

## DX Sensor Installation Guide

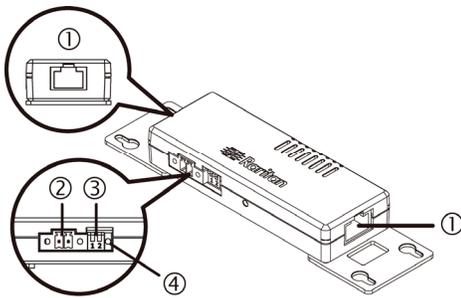
This installation guide offers general instructions on identifying the components on a DX sensor package, and how to install it.

For detailed information on each sensor package, download the Environmental Sensors Guide from Raritan website's **PX2 Support Files page** (<https://www.raritan.com/support/product/px2/px2-support-files>). For software functions, access online help from your Raritan PDU or EMX application, such as PX2, PX3 or EMX online help, or from the Raritan website's **Support page** (<http://www.raritan.com/support/>).

### Overview

A DX sensor package usually has 4 types of components. They are:

1. Two RJ-45 ports
2. Terminals
3. Dip switches
4. LED indicator(s)



Depending on the DX sensor package you purchased, your DX may have more terminals, dip switches and LED indicators than the above diagram.

Installing a DX sensor package involves three steps:

**Step 1: Identify Terminals** (on page 1)

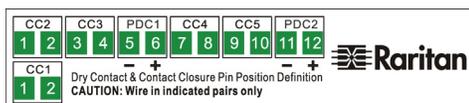
**Step 2: Connect Detectors or Actuators to Terminals** (on page 1)

**Step 3: Connect DX to a Raritan PDU or EMX** (on page 2)

### Step 1: Identify Terminals

If your DX has only *one pair of terminals*, such as DX-PIR, the terminals are a contact closure sensor channel unless the DX sensor name contains "Dn" or "PDn", where *n* is a number.

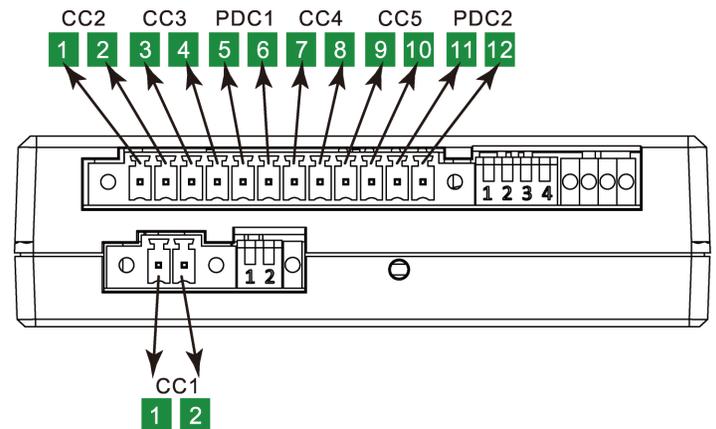
If your DX has *more than one pair of terminals*, such as DX-D2C6 or DX-PD2C5, a terminal label indicating all terminal locations and types is affixed to the DX. A terminal label looks like the following DX-PD2C5 label.



### ► To identify terminal types using the terminal label:

1. Match the terminals shown on the label with those on the DX. Terminal locations on the label are the same as physical terminal locations.

The diagram below illustrates how to match DX-PD2C5 terminals with those on the label.



2. View the channel name above each pair of terminals on the label. A channel name comprises the terminal type and a channel number, such as CC1, PDC1, DC1, and the like.

Channel name	Terminal type
CC	Contact closure sensor channels
PDC	Powered dry contact channels
DC	Dry contact channels

### Step 2: Connect Detectors or Actuators to Terminals

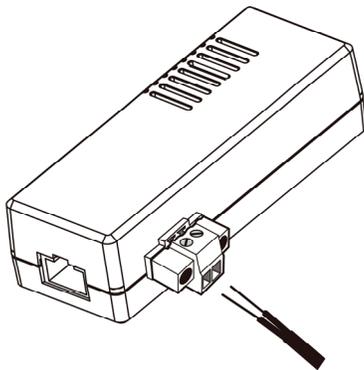
A CC channel connects a contact closure sensor. A DC or PDC channel connects an actuator, which controls a system.

**Warning:** DX sensor packages do NOT support all types of contact closure sensors or actuators. For example, DX does not support Raritan's DPX water sensors. See the Environmental Sensors Guide for restrictions.

► **To connect a detector or actuator to a pair of terminals:**

- Strip the insulation around 12mm from the end of each wire of a detector or actuator.
  - Wire size range: AWG 28 to 20 or 0.09 to 0.5 square millimeters
- Fully insert each wire into each termination point of a CC, DC or PDC channel on the DX sensor package.

Important: For a PDC channel, you must check the electrical polarity markings (+ and -) on the DX label to make sure each wire is inserted into the correct termination point with the correct polarity.



- Use a screwdriver with a 2.5 mm wide shaft to tighten the screws above each termination point to secure the wires, using a torque of 0.196 N·m (2 kgf·cm).
- Repeat the above steps if your DX has more terminals.

**Step 3: Connect DX to a Raritan PDU or EMX**

An appropriate cable is required for connecting DX to a Raritan product like a PDU or EMX. The appropriate cable varies based on the sensor port type of the Raritan product.

Warning: NOT all Raritan products support all DX sensor packages. See the Environmental Sensors Guide for restrictions.

► **RJ-12 sensor port, such as PX2, EMX and PXE:**

Use the RJ-12 to RJ-45 adapter cable shipped with the DX sensor package. Connect the cable's RJ-12 connector to the sensor port of your Raritan PDU or EMX, and the RJ-45 connector to either RJ-45 port of the DX.

- The adapter cable's part number: 254-01-0032-00

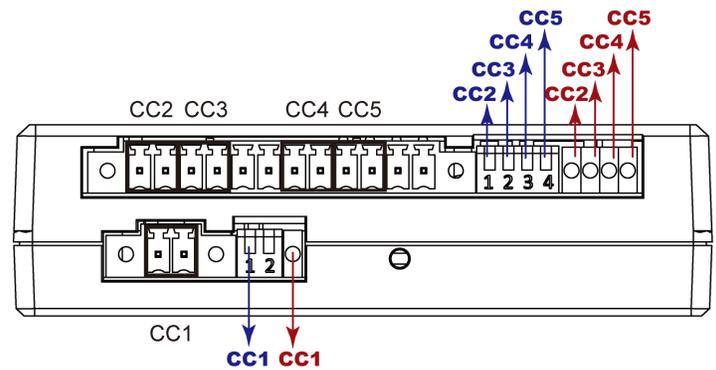
► **RJ-45 sensor port, such as PX3 and PX3TS:**

Use a standard network patch cable with RJ-45 connectors on both ends. Connect one end to the sensor port of your Raritan PDU, and the other end to either RJ-45 port of the DX.

Warning: Do NOT use a crossover cable to connect DX.

**Dip Switches and LEDs**

Dip switches and LED indicators are associated with CC channels, and their sequence matches the CC channel sequence. The following diagram illustrates how the CC channel sequence on DX-PD2C5 matches the sequence of dip switches (in blue) and LED indicators (in red).



► **Dip switches:**

Dip switches determine the normal settings of associated CC channels.

- On (down): Set to "Normally Open"
- Off (up): Set to "Normally Closed"

► **LED indicators:**

An LED indicator indicates the state of the associated CC channel if a contact closure sensor has been connected.

- Solid On: Alarmed state
- Off: Normal state
- CC1 LED flashing: Sensor firmware upgrade in process

**Cascading**

Most DX sensor packages support cascading using standard network patch cables but some may not support it, such as DX-PD2C5. See the Environmental Sensors Guide for restrictions.

► **Supported maximum total cable length:**

DX supports a distance up to 98 feet (30 m) except for DX-PD2C5, which supports only up to 29 feet (9 m).