

ELECTRO-BOILER

TS Series

Installation Instructions

EB-WO-KIT

APPLICATION:

This Electro-Boiler kit is designed for the conversion of the EB-MA-** and EB-WA-** boilers to outdoor temperature sensing (EB-(W, M)O-*). Included are the outdoor sensor, replacement microchip for the TS Series boiler board, and replacement temperature set point decal.

WARNING

ENSURE ALL POWER IS TURNED OFF AT THE BOILER BEFORE INSTALLING THIS KIT. FAILURE TO DO SO MAY CAUSE SEVERE INJURY OR DEATH.



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Installation Instructions:

Step 1

Turn off all boiler circuit breakers; this will disconnect power to the boiler circuit board.

Step 2

When replacing the boiler control microchip, note the orientation of the U-shaped indent on one end of the chip (see Figure 2). The new chip must have the indent in the exact same position when installed onto the circuit board.

CAUTION

THE MICROCHIPS ARE STATIC SENSITIVE. EVERY EFFORT SHOULD BE MADE BY THE TECHNICIAN TO USE A PROPERLY CONNECTED GROUND STRAP WHEN HANDLING THE MICROCHIPS.

Removing existing chip (see Figure 2): With a small flat blade screwdriver gently pry up on one end of the chip. As the chip lifts out of its carrier, carefully work the screwdriver underneath until it completely lifts out.

Installing the new chip: With the indent properly orientated, carefully align the pins and insert the chip into the carrier. When it appears all the pins are properly inserted, use medium thumb pressure to push on the chip and assure all pins are fully seated.

Note: If the space between the rows of pins on the chip is wider than the space on the chip carrier, it may be necessary to carefully bend the rows of pins inward. This is best accomplished by holding the chip on edge so all the pins in one row are against a flat surface. Carefully roll the body of the chip slightly toward the surface. This will bend the entire row of pins inward, and prevent individual misaligned pins.

Step 3

Affix the new temperature setting decal E-(W, M)O over the existing EB-(W, M)A decal.

Installing the outdoor sensor (OT):

Note: Outdoor Sensor (OT) is identified by the longer cable and the metal mounting bracket (see Figure 1).



Figure 1

Step 4

Determine best location for the OT sensor using the following ground rules.

- a. Locate on the outside of the house to sample outside temperature least affected by sun.
- b. Locate sensor away from other objects that produce a heat or cool effect such as heat pump Freon line sets, drier vents, direct sunlight, steel siding, or other miscellaneous objects that affect the air temperature.
- c. Do not install sensor in an enclosure which may have a “heat build up” or insulation effect.
- d. Must be mounted on exterior of building with probe tip pointing up.

Step 5

The factory supplied OT cable is approximately 25'. Determine necessary length of cable to route to the predetermined outside location. If the sensor wire cable is too short, you must use the following rules for extending the cable.

- a. Use unshielded (low capacitance, prefer twisted) 3 or 4-wire low voltage cable, 50-foot maximum.
- b. Do not, under any circumstances, use leftover wires within the thermostat cable going to the outdoor unit.

Step 6

Mount OT sensor with sensor tip up (cable downward).

- a. Drill ¼” hole near the outside sensor location.
- b. Route wire from outside making sure not to crimp, cut, staple, or damage cable in any way.

Step 7

Keep the sensor cables at least 12” away from any line voltage wiring, Romex, etc. Do not, under any circumstances, use part of existing thermostat cable, leftover wires, for the sensor cable.

Note: Do not reconnect OT sensor wires to the 4-screw terminal block until sensor is properly installed (see Figure 2).

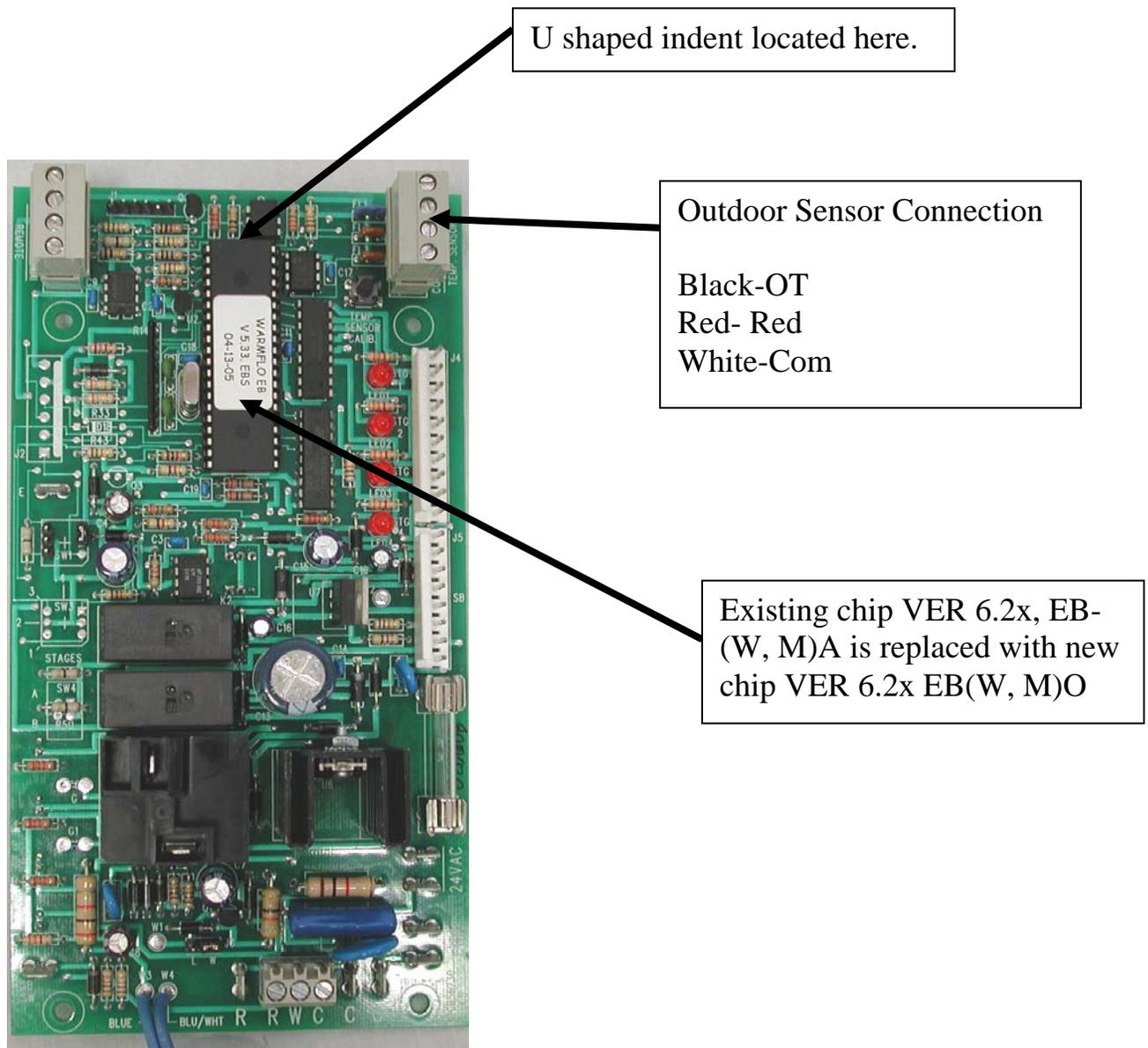


Figure 2

Electro Industries, Inc.

Limited Product Warranty

Effective February 5, 2009

Electro Industries, Inc. warrants to the original owner, at the original installation site, for a period of two (2) years from date of installation, that the product and product parts manufactured by Electro Industries are free from manufacturing defects in materials and workmanship, when used under normal conditions and when such product has not been modified or changed in any manner after leaving the plant of Electro Industries. If any product or product parts manufactured by Electro Industries are found to have manufacturing defects in materials or workmanship, such will be repaired or replaced by Electro Industries. Electro Industries shall have the opportunity to directly, or through its authorized representative, examine and inspect the alleged defective product or product parts. Electro Industries may request that the materials be returned to Electro Industries at the owner's expense for factory inspection. The determination as to whether product or product parts shall be repaired, or in the alternative replaced, shall be made by Electro Industries or its authorized representative. Electro Industries will cover reasonable labor costs to repair defective product or product parts for ninety (90) days after installation.

TWENTY YEAR (20) LIMITED WARRANTY ON BOILER ELEMENTS AND VESSELS

Electro Industries, Inc. warrants that the boiler elements and vessels of its products are free from defects in materials and workmanship through the twentieth year following date of installation. If any boiler elements or vessels are found to have a manufacturing defect in materials or workmanship, Electro Industries will replace them.

TWENTY YEAR (20) LIMITED WARRANTY ON SPIN FIN ELEMENTS

Electro Industries, Inc. warrants that the spin fin elements of its products are free from defects in materials and workmanship through the twentieth year following date of installation. If any spin fin elements are found to have a manufacturing defect in materials or workmanship, Electro Industries will replace them.

FIVE YEAR (5) LIMITED WARRANTY ON OPEN WIRE ELEMENTS

Electro Industries, Inc. warrants that the open wire elements of its products are free from defects in materials and workmanship through the fifth year following date of installation. If any open wire elements are found to have a manufacturing defect in materials or workmanship, Electro Industries will replace them.



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THESE WARRANTIES DO NOT COVER:

1. Costs for labor for removal and reinstallation of an alleged defective product or product parts, transportation to Electro Industries, and any other materials necessary to perform the exchange, except as stated in this warranty. Replacement material will be invoiced to the distributor in the usual manner and will be subject to adjustment upon verification of defect.
2. Any product that has been damaged as a result of being improperly serviced or operated, including, but not limited to, the following: operated with insufficient water or airflow, allowed to freeze, subjected to flood conditions, subjected to improper voltages or power supplies, operated with airflow or water conditions and/or fuels or additives which cause unusual deposits or corrosion in or on the product, chemical or galvanic erosion, improper maintenance or subject to any other abuse or negligence.
3. Any product that has been damaged as a result of natural disasters, including, but not limited to, the following: lightning, fire, earthquake, hurricanes, tornadoes or floods.
4. Any product that has been damaged as a result of shipment or handling by the freight carrier. It is the receiver's responsibility to claim and process freight damage with the carrier.
5. Any product that has been defaced, abused, or suffered unusual wear and tear as determined by Electro Industries or its authorized representative.
6. Workmanship of any installer of the product. This warranty does not assume any liability of any nature for unsatisfactory performance caused by improper installation.
7. Transportation charges for any replacement part or component, service calls, normal maintenance; replacement of fuses, filters, refrigerant, etc.

CONDITIONS AND LIMITATIONS:

1. If at the time of a request for service the original owner cannot provide an original sales receipt or a warranty card registration then the warranty period for the product will have deemed to begin thirty (30) days after the date of manufacture and **NOT** the date of installation.
2. The product must have been sold and installed by a licensed electrical contractor, a licensed plumbing contractor, or a licensed heating contractor.
3. The application and installation of the product must be in compliance with Electro Industries' specifications as stated in the installation and instruction manual, and all state and federal codes and statutes. If not, the warranty will be null and void.
4. The purchaser shall have maintained the product in accordance with the manual that accompanies the unit. Annually, a qualified and licensed contractor must inspect the product to assure it is in proper working condition.
5. All related heating components must be maintained in good operating condition.
6. All lines must be checked to confirm that all condensation drains properly from the unit.
7. Replacement of a product or product part under this limited warranty does not extend the warranty term or period.
8. Replacement product parts are warranted to be free from defects in material and workmanship for ninety (90) days from the date of installation. All exclusions, conditions, and limitations expressed in this warranty apply.
9. Before warranty claims will be honored, Electro Industries shall have the opportunity to directly, or through its authorized representative, examine and inspect the alleged defective product or product parts. Remedies under this warranty are limited to repairing or replacing alleged defective product or product parts. The decision whether to repair or, in the alternative replace, products or product parts shall be made by Electro Industries or its authorized representative.

THESE WARRANTIES DO NOT EXTEND TO ANYONE EXCEPT THE ORIGINAL PURCHASER AT RETAIL AND ONLY WHEN THE PRODUCT IS IN THE ORIGINAL INSTALLATION SITE. THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE.

ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED WITH RESPECT TO ALL PURCHASERS OR OWNERS. ELECTRO INDUSTRIES, INC. IS NOT BOUND BY PROMISES MADE BY OTHERS BEYOND THE TERMS OF THESE WARRANTIES. FAILURE TO RETURN THE WARRANTY CARD SHALL HAVE NO EFFECT ON THE DISCLAIMER OF THESE IMPLIED WARRANTIES.

ALL EXPRESS WARRANTIES SHALL BE LIMITED TO THE DURATION OF THIS EXPRESS LIMITED WARRANTIES SET FORTH HEREIN AND EXCLUDE ANY LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES RESULTING FROM THE BREACH THEREOF. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY. PRODUCTS OR PARTS OF OTHER MANUFACTURERS ATTACHED ARE SPECIFICALLY EXCLUDED FROM THE WARRANTY.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY UNDER THE LAWS OF EACH STATE. IF ANY PROVISION OF THIS WARRANTY IS PROHIBITED OR INVALID UNDER APPLICABLE STATE LAW, THAT PROVISION SHALL BE INEFFECTIVE TO THE EXTENT OF THE PROHIBITION OR INVALIDITY WITHOUT INVALIDATING THE REMAINDER OF THE AFFECTED PROVISION OR THE OTHER PROVISIONS OF THIS WARRANTY.