

Wireless Module System and E2

For a copy of the full Wireless User Manual (P/N 026-1734), go to copeland.com/documents/026-1734-wireless-module-system-installation-operation-manual-en-4845146.pdf to download it or contact Copeland Technical Support at 833-409-7505.

The Wireless Module System allows a quick and easy monitoring for a variety of Refrigeration and HVAC applications by connecting temperature probes, product simulators, humidity probes or switches to the Wireless Module that transmits these signals to the Wireless Gateway. The Gateway translates the signal into usable information to send to the building controller, E2 (version 4.08 or higher) or Supervisory Controller, where the data can be logged into reports or used by algorithms to make control decisions. The Wireless Gateway can receive signals from up to 99 Modules. The Wireless Module is flexible and configurable with up to three (3) analog or digital inputs that can be used for a variety of applications in Refrigeration and HVAC, eliminating installation materials and costly labor-intensive wiring.

Installing the Wireless Module

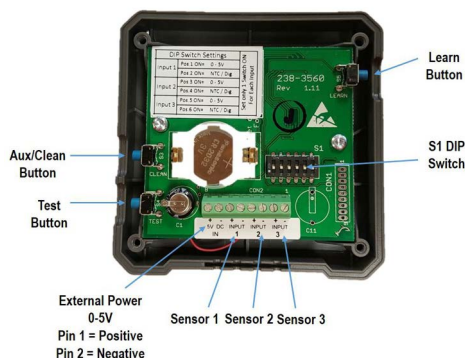
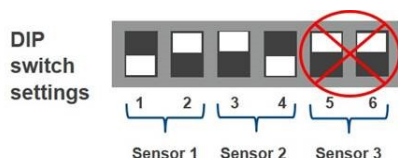


Figure 1 - Wireless Module Board Inside Enclosure

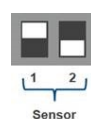
If this is a User Selected Input Module (P/N 814-3600), you must set the DIP switch setting based on the input being received from the sensor; either 0 to 5V or NTC/Digital.



814-3600 User selectable model:

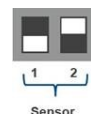
- Set only one switch **ON** for each sensor pair
- Each pair can be set separately

Table 1 - DIP Switch Settings



0-5V Input:

- Humidity Sensor or Analog 0-5V Input
- Pin 1 **ON**
- Pin 2 **OFF**



NTC/Dig Input:

- Temp or Digital Sensor Input
- Pin 1 **OFF**
- Pin 2 **ON**

Setup and Commissioning of Module in E2

The Wireless Module must be associated with the Gateway through the Commissioning process. With proper range planning, all Modules can be commissioned to the Gateway prior to mounting. For complete instructions on setup and commissioning of the Wireless Module, refer to the Wireless User Manual (P/N 026-1734).

Steps to set up and commission the Wireless Module in E2:

1. Go to the Add Application screen to add required number of RF Modules (**Menu, 6, 1, F4: Lookup, 23. RF Module**) then press **Enter**.
2. Enter how many (99 max per Gateway) and press **Enter**.

- Once the RF Module application has been added, go to Configured Applications to commission the device (**Menu, 5, 230. RF Module**).
- Select an RF Module from the list and press **Enter**.
- Pull up the Actions Menu, and initiate commissioning (**Enter, 9, 1: Commission Device**).
- The application will enter learning mode.
- Within one (1) minute, press the **Learn** button on the Module.



Figure 2 - Wireless Module Enclosure

During the commissioning process, press the **Learn** button and the following occurs:

Blue LED:

- 1 blink = learning/commissioning started.
 - 2 blinks = commissioning was successful (occurs in one (1) second).
8. If successful, the Module Status will display **Commissioned**, then **Good** on the E2. Check signal strength prior to mounting the Modules permanently. If reception levels are not sufficient, repositioning or use of repeaters may be necessary.

Check Signal Reception

- Go to the RF Module main screen (**Menu, 5, 230. RF Module**), select the Module then press **Enter**.
- From the Actions menu, select **Application Logs/Graphs** (**Enter, 8. Application Logs/Graphs**).
- Select **1. Module Stats** and press **Enter**.

The Application Log screen will show the SSI Signal Strength. The lower the negative number, the higher the signal strength.

Table 2 - SSI Signal Strength Values

4 Bars	>= -75	VERY GOOD Reception rates > 98%
3 Bars	<-75 and >=-85	GOOD Reception rates > 95%
2 Bars	<-85 and >=-90	FAIR Reception rates < 95%
1 Bar	<-90 and >=-95	POOR Reception rates <70%
0 Bars	<-95	FAIL Reception rates <50% OPEN Module alarms

Wireless Module System Parts and Accessories

Table 3 - Ordering Information

Part Number	RF Description
814-3550	Wireless Gateway 902MHz
814-3560	Wireless Repeater 902MHz, 24VAC
814-3570	Wireless Repeater 902MHz, 120VAC
501-1121	Temp Sensor, General Purpose
508-9101	Temp Sensor, Product Simulator
201-1160	Temp Sensor, NSF
140-6801	Optional wall mount 5V power supply

Module Commissioning Tips

- Hours on battery is displayed in the Module Summary screen. The battery will last for 17,100 hours of use. The battery is still good if the voltage is 2.90 or higher.
- It takes 200 lux five (5) hours per day to run the RF Module on the solar cell continuously.
- Place Modules so that the solar cell can power the Module and battery usage indicator remains **Off**.
- The default update rate of two (2) minutes optimizes power consumption.
- Faster update rates may require an external 5V power supply (available as an option).
- With proper range planning, all Modules can be commissioned to the Gateway with the **Learn** button prior to mounting.
- Check signal strength on the E2 prior to mounting the Modules permanently.
- Use the **Test** button for instant transmission if you do not want to wait for the regular update rate.
- Placement of the Modules should be positioned so that SSI reception levels are 3 or 4 Bars. Reposition or use repeaters as necessary.

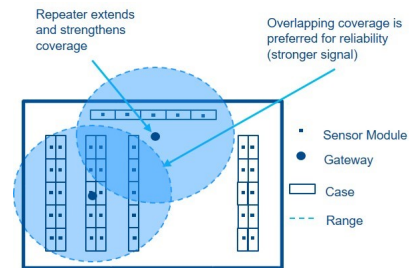


Figure 3 - Overlapping Coverage Area

Visit our website at copeland.com/en-us/products/controls-monitoring-systems for the latest technical documentation and updates. For Technical Support call **833-409-7505** or email ColdChain.TechnicalServices@Copeland.com