Model BH2
Heavy Duty Bimetallic Thermometers
Models BH222, BH226, BH229, BH242, BH246, BH249, BH262, BH266

- 63mm, 100mm and 160mm case options
- Stainless steel construction - case and stem
- External zero adjustment
- No contaminants - safe for food and chemical applications
- Can be supplied with a wide range of Rototherm thermowells
- Can be fitted with electrical contact heads (100mm & 160mm sizes only)
- Available with maximum or minimum value and index pointers

Introduction
The Rototherm range of Heavy Duty Bimetallic Thermometers combines robust construction, that makes these instruments suitable for the most stringent environmental conditions, together with an accurately manufactured bimetallic coil, which enable each instrument to ensure a long dependable life.

All Rototherm bimetallic thermometers contain no harmful fluids ensuring no contamination of the process.

Applications
- Ovens, Dryers, Storage Tanks
- Food Processing, Dairies, Breweries
- Pharmaceuticals and Petro chemical Industries, Refining

Specification

Case & Bezel
304 Stainless steel standard. 316 Stainless steel non-standard option Weatherproof (rated IP 65)

Dial
Non ferrous metal clearly marked to BS3693. Black characters on a white background

Window
Glass as standard. Options: Toughened glass or acrylic

Stem Material
316 Stainless steel

Stem Diameters
6.0mm, 6.3mm, 8.0mm and 12.7mm

Immersion Length
Minimum immersion depends on temperature range (see table)

Models
BH222 63 mm dial, vertical stem entry
BH226 63 mm dial, coaxial stem entry
BH229 63 mm dial, flange mounting
BH242 100 mm dial, vertical stem entry
BH246 100 mm dial, coaxial stem entry
BH249 100 mm dial, flange mounting
BH262 160 mm dial, vertical stem entry
BH266 160 mm dial, coaxial stem entry

Rototherm Quality
The BH2 Series of Bimetallic Thermometers are designed, manufactured and tested to ISO9001:2000.

Each thermometer carries Rototherm’s standard 12 month warranty.

Maximum Stem Lengths
6.0mm & 6.3mm x 500mm
8.0mm x 1000mm
12.7mm x 1500mm

Fitting
Plain stem for fitting with compression gland or flange

Accuracy
±1% of span

Weight
1.0 kg (average)

Options
Alternative stem diameters and lengths. Maximum or minimum value, and index pointers available. Electric contacts available (100mm and 160mm nominal diameter dials only),
### Standard Temperature Ranges

<table>
<thead>
<tr>
<th>Temperature Ranges</th>
<th>Sensitive Portion Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Scale</td>
</tr>
<tr>
<td></td>
<td>Degree C</td>
</tr>
<tr>
<td>-30 / +60 ºC</td>
<td>20 to 140 ºF</td>
</tr>
<tr>
<td>-20 / +120 ºC</td>
<td>n/a</td>
</tr>
<tr>
<td>0 to 60 ºC</td>
<td>n/a</td>
</tr>
<tr>
<td>0 to 100 ºC</td>
<td>20 to 220 ºF</td>
</tr>
<tr>
<td>0 to 120 ºC</td>
<td>n/a</td>
</tr>
<tr>
<td>0 to 160 ºC</td>
<td>0 to 300 ºF</td>
</tr>
<tr>
<td>0 to 200 ºC</td>
<td>n/a</td>
</tr>
<tr>
<td>0 to 250 ºC**</td>
<td>n/a</td>
</tr>
<tr>
<td>50 to 250 ºC</td>
<td>50 to 250 ºC &amp; ºF</td>
</tr>
<tr>
<td>0 to 300 ºC**</td>
<td>n/a</td>
</tr>
<tr>
<td>0 to 400 ºC</td>
<td>0 to 800 ºF</td>
</tr>
<tr>
<td>0 to 500 ºC*</td>
<td>n/a</td>
</tr>
</tbody>
</table>

* thermometers with ranges above 400 Degree C should not be used for prolonged periods above 420 Deg C
** only available with 8.0mm and 12.7mm stem diameters

### Dimensions & Mountings

**BH2 49:** 4.8mm diameter slots on 120 mm PCD
**BH2 29:** 3.6mm diameter slots on 75 mm PCD

<table>
<thead>
<tr>
<th>Dial Size</th>
<th>63 mm</th>
<th>100 mm</th>
<th>160 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Vertical</td>
<td>Coaxial</td>
<td>Flanged</td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td>BH222</td>
<td>BH226</td>
<td>BH229</td>
</tr>
<tr>
<td><strong>Case diameter mm (A)</strong></td>
<td>69</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td><strong>Flange diameter mm (B)</strong></td>
<td>-</td>
<td>-</td>
<td>84</td>
</tr>
<tr>
<td><strong>Case Depth mm (C)</strong></td>
<td>43</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td><strong>Weight (gm)</strong></td>
<td>265</td>
<td>215</td>
<td>265</td>
</tr>
</tbody>
</table>

All dimensions are in mm. Drawings are for illustration purposes only.
## Ordering Information

63 mm dial, vertical  
63 mm dial, coaxial  
63 mm dial, flanged  
100 mm dial, vertical  
100 mm dial, coaxial  
100 mm dial, flanged  
160 mm dial, vertical  
160 mm dial, coaxial

### Window
- Glass (Standard)  
- Acrylic  
- Toughened Glass  
- Contact Head

### Stem Diameter
8.0mm is standard (options 6.0, 6.3 or 12.7mm)

### Stem length
Insert stem length in mm

### Temperature Range
From table

### Units
- ºC, ºF or ºC & ºF dual scale

### Glands
- 1/2" BSP  
- 3/4" BSP  
- 1/2" NPT  
- 1/2" API  
- Other (State Requirement)

### Pointer Options & Electrical Contact Heads
- Electric contact type A  
- Electric contact type B  
- Electric contact type E  
- No electric contact  
- Maximum pointer  
- Minimum pointer  
- Index pointer  
- No additional pointer

### Example Order Code

Model BH2 46, 100mm dial bimetallic thermometer, co-axial mounting, stem diameter 12.7mm, stem length 300mm, temperature range 0 to 60ºC, 1/2" BSP gland, fitted with type A contact head
Accessories & Optional Features

Electrical Contact Heads
To provide alarm or control functions, 100 and 160mm nominal dial instruments can be specified with electrical contact heads mounted in a clear plastic window which replaces the standard one. The set point can be adjusted to any position on the scale with a removable key. Single and dual contacts systems are available. Electrical contact heads provide a repeatable switching point, but the absolute accuracy tolerance of the instrument is approximately doubled by the contacts.

Contact Rating
Standard contact head assemblies: 250V, switching capacity 10W, 18VA, maximum current 0.7A.

Service
Indoor use, ambient temperature -10/70ºC, free from vibration

Application
100 and 150mm nominal dial size instruments only with 12.7 mm stem diameter

System Operation | Typical Application
--- | ---
A | Break on rise
B | Make on rise
E | Break on rise and make on rise

Electrical contact heads are available on the following instruments:

BH2 Heavy Duty Bimetallic Thermometers - 100mm and 160mm dial size only. Stem diameter must be 12.7 mm.
Contact Type A, B and E

Thermowells
Used predominantly in the power, process, pharmaceutical and petrochemical industries, thermowells are used to protect temperature indicators and sensors from process media and to enable servicing or replacement of indicators without the need to shut down plant.

Rototherm thermowells are designed to meet standards established by BSI, DIN, ASME and other authorities as well as established company standards such as BP, Shell, CEGB, ICI etc.

Thermowells are available fabricated from tube, drilled from barstock or from forgings. Full material certification including original mill and suppliers material certificates can be provided. If required NACE standard MR-01-75 requirements can be met.

Process Connections
Rototherm thermowells are available with both flanged and screwed process connections including:
FLANGES - ANSI, BS, and DIN (others also available)
SCREWED - NPT, API, BSP and ISO

Dye penetrant or radiographic inspection of welds is available if required. Flanged thermowells can also be manufactured from “one piece” forgings removing the need for welding.

Compression Glands / Fittings
Compression glands tighten on the stem to provide liquid and gas tight seal. Once fitted the position of the thermometer can only be altered by cutting off the olive and replacing it with a new one.

Add 50mm for BSP threads (75mm for NPT threads) to desired immersion length to obtain minimum “D” dimension).