

T7007A Platinum Remote Bulb Sensor

INSTALLATION INSTRUCTIONS

BEFORE INSTALLATION

WARNING

To prevent personal injury, **DO NOT** disturb asbestos insulating materials. Determine if the insulating material contains asbestos either by obtaining a building survey report or by having the material in question tested. If the material is asbestos or suspected of being asbestos, notify the owner to retain a qualified contractor to do the removal.

1. Do not run T7007A Remote Bulb Sensor ("Sensor") wiring in the same conduit or raceway as power wiring.
2. If control circuit lightning protection is required, use 14502412-014 Lightning Protector.
3. Use 18 AWG (0.81 sq mm) twisted-pair for field wiring between the Sensor and controller.
4. If 16 or 14 AWG wiring is specified use AMP 320559 (for 16 AWG) or 327583 (for 16 or 14 AWG) crimp connectors.
5. Do not exceed 200 ft (60.8m) of field wiring between the Sensor and controller.
6. Install Sensor in accordance with job drawings.

INSTALLATION

General

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

It is assumed that all necessary conduit and standard electrical boxes are installed, and wire runs have been made. Use properly sized wire nuts for field wiring connections. If standard electrical boxes need to be mounted on piping, use perforated metal strap material to secure them. Ensure piping is free of dirt and corrosion before applying heat conductive compound and installing the Sensor.

Determine Sensor locations and terminations from the job drawings. Always use the 107323A Sun Shield/Bulb Holder when installing the Sensor outdoors or for space temperature sensing applications.

Equipment Required

1. The 107323A Sun Shield/Bulb Holder is used for mounting the Sensor for space temperature sensing. Mounting hardware necessary for installation and surface involved must be obtained locally.
2. The 14503800 Installation Kit is used for mounting Sensor on a pipe. Included are:
 - Heat conductive compound
 - Hose-type clamp
 - Wire mesh
 - White fiberglass insulation tape
3. The 14503801 Installation Kit is used for wrapping insulation around the Sensor when it is mounted on an uninsulated pipe. Included are:
 - Fiberglass pipe insulation. Three inches wide by 20 feet long (76 by 6096 mm).
 - Nonporous protective wrapping, vapor seal type. Electrical or polyester tape also makes a good protective wrapping.
4. Duct Tape is used for general mounting procedures.
5. Perforated metal strap material is used for mounting standard electrical boxes on pipes.

Installation Procedures

Space or Outdoors Air Temperature Sensing

NOTE: The Sensor must be located within 30 in. (762 mm) of a standard electrical box, to allow field wiring within the box. Use a two-screw clamp-type connector in the knockout where the cable enters the standard electrical box.

1. At the desired Sensor location, use the Sun Shield/Bulb Holder as a template and mark four mounting holes.
2. Drill the four mounting holes necessary for the mounting hardware and surface involved.
3. Route the cable end of the Sensor through a two-screw clamp-type connector and into a standard electrical box (Fig. 1). Provide four inches (102 mm) of cable within the box.
4. Insert and secure the Sensor in the two tabs provided on the Sun Shield/Bulb Holder. Some adjustment of the tabs may be required to retain the Sensor.
5. Using mounting hardware appropriate for the surface involved, secure the Sun Shield/Bulb Holder and Sensor.
6. Connect Sensor leadwires to the field wiring with wire nuts or crimp connectors.



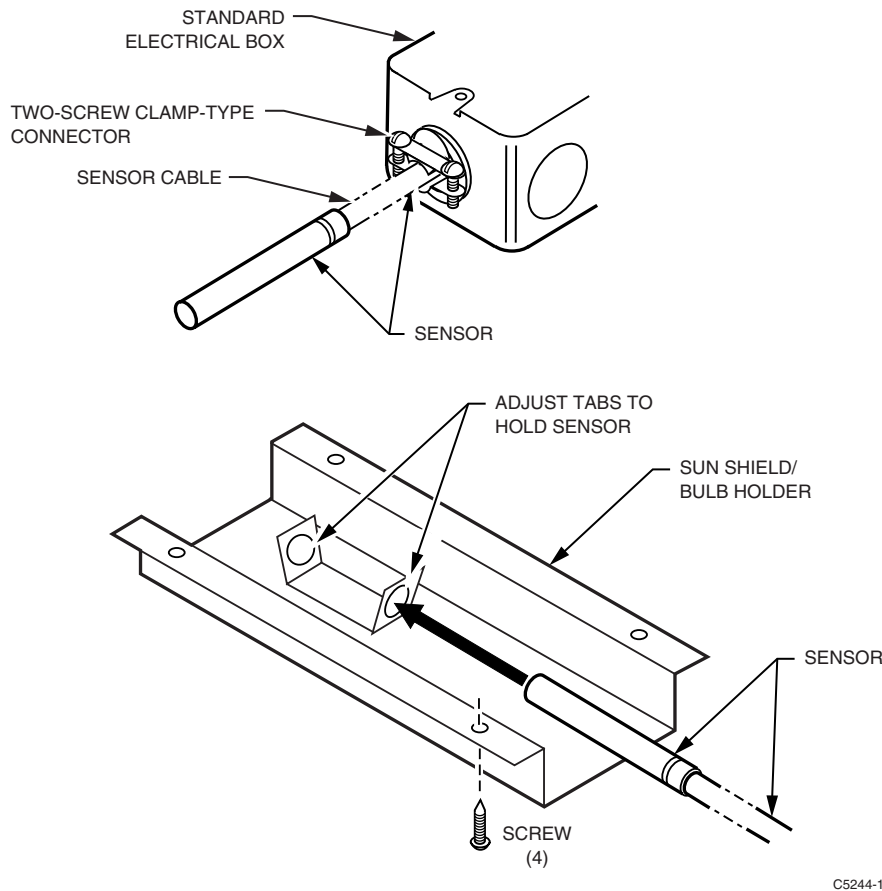


Fig. 1. Mounting Sensor on Sun Shield/Bulb Holder.

Uninsulated Pipe

1. Using the heat conductive compound from the 14503800 Installation Kit, coat the Sensor mounting location on the pipe (Fig. 2).
 2. Mount the Sensor parallel to the centerline of the pipe and hold in place with duct tape. Route the cable end of the Sensor in the direction of the connecting field wiring.
 3. Using the clamp from the 14503800 Installation Kit, position the clamp around the Sensor and the pipe.
 4. Tighten the clamp until there is solid physical contact between the Sensor and the pipe.
 5. Secure or trim the strap end of the clamp, if it would cause a problem, when wrapping and taping the pipe.
 6. Measure 12 inches (305 mm) out from both ends of the Sensor (Fig. 3), along the length of the pipe, and mark the pipe in both directions.
 7. Using the wire mesh from the 14503800 Installation Kit, form the wire mesh over the contour of the Sensor.
 8. Using the white fiberglass insulation tape from the 14503800 Installation Kit, form a piece of the white fiberglass insulation tape over the wire mesh and around the Sensor.
 9. Secure Sensor, wire mesh, and white fiberglass insulation tape to the pipe with duct tape.
 10. Starting at one of the marks made in Step 6, use duct tape to tape a layer of fiberglass pipe insulation (insulation from the 14503801 Installation Kit) over the Sensor and the pipe, until reaching the second mark. Leave Sensor cable accessible.
- NOTE:** The purpose of wrapping insulation around the Sensor, when it is mounted on an uninsulated pipe, is to obtain a true and accurate reading from the pipe through the Sensor.
11. Repeat the procedure by taping an overlapping layer of nonporous protective wrapping (wrapping from the 14503801 Installation Kit) from one measured mark to the other.
 12. Connect Sensor leadwires to the field wiring with wire nuts.

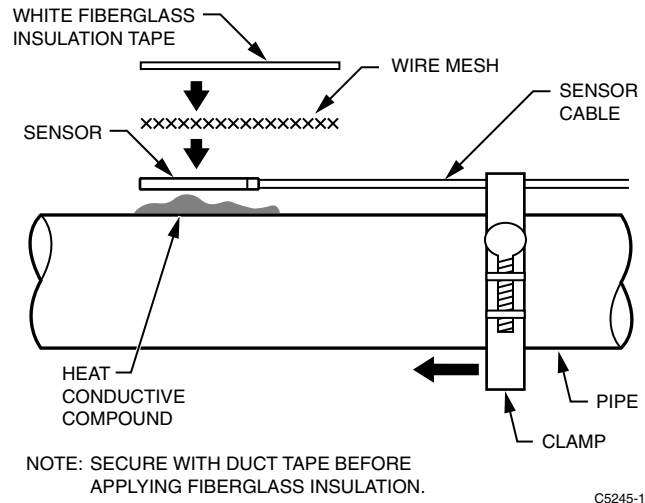


Fig. 2. Mounting Sensor on Uninsulated Pipe

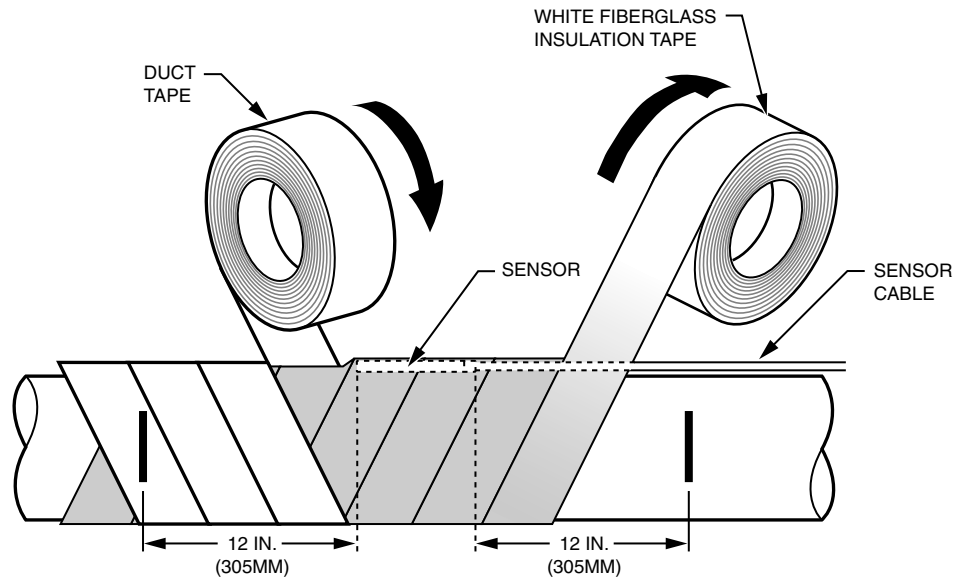


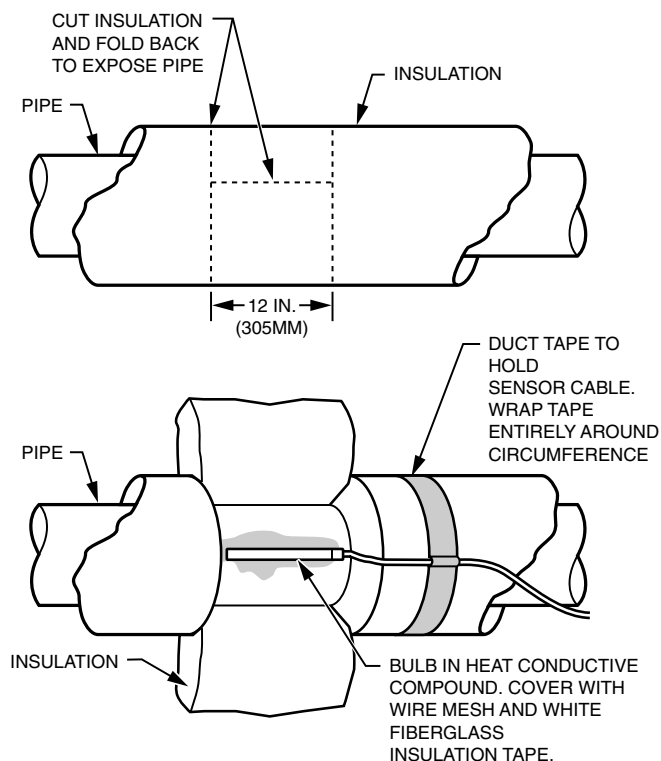
Fig. 3. Wrapping Sensor on Uninsulated Pipe.

Insulated Pipe

! WARNING

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1. Cut the non-asbestos pipe insulation (Fig. 4) and fold it back to expose the pipe.
2. Remove any rust, dirt, or corrosion from exposed pipe.
3. Using the heat conductive compound from 14503800 Installation Kit, coat the Sensor mounting location on the pipe.
4. Mount the Sensor parallel to the centerline of the pipe and hold in place with duct tape. Route the cable end of the Sensor in the direction of the connecting field wiring.
5. Using the wire mesh from 14503800 Installation Kit, form the wire mesh over the contour of the Sensor.
6. Using the white fiberglass insulation tape from 14503800 Installation Kit, form a piece of the white fiberglass insulation tape over the wire mesh and around the Sensor.
7. Secure the entire assembly to the pipe with duct tape.
8. Replace pipe insulation and tape all joints with duct tape, leaving Sensor cable accessible.
9. Route and tape the cable portion of the Sensor along the pipe to the field wiring.
10. Connect Sensor leadwires to the field wiring with wire nuts.



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Fig. 4. Mounting Sensor on Insulated Pipe.

WIRING

The following instructions provide for reliable connections between the field wires and the sensor wires even when a specified 18 AWG twisted pair field wires are not available.

18 AWG (0.81 sq mm) Stranded Wire	16 or 14 AWG (1.3 or 2.1 sq mm) Solid Wire
1. Strip approximately 1/2 in. (13 mm) of insulation from the end of field wires.	1. Use AMP splice connector 320559 (CCT3852-2) for 16 through 22 AWG (1.3 through 0.33 sq mm) wire or AMP splice connector 327583 (CCT3852-15) for 14 through 22 AWG (2.1 through 0.33 sq mm) wire to connect sensor leads to field wires.
2. Use wire nuts to connect lead wires of the Sensor to field wires.	2. Trim stripped sensor leads back to insulation, place sensor lead and field wire in connector, and crimp with Klein 1000 (CCT3815) crimp tool.

Honeywell

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