



Installation Instructions

Tracer® Zone Sensor
Wireless/Wired Communicating

Wired Models		Wireless Models	
ZS-T-E-WR-B	X13791099001	ZS-T-E-WL-B	X13791097001
ZS-T-H-E-WR-B	X13791099002	ZS-T-H-E-WL-B	X13791097002
ZS-THCO-E-WR-B	X13791099003	ZS-THCO-E-WL-B	X13791097003
ZS-T-N-WR-B	X13791100001	ZS-T-N-WL-B	X13791098001
ZS-TH-N-WR-B	X13791100002	ZS-TH-N-WL-B	X13791098002
ZS-THCO-N-WR-B	X13791100003	ZS-THCO-N-WL-B	X13791098003

SAFETY WARNING
Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

1
Warnings, Cautions, and Notices

Read this manual thoroughly before operating or servicing this unit. Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

WARNING
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION
Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE
Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns
Scientific research has shown that certain man-made chemicals can affect the earth’s naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

Important Responsible Refrigerant Practices
Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

WARNING
Proper Field Wiring and Grounding Required!
Failure to follow code could result in death or serious injury. All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

WARNING
Personal Protective Equipment (PPE) Required!
Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, **MUST** follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

WARNING
Follow EHS Policies!
Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company’s Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

WARNING
Cancer and Reproductive Harm!
This product can expose you to chemicals including lead and bisphenol A (BPA), which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

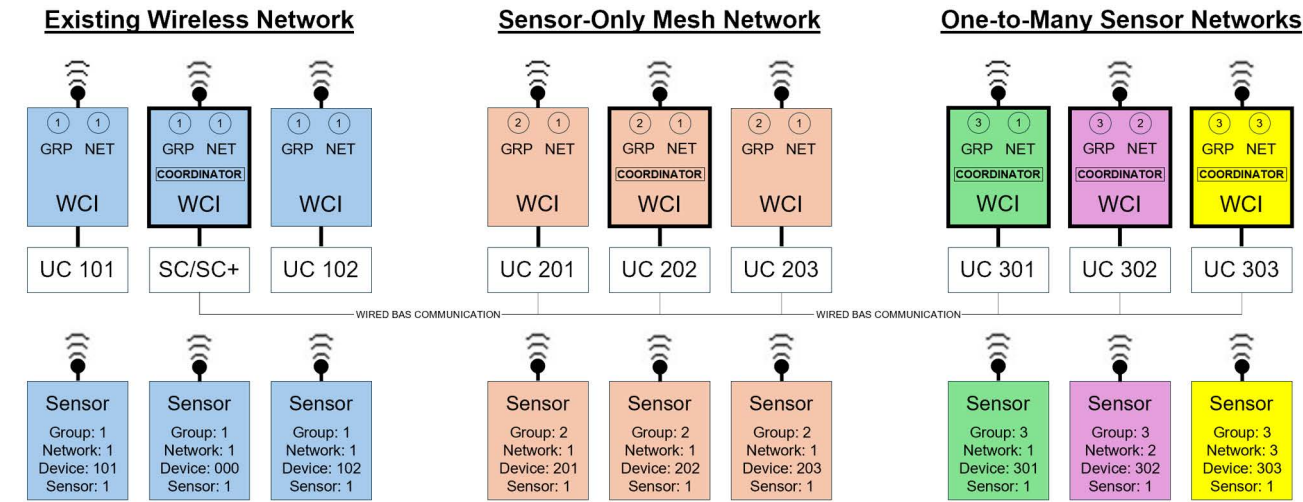
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For more detailed installation information, see *Tracer Zone Sensors Installation, Operation, and Maintenance* (BAS-SVX096*-EN).

4
Overview

Figure 1. Network diagram

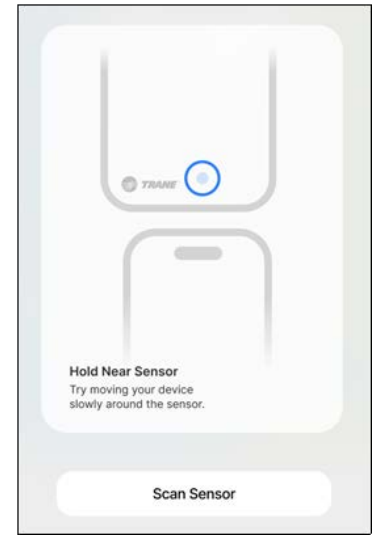


- Coordinator:** One centrally located WCI on each network must be configured as a network coordinator. For more information about configuring network coordinator, see *Tracer Zone Sensors Installation, Operation, and Maintenance* (BAS-SVX096*-EN).
- On existing wireless networks, the WCI connected to the system controller is typically the coordinator.
 - When creating a sensor-only mesh network, designate and configure the WCI on one centrally located controller as the network coordinator.
 - For one-to-many controller-sensor configurations, configure the WCI connected to each controller as a network coordinator.
- GRP-NET:** Give a unique GRP-NET assignment to each network coordinator WCI and configure each WCI and sensor associated with that network with GRP-NET values matching the network coordinator. Valid GRP numbers are 0-8 and valid NET numbers are 1-8.
- Sensors:** Each device can connect to up to six sensors.
- Configure wireless sensors with the device address; the device address for sensors connected to the system controller is 000.
 - All sensors connected to a device must have a unique sensor number. For wired sensors, this is the only addressing configuration needed.

5
Tracer Quick Config App Connection

After downloading and installing the Tracer® Quick Config app on a mobile device with NFC enabled, open the app and connect to the zone sensor by placing mobile device near the sensor. The zone sensor does not require power for configuration, so this step can be completed with the sensor still in the box.

Figure 2. Tracer Quick Config app



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Sensor Configuration with Tracer Quick Config App

Figure 3. Unit name, addressing, setpoint, and other settings

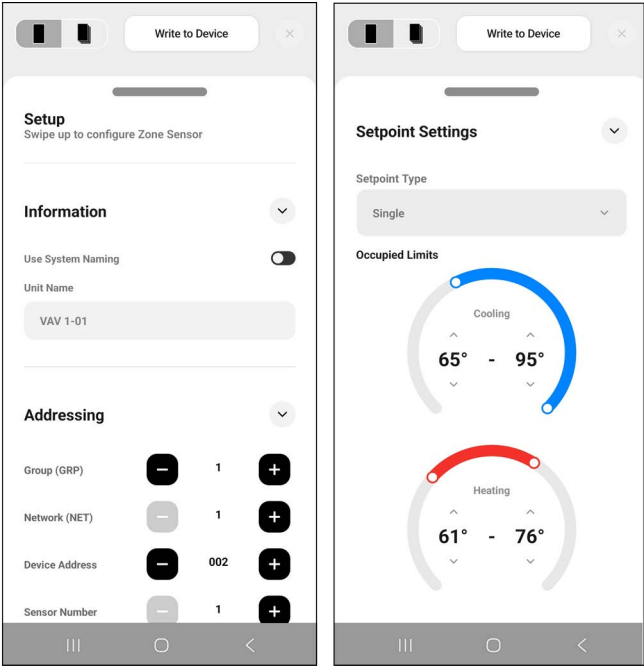
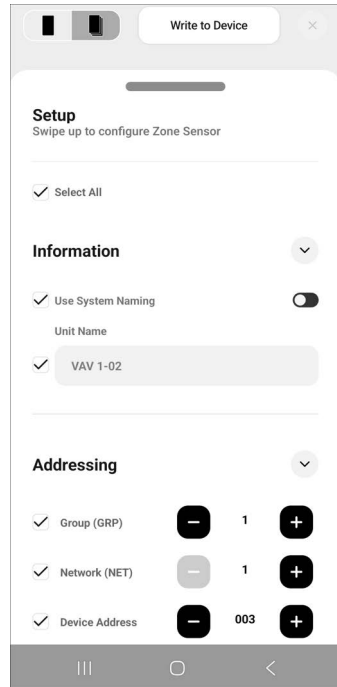
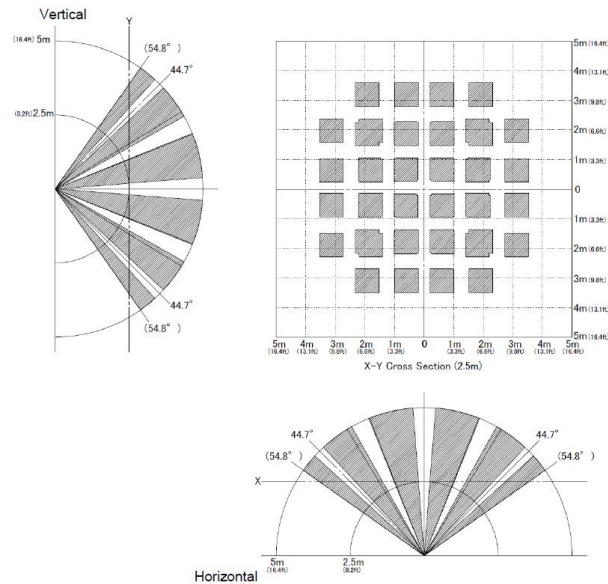


Figure 4. Configuring multiple zone sensors with Tracer Quick Config App



In the upper left-hand corner, use multiple write mode to send selected settings to multiple sensors. For wireless sensors, device address is automatically incremented by one on each subsequent write.

Figure 5. Occupancy sensor coverage (only if equipped)



Occupancy sensor range is 16.4 ft (5 m).

Figure 6. Removing sensor from backplate

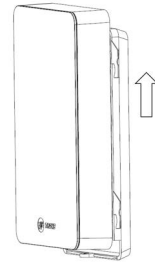
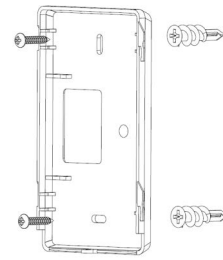


Figure 7. Securing the backplate to a mounting surface



For more information about selecting sensor location, see Tracer Zone Sensors Installation, Operation, and Maintenance (BAS-SVX096*-EN).

Figure 8. Removing battery strip (wireless sensor only)

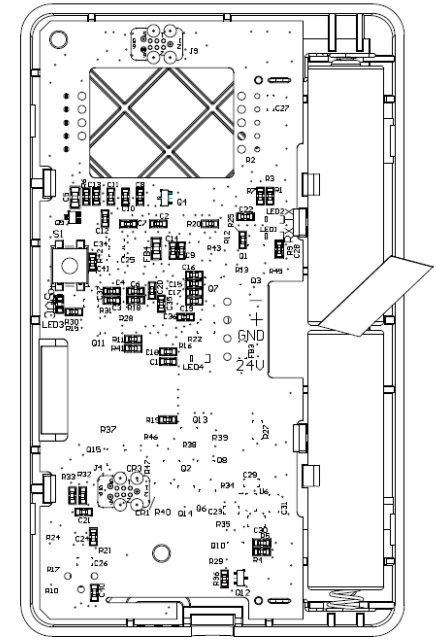
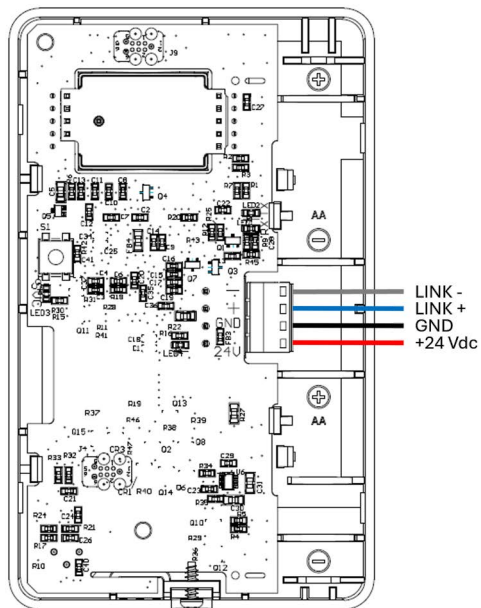
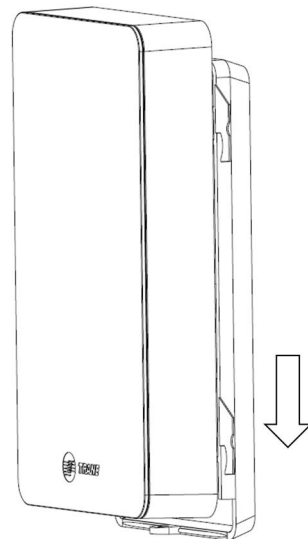


Figure 9. Completing wiring connections (wired sensor only)



Remove terminal block for access to the screw terminations. 22 AWG wire is recommended. For best performance, confirm wiring penetrations are sealed.

Figure 10. Mounting sensor on backplate



Error Codes

Table 1. Error codes

Possible Cause	Explanation/Resolution
Sensor is not associated with UC (E1)	- Verify that the unit controller and WCI firmware are up to date. - 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 has not joined the network (E2)	- Verify that the network is open. - Normal for sensor configured with GRP-NET 0-0. - Verify that the sensor is within radio range. - If the sensor has previously joined the network, verify that WCIs in range are powered up. Unlock sensor to initiate controller sync. Otherwise, set the correct GRP and NET addresses and open the wireless network to allow the sensor to join.
Sensor drains battery 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)	Replace the sensor.
Wrong sensor address (E8)	The configured sensor address does not match the sensor address that is expected by the UC. Use the appropriate service tool software 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. The may involve waiting (up to 51 minutes) for the UC to forget the address of a failed sensor.

Agency Listings and Compliance

The European Union (EU) Declaration of Conformity is available from your local Trane office.

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