DIGITUS®

Smart Power Distribution Unit

Safety and Grounding:

***Read the following information before installing or operating your DIGITUS Power Distribution Unit:***

- This PDU is intended for indoor use only.
- This PDU must not be operated one behind the other!
- Operation only in dry and closed rooms.
- This PDU may not be operated covered. Always ensure free accessibility.
- The maximum power stated on the rating plate must not be exceeded.
- Plug this PDU into a three-wire, grounded power outlet only. The power outlet must be connected to appropriate branch circuit/ mains protection (fuse or circuit breaker). Connection to any other type of
  power outlet may result in a shock hazard.
- Use only the supplied brackets of mounting.
- Check that the power cord, plug, and socket are in good condition.
- Voltage free only when the power plug is unplugged.
- Disconnect the PUD from the power outlet before you install or connect equipment to reduce the risk of electric shock when you cannot verify grounding. Reconnect the PDU to the power outlet only after you make all connections.
- Operation under unfavorable environmental conditions must be avoided. (Humidity over 80% relative, wet, ambient temperatures above 50 ° C, solvents, flammable gases, dust, vapors).
- If external damage to this PDU is detected, do not operate this PDU. Take this PDU immediately out of service if external damage is detected.
- Do not pour liquids over the power strip. There is a high risk of fire or life-threatening electric shock.
- When opening the power strip, live parts can be exposed. There is a risk of electric shock. The power strip may only be opened by a specialist.

1. Smart PDU Introduction

The Smart Power Distribution Unit is a network manageable device that provides power monitoring, controlling and managements to many equipments in the rack cabinet of data center through LAN or WAN. For meeting with the restrictions and requirements in different environment, SMART PDU supplies many connection methods that user can manage it through its Web interface (HTTP or HTTPS), Serial connection, Telnet or SNMP.

1.1 Product picture and description

1.1.1 Vertical SMART PDU (0U)
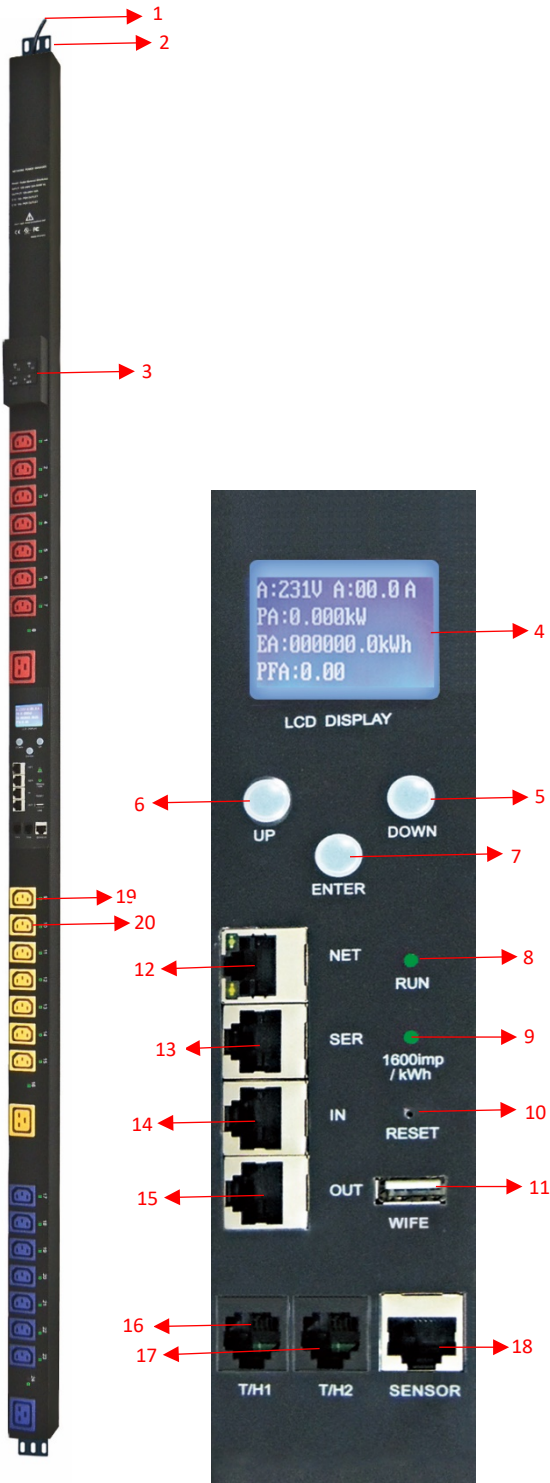
1. Input power cord;

2. Brackets;

3. Hydraulic circuit breaker;

4. LCD screen;

5. DOWN key: scroll down to the next page;

6. UP key: scroll up to the previous page;

7. ENTER: OK button;

8. RUN indicator

9. 1600imp/kWh Energy pulse indicator;

10. RESET button;

11. USB port for WIFI access or software upgrade;

12. NET: 10/100M Ethernet communication port

13. SER: Serial communication port
    (support MODBUS);

14. IN: for daisy-chain

15. OUT: for daisy-chain

16. T/H1: temperature and humidity sensor port 1

17. T/H1: temperature and humidity sensor port 2

18. SENSOR: extend sensor hub communication
    port, sensor hub support 2
    temperature/humidity sensor, 2 door sensor,
    1 water logging sensor and 1 smoke sensor

19. LED indicator;

20. Outlets

1.2 Installation

Vertical-mounting (0U)

1.3 Function Description

There are four series for the Smart PDU range. A, B, D series function comparison table:

	A series	B series	D series
Input-level Metering (A/V/VA/kWh/Power factor)	Yes	Yes	Yes
Individual Outlet Metering	No	Yes	Yes
Individual Outlet Switching	No	No	Yes

A series: DN-95624/ DN-95625/ DN-95640/ DN-95641/ DN-95642
B series: DN-95628
D series: DN-95632/ DN-95634/ DN-95643

2. Hardware Introduction

2.1. System initialization

The buzzer sounds when the SMART PDU is switched on and it stops after 3 seconds.

Then the LCD screen is lighted after 6 seconds with the following information displayed:

15:53:58	(Device time)	15:53:58
2015-04-21	(Date)	2015-04-21
192.168.1.163	(IP address)	

Vertical (0U)   Horizontal (1U)

Note: 192.168.1.163 is the default IP address; and this is the first page after system initialization.

2.2. View system information

2.2.1. View system information

Press **ENTER** to go to the main menu

(The first page on menu)

Information	(Device information)
Total	(Total power data)
Tem/Hum	(Temperature/Humidity)
Sensors	(Door/water

(The second page on menu)

Output	(Outlet socket)
Group	(Outlet group)

Through the DOWN or UP key to scroll down or up to the next/previous page, turn to the main menu and select the first item **Information**, then press **ENTER** to go to the Information menu and the displayed information are as below:

CPU: ARM926EJ-S	（CPU model）
Version: 1.0.0	（Software version）
M/S: Master	（Master/Slave unit）
Type: 3 phase D	（Device series）

Note: the displayed information may differ from device part number.
CPU: ARM926EJ-S means the type of the device CPU chip; Version: 1.0.0 is the software version number; M/S: Master means the Master Unit and Slave 1 means the Slave unit 1(1-4 means the order of Slave unit); Type: 3 phase C means the device is 3 phase C series one.
Through the DOWN or UP key to scroll down or up to the next/previous page, turn to the main menu and select the second item **Total**, then press ENTER to go to the Total menu and the displayed information are as below:

```
U: 214V I: 00.0A


P: 0.000kW

E: 000013.1kWh
```

**Note: the above information is from a single phase device, if it is a 3 phase one,
the power date of each phase will be displayed as well. U: 214V means the input voltage,
I:00.0A means the total input current, P:0.000KW means the total power, E:000013.1kWh
means the total power consumption, PF:0.00 means the power factor.**
Press **ENTER** to return to the main menu, and then press **DOWN** key to select **Temp/Hum** to view
the temperature/humidity as below:

```
T1: ---      H1: ---

T2: ---      H2: ---

T3: ---      H3: ---

T4: ---      H4: ---
```

Press **ENTER** to return to the main menu, and then press **DOWN** key to select **Sensors** to view the
door, water logging, and smoke sensor status as below:

```
Door1: None

Door2: None

Smoke: None

Water: None
```

Press **ENTER** to return to the main menu, then press **DOWN** key to select **Output** to view each
individual outlet current as below:

```
Output01: 00.0A

Output02: 00.0A

Output03: 00.0A

Output04: 00.0A
```

Press DOWN or UP key to view the current of rest outputs:
Note: Press UP button to view the previous page of device information.

Press **ENTER** to return to the main menu, then press **DOWN** key to select **Group** to view each group outlet current as below:

Group1:00.0A	Group5:00.0A
Group2:00.0A	Group6:00.0A
Group3:00.0A	
Group4:00.0A	

3. SMART PDU Software Introduction

3.1. Software overview

SMART PDU is equipped with embedded software system which provides a lot of network services like WEB server, SNMP, Telnet, SMTP and NTP. It's easy to do second development and software integration.

3.2. Access method

Web based, can access via browsers like Internet Explorer, Google Chrome and Fire fox; supports WIFI (including the mobile device like smart phone and tablet), SNMP (v1 / v2c / v3), Telnet and Serial console like MODBUS.

3.2.1 Web access

Open a browser and enter the default IP address, the login window will pop up like below, see figure1-1.
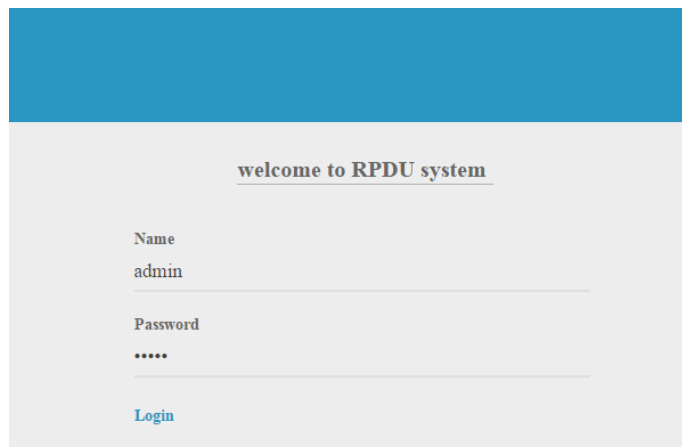

Figure 1-1

Fill in the correct user name and password **(Factory default login name is admin, password is admin)** to login the main interface, see figure1-2
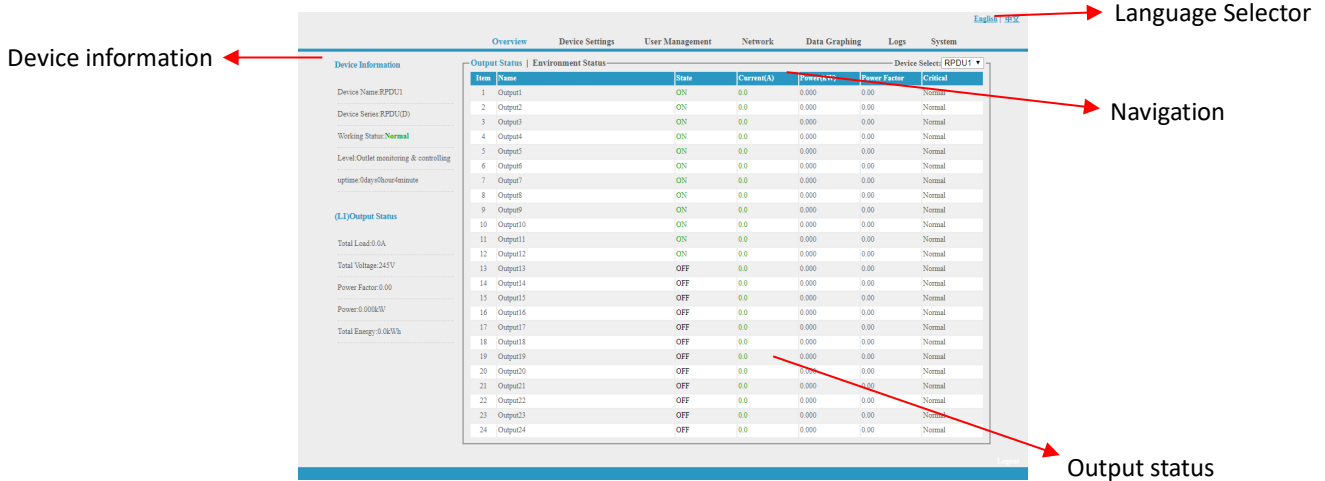

Figure 1-2

Mainly 3 parts on main interface: Navigation menu, Device information and Output status.
Navigation menu: show company logo and function menus and language selector.
Device information: display device name, device series, and device status and function level.
Output status: display output name, on/off state, individual current, individual power, power factor and environment status. From the drop-down menu of device to check the information of Slaves.

More detailed information on operating and configuring the device can be found in the corresponding user manual.

4. Technology Parameters

No.	Performance parameter		Technical parameter
1	Input	Rated input voltage	110/220VAC 50/60 Hz;
		Rated input plug	IEC60309 standard
		Cable specification	16A:3×2.5mm² 32A:3×6.0mm²;
		Cable length	2.5M
		Max. load current	16A, 32A
		Overload protector	1P circuit breaker
2	Output	Socket standard	Standard IEC320 C13, C19
		Socket quantity	A Series: DN-95624 (24way), DN-95625 (42way) B Series: DN-95628 (20way), DN-95629 (24way); C Series: DN-95630 (24way), DN-95631 (24way); D Series: DN-95632 (24way) DN-95633 (16way), DN-95634 (24way);
		Output voltage	110/220VAC 50/60 Hz
		Output current	16A, 32A
3	Control ports	Net port	1×RJ45 port
		Daisy chain port	2×RJ45 port
		Software update port	1×RJ45 port
		Temperature & humidity port	Max 2×RJ11 port（can add more）
		Smoke sensor port	Max 1×RJ11 port（optional）
		Water sensor port	Max 1×RJ11 port（optional）
		Door sensor port	Max 1×RJ11 port（optional）
4	Display	Working state	1×LED
		Power pulse	1×LED
		IP Address, M/S SMART PDU state, measurement value, alarm state	LCD screen（Resolution: 128×64）
5	Load current display technology	Total current	Full-scale:16A/32A, Accuracy:±1%+0.2 Resolution:200mA, Response:400ms

	requirement	Individual load current	Full-scale: 10A/ 16A, Accuracy:±1%+0.1, resolution:100mA, Response:400ms
6	Temperature/humidity Technology requirement	Temperature	Accuracy:±1℃，Response: 400ms
		Humidity	Accuracy:±5%RH，Response: 400ms
7	Product size	Product size（L×W×H）	X^2×56×52mm
		Mounting hole	X^3
8	Case color	Color	Black
9	Fittings	Installation bracket	1 set
		Network connection cable	2M blue network cable*1
		Daisy-chain connection cable	2M yellow network cable*1
		Serial connection cable	2M Ivory Serial cable*1
		User manual	1 set (CD)
10	Optional fittings	Sensor	Temperature/humidity sensor
			Smoke sensor
			Door sensor
			Water logging sensor
11	Environment	Working Environment	Temperature: 0℃～+45℃ Relative humidity: 30%～90%
		Storage Environment	Temperature: -20℃～+70℃ Relative humidity :0%～95%
12	ROHS	Compliance	

This is a Class A product. In home environment, this product may cause radio interference.

In this case, the user may be required to take appropriate measures.

Hereby Assmann Electronic GmbH, declares that the Declaration of Conformity is part of the shipping content.

If the Declaration of Conformity is missing, you can request it by post under the below mentioned manufacturer address.

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