

Power Switch-8

Power Management



Master



Slave

User's Guide

Power Switch-8

Power Switch-8 is a couple of power control units made of a Master named Power Switch Master and a slave named Power Switch Slave.

Power Switch Master is a power control unit with a built-in Web server, an Ethernet and a serial RS232 connection. It enables you to control the power supply of 8 power sockets either remotely through a Network (Intranet or Internet) or locally through its serial RS232 connection. The number of the controlled sockets can be extended up to 40 by connecting up to 4 Power Switch Slave to the Master.

Thanks to the use of two separate power inlets and the optional Twin mode which allows you to control at the same time two power sockets, this device is the ideal solution to control the power of servers using redundant power supplies.

Power Switch Slave is a power control unit with a serial RS232 connection. It enables you to control the power supply of 8 sockets through its serial RS232 connection. The number of the controlled sockets can be extended up to 32 by cascading up to 4 Power Switch Slave.

Like the Master, this device has two separate power inlets to increase the security and the load available on the power sockets.

Chapters

1. Safety instructions: to read before use!
2. Installation
3. Configuration of the Power Switch Master
4. Configuration using the Power Switch Finder program
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7. Serial port configuration
8. Command the sockets through a Web browser
9. Command the sockets through a serial connection
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1. Safety instructions: to read before use!



Remark: In the following instructions "Power Switch device" is used for both devices Power Switch Master and Power Switch Slave.

- ▶ The Power Switch devices can only be installed by qualified people with the following installation and use instructions. The manufacturer disclaims all responsibility in case of a bad utilisation of the Power Switch devices and particularly any use with equipments that may cause personal injury or material damage.
- ▶ This equipment is designed to be installed on a dedicated circuit that must have a circuit breaker or fuse protection.
- ▶ The electrical power sockets used to plug the power cords of the Power Switch devices must be close to the Power Switch devices and easily accessible.
- ▶ Check that the power cords, plugs and sockets are in good condition.
- ▶ The Power Switch devices can only be connected to three-wire 230 VAC (50-60Hz) sockets.
- ▶ Always plug the Power Switch devices into properly grounded power sockets (two poles plus ground).
- ▶ Never exceed 10 Amp total load for each group of 4 power sockets of an Power Switch device.
- ▶ If you have to replace an external fuse of an Power Switch device, never use another type of fuse than 10A/250V T.
- ▶ The Power Switch devices are intended for indoor use only. Do NOT install them in an area where excessive moisture or heat is present.
- ▶ Always disconnect the 2 (two) power cords of the Power Switch device if you want to intervene on the Power Switch device or on the equipment powered from the Power Switch device.
- ▶ The power outlets of the Power Switch devices are not circuit breakers! If you want to intervene on equipment connected to an Power Switch device you must disconnect this equipment from the Power Switch device.
- ▶ The Power Switch devices contain potentially hazardous voltages. Do NOT attempt to disassemble them.
- ▶ The Power Switch devices contain no user serviceable parts and repairs are to be performed by factory trained service personnel only.

2. Installation

The **Power Switch Master** has a built-in Web server, an Ethernet and a serial interface. It can be used as a stand-alone device to control over IP eight IEC power sockets. The number of controlled sockets can be extended to 16, 24, 32 or 40 by cascading 1 to 4 Power Switch Slave.

The **Power Switch Slave** has a serial RS232 interface used to control individually its 8 power sockets either through an Power Switch Master or through any device using a serial RS232 connection (PC, Console server...). By cascading up to 4 Power Switch Slave, it is possible to control up to 32 sockets via one serial port.

Connecting Power Switch Master

1. Connect your 10BaseT cable to the RJ-45 network port and to the Power Switch Master.
If you want to configure the Power Switch Master or control its power sockets over a Terminal connection, connect the supplied serial cable to an available serial port on your PC and to the serial port of the Power Switch Master.
2. Plug the 2 power cables into 2 **grounded** sockets. The A and B LEDs light on to confirm that power is on and the Pwr LED confirms that the Web server is powered.
3. You can now configure the Power Switch Master by following the indications of the paragraph 3 "Configuration of the Power Switch Master" or, if necessary, install the Power Switch Slave as indicated hereafter.

Connecting Power Switch Slave

1. Connect the supplied RJ9 link-up cable to the RJ9 Out connector of the Master and to the RJ9 In connector of the slave.
To cascade several Slaves, link RJ9 Out connector to RJ9 In connector of the next slave.
2. Allocate an address to each Slave by positioning the address selection DIP-switches marked Slct on the front panel according to the following table.

Remarks

- Unplug the device before changing its DIP switches.
- Do NOT use the same address for two different Slaves.

Slave number	DIP-switch 1	DIP-switch 2
1	Off	Off
2	On	Off
3	Off	On
4	On	On

Position Off = switch upwards

Position On = switch downwards

Micro-switch 1 is on the left side, micro-switch 2 on the right.

3. Plug the 2 power cables into 2 **grounded** sockets. The A and B LEDs light on to confirm that power is on.

3. Configuration of the Power Switch Master

To use the Power Switch Master on your network, you must first configure its network parameters. Ask your network administrator for the parameters to use.

There are two different methods to configure the Power Switch Master:

Method 1:

Through a network using the Power Switch Finder Program (on the delivered CD).

It is the simplest and fastest configuration method if you use Windows as operating system. We suggest that you use this program at least during the first configuration: it allows you to configure your Power Switch Master through your local network even if its network parameters (IP Address, Subnet mask and Port) are not compatible with those of your PC or your local network.

If you decide to use this method you can directly go to §4 "Configuration using the Power Switch Finder program".

Default Network parameters:

IP address	192.168.100.100
Subnet mask	255.255.255.0
Gateway	no address
Port	80

Method 2:

Through a RS232 serial connection using a Terminal connection. If you use a PC, use the serial cable supplied with the product and a Terminal program such as Windows HyperTerminal or the MicroTerminal program on the CD (folder miscellaneous).

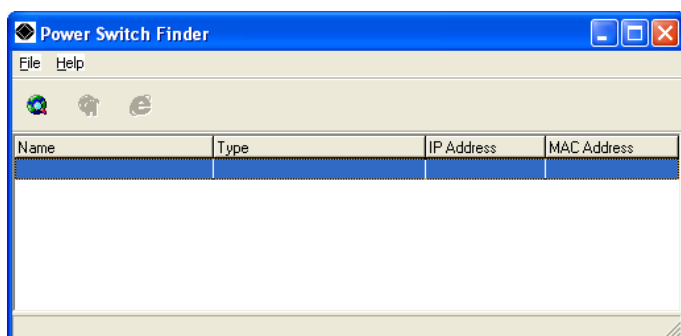
If you decide to use this method, you can directly go to §5 "Configuration using a Terminal connection".

4. Configuration using the Power Switch Finder program

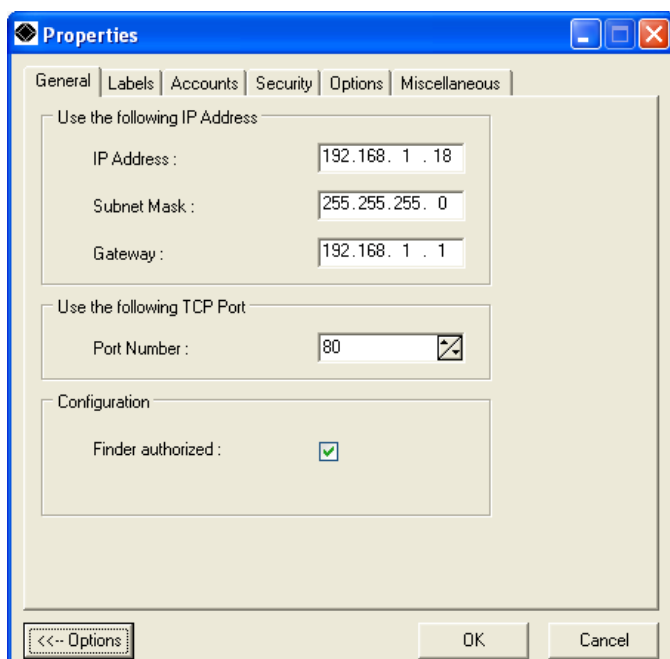
Remarks:

- The Power Switch Master and the PC used to configure it have to be connected on the same segment of the network. The protocol of this program can not be routed so it can not be used to configure the Power Switch through a WAN or the Internet.
- This program does not work if the administrator has deactivated it in the configuration of the Power Switch (for security reasons for example).

1. Start the **PS-Finder.exe** program on the CD-ROM.
The Power Switch Finder window appears.



2. In the tool bar click on the **first left button** or choose the **File/Scan** Menu.
The program browses the segment on which is connected your PC and displays the name, the type, the IP and MAC Address of the connected Power Switch.
3. In the tool bar click on the **second left button** or choose the **File/Configure** Menu.
The properties dialog box appears and you can now configure the network parameters. To configure all other parameters click on the **Options** button on the bottom of the dialog box.



General Tab

This tab is used:

- ▶ to define all the network parameters of the Power Switch Master (IP Address, Subnet Mask, Default Gateway and Port Number).
- ▶ to permit or deny the configuration using the Power Switch Finder program for security reasons.

Labels Tab

This tab is used:

- ▶ to attribute a label to a group of Power Switch devices connected together (a group is made of 1 Power Switch Master and up to 4 Slaves).
- ▶ to attribute a label to each Power Switch and its 8 power sockets (use the left vertical Tabs to select the Power Switch you want to configure).

Accounts Tab

In combination with the left vertical tab Group, this tab is used:

- ▶ to attribute a name and a password to the administrator who has access to all the sockets within a group of Power Switch.

In combination with one of the left vertical tabs «Device 1» to «Device 5», this tab is used:

- ▶ to define 8 user accounts using a name and a password for each one.
- ▶ to define the power sockets each user will be able to control.
- ▶ to activate or deactivate an Power Switch Slave connected to the Master.
- ▶ to define the function modus of each Power Switch (Single mode or Twin mode):
 - **Single mode** enables you to control individually each power socket,
 - **Twin mode** enables you to control two power sockets with one command. This mode is particularly intended to restart devices using redundant power supplies. In that case, the 4 sockets powered by the power supply A (sockets 1 to 4) are automatically associated to the 4 sockets powered by the power supply B (sockets 5 to 8) and the labels of the first 4 sockets are used.

Security Tab

This tab is used to define addresses which are authorised or denied to access to the Power Switch over the Network. For all details about this features, please refer to chapter 6 "Security parameters configuration".

Options Tab

This tab is used to:

- ▶ define the restart delay valid for all power sockets of all Power Switch connected together;
- ▶ configure an Email address to which the user can manually send a message in case of problem.

Miscellaneous Tab

In combination with one of the left vertical tabs "Device 1" to "Device 5" to know how many times an Power Switch has been powered ON and how many times its power sockets have been switched from OFF to ON. These values can not be reset by the user.

5. Configuration using a Terminal connection

The RS232 serial port of the Power Switch Master can be used to control its power socket and to configure its Web server.

To configure the Web server using a PC and a Terminal connection:

1. Use the supplied RS232 serial cable to connect the Power Switch Master to an available serial port of your PC.
2. Run a terminal program such as Windows HyperTerminal or the MicroTerminal program on the CD (folder miscellaneous).
3. Configure the appropriate serial port with the following settings:
9.600 bauds, 8 bits, no parity, 1 stop bit and no flow control.
If you use the MicroTerminal program on the CD (folder miscellaneous) you only have to choose the used serial port, this program is already configured at 9600,n,8,1.
4. On your computer, press **<ENTER>** until the prompt «>» appears on your screen. (the Power Switch Master is now in Command mode and is waiting for commands to switch the power sockets. The serial command mode is explained in § 9).
5. Press the **<TAB>** key on your keyboard.
The Configuration menu appears on your screen and the Power Switch Master is now in the Configuration mode. Follow the menu to configure the Web server of your Power Switch Master.

```
>
Power Switch M8

Commands :

Configuration

  /NP      Network Parameters Settings
  /PS      Passwords Settings
  /NS      Group, Device and Socket Names Settings
  /DP      Device Parameters Settings
  /RD      Socket Restart Delay Settings
  /IS      IP Security Settings
  /RS      Restart the Device

Enter Selection

>
```

All commands start with the slash «/»

ex.: type the command **/NP** to go to the **Network Parameters** settings menu.

To display the current menu again, press **<ENTER>**.

To go to the previous menu and to display it, press **<ESC>**.

Remark: to leave the configuration mode, type the restart command **/RS**. This is particularly important if you want to control the power socket later through the serial connection.

The configuration of the serial port is explained in § 7 (Serial port configuration).

MAIN CONFIGURATION MENU

The Main menu of the configuration mode displays all the commands that can be used.

- ▶ All commands start with the character slash «/»
(ex.: type the command **/NP** to go to the **Network Parameters** settings menu.
- ▶ To display the current menu again, press **<ENTER>**.
- ▶ To return to the previous menu and display it, press **<ESC>**.

```
Power Switch
Commands :
Configuration
  /NP      Network Parameters Settings
  /PS      Passwords Settings
  /NS      Group, Device and Socket Names Settings
  /DP      Device Parameters Settings
  /RD      Socket Restart Delay Settings
  /IS      IP Security Settings
  /RS      Restart the Device
Enter Selection
>
```

NETWORK PARAMETERS SETTINGS MENU

Command /NP

This Menu is used to configure all network parameters (IP Address, Subnet Mask, Gateway and Port) and to permit or prevent the configuration over a local area network using the special Power Switch Finder program.

```
NETWORK PARAMETERS SETTINGS

  MAC Address      00.01.9A.F1.00.0F
1. IP Address     192.168.100.100
2. Subnet Mask    255.255.255.0
3. Gateway        0.0.0.0
4. Port           80
5. Finder         Activated

Enter Selection or <ESC> to exit

>
```

Command 1

```
NETWORK PARAMETERS SETTINGS

  IP Address is: 192.168.100.100

Enter IP Address or <ESC> to exit
You must restart the device (Command /RS) to valid the new parameters

>
```

Command 2

```
NETWORK PARAMETERS SETTINGS

  Subnet Mask is: 255.255.255.0

Enter subnet mask or <ESC> to exit
You must restart the device (Command /RS) to valid the new parameters

>
```

Command 3

```
NETWORK PARAMETERS SETTINGS

  Gateway is: 0.0.0.0

Enter gateway address or <ESC> to exit
You must restart the device (Command /RS) to valid the new parameters

>
```

Command 4

NETWORK PARAMETERS SETTINGS

Port is: 80

Enter port or <ESC> to exit

You must restart the device (Command /RS) to valid the new parameters

>

Command 5

NETWORK PARAMETERS SETTINGS

Finder is: Activated

1. Activate
2. Deactivate

Enter Selection or <ESC> to exit

You must restart the device (Command /RS) to valid the new parameters

>

PASSWORD SETTINGS MENU

Command /PS

This Menu is used to configure the names and the corresponding passwords for the administrator and all the users.

```
PASSWORDS SETTINGS
1. Administrator
2. Users Device 1
3. Users Device 2
4. Users Device 3
5. Users Device 4
6. Users Device 5

Enter Selection or <ESC> to exit
>
```

Command 1

```
ADMINISTRATOR NAME & PASSWORD SETTINGS
1. Administrator Name      admin
2. Administrator Password  admin

Enter Selection or <ESC> to exit
>
```

Command 2

```
DEVICE 1 / USERS SETTINGS
1. User 1
2. User 2
3. User 3
4. User 4
5. User 5
6. User 6
7. User 7
8. User 8

Enter Selection or <ESC> to exit
>
```

Command 1

```
DEVICE 1 / USER 1 SETTINGS
1. User 1 Name              user1-1
2. User 1 Password          user1-1
3. User 1 authorized Sockets 1,5

Enter Selection or <ESC> to exit
>
```

GROUP, DEVICE AND SOCKET NAMES SETTINGS

Command /NS

This Menu is used to attribute a label to a group of Power Switch, a label to each Power Switch device and a label to each power socket.

```
GROUP, DEVICE AND SOCKET NAMES SETTINGS

1.  Group Name           Group Name
2.  Device 1 & Socket Name Device 2 name
3.  Device 2 & Socket Name Device 2 name
4.  Device 3 & Socket Name Device 3 name
5.  Device 4 & Socket Name Device 4 name
6.  Device 5 & Socket Name Device 5 name

Enter Selection or <ESC> to exit

>
```

Command 1

```
GROUP NAME SETTING

Group Name is: Device Name

Enter Name (max. 32 characters) or <ESC> to exit

>
```

Command 2 to 6

```
DEVICE 1 / SOCKET NAMES SETTINGS

1.  Device Name       Device 1 name
2.  Socket 1         Socket 1-1 name
3.  Socket 2         Socket 1-2 name
4.  Socket 3         Socket 1-3 name
5.  Socket 4         Socket 1-4 name
6.  Socket 5         Socket 1-5 name
7.  Socket 6         Socket 1-6 name
8.  Socket 7         Socket 1-7 name
9.  Socket 8         Socket 1-8 name

Enter Selection or <ESC> to exit
```

DEVICE PARAMETERS SETTINGS

Command /DP

This Menu is used to:

- ▶ configure an Email address to which the user can manually send a message in case of problem,
- ▶ define the function modus of each Power Switch device (Single mode or Twin mode),
Single mode enables you to control individually each power socket,
Twin mode enables you to control two power sockets with one command. This mode is particularly intended to restart devices using redundant power supplies. In this case, the 4 sockets powered by power supply A (sockets 1 to 4) are automatically associated to the 4 sockets powered by power supply B (sockets 5 to 8) and the labels of the first 4 sockets are used.
- ▶ activate or deactivate an Power Switch Slave connected to an Power Switch Master.

```
DEVICE PARAMETERS SETTINGS

1. Mail to
2. Device #1    Activated      Twin Mode
3. Device #2    Activated      Twin Mode
4. Device #3    Not Activated  Single Mode
5. Device #4    Not Activated  Single Mode
6. Device #5    Not Activated  Single Mode

Enter Selection or <ESC> to exit

>
```

Command 1

```
MAIL TO SETTING

Mail to is:

Enter Name (max. 32 characters) or <ESC> to exit

>
```

```
DEVICE 1 PARAMETERS SETTINGS

Device #1    Activated      Twin Mode

1. Single Mode / Twin Mode
2. Activate / Deactivate

Enter Selection or <ESC> to exit

>
```

Command 1

DEVICE 1 PARAMETERS SETTINGS

Mode is: Twin Mode

1. Twin Mode
2. Single Mode

Enter Selection or <ESC> to exit

>

DEVICE 1 PARAMETERS SETTINGS

Device is: Activated

1. Activate
2. Deactivate

Enter Selection or <ESC> to exit

>

SOCKET RESTART DELAY SETTINGS

Command /RD

This Menu is used to define the restart delay for all the power sockets.

```
SOCKET RESTART DELAY SETTINGS
1. Delay before Restart (sec)    5
Enter Selection or <ESC> to exit
>
```

Command 1

```
SOCKET RESTART DELAY SETTINGS

    Delay before Restart (sec) is: 5
1. 5 sec
2. 10 sec
3. 15 sec
4. 30 sec
5. 60 sec
Enter Selection or <ESC> to exit
>
```

Command 1

```
SOCKET RESTART DELAY SETTINGS
1. Delay before Restart (sec)    5
Enter Selection or <ESC> to exit
>
```


IP SECURITY SETTINGS

Command /IS

This Menu is used to define IP addresses or IP ranges that are authorized or not to access the Web Server of the Power Switch Master. See § 6 for all details.

```
IP SECURITY SETTINGS

1. Mask #1    0.0.0.0          Deny    Not Activated
2. Mask #2    0.0.0.0          Deny    Not Activated
3. Mask #3    0.0.0.0          Deny    Not Activated
4. Mask #4    0.0.0.0          Deny    Not Activated
5. Mask #5    0.0.0.0          Deny    Not Activated
6. Mask #6    0.0.0.0          Deny    Not Activated
7. Mask #7    0.0.0.0          Deny    Not Activated
8. Mask #8    0.0.0.0          Deny    Not Activated

Enter Selection or <ESC> to exit

>
```

Command 1

```
IP SECURITY SETTINGS

Mask #1    0.0.0.0          Deny    Not Activated

1. Edit the Mask
2. Permit / Deny
3. Activate / Deactivate

Enter Selection or <ESC> to exit

>
```

Command 1

```
IP SECURITY SETTINGS

Mask #1 is: 0.0.0.0

Enter mask or <ESC> to exit

>
```

Command 2

```
IP SECURITY SETTINGS

Mask #1 Access is: Deny

1. Permit
2. Deny

Enter Selection or <ESC> to exit

>
```

Command 3

```
IP SECURITY SETTINGS

Mask #1 Supervision is: Not Activated

1. Activate
2. Deactivate

Enter Selection or <ESC> to exit

>
```

RESTART THE DEVICE

Command /RS

This Menu is used to restart the Power Switch Master.

This function is needed:

- ▶ to take into account changes of network parameters (command /NP),
- ▶ to leave the serial configuration mode and return to the command mode.

```
RESTART THE DEVICE
```

```
The system is reinitializing, please wait ...
```

```
>
```

6. Security parameters configuration

Explanations about masks settings :

- ▶ Each mask can be an IP Address or a range of IP Addresses.
- ▶ Each mask allows you to permit or deny access to the Web server of the Power Switch Master for specific addresses or ranges of addresses.
- ▶ Each mask can be activated or deactivated (without function in this case).
- ▶ Each IP Address consists of a series of four eight-bit numbers. The number 255 is used as a wildcard, it replaces all others.
- ▶ Masks are listed in order of descending priority; so Mask 1 has the highest priority.
- ▶ Masks have a cumulative effect; high priority masks supersede the effect of lower priority masks.

Example 1:

⇒ Deny the access to all IP addresses except 192.168.001.015

Mask	IP Address	Permit	Deny	Activated
#1	192.168.001.015	✓		✓
#2	255.255.255.255		✓	✓

Example 2:

⇒ Permit access only to IP addresses beginning with 192.

Mask	IP Address	Permit	Deny	Activated
#1	192.255.255.255	✓		✓
#2	255.255.255.255		✓	✓

Example 3:

- ⇒ Permit access only to IP addresses beginning with 192
- ⇒ Deny access to IP address 192.168.001.010

Masque	IP Address	Permit	Deny	Activated
#1	192.168.001.010		✓	✓
#2	192.255.255.255	✓		✓
#3	255.255.255.255		✓	✓

Example 4:

- ⇒ Permit access to IP addresses beginning with 192
- ⇒ Deny access to address 192.168.001.010
- ⇒ Permit access to IP addresses beginning with 217.128.103

Mask	IP Address	Permit	Deny	Activated
#1	192.168.001.010		✓	✓
#2	192.255.255.255	✓		✓
#4	217.128.103.255	✓		✓
#3	255.255.255.255		✓	✓

7. Serial port configuration

Power Switch Master

Connector: SUB-D9 female connector

Pin configuration

Pin 2 = TxD (transmit data to the PC)
Pin 3 = RxD (receive commands)
Pin 5 = GnD

Configuration parameters

Speed: 9600 bauds
Parity: No
Format: 8 bits
Stop bit: 1
Flow control: no

Remarks:

- The serial cable provided with Power Switch Master is a standard straight extension cable with DB9 connectors. This cable is intended to connect the serial port of the Power Switch Master to a serial port of a PC.
- You may use any other straight serial cable, but for EMC reasons, we advise you not to use cables above 2.9 meters long.

Power Switch Slave

Connector: RJ9 female

Pin configuration

1 (yellow) = Ground
2 (white) = RxD (receive commands)
3 (blue) = TxD (transmit data)
4 (orange) = Ground

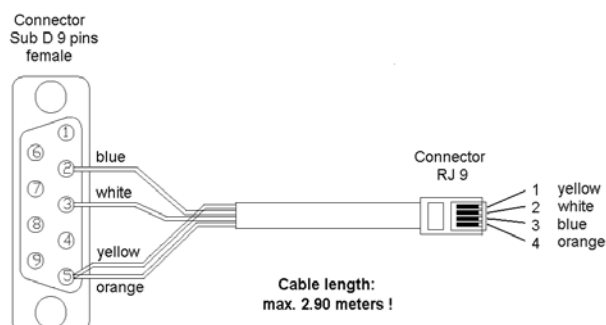
Configuration parameters

Speed: 9600 bauds
Parity: No
Format: 8 bits
Stop bit: 1
Flow control: no

A short connection cable is supplied with each Power Switch Slave.

This cable is used to connect its RJ9 input connector to the RJ9 output connector of an Power Switch Master or another Power Switch Slave.

If you want to connect the Power Switch Slave directly to the serial port of a PC, make a serial cable as indicated by the drawing below or contact your dealer to order one.

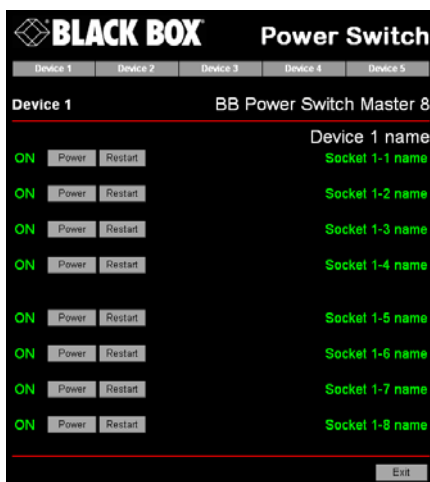


8. Command the Power Sockets through a Web browser

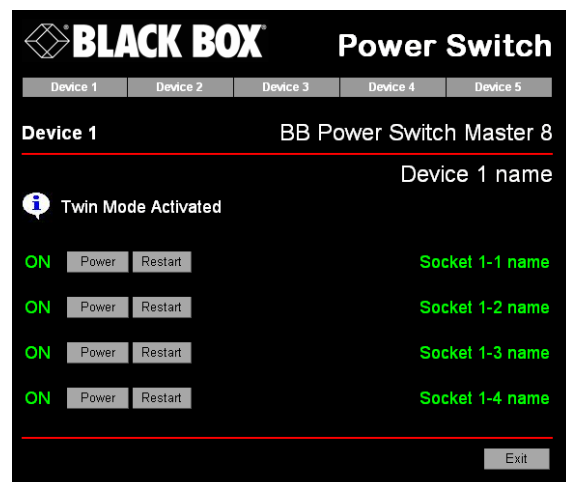
1. Start your Web browser
Type the IP address of your Power Switch Master.
The browser displays the authentication dialog box.



2. Enter a user name and its corresponding password.
 - ▶ With the administrator name (default value = admin) and the administrator password (default value = admin), you will be able to control all the power sockets and also to configure all the parameters of the Power Switch Master.
 - ▶ With a user name and its password you will only be able to control the socket status.



Home page in «Single mode»



Home page in «Twin mode»

The **Power** button allows you to switch the socket ON and OFF.

The **Restart** button allows you to switch OFF the socket. It will be automatically switched on after the delay set by the administrator during the configuration (default value is 5 sec).

Default Configuration of the Power Switch Master

IP address	192.168.100.100	Administrator Name :	admin
Subnet mask	255.255.255.0	Administrator Password :	admin
Gateway	no address		
Port	80		

9. Command the Power Sockets through a serial connection

The power sockets of the Power Switch Master and the Power Switch Slave can be controlled using a simple ASCII protocol over an RS232 serial connection.

Control the power sockets of the Power Switch Master and its slaves

1. Use the supplied RS232 serial cable to connect the Power Switch Master to an available serial port of your PC.
2. Run a terminal program such as Windows HyperTerminal or the MicroTerminal program on the CD (folder miscellaneous).
3. Configure the appropriate serial port with the following settings:
9.600 bauds, 8 bits, no parity, 1 stop bit and no flow control.
If you use the MicroTerminal program on the CD (folder miscellaneous) you only have to choose the used serial port, this program is already configured at 9600,n,8,1.
4. On your computer, press <ENTER> until the prompt «>» appears on your screen. This prompt indicates that the Power Switch Master is in Command mode (it is the default mode after Power up).

Remark: the power socket of the Power Switch can only be controlled if the Power Switch is in Command mode and NOT in Configuration mode. If you are in Configuration mode, type the command **/RS** to leave this mode.

The syntax of the command line is: Pxy=z

Parameter	Value	Function
x	1 to 5	represents the number of the Power Switch: 1 means Power Switch Master 2 to 5 means the corresponding connected Slave
y	0 1 to 8	means that all the sockets have to be controlled together indicates the number of the socket you want to control
z	0	Command to switch the socket(s) Off
	1	Command to switch the socket(s) On
	r	Command to restart the socket(s)
	t	Command to toggle the state of the socket

Example to control the Master:

P10=1 <ENTER> switch all the 8 sockets ON
P10=0 <ENTER> switch all the 8 sockets OFF
P14=r <ENTER> restart socket 4
P18=t <ENTER> toggle socket 8

Example to control the first Slave connected to the Master

DIP-Switch of the Slave: 1 = off and 2 = off

P20=1 <ENTER> switch all the 8 sockets ON

P25=0 <ENTER> switch socket 5 OFF

Remarks:

- The Power Switch accepts lower case and upper case commands.
 - The Power Switch sends an echo for each received character.
 - If the Twin mode is activated, sending a command to a specific socket number will also control its corresponding twin socket.
-

Control the power sockets of an Power Switch Slave or several slaves connected together

In this case, you have to make a special serial cable as indicated by the drawing in §7 or contact your dealer to order one.

1. Use this special cable to connect the Power Switch Slave to an available serial port of your PC.
2. Run a terminal program such as Windows HyperTerminal or the MicroTerminal program on the CD (folder miscellaneous).
3. Configure the appropriate serial port with the following settings:
9.600 bauds, 8 bits, no parity, 1 stop bit and no flow control.
If you use the MicroTerminal program on the CD (folder miscellaneous) you only have to choose the used serial port, this program is already configured at 9600,n,8,1.
4. From your computer, enter the command as explained below.

The syntax of the command line is: Pxy=z

Parameter	Value	Function
x	1 to 4	1 to 4 means the corresponding connected Slave
y	0 1 to 8	means that all the sockets have to be controlled together indicates the number of the socket you want to control
z	0	Command to switch the socket(s) OFF
	1	Command to switch the socket(s) ON
	r	Command to restart the socket(s)
	t	Command to toggle the state of the socket

Example to control the first Slave

DIP-Switch: 1 = off and 2 = off

P10=1 <ENTER> switch all 8 sockets ON
P10=0 <ENTER> switch all 8 sockets OFF
P14=r <ENTER> restart socket 4
P18=t <ENTER> toggle socket 8

Example to control the second Slave

DIP-Switch: 1 = on and 2 = off

P20=1 <ENTER> switch all 8 sockets ON
P25=0 <ENTER> switch socket 5 OFF

Remarks:

- The Power Switch accepts lower case and upper case commands.
 - The Power Switch sends an echo for each received character.
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10. Technical data

Power Switch Master

Network standards	IEEE 802.3, 10BASE-T
Network protocols	TCP/IP, HTTP
Network connection	RJ-45 connector for UTP CAT5
Max. network cable length	100 meters (not included)
Serial connection	RS232, SUB-D 9 female
Nominal input voltage	230 V/50Hz
Input power socket	IEC-320
Output voltage	230 V/50Hz
Output power socket	IEC-320
Maximum total current	10 A
Fuse	2 fuses of 10 A(T) (1 for each group of 4 power sockets)
LEDs	1 for Power Supply A 1 for Power Supply B 8 for the power sockets status 1 for Web server Power and Network traffic 4 for the connected Slaves
Operating temperature	0°C to +40°C
Operating humidity	10% to 80%
Dimensions (LxDxH)	437 x 107 x 42 mm
Weight	2 Kg
Approvals	CE, EN55022 & EN55024

Power Switch Slave

Serial connection	RS232, SUB-D 9 female
Nominal input voltage	230 V/50Hz
Input power socket	IEC-320
Output voltage	230 V/50Hz
Output power socket	IEC-320
Maximum total current	10 A
Fuse	2 fuses of 10 A(T) (1 for each group of 4 power sockets)
LEDs	1 for Power and Network Traffic 1 for socket status
Operating temperature	0°C to +40°C
Operating humidity	10% to 80%
Dimensions	437 x 107 x 42 mm
Weight	2 Kg
Approvals	CE, EN55022 & EN55024

All modifications reserved

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