

# ELECTRO INDUSTRIES - FIELD SERVICE BULLETIN

Bulletin Number 1090 Date July 7, 2005

Product Name WarmFlo Furnace Interface Module

Affected Product Model Numbers: WF-LGR2 and WF-LGR3

Manufactured Dates: General Concern – WF-LGR2 4-98 to 6-01  
WF-LGR3 7-01 to 7-6-05

Specific Concern – when combined with WarmFlo chip version 2.24, dated 07-07-04 and above

## FIELD INFORMATION

### **Possible Failure – Air Conditioning and Electro-Mate Heating, Same Time**

An outdoor temperature (OT) failure during cooling operation can enable the Electro-Mate with electric elements on.

### **Background**

The application for this WarmFlo interface module is heat pump type room thermostat. With the heat pump room thermostat the “Y” function is neither heating or cooling and a basic turn-on function. Within this room thermostat, the heating or cooling is determined by the reversing valve (O) function. During the initial WF-LGR2, followed up by the WF-LGR3, product design it was determined that tying into the heat pump reversing valve wire or signal was overly complex for the installer, plus heat pump manufacturers have different logic interpretation for the reversing valve signal. It was determined to use 50° outdoor temperature as the method of disabling the Electro-Mate heating.. Thus keeping the Electro-Mate off resides in the outdoor sensor’s correct reporting of 50° and above during cooling. For several years option procedure HD326 was available showing how to add a relay detecting the reversing valve wired to disable Electro-Mate during cooling for applications where the 50° reference point was not ideal.

### **Suggested Increased Reliability Modification**

The room thermostat (or outdoor unit) reversing valve wire (O or B) should be used to disable (prevent from coming on during cooling) the Electro-Mate/WarmFlo heating function. This can be accomplished by the field addition of a relay where the relay coil senses the reversing valve wire and either the normally open or normally closed contact (depending upon heat pump manufacturer’s reversing valve logic) is used to interrupt the yellow wire between this Interface Module and the WarmFlo controller board. The WarmFlo controller board turn-on function is the “Y” tab or screw.

The diagram on page 2 shows the insertion of this relay disabling WarmFlo during cooling. The drawing is shown for reversing valve high (24 volts) during cooling, if your heat pump unit is high during heating, see Note 1.

## Latest WarmFlo Program Versions, Amplified This Possible Failure Concern

There were continued requests to program more freeze protect sequences within the WarmFlo board, thus beginning with version 2.24, dated 07-07-04, a 90-minute timeout function switches the system to gas furnace. This turned out to be a good feature for winter but in the case of the possible OT failure there is a possibility of 90-minute timeout and also causing gas furnace.

For this combination of WF-LGR3 and version 2.24 and higher Electro Industries is sending out a letter requesting the addition of this safety relay.

Approval W. Siefert Date 7-18-05

