

# Technical Datasheet



## Bimetallic Thermometers GB Range



### Key Features

- Nominal diameter options of 100mm, 125mm and 150mm stainless steel case
- With rigid or "every angle" stem
- Watertight casing stainless steel execution
- Indication ranges included between -50 to +500 °C
- Wide choice of stem
- High quality and reliability covering all the application

### Series Overview

- The GB bimetallic thermometers offers customers a cost effective and reliable solution to their arduous process control requirements
- Available with a wide variety of casing options and size, the GB bimetallic thermometers can be used for a variety of applications when pressure measurements are needed.

### Other products

Other products in the series include:

- Gas Expansion Type Temperature Gauges



### Product applications

The GB range is suitable for a wide range of applications in many industry sectors where a safety barrier & blow out back are required to give added safety:

- Oil & Gas
- Chemical
- Petrochemical
- Refining
- Power
- Food Industry
- OEM

The choice of models available ensures suitability for use in:

- Corrosive atmospheres
- Resistant to chemical attack

### How can we help you?

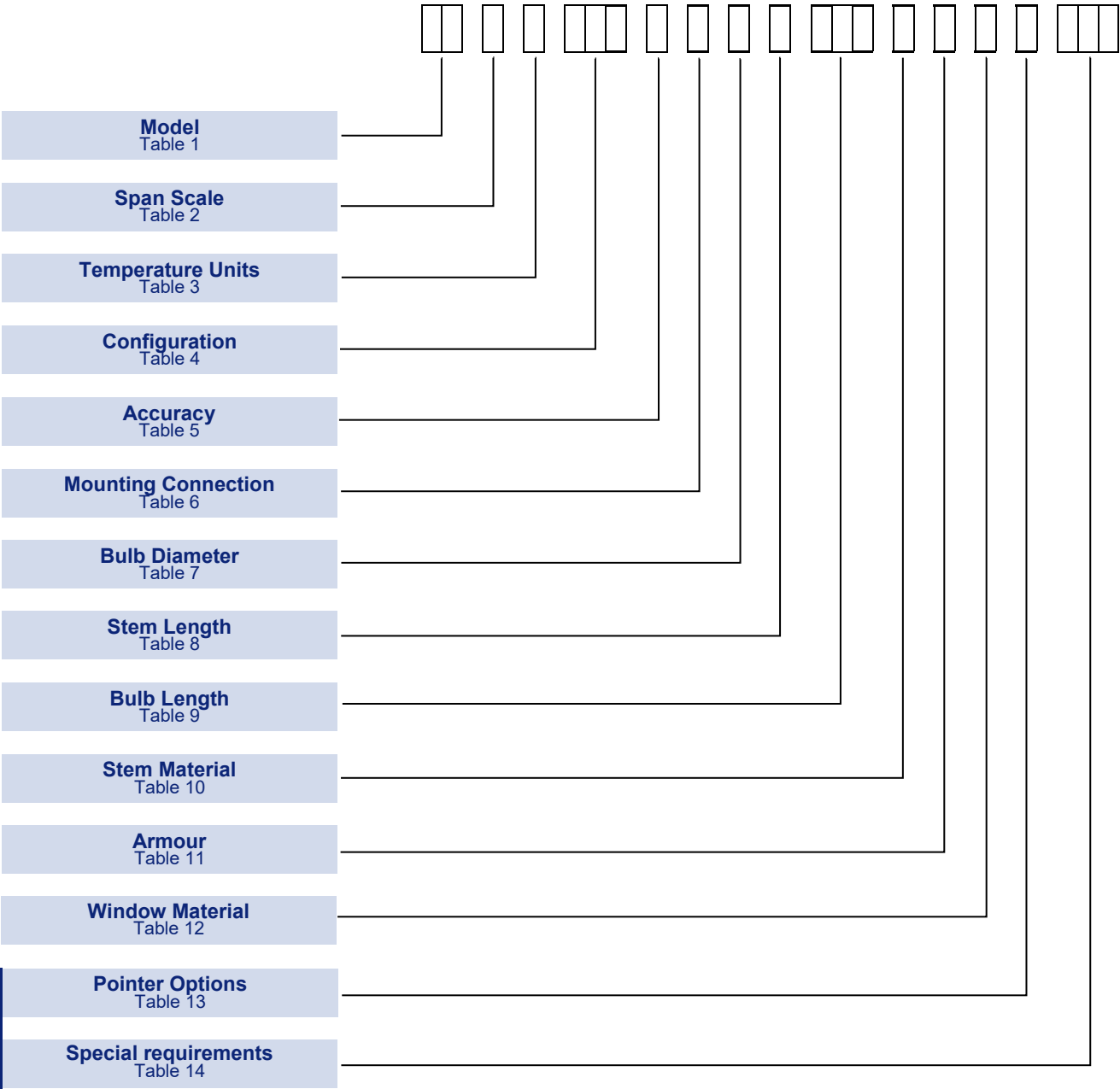
Delta Mobrey offers fast, efficient and knowledgeable support when and where you need it. Please visit our website at [www.delta-mobrey.com](http://www.delta-mobrey.com) to find your local support centre or call us on:

**+44 (0) 1252 729140**

Bimetallic Thermometer  
Model: GB

How to order

Gauges can be configured by selecting codes representing the desired features from the tables that follow. The chart below, describes how the model code is built up. For assistance in configuring a switch that best suits your needs, please contact your local sales office.



**NOTE:** Options shaded in the following tables are the most common options and are available on the quickest lead-times and at the lowest cost.

**NOTE:** Only the most common options are shown in this data sheet. Should you require a feature that is not shown, please contact your local sales office for further details.

Technical Specification

Nominal sizes:	100 and 150 mm option B
Casing:	Case and ring in AISI 304 stainless steel or AISI 316 with bayonet bezel
Protection degree:	IP 55 for dry execution, IP65 for liquid filled
Windows material:	Glass for dry execution, laminated safety glass for liquid filled execution
Thermometric element:	Bimetal spiral
Working temperature:	From 1/10 to 9/10 (referred to full scale value)
Over-temperature:	115% of full scale value (occasionally allowed)
Movements:	Stainless steel
Pointer:	Aluminium with micrometer adjustment
Dials:	White aluminium with black graduation
Accuracy:	Class 1.0 per EN 13190
Sensitive stem:	Instruments are manufactured with fixed or sliding connection also suitable for an eventual thermowell connection
Thermowell:	Built-up from pipe or machined from a bar with flanged or threaded connection (see dedicated Technical Data Sheet)

## TABLE 1

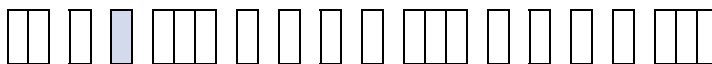
## TABLE 2

ENCLOSURE TYPES	Code
Bimetallic Thermometer	
100 mm and 150 mm	GB

SPAN OF OUTER SCALE	Code
0 to 60	A
0 to 100	B
0 to 120	C
0 to 160	D
0 to 200	E
0 to 250	F
0 to 300	G
0 to 400	H
0 to 500	J
0 to 600	K
-50 to +50	L
-40 to +60	M
-20 to +40	N
-20 to +100	P
-30 to +70	Q
-80 to +120	R
-50 to +110	S
-40 to +120	T
-30 to +170	U
-50 to +220	V
-30 to +220	W
-20 to +140	Y

**Temperature Units**

TABLE 3



	Code
Degrees Celsius	<b>C</b>
Degrees Celsius and inner scale to suit in Degrees Fahrenheit	<b>G</b>

**Configuration**

TABLE 4



	Code
Gauge diameter, mounting, case features & safety fill. Various options available. Contact Delta Mobrey Sales	<b>XXX</b>

**Accuracy Class**

TABLE 5



	Code
Class 1.0 ( $\pm 1$ per cent of full scale deflection)	<b>A</b>
Class 1.6 ( $\pm 1.6$ per cent of full scale deflection)	<b>B</b>

**Mounting connection**

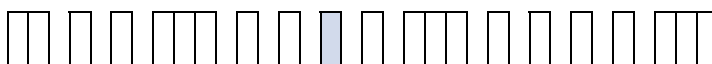
TABLE 6



	Code
R1/2 (1/2inch BSPT male), sliding and swivel	<b>D</b>
1/2-14 NPT External, fixed	<b>J</b>
G1/2B (1/2inch BSPP male), fixed	<b>K</b>
G1/2B (1/2inch BSPP male), sliding and swivel.	<b>L</b>
3/4-14 NPT External, sliding and swivel.	<b>M</b>
G3/4B (3/4inch BSPP male), sliding and swivel	<b>O</b>
1/2-14 NPT External, sliding and swivel	<b>R</b>
R1/2 (1/2inch BSPT male), fixed	<b>W</b>
G3/8B (3/8inch BSPP male), sliding and swivel	<b>Z</b>

**Bulb diameter**

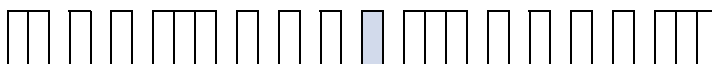
TABLE 7



	Code
Bulb 6mm diameter	<b>A</b>
Bulb 8mm diameter	<b>B</b>
Bulb 10mm diameter	<b>C</b>

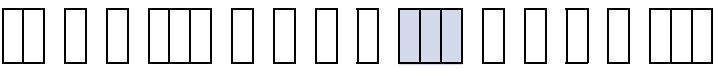
**Stem Length**

TABLE 8



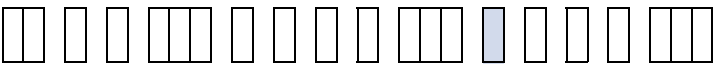
	Code
Various options available. Contact Delta Mobrey Sales	<b>X</b>

**Bulb Length**

TABLE 9	
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	Code
Various options available. Contact Delta Mobrey Sales	XXX

**Stem Materials**

TABLE 10	
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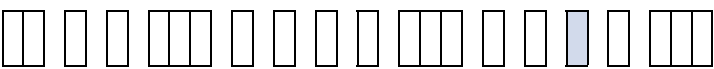
	Code
Direct mount stem 316 stainless steel	R

**Armour**

TABLE 11	
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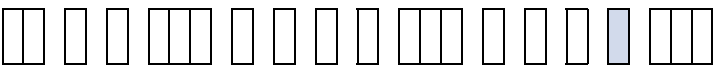
	Code
No armoured capillary	0

**Window Material**

TABLE 12	
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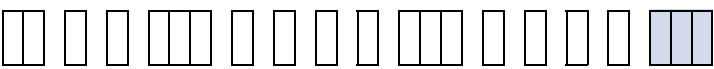
	Code
Laminated Safety Glass window for nominal gauge diameter 100mm and crimped retaining bezel.	D
Laminated Safety Glass window for nominal gauge diameter 100mm and bayonet retaining bezel.	F
Standard glass window	G
Laminated Safety Glass window for nominal gauge diameter 150mm and crimped retaining bezel.	M
Laminated Safety Glass window for nominal gauge diameter 150mm and bayonet retaining bezel.	P

**Pointer Option**

TABLE 13	
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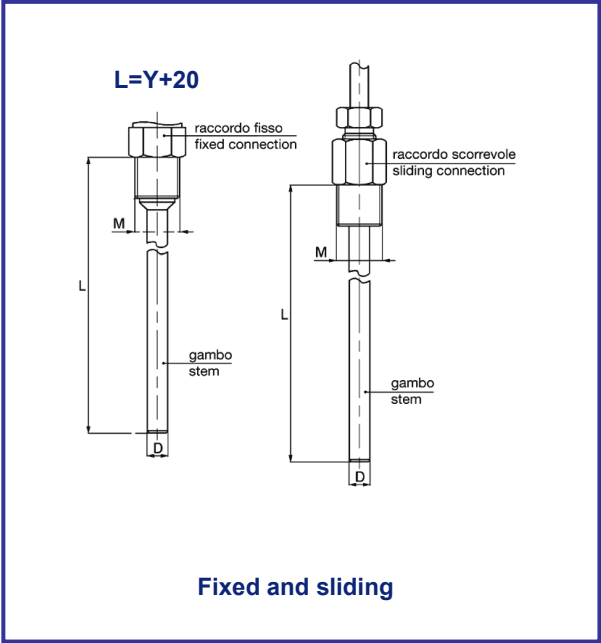
	Code
Standard assembly only	0

**Special Requirements**

TABLE 14	
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	Code
Special requirements	XXX

Sensitive stems and connections



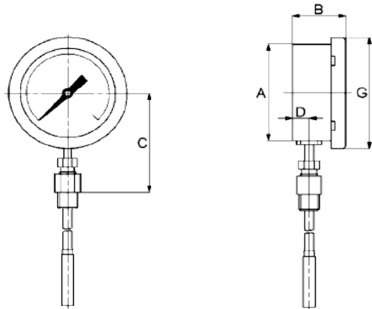
SIZE AVAILBALE
½" NPT
G½B (½"BSPP)
R½ (½"BSPT)
R½ (½"BSPT)
G½B (½"BSPP)
¾"NPT
½"NPT
G3/8B (3/8"BSPP)

Please refer to the Thermowells Data Sheet available on the website, for a correct coupling with the instrument

Note : Different length could be realized. Please contact our Sales department.

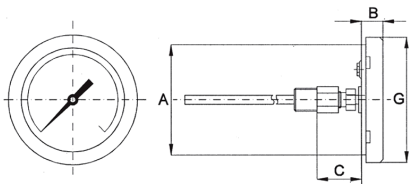
Range °C	Bulb Dimensions & Length L (Y+20mm)			
	min	standard	min	standard
	Diameter 6mm		Diameter 8mm	
-50 to +50	90	100 - 150 200 - 250 300 - 400	90	100 - 150 200 - 250 300 - 400
-40 to +60	90	100 - 150 200 - 250 300 - 400	90	100 - 150 200 - 250 300 - 400
-20 to +40	110	150 200 - 250 300 - 400	110	150 200 - 250 300 - 400
-20 to +100	70	100 - 150 200 - 250 300 - 400	70	100 - 150 200 - 250 300 - 400
0 to 60	110	150 200 - 250 300 - 400	110	150 200 - 250 300 - 400
0 to 100	90	100 - 150 200 - 250 300 - 400	90	100 - 150 200 - 250 300 - 400
0 to 120	70	100 - 150 200 - 250 300 - 400	70	100 - 150 200 - 250 300 - 400
0 to 160	60	100 - 150 200 - 250 300 - 400	60	100 - 150 200 - 250 300 - 400
0 to 200	80	100 - 150 200 - 250 300 - 400	80	100 - 150 200 - 250 300 - 400
0 to 250	110	150 200 - 250 300 - 400	110	150 200 - 250 300 - 400
0 to 300	80	150 200 - 250 300 - 400	80	150 200 - 250 300 - 400
0 to 400	80	100 - 150 200 - 250 300 - 400	80	100 - 150 200 - 250 300 - 400
0 to 500	80	200 - 250 300 - 400	80	100 - 150 200 - 250 300 - 400
0 to 600	60	150 200 - 250 300 - 400	60	150 200 - 250 300 - 400

Sensitive stems and connections



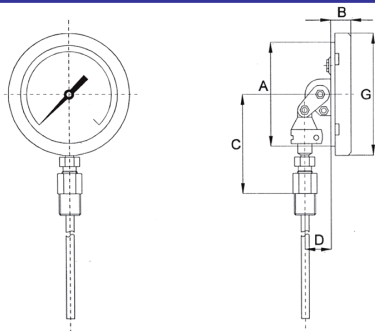
Thermometer for direct vertical mounting

DN	A	B	C	D	G	Weight
100	103	23	108	35	118	0.48
125	119	22	108	35	130	0.60
150	150	23	108	35	166	0.71



Thermometer for direct horizontal mounting

DN	A	B	C	G	Weight
100	103	22	58	111	0.38
125	119	22	58	130	0.44
150	150	22	58	161	0.50



Every angle thermometer for direct mounting

DN	A	B	C	D	G	Weight
100	100	22	80	40	111	0.48
125	119	22	80	40	130	0.54
150	150	22	80	40	161	0.60



## Approvals

### EUROPEAN DIRECTIVE



#### Pressure Equipment Directive (PED) 2014/68/EU

Compliant to PED, Module A for static Pressure > 200 Bar, SEP for Static Pressure ≤200bar

#### ATEX Directive 2014/34/EU



CONSTRUCTION SAFETY— Technical file storage reference SGS21ATEX0095DR

Notified body for Technical storage file : SGS Fimko Oy, Helsinki, Finland, Notified Body No 0598

- Ex h IIC T6 Gb X
- Ex h IIIC T85°C Db X

### UK REGULATION



#### Pressure Equipment (Safety) Regulation 2016

S.I. 2016 no. 1105, as amended, Module A for static Pressure > 200 Bar, SEP for Static Pressure ≤200bar

#### Equipment and Protective Systems Intended for use in Potentially

#### Explosive Atmospheres Regulation 2016



(S.I. 2016 No. 1107 as amended)

CONSTRUCTION SAFETY— Technical file storage reference BAS21UKEx0356TDR

Approved body for Technical storage file : SGS Baseefa Ltd, Buxton, United Kingdom, Approval Body No 1180

- Ex h IIC T6 Gb X
- Ex h IIIC T85°C Db X

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Page 9 of 9