Installation Instructions

Air-Fi™ Wireless Communications Sensor (WCS)

Model Numbers: X13790955010, X13790955040, X13790955050, X13790968010, X13790956010, X13790969010, X13790973010

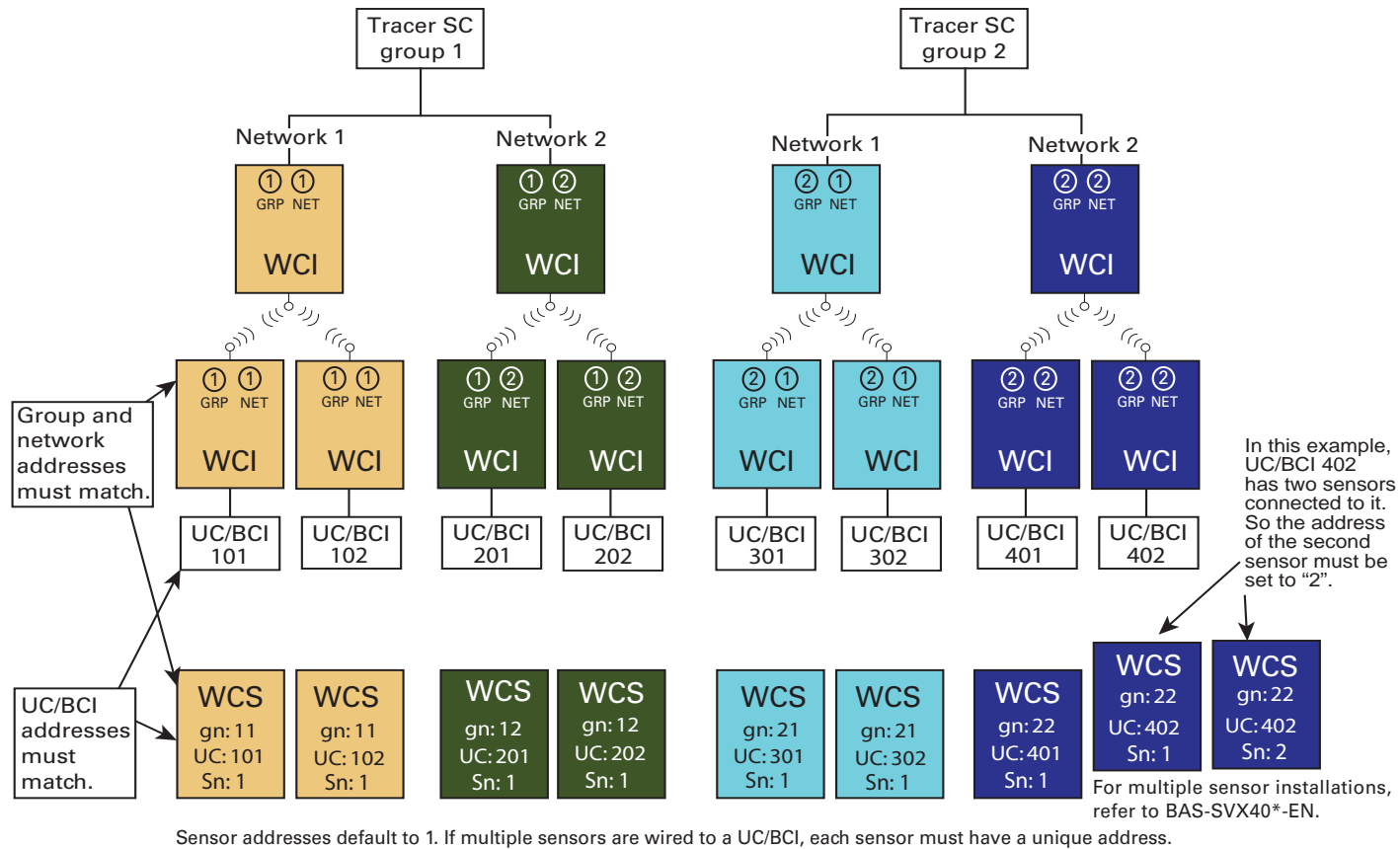**February 2105**   **X39641265001B**
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Ingersoll Rand

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1 Addressing Overview

Tracer SC group 1 — Network 1, Network 2
Tracer SC group 2 — Network 1, Network 2

Group and network addresses must match.

UC/BCI addresses must match.

| WCI | WCI | WCI | WCI | WCI | WCI | WCI | WCI |
| UC/BCI 101 | UC/BCI 102 | UC/BCI 201 | UC/BCI 202 | UC/BCI 301 | UC/BCI 302 | UC/BCI 401 | UC/BCI 402 |

| WCS gn:11 UC:101 Sn:1 | WCS gn:11 UC:102 Sn:1 | WCS gn:12 UC:201 Sn:1 | WCS gn:12 UC:202 Sn:1 | WCS gn:21 UC:301 Sn:1 | WCS gn:21 UC:302 Sn:1 | WCS gn:22 UC:401 Sn:1 | WCS gn:22 UC:402 Sn:1 | WCS gn:22 UC:402 Sn:2 |

In this example, UC/BCI 402 has two sensors connected to it. So the address of the second sensor must be set to "2".

For multiple sensor installations, refer to BAS-SVX40*-EN.

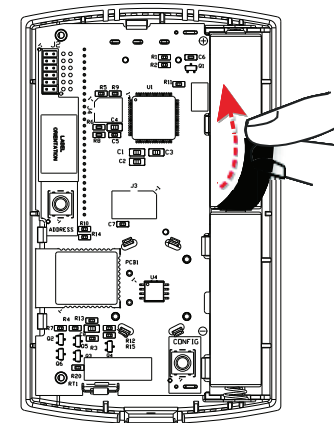Sensor addresses default to 1. If multiple sensors are wired to a UC/BCI, each sensor must have a unique address.

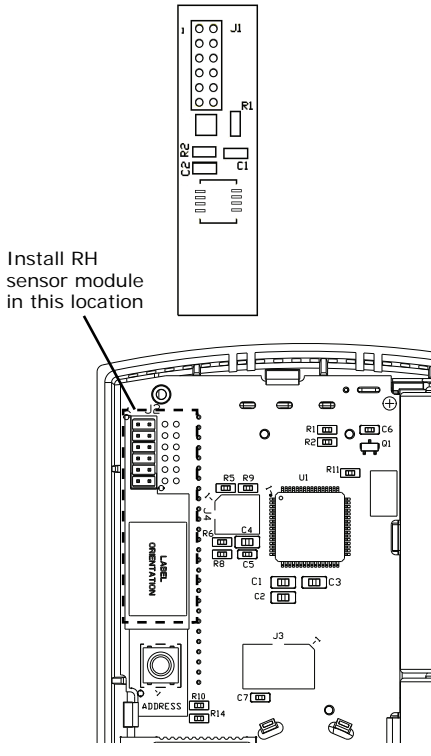
2 Remove the cover

Pull the insulation strip from between the batteries

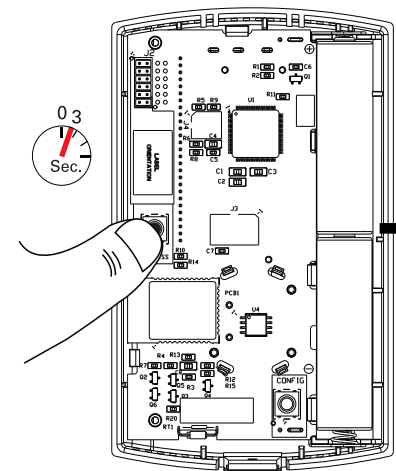## 3 RH sensor module

A 2% relative humidity sensor module, available as a separate part (X13790973010; model WCS-SH), can be installed on a WCS either before or after the WCS is powered up.
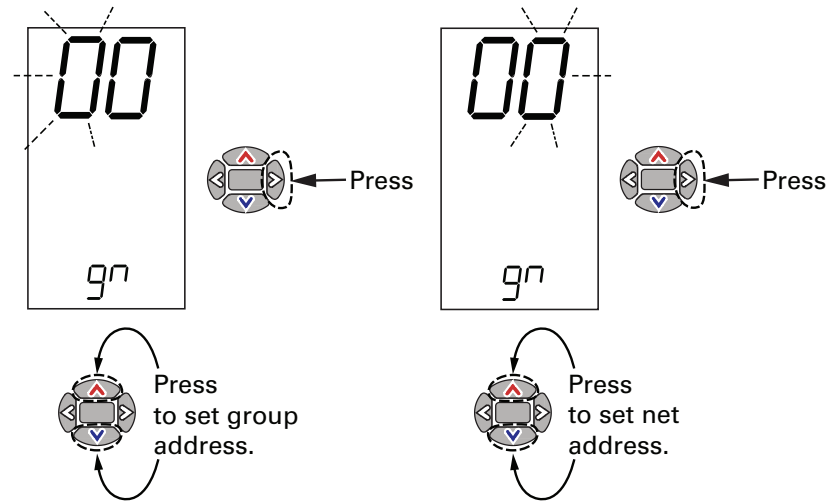

Install RH sensor module in this location

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4 Press and hold the Address button for 3 seconds

0 3 Sec.

Sensor display legend:

gn : group, network

UC : unit controller

Sn : wireless sensor

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5 Set group and net address

Press — Press

Press to set group address.

Press to set net address.

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6 Set unit controller address

Press — Press — Press

Press to set 1st digit of UC address.

Press to set 2nd digit of UC address.

Press to set 3rd digit of UC address.

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7 Set sensor address
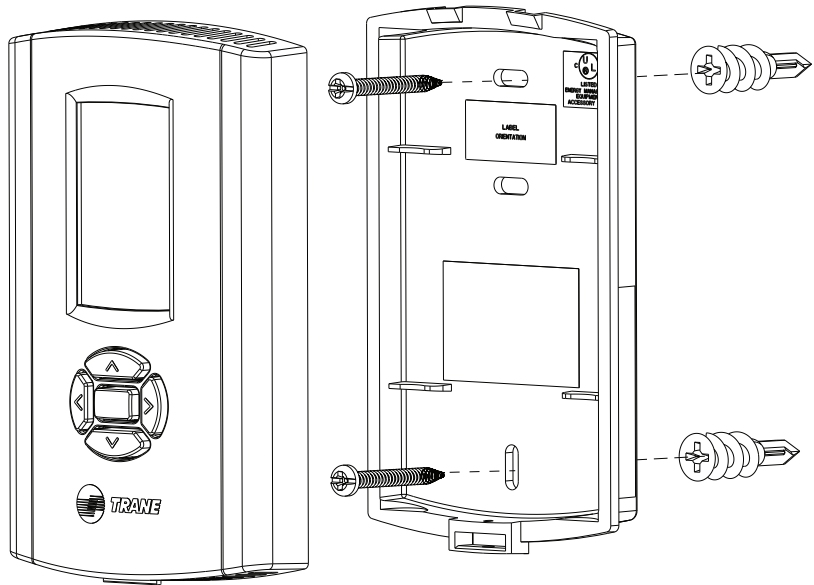

Press

Press to change sensor number, if multiple sensors are used.
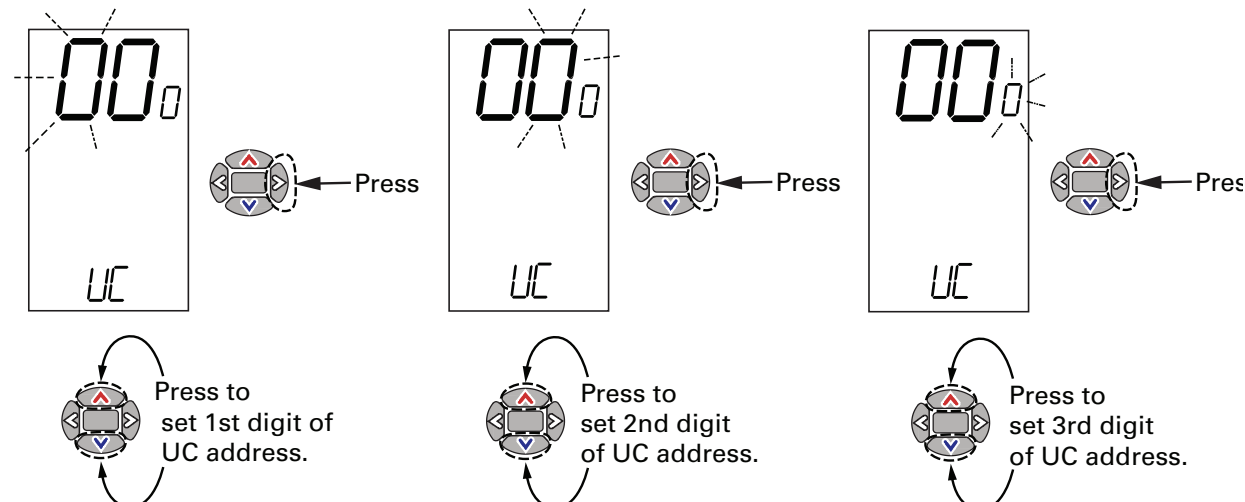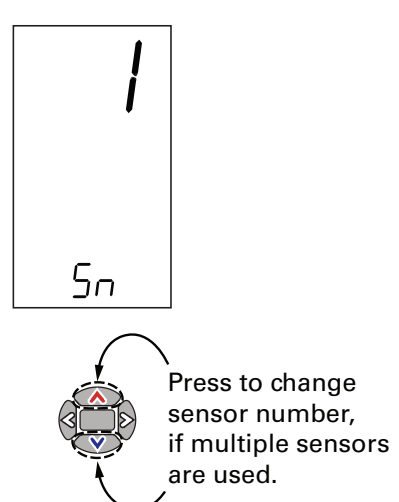
After addresses are set, the WCS will immediately attempt to join the network and associate with the controller.

Error code **E2** will appear on the sensor display until the WCS successfully joins the network.

Error code **E1** will be displayed until association is successful.

You can press the center button twice at any time to cause the WCS to reattempt to join the network and to associate with the WCI.

Secure the backplate to a mounting surface

Error Codes

Possible cause	Explanation/Resolution
Sensor is not associated with UC (**E1**)	The configured address in the sensor does not match the dials of a UC for any WCI in the same wireless network. Re-associate the sensor with the WCI by correcting the UC address in the sensor.
Sensor is not communicating (**E2**)	Normal for sensor configured with GRP-NET 0-0. Verify that the sensor has the correct group (GRP) and network (NET) addresses. Verify that the sensor is within radio range. If the sensor has previously joined the network, verify that WCIs in range are powered up. Press the center button on the front of the sensor twice to force association. Otherwise, set the correct GRP and NET addresses and open the wireless network to allow the sensor to join.
Sensor drains battery current during sleep (**E3**)	If the error persists and batteries drain prematurely, the sensor may have defective components and need to be replaced.
Internal failure (**E7**)	Sensor display fails to communicate with the radio. Replace the sensor.
Wrong sensor address (**E8**)	The configured sensor address does not match the sensor address that is expected by the UC. Use Tracer TU to configure the UC for the quantity of sensors it should accept, if more than one.
Duplicate sensor (**E9**)	Another sensor with the same configured UC address and sensor address is already associated with the UC. Resolve the duplication. This may involve waiting (up to 51 minutes) for the UC to forget the address of a failed sensor.

Testing radio signal quality between the WCS and the WCI, and WCS battery life

Symbol on sensor display	Indicates...
	Associated but no communication with the WCI. In this situation, only the battery level and error code will appear.
	Excellent signal quality • Good signal margin for reliable communication. • Corresponds to a green link on the Tracer TU network health map.
	Satisfactory signal quality: • Adequate signal quality for reliable communication. • Corresponds to a yellow link on the Tracer TU network health map.
	Poor signal quality: • Unreliable communication. • Recommend moving the sensor or the WCI to a better location if the quality remains low for repeated signal tests. • Corresponds to a red link on the Tracer TU network health map.
	100–50% battery life remaining.
	50–3% battery life remaining.
	Less than 3% battery life remaining. When the remaining battery power is approximately 1%, the battery symbol will flash on the main display screen. In the test mode display screen, the empty battery symbol will not flash.