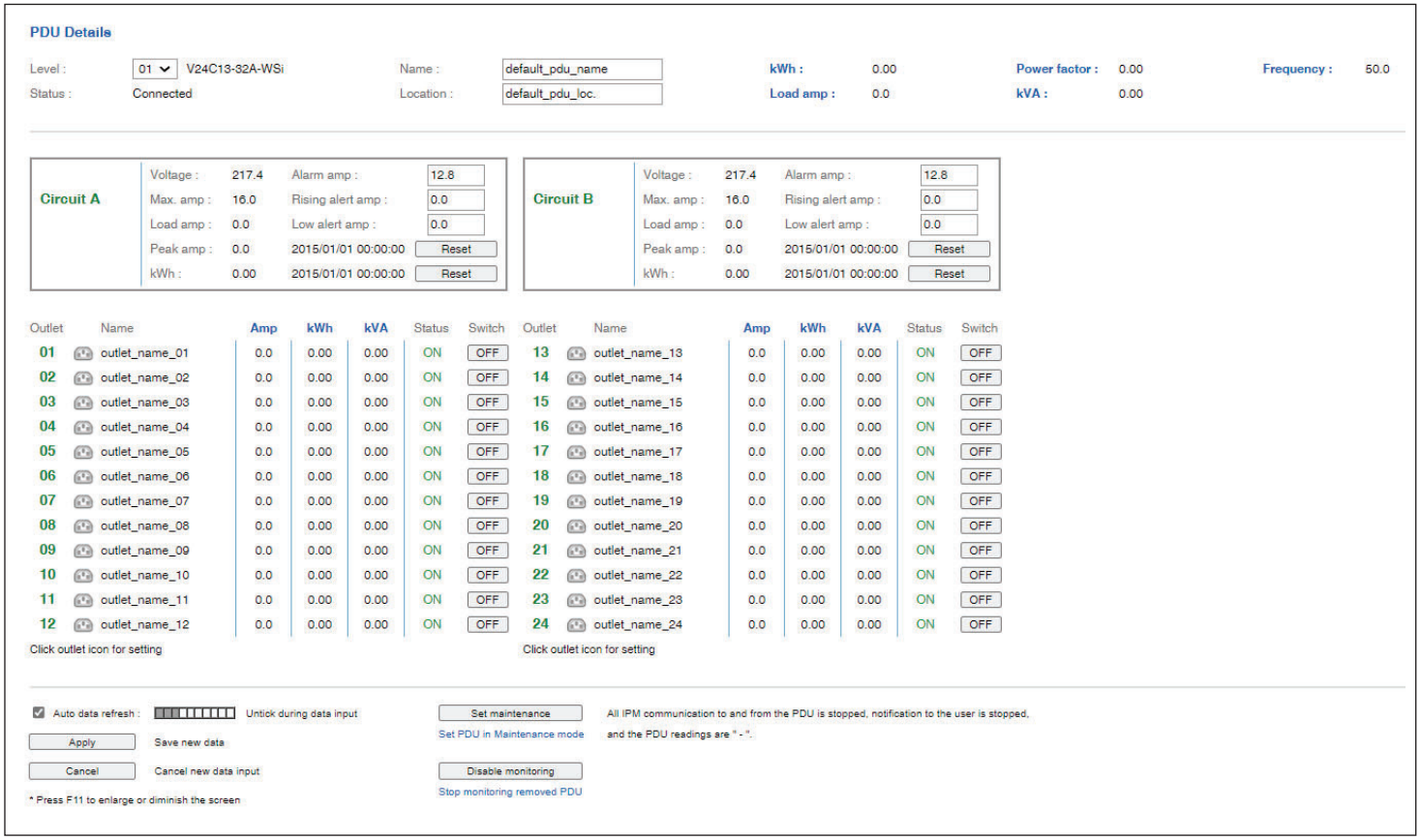
**** Please search the new installed PDUs via PPS-03-S WEBUI before do the searching in IPM-04. Details please refer to PPS-03-S user manual < 1.5 >**



< 4.2 > Details

In < **Details** >,

- Change " **Name** " and " **Location** " of PDU & Click " **Apply** "
- Change " **Alarm amp.** " . " **Rising alert amp.** " & " **Low alert amp.** " of PDU's banks or circuits & Click " **Apply** "
- Click " **Reset** " to reset peak amp. and kWh of PDU's banks or circuits if necessary
- Click " **ON / OFF** " to switch ON / OFF outlet (Switched PDU only)
- View On / OFF status of each PDU's outlet
- View aggregated current on the PDU
- View latest loading & energy consumption of each PDU outlet (Outlet Measurement PDU only)
- View latest Voltage of each PDU bank or circuit



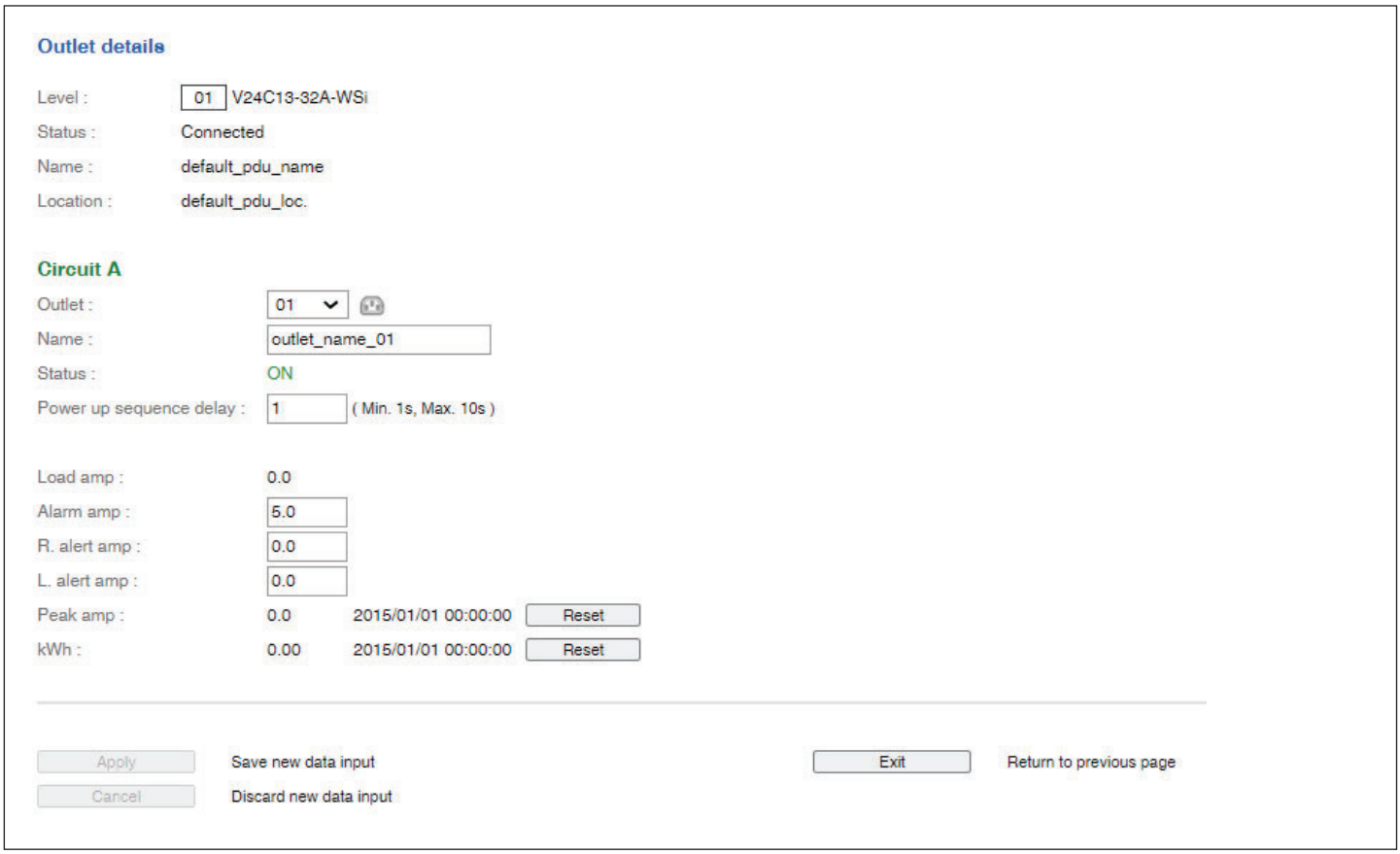
< 4.3 > Outlet Setting

In < **Outlet setting** >,

- Change PDU's outlet name
- Change " **Power up sequence delay** " of PDU's outlet (Switched PDU only)
- Change " **Alarm amp.** " , " **Rising alert amp.** " & " **Low alert amp.** " of PDU's outlet (Outlet Measurement PDU only)

Click " **Apply** " to finish the above settings

- Click " **Reset** " to reset peak amp. or kWh of PDU's outlet (Outlet Measurement PDU only)

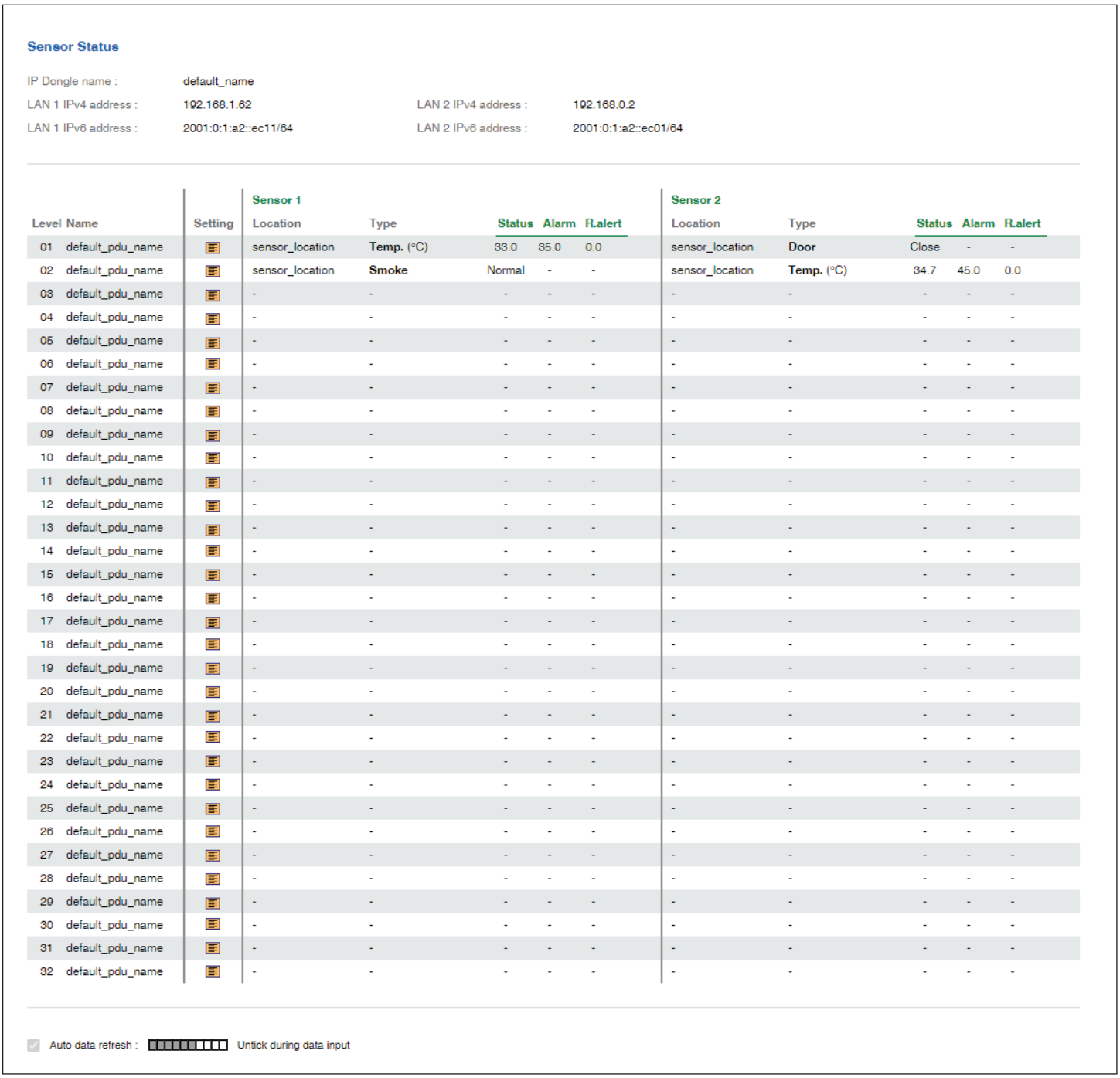


< 4.4 > Sensor Status

In < **Sensor status** >,

- View status, location, latest reading & alarm setting of Temp. & Humid sensors
- View status & location of Door sensor & Smoke sensor

The GUI will not show the readings if the sensors are **NOT** installed & activated.



Sensor Status

IP Dongle name : default_name

LAN 1 IPv4 address : 192.168.1.62 LAN 2 IPv4 address : 192.168.0.2

LAN 1 IPv6 address : 2001:0:1:a2::ec11/64 LAN 2 IPv6 address : 2001:0:1:a2::ec01/64

			Sensor 1					Sensor 2				
Level	Name	Setting	Location	Type	Status	Alarm	R.alert	Location	Type	Status	Alarm	R.alert
01	default_pdu_name		sensor_location	**Temp.** (°C)	33.0	35.0	0.0	sensor_location	**Door**	Close	-	-
02	default_pdu_name		sensor_location	**Smoke**	Normal	-	-	sensor_location	**Temp.** (°C)	34.7	45.0	0.0
03	default_pdu_name		-	-	-	-	-	-	-	-	-	-
04	default_pdu_name		-	-	-	-	-	-	-	-	-	-
05	default_pdu_name		-	-	-	-	-	-	-	-	-	-
06	default_pdu_name		-	-	-	-	-	-	-	-	-	-
07	default_pdu_name		-	-	-	-	-	-	-	-	-	-
08	default_pdu_name		-	-	-	-	-	-	-	-	-	-
09	default_pdu_name		-	-	-	-	-	-	-	-	-	-
10	default_pdu_name		-	-	-	-	-	-	-	-	-	-
11	default_pdu_name		-	-	-	-	-	-	-	-	-	-
12	default_pdu_name		-	-	-	-	-	-	-	-	-	-
13	default_pdu_name		-	-	-	-	-	-	-	-	-	-
14	default_pdu_name		-	-	-	-	-	-	-	-	-	-
15	default_pdu_name		-	-	-	-	-	-	-	-	-	-
16	default_pdu_name		-	-	-	-	-	-	-	-	-	-
17	default_pdu_name		-	-	-	-	-	-	-	-	-	-
18	default_pdu_name		-	-	-	-	-	-	-	-	-	-
19	default_pdu_name		-	-	-	-	-	-	-	-	-	-
20	default_pdu_name		-	-	-	-	-	-	-	-	-	-
21	default_pdu_name		-	-	-	-	-	-	-	-	-	-
22	default_pdu_name		-	-	-	-	-	-	-	-	-	-
23	default_pdu_name		-	-	-	-	-	-	-	-	-	-
24	default_pdu_name		-	-	-	-	-	-	-	-	-	-
25	default_pdu_name		-	-	-	-	-	-	-	-	-	-
26	default_pdu_name		-	-	-	-	-	-	-	-	-	-
27	default_pdu_name		-	-	-	-	-	-	-	-	-	-
28	default_pdu_name		-	-	-	-	-	-	-	-	-	-
29	default_pdu_name		-	-	-	-	-	-	-	-	-	-
30	default_pdu_name		-	-	-	-	-	-	-	-	-	-
31	default_pdu_name		-	-	-	-	-	-	-	-	-	-
32	default_pdu_name		-	-	-	-	-	-	-	-	-	-

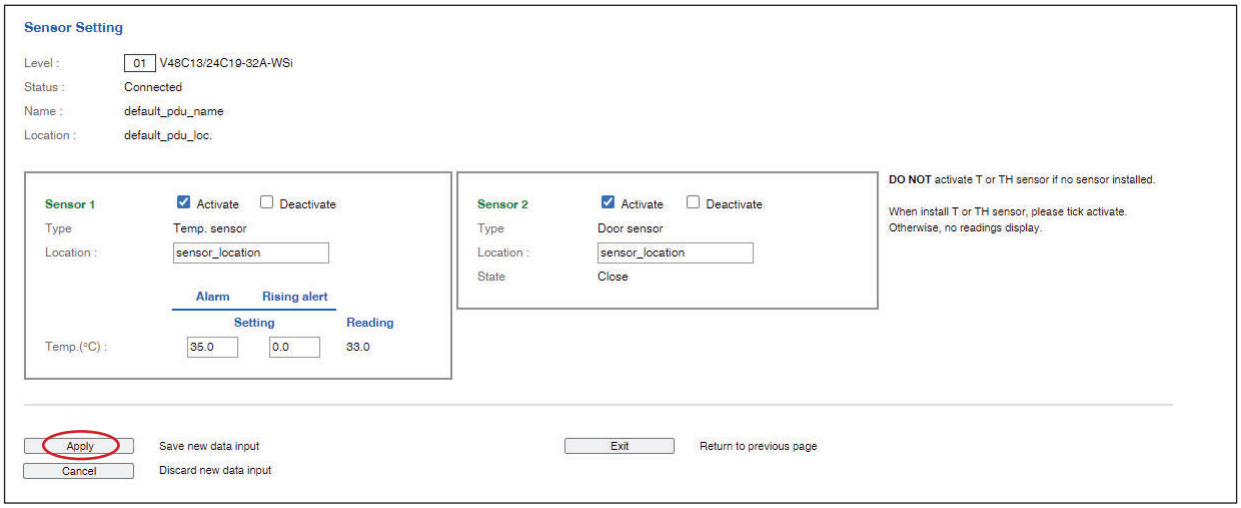
Auto data refresh : Untick during data input

< 4.5 > Sensor Setting

In < **Sensor Setting** >,

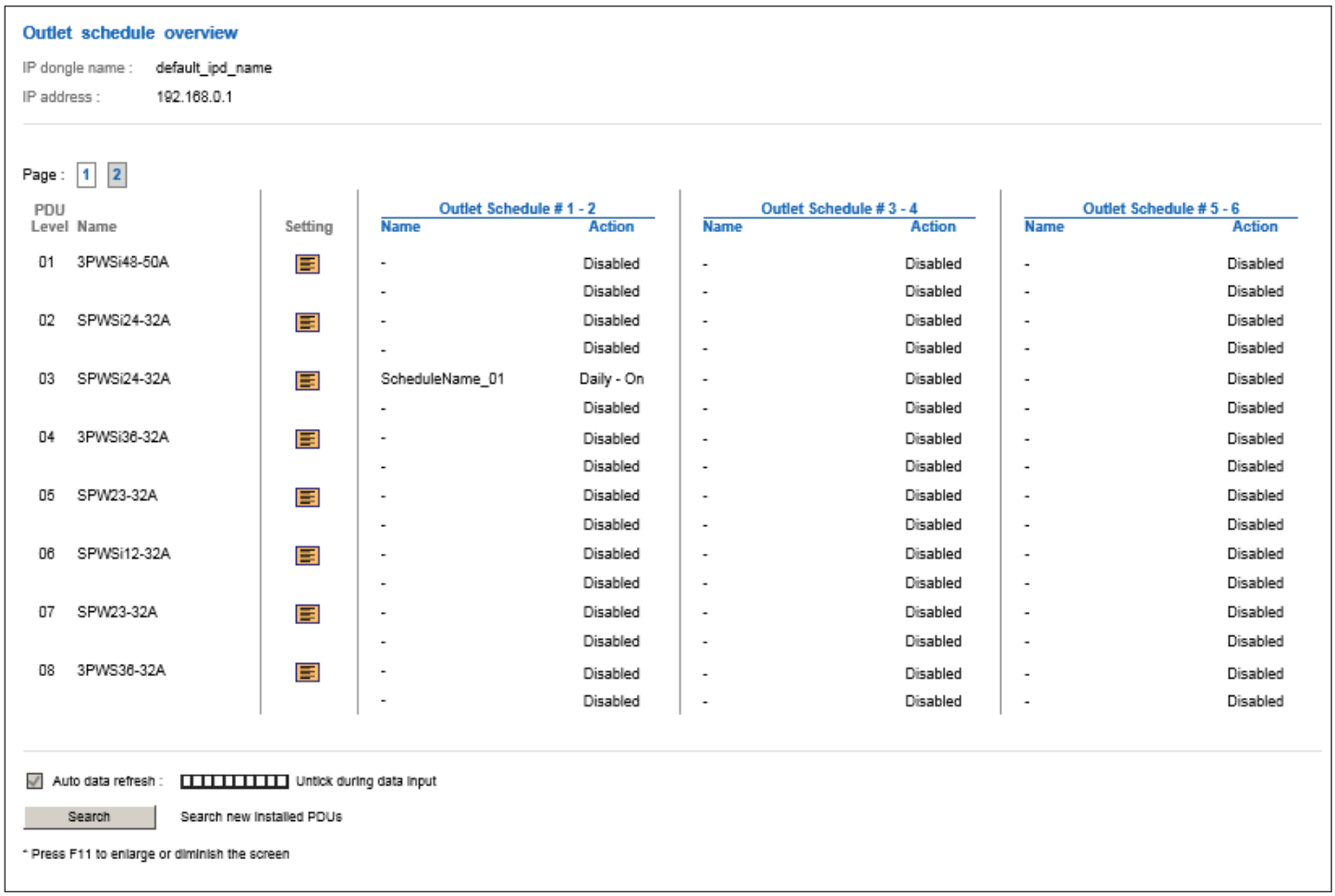
- Default Sensor setting : Deactivate
- " **Activate** " sensors ONLY when they are connected
- Change " **Location** " , " **Rising alert Setting** " & "**Alarm Setting** " of Temp. & Humid sensors
- Change " **Location** " of Door sensor & Smoke sensor

If no any sensor connected, NEVER activate.



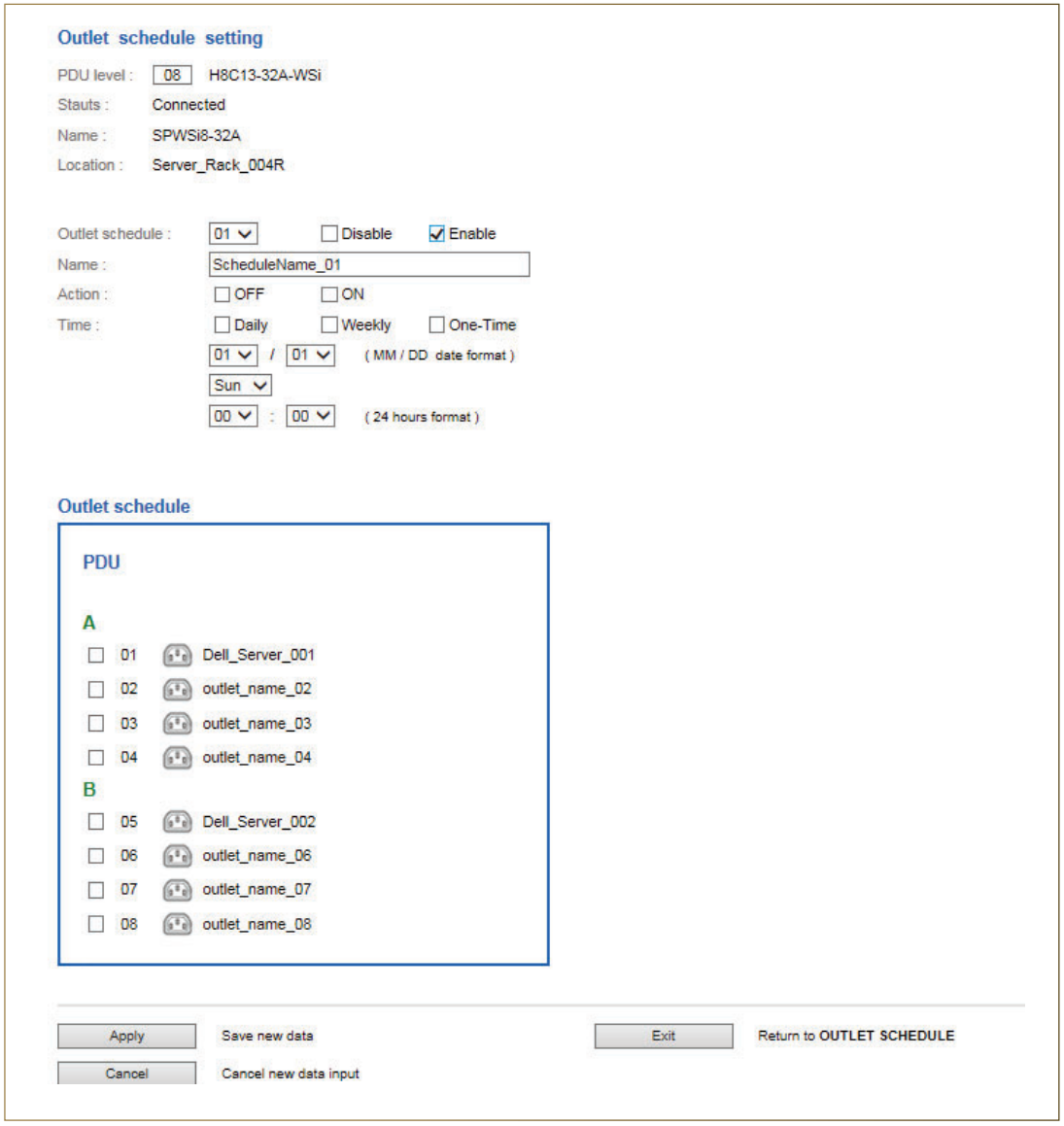
< 4.6 > Outlet Schedule Overview

< **Outlet Schedule Overview** > provides an overview on outlet schedule setting of PDUs, and scan the page by IP Dongle group one by one.



< 4.7 > Outlet Schedule Setting

In < **Outlet Schedule Setting** >, user can set max. 6 outlet On / Off schedules in each PDU. The outlet schedule can be set on one-time, daily or weekly basis. (Switched PDU with 1.8” LCD meter only)

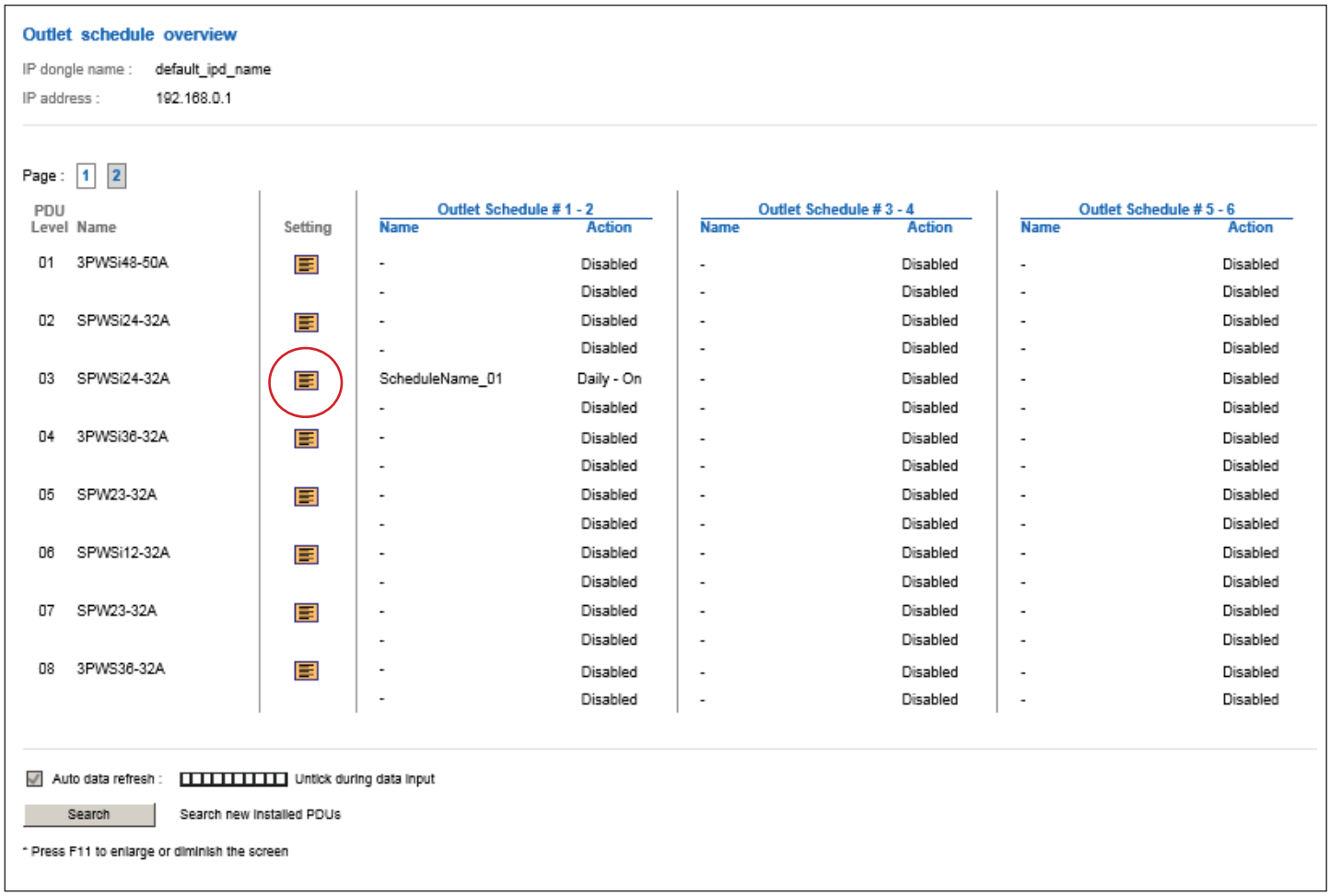


< 4.7 > Outlet Schedule Setting

PDU outlet schedule is a function allowing users to set a specific time to switch either ON or OFF the outlets on daily, weekly or one-time basis.

Each PDU provides **6 schedule tasks**. Users can follow the steps below to enable the PDU outlet schedule

Step 1. Go to < **Outlet Schedule Overview** > page, Click " **Setting** "



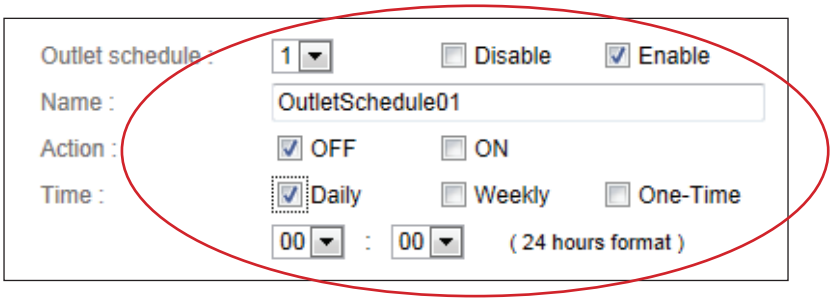
< 4.7 > Outlet Schedule Setting

Step 2. In < **Outlet Schedule Setting** > page, Select " **Outlet schedule 1** " & Tick " **Enable** "

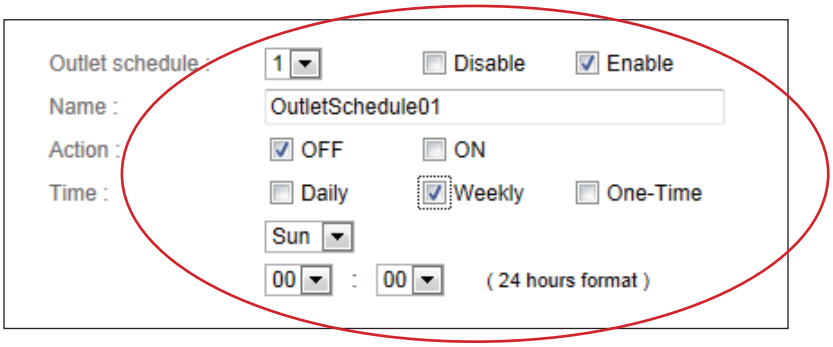
Step 3. Provide the name of the outlet schedule

Step 4. Select the action (either ON or OFF)

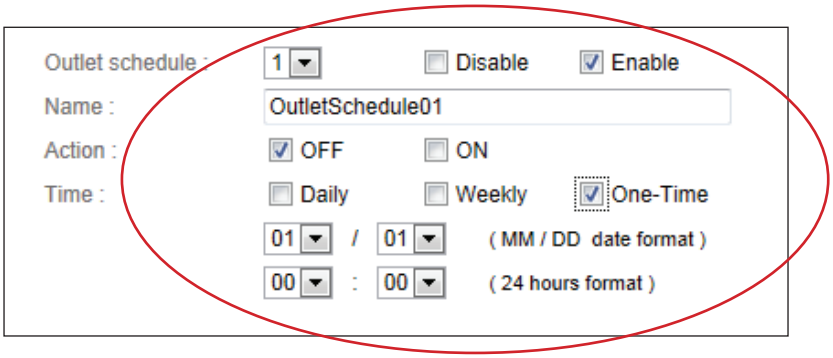
Step 5. Select the time for outlet schedule.



Daily ON / OFF Schedule



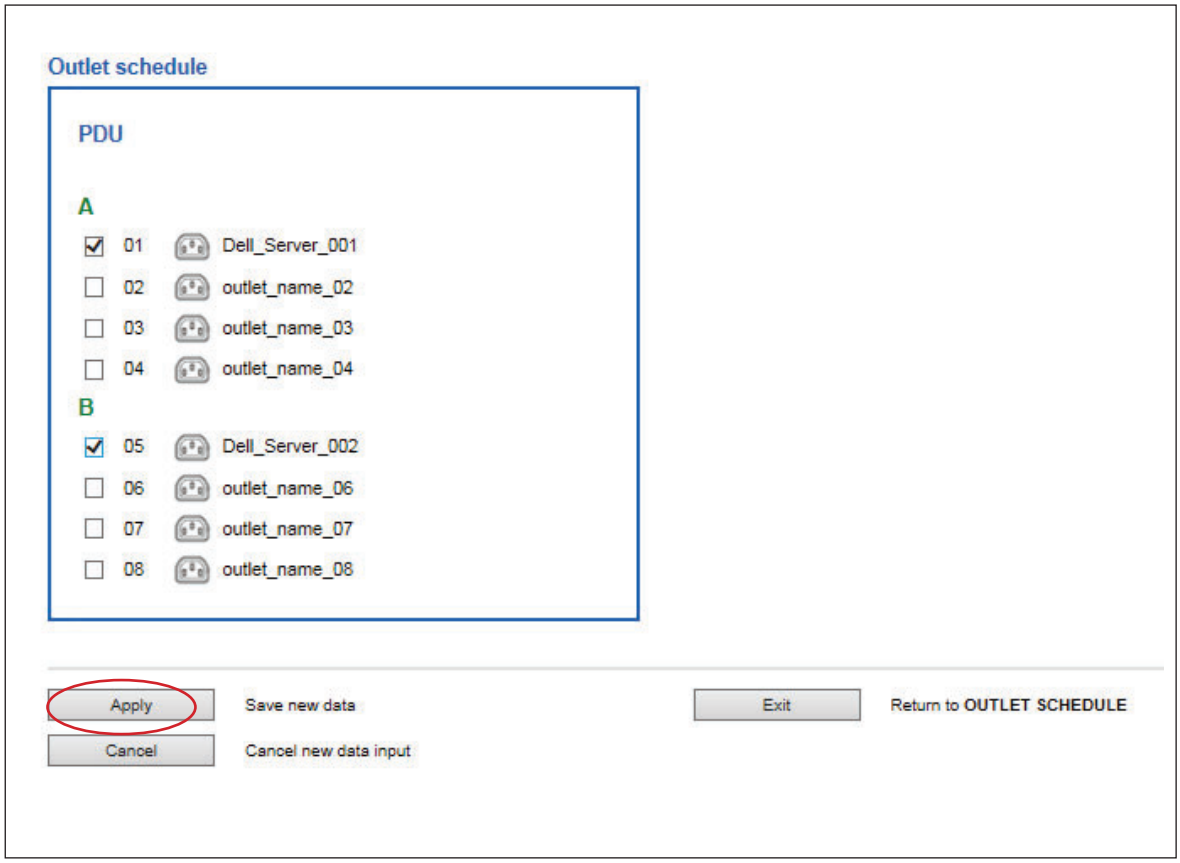
Weekly ON / OFF Schedule



One-time ON / OFF Schedule

< 4.7 > Outlet Schedule Setting

Step 6. Tick the outlets to switch ON / OFF



Step 7. Click " **Apply** " to save the settings

Step 8. Repeat step 2 to 7 for Outlet Schedule no.2 to 6 if necessary

If the outlet schedule task is " **One-Time** ", the setting will return to " **Disable** " once the task is completed.

To cancel the outlet schedule, tick " **Disable** " & Click " **Apply** " to finish the change.

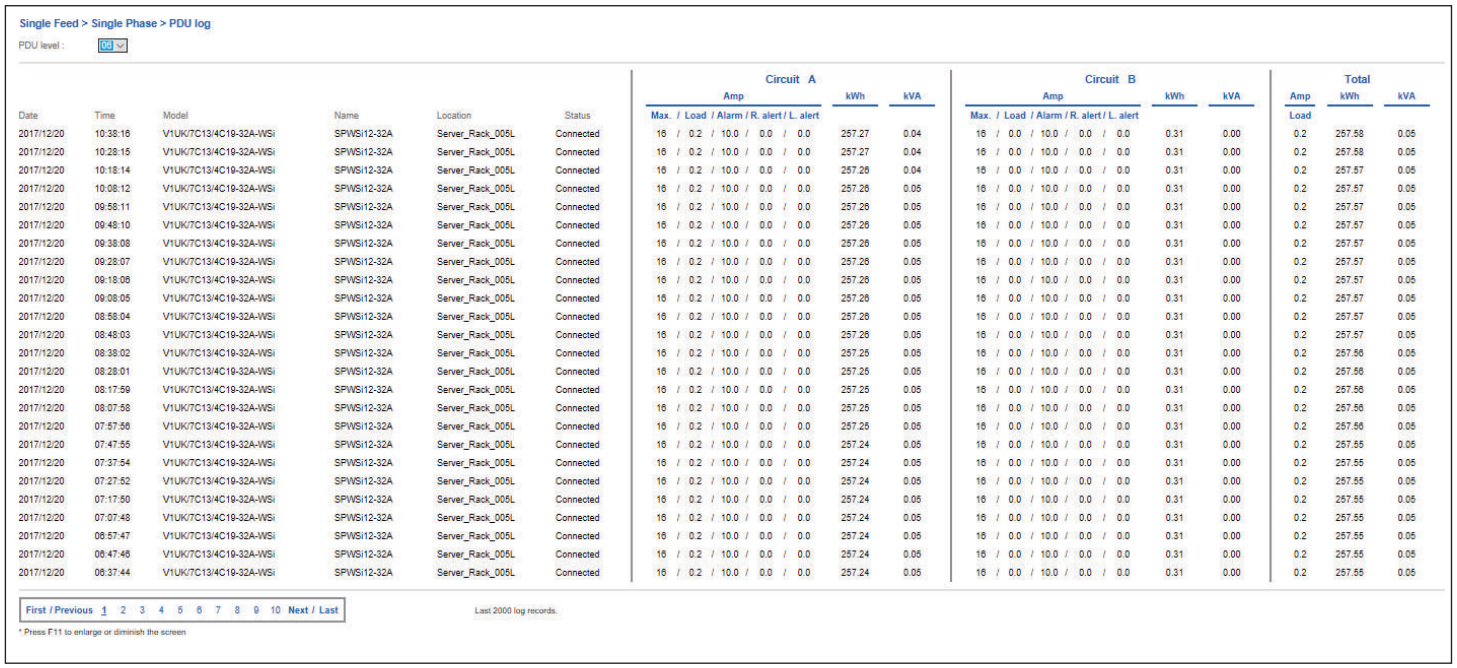
Part V. Log & Events

< 5.1 > Single Phase PDU / Outlet Log

< Single Phase PDU Log >

provides past 2000 log records of each Single Phase PDU.

The software will generate a PDU log record every 10 mins.



Single Feed > Single Phase > PDU log

PDU level : 02

						Circuit A				Circuit B				Total		
						Amp		kWh	kVA	Amp		kWh	kVA	Amp	kWh	kVA
Date	Time	Model	Name	Location	Status	Max. / Load / Alarm / R. alert / L. alert				Max. / Load / Alarm / R. alert / L. alert				Load		
2017/12/20	10:38:16	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.27	0.04	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.58	0.05
2017/12/20	10:28:15	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.27	0.04	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.58	0.05
2017/12/20	10:18:14	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.04	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	10:08:12	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	09:58:11	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	09:48:10	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	09:38:08	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	09:28:07	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	09:18:06	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	09:08:05	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	08:58:04	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	08:48:03	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.26	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.57	0.05
2017/12/20	08:38:02	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.25	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.56	0.05
2017/12/20	08:28:01	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.25	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.56	0.05
2017/12/20	08:17:59	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.25	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.56	0.05
2017/12/20	08:07:58	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.25	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.56	0.05
2017/12/20	07:57:56	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.25	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.56	0.05
2017/12/20	07:47:55	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.24	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.55	0.05
2017/12/20	07:37:54	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.24	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.55	0.05
2017/12/20	07:27:52	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.24	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.55	0.05
2017/12/20	07:17:50	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.24	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.55	0.05
2017/12/20	07:07:48	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.24	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.55	0.05
2017/12/20	06:57:47	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.24	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.55	0.05
2017/12/20	06:47:46	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.24	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.55	0.05
2017/12/20	06:37:44	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	Server_Rack_005L	Connected	16 / 0.2 / 10.0 / 0.0 / 0.0		257.24	0.05	16 / 0.0 / 10.0 / 0.0 / 0.0		0.31	0.00	0.2	257.55	0.05

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

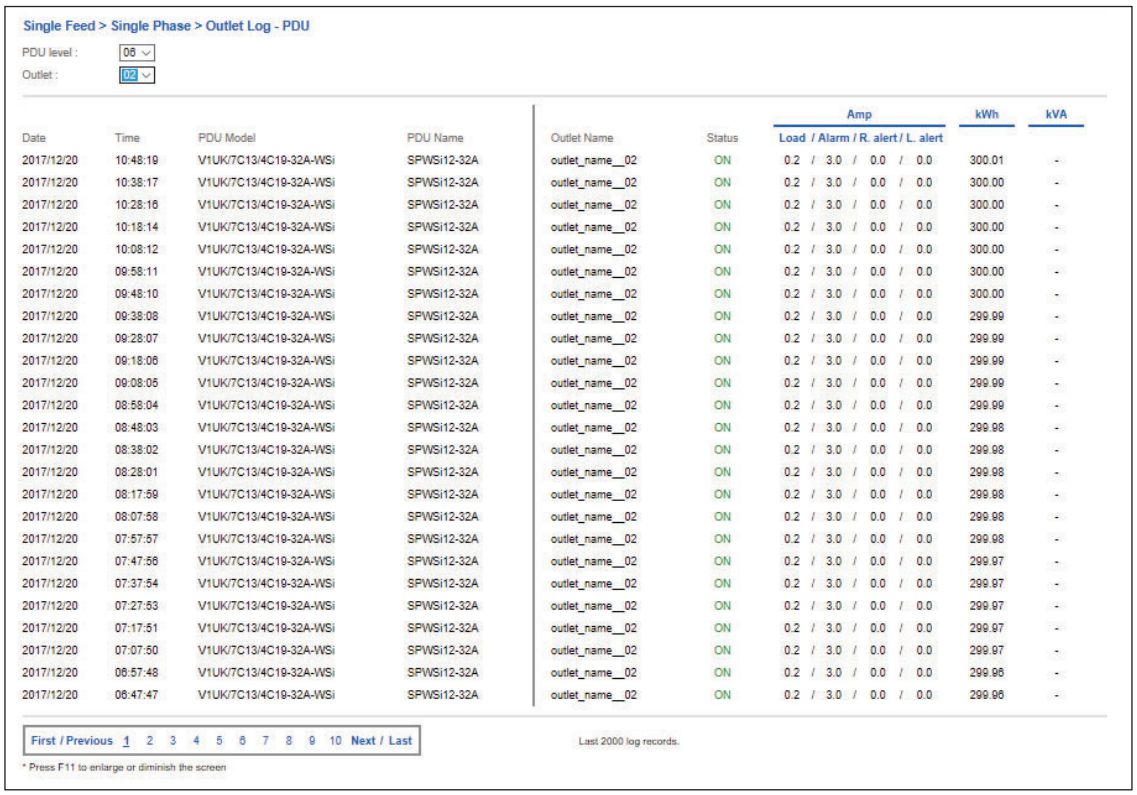
Last 2000 log records.

* Press F11 to enlarge or diminish the screen

< Single Phase PDU Outlet Log >

provides past 2000 log records of each Single Phase PDU's Outlet .

The software will generate an outlet log record every 10 mins.



Single Feed > Single Phase > Outlet Log - PDU

PDU level : 06

Outlet : 02

						Amp	kWh	kVA
Date	Time	PDU Model	PDU Name	Outlet Name	Status	Load / Alarm / R. alert / L. alert		
2017/12/20	10:48:19	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	300.01	-
2017/12/20	10:38:17	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	300.00	-
2017/12/20	10:28:16	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	300.00	-
2017/12/20	10:18:14	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	300.00	-
2017/12/20	10:08:12	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	300.00	-
2017/12/20	09:58:11	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	300.00	-
2017/12/20	09:48:10	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	300.00	-
2017/12/20	09:38:08	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.99	-
2017/12/20	09:28:07	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.99	-
2017/12/20	09:18:06	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.99	-
2017/12/20	09:08:05	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.99	-
2017/12/20	08:58:04	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.99	-
2017/12/20	08:48:03	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.98	-
2017/12/20	08:38:02	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.98	-
2017/12/20	08:28:01	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.98	-
2017/12/20	08:17:59	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.98	-
2017/12/20	08:07:58	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.98	-
2017/12/20	07:57:57	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.98	-
2017/12/20	07:47:56	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.97	-
2017/12/20	07:37:54	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.97	-
2017/12/20	07:27:53	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.97	-
2017/12/20	07:17:51	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.97	-
2017/12/20	07:07:50	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.97	-
2017/12/20	06:57:48	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.96	-
2017/12/20	06:47:47	V1UK/7C13/4C19-32A-WSi	SPWSi12-32A	outlet_name__02	ON	0.2 / 3.0 / 0.0 / 0.0	299.96	-

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

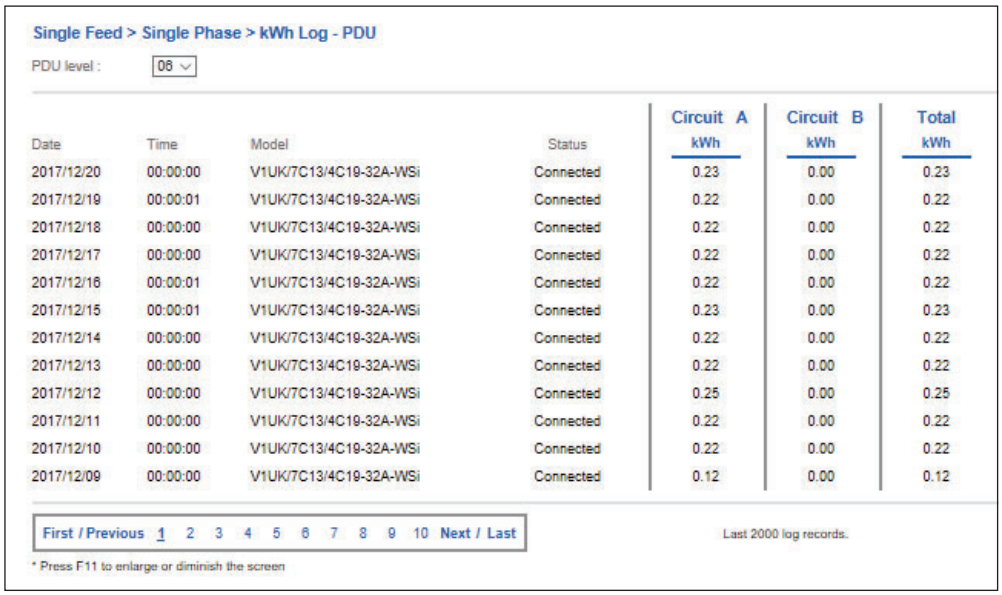
Last 2000 log records.

* Press F11 to enlarge or diminish the screen

< 5.1 > Single Phase PDU / Outlet Log

< Single Phase Daily kWh Log - PDU >

provides past 2000 daily energy consumption log records of each Single Phase PDU.
The record is logged at 00:00 everyday (+/- 5 mins.)



Single Feed > Single Phase > kWh Log - PDU

PDU level : 06

Date	Time	Model	Status	Circuit A kWh	Circuit B kWh	Total kWh
2017/12/20	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.23	0.00	0.23
2017/12/19	00:00:01	V1UK/7C13/4C19-32A-WSi	Connected	0.22	0.00	0.22
2017/12/18	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.22	0.00	0.22
2017/12/17	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.22	0.00	0.22
2017/12/16	00:00:01	V1UK/7C13/4C19-32A-WSi	Connected	0.22	0.00	0.22
2017/12/15	00:00:01	V1UK/7C13/4C19-32A-WSi	Connected	0.23	0.00	0.23
2017/12/14	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.22	0.00	0.22
2017/12/13	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.22	0.00	0.22
2017/12/12	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.25	0.00	0.25
2017/12/11	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.22	0.00	0.22
2017/12/10	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.22	0.00	0.22
2017/12/09	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	0.12	0.00	0.12

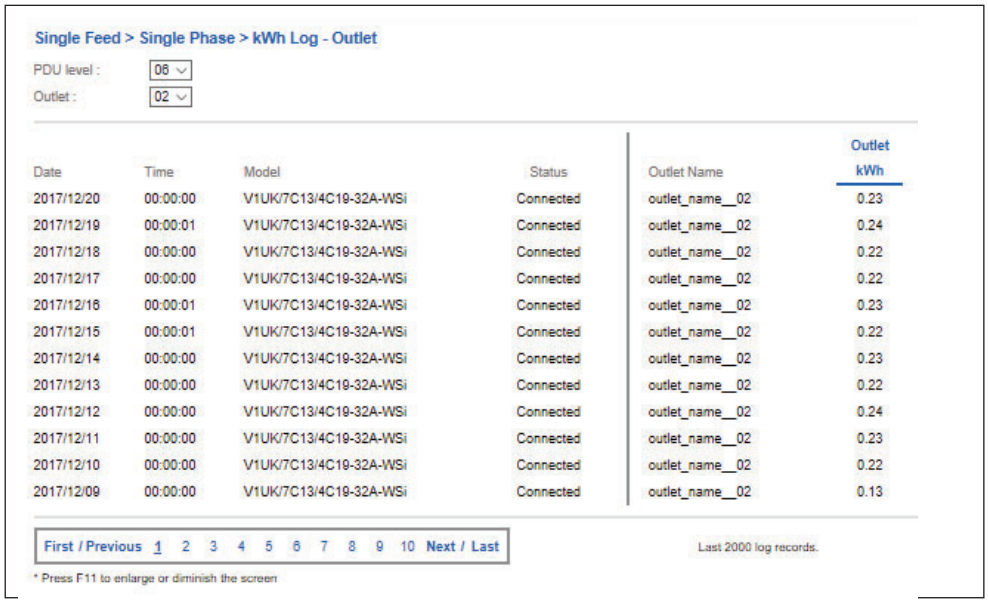
First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

* Press F11 to enlarge or diminish the screen

< Single Phase Daily kWh Log - Outlet >

provides past 2000 daily energy consumption log records of each Single Phase PDU's Outlet .
The record is logged at 00:00 everyday (+/- 5 mins.) .
(Single Phase Outlet Measurement PDU only)



Single Feed > Single Phase > kWh Log - Outlet

PDU level : 06

Outlet : 02

Date	Time	Model	Status	Outlet Name	Outlet kWh
2017/12/20	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.23
2017/12/19	00:00:01	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.24
2017/12/18	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.22
2017/12/17	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.22
2017/12/16	00:00:01	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.23
2017/12/15	00:00:01	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.22
2017/12/14	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.23
2017/12/13	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.22
2017/12/12	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.24
2017/12/11	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.23
2017/12/10	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.22
2017/12/09	00:00:00	V1UK/7C13/4C19-32A-WSi	Connected	outlet_name__02	0.13

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

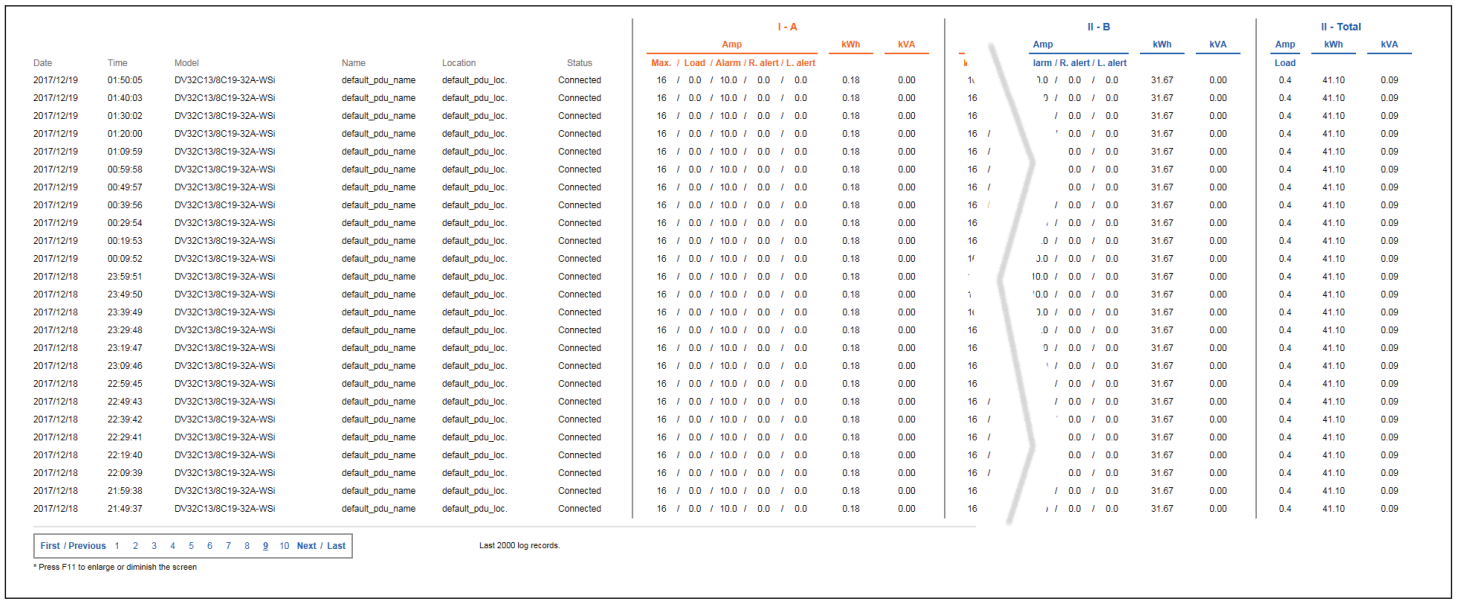
* Press F11 to enlarge or diminish the screen

< 5.1 > Single Phase PDU / Outlet Log

< Single Phase Dual Feed PDU Log >

provides past 2000 log records of each Single Phase PDU.

The software will generate a PDU log record every 10 mins.



Date	Time	Model	Name	Location	Status	I - A Amp Max. / Load / Alarm / R. alert / L. alert	I - A kWh	I - A kVA	II - B Amp Alarm / R. alert / L. alert	II - B kWh	II - B kVA	II - Total Amp Load	II - Total kWh	II - Total kVA
2017/12/19	01:50:05	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	01:40:03	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	01:30:02	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	01:20:00	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	01:09:59	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	00:59:58	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	00:49:57	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	00:39:56	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	00:29:54	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	00:19:53	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/19	00:09:52	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	23:59:51	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	23:49:50	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	23:39:49	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	23:29:48	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	23:19:47	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	23:09:46	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	22:59:45	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	22:49:43	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	22:39:42	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	22:29:41	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	22:19:40	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	22:09:39	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	21:59:38	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09
2017/12/18	21:49:37	DV32C13/8C19-32A-WSi	default_pdu_name	default_pdu_loc.	Connected	16 / 0.0 / 10.0 / 0.0 / 0.0	0.18	0.00	16 / 0.0 / 0.0	31.67	0.00	0.4	41.10	0.09

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

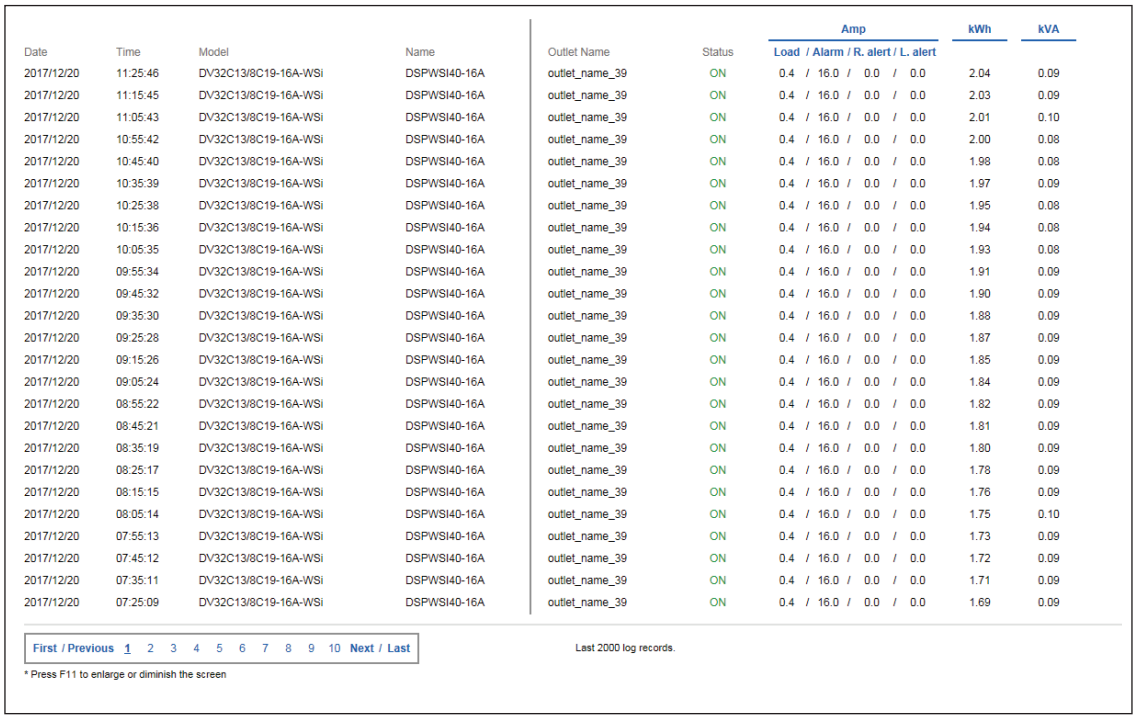
Last 2000 log records.

* Press F11 to enlarge or diminish the screen

< Single Phase Dual Feed PDU Outlet Log >

provides past 2000 log records of each Single Phase PDU's Outlet .

The software will generate an outlet log record every 10 mins.



Date	Time	Model	Name	Outlet Name	Status	Amp Load / Alarm / R. alert / L. alert	kWh	kVA
2017/12/20	11:25:46	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	2.04	0.09
2017/12/20	11:15:45	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	2.03	0.09
2017/12/20	11:05:43	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	2.01	0.10
2017/12/20	10:55:42	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	2.00	0.08
2017/12/20	10:45:40	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.98	0.08
2017/12/20	10:35:39	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.97	0.09
2017/12/20	10:25:38	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.95	0.08
2017/12/20	10:15:36	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.94	0.08
2017/12/20	10:05:35	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.93	0.08
2017/12/20	09:55:34	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.91	0.09
2017/12/20	09:45:32	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.90	0.09
2017/12/20	09:35:30	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.88	0.09
2017/12/20	09:25:28	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.87	0.09
2017/12/20	09:15:26	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.85	0.09
2017/12/20	09:05:24	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.84	0.09
2017/12/20	08:55:22	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.82	0.09
2017/12/20	08:45:21	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.81	0.09
2017/12/20	08:35:19	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.80	0.09
2017/12/20	08:25:17	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.78	0.09
2017/12/20	08:15:15	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.76	0.09
2017/12/20	08:05:14	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.75	0.10
2017/12/20	07:55:13	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.73	0.09
2017/12/20	07:45:12	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.72	0.09
2017/12/20	07:35:11	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.71	0.09
2017/12/20	07:25:09	DV32C13/8C19-16A-WSi	DSPWSI40-16A	outlet_name_39	ON	0.4 / 16.0 / 0.0 / 0.0	1.69	0.09

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

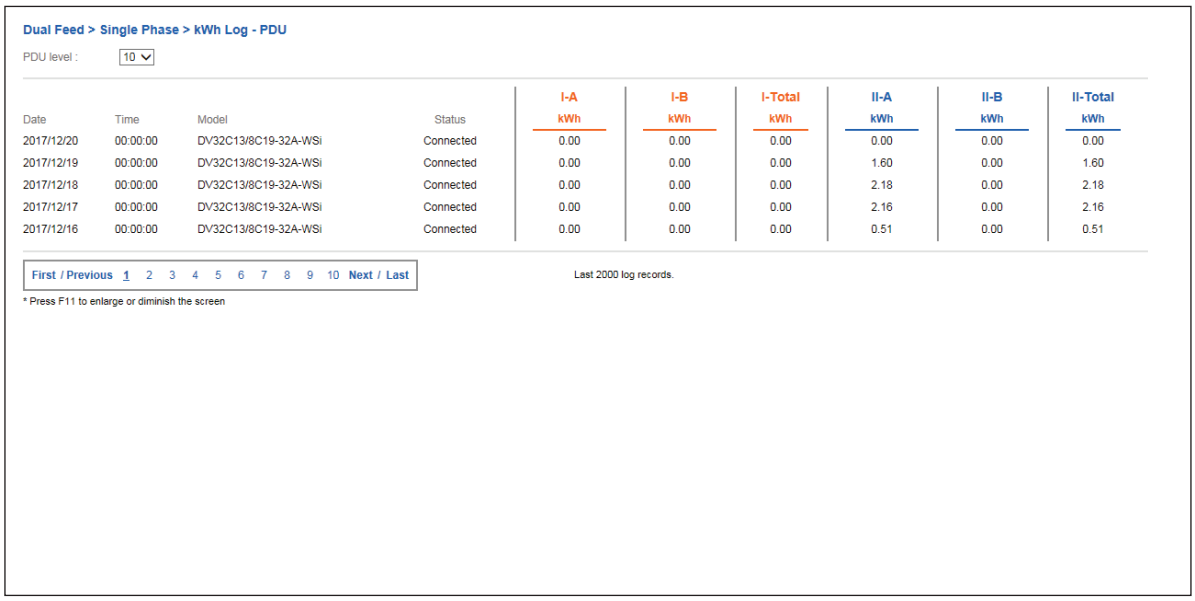
Last 2000 log records.

* Press F11 to enlarge or diminish the screen

< 5.1 > Single Phase PDU / Outlet Log

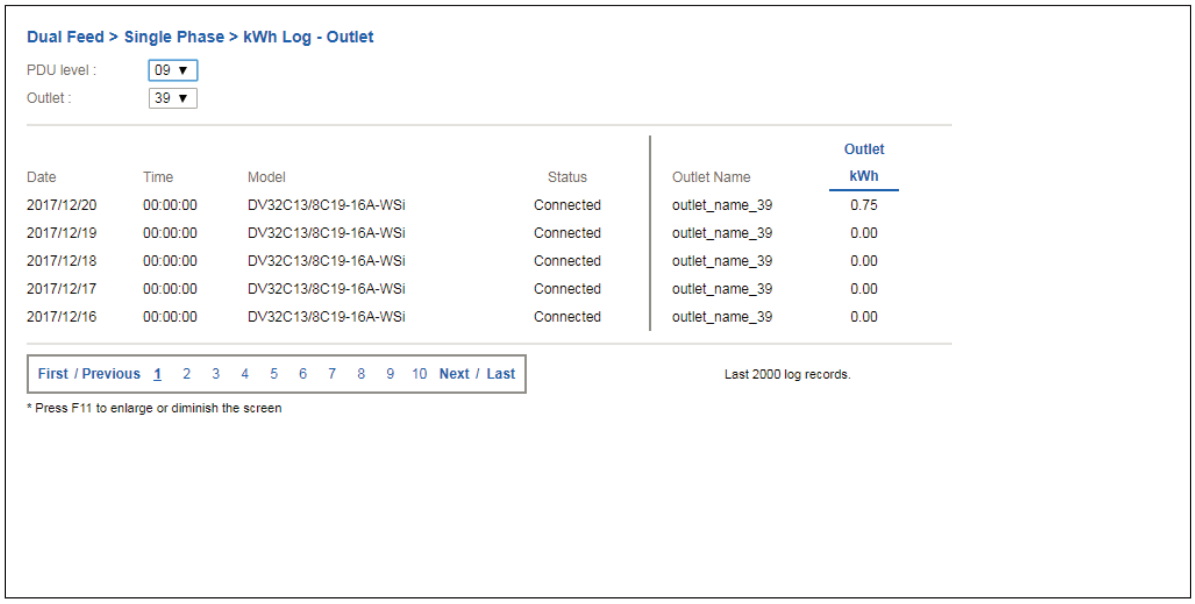
< Single Phase Dual Feed Daily kWh Log - PDU >

provides past 2000 daily energy consumption log records of each Single Phase PDU.
The record is logged at 00:00 everyday (+/- 5 mins.)



< Single Phase Dual Feed Daily kWh Log - Outlet >

provides past 2000 daily energy consumption log records of each Single Phase PDU's Outlet .
The record is logged at 00:00 everyday (+/- 5 mins.) .
(Single Phase Outlet Measurement PDU only)

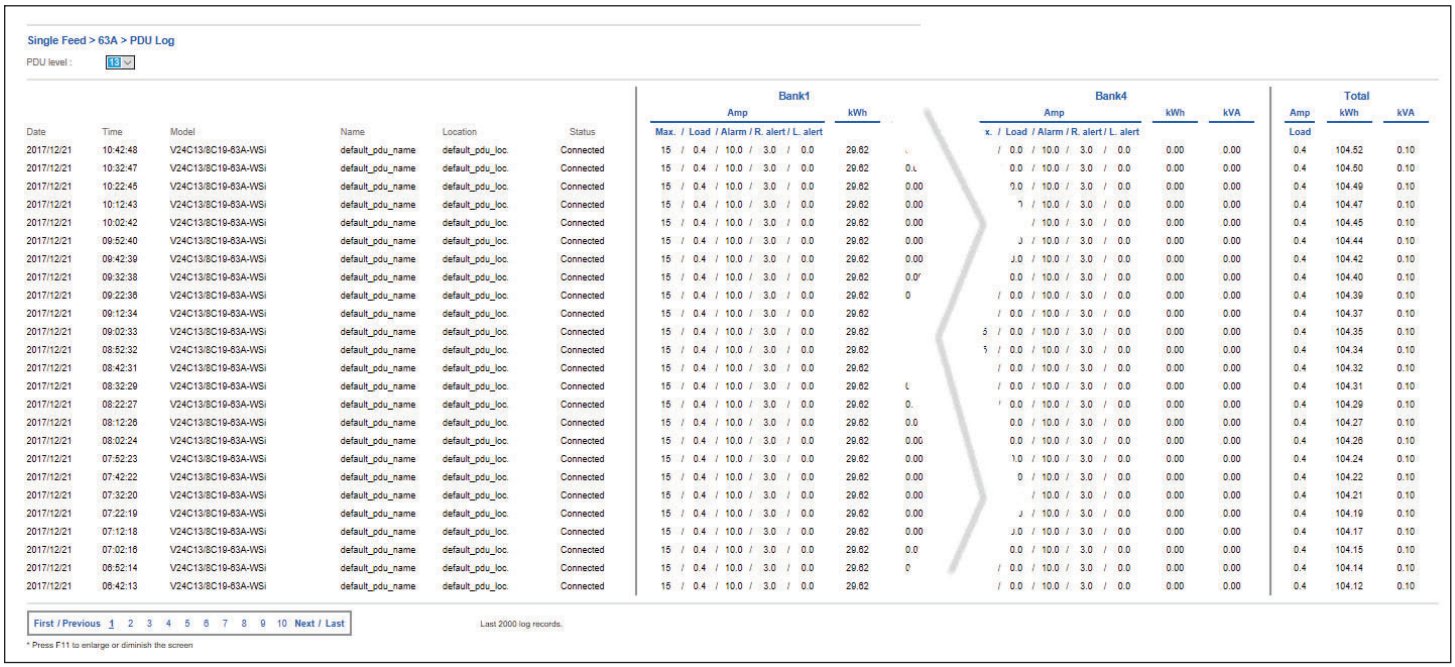


< 5.1 > Single Phase PDU / Outlet Log

< 63A PDU Log >

provides past 2000 log records of each 63A PDU.

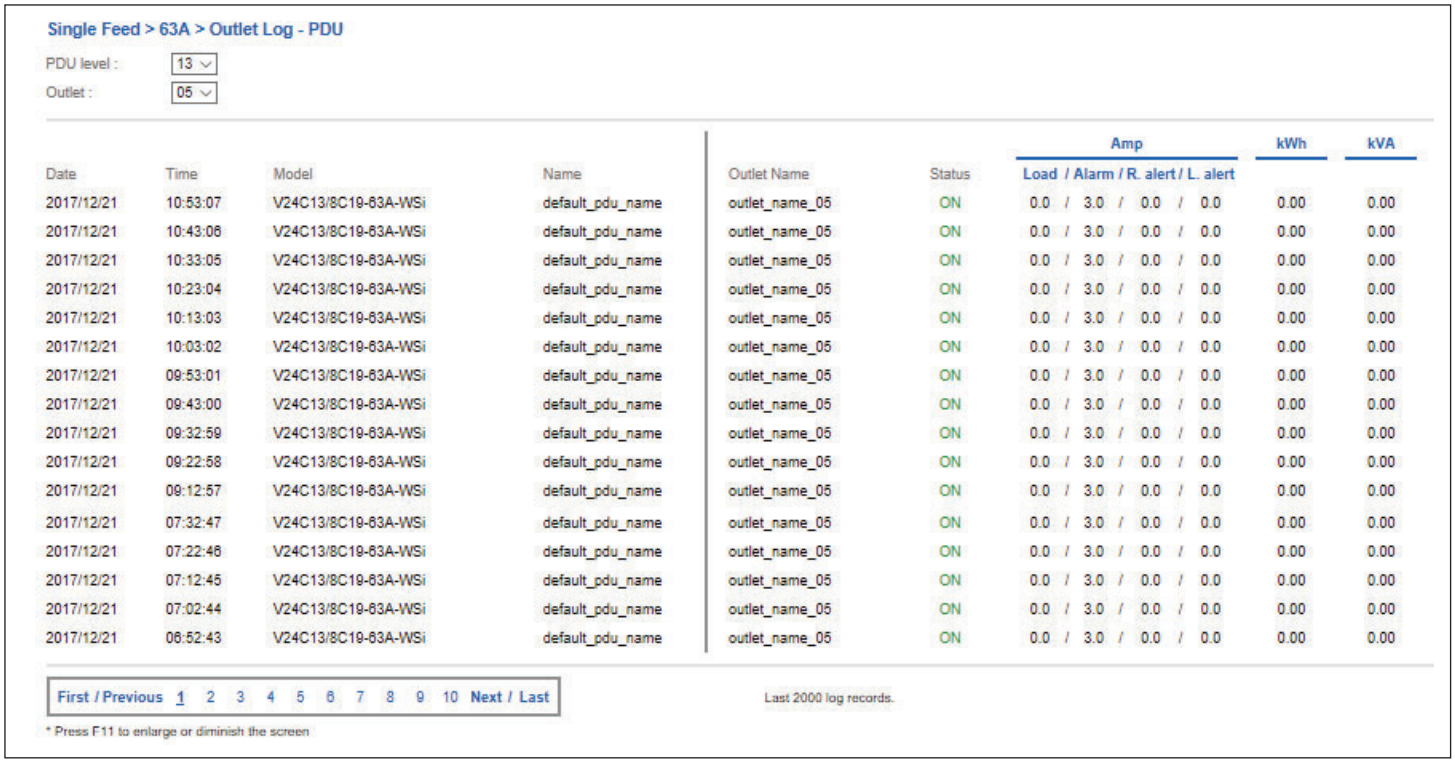
The software will generate a PDU log record every 10 mins.



< 63A PDU Outlet Log >

provides past 2000 log records of each Single Phase PDU's Outlet .

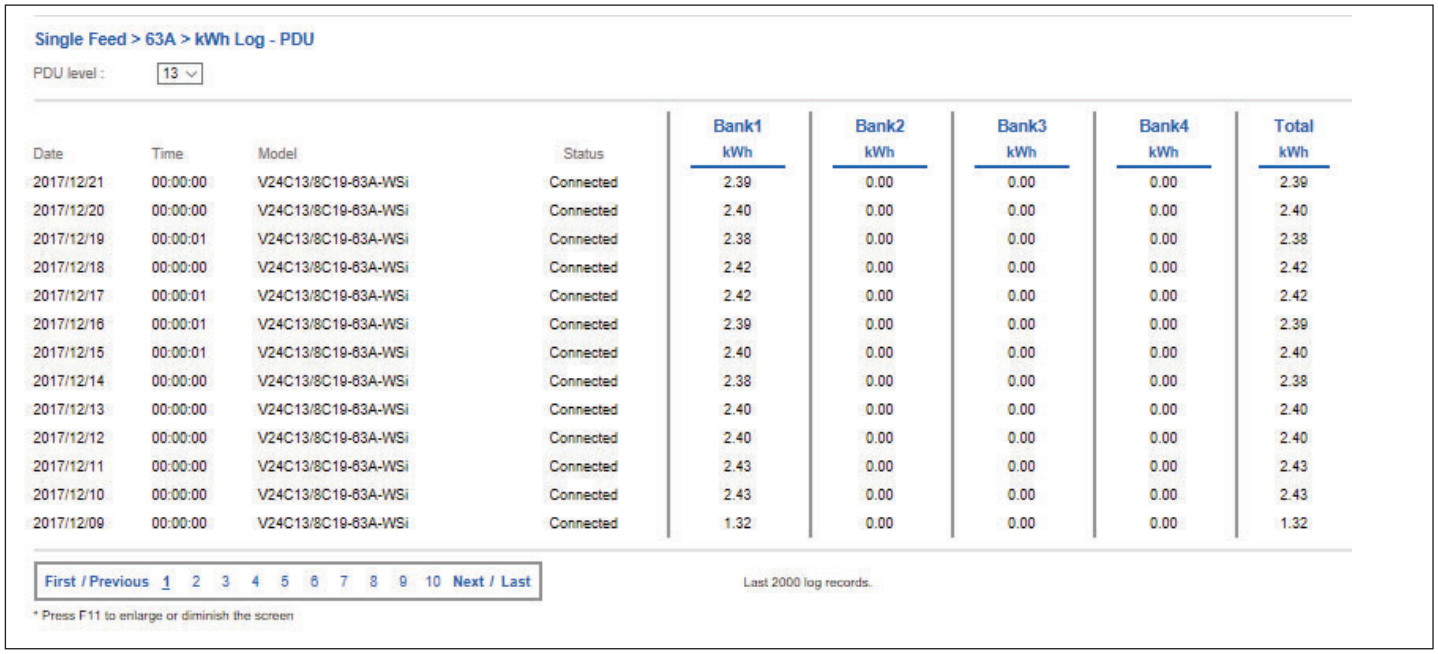
The software will generate an outlet log record every 10 mins.



< 5.1 > Single Phase PDU / Outlet Log

< 63A Daily kWh Log - PDU >

provides past 2000 daily energy consumption log records of each 63A PDU.The record is logged at 00:00 everyday (+/- 5 mins.)



Single Feed > 63A > kWh Log - PDU

PDU level : 13

Date	Time	Model	Status	Bank1 kWh	Bank2 kWh	Bank3 kWh	Bank4 kWh	Total kWh
2017/12/21	00:00:00	V24C13/8C19-63A-WSi	Connected	2.39	0.00	0.00	0.00	2.39
2017/12/20	00:00:00	V24C13/8C19-63A-WSi	Connected	2.40	0.00	0.00	0.00	2.40
2017/12/19	00:00:01	V24C13/8C19-63A-WSi	Connected	2.38	0.00	0.00	0.00	2.38
2017/12/18	00:00:00	V24C13/8C19-63A-WSi	Connected	2.42	0.00	0.00	0.00	2.42
2017/12/17	00:00:01	V24C13/8C19-63A-WSi	Connected	2.42	0.00	0.00	0.00	2.42
2017/12/16	00:00:01	V24C13/8C19-63A-WSi	Connected	2.39	0.00	0.00	0.00	2.39
2017/12/15	00:00:01	V24C13/8C19-63A-WSi	Connected	2.40	0.00	0.00	0.00	2.40
2017/12/14	00:00:00	V24C13/8C19-63A-WSi	Connected	2.38	0.00	0.00	0.00	2.38
2017/12/13	00:00:00	V24C13/8C19-63A-WSi	Connected	2.40	0.00	0.00	0.00	2.40
2017/12/12	00:00:00	V24C13/8C19-63A-WSi	Connected	2.40	0.00	0.00	0.00	2.40
2017/12/11	00:00:00	V24C13/8C19-63A-WSi	Connected	2.43	0.00	0.00	0.00	2.43
2017/12/10	00:00:00	V24C13/8C19-63A-WSi	Connected	2.43	0.00	0.00	0.00	2.43
2017/12/09	00:00:00	V24C13/8C19-63A-WSi	Connected	1.32	0.00	0.00	0.00	1.32

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

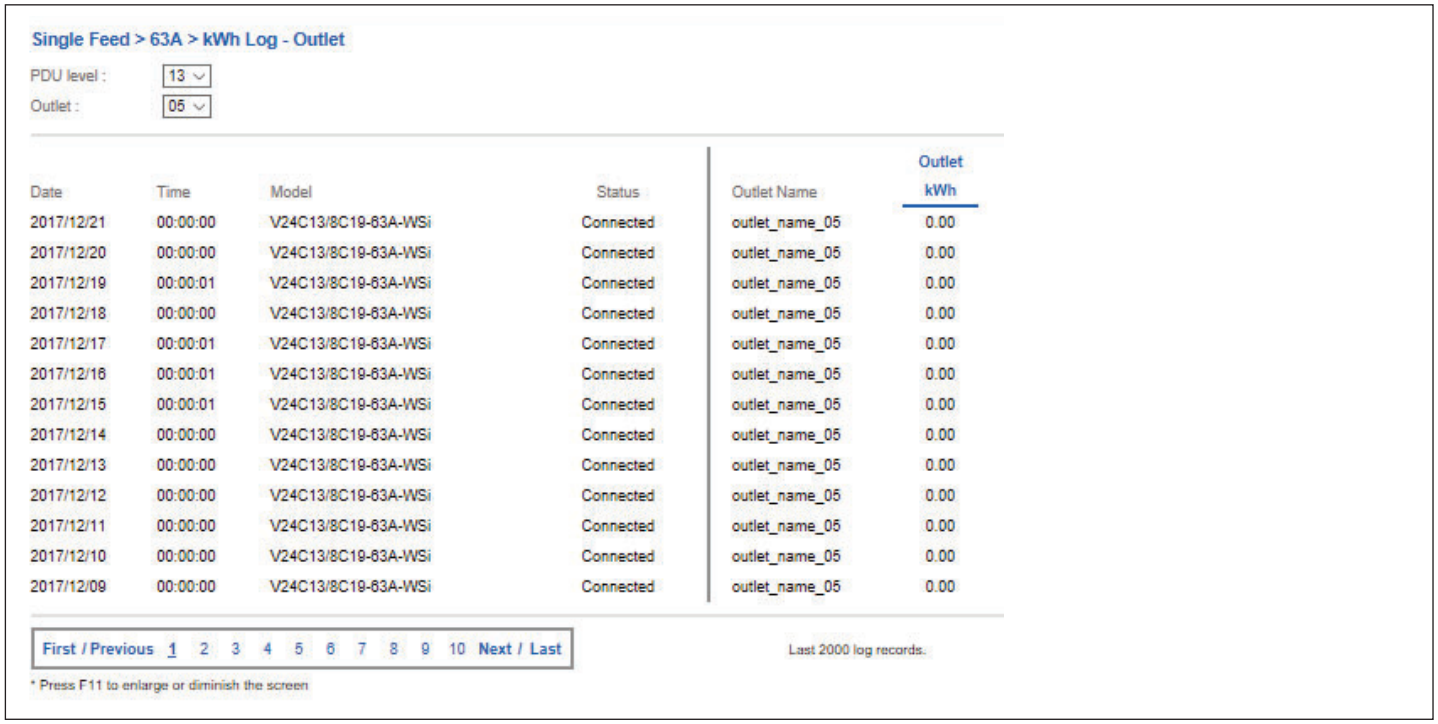
* Press F11 to enlarge or diminish the screen

< 63A Daily kWh log - Outlet >

provides past 2000 daily energy consumption log records of each 63A PDU's Outlet .

The record is logged at 00:00 everyday (+/- 5 mins.).

(63A Outlet measurement PDU only)



Single Feed > 63A > kWh Log - Outlet

PDU level : 13

Outlet : 05

Date	Time	Model	Status	Outlet Name	Outlet kWh
2017/12/21	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/20	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/19	00:00:01	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/18	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/17	00:00:01	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/16	00:00:01	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/15	00:00:01	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/14	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/13	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/12	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/11	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/10	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00
2017/12/09	00:00:00	V24C13/8C19-63A-WSi	Connected	outlet_name_05	0.00

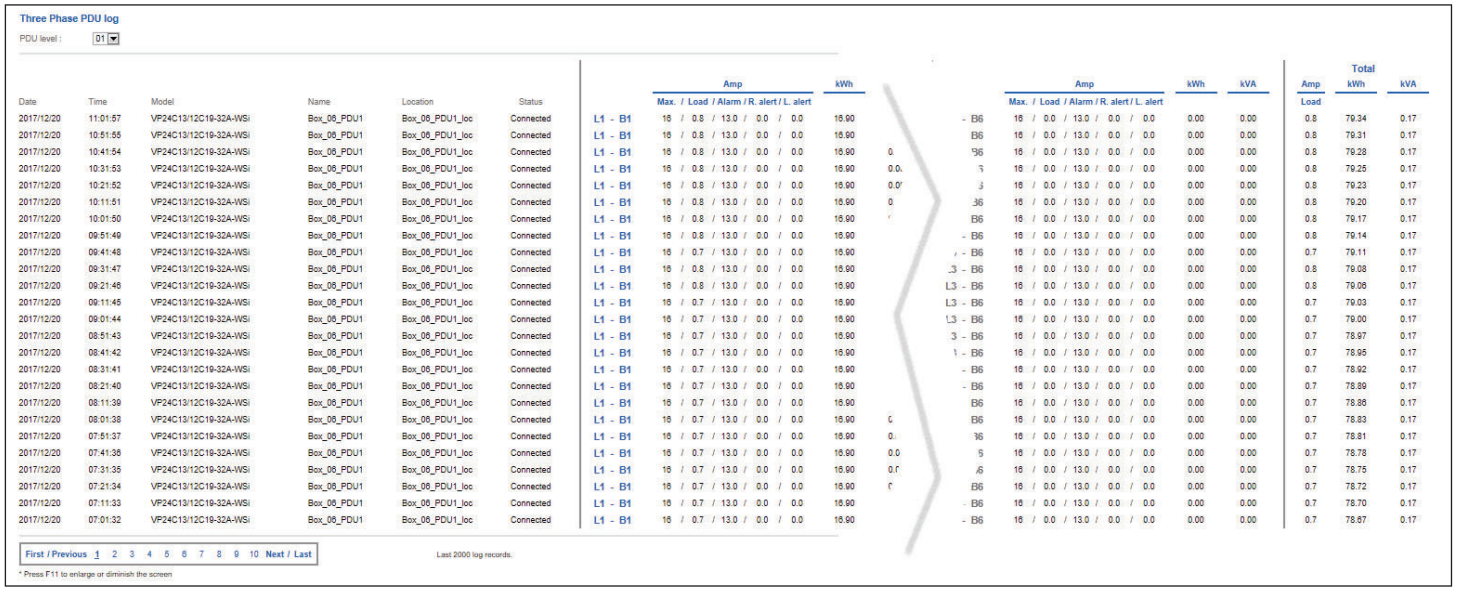
First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

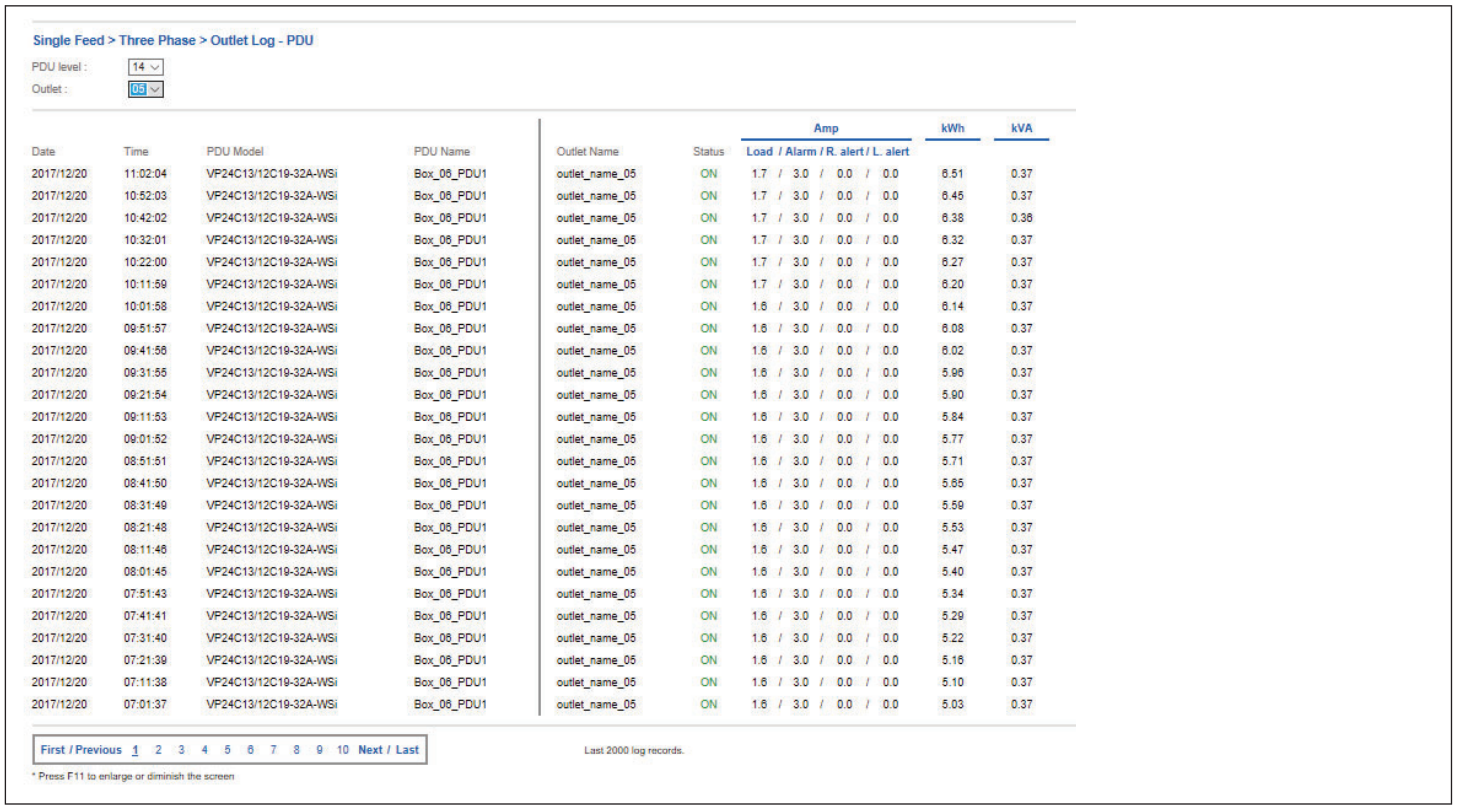
* Press F11 to enlarge or diminish the screen

< 5.2 > Three Phase PDU / Outlet Log

< Three Phase PDU Log > provides past 2000 log records of each Three Phase Phase PDU. The software will generate a log every 10 mins.



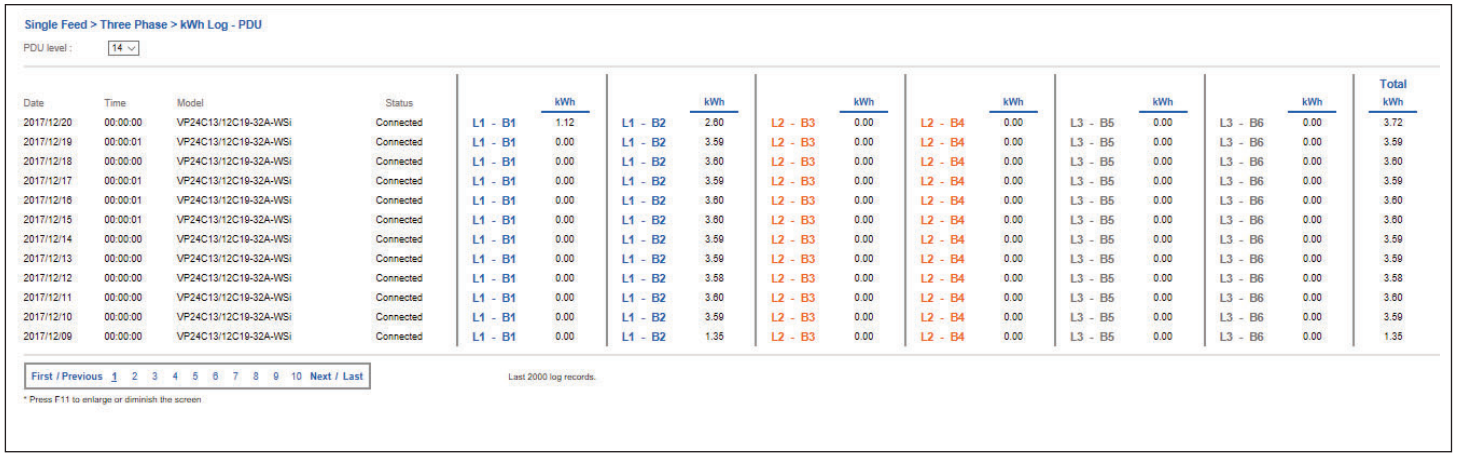
< Three Phase PDU Outlet Log > provides past 2000 log records of each Three Phase Phase PDU's Outlet. The software will generate a log every 10 mins.



< 5.2 > Three Phase PDU / Outlet Log

< Three Phase Daily kWh Log - PDU >

provides past 2000 daily energy consumption log records of each Three Phase PDU. The record is logged at 00:00 everyday (+/- 5 mins.)



Single Feed > Three Phase > kWh Log - PDU

PDU level : 14

Date	Time	Model	Status		kWh		kWh		kWh		kWh		kWh		kWh	Total kWh
2017/12/20	00:00:00	VP24C13/12C19-32A-WSi	Connected	L1 - B1	1.12	L1 - B2	2.60	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.72
2017/12/19	00:00:01	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.59	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.59
2017/12/18	00:00:00	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.60	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.60
2017/12/17	00:00:01	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.59	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.59
2017/12/16	00:00:01	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.60	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.60
2017/12/15	00:00:01	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.60	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.60
2017/12/14	00:00:00	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.59	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.59
2017/12/13	00:00:00	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.59	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.59
2017/12/12	00:00:00	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.58	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.58
2017/12/11	00:00:00	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.60	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.60
2017/12/10	00:00:00	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	3.59	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	3.59
2017/12/09	00:00:00	VP24C13/12C19-32A-WSi	Connected	L1 - B1	0.00	L1 - B2	1.35	L2 - B3	0.00	L2 - B4	0.00	L3 - B5	0.00	L3 - B6	0.00	1.35

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

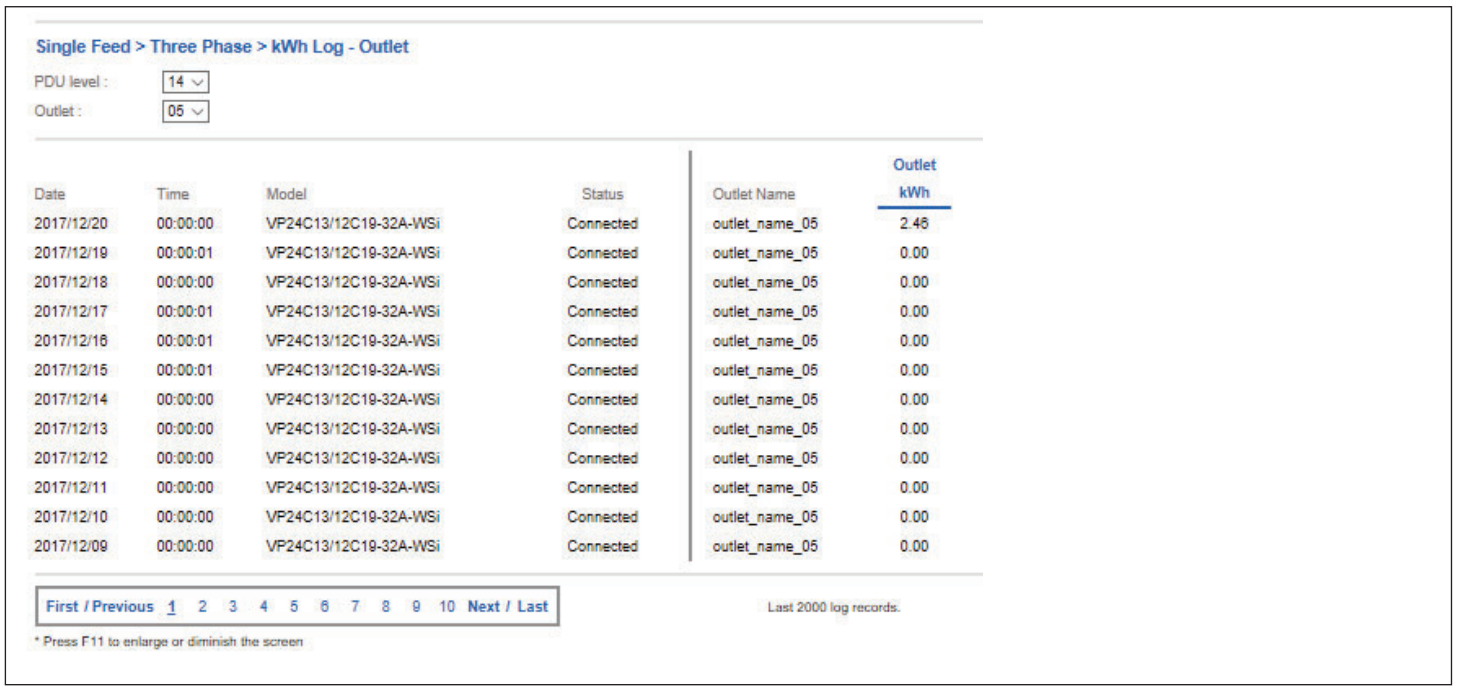
* Press F11 to enlarge or diminish the screen

< Three Phase Daily kWh Log - Outlet >

provides past 2000 daily energy consumption log records of each Three Phase PDU's Outlet .

The record is logged at 00:00 everyday (+/- 5 mins.).

(3 Phase Outlet measurement PDU only)



Single Feed > Three Phase > kWh Log - Outlet

PDU level : 14

Outlet : 05

Date	Time	Model	Status	Outlet Name	Outlet kWh
2017/12/20	00:00:00	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	2.46
2017/12/19	00:00:01	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/18	00:00:00	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/17	00:00:01	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/16	00:00:01	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/15	00:00:01	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/14	00:00:00	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/13	00:00:00	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/12	00:00:00	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/11	00:00:00	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/10	00:00:00	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00
2017/12/09	00:00:00	VP24C13/12C19-32A-WSi	Connected	outlet_name_05	0.00

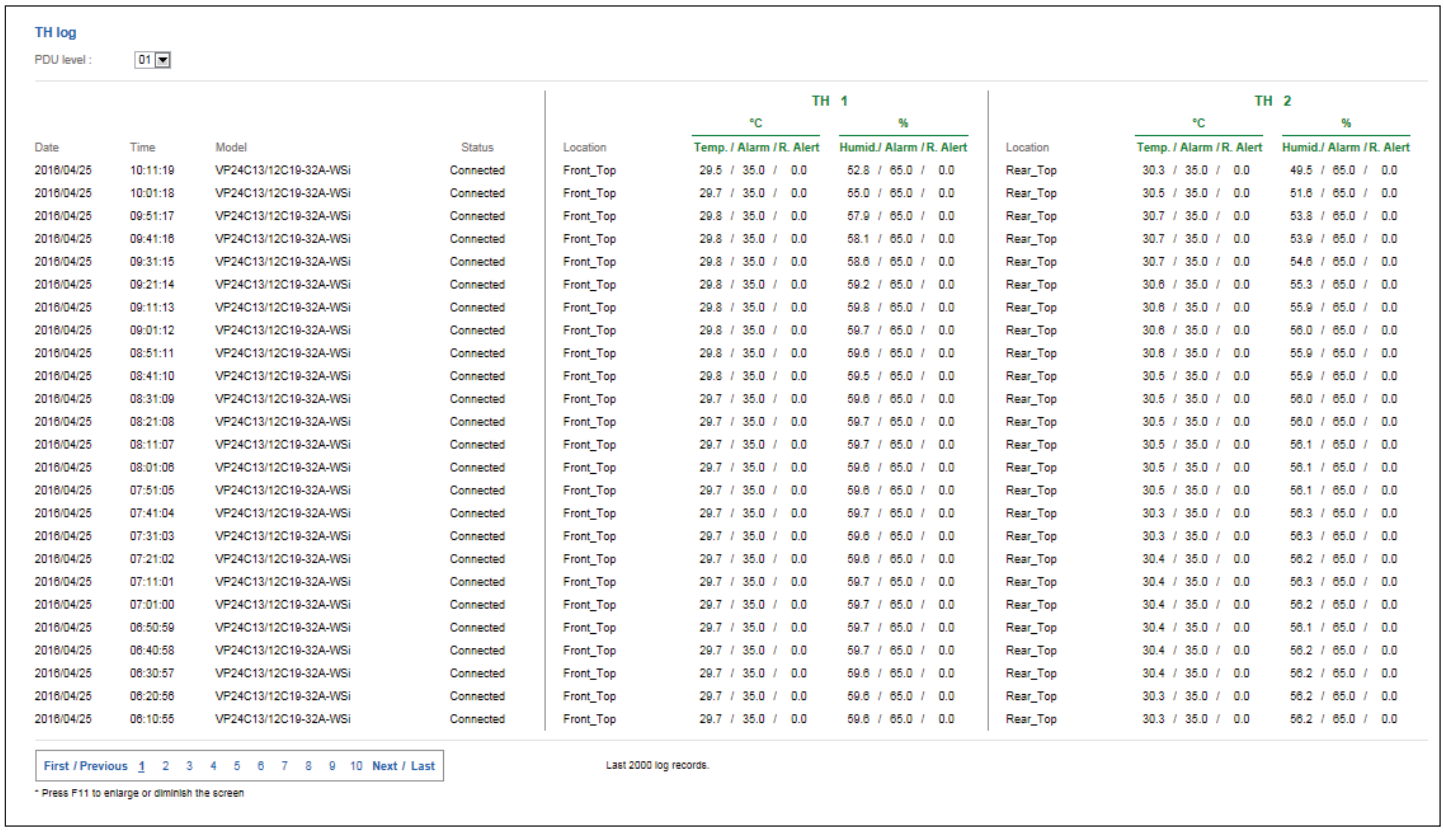
First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

* Press F11 to enlarge or diminish the screen

< 5.3 > Sensor Log

< TH log > provides past 2000 TH log records of each PDU.
The software will generate a TH log record every 10 mins.



TH log

PDU level : 01

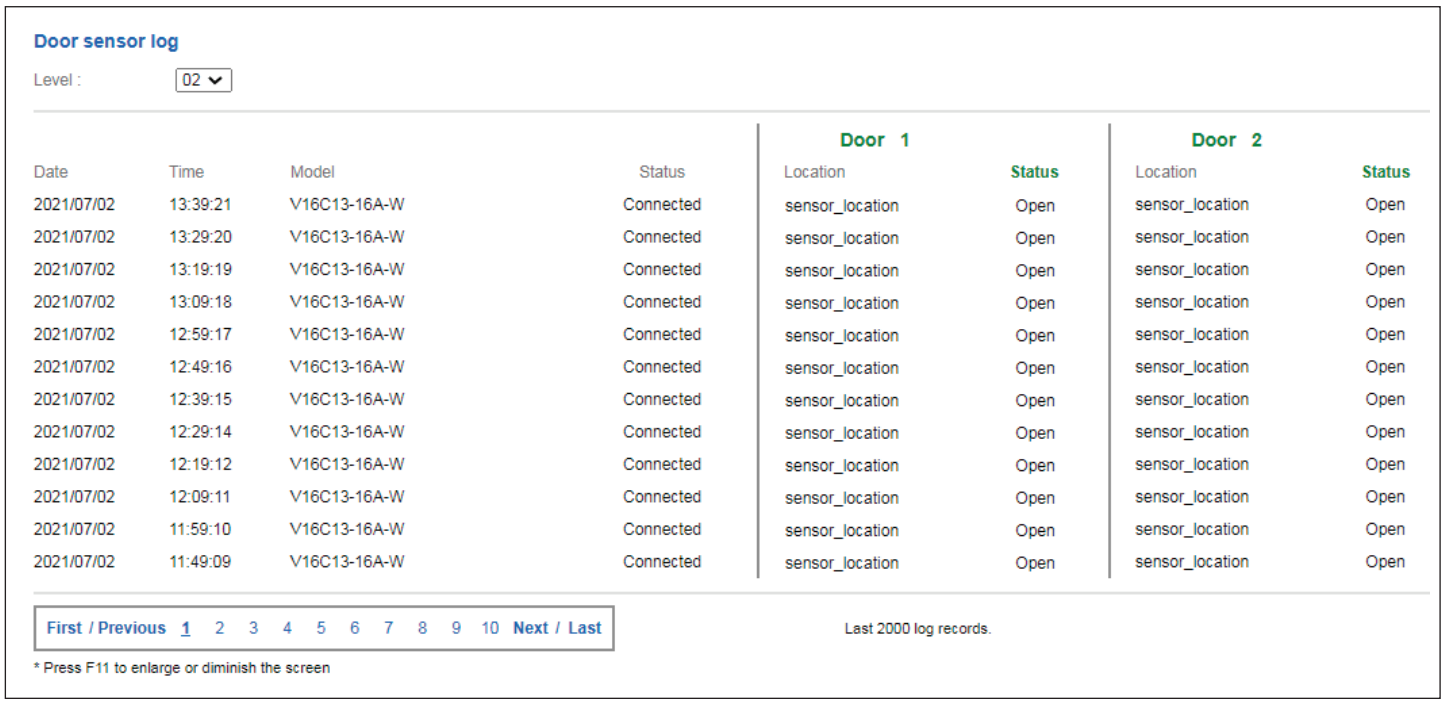
					TH 1		TH 2	
					°C	%	°C	%
Date	Time	Model	Status	Location	Temp. / Alarm / R. Alert	Humid./ Alarm / R. Alert	Location	Temp. / Alarm / R. Alert	Humid./ Alarm / R. Alert
2016/04/25	10:11:19	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.5 / 35.0 / 0.0	52.8 / 65.0 / 0.0	Rear_Top	30.3 / 35.0 / 0.0	49.5 / 65.0 / 0.0
2016/04/25	10:01:18	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	55.0 / 65.0 / 0.0	Rear_Top	30.5 / 35.0 / 0.0	51.6 / 65.0 / 0.0
2016/04/25	09:51:17	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.8 / 35.0 / 0.0	57.9 / 65.0 / 0.0	Rear_Top	30.7 / 35.0 / 0.0	53.8 / 65.0 / 0.0
2016/04/25	09:41:16	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.8 / 35.0 / 0.0	58.1 / 65.0 / 0.0	Rear_Top	30.7 / 35.0 / 0.0	53.9 / 65.0 / 0.0
2016/04/25	09:31:15	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.8 / 35.0 / 0.0	58.6 / 65.0 / 0.0	Rear_Top	30.7 / 35.0 / 0.0	54.6 / 65.0 / 0.0
2016/04/25	09:21:14	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.8 / 35.0 / 0.0	59.2 / 65.0 / 0.0	Rear_Top	30.6 / 35.0 / 0.0	55.3 / 65.0 / 0.0
2016/04/25	09:11:13	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.8 / 35.0 / 0.0	59.8 / 65.0 / 0.0	Rear_Top	30.6 / 35.0 / 0.0	55.9 / 65.0 / 0.0
2016/04/25	09:01:12	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.8 / 35.0 / 0.0	59.7 / 65.0 / 0.0	Rear_Top	30.6 / 35.0 / 0.0	56.0 / 65.0 / 0.0
2016/04/25	08:51:11	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.8 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.6 / 35.0 / 0.0	55.9 / 65.0 / 0.0
2016/04/25	08:41:10	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.8 / 35.0 / 0.0	59.5 / 65.0 / 0.0	Rear_Top	30.5 / 35.0 / 0.0	55.9 / 65.0 / 0.0
2016/04/25	08:31:09	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.5 / 35.0 / 0.0	56.0 / 65.0 / 0.0
2016/04/25	08:21:08	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.7 / 65.0 / 0.0	Rear_Top	30.5 / 35.0 / 0.0	56.0 / 65.0 / 0.0
2016/04/25	08:11:07	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.7 / 65.0 / 0.0	Rear_Top	30.5 / 35.0 / 0.0	56.1 / 65.0 / 0.0
2016/04/25	08:01:06	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.5 / 35.0 / 0.0	56.1 / 65.0 / 0.0
2016/04/25	07:51:05	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.5 / 35.0 / 0.0	56.1 / 65.0 / 0.0
2016/04/25	07:41:04	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.7 / 65.0 / 0.0	Rear_Top	30.3 / 35.0 / 0.0	56.3 / 65.0 / 0.0
2016/04/25	07:31:03	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.3 / 35.0 / 0.0	56.3 / 65.0 / 0.0
2016/04/25	07:21:02	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.4 / 35.0 / 0.0	56.2 / 65.0 / 0.0
2016/04/25	07:11:01	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.7 / 65.0 / 0.0	Rear_Top	30.4 / 35.0 / 0.0	56.3 / 65.0 / 0.0
2016/04/25	07:01:00	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.7 / 65.0 / 0.0	Rear_Top	30.4 / 35.0 / 0.0	56.2 / 65.0 / 0.0
2016/04/25	06:50:59	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.7 / 65.0 / 0.0	Rear_Top	30.4 / 35.0 / 0.0	56.1 / 65.0 / 0.0
2016/04/25	06:40:58	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.7 / 65.0 / 0.0	Rear_Top	30.4 / 35.0 / 0.0	56.2 / 65.0 / 0.0
2016/04/25	06:30:57	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.4 / 35.0 / 0.0	56.2 / 65.0 / 0.0
2016/04/25	06:20:56	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.3 / 35.0 / 0.0	56.2 / 65.0 / 0.0
2016/04/25	06:10:55	VP24C13/12C19-32A-WSi	Connected	Front_Top	29.7 / 35.0 / 0.0	59.6 / 65.0 / 0.0	Rear_Top	30.3 / 35.0 / 0.0	56.2 / 65.0 / 0.0

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

* Press F11 to enlarge or diminish the screen

< Door Sensor log > provides past 2000 door sensor log records of each PDU.
The software will generate a door sensor log record every 10 mins.



Door sensor log

Level : 02

				Door 1		Door 2	
Date	Time	Model	Status	Location	Status	Location	Status
2021/07/02	13:39:21	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	13:29:20	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	13:19:19	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	13:09:18	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	12:59:17	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	12:49:16	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	12:39:15	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	12:29:14	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	12:19:12	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	12:09:11	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	11:59:10	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open
2021/07/02	11:49:09	V16C13-16A-W	Connected	sensor_location	Open	sensor_location	Open

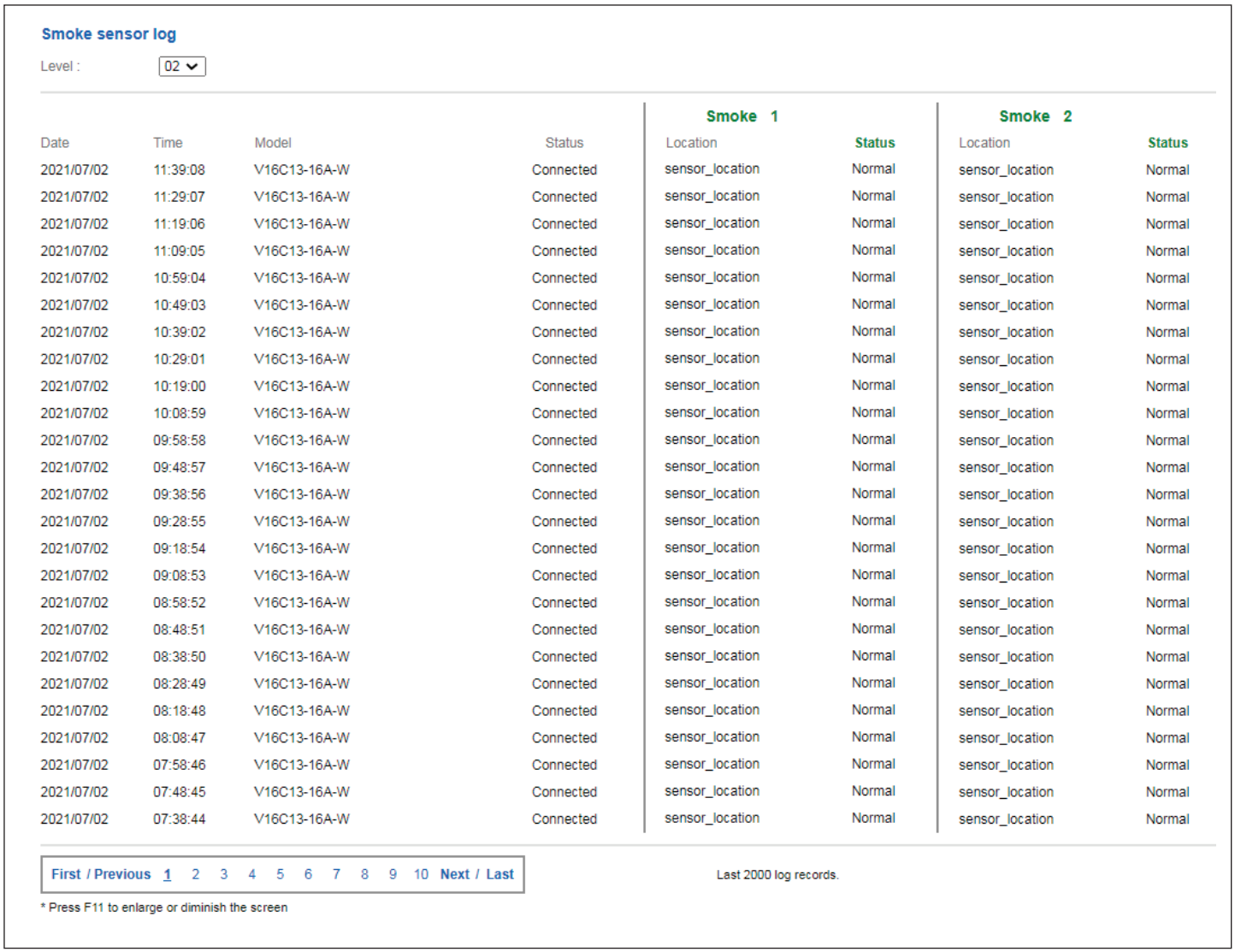
First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

* Press F11 to enlarge or diminish the screen

< 5.3 > Sensor Log

< **Smoke Sensor Log** > provides past 2000 smoke sensor log records of each PDU.
The software will generate a smoke sensor log record every 10 mins.



Smoke sensor log

Level : 02

				Smoke 1		Smoke 2	
Date	Time	Model	Status	Location	Status	Location	Status
2021/07/02	11:39:08	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	11:29:07	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	11:19:06	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	11:09:05	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	10:59:04	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	10:49:03	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	10:39:02	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	10:29:01	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	10:19:00	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	10:08:59	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	09:58:58	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	09:48:57	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	09:38:56	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	09:28:55	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	09:18:54	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	09:08:53	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	08:58:52	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	08:48:51	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	08:38:50	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	08:28:49	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	08:18:48	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	08:08:47	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	07:58:46	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	07:48:45	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal
2021/07/02	07:38:44	V16C13-16A-W	Connected	sensor_location	Normal	sensor_location	Normal

First / Previous 1 2 3 4 5 6 7 8 9 10 Next / Last

Last 2000 log records.

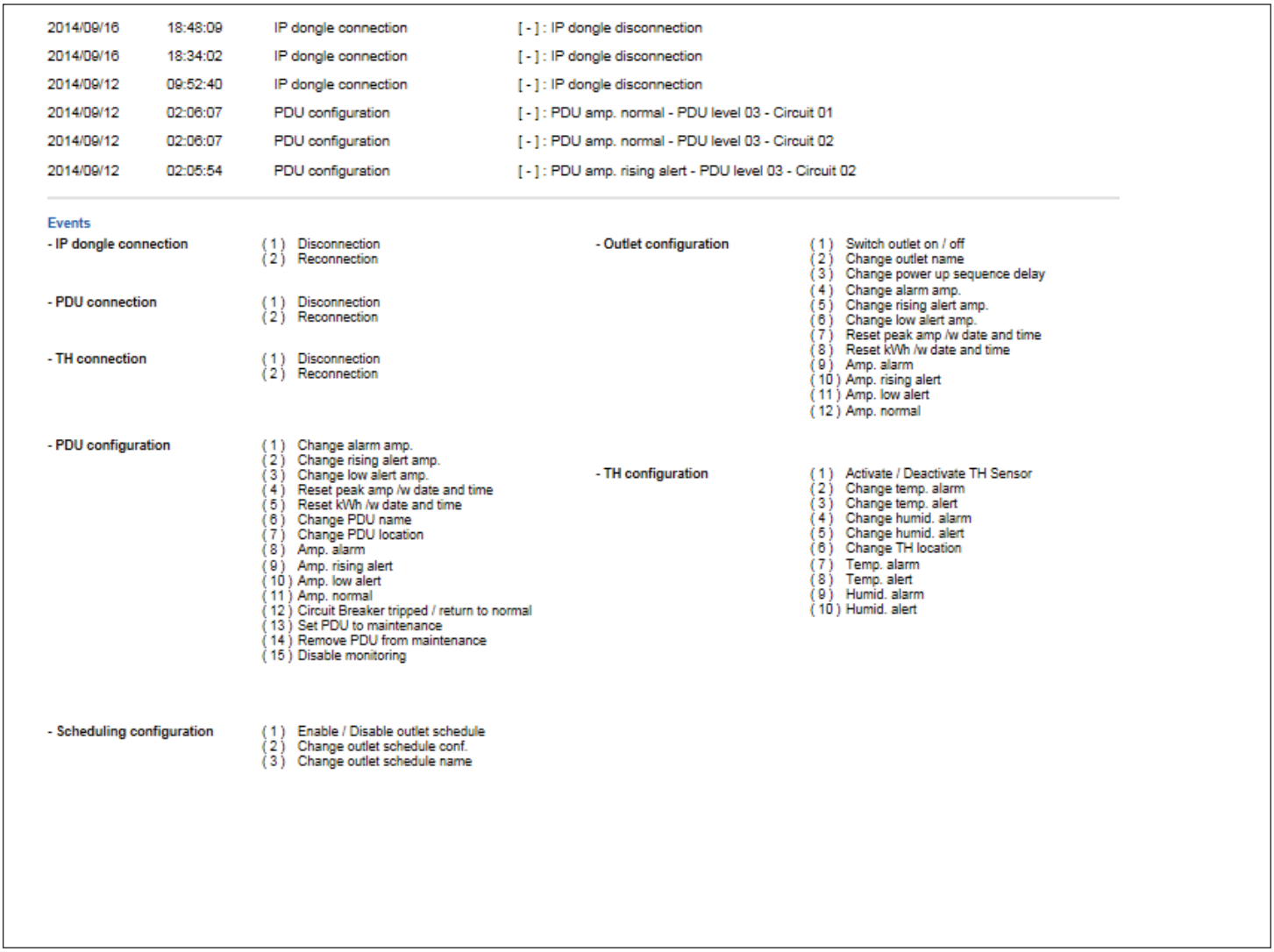
* Press F11 to enlarge or diminish the screen

< 5.4 > Event Log

< Event > based on IP Dongle group one by one to provide past 2000 event records of :

- IP Dongle connection
- PDU connection
- TH sensor connection

- PDU configuration
- Outlet configuration
- TH sensor configuration
- Scheduling configuration



2014/09/16	18:48:09	IP dongle connection	[-] : IP dongle disconnection
2014/09/16	18:34:02	IP dongle connection	[-] : IP dongle disconnection
2014/09/12	09:52:40	IP dongle connection	[-] : IP dongle disconnection
2014/09/12	02:06:07	PDU configuration	[-] : PDU amp. normal - PDU level 03 - Circuit 01
2014/09/12	02:06:07	PDU configuration	[-] : PDU amp. normal - PDU level 03 - Circuit 02
2014/09/12	02:05:54	PDU configuration	[-] : PDU amp. rising alert - PDU level 03 - Circuit 02

Events

- IP dongle connection
  (1) Disconnection
  (2) Reconnection
- PDU connection
  (1) Disconnection
  (2) Reconnection
- TH connection
  (1) Disconnection
  (2) Reconnection
- PDU configuration
  (1) Change alarm amp.
  (2) Change rising alert amp.
  (3) Change low alert amp.
  (4) Reset peak amp /w date and time
  (5) Reset kWh /w date and time
  (6) Change PDU name
  (7) Change PDU location
  (8) Amp. alarm
  (9) Amp. rising alert
  (10) Amp. low alert
  (11) Amp. normal
  (12) Circuit Breaker tripped / return to normal
  (13) Set PDU to maintenance
  (14) Remove PDU from maintenance
  (15) Disable monitoring
- Scheduling configuration
  (1) Enable / Disable outlet schedule
  (2) Change outlet schedule conf.
  (3) Change outlet schedule name
- Outlet configuration
  (1) Switch outlet on / off
  (2) Change outlet name
  (3) Change power up sequence delay
  (4) Change alarm amp.
  (5) Change rising alert amp.
  (6) Change low alert amp.
  (7) Reset peak amp /w date and time
  (8) Reset kWh /w date and time
  (9) Amp. alarm
  (10) Amp. rising alert
  (11) Amp. low alert
  (12) Amp. normal
- TH configuration
  (1) Activate / Deactivate TH Sensor
  (2) Change temp. alarm
  (3) Change temp. alert
  (4) Change humid. alarm
  (5) Change humid. alert
  (6) Change TH location
  (7) Temp. alarm
  (8) Temp. alert
  (9) Humid. alarm
  (10) Humid. alert

Part VI. Report

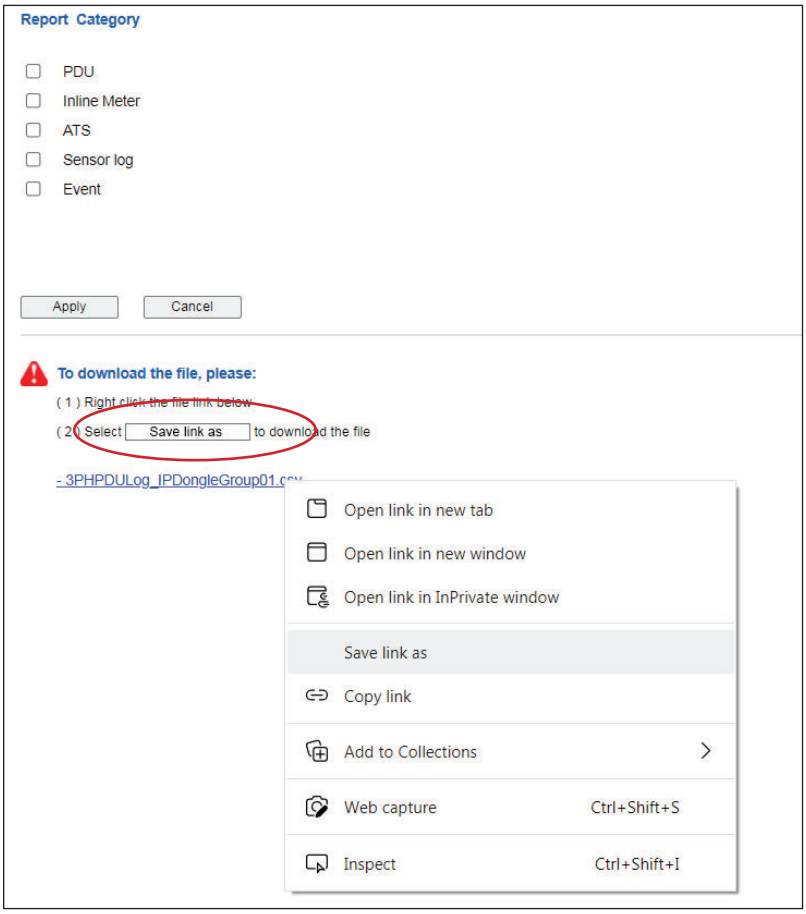
< Report > provides monthly report for PDU log , Inline meter log , outlet log , Sensor log , Daily kWh log & Event log which can be exported in CSV format.

Please follow the steps below to export the log category you want :

Step 1. Select " **Report Category** " , " **Period** " & " **Target** "

Step 2. Click " **Apply** " & Click " **OK** " from the pop up window

Step 3. Right Click the file name below & Select " **Save link as** " to download the log file



Step 4. Click " **Close** " to complete or " **Open** " to view the content of log file

Complete

Part VII. SNMP & IP Dongle

< 7.1 > SNMP Setup

The IP dongle can manage the connected single & three phase intelligent PDUs in a single daisy-chain up to 32 levels via SNMP v1/v2 or v3 (Simple Network Management Protocol)

(I). Accessing MIB Files

Step 1. Click the following link to go to the mangement software download page :
http://www.austin-hughes.com/resources/infrapower/software

Step 2. Select the appropriate MIB file of the PDU series

(II). Enabling SNMP Support

i. The following steps summarize how to enable the IP Dongle for SNMP v1 / v2 support.

Step 1. Connect the IP Dongle to a computer. (Please refer to < 2.2 > IP dongle configuration)

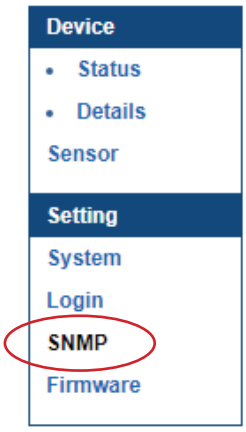
Step 2. Open the MS Edge

Step 3. Enter the configured IP Dongle address into the address bar.
Default IP address of LAN 1 is " **192.168.11.1** "
Default IP address of LAN 2 is " **192.168.0.1** "

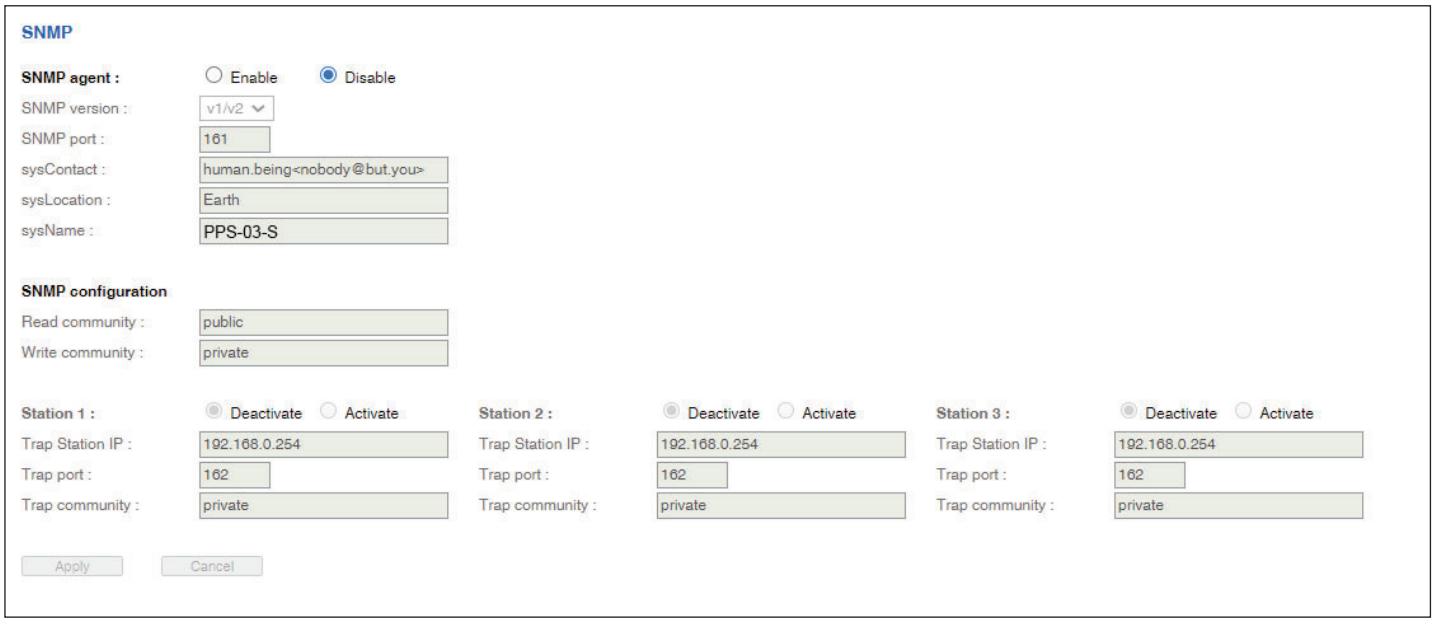
Step 4. Enter " **Login name** " & " **Password** ".
Default Login name : 00000000.
To change Login name of IP dongle WEBUI (PPS-03-S),
please refer to PPS-03-S user manual 1.10 < Login > for details.
Password: the one you set in Step 7 of < 2.2 > IP Dongle Configuration.

< 7.1 > SNMP Setup

Step 5. Select the SNMP from the left navigation pane



Step 6. The SNMP Settings window appears as below:



Step 7. Click **“ Enable “** in **“ SNMP agent “** to start the SNMP agent service

Step 8. Select **“ v1/v2 “** in **“ SNMP version “**

Step 9. Input **“ SNMP port “.** Default is 161

Step 10. Input “ **sysContact** “. Default is human.being<nobody@but.you>

Step 11. Input “ **sysLocation** “. Default is Earth

Step 12. Input “ **sysName** “. Default is A320D

Step 13. Input **“ Read Community “.** Default is public

Step 14. Input **“ Write Community “.** Default is private

Step 15. Click **“ Activate “** in Station 1 to enable the trap service

Step 16. Input **“ Trap Station IP “ , “ Trap Port “** & **“ Trap Community “** of Station 1

Step 17. Repeat Step 14 & 15 for Station 2 & 3

Step 18. Click **“ Apply “** to finish the SNMP v1 / v2 settings

ii. The following steps summarize how to enable the IP Dongle for SNMP v3 support.

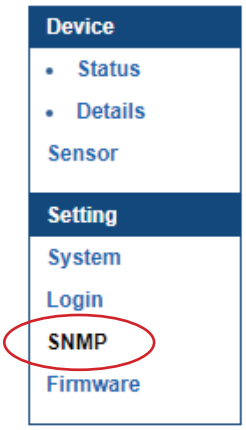
Step 1. Connect the IP dongle to a computer. (Please refer to < 2.2 > IP dongle configuration)

Step 2. Open MS Edge

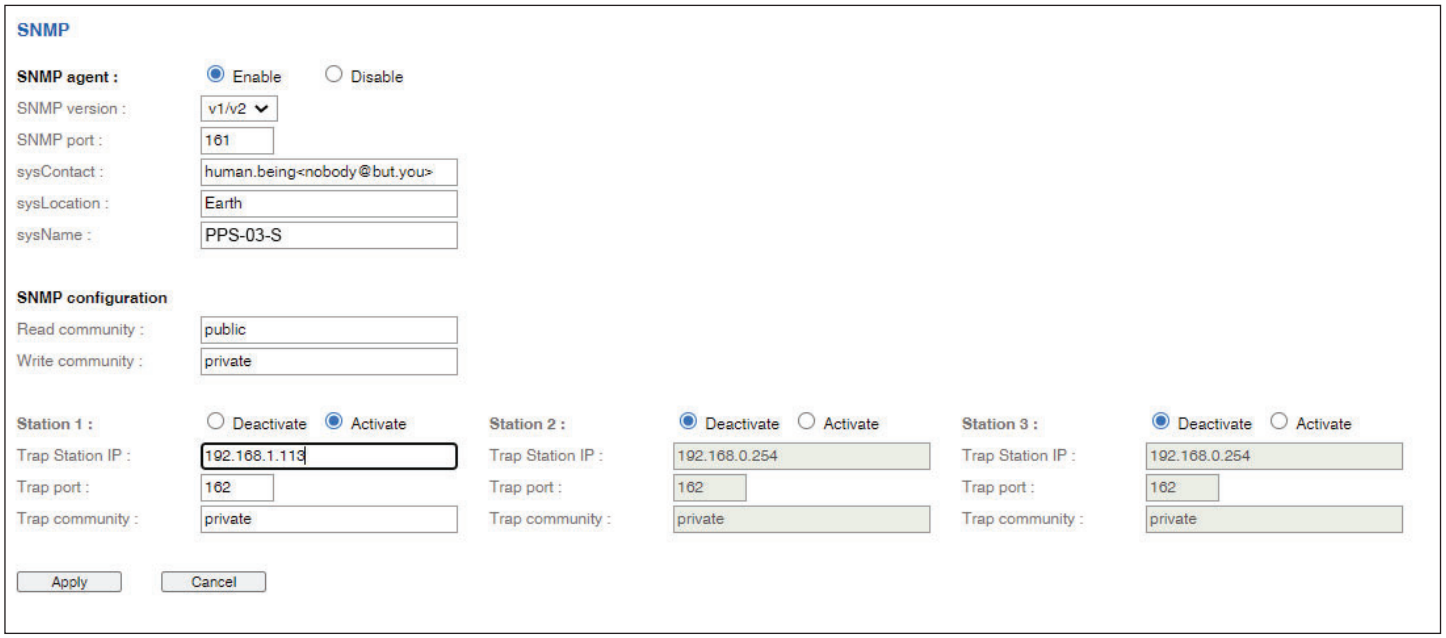
Step 3. Enter the configured IP Dongle address into the address bar.
Default IP address of LAN 1 is " **192.168.11.1** "
Default IP address of LAN 2 is " **192.168.0.1** "

Step 4. Enter " **Login name** " & " **Password** ".
Default Login name : 00000000.
To change Login name of IP dongle WEBUI (PPS-03-S),
please refer to PPS-03-S user manual 1.10 < Login > for details.
Password: the one you set in Step 7 of < 2.2 > IP Dongle Configuration.

Step 5. Select SNMP from the left navigation pane



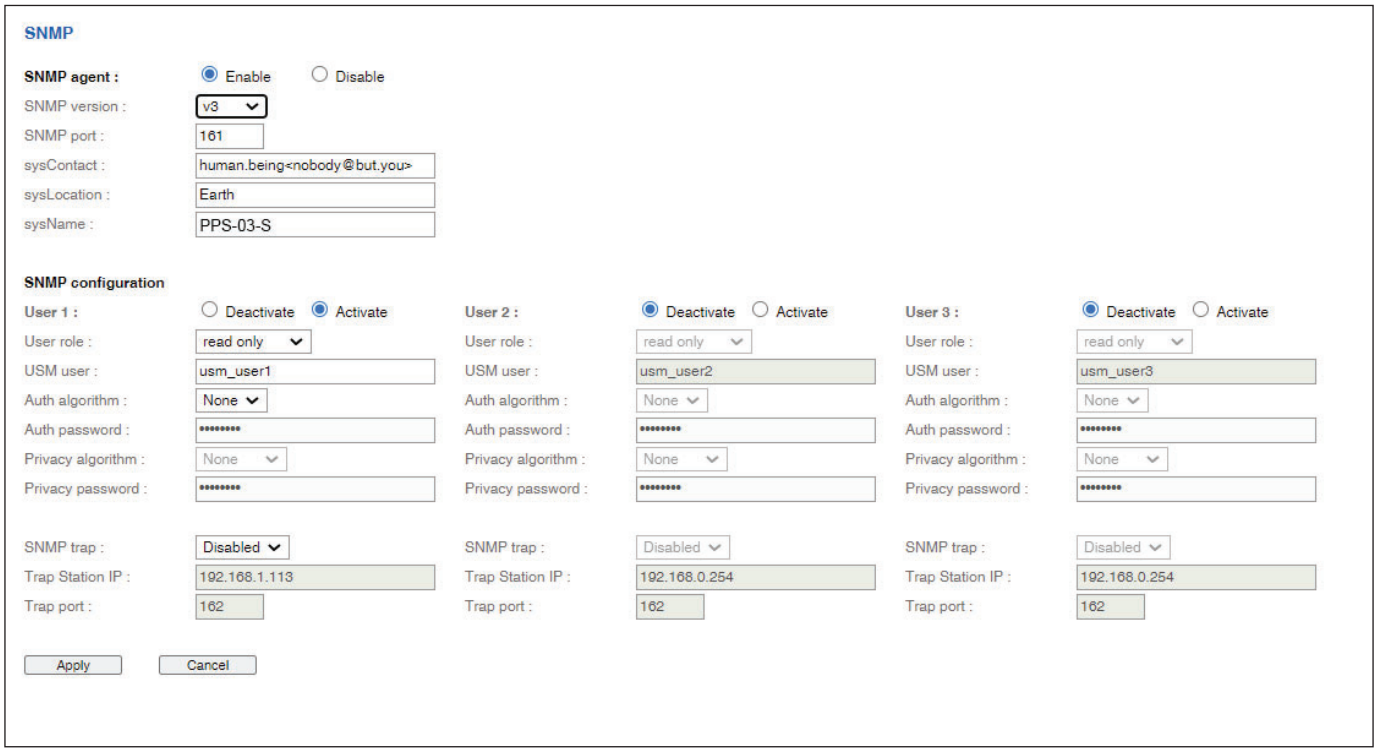
Step 6. The SNMP Settings window appears as below:



< 7.1 > SNMP Setup

Step 7. Click **“ Enable “** in **“ SNMP agent “** to start the SNMP agent service

Step 8. Select **“ v3 “** in **“ SNMP version “** & the SNMP v3 settings window appears as below :



Step 9. Input **“ SNMP port “**. Default is 161

Step 10. Input “ **sysContact** “. Default is human.being<nobody@but.you>

Step 11. Input “ **sysLocation** “. Default is Earth

Step 12. Input “ **sysName** “. Default is A320D

Step 13. Click **“ Activate “** in User 1

Step 14. Select **“ Read Only “** or **“ Read & Write “** in User role :

Step 15. Input the name of **“ USM user “** . Default is usm_user1

Step 16. Select **“ None / MD5 / SHA “** in **“ Auth algorithm “**.
If you select **“ Read & Write “** in **“ User role: “** ,
you MUST select **“ MD5 / SHA “** in **“ Auth algorithm “**

Step 17. Input the **“ Auth password: “** Default is “ 00000000 ‘

Step 18. Select **“ None / DES / AES / AES192 / AES256 “** in **“ Privacy algorithm “**.
If the Auth algorithm is **“ NONE “** , NO privacy algorithm can be selected.

Step 19. Input the **“ Privacy password “**

Step 20. If you want to receive trap message, select **“ Enable “ in SNMP trap**

Step 21. Input the **“ Trap Station IP “** & **“ Trap port “**

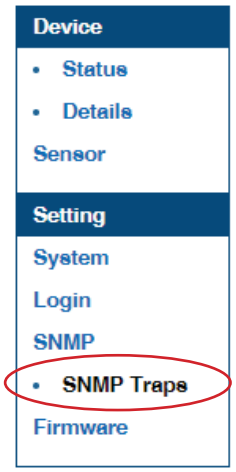
Step 22. Repeat step 12 to 20 for User 2 & 3

Step 23. Click **“ Apply “** to finish the SNMP v3 settings.

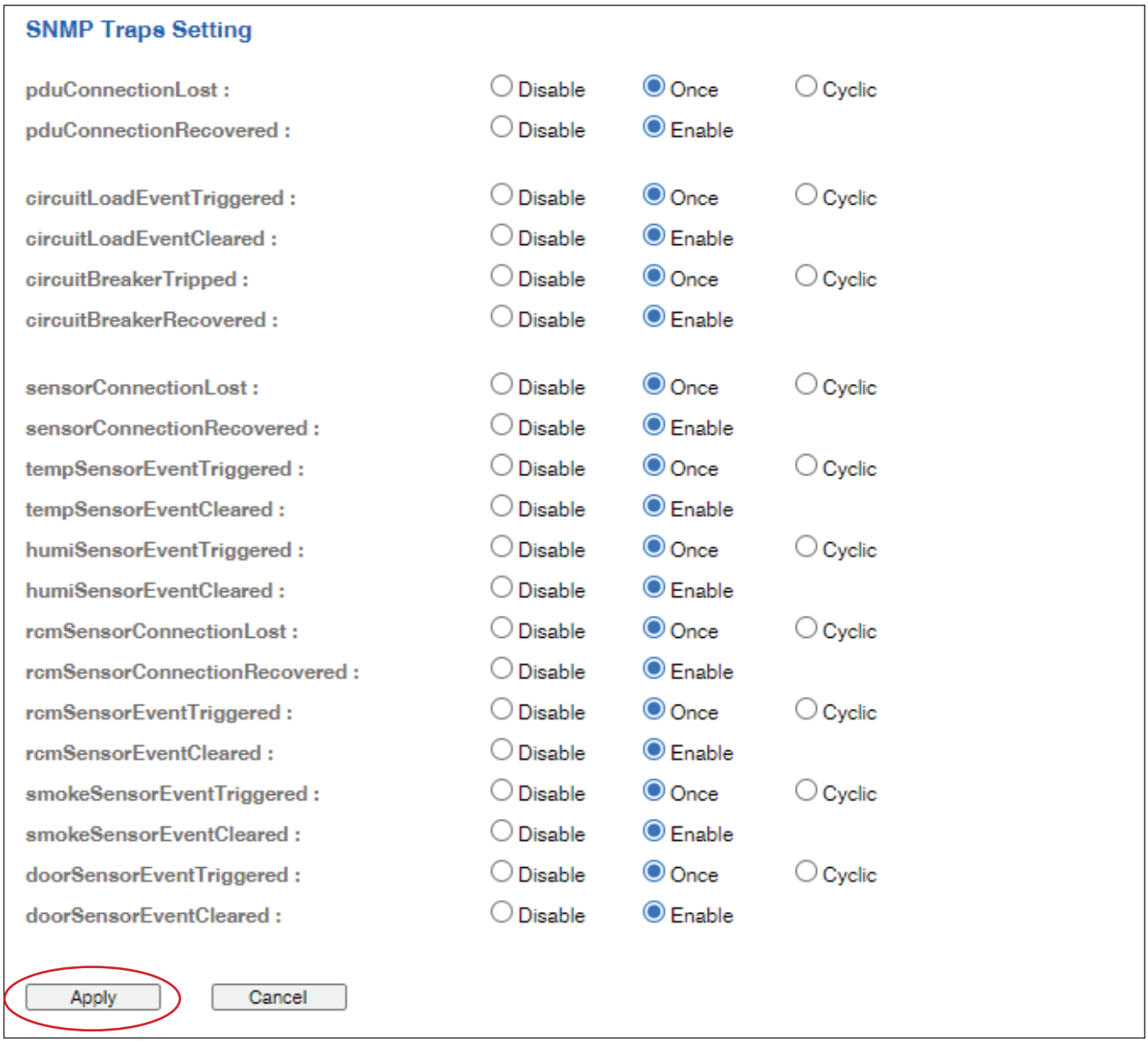
< 7.1 > SNMP Setup

(III). SNMP Traps Setting

After enable SNMP, you can click “ SNMP Traps “ to go to the “ SNMP Traps Setting “ page



Below is the default setting for each PDU SNMP trap.
You can set the SNMP trap option and Click “ Apply “ to finish the settings.



< 7.2 > IP Dongle Firmware Upgrade

< Firmware Upgrade >

For function enhancement of IP dongle WEBUI, please take the following steps to remotely upgrade the IP Dongle firmware :

Step 1. Click the following link to go to the mangement software download page :
http://www.austin-hughes.com/resources/infrapower/software

Step 2. Select the appropriate IP Dongle firmware file of the PDU series

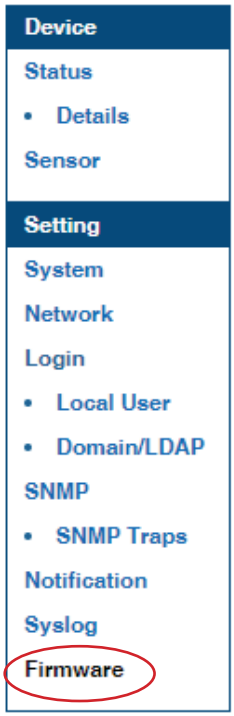
Step 3. Connect the IP Dongle to the computer. (Please refer to < 2.2 > IP dongle configuration)

Step 4. Open the MS Edge

Step 5. Enter the configured IP Dongle address into the Address bar.
Default IP address of LAN 1 is " **192.168.11.1** "
Default IP address of LAN 2 is " **192.168.0.1** "

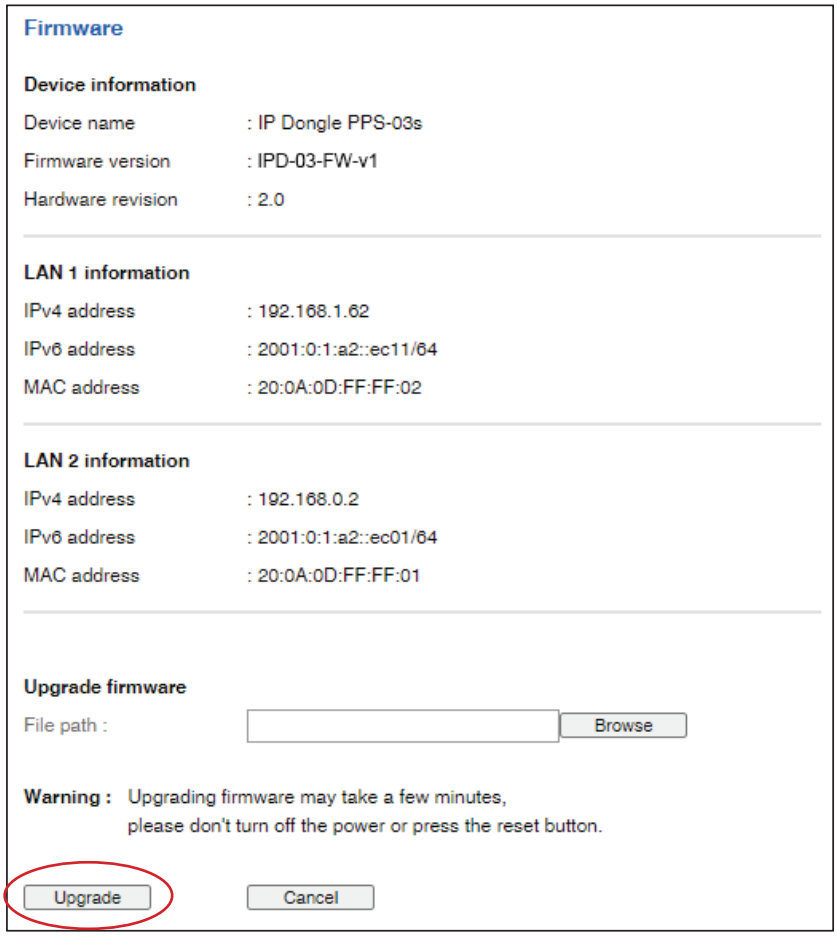
Step 6. Enter " **Login name** " & " **Password** ".
Default Login name : 00000000.
To change Login name of IP dongle WEBUI (PPS-03-S),
please refer to PPS-03-S user manual 1.10 < Login > for details.
Password: the one you set in Step 7 of < 2.2 > IP Dongle Configuration.

Step 7. Select the Firmware from the left navigation pane



< 7.2 > IP Dongle Firmware Upgrade

Step 8. The firmware upgrade window appears as below :



Step 9. Click " **Browse** " and select the firmware file (xxx.zip for firmware version IPD-03-FW-v1 / xxx.enc for firmware version IPD-03-FW-V1.1 or above) from the specific path in the pop up window and Click " **Open** "

Step 10. Click " **Upgrade** " to start the upgrade process. It takes a few minutes to complete.

Step 11. Once complete, UI will return to the login page.

< 7.3 > DHCP Setting

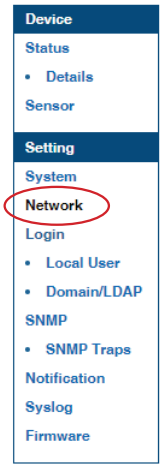
Step 1. Connect the IP dongle to the computer (Please refer to < 2.2 > IP dongle configuration)

Step 2. Open the MS Edge

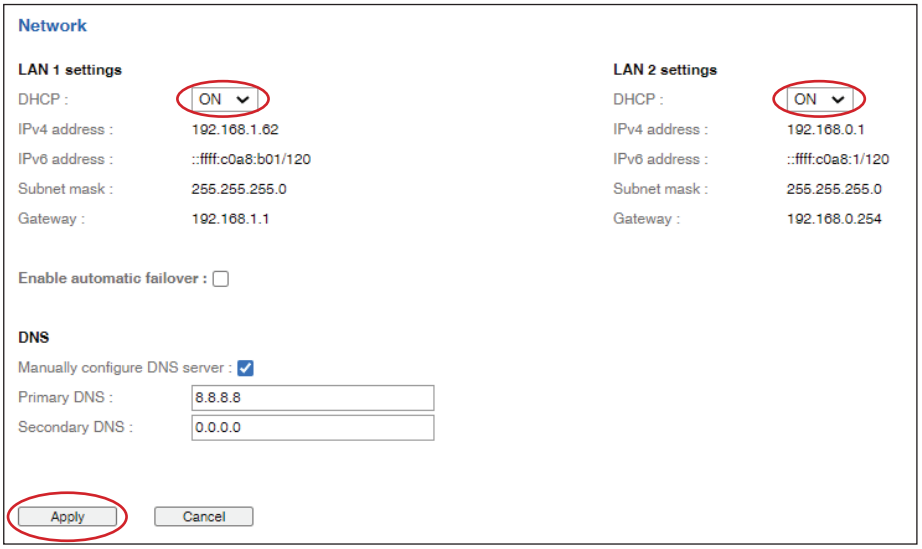
Step 3. Enter the configured IP Dongle address into the address bar.
Default IP address of LAN 1 is " **192.168.11.1** "
Default IP address of LAN 2 is " **192.168.0.1** "

Step 4. Enter " **Login name** " & " **Password** ".
Default Login name : 00000000.
To change Login name of IP dongle WEBUI (PPS-03-S),
please refer to PPS-03-S user manual 1.10 < Login > for details.
Password: the one you set in Step 7 of < 2.2 > IP Dongle Configuration.

Step 5. Select " **Network** " from the left navigation pane

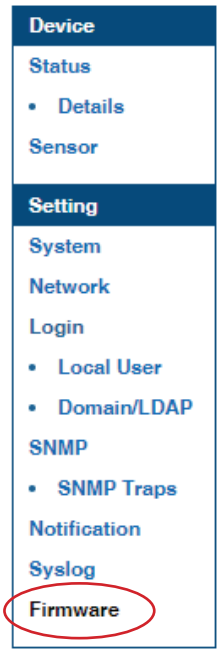


Step 6. Dual Lan Mode: Select " **ON** " from " **DHCP** " of LAN 1 & LAN 2
Click " **Apply** " to save the settings

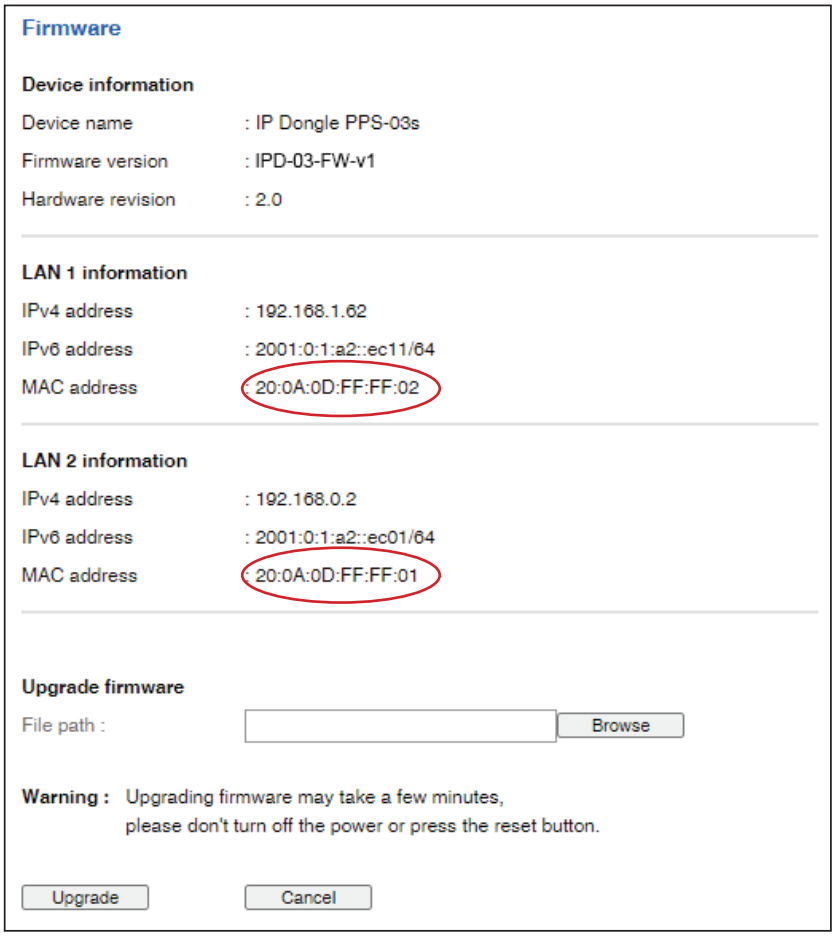


< 7.3 > DHCP Setting

Step 7. Select " **Firmware** " from the left navigation pane



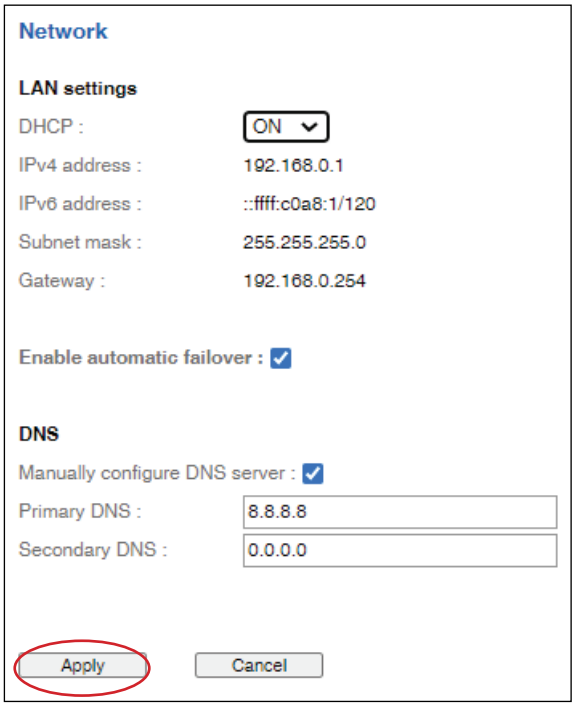
Step 8. Record the " **MAC address** " of LAN 1 & LAN 2.



Step 9. Assign an IP addressof LAN 1 & LAN 2 of to the IP Dongle from your DHCP server.

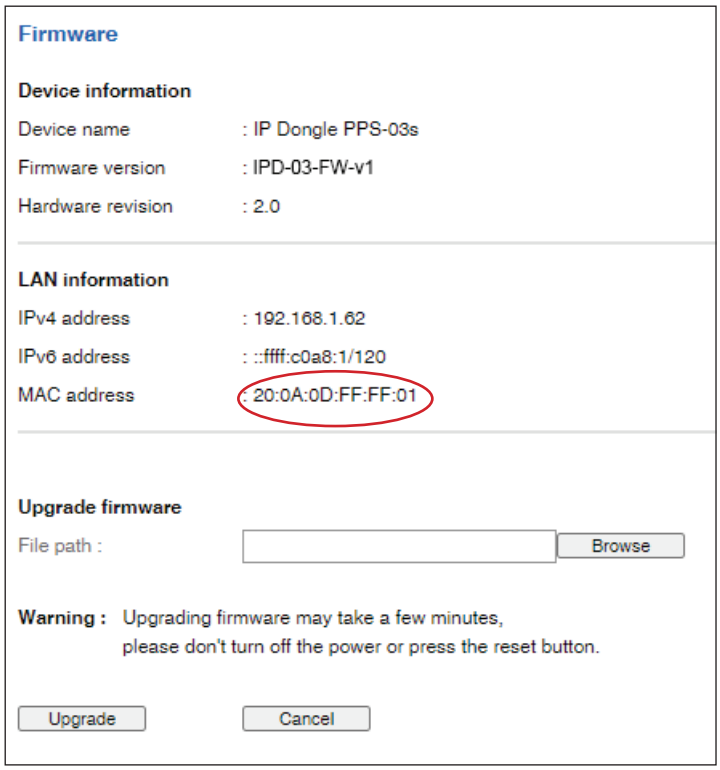
< 7.3 > DHCP Setting

Step 10. Failover Mode: Select " **ON** " from " **DHCP** " & Click " **Apply** " to save the settings



Step 11. Select " **Firmware** " from the left navigation pane

Step 12. Record the " **MAC address** "



Step 13. Assign an IP address to the IP Dongle from your DHCP server.

Complete

Part VIII. FAQ

< 8.1 > Management Software

1. Is IPM-04 management software free of charge ?
Yes.

2. What is InfraPower Manager ?
The InfraPower Manager IPM-04 is a Windows based system to consolidate management of max. **1600 PDUs** via **50 IP dongles**, using a simple web interface which monitors and controls dual feed single phase , single & 3 Phase W series PDUs.
- SNMP Capability v2 / v3 via IP Dongle
- Outlet switch On/Off and scheduling
- Outlet level kWh & amp measurement
- Temp-Humid monitoring
- Graphic user interface
- PDU & outlet reporting (kWh / Amp / Event / Temp & Humid)

3. Which OS platform does IPM-04 support ?
- MS Windows 10 Pro
- MS Windows 7 Professional with SP1
- MS Windows Server 2012 R2 Standard Edition
- MS Windows Server 2008 Standard Edition SP2
- MS Windows Server 2008 R2 Standard Edition SP1
- MS Windows Server 2003 R2 Standard Edition with SP2

Ensure the user logins as a member of "Administrators" Group before IPM-04 Installation and execution.

4. What are the default ports used in the IPM-04 ?
- UTP port : 8890 for searching IP Dongle
- TCP port : 4000 for IP Dongle communication
- TCP port : 80 for HTTP
- TCP port : 25 for email alarm service (can be changed by user)

5. Why can't I access the login page ?
- If the web service is started & the port of web server is open in firewall setting

6. Why can't I login remotely ?
- If the login name & password is correct

7. Which database does the IPM-04 support ?
PostgreSQL

8. What is the PostgreSQL default password for IPM-04 ?
1qaz2WSX

9. How can I receive alarm email and get full log report ?
Ensure that IPM-04 is executed and the alarm server is configured properly and being enabled.

10. What is the default user name & login password of IPM-04 ?
Default user name " **admin** " / Default login password " **00000000** "

< 8.1 > Management Software

11. What is the command password of IPM-04 ?

- Each IP Dongle group has its command password (Default " **00000000**") .
- For security, it will be requested for any PDU configuration and control.
- Only administrator can set command password.
- The passwords are disabled or enabled, same or different subject to the administrator's management.

12. Is it possible to increase PDU from 1600 & IP Dongle group from 50 ?

Yes, but custom management software & service charges required.

13. Is it possible to increase the concurrent user from 5 ?

Yes, but custom management software & service charges required.

14. Can I manage W series PDUs from different workstations ?

Yes, max. 5 concurrent login users from different workstations.

15. Why UI shows PDU / PDUs disconnection ?

- the PDU is power OFF or
- duplicate the PDU level no. or
- cable loose / defective

- the IP Dongle fails
  Refer to < 8.2 > IP Dongle

- the W Meter fails
  Refer to < 8.3 > W Meter

- the power module fails
  Refer to < 8.4 > Power Module

16. Why UI shows Temp. / Temp. + Humid sensor disconnection ?

- Temp. / Temp. + humid sensor is NOT connected
- Temp. / Temp. + humid sensor in BAD contact
- Temp. / Temp. + humid sensor is defective

< 8.2 > IP Dongle

1. **What is the IP Dongle ?**
   The IP Dongle, with patented hot-plug & field replaceable design and SNMP function, provides a simple and economical way to consolidate management of max. 32 pcs of Dual Feed single phase , single & 3 Phase PDUs via a single network IP address to save IP address cost.

2. **Does IP Dongle have a built-in UI ?**
   Yes, a built-in UI provides a general remote monitoring & control for cascaded PDUs.
   However, this built-in UI can only manage up to 32 PDUs in a daisy chain, no any reporting, event & log.
   If need a complete monitoring & control AND a log & reporting for some hundred PDUs, the free IPM-04 PDU management software is absolutely required.

3. **How to reset IP dongle to factory default ?**
   Press and hold the reset button until Green LED off to reset IP dongle to factory default.

4. **Can I use the built-in dongle UI and IPM-04 management software simultaneously?**
   Yes.

5. **Is the IP Dongle essential to IPM-04 management software ?**
   Yes, the software can't run without IP Dongle

6. **Is the IP Dongle essential to SNMP function ?**
   Yes, absolutely.

7. **Does the IP Dongle support SNMP v2 and v3 ?**
   Yes.

8. **What is default setting of IP Dongle ?**
   The default IP setting is as below :

LAN 1		LAN 2	
IP address	: 192.168.11.1	IP address	: 192.168.0.1
Subnet Mask	: 255.255.255.0	Subnet Mask	: 255.255.255.0
Gateway	: 192.168.11.254	Gateway	: 192.168.0.254

< 8.2 > IP Dongle

9. What is the IP setup utilities?
This is a windows application used to assign the IP address of IP Dongle.
Please find the link below :
http://www.austin-hughes.com/support/utilities/infrapower/IPdongleSetup.msi

10. What are the default ports used in IP setup utilities ?
- UTP port : 8880, 8881, 8882, 8883, 8884, 8888, 8889, 8890 & 8891

11. Does the IP Dongle support DHCP (Dynamic Host Configuration Protocol)?
Yes.

12. Will the reset of IP Dongle affect the power to the outlets ?
No, the IP Dongle operates on a separate circuit, so the power to the outlets will remain unchanged.

13. What are the symptoms if the IP Dongle fails ?
- UI shows IP Dongle disconnection and users fail to access the whole cascaded PDUs.
- Orange LED off of IP Dongle

14. Why the IP Dongle fails to work ?
- the IP Dongle itself fails or
- the 1st level W Meter fails or
- the 1st level Power Module fails or
- cable loose or defective between IP Dongle and the network device

15. How can I replace a failed IP Dongle ?
Download the guide below to replace the IP Dongle :
http://www.austin-hughes.com/support/replacementguide/infrapower/RG-IP-W-IP-Dongle.pdf

16. Does the IP dongle have firmware built-in ?
Yes

17. How can I get the updated IP dongle firmware ?
Please find the link below :
http://www.austin-hughes.com/resources/software/infrapower

18. Can I remotely update the IP dongle firmware ?
Yes.
Download the guide below to update the firmware accordingly :
http://www.austin-hughes.com/support/upgradeguide/infrapower/UG-IP-W-IPdongle-Firmware.pdf

< 8.3 > W Meter

1. **What are features of the W Meter ?**
   - Support Dual Feed single phase , single & 3 Phase PDU and they can be inter-cascaded in a single daisy chain
   - Support switched PDU and outlet amp + kWh measurement
   - Simply connect 1 x IP Dongle to access up to 32 PDUs to save IP network address
   - SNMP Capability v2 / v3 via IP Dongle
   - Sensor port x 2
   - 2.8” color LCD featured w/ touchscreen
   - Built-in buzzer will sound when circuit or bank Amp over alarm setting
   - Field replaceable design allows meter replacement without PDU power interruption

2. **What is the default PDU level ?**
   Level 16

3. **What is the default outlet status of Switched PDU ?**
   ON

4. **If one of the cascaded PDU W Meter fails, will it affect the data transmission among PDUs in the same daisy chain ?**
   No , the meter design prevents this from happening.

5. **If one of the cascaded W series PDU (meter) loses power, will it affect the data transmission among PDUs in the same daisy chain ?**
   Yes, if the 1st level PDU loses power.
   No , if NOT the 1st level PDU loses power.

6. **What is the maximum cabling distance between two cascaded W series PDUs ?**
   Up to 10 meter (33 feet) via CAT. 5 / 6 cable.

7. **What are the symptoms if the W Meter fails ?**
   - if the W Meter PDU is one of that among the 2nd to last level, UI shows PDU disconnection and users fail to access this PDU
   - if the W Meter PDU is the 1st level, UI shows IP Dongle disconnection and users fail to access the whole cascaded PDUs
   - W Meter no display

8. **Why the W Meter fails to work ?**
   - the W Meter itself fails or
   - the Power Module fails and can’t supply power to W Meter so the W Meter fails to work or
   - the Power Module IC defective and causes W Meter has no data return or
   - the LAN cable loose or defective

9. **How can I replace a failed W Meter ?**
   Download the guide below to replace the W Meter :
   http://www.austin-hughes.com/support/replacementguide/infrapower/RG-IP-W3-Meter.pdf

< 8.3 > W Meter

10. How accurate is the energy measurement on W Meter ?

The W Meter have an accuracy of +/- 1% of reading across the entire power and outlets energy measurement compliant with IEC 62053/ANSI C12.20 Standards

- Ampere - squelched to 0A under 0.3A
- Accuracy is not defined below 0.3A.

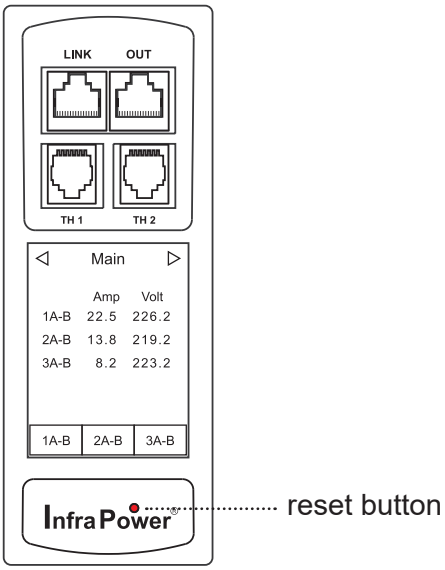
Functional Specifications - Metering	
Input Metering Range	0.3 to Rated Input Current
Outlet Metering Range	0.3 to 16.0A
Ampere Accuracy (A)	+/- 1%
Voltage Accuracy (V)	+/- 1%
Power Accuracy (kW)	+/- 1%
Energy Accuracy (kWh)	+/- (1%)*hours

11. Does the W meter have firmware built-in ?

Yes

12. What can I do if the W Meter turns white ?

- Use a pin to press the reset button
- If the symptom still persists, call your dealer for support



< 8.4 > Power Module

1. **What is feature of the Power Module ?**
   - convert AC to DC for W Meter, IP Dongle & outlet control module
   - field replaceable design allows quick replacement

2. **How affect the W Meter if the Power Module fails ?**
   It will cause the meter fails to work as below :
   - if the W Meter PDU is one of level among the 2nd to the last, UI shows PDU disconnection and users fail to access this PDU
   - if the W Meter PDU is the 1st level, UI shows IP Dongle disconnection and users fail to access the whole cascaded PDUs
   - W Meter no display and / or no data return

3. **How affect the switched & measurement WS / WSi / Wi PDU if the Power Module fails ?**
   - lose outlet On/Off control and outlet amp & kWh measurement
   - but outlet can still supply power to device

4. **Why the Power Module fails to work ?**
   - the power module itself fails

5. **How can I replace a failed Power Module ?**
   For safety, please follow the Power Module replacement guide.
   Download the guide below to replace the Power Module :
   http://www.austin-hughes.com/support/replacementguide/infrapower/RG-IP-W3-Power-Module.pdf

< 8.5 > Outlet Control Module

1. **How many types of Outlet Control Module ?**
   The outlet control module is a built-in PCB and NOT a hot-swapped & field replaceable design.
   - switched & measurement module for WSi switched & outlet level measurement PDU
   - outlet measurement module for Wi outlet level measurement PDU
   - switched module for WS switched PDU

2. **How affect the switched & measurement WS / WSi / Wi PDU if the Outlet Module fails ?**
   - lose outlet On/Off control and outlet level measurement
   - but outlet can still supply power to device

3. **Why the outlet control module fails to work ?**
   - the outlet control module itself fails

4. **How can I replace a failed Outlet Control Module ?**
   No, not like W Meter & Power Module, Outlet Control Module is NOT hot-swapped & field replaceable design. You have to replace the whole PDU.

5. **How can I replace a failed PDU ?**
   Download the guide below to replace the PDU :
   http://www.austin-hughes.com/support/replacementguide/infrapower/RG-IP-W3-PDU.pdf

< 8.5 > Outlet Control Module

6. **What status the outlet LED means for WS / WSi switched PDU** ?
   LED in Solid Blue : Outlet ON
   LED Not lit : Outlet OFF

7. **How the outlets react when the user power up the WS / WSi switched PDU ?**
   First, all outlets will return to power OFF status within 5 seconds.
   Then, all outlets power ON sequentially.

8. **Why the outlet LED Not lit but the outlets still ON power status ?**
   The outlet LED is defective.

< 8.6 > TH Sensors & Others

TH sensors

1. **How accurate is the Temp. & Humid. sensor ?**
   ± 1°C (typical) & ± 4.5% RH (typical)

2. **How accurate is the Temp. sensor ?**
   ± 1.5°C (typical)

3. **What is the default TH setting ?**
   Default : Deactivate

4. **Is the TH sensor plug-n-play ?**
   Yes, but only for the local meter display.
   No, for management software UI. You have to activate the sensor in < TH Sensor >.
   Note : never activate if no sensor connection

< 8.6 > TH Sensors & Others

Others

1. **Will the PDU settings remain unchanged after power OFF ?**
   Yes, the settings will remain unchanged such as PDU & Outlet Name, Location, Alarm amp., Low alert amp. .....

2. **Does the InfraPower PDU has the over ampere protection ?**
   Yes, the optional resettable fuse and circuit breaker available.

3. **What is the standard inlet cable length of InfraPower PDU ?**
   3 meter (9.9 feet)

4. **Where can I find the Catalogue / User manual / Model list / Wire diagram of InfraPower PDUs ?**
   Please visit the www.austin-hughes.com

5. **How can we get a further support?**
   Please send the email to support@austin-hughes.com or sales@austin-hughes.com

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