# D-Wire Sensors

## Overview

### D-Wire Sensor Network (D-PK-DSNSR-12XXX)

D-Wire sensors are a way to track environmentals in your server room, telecom shelter, PBX closet, or data center using convenient daisy-chained sensors. With D-Wire sensors, you don't have to worry about analog capacity on your RTUs, tangled masses of sensors at your RTU, or even the trouble of wiring analog connectors.

D-Wire sensors from DPS use simple RJ-11 connectors, in and out, and allow you to chain up to 16 sensors to a single DPS RTU's D-Wire port. Your sensor chain can be a maximum of 600 feet, so you can run sensors out as far as you need to monitor your equipment, without having to place analog-capable RTUs in multiple places.

D-Wire Sensors available include:

- Temperature
- Temperature/Humidity
- 3-Discrete Alarm Node
- External Temperature Node
- Analog Node for Voltages
- Analog Node for 4-20mA Sensors



| Max/Min For Common D-Wire Sensors | | | | | | |
|---|---|---|---|---|---|---|
| | **Min** | **Max** | **Accuracy** | **Resolution** | **Operating Temp** | |
| **Temp Sensor** | -40°F | 180°F | ±0.5°F | 0.05°F | -40°F | 180°F |
| **Humidity Sensor** | 0% RH | 100% RH | ±3.5% RH | 0.2% RH | 32°F | 122°F |
| **Analog Sensor** | 0V | 12V | ±2% | 12 mV | -4°F | 158°F |
| **Analog Sensor** | 0V | 60V | ±2% | 60 mV | -4°F | 158°F |

## Key Benefits

- D-Wire sensors do not need a power source.
- "Plug 'n' Play" functionality.
- The analog signal is digitized at the sensor, so the cable is less susceptible to noise and can be longer.
- Analog value is sent to the RTU for data logging and real-time reading.
- DPS Telecom D-Wire Sensors are more economical compared to 3rd-party alternatives.
- Sensors are uniquely identified by the host or RTU, allowing them to be supervised. This means if a sensor is unplugged or the cable is broken, the RTU can detect this and notify you.

📞 **Call 1-800-622-3314 For Pricing**

**Visit our website at www.dpstele.com**

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# Hardware Installation

**If connecting directly to a D-Wire enabled RTU:**

Use standard CAT5E, straight-through RJ-11 or RJ-12 cable. Connect "In" jack on the temp sensor to the D-Wire or Digital Sensor input on your RTU.

**If connecting to an existing chain of sensors:**

Connect the "In" jack on the temp sensor to the "Out" jack on the previous sensor in the chain.
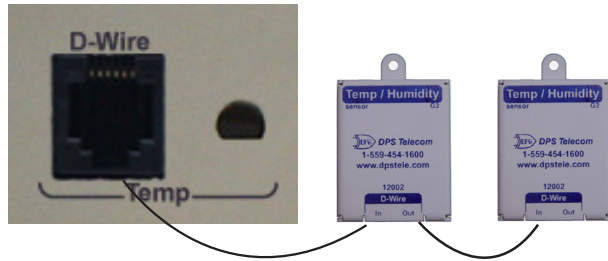


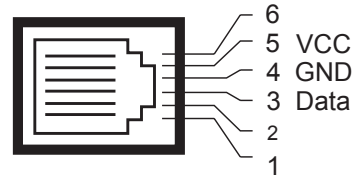**Fig 1** *Connecting a chain of sensors to the D-Wire port on a RTU*



**Fig 2** *Pinout for D-Wire/TempDefender sensor ports*

# Software Configuration

1. Connect to the Web Interface for your DPS Telecom RTU

   - Enter the IP address of your RTU in the address bar of your web browser
   - Enter your user-name (if required) and password. The Default user-name is **admin** and password is **dpstelecom**.

2. Navigate to the **Sensors** option in Web Interface's Edit Menu.

3. Sensors connected to the NetGuardian will appear in the order connected. Your RTU will automatically recognize the sensor's type (temp, humidity, air flow, etc.) and populate the sensor ID and Unit fields. When you connect a sensor, the sensor's ID number (labeled on the side of the sensor) will appear in the first available Sensor ID field with a yellow background.
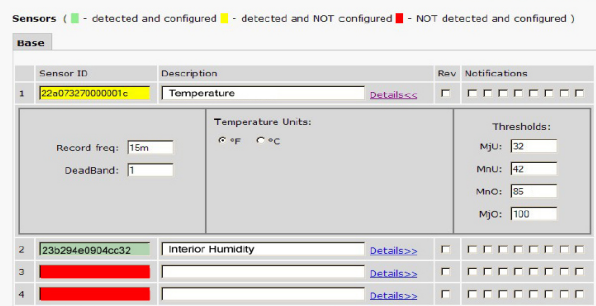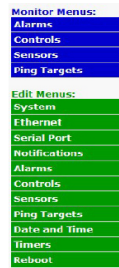


**Fig 3** *The Sensor Configuration Screen in the Web Interface*

4. Fill in any fields as necessary for your configuration (i.e. thresholds, notifications, etc.). See the table on the following page for information about available fields in the Sensors section of the web interface.

5. Click **Save**

Your sensors are now configured.

This Monitor section provides the measurements of each sensor. The **Monitor >> Sensors** screen provides a description of each sensor, the current reading, the units being read, and the alarm conditions (major under, minor under, major over, minor over) according to your software configuration.

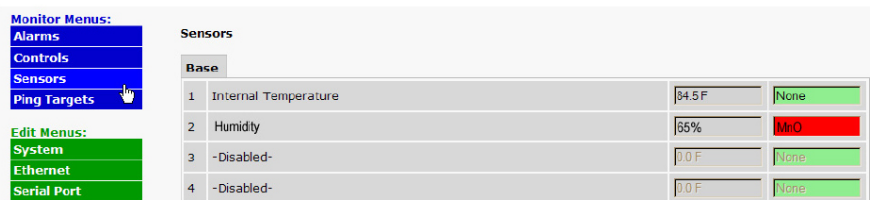The analog thresholds can be configured in the **Edit** >> **Sensors** menu as seen in Fig. 3.



**Fig 4** *Properly configured sensors reporting values via the Sensors section in the Monitor Menu of the Web Interface*

**Warning:** Using the incorrect cable or cable pinout can cause damage to your unit. The cable should always be a straight-through connection. To guarantee that the correct cable is used, call DPS Telecom for ordering options.

## For Service and Support, visit www.dpstele.com/support or call 559-454-1600