Honeywell

L6008A1192
Remote Bulb Aquastat® Controller

TRADELINE®

INSTALLATION INSTRUCTIONS

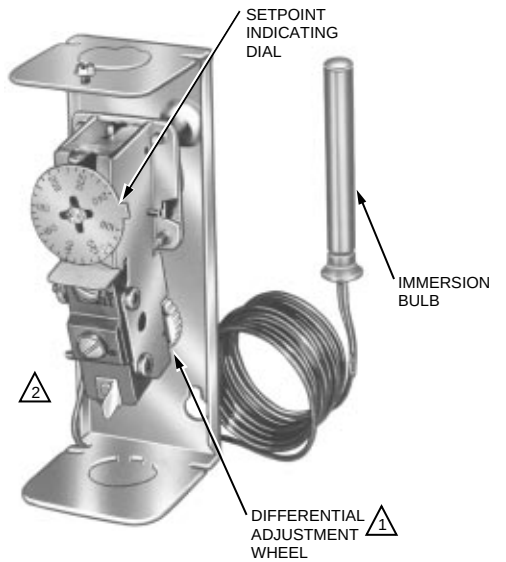
APPLICATION

The L6008A Remote Bulb Aquastat® Controller is an immersion type controller that operates in response to the temperature change in a hydronic heating system, or other heated liquid. It provides spdt switching for three-wire circuit applications, combining low limit and circulator controls.

Switch ratings are shown on the inside cover. The electrical requirements of controlled equipment must not exceed the switch rating.

A plastic bag of heat-conductive compound is included with the L6008A Aquastat® Controller for use when the sensing bulb is inserted into a well designed for a bulb larger than the one used on the L6008A. For information on the heat-conductive compound, see the Material Safety Data Sheet (MSDS), form 69-0955. A setpoint indicator is also included to prevent a setting above the desired temperature on the low limit. See Fig. 1.

If an immersion well or capillary compression fitting must be ordered, refer to form 68-0040, Wells and Fittings for Temperature Controllers, for part numbers and ordering information.



1 ONLY MODELS WITH ADJUSTABLE DIFFERENTIAL HAVE ADJUSTMENT WHEEL. STANDARD MODELS ARE FIXED AT APPROXIMATELY 5°F (3°C).

2 SELECT MODELS HAVE SCREW TERMINAL, NOT TAB TERMINAL.

M8814

Fig. 1. Internal view of L6008A Aquastat® Controller.

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings in the instructions and on the product to assure that the product is suitable for your application.
3. The installer must be a trained, experienced service technician.
4. After installation is complete, check out the product operation as explained in these instructions.

⚠ WARNING

CAN CAUSE PROPERTY DAMAGE, SEVERE INJURY OR DEATH.
This product is intended for use only in systems with a pressure relief valve.

⚠ CAUTION

Disconnect the power supply before installation to prevent electrical shock or equipment damage.

The remote temperature-sensing bulb can be installed either by using an immersion well or by directly immersing in the controlled liquid. For installations not using an immersion well, the bulb must be secured with either a bulb compression fitting (Fig. 3) or a capillary compression fitting (Fig. 4). The well (if present one is unsuitable for the L6008A bulb) or fitting must be ordered separately. These fittings are available in either l/2 inch NPT or 3/4 inch NPT spud. If the present well or fitting is not suitable, the boiler must be drained to a point below the boiler tapping or location where the bulb is to be installed.

IMPORTANT

Obtain the best response with a well that snugly fits the sensing bulb. Regardless of the well used, insert the bulb until it rests against the bottom of the well. Use a well of correct length and, if necessary, bend the tubing to hold the bulb against the bottom of well, but do not make a sharp bend in the tubing.

When the well does not snugly fit the bulb, use the heat-conductive compound as follows:

1. Fold the bag of compound lengthwise and twist it gently.
2. Snip the end off the bag and work the open end of the bag all the way into the well.
3. Slowly pull the bag out while squeezing firmly to distribute compound evenly in the well.
4. Insert the bulb all the way to the bottom of the well. If necessary, bend the tubing to hold the bulb against the bottom of the well and to hold the outer end of the bulb firmly in contact with the side of the well.
5. Wipe the excess compound off the outer end of the well.

To Mount the Case

1. Remove the cover and fasten the case to the wall or panel using the three mounting holes in the back of the case.
2. If necessary, reroute the tubing to run through any of the other three corner notches in the case. Be careful not to kink or sharply bend the tubing. Bends should have at least a 1 in. (25.4 mm) radius.

NOTE: Rupture of the sensing element causes loss of sensing fluid and inactivates the control.

Installing the Remote Bulb

Immersion Well Mounting

1. If the old well must be replaced, drain the boiler to a point below the well tapping and remove the old well. Screw the new well into the tapping, refill the system and check for leaks.
2. Insert the bulb into the well, pushing the tubing until it bottoms in the well. Add heat-conductive compound, if necessary.
3. Attach the retainer clamp to the end of the well spud. Loosen the draw nut and, if necessary, spread the clamp jaws with a screwdriver.
4. With the retainer clamp attached to the well spud, adjust the tubing to fit through the retainer clamp groove, as shown in Fig. 2 at point B. Be sure the clamp jaws hook over the ridge at the end of the well spud, as shown in Fig. 2.
5. Tighten the draw nut so that the retainer clamp is firmly attached to the well spud and the tubing is held securely in place.

CAUTION

Do not secure the draw nut so tightly that the retainer clamp could collapse tubing.

Mounting with Bulb Compression Fitting

1. Screw the fitting into the boiler or pipe tapping.
2. Slide the sealing washer onto the bulb.
3. Insert the bulb into the fitting until it bottoms.
4. Slide split the sleeve into the fitting.
5. Place clamps A and B onto the assembly so that the sleeve is drawn into the fitting when the screws are tightened.

NOTE: Make sure that the nub on clamp A engages the space between the sleeve and the clamp.

6. Tighten the clamp screws evenly.
7. Refill the system and check the installation for leaks.

Mounting with Capillary Compression Fitting

1. Screw the fitting into the boiler or pipe tapping.
2. Place the packing nut on the tubing.
3. Place the composition disc and the four slotted brass washers on the tubing as shown in Fig. 4. Turn the brass washers so that the slots are 180 degrees from each other.
4. Slide the seal assembly into the fitting and tighten the packing nut.
5. Refill the system and check the installation for leaks.

Wiring

Wiring must meet all applicable codes and ordinances for wire size, insulation type, and enclosures. Controllers are provided with conduit knockouts in the top and bottom of case.

Follow the boiler manufacturer's instructions for hookup, or refer to Fig. 5.

ADJUSTMENTS

Set the differential to correspond with the boiler manufacturer recommendations. To adjust models with an adjustable differential, rotate the wheel on the back of the snap switch until the desired reading is aligned with the V notch in the frame. The wheel provides an adjustment from 5°F to 30°F (3°C to 17°C). Replace the cover on the Aquastat® Controller.

Adjust the control point to correspond with the boiler manufacturer's recommendations. To adjust, insert a screwdriver in the slotted screw type head located beneath the window in the cover. Turn the scale to the desired control point.

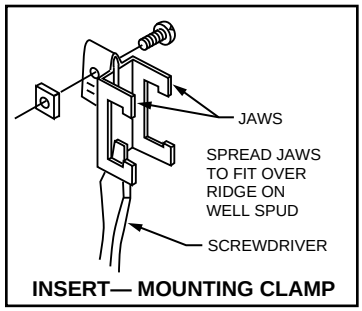
CHECKOUT

WARNING

CAN CAUSE PROPERTY DAMAGE, SEVERE INJURY OR DEATH.

This product is intended for use only in systems with a pressure relief valve.

Check to make certain that the Aquastat® Controller is properly installed and adjusted. Put the system into operation and observe the action of the device through several cycles to make certain that it provides proper low limit cutout protection and circulator control. Then make further adjustments to meet more precise comfort requirements.



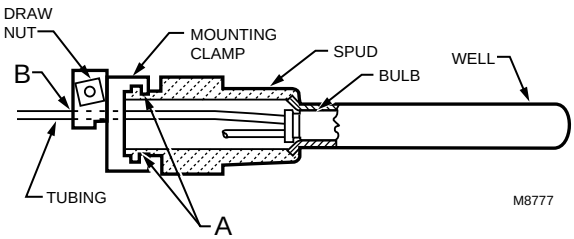


Fig. 2. Mounting L6008A Bulb in immersion well using retainer clamp.

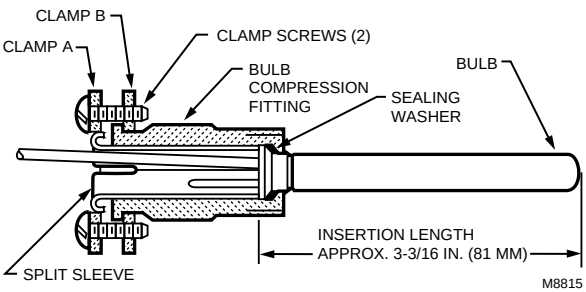


Fig. 3. Bulb compression fitting in in. (mm).

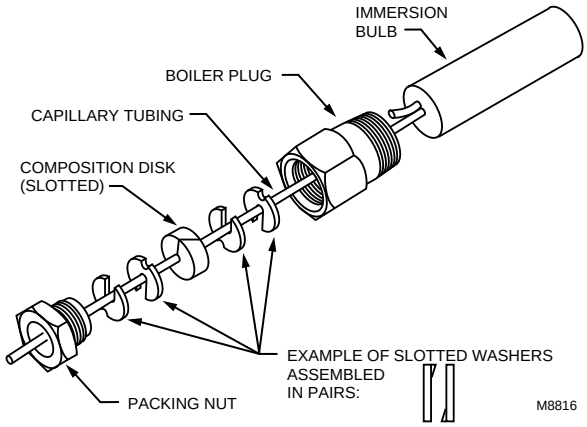


Fig. 4. Capillary compression fitting.

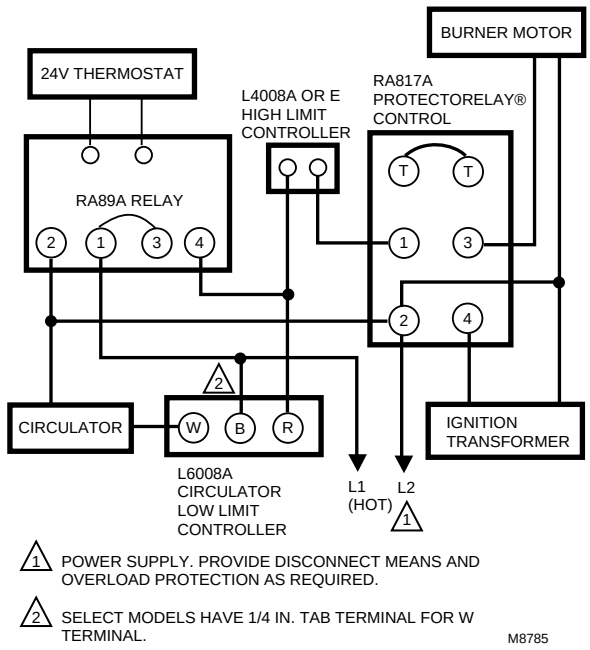


Fig. 5. Typical connection diagram for oil-fired hydronic heating system providing year-around domestic hot water.

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