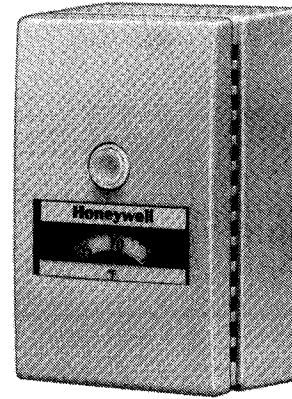# Honeywell

T7660A-D
Space Temperature Sensors

The T7660 Space Temperature Sensor is used with the W7620 Zone Controller, W7600 Commercial Zoning System, or W180 Zone Control System.

- Platinum sensor.

- High temperature sensitivity.

- Computer Network Automation Protocol (CNAP) communication connection (W7620 only).

- T7660C,D setpoint adjustment available in english (°F) or metric (°C) units.

- Override switch and status LED option.

- T7660D includes part no. 14001496-001 Mounting Adapter Plate for 2 in. by 4 in. J box.

- T7660D includes part no. 14002136-005 Trim Plate (beige).

- Adapter plates, finish plates, and mounting rings are available to meet customized application needs.

CONTENTS

Specifications

New Model*		Old Model***	Description
T7660A1017	Replaces	T7660A1009	Sensor only.
T7660B1015	Replaces	T7660B1007	Sensor with override switch and status LED.
T7660C1021	Replaces	T7660C1005	Sensor with override switch, status LED, and setpoint adjustment dial in °F.
T7660C1039	Replaces	T7660C1013	Sensor with override switch, status LED, and setpoint adjustment dial in °C.
T7660D1029**	Replaces	T7660D1003	Configurable sensor. Contains a T7660C1021 plus the scaleplate and switch parts required to configure a T7660A or T7660B sensor, °F.
T7660D1037	Replaces	T7660D1011	Configurable sensor. Contains a T7660C1021 plus the scaleplate and switch parts required to configure a T7660A or T7660B sensor. OEM logo.
T7660D1045**			Configurable sensor. Contains a T7660C1039 plus the scaleplate and switch parts required to configure a T7660A or T7660B sensor. °C.

* Includes wiring terminals (Fig. 4) in lieu of Cable/Plug Assembly.
** Includes part no. 14001496-001 Adaptor Plate for Mounting on 2 x 4 Electrical J Box, and part no. 14002136-005 Trim Plate (Beige).
*** Includes part no. 230828 Cable/Plug Assembly.

NOTE: W180 Controller does not support the setpoint adjustment dial option.

Ordering Information

When purchasing replacement and modernization products from your TRADELINE® wholesaler or your distributor, refer to the TRADELINE Catalog or price sheets for complete ordering number, or specify—
  1. Order number, TRADELINE, if desired.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:
  1. Your local Honeywell Home and Building Control Sales Office (check white pages of phone directory).
  2. Home and Building Control Customer Satisfaction
     Honeywell Inc., 1885 Douglas Drive North
     Minneapolis, Minnesota 55422-4386 (612) 951-1000

  In Canada—Honeywell Limited/Honeywell Limitée, 740 Ellesmere Road, Scarborough, Ontario M1P 2V9. International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

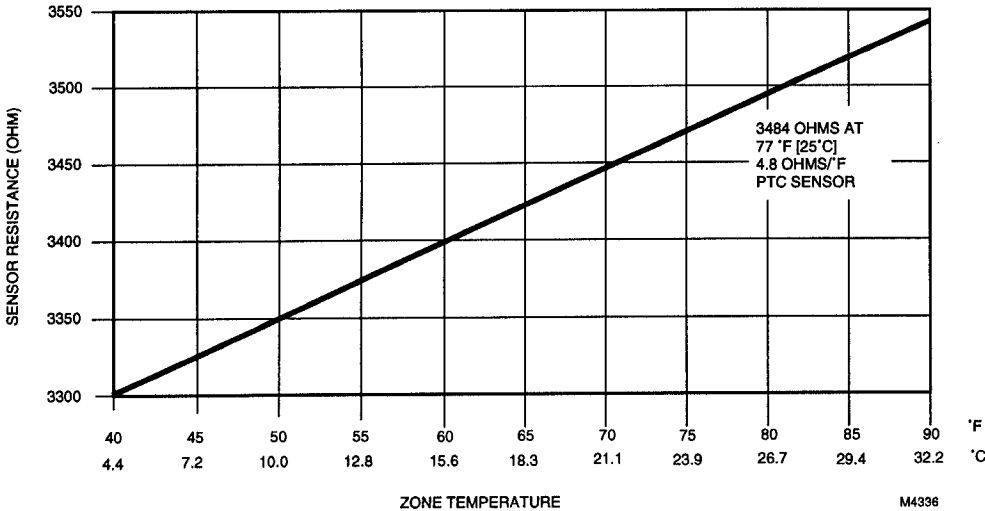**Fig. 1—Zone thermostat sensor resistance versus actual zone temperature.**
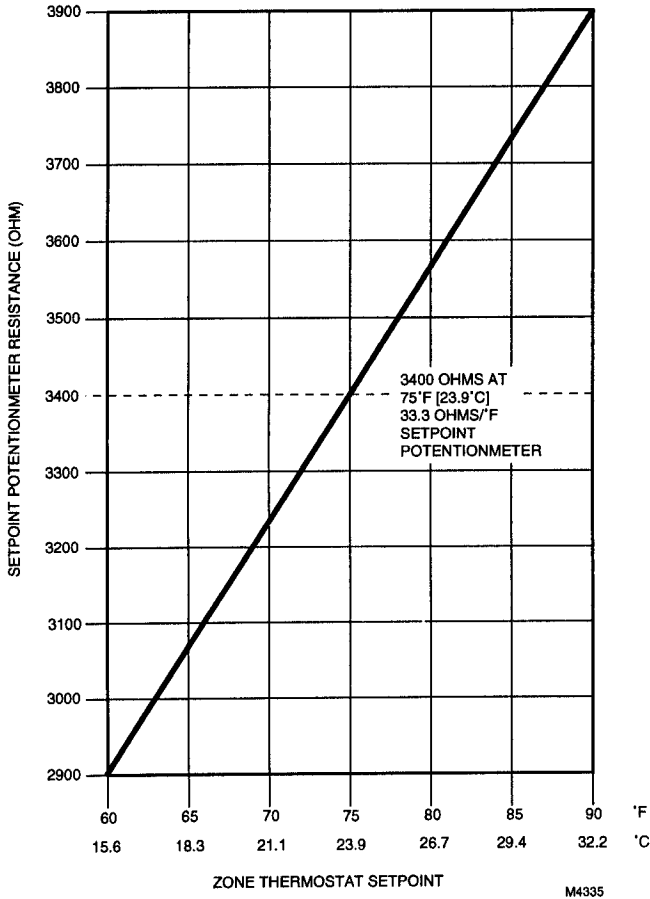

Fig. 2—Zone setpoint potentiometer resistance versus indicated zone setpoint.

Installation

BEFORE INSTALLATION...

1. Refer to job drawings to determine the space sensor and wiring locations.

2. No special tools are required for installation. A 0.050 inch Allen wrench used to remove the sensor cover is supplied with each sensor. A 3/32" to 1/8" (2 to 3 mm) screwdriver is required for the screw down wiring terminals.

MOUNTING THE SPACE SENSOR

Mount the space sensor on an inside wall approximately 54 inch [1372 mm] from the floor (or as specified) where it is exposed to the average space temperature. Do not mount the space sensor on an outside wall or a wall containing water pipes or air ducts near the space sensor. Avoid locations that are exposed to discharge air from registers or radiation from lights, appliances, or the sun.

NOTE: All wiring must conform to local codes and ordinances.

1. Mount the space sensor mounting plate on a wall, mullion (1-7/8" [48 mm] wide minimum), or electrical box, see Fig. 3 and Table 1.

2. a. For connection to the W7620 Zone Controller:
   - Wire the sensor to the controller matching the terminal designation (connect a wire from T on the sensor to T on the controller). Refer to Table 2 for required terminal and control description.
   - Run the sensor wires in the same conduit as other low voltage W7620 wires only if they are in a shielded cable. The shield must be grounded at the W7620.

   b. For connection to the W7600 Commercial Zoning System or W180 Zone Control System:
   - Clip Jumper JA on the back of the T7660. This will put a 510 ohm resistor in series with the digital output to the LED. Clip Jumper JA only on applications where the LED is used to indicate occupied/unoccupied status, see Figs. 4 and 5.
   - Do not run space sensor wiring in the same conduit with AC wires.
   - Run the wiring a maximum distance of 500 feet between the space sensor and the Zoning System Controller when using standard No. 18 AWG wire. To reduce noise on the sensor wires, use shielded cable with the shield connected to ground on the Controller end only.

3. Mount the space sensor circuit board on the mounting plate (Fig. 6).

4. Mount the cover on the mounting plate (Fig. 7).

TABLE 1—MOUNTING ACCESSORIES.

Type of Mounting	14001496-001 Adaptor Plate	14002136-004/005 Finish Plate[1]	14001608-001 Black Mounting Ring
Direct to wall	—	—	—
2 x 4 inch electrical box	X	X	—
2 x 4 inch electrical box with 230518 Plaster Ring	—	Optional	Optional
4 x 4 inch electrical box with mud ring	X	X	—
4 x 4 inch electrical box with 14000885-001 Plaster Ring	—	Optional	Optional[2]

[1] 14002136-004 black.
  14002136-005 beige.
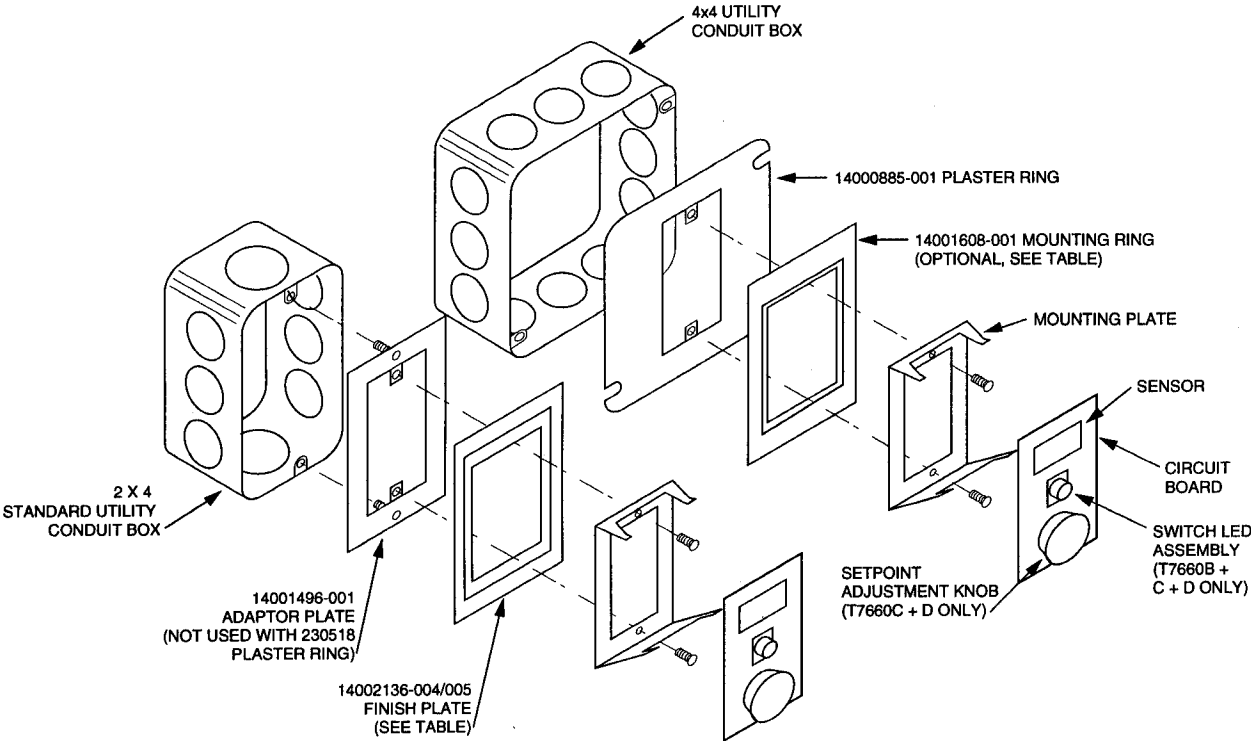[2] Required only if plaster ring standoff extends from wall surface.

TABLE 2—W7620 TERMINALS AND CONTROL DESCRIPTIONS.

Control Function	Required Termination
Sensor Only	T, A↓
Setpoint Adjustment Dial Only	SP, A↓
Override Pushbutton and LED Only	PB, LED, D↓[1]
CNAP Communication Connection Only	CN+, CN-[2]

[1] Cut Jumper JA on T7660 to activate 510 ohm resistor to limit current from W7600 or W180 to T7660 LED. Not required for W7620 applications.
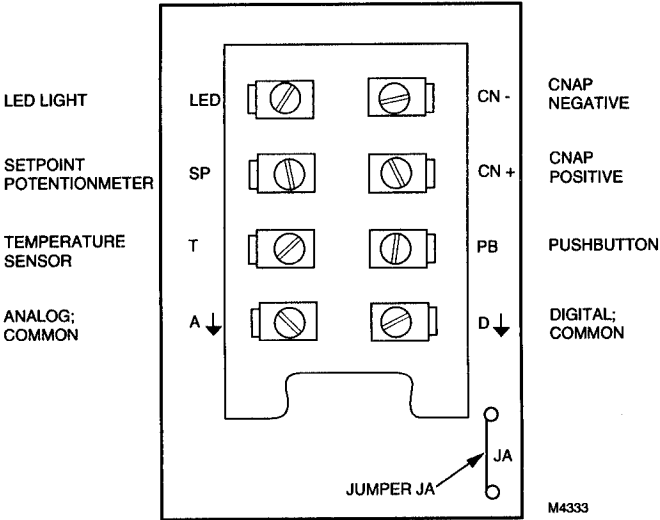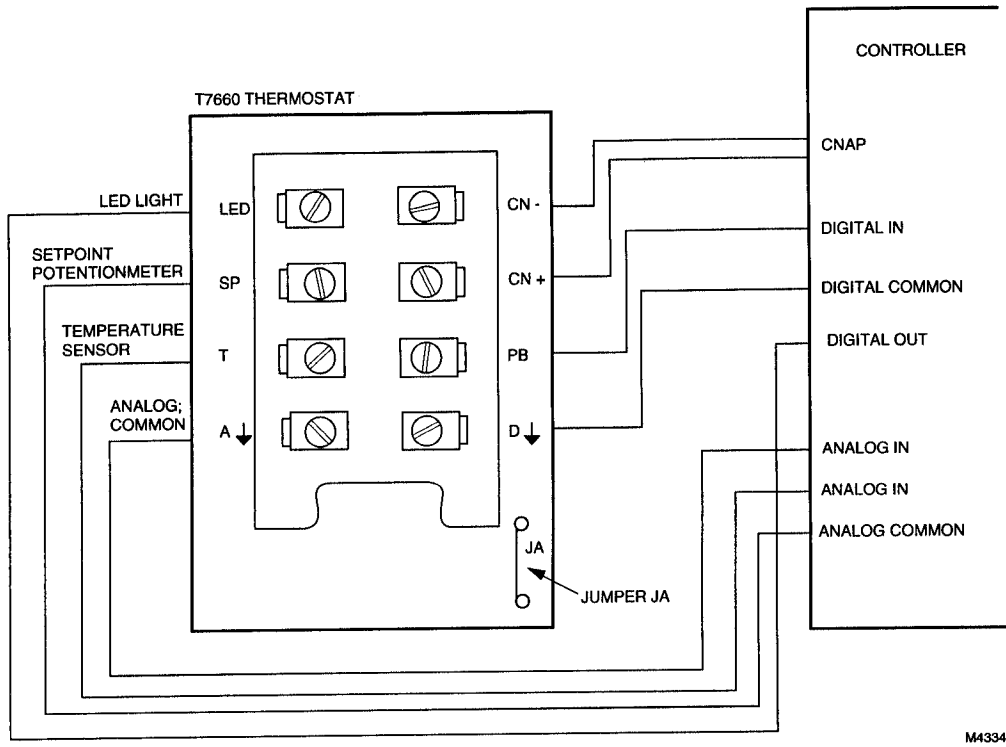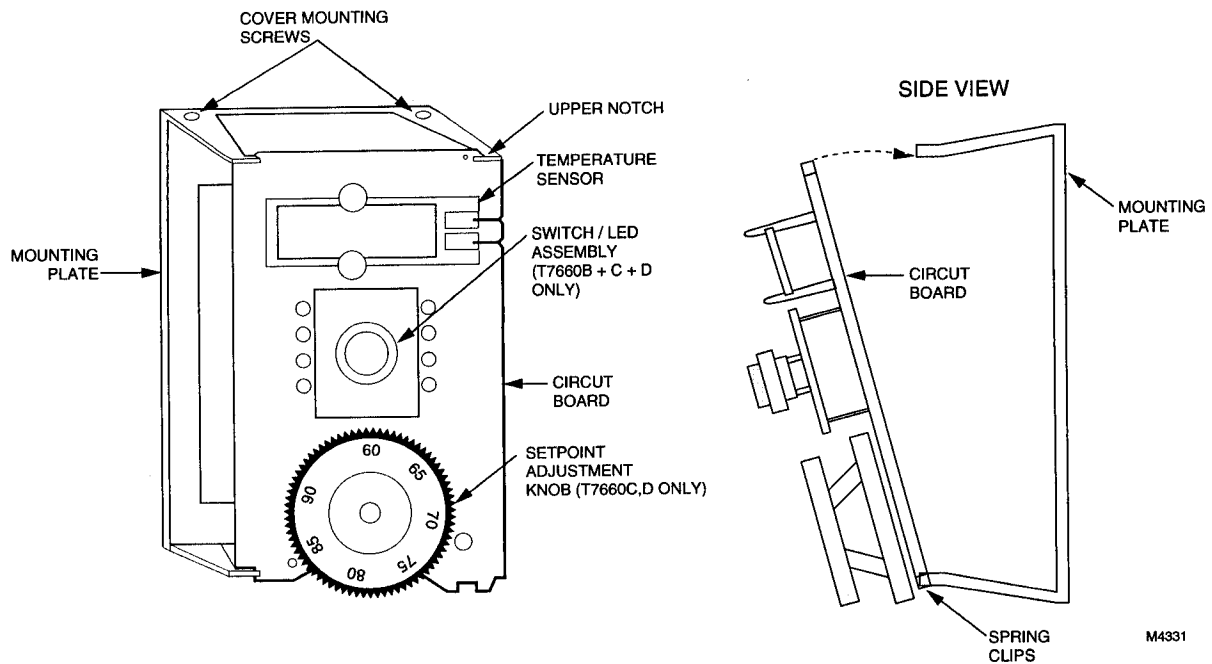[2] Not available on W7600 or W180 applications.

Fig. 3—Mounting.

4x4 UTILITY
CONDUIT BOX

14000885-001 PLASTER RING

14001608-001 MOUNTING RING
(OPTIONAL, SEE TABLE)

MOUNTING PLATE

SENSOR

CIRCUIT
BOARD

SWITCH LED
ASSEMBLY
(T7660B +
C + D ONLY)

SETPOINT
ADJUSTMENT KNOB
(T7660C + D ONLY)

2 X 4
STANDARD UTILITY
CONDUIT BOX

14001496-001
ADAPTOR PLATE
(NOT USED WITH 230518
PLASTER RING)

14002136-004/005
FINISH PLATE
(SEE TABLE)

M4332

Fig. 4—T7660 backview.

LED LIGHT — LED

SETPOINT
POTENTIONMETER — SP

TEMPERATURE
SENSOR — T

ANALOG;
COMMON — A

CN - — CNAP
NEGATIVE

CN + — CNAP
POSITIVE

PB — PUSHBUTTON

D — DIGITAL;
COMMON

JA

JUMPER JA

M4333

Fig. 5—T7660 to Controller Connections.

M4334

Fig. 6—Placement of circuit board onto mounting plate.

SIDE VIEW

M4331

Fig. 7—Mounting Cover.

SWITCH /LED
ASSEMBLY
(T7660B+C+D
ONLY)

T7660C+D

COVER MOUNTING
SLOTS

M4337

2
[51]

1½
[38]

3 3/16
[81]

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Home and Building Control
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Home and Building Control
Honeywell Limited—Honeywell Limitée
740 Ellesmere Road
Scarborough, Ontario
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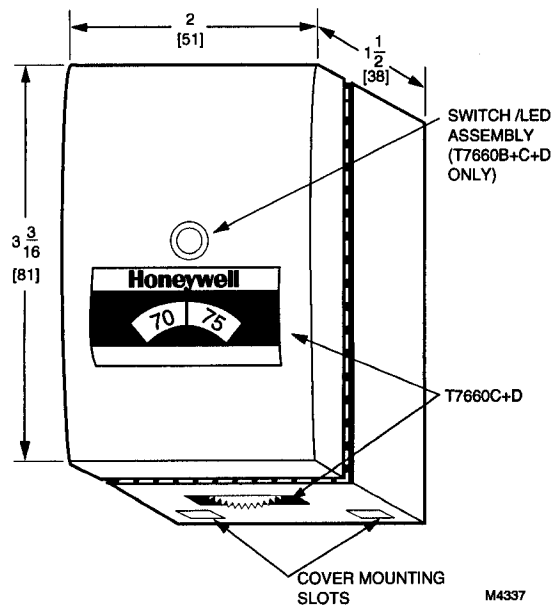
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