

**BILBEE**

CONTROLS, INC.

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## The Model B-200<sup>®</sup> Conduction Type Thermostat

### Minimum overshoot, small cycling differential and faster response

The three most important requirements for control characteristics are:

1. Little or no overshoot of the temperature setting on the initial warm-up cycle or on recovery
2. A cycling differential sufficiently close for the application; and
3. Fast response to the sudden heat loads and full recovery to the temperature setting.

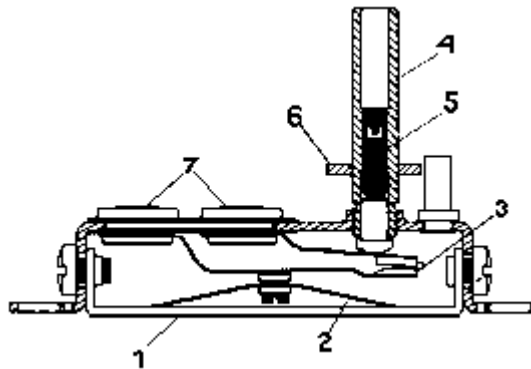
### Calibration

Offered pre-calibrated to pre-determined specifications.

The calibration stability is, however, very high since there is no element in these units which will shrink, grow or take a permanent set under normal operating conditions.

And because the uniformity of the calibration curve depends primarily on the mechanical tolerances, it can be controlled within close limits.

B-200 IS A REGISTERED TRADEMARK OF  
BILBEE CONTROLS INC



1. BASE PLATE - HEAT SENSITIVE ELEMENT WITH HIGH COEFFICIENT OF EXPANSION
2. THERMAL SPRING OF LOW-EXPANSION ALLOY, WELDED AT ENDS TO BASE PLATE.
3. FINE SILVER CONTACTS, WELDED TO STAINLESS STEEL SPRINGS.
4. ADJUSTING SHAFT
5. CALIBRATING SCREW (FACTORY USE ONLY)
6. STOP WASHER
7. #6 - 32 TAPPED RIVET TERMINALS

### Construction

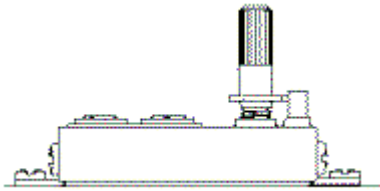
The Model B-200 uses no bonded bi-metal strip. The contacts are opened and closed by expansion and contraction of the base and the resulting vertical movement of the specially formed, low expansion thermal spring.

The base plate in full conduction contact with the heated surface results in minimum overshoot, smaller cycling differential and faster response to heat loading.

The forceful push-pull of the thermal spring against the strong contact spring tension gives clean make and break resulting in no flutter, less contact wear, longer life. The case is constructed of heavy gauge steel and gives complete protection against damage to the contact springs in shipment and installation. It also guards against contamination of contacts during operation.

The useful range for which the B-200 can be supplied is from room temperature 75° F to 600° F. On units specified as having an "off" position at extreme counter-clockwise rotation, the contacts will remain open in this position at a temperature down to 50° F or lower depending upon the thread pitch, total rotation and maximum setting.

All of our thermostats are U. L. recognized under file number E79570(M). The rating is A. C. maximum volts 230V; maximum watts 1500W. The circuits are single pole, single throw; the contacts open with a rise in temperature. The thermostats are all marked with a drawing number and date code.



## Mounting

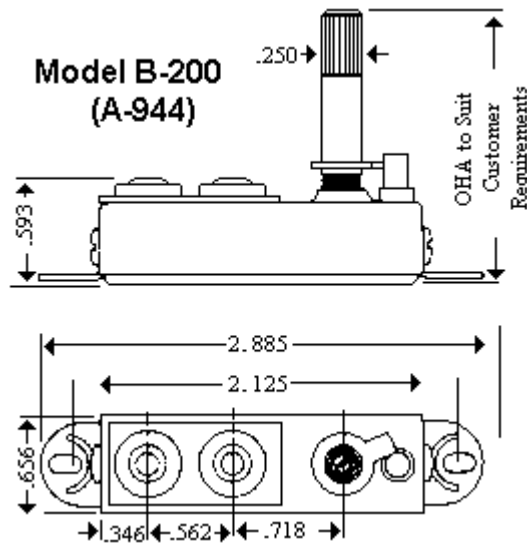
The heat sensitive base plate of the thermostat must be mounted in full area contact with the heated surface. The surface should be flat and smooth, and screws should be used for mounting. If clamps or brackets are used, they should be carefully designed to assure positive contact and positioning. To bring the control shaft out horizontally, in such applications as waffle irons and sandwich grills, the thermostat may be mounted on an "L" bracket of aluminum with little loss of sensitivity.

## Customer Service and Custom Design

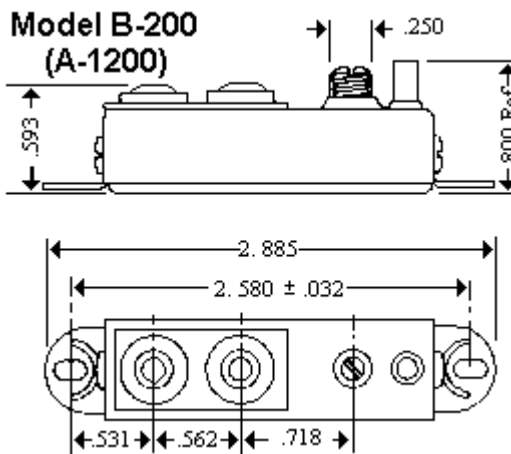
Our extensive laboratory facilities and engineering expertise are always available to our customers. We welcome the opportunity to work with design and development engineers on specific application problems and emphasize the customer benefits of beginning such work in the early design stages. This service helps assure the best product for your specific applications.

## B-200® Stock Items

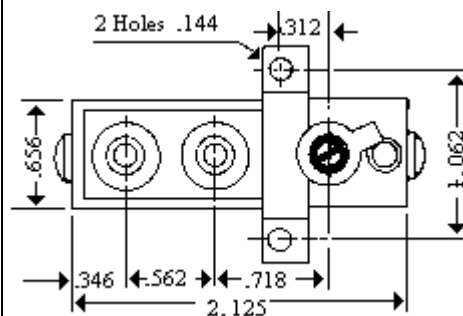
The Model B-200® is available for immediate shipment from stock in two versatile designs.



Range: Adjustable from room Temp off - 525°F  
 Rotation: 310 Angular Degree  
 Overall Height: 1.500 inches  
 Terminal Connection: #6-32 screw  
 Shaft Detail: 24 tooth broach .250" dia.



Range Factory set from 70° F up to 600° F and sealed.



Option: Saddle Bracket available separately.

## Features and Benefits

- All of our adjustable Controls include fine adjustment trim screws inside the control shaft
- Fine silver contacts are spot welded in position on the current carrying springs for excellent electrical and heat flow
- Shaft configuration is designed to suit knob attaching requirements
- All of our thermostats are recognized by Underwriters Laboratories for a maximum of 1500 watts at 120 volts A. C. under file number E79570(M), and CSA recognized under file number LR50152
- Standard calibration tolerance is ±5% of the calibration temperature.

## Typical Applications

- Flatirons
- Ironers
- Deep Fryers
- Roasters
- Fudge Cups
- Solder Pots
- Vulcanizers
- Sealing Machines
- Sealing Irons
- Ovens
- Hot Plates
- Transfer Presses
- Laminators
- And other household, industrial and laboratory applications

## Add It All Up

Flexibility of design, customer service and laboratories, innovative quality control, years of experience and Bilbee comes out as a front runner for your next product application. Give us a call. We would welcome the chance to prove it to you.