

MODEL 661

Alarm Control

- 2 Adjustable Trip Points
- Fail-safe Operation
- Automatic Reset
- 5-Year Unconditional Warranty



DESCRIPTION

The Model 661 Alarm Control, part of the 600 series line of instrumentation controls, is designed to monitor and maintain measurable applications such as liquid levels, temperature, pressure, flow, etc. A user-provided 4-20mA current loop represents the measurable application, and output connections are provided for signal alarms.

Two setpoints, the HIGH ADJUST, and the LOW ADJUST, are field adjustable. If the input is between the two setpoints, the relays are energized. If the input is above the high setpoint, the HIGH ALARM relay de-energizes to provide a tripped condition. This tripped condition will automatically reset when the input falls back below the setpoint. If the input falls below the low setpoint the LOW ALARM relay de-energizes. The tripped condition resets when the input rises back above the setpoint.

The Model 661 is equipped with top-mounted LEDs for trip status indication. A HIGH ALARM or LOW ALARM LED turns OFF in a tripped condition. The INPUT LOOP ERROR LED turns ON if the input is outside the 4-20mA range.

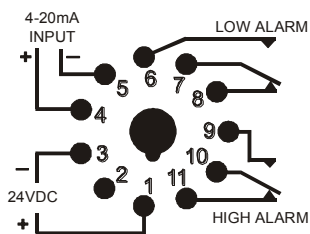
A Time Mark Model 650 Loop Power Supply (or equivalent) is required to provide DC operating voltage. A Time Mark Model 672-15 Pressure Transducer (or equivalent) is required to provide the input signal.

SPECIFICATIONS

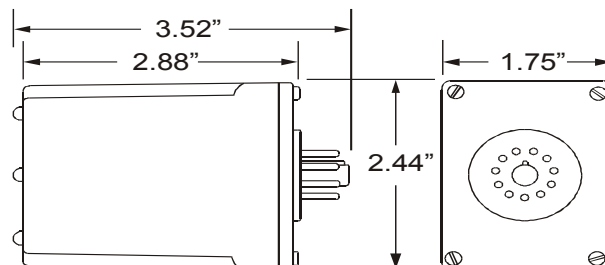
Model	661
Operating Voltage	24VDC $\pm 5\%$
Supply Current	30mA maximum
Input Signal	4-20mA
Input Resistance	50 ohms
Input Loop Error	High: 23-25mA Low: 2-3mA
Trip Adjustment	High: 4-20mA Low: 4-20mA
Hysteresis	2.5% at midrange
Contact	10 amps at 240VAC resistive
Operating Temperature	-13° to +122° F
Expected Relay Life	Mech: 10 million operations Elec: 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

PIN DIAGRAM



DIMENSIONS



(dimensions have tolerance of ± 0.06)



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MODEL 661 Alarm Control

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

GENERAL SAFETY

THE MODEL 661 ALARM 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 AND WIRING SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

Installation Instructions

INSTALLATION

Connect 24 VDC 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 661 device (and on this data sheet). **Pay careful attention to polarity.**

NOTE: When installing the Model 661 Control 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 silicon 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 pre-vent the entrance of moisture and other contaminants into the base and socket areas.

ADJUSTMENT

The Model 661 Alarm Control relays are normally energized when the input is between the trip points. If the input rises above the HIGH trip point, or falls below the LOW trip point, the high or low alarm relay de-energizes. Either way, the relay returns to the energized state when the input signal is again between the two setpoints (see the Operation Diagram). The HIGH ALARM 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 HIGH ALARM and LOW ALARM setpoints. These two setpoints, in milliamps, are used to adjust the Model 661.

To Begin: Turn the LOW ADJUST fully counter-clockwise, to it's lowest setting, then turn the HIGH ADJUST fully clockwise to it's highest setting. Both ALARM LEDs should be lit.

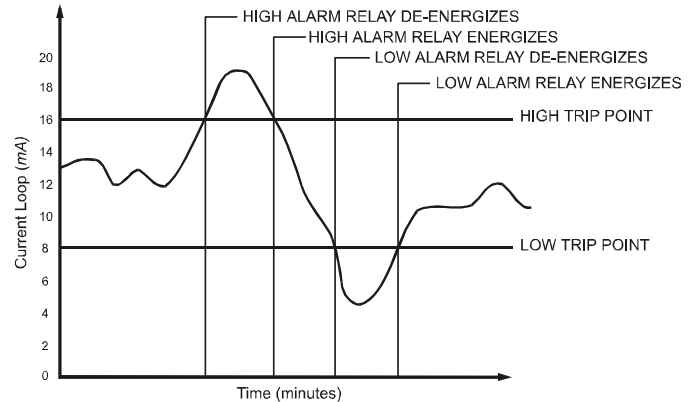
To adjust the HIGH ALARM: With the **Model 680 4-20mA Simulator** (or other adjustable, known signal source), apply the current level for the HIGH ALARM. Turn the HIGH ADJUST pot slowly, counter-clockwise until the HIGH ALARM LED goes out.

To Adjust the Low Alarm: With the Model 680 4-20mA Simulator (or other adjustable, known signal source), apply the current level for the LOW ALARM. Turn the LOW ADJUST pot slowly, clockwise until the LOW ALARM LED goes out.

Check Setpoints: With the Model 680 4-20mA Simulator (or other adjustable, known signal source), check the high and low alarm setpoints 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.

OPERATION DIAGRAM



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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