

## 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

BH2 22	63 mm dial, vertical stem entry
BH2 26	63 mm dial, coaxial stem entry
BH2 29	63 mm dial, flange mounting
BH2 42	100 mm dial, vertical stem entry
BH2 46	100 mm dial, coaxial stem entry
BH2 49	100 mm dial, flange mounting
BH2 62	160 mm dial, vertical stem entry
BH2 66	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),

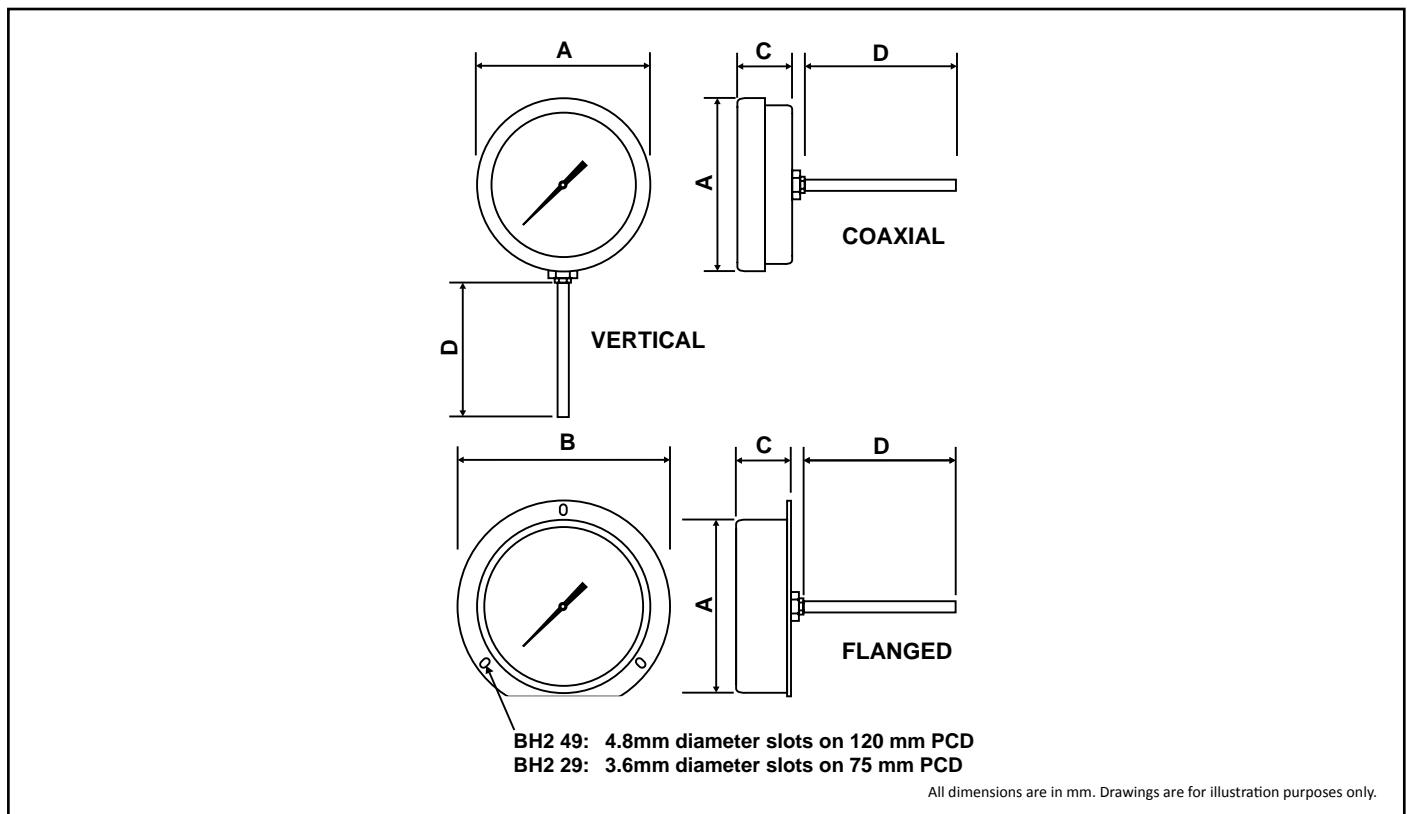
## Standard Temperature Ranges

Temperature Ranges			Sensitive Portion Length		
Single Scale		Dual Scale	Stem Diameter		
Degree C	Degree F	Degree C & F	6.0 mm / 6.35 mm	8.0 mm	12.7 mm
-30 / +60 °C	20 to 140 °F	n/a	65 mm	70 mm	95 mm
-20 / +120 °C	n/a	n/a	45 mm	50 mm	75 mm
0 to 60 °C	n/a	n/a	85 mm	90 mm	100 mm
0 to 100 °C	20 to 220 °F	0 to 100 °C & °F	55 mm	60 mm	80 mm
0 to 120 °C	n/a	n/a	50 mm	55 mm	80 mm
0 to 160 °C	0 to 300 °F	n/a	40 mm	45 mm	65 mm
0 to 200 °C	n/a	n/a	35 mm	40 mm	65 mm
0 to 250 °C**	n/a	n/a	30 mm	35 mm	65 mm
50 to 250 °C	n/a	50 to 250 °C & °F	35 mm	40 mm	65 mm
0 to 300 °C**	n/a	n/a	40 mm	45 mm	60 mm
0 to 400 °C	0 to 800 °F	n/a	30 mm	35 mm	55 mm
0 to 500 °C*	n/a	n/a	30 mm	35 mm	55 mm

\* 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



Dial Size	63 mm			100 mm			160 mm	
Type	Vertical	Coaxial	Flanged	Vertical	Coaxial	Flanged	Vertical	Coaxial
Model	BH222	BH226	BH229	BH242	BH246	BH249	BH262	BH266
Case diameter mm (A)	69	69	69	112	112	112	173	173
Flange diameter mm (B)	-	-	84	-	-	133	-	-
Case Depth mm (C)	43	15	18	47	22	22	50	22
Weight (gm)	265	215	265	400	405	575	950	750

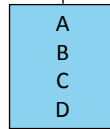
### Ordering Information

- 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

BH2 22							
BH2 26							
BH2 29							
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BH262							
BH266							

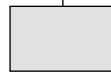
**Window**

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



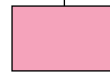
**Stem Diameter**

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



**Stem length**

Insert stem length in mm



**Temperature Range**

From table



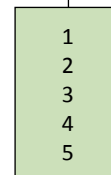
**Units**

°C, °F or °C & °F dual scale



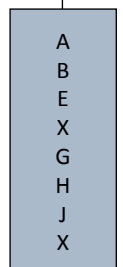
**Glands**

- 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**

BH2 46	D	12.7mm	300mm	0 to 60	Deg C	1	A
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Model BH2 46, 100mm dial bimetallic thermometer, co-axial mounting, stem diameter 12.7mm, stem length 300mm, temperature range 0 to 60°C, 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 -10/70°C, 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	Temperature control
B	Make on rise	Over temperature alarm
E	Break on rise and make on rise	Temperature control plus alarm

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).



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