



WHITE-RODGERS

11B05
HOT WATER CONTROL
Reverse Acting – Well-Immersion
Adjustable Differential
INSTALLATION INSTRUCTIONS

Operator: Save these instructions for future use!

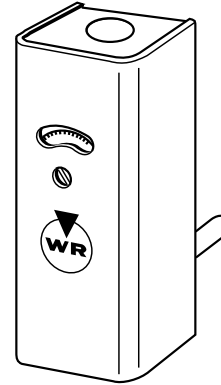
**FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY BEFORE
INSTALLING OR OPERATING THIS CONTROL COULD CAUSE PERSONAL
INJURY AND/OR PROPERTY DAMAGE.**

DESCRIPTION

These controls have close-on-rise switch action and are designed for use on hot water heating installations. They prevent operation of the circulator or unit heater fan if the boiler water is not hot enough for proper heating.

Models are available with either horizontal or vertical well. Some of these models also have excess capillary stored within the enclosure, permitting them to be used with wells having either a standard or extended shank.

Another model, ideal for replacement purposes, has a slotted case and excess capillary stored within the enclosure. This control can be used with either a standard or extended shank well, on either horizontal or vertical well installations.



PRECAUTIONS

THESE CONTROLS MUST BE INSTALLED BY A QUALIFIED INSTALLER.

Do not exceed the specification ratings.

All wiring must conform to local and national electrical codes and ordinances.

This control is a precision instrument, and should be handled carefully. Rough handling or distorting components could cause the control to malfunction.

This control has been accurately calibrated at the factory. Any attempt to calibrate this control will void the White-Rodgers warranty.

WARNING

Do not use on circuits exceeding specified voltages. Higher voltages will damage control and could cause shock or fire hazard.

CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.

Following installation or replacement, follow appliance manufacturer's recommended installation and/or service instructions to insure proper operation.

CAUTION

To prevent electrical shock and/or equipment damage, disconnect electric power to system, at main fuse or circuit breaker box, until installation is complete.

Shut off main gas to heating system until installation is complete.

CONVERTIBLE CONTROLS

Convertible controls have a Knockout Plate on back of case (secured by Hex Nut on Horizontal models, and by Knockout Plug on Vertical models). To convert from **Horizontal to Vertical**:

1. Remove control cover. Then remove bottom knockout.
2. Remove Hex Nut (inside control) from Well Mounting Stem. (To loosen, hold Hex Nut inside while turning Hex Nut on back of control counterclockwise.)

3. Pull Well Mounting Stem away from case and remove Knockout Plate.
4. Swing capillary down through slot into bottom knockout.
5. Secure Knockout Plate to back of case by using Knockout Plug provided in envelope.
6. Insert Well Mounting Stem into bottom knockout and tighten Hex Nut (inside control) securely.



WHITE-RODGERS DIVISION
EMERSON ELECTRIC CO.
9797 REAVIS RD., ST. LOUIS, MO. 63123
(314) 577-1300, FAX (314) 577-1517
9999 HWY. 48, MARKHAM, ONT. L3P 3J3
(905) 475-4653, FAX (905) 475-4625

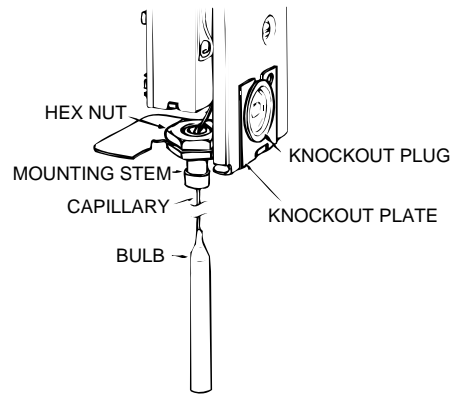
Printed in U.S.A.

PART NO. 37-2070B
Replaces 37-2070 & 37-9197
9546

CONVERTIBLE CONTROLS CONT.

NOTE

To convert from **Vertical** to **Horizontal** model, remove Knockout Plug and Plate. Remove Hex Nut (inside control) and swing capillary upward into back knockout. Place Knockout Plate beneath Hex Nut on back of control and tighten Hex Nut (inside control). If bottom knockout is not used for wiring, insert Knockout Plug.



Convertible Control converted to Vertical Model.

EXTENDING CAPILLARY

Some controls have excess stored capillary which may be extended for use with an **extended** shank well. Use reasonable care when straightening and forming the capillary.

With the capillary fully extended, the bulb should slide all the way to the end of the well.

INSTALLATION

If the manufacturer of the boiler recommends a control location, follow such recommendations.

If none are offered, locate the control at the top of the boiler near an outlet pipe or in the outlet pipe.

To remove the well from the control, loosen the set screw in the large nut, then slide the well off which exposes the bulb. Screw the well into the proper tapping. Slide the bulb

back into the well, making sure that the bulb enters the well as far as it will go and tighten the set screw.

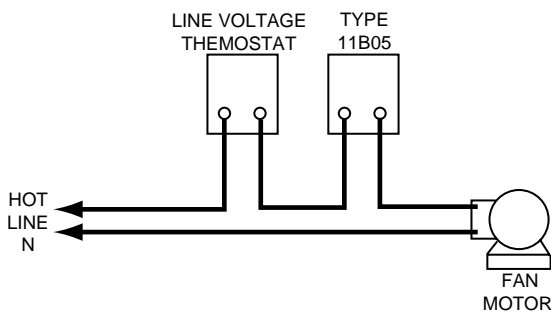
CAUTION

Do not dent or bend the bulb as this will prevent it from fitting into the well properly.

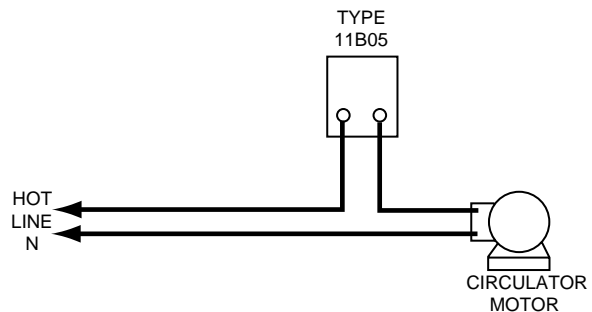
WIRING

All wiring should be done in accordance with local and national electrical codes and ordinances.

If the boiler manufacturer recommends a wiring diagram, then follow such recommendations. If none is offered, these diagrams show suggested circuits.



Used as Hot Water Control to prevent unit heater fan from operating until coils are warm.



Used as Hot Water Control to start and stop the circulator.

SETTING THE CONTROL

CONTROLS WITH ADJUSTABLE DIFFERENTIAL

The movable indicator points to the temperature at which the contacts close. The fixed indicator points to the temperature at which the contacts open. The difference between these two indicators is the differential.

To set the control:

1. Use a screwdriver in the adjusting slot (A) on the front of the control to turn the dial so that the fixed indicator (B) points to the temperature at which the contacts will open.

2. Turn the differential adjusting screw (C) until the movable indicator (D) points to the temperature at which the contacts will close.

