

NetBotz®

Rack monitor 250

125kHz Access Control Appliance

13.56 Access Control Appliance

Installation and Quick Configuration Manual

NBRK0250

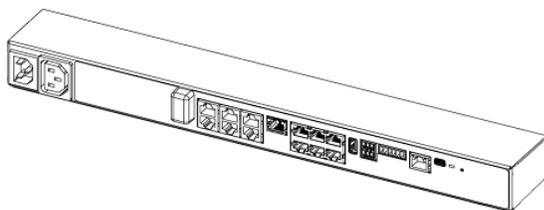
NBACS0125

NBACS1356

Attention!

To get the latest features, update the firmware before using.
Go to apc.com to download the firmware update tool for this product.

990-9814B



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Important Safety Information

Read the instructions carefully to become familiar with the equipment before trying to install, operate, service, or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **will result in death** or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **can result in death** or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **can result in minor or moderate injury**.

NOTICE

NOTICE addresses practices not related to physical injury including certain environmental hazards, potential damage or loss of data.

Adhere to all national and local electrical codes.

Introduction

Product description

The APC™ by Schneider Electric NetBotz® Rack monitor 250 is a rack-mountable central hardware appliance for an environmental monitoring and control system. Once installed, you monitor and control your system using a network or serial connection.

The Rack monitor 250 includes six ports for connecting temperature and humidity sensors, and other sensors including fluid detection sensors and third-party dry contact sensors. Using other ports on the Rack monitor 250, you can connect two door switch sensors, two rack door handles, a beacon, and temperature and humidity sensors with digital display.

To expand your system, you can connect the Rack monitor 250 to your building management system, connect up to six NetBotz Rack Sensor Pod 150s and additional sensors, and use ports that provide power to or allow control of other devices.

NOTICE: The Rack monitor 250 cannot be connected to or networked with any other NetBotz appliances. It uses unique software that is not compatible with other NetBotz products.

Document overview

The *NetBotz Rack monitor 250 Installation and Quick Configuration Manual* describes how to install the Rack monitor 250, connect the provided temperature/humidity sensor and other additional devices, and configure the network settings. After performing the quick configuration procedures in this manual, you can access your system through its software interface, perform additional configuration tasks, and begin monitoring the environment.

Additional documentation

Unless otherwise noted, the following documentation is available on the applicable product page on the APC web site, www.apc.com, or on StruxureWare for Data Centers DCIM Support, dcimsupport.apc.com. To quickly find a product page on the APC web site, enter the product name or part number in the Search field.

NetBotz Rack monitor 250 User's Guide – Includes details for using, managing, and configuring the system with a NetBotz Rack monitor 250 (NBRK0250).

Security Handbook – Describes security features for the APC Network Management Card and for devices with embedded components of the Network Management Card.

Modbus Register Map – defines NetBotz Rack monitor 250 (NBRK0250) Modbus datapoint registers for communication with a building management system using the Modbus protocol.

Modbus Over Serial Line Specification & Implementation Guide – The Modbus standard. Available at www.modbus.org.

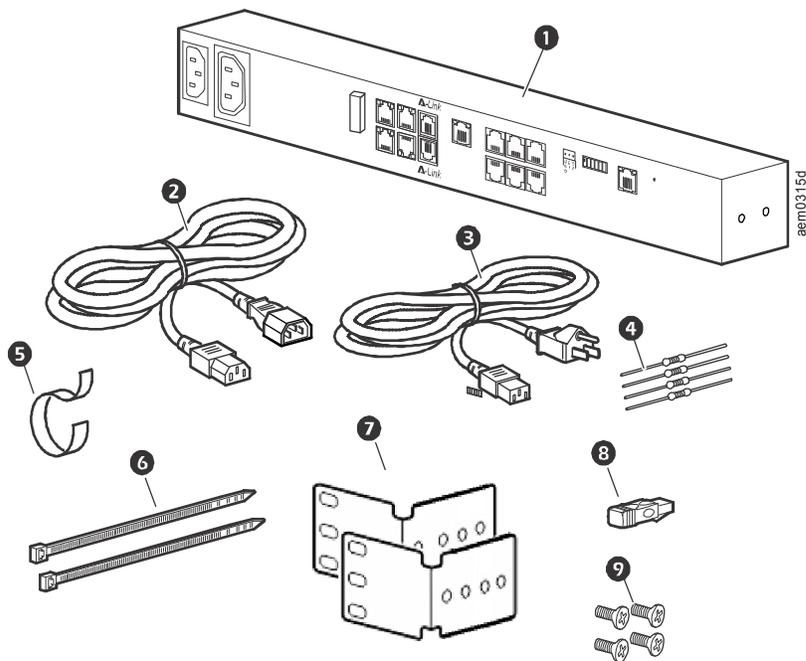
Receiving inspection

Inspect the package and its contents for shipping damage and see that the parts included in the shipment match the parts listed in the inventory table. Immediately report any shipping damage to the shipping agent. Report missing contents, damage, or other problems to Schneider Electric or your Schneider Electric reseller.

Inventory

Inspect the contents of the package to see that the parts included match those shown below. Report missing or damaged contents to Schneider Electric or your Schneider Electric reseller. However, if damage was due to shipping, immediately report the damage to the shipping agent.

The shipping and packaging materials are recyclable. Please save them for later use or dispose of them appropriately.



Item	Description
①	NetBotz Rack monitor 250
②	1.8-m (6-ft) IEC-320-C13 to IEC-320-C14 power cord
③	1.8-m (6-ft) NEMA 5-15P to IEC-320-C13 power cord
④	1/4-W, 150-ohm resistors (2) 1/4-W, 499-ohm resistors (2)
⑤	203-mm (8-in) hook and loop cable strap
⑥	203-mm (8-in) nylon tie wraps (2)
⑦	Mounting brackets for a standard 19-in rack (2)
⑧	A-Link terminator
⑨	8-32 x 1/4-in Phillips-head screws (4)
	Not shown:
	USB A-USB mini B configuration cable
	Temperature and Humidity Sensor (AP9335TH)
	Temperature and Humidity Sensor hardware kit 203-mm (8-in) nylon tie wraps (5) 19 x 19-mm (3/4 x 3/4-in) adhesive-backed cable tie mount (2) 25 x 25-mm [1 x 1-in] adhesive-backed cable tie mount #6 - #10 wall anchor #8 x 3/4-in sheet metal screw
	USB Coordinator (NBWC100U) for wireless sensor network (installed in the Wireless port under a plastic cover)
	Wireless Temperature Sensor (NBWS100T)
	Wireless Temperature Sensor hardware kit Tie wraps (3) 19 x 19-mm (3/4 x 3/4-in) adhesive-backed cable tie mount (2) Wall mounting bracket #6 - #10 wall anchor (2) #8 x 3/4-in sheet metal screws (2) Foam adhesive strips (2)
	Basement mount hardware kit Rail extenders with fasteners (2) Rail extenders spacers (2) M6 plastic cup washers (10) M6 x 16 Phillips/slot screws ROHS(10)

The NetBotz 125 kHz Access Control Appliance (NBACS0125) and NetBotz 13.56 MHz Access Control Appliance (NBACS1356) also include either the NetBotz 125 kHz Handle Kit (NBHN125) or the NetBotz 13.56 MHz Handle Kit (NBHN1356). For more information, see “Install the rack access handle kit” on page 14.

Additional options

The following options are available for the Rack monitor 250. For more information, contact your APC representative or the distributor from whom you purchased your APC product.

- NetBotz Rack Sensor Pod 150 (NBPD0150)
- Temperature Sensor with Digital Display (AP9520T)
- Temperature/Humidity Sensor with Digital Display (AP9520TH)
- Temperature Sensor (AP9335T)
- Temperature/Humidity Sensor (AP9335TH)
- Wireless Temperature Sensor (NBWS100T/NBWS100H)
- Wireless Sensor Pod 180 (NBPD0180)
- USB Coordinator & Router (NBWC100U)
- NetBotz 3.65-m (12-ft) Door Switch Sensor for APC Racks (NBES0303)
- NetBotz 15.24-m (50-ft) Door Switch Sensor for Rooms or Third Party Racks (NBES0302)
- NetBotz 125 kHz Handle Kit (NBHN125)
- NetBotz 13.56 MHz Handle Kit (NBHN1356)
- NetBotz Dry Contact Cable (NBES0304)
- Alarm Beacon (AP9324)
- NetBotz Vibration Sensor (NBES0306)
- NetBotz Smoke Sensor (NBES0307)
- NetBotz Spot Fluid Sensor (NBES0301)

StruxureWare-certified

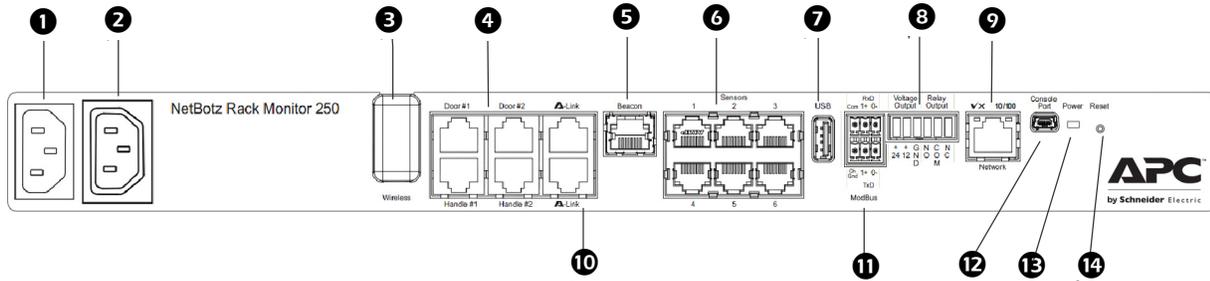
This product is certified for use in Schneider Electric StruxureWare for Data Centers systems.

Physical description

Back

Toolless mounting pegs allow for installation in APC NetShelter® VX and SX racks and enclosures without using any U-spaces. (For more details, see “Toolless peg-mount installation” on page 8.)

Front



Item	Description
1 AC Line Inlet	Provides for the input power connection; see “Specifications” on page 30 for voltage information.
2 Switched Outlet	Provides power to a device at a total maximum amperage of 10 A. Activates a connected device when configured events occur. (For example, a fan may be connected to this outlet, and the outlet may be configured to turn on when a high threshold violation occurs for a temperature sensor.)
3 Wireless Network Coordinator	USB port with NetBotz USB Coordinator (NBWC100U) installed. Used with included NetBotz Wireless Temperature Sensor (NBWS100T) to monitor temperature. Additional wireless sensors can be purchased separately (NBWS100T, NBWS100H, NBPD0180, NBWC100U).
4 Rack Access ports	Ports for the door switch sensors on doors #1 and #2 Ports for the handle sensors (NBHN0125 or NBHN1356) on doors #1 and #2
5 Beacon port	Used for connecting an alarm beacon (AP9324).
6 Universal sensor ports	Used for connecting APC sensors and third-party dry contact sensors. (See “Connect sensors to universal sensor ports” on page 12 for a list of applicable APC sensors.) Third-party dry contact sensors require a NetBotz Dry Contact Cable (NBES0304).
7 USB port	Used to connect USB devices to the appliance.
8 Voltage Output	Provides 12 Vdc or 24 Vdc (75 mA) to a connected device.
8 Relay Output	Used for connecting relay-controlled external devices.
9 10/100 Network Port	Provides the connection to the network. Status and link LEDs indicate network traffic. See “Status LED” on page 7.
10 A-Link ports	Used to cascade NetBotz Rack Sensor Pod 150s (NBPD0150), or connect Temperature Sensors with Digital Display (AP9520T) and Temperature/Humidity Sensors with Digital Display (AP9520TH). Provides communications and power using standard CAT-5 cabling with straight-through wiring. If you cascade multiple devices, you must connect a supplemental power supply (Power Supply 100–240 Vac/24 Vdc, part number AP9505i) to a NetBotz Rack Sensor Pod 150. For details, see “Cascade devices to A-Link ports” on page 17.
11 Modbus RS-485 port	Provides the connection to a building management system using the Modbus protocol.

	Item	Description
12	Console Port	Used to connect the USB A-USB mini B configuration cable, when configuring initial network settings. NOTICE: If you are unable to access the appliance using the console port, you may need to install a serial-to-USB virtual COM port driver. The USB vendor is FTDI; the driver type is VCP. Driver downloads are available on the FTDI Chip web site.
13	Power LED	Indicates whether the unit is receiving power (blue—receiving power; dark—not receiving power).
14	Reset button	Restarts the Rack monitor 250 network management interface.

LED descriptions

Status LED

This LED (light-emitting diode) indicates the status of the Rack monitor 250.

Condition	Description
Off	One of the following situations exists: The Rack monitor 250 is not receiving input power. The Rack monitor 250 is not operating properly. It may need to be repaired or replaced. Contact Customer Support. See “APC Worldwide Customer Support”.
Solid green	The Rack monitor 250 has valid TCP/IP settings.
Solid orange	A hardware malfunction has been detected in the Rack monitor 250. Contact Customer Support. See “Worldwide Customer Support” .
Flashing green	The Rack monitor 250 does not have valid TCP/IP settings. ¹
Flashing orange	The Rack monitor 250 is making BOOTP requests. ¹
Rapidly flashing green	A user initiated a LED blink test from the user interface.
Alternately flashing green and orange	If the LED is flashing slowly, the Rack monitor 250 is making DHCP ² requests. ¹ If the LED is flashing rapidly, the Rack monitor 250 is starting up.
<p>1. If you do not use a BOOTP or DHCP server, see “TCP/IP configuration methods” on page 18 to configure the TCP/IP settings. 2. To use a DHCP server, see “DHCP” on page 20.</p>	

Link-RX/TX (10/100) LED

This LED indicates the network status of the Rack monitor 250.

Condition	Description
Off	One or more of the following situations exist: The Rack monitor 250 is not receiving input power. The cable that connects the Rack monitor 250 to the network is disconnected or not functioning properly. The Rack monitor 250 is turned off or not operating correctly. It may need to be repaired or replaced. Contact Customer Support. See “APC Worldwide Customer Support”
Solid green	The Rack monitor 250 is connected to a network operating at 10 Megabits per second (Mbps).
Solid orange	The Rack monitor 250 is connected to a network operating at 100 Mbps.
Flashing green	The Rack monitor 250 is receiving or transmitting data packets at 10 Mbps.
Flashing orange	The Rack monitor 250 is receiving or transmitting data packets at 100 Mbps.

Installation

Install the Rack monitor 250

You can install the Rack monitor 250 in the front or the back of the rack using the rack-mount option (requires 1 U of rack space). If you are using an APC NetShelter VX or SX rack, you can use the toolless peg-mounts (does not use any U-space).

NOTICE: Only connect approved devices to ports on the Rack monitor 250 as directed in this manual. Plugging in other devices may result in equipment damage.

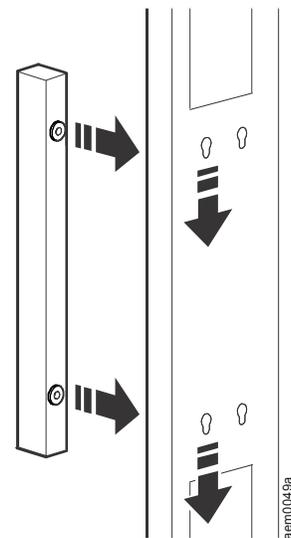
NOTICE: Install the Rack monitor 250 in an environment compatible with the environmental specifications on page 30.

CAUTION: When you install the Rack monitor 250 in the rack, do not create a hazardous condition due to uneven mechanical loading. For example, do not use the Rack monitor 250 as a shelf.

Toolless peg-mount installation

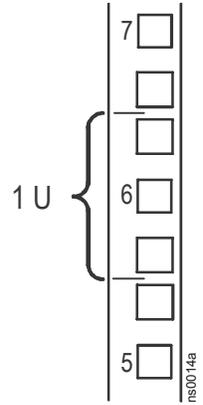
The toolless peg-mount installation is only available with a NetShelter VX or SX rack or enclosure.

1. In the left or right cable channel in the back panel of the enclosure, install the Rack monitor 250 in a set of mounting holes. Be sure to push down until it locks.
2. See “Power cord and network cable connections” on page 10.



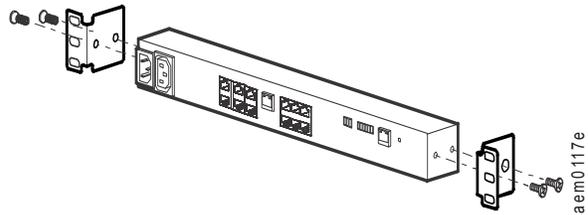
Rack-mount installation

1. Choose a location for the Rack monitor 250 in the front or back of the rack. The Rack monitor 250 occupies one U-space. A notched hole or a number on the vertical rail of the rack denotes the middle of a U-space.

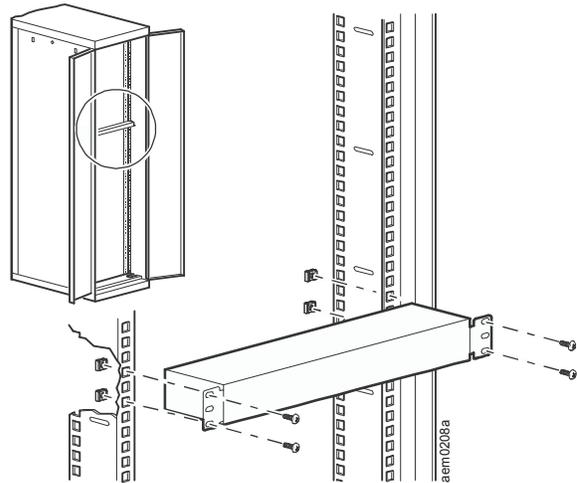


NOTICE: To avoid equipment damage, use only the hardware provided when installing the brackets.

2. Install the brackets.



3. Secure the Rack monitor 250 to the rack, using cage nuts and screws (provided with the rack).
4. See "Power cord and network cable connections" on page 10.



Power cord and network cable connections

CAUTION: Before you energize the Rack monitor 250, review the electrical specifications on page 30 to avoid overloading the circuit providing power.

CAUTION: Make sure you properly ground the Rack monitor 250; plug it directly into a wall outlet or verify the ground path if you connect it to a power strip.

NOTICE: The NetBotz Rack Monitor 250 is not a PoE compatible device. Do not connect a NetBotz Rack Monitor 250 to a PoE (Power over Ethernet) switch.

Connect the appropriate power cord to the AC Line Inlet of the Rack monitor 250.

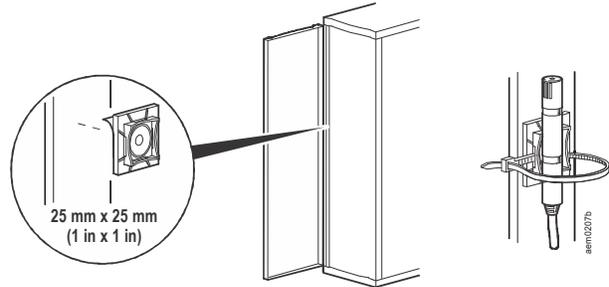
1. Secure the power cord using the tie wraps.
2. Connect a standard network cable to the Rack monitor 250.
3. Plug the power cord into a power source.
4. Use the hook and loop cable strap and the 25-mm (1-in) wide tie wrap to secure cables.

Install the temperature/humidity sensor

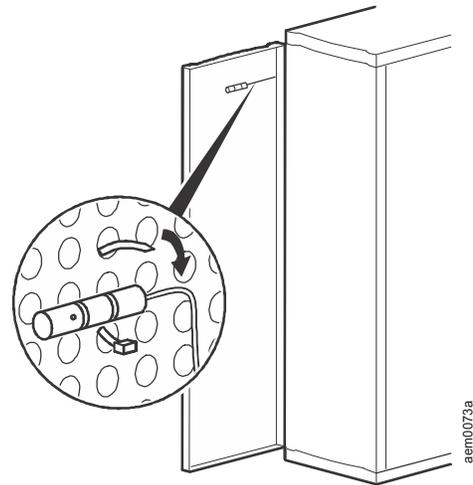
Choose a location and install the temperature/humidity sensor. Avoid locations in direct sunlight or other locations that may affect the sensor reading, such as near windows, room entrances, air ducts, or other heat sources.

When securing the sensor, tighten the tie wrap over the recessed channel of the sensor casing.

Vertical rail installation. Firmly install the sensor mount (25 x 25-mm [1 x 1-in] cable tie mount) at the location you selected. Then secure the sensor with a tie wrap.



Door-mount installation. For racks with a perforated door, use a tie wrap to secure the sensor.



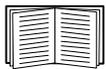
Wall-mount installation. For a rough wall or porous surface, install the wall anchor at the location you selected. Then, secure the sensor mount to the wall anchor using the screw provided. For a smooth wall or other smooth surface, firmly install the sensor mount (25 x 25-mm [1 x 1-in] cable tie mount). Secure the sensor to the sensor mount using a tie wrap.

1. Route the sensor cord to the Rack monitor 250.
 - If you mounted the sensor on the door, be sure the door is fully open when you route the sensor cord.
 - The 4-m (13-ft) sensor cord can be extended to a maximum of 15 m (50 ft), using RJ-45 female-to-female couplings and standard CAT5 cables.
2. Connect the sensor to the Rack monitor 250 (see “Connect sensors to universal sensor ports” on page 12).

Connect sensors to universal sensor ports

The following sensors are supported by the Rack monitor 250 and connect to the universal sensor ports:

- Temperature Sensor (AP9335T)
- Temperature/Humidity Sensor (AP9335TH)
- NetBotz 3.65-m (12-ft) Door Switch Sensor for APC Racks (NBES0303)
- NetBotz 15.24-m (50-ft) Door Switch Sensor for Rooms or Third Party Racks (NBES0302)
- NetBotz Dry Contact Cable (NBES0304)
- NetBotz Vibration Sensor (NBES0306)
- NetBotz Smoke Sensor (NBES0307)
- NetBotz Spot Fluid Sensor (NBES0301)



For sensors that connect to A-Link ports (Temperature Sensors with Digital Display [AP9520T] and Temperature/Humidity Sensors with Digital Display [AP9520TH]), see “Cascade devices to A-Link ports” on page 17.

NOTICE: Only connect approved devices to ports on the Rack monitor 250 as directed in this manual. Plugging in other devices may result in equipment damage, and will cause the Rack monitor 250 to reboot.

Connect APC and third-party dry contact sensors to the six universal sensor ports, labeled **Sensors**, on the Rack monitor 250.

- Third-party dry contact sensors require the NetBotz Dry Contact Cable (NBES0304). To connect a sensor to the cable, follow the instructions provided with the sensor and the instructions provided with the cable.
- The length of a sensor cable can be extended using RJ-45 female-to-female couplings and standard CAT5 cabling. See “System Specifications” on page 32 for maximum cable lengths.

NOTICE: Connect a door switch sensor to a universal sensor port only when it is used without a handle. Connect a door switch used with a handle kit to the Door Switch 1 or 2 port.

Install the rack access handle kit

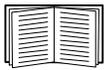
The Rack monitor 250 supports only the following handle kits, connected to the Handle 1 and Handle 2 ports:

- NetBotz 125 kHz Handle Kit (NBHN125)
- NetBotz 13.56 MHz Handle Kit (NBHN1356)

NOTICE: Only connect approved devices to ports on the Rack monitor 250 as directed in this manual. Plugging in other devices may result in equipment damage, and will cause the Rack monitor 250 to reboot.

You can install a NetBotz Handle Kit in the following racks:

- NetShelter® SX
- NetShelter SX Colocation rack (AR3200)
- NetShelter SV
- Chatsworth GlobalFrame™ Cabinet



For the most recent information on the racks compatible with this product, go to the APC web site www.apc.com DCIM Support dcimsupport.apc.com or contact your Schneider Electric representative.

Use a #1 Pozidriv® driver to install the handle kit.

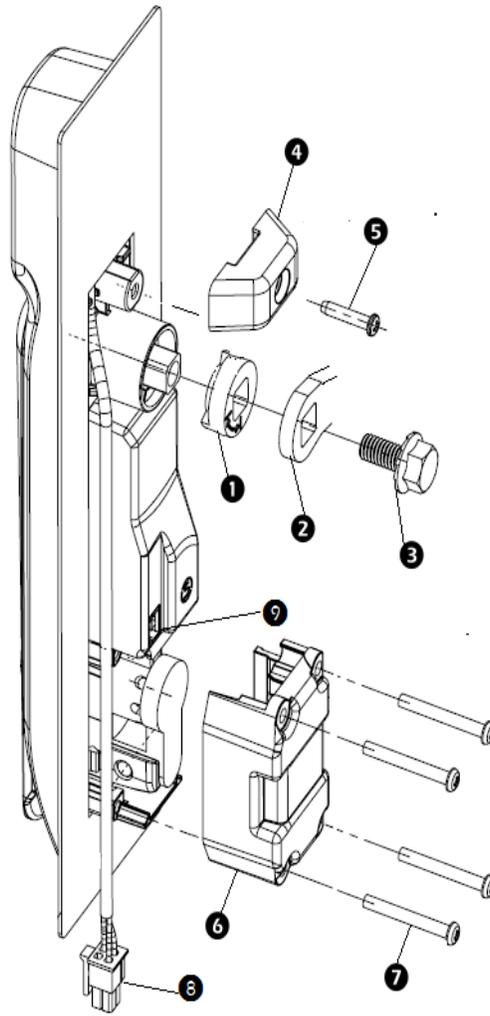
1. Remove the handle from the rack door. Save the cam from the rack handle to use with the new handle kit (SX or VX rack only), or use one of the cams that came with the handle kit.
2. Position the new handle in the door.
3. With the swing handle closed, position the rotation limiter (1) with the arrows in the lower right corner for right hand mounting, or in the lower left for left hand mounting. Make sure the swing handle moves toward the inside of the rack in the open position. Reposition the rotation limiter if necessary.
4. Attach the top mounting bracket (4) with the M3x14 Pozidriv screw (5).
5. Reattach the cam (2) with the cam screw (3).
6. Attach the bottom mounting bracket (6) using four M3x24 Pozidriv screws (7), with the tab on the right for right hand mounting, or on the left for left hand mounting

NOTICE: Make sure the handle wire is outside the mounting bracket and does not interfere with the latch. **Do not crimp the wire during installation.**

7. Attach the included cable assembly to the proximity reader connector on the handle (8) and the lock connector port (9) on the handle wire. Thread the cable assembly through the rack door.

NOTICE: Only use the cable that came with the NetBotz Handle Kit.

8. Connect the cable assembly to the included inline RJ45 connector and Category 5 cable.
9. Thread the cable through the rack.
10. Connect the cable to the Rack monitor 250 **Handle 1** or **Handle 2** port.



-
- ❶ Rotation limiter
 - ❷ Cam from your rack
 - ❸ Cam screw
 - ❹ Top mounting bracket
 - ❺ M3x14 Pozidriv mounting screw
 - ❻ Bottom mounting bracket
 - ❼ M3x25 Pozidriv mounting screws (4)



For information about rack access proximity cards, see “Other Configuration” on page 27.

For more information about installing the handle in your enclosure, see the installation manual that came with the NetBotz Handle Kit, or go to dcimsupport.apc.com.

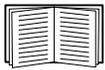
Connect the door switch

The Rack monitor 250 supports only the following door switch sensors connected to the universal sensor ports, or, when used with the NetBotz Handle Kit, the Door Switch 1 and Door Switch 2 ports:

- NetBotz 3.65-m (12-ft) Door Switch Sensor for APC Racks (NBES0303)
- NetBotz 15.24-m (50-ft) Door Switch Sensor for Rooms or Third Party Racks (NBES0302)

NOTICE: The Rack monitor 250 is not compatible with the door switch cable included with the NetBotz Rack Access PX-HID (AP9361).

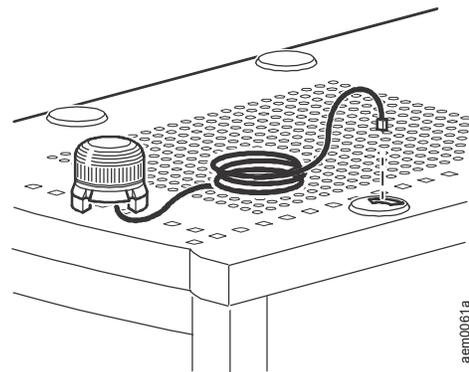
1. Choose a location at the top of the rack to install the door switch and door switch magnet.
2. Connect the door switch to the enclosure frame.
3. Connect the door switch cable to the **Door Switch 1** or **Switch 2** port on the Rack monitor 250.
4. Connect the door switch magnet to the enclosure door.



For more information, see the installation sheet that came with your door switch sensor (NBES0302 or NBES0303).

Connect the alarm beacon and other optional devices

1. To install an alarm beacon:
 - Mount the alarm beacon in a visible position either on the roof of the rack or inside the rack.
 - Route the alarm beacon cable to the Rack monitor 250. The alarm beacon cable may be extended to a maximum of 100 m (300 ft), using RJ-45 couplings and standard CAT-5 cables.
 - Connect the cable to the Beacon port.



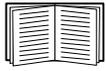
2. Connect one device to the Relay Output.

NOTICE: The Relay Output is rated for Class 2 circuits only.

3. Connect one device to the Voltage Output.
4. Connect a device to the Switched Outlet.

Wire the Modbus interface

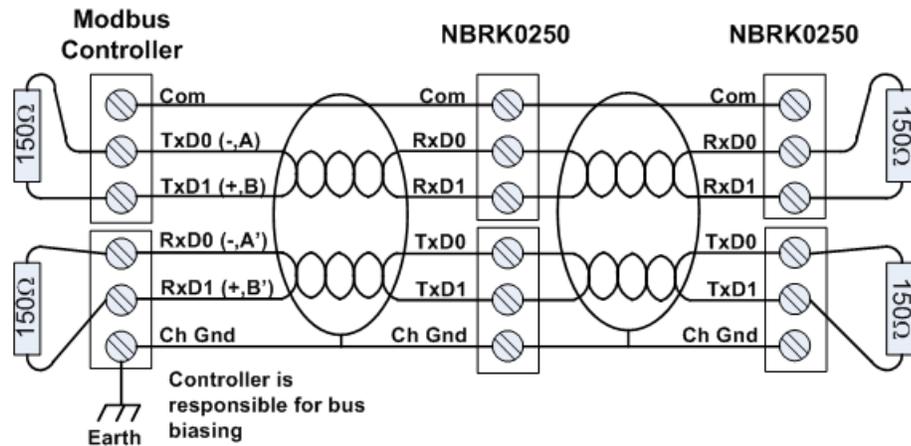
The NetBotz Rack monitor 250 connects to your building management system using the Modbus RS-485 interface. The Modbus interface supports 2-wire and 4-wire RS-485, plus ground.



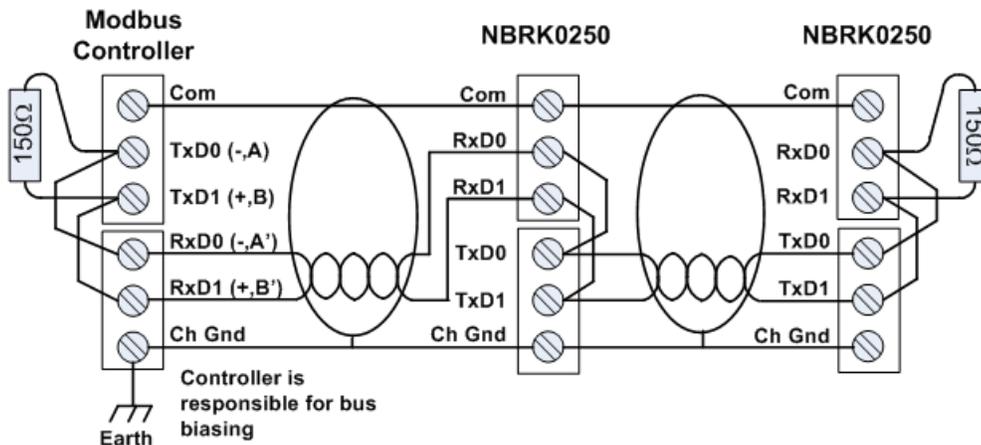
For more information, see the Modbus standard available at www.modbus.org.

For details on Modbus register settings, see the Modbus register map document for your specific Modbus-enabled device.

4-wire (full duplex) connection diagram



2-wire (half duplex) connection diagram



The Modbus standard specifies 150 ohm termination resistors at each end of a bus. Unless the bus is very long and operating at high data rates, these resistors are not needed.

Busses under 2000 feet operating at 9600 baud, or under 1000 feet operating at 19,200 baud, should not require termination.

Cascade devices to A-Link ports

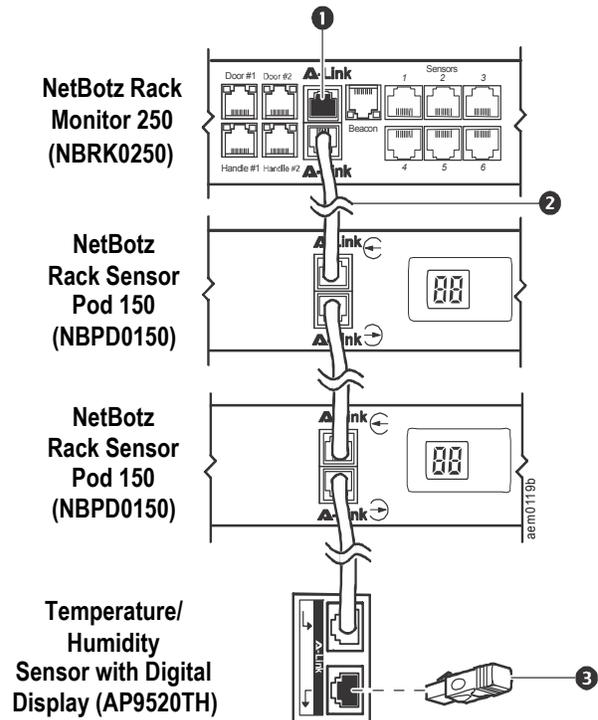
You can cascade up to six NetBotz Rack Sensor Pod 150s (NBP0150) and up to eight Temperature Sensors with Digital Display (AP9520T) and Temperature/Humidity Sensors with Digital Display (AP9520TH) to A-Link ports.

A-Link is an APC proprietary CAN (Controller Area Network) bus. Devices compatible with A-Link are not Ethernet devices and cannot coexist on an Ethernet bus with other networking devices, such as hubs and switches.

You cannot cascade Rack monitor 250s or other NetBotz appliances.

Before performing this procedure, follow the installation instructions provided with your NetBotz Rack Sensor Pod 150s and sensors. If you cascade several devices, be sure you have a supplemental power supply (Power Supply 100–240 Vac/24 Vdc—AP9505i) to connect to your system.

1. Connect sensors and NetBotz Rack Sensor Pod 150s to the Rack monitor 250, as shown.
 - Use CAT-5 (or equivalent) Ethernet patch cables (2). **Caution: Do not use crossover cables.**
 - Connect to **in** and **out** ports as shown.
 - The maximum combined length of all A-Link cables must not exceed 1000 m (3,280 ft).
2. Plug an A-Link terminator into the unused A-Link ports (1 and 3).



NOTICE: The first time a NetBotz Rack Sensor Pod 150 receives power, it obtains a unique identification address for communication over the A-Link bus. To avoid communication problems, you must complete steps 1 and 2 before you connect a supplemental power supply.

3. If you have cascaded several devices, connect a supplemental power supply (AP9505i) to the 24 VDC Input jack of one of the Rack Sensor Pod 150s.



For more information, go to dcimsupport.apc.com.

Quick Configuration

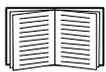
Disregard the procedures described in this chapter if you have StruxureWare Data Center Expert as part of your system. See the documentation for your StruxureWare device for more information.

You must configure the following TCP/IP settings before the Rack monitor 250 can operate on a network:

- IP address
- Subnet mask
- Default gateway

If a default gateway is unavailable, use the IP address of a computer that is located on the same subnet as the Rack monitor 250 and that is usually running. The Rack monitor 250 uses the default gateway to test the network when traffic is very light.

NOTICE: Do not use the loopback address (127.0.0.1) as the default gateway address. It disables the network interface and requires you to reset TCP/IP settings to their defaults using a local serial login.



See “Watchdog Features” in the *NetBotz Rack monitor 250 User Guide* on the APC web site for more information about the watchdog role of the default gateway.

TCP/IP configuration methods

Use one of the following methods to define the TCP/IP settings for the Rack monitor 250 for IPv4:

- “Device IP Configuration Utility” on page 18
- “DHCP and BOOTP configuration” on page 19
- “How to Recover from a Lost Password” on page 23
- Networked computer:
 - “Local access to the command line interface” on page 20
 - “Remote access to the command line interface” on page 21

Device IP Configuration Utility

The Device IP Configuration Utility can discover the Rack monitor 250 if it does not have an IP address assigned. Once discovered, you can configure its IP address settings.

System requirements. The Utility runs on Microsoft Windows 2000, Windows Server® 2003, Windows Server 2012 and on both 32- and 64-bit versions of Windows XP, Windows Vista, Windows 2008, Windows 7, Windows 8 and Windows 10 operating systems.

This utility supports IPv4 only.

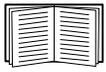
Installation. To install the Utility from a downloaded executable file:

1. Go to apc.com/tools/download.
2. Filter by Software Upgrades - Wizards and Configurators.
3. Select and download the Network Management Device IP Configuration Utility.
4. Open the folder where you downloaded the Utility, and run the executable file.

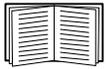
When installed, the Utility is available through the Windows “Start Menu” option.

DHCP and BOOTP configuration

The default TCP/IP configuration setting, **DHCP**, assumes a properly configured DHCP server is available to provide TCP/IP settings to the Rack monitor 250. You can also configure the setting for BOOTP.



A user configuration (.ini) file can function as a BOOTP or DHCP boot file. For more information, see the TCP/IP configuration section of the Rack monitor 250 *User's Guide*, available on the APC web site, www.apc.com.



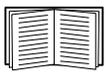
If neither of these servers is available, see “Device IP Configuration Utility” on page 18, “Local access to the command line interface” on page 20, or “Remote access to the command line interface” on page 21 to configure the needed TCP/IP settings.

BOOTP. For the Rack monitor 250 to use a BOOTP server to configure its TCP/IP settings, it must find a properly configured RFC951-compliant BOOTP server.

In the BOOTPTAB file of the BOOTP server, enter the MAC address of the Rack monitor 250, IP address, subnet mask, and default gateway, and, optionally, a bootup file name. Look for the MAC address on the bottom of the Rack monitor 250 or on the Quality Assurance slip included in the package.

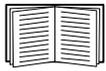
When the Rack monitor 250 reboots, the BOOTP server provides it with the TCP/IP settings.

- If you specified a bootup file name, the Rack monitor 250 attempts to transfer that file from the BOOTP server using TFTP or FTP. The Rack monitor 250 assumes all settings specified in the bootup file.
- If you did not specify a bootup file name, you can configure the other settings of the Rack monitor 250 remotely through its Web interface or command line interface; the user name and password are both **apc**, by default.



To create a bootup file, see your BOOTP server documentation.

DHCP. You can use an RFC2131/RFC2132-compliant DHCP server to configure the TCP/IP settings for the Rack monitor 250.



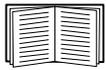
This section summarizes the Rack monitor 250 communication with a DHCP server. For more detail about how a DHCP server can configure the network settings for a Rack monitor 250, see the Rack monitor 250 *User's Guide* on the web site.

1. The Rack monitor 250 sends out a DHCP request that uses the following to identify itself:
 - A Vendor Class Identifier (APC by default)
 - A Client Identifier (by default, the MAC address of the Rack monitor 250)
 - A User Class Identifier (by default, the identification of the application firmware installed on the Rack monitor 250)
2. A properly configured DHCP server responds with a DHCP offer that includes all the settings the Rack monitor 250 needs for network communication. The DHCP offer also includes the Vendor Specific Information option (DHCP option 43). The Rack monitor 250 can be configured to ignore DHCP offers that do not encapsulate the APC cookie in DHCP option 43 using the following hexadecimal format. (The Rack monitor 250 does not require this cookie by default).

Option 43 = 01 04 31 41 50 43

where

- the first byte (01) is the code
- the second byte (04) is the length
- the remaining bytes (31 41 50 43) are the APC cookie.



See your DHCP server documentation to add code to the Vendor Specific Information option.

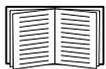
The Rack monitor 250 web interface has options to use vendor-specific data to require the DHCP server to provide an “APC” cookie. See the Rack monitor 250 *User's Guide* for information.

Local access to the command line interface

For local access, connect a computer to the Rack monitor 250 to access the command line interface.

NOTICE: If you are unable to access the appliance using the console port, you may need to install a serial-to-USB virtual COM port driver. The USB vendor is FTDI; the driver type is VCP. Driver downloads are available on the FTDI Chip web site.

1. Select a USB port at the computer, and disable any service that uses that port.
2. Connect the provided USB A-USB mini B configuration cable from the selected port on the computer to the console port on the Rack monitor 250.
3. Run a terminal program (e.g. 3rd party terminal emulator programs like HyperTerminal, PuTTY, or Tera Term) and configure the selected port for 9600 bps, 8 data bits, no parity, 1 stop bit, and no flow control. Save the changes.
4. Press ENTER, repeatedly if necessary, to display the **User Name** prompt.
5. Use **apc** for the user name and password.



.See “Command line interface” on page 22 to finish the configuration.

Remote access to the command line interface

From any computer on the same network as the Rack monitor 250, you can use ARP and Ping to assign an IP address to the Rack monitor 250, and then use Telnet to access its command line interface and configure the other TCP/IP settings.

After the Rack monitor 250 has its IP address configured, you can use Telnet, without first using ARP and Ping, to access that Rack monitor 250.

1. Use the MAC address of the Rack monitor 250 in the ARP command to define the IP address.

Note: Look for the MAC address on the bottom of the Rack monitor 250 or on the Quality Assurance slip included in the package.

For example, to define 156.205.14.141 as the IP address of a Rack monitor 250 with 00 c0 b7 63 9f 67 as its MAC address, use one of the following commands:

- Windows command format:

```
arp -s 156.205.14.141 00-c0-b7-63-9f-67
```

- LINUX command format:

```
arp -s 156.205.14.141 00:c0:b7:63:9f:67
```

2. Use Ping with a size of 113 bytes to assign the IP address defined by the ARP command. For the IP address defined in step 1, use one of the following commands:

- Windows command format:

```
ping 156.205.14.141 -l 113
```

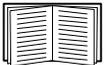
- LINUX command format:

```
ping 156.205.14.141 -s 113
```

3. Use Telnet to access the Rack monitor 250 at its newly assigned IP address. For example:

```
telnet 156.205.14.141
```

4. Use **apc** for both user name and password.



See “Command line interface” on page 22 to finish the configuration.

Command line interface

After you log on at the command line interface, as described in “Local access to the command line interface” on page 20 or “Remote access to the command line interface” on page 21, you can manually configure network settings.

1. Contact your network administrator to obtain the IP address, subnet mask, and default gateway for the Rack monitor 250.
2. Use this command to configure network settings. (Text in italics indicates a variable.)

```
tcpip  
-i yourIPAddress  
-s yourSubnetMask  
-g yourDefaultGateway
```

For each variable, type a numeric value that has the format *xxx.xxx.xxx.xxx*.

The command can be entered on one line. For example, to set a system IP address of 156.205.14.141, a Subnet Mask of 255.255.255.0 and a default gateway of 156.205.14.1, type the following command and press ENTER:

```
tcpip -i 156.205.14.141 -s 255.255.255.0 -g 156.205.14.1
```

3. Type *reboot*. The Rack monitor 250 restarts to apply the changes.

.INI file utility

You can use the .INI file export utility to export .INI file settings from configured Rack monitor 250s to one or more unconfigured Rack monitor 250s. The utility and documentation are available in KBase article FA156117 on the APC support website, www.apc.com/support.

How to Recover from a Lost Password

You can use a local computer that connects to the Rack monitor 250 through the serial port to access the command line interface.

1. Select a serial port at the local computer, and disable any service that uses that port.
2. Connect the provided USB A-USB mini B configuration cable to the selected port at the computer and to the console port at the Rack monitor 250.

NOTICE: If you are unable to access the appliance using the console port, you may need to install a serial-to-USB virtual COM port driver. The USB vendor is FTDI; the driver type is VCP. Driver downloads are available on the FTDI Chip web site.

3. Run a terminal program (such as HyperTerminal, Tera Term or PuTTY) and configure the selected port for 9600 bps, 8 data bits, no parity, 1 stop bit, and no flow control.
4. Press ENTER, repeatedly if necessary, to display the **User Name** prompt. If you are unable to display the **User Name** prompt, verify the following:
 - The serial port is not in use by another application.
 - The terminal settings are correct as specified in step 3.
 - The correct cable is being used as specified in step 2.
5. Press the **Reset** button. The Status LED will flash alternately orange and green. Press the **Reset** button a second time immediately while the LED is flashing to reset the user name and password to their defaults temporarily.
6. Press ENTER, repeatedly if necessary, to display the **User Name** prompt again, then use the default, **apc**, for the user name and password. (If you take longer than 30 seconds to log on after the **User Name** prompt is redisplayed, you must repeat step 5 and log on again.)
7. At the command line interface, use the following commands to change the **Password** setting, which is **apc** at this stage:

```
user -n user name -pw user password
```

For example, to change the Super User password to **XYZ**, type:

```
user -n apc -pw XYZ
```

NOTICE: For security reasons, it is possible to disable the Super User account. To verify that the Super User account is enabled, type:

```
user -n <user name>
```

If Access: Disabled is returned, you can re-enable the Super User by typing:

```
user -n <user name> -e enable
```

8. Type quit or exit to log off, reconnect any serial cable you disconnected, and restart any service you disabled.

Access the Rack monitor 250

After the Rack monitor 250 is running on your network, you can access the following Rack monitor 250 software user interfaces to finish configuring and to begin monitoring your system:

- Web user interface (HTTP or HTTPS protocol)
- Telnet or Secure SHell (SSH)
- SNMP
- Modbus



For more information on the interfaces, see the *NetBotz Rack monitor 250 User's Guide*. For details on how to access the user's guide, see "Additional documentation" on page 1.

Web user interface

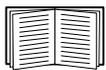
Use Microsoft® Internet Explorer® 11 and higher, Firefox, or Chrome to access the user interface of the Rack monitor 250.

When you use a web browser to configure Rack monitor 250 options or to view the event and data logs, you can use either HTTP or HTTPS:

- HTTP (enabled by default) provides authentication by user name and password but no encryption.
- HTTPS provides security through Secure Sockets Layer (SSL); encrypts user names, passwords, and data being transmitted; and authenticates the Rack monitor 250 using digital certificates.

To access the web user interface and configure the security of your device on the network:

1. Address the Rack monitor 250 by its IP address (or DNS name if configured).
2. Enter the user name and password (by default, **apc** and **apc** for an Administrator).
3. To enable or disable HTTP or HTTPS, go to **Configuration > Network > Web > Access**.



For more information on selecting and configuring network security, see the *Security Handbook*. For details on how to access the *Security Handbook*, see "Additional documentation" on page 1.

Telnet and SSH

You can access the control console through Telnet or Secure SHell (SSH), depending on which is enabled. Go to **Configuration > Network > Console > Access**. By default, Telnet is enabled. Enabling SSH automatically disables Telnet.

Telnet for basic access. Telnet provides the basic security of authentication by user name and password, but not the high-security benefits of encryption. To use Telnet to access the control console of the Rack monitor 250:

1. At a command prompt, use the following command line, and press ENTER:

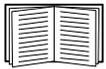
```
telnet address
```

As *address*, use the IP address of the Rack monitor 250 (or DNS name if configured).

2. Enter the user name and password (by default, **apc** and **apc** for an Administrator, or **device** and **apc** for a Device User).

SSH for high-security access. If you use the high security of SSL for the web interface, use Secure SHell (SSH) for access to the control console. SSH encrypts user names, passwords, and transmitted data.

The interface, user accounts, and user access rights are the same whether you access the control console through SSH or Telnet, but to use SSH, you must first configure SSH and have an SSH client program installed on your computer.



See the *NetBotz Rack monitor 250 User's Guide* for more information on configuring and using SSH. For details on how to access the user's guide, see "Additional documentation" on page 1.

Simple Network Management Protocol (SNMP)

SNMPv1 only. After you add the PowerNet[®] MIB to a standard SNMP MIB browser, you can use that browser to access the Rack monitor 250. All user names, passwords, and community names for SNMP are transferred over the network as plain text. The default read community name is **public**; the default read/write community name is **private**.

SNMPv2c is also supported by the SNMPv1 interface and configuration settings. For more information, see KBase FA156193.

SNMPv3 only. For SNMP GETs, SETs, and trap receivers, SNMPv3 uses a system of user profiles to identify users. An SNMPv3 user must have a user profile assigned in the MIB software program to perform GETs and SETs, browse the MIB, and receive traps. The default settings are **no authentication** and **no privacy**.

NOTICE: To use SNMPv3, you must have a MIB program that supports SNMPv3. The Rack monitor 250 supports only MD5 authentication and DES encryption.

SNMPv1 and SNMPv3. To use StruxureWare Data Center Expert to manage the Rack monitor 250 on its public network, you must have SNMPv1 enabled in the unit interface. Read access allows Data Center Expert to receive traps from the Rack monitor 250. Write access is required while you set the Data Center Expert server as a trap receiver.

To enable or disable SNMP access, you must be an Administrator. Go to **Configuration > Network**, and use the **Access** option under **SNMPv1** or **SNMPv3**.

Modbus

In the Rack monitor 250 user interface, go to **Configuration > Network > Modbus > serial** (or **TCP**).

1. Check the box to enable access to the Modbus serial or TCP interface.
2. Set the connection parameters for the Modbus connection:
 - a. For the **TCP** connection, specify a port number (502, 5000 to 32768).

Click **Apply**.

- b. For the **serial** connection, specify the parameters. The default serial connection settings are 9600 baud, 8 data bits, parity even, and 1 stop bit.

Set **Parity** to **None**.

Specify the **Target Unique ID** (1 to 247).

The Modbus Click **Apply**.

NOTICE: The Rack monitor 250 sets the value for stop bits automatically based on parity according to the Modbus standard. When parity is set to None, 2 stop bits are used.

Other Configuration

Configure Rack Access Proximity Cards

Both handles must be the same model, either two 125 kHz handles or two 13.56 MHz handles. The proximity card type must be the same for both handles.

The Rack monitor 250 with the NetBotz 125 kHz Handle Kit (NBHN0125) supports the following 125kHz proximity cards:

- H10301 26-bit
- H10302 - 37 bit
- H10304 - 37bit with facility code
- CORP-1000

The Rack monitor 250 with the NetBotz 13.56 MHz Handle Kit (NBHN1356) supports the following 13.56MHz proximity cards:

- MIFARE Classic 4-byte UID
- MIFARE Classic 7-byte UID
- MIFARE DESFIRE
- MIFARE PLUS
- iClass®

To register a new proximity card:

1. Go to **Configuration > Device > Lock Properties** in the Rack monitor 250 user interface.
2. Check the box to enable the card reader. Specify the card type for the installed handle(s), the auto-relock time (10 - 60 seconds), and the time to wait before the door open alarm is activated for Door 1, Door 2, or both (1 - 120 minutes). Click **Apply**.
3. Hold the card in front of the proximity reader on the handle until you hear a beep.
4. Go to **Configuration > Device > User Access > Unregistered Users**.
5. Click the card ID number to specify the user name, door access (Door 1, Door 2, or both), the access schedule (24 x 7 by default), and enable account access.
6. Click **Apply**.

To view, modify, or delete registered users, go to **Configuration > Device > User Access > Registered Users**.

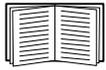


For information about configuring rack access, see the NetBotz Rack monitor 250 user manual or go to dcimsupport.apc.com.

Configure the Wireless Sensor Network

The NetBotz Rack monitor 250 includes a USB Coordinator (NBWC100U) connected to the Wireless port under a plastic cover. The Coordinator on the wireless sensor network is enabled by default. One Wireless Temperature Sensor (NBWS100T) is included with the appliance.

The Rack monitor 250 must be communicating on the network, and you must have access to its web user interface to configure the wireless sensor network.



For information, see “Access the Rack monitor 250” on page 24.

To configure the wireless sensor network:

1. Log in to the Rack monitor 250 user interface, and go to **Configuration > Device > Wireless Sensor Network**.
2. Position and turn on your Wireless Temperature Sensor(s).
3. Enable **Auto Join** until all the wireless sensors in the network have been discovered, or click **Add New Sensor** to add sensors manually.

NOTICE: You must enter the extended address (MAC) for each sensor you manually add to the network.

The wireless sensors appear in the list as they join the network. Auto Join runs for five hours, or until you end it manually.

You can add up to 47 wireless sensors without rebooting the network.

When you remove one or more wireless sensors, you must commit the sensor list to reboot the wireless network and allow it to reform. This can take several minutes.

The following wireless sensors are supported on the wireless sensor network in Router mode:

- NetBotz USB Coordinator & Router (NBWC100U)
- NetBotz Wireless Sensor Pod 180 (NBPD0180)

The following wireless sensors are supported on the wireless sensor network in End Device mode:

- NetBotz Wireless Temperature Sensor (NBWS100T/NBWS100H)
- NetBotz Wireless Sensor Pod 180 (NBPD0180)

The Wireless Sensor Pod 180 cannot be used as the Coordinator on the Rack monitor 250 wireless sensor network.

Each wireless network must have **one and only one Coordinator, connected only to the Wireless port on the Rack monitor 250**. Routers are powered by an AC-USB adapter, **not directly connected** to the Rack monitor 250. End Devices are powered by batteries.

Disabling the wireless sensor network

You must remove the plastic cover and disconnect the Coordinator from the appliance to disable the wireless network. You can replace the Coordinator to enable the wireless sensor network again at any time.

NOTICE: Store the USB Coordinator and the Wireless Temperature Sensor in a safe place when not in use. You must purchase a replacement USB Coordinator (NBWC100U) and Wireless Temperature Sensor (NBWS100T) if necessary.

Troubleshooting the wireless sensor network

During the boot process, the Coordinator LED activity is as follows:

- Flashes a quick green, yellow, red sequence
- Alternately flashes green and yellow for about 30 seconds
- Flashes green 3 times
- Turns solid yellow for 5 seconds
- Flashes a quick green, yellow, green sequence

NOTICE: If the LED flashes red three times, then slowly flashes red, contact Technical Support.

After the boot process is complete, LED activity on the Coordinator signifies its status:

LED activity	Meaning
Flashes green	Normal. The network was formed successfully.
Off	Forming a network. or Not communicating with the Rack monitor 250. Reboot the Coordinator.*
Solid red	Unable to form a network. Reboot the Coordinator.*

*To reboot the Coordinator, remove the plastic cover and press and hold the reset button (the LED) for no more than three seconds.



For more information, see the Quick Start Guides and installation manuals for your wireless devices, or go to dcimsupport.apc.com.

Specifications

NetBotz Rack Monitor 250 (NBRK0250)

Electrical

Input voltage, nominal, for AC Line Inlet	100–240 Vac; 50/60 Hz
Maximum total current draw for AC Line Inlet	10 A (defined by Switched Outlet load + 0.25 A)
Maximum output voltage for Switched Outlet	Defined by input voltage
Maximum output current for Switched Outlet	10 A (defined by Switched Outlet load)
Voltage for Voltage Output contacts	12 Vdc, 24 Vdc
Current for Voltage Output contacts	75 mA total for 12 V and 24 V load
Current capacity of Relay Output contacts	1 A, 30 V AC/DC (rated for Class 2 circuits only)

Physical

Dimensions (H x W x D)	43.6 x 431.8 x 59.2 mm (1.72 x 17.00 x 2.33 in)
Shipping dimensions (H x W x D)	67 x 450 x 225 mm (2.6 x 17.8 x 8.9 in)
Weight	1.26 kg (2.80 lb)
Shipping weight	3.00 kg (6.50 lb)

Environmental

Elevation (above MSL)	
Operating	0 to 3000 m (0 to 10,000 ft)
Storage	0 to 15 000 m (0 to 50,000 ft)
Temperature	
Operating	0 to 45°C (32 to 113°F)
Storage	–15 to 65°C (5 to 149°F)
Humidity	
Operating	0 to 95%, non-condensing
Storage	0 to 95%, non-condensing

Performance

Typical Rack monitor 250 response time for dry contact sensor or door switch sensor state changes	200 mS
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Compliance

Compliance

Approvals

CE

UL listed to 60950-1 and CSA C22.2 No 950

TUV tested to IEC 60950-1, 2nd ed., am1; am2

ICES-003:2012

AS/NZS CISPR 22

VCCI V-3:2015

FCC 47 CFR Part 15 Radiated Emissions

FCC 47 CFR Part 15 Conducted Emissions

EN 55022:2010+AC:2011, Class A

EN 55024:2010

EN 61000-3-2

EN 61000-3-3

EN 61000-4-2

EN 61000-4-3

EN 61000-4-4

EN 61000-4-5

EN 61000-4-6

EN 61000-4-8

EN 61000-4-11

Wireless Compliance

Immunity/Emissions

CE

EMC Directive 2004/108/EC

R&TTE Directive 1999/5/EC

Canadian ICES-003

US FCC 47 CFR Part 15

IC: 3351C-NBWC100U

FCC ID:SNSNBWC100U

Temperature/Humidity Sensor (AP9335TH)

Specifications

Temperature accuracy	±1°C (±2°F), from 0 to 40°C (32 to 104°F)
Humidity accuracy	±4% RH, 20 to 90% RH, at 25°C (77°F) ±8% RH, 30 to 80% RH, from 15 to 30°C (59 to 95°F)
Sensor operating temperature	-10 to 70°C (14 to 159°F)
Cable length	4 m (13 ft)

System Specifications

A-Link

Maximum combined length of all A-Link cables	1000 m (3,280 ft)
Maximum number of NetBotz Rack Sensor Pod 150s that can be cascaded on the A-Link bus [†]	6
Maximum number of sensors (sensors with digital display [AP9520T] and Temperature/Humidity Sensors with Digital Display [AP9520TH]) that can be cascaded on the A-Link bus [†]	8

Temperature/Humidity Sensor (AP9335TH), Temperature Sensor (AP9335T),

Maximum length of cable	15 m (50 ft)
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Beacon

Maximum length of cable	100 m (330 ft)
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NetBotz Dry Contact Cable (NBES0304), NetBotz 3.65-m (12-ft) Door Switch Sensor for APC Racks (NBES0303), NetBotz 15.24-m (50-ft) Door Switch Sensor for Rooms or Third Party Racks (NBES0302)

Maximum length of cable	30.48 m (100 ft)
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[†]If several devices (NetBotz Rack Sensor Pod 150s [NBPD0150], Temperature Sensors with Digital Display [AP9520T], and Temperature/Humidity Sensors with Digital Display [AP9520TH]) are cascaded on the A-Link bus, a supplemental power supply (Power Supply 100–240 Vac/24 Vdc—AP9505i) is required. The power supply connects to the 24 VDC Input on a NetBotz Rack Sensor Pod 150. See dcimsupport.apc.com for more information.

Handles

Maximum length of cable	100 m (330 ft)
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Door switches

Maximum length of cable	100 m (330 ft)
Gap distance [†]	Less than 1 in (2.54 cm) in air

Radio Frequency Interference

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

USA—FCC

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

NOTE: THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

FCC ID: SNSNBWC100U

Canada—ICES

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC: 3351C-NBWC100U

European Union

This product's transmitter is in conformity with the requirements of EU Council Directive 199/5/EC on the approximation of the laws of the Member States relating to Radio and Telecommunications Terminal Equipment (R&TTE). This product may cause radio interference in which case the user may be required to take adequate measures.

This product is in conformity with the protection requirements of EU Council Directive 2004/ 108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. Schneider Electric cannot accept responsibility for any failure to satisfy the protection requirements resulting from an unapproved modification of the product.

Two Year Limited Factory Warranty

Schneider Electric IT Corporation (SEIT), warrants its products to be free from defects in materials and workmanship for a period of two (2) years excluding the batteries. The SEIT obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. Repair or replacement of a defective product or parts thereof does not extend the original warranty period.

This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase. Products may be registered online at warranty.apc.com.

SEIT shall not be liable under the warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by end user's or any third person's misuse, negligence, improper installation, testing, operation or use of the product contrary to SEIT's recommendations or specifications. Further, SEIT shall not be liable for defects resulting from: 1) unauthorized attempts to repair or modify the product, 2) incorrect or inadequate electrical voltage or connection, 3) inappropriate on site operation conditions, 4) Acts of God, 5) exposure to the elements, or 6) theft. In no event shall SEIT have any liability under this warranty for any product where the serial number has been altered, defaced, or removed.

EXCEPT AS SET FORTH ABOVE, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, APPLICABLE TO PRODUCTS SOLD, SERVICED OR FURNISHED UNDER THIS AGREEMENT OR IN CONNECTION HEREWITH.

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SEIT EXPRESS WARRANTIES WILL NOT BE ENLARGED, DIMINISHED, OR AFFECTED BY AND NO OBLIGATION OR LIABILITY WILL ARISE OUT OF, SEIT'S RENDERING OF TECHNICAL OR OTHER ADVICE OR SERVICE IN CONNECTION WITH THE PRODUCTS.

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NOTHING IN THIS LIMITED WARRANTY SHALL SEEK TO EXCLUDE OR LIMIT SEIT'S LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM ITS NEGLIGENCE OR ITS FRAUDULENT MISREPRESENTATION OF TO THE EXTENT THAT IT CANNOT BE EXCLUDED OR LIMITED BY APPLICABLE LAW.

To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from customer support. Customers with warranty claims issues may access the SEIT worldwide customer support network through the SEIT Web site: www.apc.com. Select your country from the country selection drop down menu. Open the Support tab at the top of the web page to obtain information for customer support in your region. Products must be returned with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase.

Obtaining service

To obtain support for problems with your NetBotz Rack Monitor 250:

1. Note the serial number. The serial number is printed on a label located on the bottom of the unit.
2. Contact Customer Support at a phone number on the back cover of this manual. A technician will try to help you solve the problem by phone.
3. If you must return the product, the technician will give you a return material authorization (RMA) number. If the warranty expired, you will be charged for repair or replacement.
4. Pack the unit carefully. The warranty does not cover damage sustained in transit. Enclose a letter with your name, address, RMA number and daytime phone number; a copy of the sales receipt; and a check as payment, if applicable.
5. Mark the RMA number clearly on the outside of the shipping carton.
6. Ship by insured, prepaid carrier to the address provided by the Customer Support technician.

Worldwide Customer Support

Customer support for this or any other product is available at no charge in any of the following ways:

- Visit the StruxureWare for Data Centers DCIM Support Community web site.
 - **dcimsupport.apc.com**
Access the most recent documentation and get quick solutions from Schneider Electric experts and a community of your peers.
- Visit the APC web site to access documents in the APC Knowledge Base and to submit customer support requests.
 - **www.apc.com**
Connect to localized APC web sites for specific countries, each of which provides customer support information.
 - **www.apc.com/support/**
Global support searching APC Knowledge Base and using e-support.
- Contact the Customer Care Center by telephone or e-mail.
 - Local, country-specific centers: go to **www.apc.com/support/contact** for contact information.

For information on how to obtain local customer support, contact the Schneider Electric representative or other distributors from whom you purchased your product.