

MODEL 662

Pump Up Control

- Automatic reset
- Two adjustable trip points
- 5-YEAR UNCONDITIONAL WARRANTY

DESCRIPTION

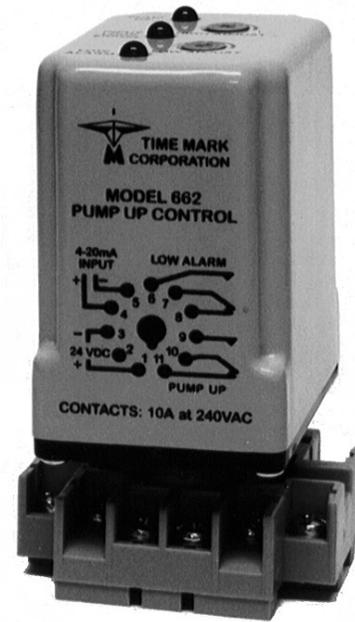
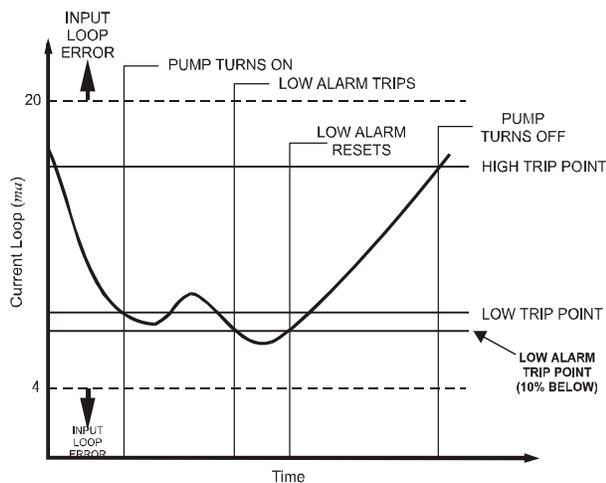
The **Model 662 Pump Up Control**, part of the **600 series** line of instrumentation controls, is designed to monitor and maintain liquid levels. A user-provided 4-20mA current loop represents the liquid level, and output connections are provided for pump control.

The HIGH ADJUST setpoint, and the LOW ADJUST setpoint, are field adjustable. If the input falls below the low setpoint, the PUMP UP relay energizes, and remains that way until the input rises above the high setpoint. The high setpoint must always be set above the low setpoint.

Top-mounted LEDs on the Model 662 show system status. The PUMP UP LED turns ON when the input falls to 10% below the low setpoint, and resets when the input rises above this level. An INPUT LOOP ERROR LED turns ON if the input is outside the 4-20mA range.

A Time Mark Model 650 Loop Power Supply (or equivalent) is required to provide the 24VDC operating voltage. A Time Mark Model 672-15 Pressure Transducer (or equivalent) is required to provide the input signal.

OPERATION DIAGRAM

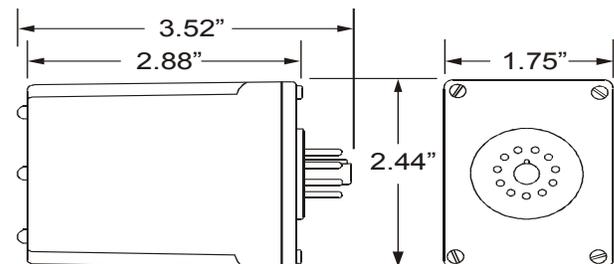


SPECIFICATIONS

Model	662
Operating voltage	24VDC \pm 5%
Supply current	30mA maximum
Input signal	4-20mA
Input resistance	50W
Input loop error	High: 23-25mA Low: 2-3mA
Adjustments	4-20mA
Low alarm trip point	10% below low trip point
Contact	Resistive: 10 amps at 240VAC
Operating temperature	-13° to +122° F
Expected relay life	Mechanical: 10 million operations Electrical: 100,000 at rated load
Humidity tolerance	0-97% w/o condensation
Enclosure material	ABS plastic
Weight	6 oz.
Mounting	11-pin socket (*order separately)

* Order 11-pin socket number **51X016**

DIMENSIONS



(dimensions have tolerance of ± 0.06)

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01/2012
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MODEL 662 Pump Up Control

READ ALL INSTRUCTIONS BEFORE INSTALLING, OPERATING OR SERVICING THIS DEVICE.
KEEP THIS DATA SHEET FOR FUTURE REFERENCE.

GENERAL SAFETY

THE MODEL 662 PUMP UP CONTROL IS NOT TO BE USED WITH INPUT VOLTAGES OTHER THAN 24VDC.
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

Installation Instructions

INSTALLATION

Connect 24VDC power to pins 1 and 3 on the 11-pin socket.

Connect the 4-20mA input signal to pins 4 and 5, and the other pins to the appropriate units in your loop system, following the base diagram shown on the Model 662 unit (and on this data sheet). When using separate supplies for 4-20mA and 24VDC you must connect pins 3 and 5 together. **Pay careful attention to polarity.**

NOTE: When installing the Model 662 in areas of high humidity or contamination, it is recommended that the base area and all exposed metal parts of the socket be coated liberally with a good quality silicone grease, such as Dow Corning DC-4 or DC-4X. Insert the unit into the socket and wipe off excess grease around the base. This will prevent the entrance of moisture and other contaminants into the base and socket areas.

ADJUSTMENT PROCEDURE

The Model 662 Pump Up Control relays are normally de-energized. If the input falls below the LOW TRIP POINT, the pump relay energizes, and the PUMP UP LED is lit.

If the input falls below the LOW ALARM trip point (*10% below the LOW TRIP POINT*), the low alarm relay energizes and the LOW ALARM LED is lit.

If the input returns to a level above the LOW ALARM trip point, the low alarm relay de-energizes, but the pump relay remains energized until the input rises above the HIGH TRIP POINT (see *Operation Diagram*). The PUMP UP and LOW ALARM LEDs may be used to indicate the tripped condition in the following adjustments.

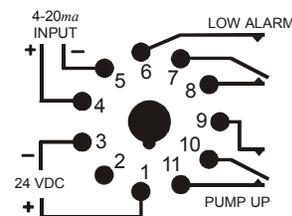
Before Adjustment: For each application, you must select the setpoints for the LOW TRIP (*the level at which you want the pump to start pumping*) and the HIGH TRIP (*the level above which you do not want the pump to operate*). These two setpoints, in mA, are used to adjust the Model 662. The LOW ALARM trip is an internal function of the device which is set approximately 10% below the LOW TRIP.

To Begin: Turn both the LOW ADJUST and the HIGH ADJUST fully counter-clockwise, to their lowest settings. Both PUMP UP and LOW ALARM LEDs should be out.

To adjust the LOW TRIP: With the Model 680 4-20mA Simulator (or other adjustable, known signal source), apply the current level.

for the LOW TRIP. Turn the HIGH ADJUST pot fully clockwise. Then, slowly turn the LOW ADJUST pot clockwise, until the PUMP UP LED illuminates

PIN DRAWING



To Adjust the HIGH TRIP: With the Model 680 4-20mA Simulator (or other adjustable, known signal source), apply the current level for the HIGH TRIP. Turn the HIGH ADJUST pot slowly, counter-clockwise until the PUMP UP LED goes out.

Check Setpoints: With the Model 680 4-20mA Simulator (or other adjustable, known signal source), check the high and low trip points and the LOW ALARM setpoint by applying current levels above and below the chosen setpoints, noting the current values shown when the LEDs come on.

Input Loop Error: Check the INPUT LOOP ERROR function by applying current levels above and below the 4-20mA range. The INPUT LOOP ERROR LED should illuminate when current is above 20mA or below 4mA.

TROUBLESHOOTING

Should the Model 662 Pump Up Control fail to operate, check all connections. Verify that the proper input source voltage is present, and check all fuses. Should problems persist, contact the factory at 800-862-2875 for assistance.

WARRANTY

This product is warranted to be free from defects in materials and workmanship, and is covered by our exclusive **5-year Unconditional Warranty**. Should this device fail to operate for any reason, we will repair it for five years from the date of manufacture. For complete warranty details, see the Terms and Conditions of Sales page in the front section of the Time Mark catalog or contact Time Mark at 1-800-862-2875.

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