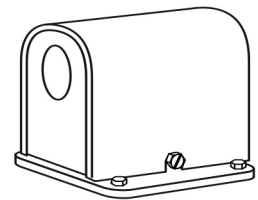




No. 2 Switch

Applications:

For series 47, 247, 63, 51, and 53 water feeders to add the low water cut-off function.



No. 2 Switch

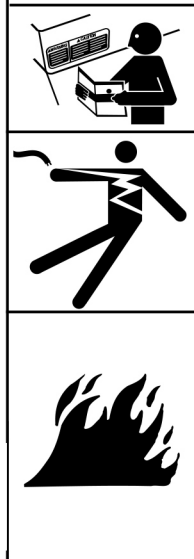
OPERATION

Electrical Ratings

Voltage	Motor Switch Rating (Amperes)		Pilot Duty
	Full Load	Locked Rotor	
120 VAC	10.2	61.2	125 VA at
240 VAC	5.1	30.6	120 or 240 VAC



WARNING

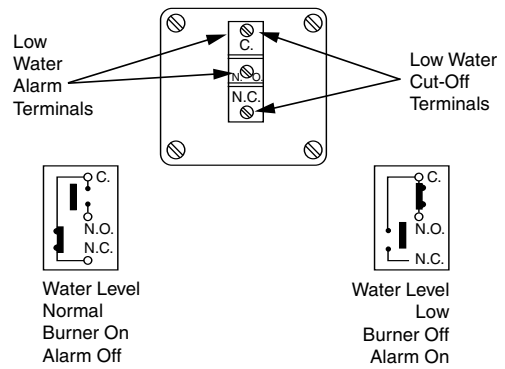


- Before using this product read and understand instructions.
- Save these instructions for future reference.
- All work must be performed by qualified personnel trained in the proper application, installation, and maintenance of plumbing, steam, and electrical equipment and/or systems in accordance with all applicable codes and ordinances.
- To prevent a fire, do not use this low water cut-off to switch currents over 10.2A, 1/2 Hp at 120 VAC or 5.1A, 1/2 Hp at 240 VAC, unless a starter or relay is used in conjunction with it.
- This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov.

Failure to follow this warning could cause property damage, personal injury or death.

The No. 2 Switch will help to maintain a minimum water level in the boiler during normal operation. The switch will shut off the burner in the event the boiler water level falls. Once the water level is restored to its normal level, the switch will allow the burner to operate.

SCHEMATIC OF SWITCH OPERATION



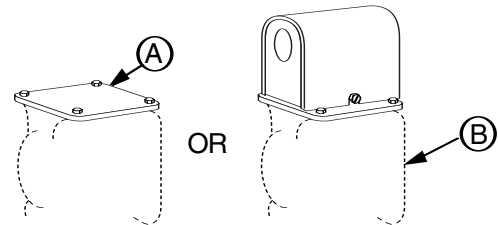
INSTALLATION –

TOOLS NEEDED:

One (1) flathead screwdriver and one (1) 5/16" socket wrench.

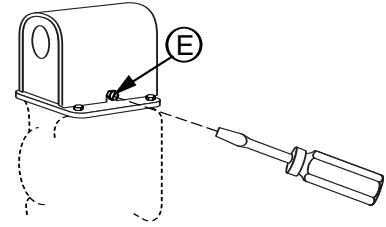
STEP 1 - Switch Installation

- a. Remove the four (4) screws that secure the cover plate (A) or the existing switch.
- b. Mount the new switch on top of the control (B) using the (4) screws.
The No. 2 switch can be positioned with the conduit opening facing toward or away from the float chamber. These are the only positions in which the switch will function properly. See drawing at right.

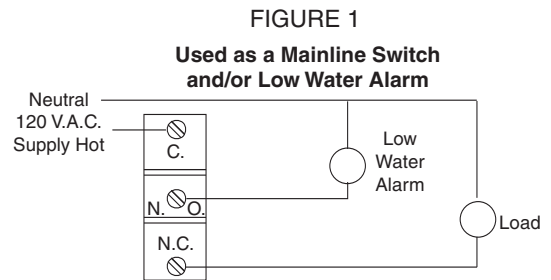


STEP 2 - Electrical Wiring

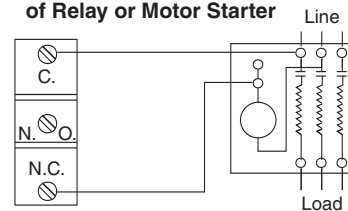
- a. Using the flathead screwdriver, remove the two (2) screws that secure the switch housing (E).



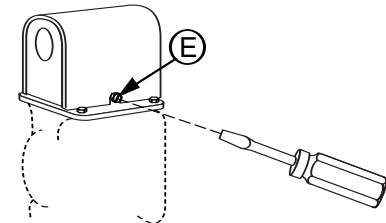
- b. Using copper wire only, follow the wiring diagrams in Figure 1 to wire the No. 2 Switch. Terminals C and NC are the low water cut-off switch. Terminals C and NO are the alarm switch. If the electrical load exceeds the rating of the switch, use an auxiliary relay or motor starter.



Used as a Pilot Switch to Coil
of Relay or Motor Starter



- c. Slide the switch housing (E) onto the switch and, using a flathead screwdriver, tighten the two (2) screws that secure the switch housing.



INSTALLATION COMPLETE

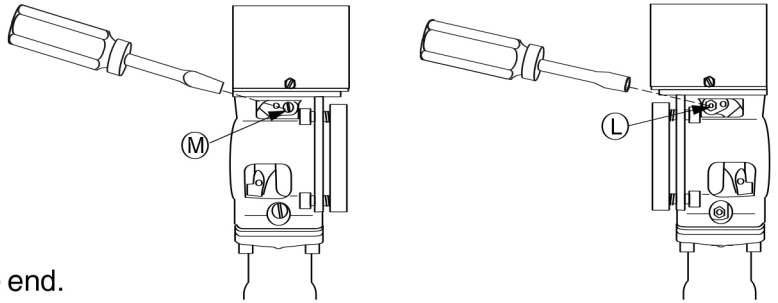
STEP 3 - Testing

- a. Check to see that the burner turns on and off, by raising and lowering the water level in the boiler.
- b. Make sure there is travel in the float arm after the burner goes on and off.
- c. Repeat test several times.

STEP 4 - Switch Adjustment

The control and switch have been factory adjusted and should not need any further adjustment in the field. Observe the devices being activated by the control and switch and, should adjustment be needed, follow the following steps.

- a. Using a flat head screwdriver and 5/16" nut driver, loosen adjusting screw (M) until cam is set in lowest position.
- b. Slowly, turn adjusting screw (M) raising the cam until the switch clicks, opening the common and normally closed contacts. Hold adjusting screw (M) in position and tighten nut (L) using 5/16" nut driver on the opposite end.



- c. Observe the devices being activated by the switch and control to determine if the switch is activating when desired.
If further adjustment is required, repeat Step c.

MAINTENANCE:

- **Replace the switch every 10 years or when the components do not operate properly.** More frequent replacement may be required when severe conditions exist.

COMMERCIAL WARRANTY

Warranty. For goods sold to commercial buyers, Seller warrants the goods sold to Buyer hereunder (with the exception of membranes, seals, gaskets, elastomer materials, coatings and other "wear parts" or consumables all of which are not warranted except as otherwise provided in the quotation or sales form) will be (i) be built in accordance with the specifications referred to in the quotation or sales form, if such specifications are expressly made a part of this Agreement, and (ii) free from defects in material and workmanship for a period of one (1) year from the date of installation or two (2) years from the date of manufacture, whichever shall occur first, unless a longer period is specified in the product documentation (the "Warranty").

Except as otherwise required by law, Seller shall, at its option and at no cost to Buyer, either repair or replace any product which fails to conform with the Warranty provided Buyer gives written notice to Seller of any defects in material or workmanship within ten (10) days of the date when any defects or non-conformance are first manifest. Under either repair or replacement option, Seller shall not be obligated to remove or pay for the removal of the defective product or install or pay for the installation of the replaced or repaired product and Buyer shall be responsible for all other costs, including, but not limited to, service costs, shipping fees and expenses. Seller shall have sole discretion as to the method or means of repair or replacement. Buyer's failure to comply with Seller's repair or replacement directions shall terminate Seller's obligations under this Warranty and render the Warranty void. Any parts repaired or replaced under the Warranty are warranted only for the balance of the warranty period on the parts that were repaired or replaced. Seller shall have no warranty obligations to Buyer with respect to any product or parts of a product that have been: (a) repaired by third parties other than Seller or without Seller's written approval; (b) subject to misuse, misapplication, neglect, alteration, accident, or physical damage; (c) used in a manner contrary to Seller's instructions for installation, operation and maintenance; (d) damaged from ordinary wear and tear, corrosion, or chemical attack; (e) damaged due to abnormal conditions, vibration, failure to properly prime, or operation without flow; (f) damaged due to a defective power supply or improper electrical protection; or (g) damaged resulting from the use of accessory equipment not sold or approved by Seller. In any case of products not manufactured by Seller, there is no warranty from Seller; however, Seller will extend to Buyer any warranty received from Seller's supplier of such products.

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Warranty. For goods sold for personal, family or household purposes, Seller warrants the goods purchased hereunder (with the exception of membranes, seals, gaskets, elastomer materials, coatings and other "wear parts" or consumables all of which are not warranted except as otherwise provided in the quotation or sales form) will be free from defects in material and workmanship for a period of one (1) year from the date of installation or two (2) years from the product date code, whichever shall occur first, unless a longer period is provided by law or is specified in the product documentation (the "Warranty").

Except as otherwise required by law, Seller shall, at its option and at no cost to Buyer, either repair or replace any product which fails to conform with the Warranty provided Buyer gives written notice to Seller of any defects in material or workmanship within ten (10) days of the date when any defects or non-conformance are first manifest. Under either repair or replacement option, Seller shall not be obligated to remove or pay for the removal of the defective product or install or pay for the installation of the replaced or repaired product and Buyer shall be responsible for all other costs, including, but not limited to, service costs, shipping fees and expenses. Seller shall have sole discretion as to the method or means of repair or replacement. Buyer's failure to comply with Seller's repair or replacement directions shall terminate Seller's obligations under this Warranty and render the Warranty void. Any parts repaired or replaced under the Warranty are warranted only for the balance of the warranty period on the parts that were repaired or replaced. The Warranty is conditioned on Buyer giving written notice to Seller of any defects in material or workmanship of warranted goods within ten (10) days of the date when any defects are first manifest.

Seller shall have no warranty obligations to Buyer with respect to any product or parts of a product that have been: (a) repaired by third parties other than Seller or without Seller's written approval; (b) subject to misuse, misapplication, neglect, alteration, accident, or physical damage; (c) used in a manner contrary to Seller's instructions for installation, operation and maintenance; (d) damaged from ordinary wear and tear, corrosion, or chemical attack; (e) damaged due to abnormal conditions, vibration, failure to properly prime, or operation without flow; (f) damaged due to a defective power supply or improper electrical protection; or (g) damaged resulting from the use of accessory equipment not sold or approved by Seller. In any case of products not manufactured by Seller, there is no warranty from Seller; however, Seller will extend to Buyer any warranty received from Seller's supplier of such products.

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Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

To make a warranty claim, check first with the dealer from whom you purchased the product or call +1-847-966-3700 for the name and location of the nearest dealer providing warranty service.

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