Manuals+ — User Manuals Simplified.

LENNOX 56L80 Sensor and After-Hours Switch Kit Instruction Manual

**SENSOR AND
AFTER-HOURS SWITCH KIT**

INSTALLATION INSTRUCTIONS FOR THE SENSOR AND AFTER-HOURS SWITCH KIT USED WITH L CONNECTION NETWORK

Contents

Shipping and Packing List

Package 1 of 1 contains:

1. Sensor (A2) or After-Hours Switch (S56)
2. Screws

IMPORTANT – Use 22AWG minimum, 1 twisted pair shielded cable (100% aluminum shield with drain wire, Teflong jacket). Lennox P/N's 94L63, 27M19, 68M25, and Bel
den type 88761 is equivalent.

⚠️ **WARNING**

Personal injury, loss of life, or damage to property! Installation and service must be performed by a qualified installer or service agency.
Improper installation, adjustment, alteration, ser vice or maintenance can cause personal injury, loss of life, or damage to property.

Application

Either a zone or return air sensor is required on each roof top unit in an L Connection™ network. The L Connection network provides direct digital communication to a single or network of rooftop units. A PC or a network control panel (NCP) can then be used to monitor and/or control the sys them. 56L80 and 94L60 sensors contain a data port that can be wired to interface with the L Connection network. The data port does not have to be wired or in operation for the system to function; it is a monitoring and diagnostic fea sure. 56L80 zone sensor contains a warmer/cooler adjustment lever which allows a + 1 degree set point shift. A DIP switch on the sensor base can be adjusted to increase the range to + 4 degrees or limit the range to no adjustment. An after-hours switch is provided on 56L80 and 94L60 zone sensors. A separate after-hours switch must be installed when this feature is desired on systems using a 56L81 return air sensor, a 94L61 zone sensor, or a 76M32 zone sensor.

Cat. No.	Features
56L80	Wall-mount; communication port; after-hours override switch; warmer/cooler adjustment with options.
94L60	Wall-mount; communication port, after-hours override switch.
94L61	Wall-mount.
56L81	Duct-mount; installed in return air.
76M32	Wall-mount; flush-mount; stainless steel.
56L16	After Hours Switch

Wall-Mount Sensor Location

Install the sensor on a standard handy box or directly on the wall. Locate the sensor in a conditioned space approximately 5 feet (1-1/2m) above the floor in an area with good air circulation at an average temperature. Avoid locating the room thermo stat where it might be affected by:

- drafts or dead spots behind doors and in corners
- hot or cold air from ducts
- radiant heat from sun or appliances
- concealed pipes and chimneys

Zone Sensors – 56L80, 94L60, 94L61

1. Route cable from the unit controller to an appropriate location in the conditioned space. Make wire connec tions to the unit as shown in figure 1.
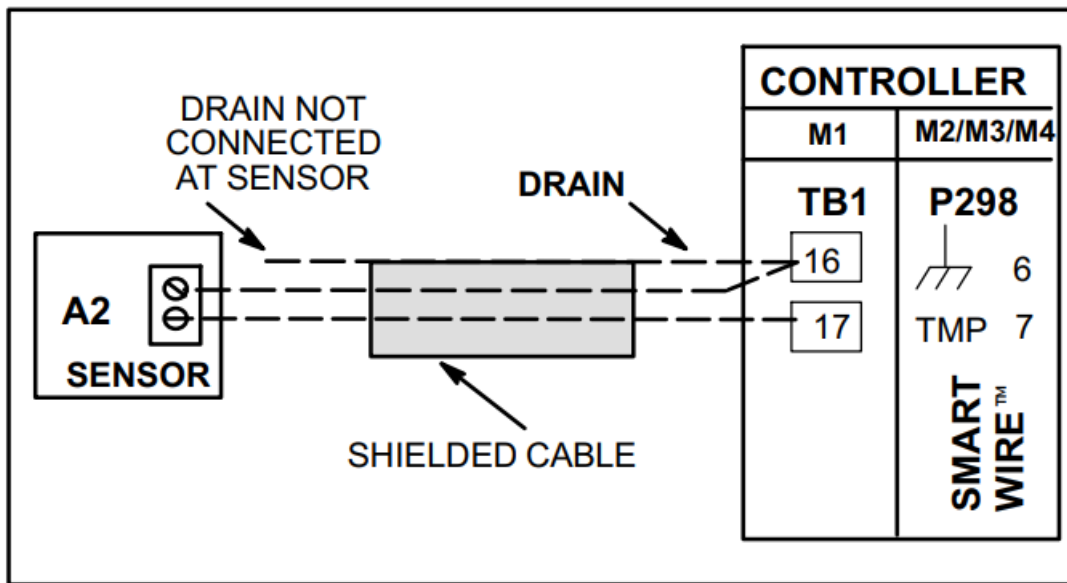
Figure 1. Sensor Wiring

2. Loosen screws and remove sensor cover. Turn set screws clockwise on 56L80 and 94L60. See figures 2 and 3.
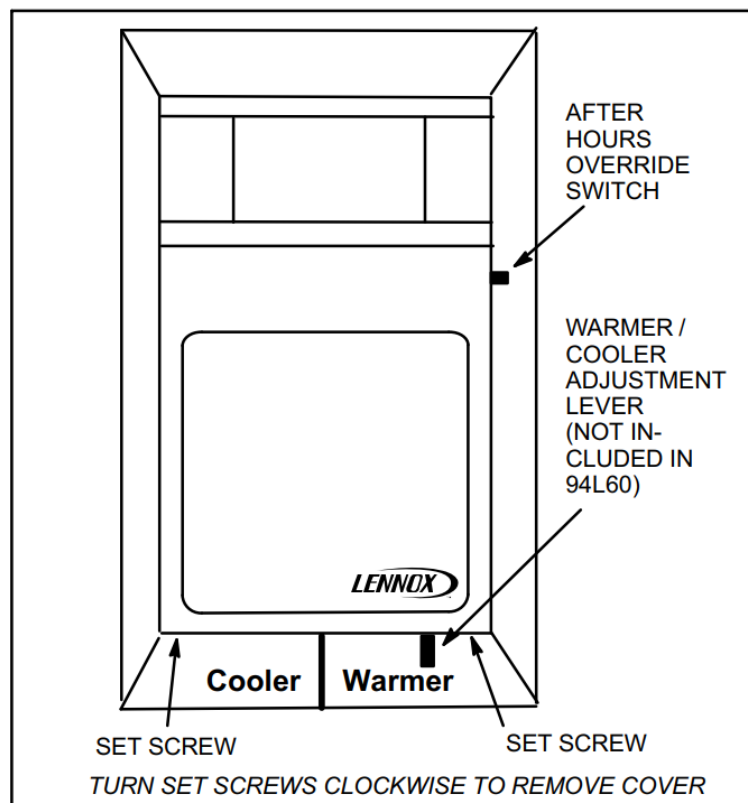

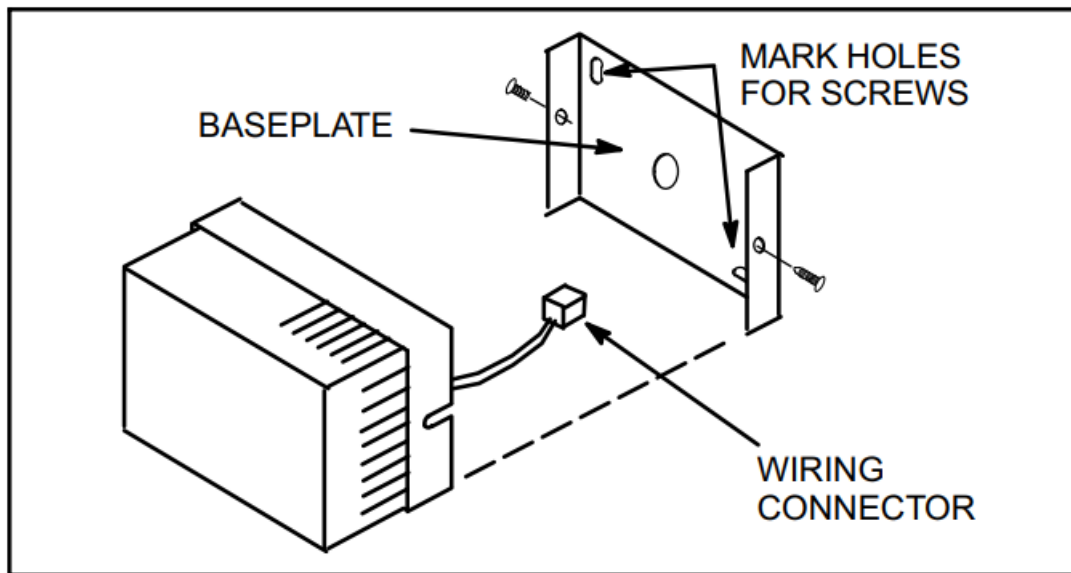**Figure 2. Zone Sensor - 56L80 and 94L60**

Figure 3. Zone Sensor - 94L61

3. Center opening in the baseplate or over the opening in the wall.

4. Mark holes for screws. See figure 3 or 4. Remove
   baseplate and drill holes.

5. Insert wall anchors (field provided) and align the baseplate over the opening in the wall. Pull wiring through an
   opening in the base plate. Secure the baseplate to the wall with screws.

6. Connect wiring to the sensor as shown in figure 1. When the use of the data port is desired on 56L80 and
   94L60 sensors, make communication wire connections as shown in figure 5.

7. 56L80 Only The sensor contains a warmer/cooler adjustment lev er which allows a +/-1ºF set point shift. A DIP
   switch on the sensor base can be adjusted to increase the
   range to +/-4ºF or limit the range to no adjustment. See figure 4 for the DIP switch location and figure 6 to
   change the adjustment range.

8. Replace zone sensor cover and either tighten side screws or turn set screws counterclockwise to secure cover
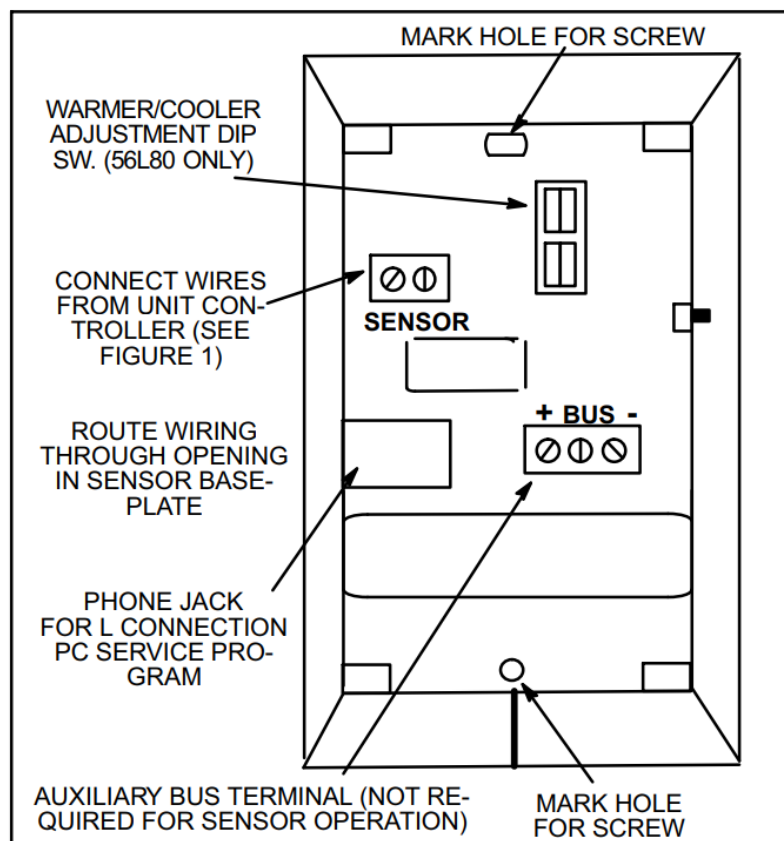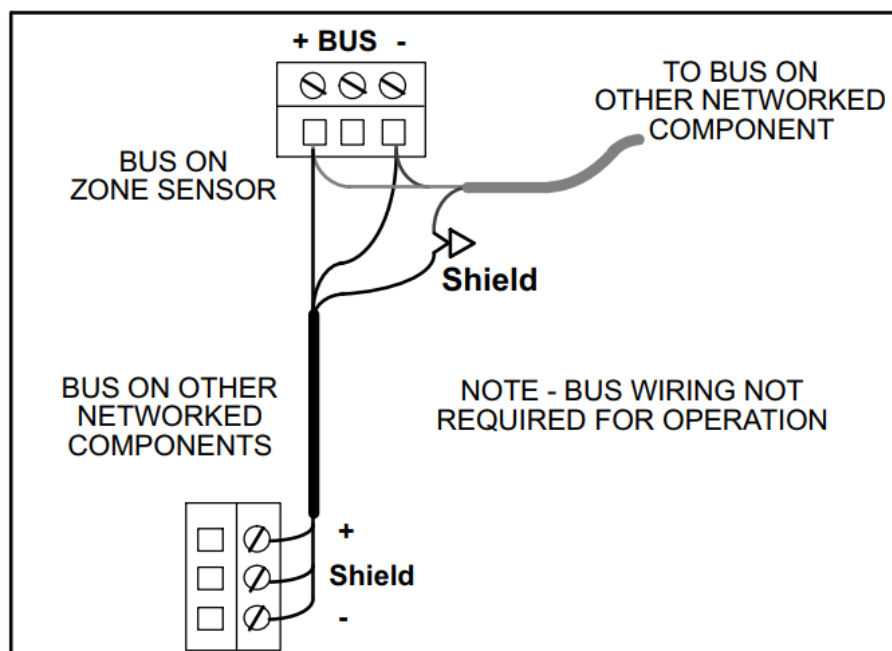   in place.

MARK HOLE FOR SCREW

WARMER/COOLER
ADJUSTMENT DIP
SW. (56L80 ONLY)

CONNECT WIRES
FROM UNIT CON-
TROLLER (SEE
FIGURE 1)

SENSOR

+ BUS -

ROUTE WIRING
THROUGH OPENING
IN SENSOR BASE-
PLATE

PHONE JACK
FOR L CONNECTION
PC SERVICE PRO-
GRAM

AUXILIARY BUS TERMINAL (NOT RE-
QUIRED FOR SENSOR OPERATION)

MARK HOLE
FOR SCREW

Figure 4. Zone Sensor - 56L80 and 94L60

+ BUS -

TO BUS ON
OTHER NETWORKED
COMPONENT

BUS ON
ZONE SENSOR

Shield

BUS ON OTHER
NETWORKED
COMPONENTS

NOTE - BUS WIRING NOT
REQUIRED FOR OPERATION

+

Shield

-

**Figure 5. Communication Wiring - L Connection
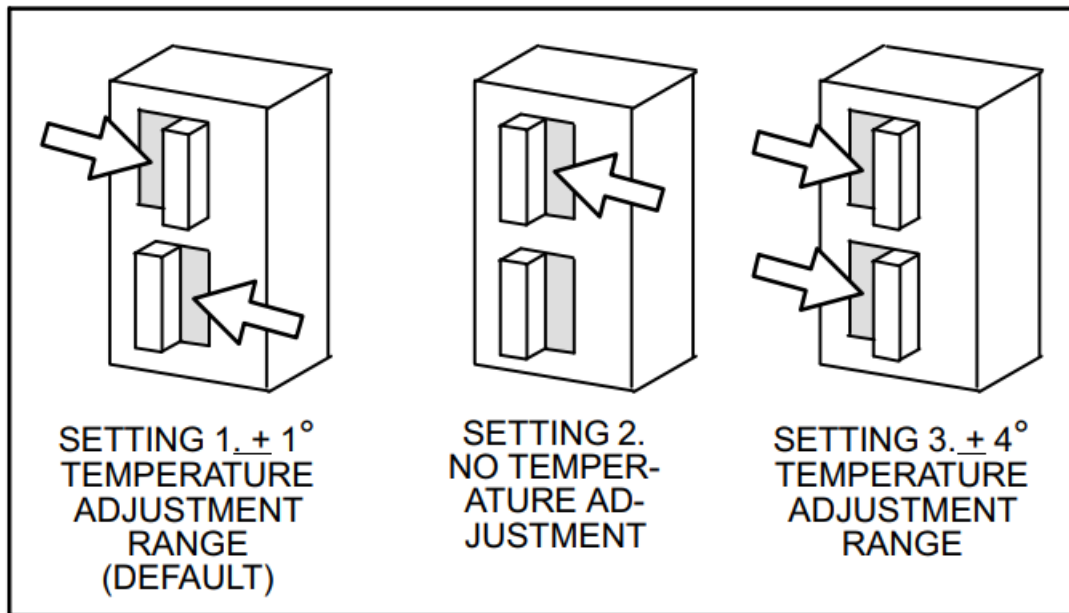(Available On 56L80 and 94L60 Sensors Only)**

Figure 6. Warmer/Cooler Adjustment Range

Zone Sensor – 76M32

1. Route cable from unit controller to an appropriate loca on in the conditioned space. Make wire connections to the unit as shown in figure 1 (see Page 1).
2. Make wire connections to the sensor with wire nuts (sen sor has led instead of a terminal block).
3. Secure sensor to the wall with screws provided.

Return Air Sensor – 56L81

1. Open the unit filter section and remove the knock-out labeled "A2". See figure 7.
2. Insert return air sensor probe through the hole and secure in place with two screws provided.
3. Connect return air sensor leads to wires from J62 ter terminals 1 and 3.
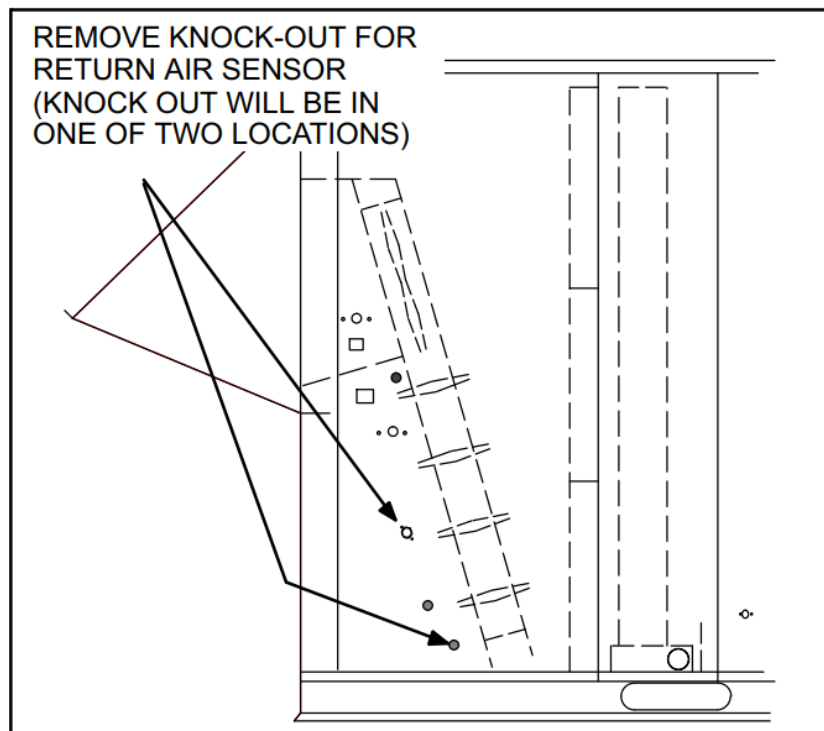4. Connect jumper wires between rooftop unit TB1 termi nails 5 and 17 and TB1 terminals 14 and 16.

REMOVE KNOCK-OUT FOR
RETURN AIR SENSOR
(KNOCK OUT WILL BE IN
ONE OF TWO LOCATIONS)

Figure 7. Unit Filter Section

After-Hours Override Switch S56 – 56L16

IMPORTANT – This section refers to 56L16 only. The after-hours override switch is located on the Zone Sen sor (A2) and requires no additional installation or wiring.

Connect standard 24V thermostat wires (one pair 20 AWG minimum) from the unit controller (M1, TB1-16 & 17; M2, M3 or M4 P298-6 & 7). Route the wires to the location where the switch will be installed.

1. Center switch over the opening in the wall and mark holes for screws.

2. Connect wires to switch pigtails.

3. Secure the switch to the wall using the two screws provided.

4. Connect jumper wires between rooftop unit TB1 terminals 5 and 17 and TB1 terminals 14 and 16.

Standard Sensors Used For Averaging

Four sensors may be used to get an average temperature reading. Use ONLY the 94L61, 56L81, 76M32 sensors and the 56L16 after-hours override switch. Wire sensors as shown in figure 8.
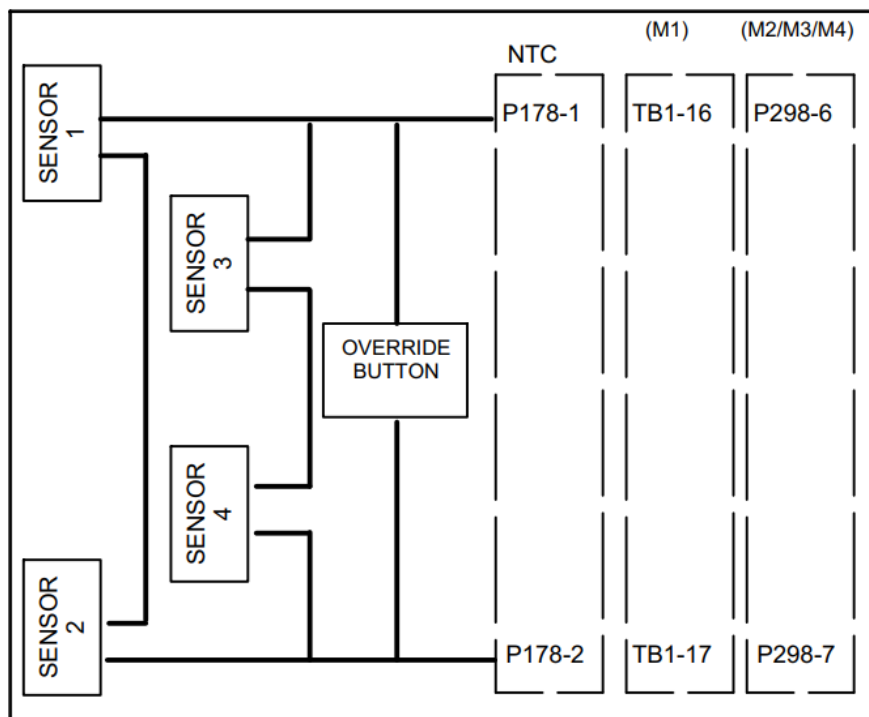
Figure 8. Wiring Standard Sensors for Averaging

Documents / Resources

LENNOX 56L80 Sensor and After-Hours Switch Kit [pdf] Instruction Manual
56L80, Sensor and After-Hours Switch Kit, 56L80 Sensor and After-Hours Switch Kit, After-Hours Switch Kit, Switch Kit, 94L60, 94L61, 56L81, 76M32

Manuals+,