



Zertifiziertes
QM-System
DIN EN ISO 9001
Zertifikat-Nr. 01017

Bimetallic Thermometers

for Combustion Gas Measurements,
Heating and Air Conditioning,
Accuracy Class 2



measuring
•
monitoring
•
analysing



- for Combustion Gas Measurements, Heating and Air Conditioning
- Fast response times
- Nominal sizes: 63, 80 and 100 mm
- Measuring ranges:
-30 ... +50 °C to 0 ... +500 °C



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KOBOLD Messring GmbH
Nordring 22-24
D-65719 Hofheim/Ts.
☎ +49(0)6192 299-0
Fax +49(0)6192 23398
E-Mail: info.de@kobold.com
Internet: www.kobold.com

Model:

TBI-A
TBI-H
TBI-K



Application and Description

The new bimetallic thermometers for heating technology are the result of years of experience, world-class quality and security as well as state-of-the-art design, and they set new standards! They are easy and quick to mount. Simply screw in the thermowell, insert the thermometer and clamp with the adjusting screw.

The thermometer case manufactured from **MACROLON®** (= polycarbonate) is not a health hazard, it is environmentally compliant, easy to recycle, impact-resistant, fire-proof and has good toughness properties even at low temperatures.

Method of Operation

The measuring element of the bimetallic thermometer is a fast-response bimetallic helix. It is manufactured from two cold-welded strips of metal with different thermal coefficients of expansion and it becomes twisted as a function of temperature. The rotary motion is transferred with low friction to the pointer.

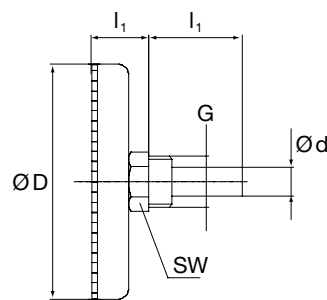
Features

- High-quality, low-friction, particularly stable bimetallic system, accuracy class 2
- Short temperature damping time with optimized adaptation of the protective tube to the special light-metal bulb
- Reduced vibration effects with ruggedized and overtemperature protected bimetal element
- Thermostable, impact-resistant, scratch-resistant, colour-fast black Macrolon® (polycarbonate)
- Extremely solid and torsionally strong case in state-of-the-art design
- Fast and perfect measuring-point sealing with specially roughened protective tube thread



Technical Details

- Permissible operating pressure of thermowell: max. 6 bar
- Measuring element: bimetallic helix
- Dial angle: approximately 270°
- Accuracy: category 2 (accord. to DIN 16203)
- Indication adjustment: at the end of the immersion shank
- Casing: Macrolon®
- Connection: centre back
- Thermowell: G 1/2 AG, copper
- Window: plexiglass
- Dial face: plastic white, dial and inscription black
- Pointer: plastic black



Dimensions

Dimensions (mm)			
NG	b	L1	d
63	23	40	12
80	24.5	60	
100	24.5	100	
		160	

Order Details (Example: TBI-HRD06 040 1R)

Model	Nominal size	Measuring range	Bulb length (L1)
TBI-HRD...	63 mm	..06.. = 0 - 60 °C, Division 1 °C ..12.. = 0 - 120 °C, Division 2 °C	..040 1R = 40 mm, G 1/2
TBI-HRE...	80 mm		..060 1R = 60 mm, G 1/2
TBI-HRF...	100 mm		..100 1R = 100 mm, G 1/2
			..160 1R = 160 mm, G 1/2

Minimum order quantity 50 pieces

Application and Description

The new bimetallic thermometers for air conditioning technology are the result of years of experience, world-class quality and security as well as state-of-the-art design, and they set new standards! They are easy and quick to mount. Simply screw the connecting flange onto the air-conditioning duct, insert the thermometer and clamp with the adjusting screw.

Method of Operation

The measuring element of the bimetallic thermometer is a fast-response bimetallic helix. It is manufactured from two cold-welded strips of metal with different thermal coefficients of expansion and it becomes twisted as a function of temperature. The rotary motion is transferred with low friction to the pointer.

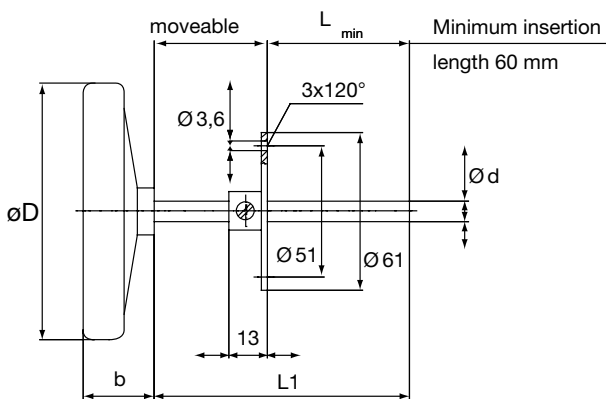
Features

- Fast response time
- Sliding flange

Areas of Application

- Air conditioning technology
- Ventilation systems

Dimensions



Technical Details

- Measuring element: bimetallic helix
- Dial angle: approximately 270°
- Accuracy: category 2 (according to DIN 16203)
- Indication adjustment: at the end of the immersion probe
- Casing: aluminium
- Connection: flange, sliding on immersion shank rear, centric
- Immersion probe: copper
- Flange: steel
- Window: plexiglass
- Dial face: plastic white, dial and inscription black
- Pointer: aluminium black

Dimensions (mm)			
NG	b	L1	d
63	20	160	9
80	22	200	
100	37		

Order Details (Example: TBI-KRD35 160 1L)

Model	Nominal size	Measuring range	Bulb length (L1)
TBI-KRD...	63 mm	..35.. = -30 ... +50 °C, Division 1 °C ¹⁾	..160 1L = 160 mm, air flange ..200 1L = 200 mm, air flange
TBI-KRE...	80 mm	..26.. = -20 ... +60 °C, Division 1 °C	
TBI-KRF...	100 mm	..08.. = 0 ... +80 °C, Division 1 °C	

Minimum order quantity 20 pieces

¹⁾ Not with nominal size 63 mm



Application and Description

The new bimetallic thermometers are the result of years of experience, world-class quality and security as well as state-of-the-art design, and they set new standards! Special models with scale ranges of 0 to 400 °C and 0 to 500 °C, with coloured segments and max pointers are available. An immersion probe with magnet or tapered thread serves as process connection.

Method of Operation

The measuring element of the bimetallic thermometer is a fast-response bimetallic helix. It is manufactured from two cold-welded strips of metal with different thermal coefficients of expansion and it becomes twisted as a function of temperature. The rotary motion is transferred with low friction to the pointer.

Features

- High-quality, low-friction, particularly stable bimetal system, accuracy class 2
- Short temperature damping time
- Reduced vibration effects with ruggedized and overtemperature protected bimetal element
- Extremely solid and torsionally strong case construction

Areas of Application

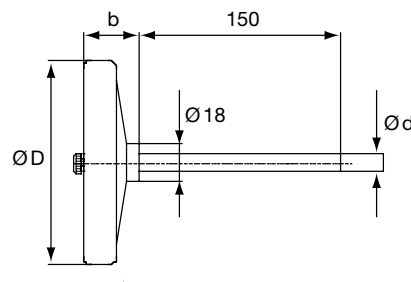
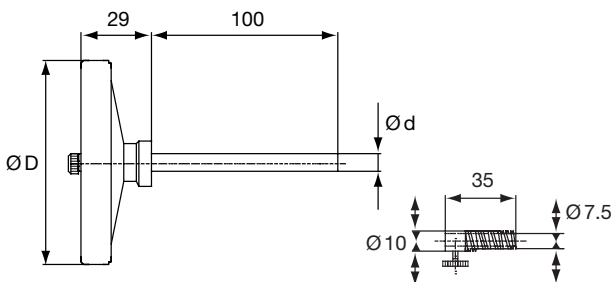
- Heating technology
- Combustion gas measurements



Technical Details

- Measuring element: bimetallic helix
- Dial angle: approximately 270°
- Accuracy: category 2 (according to DIN 16203)
- Indication adjustment: trimming pointer
- Casing: aluminium
- Connection: immersion probe, centre back
- Connection construction: with tapered thread or magnet
- Connection material: steel or stainless steel 1.4571
- Window: instrument glass
- Dial face: aluminium white, dial and inscription black
- Pointer: aluminium black, adjustable option with max. pointer

Dimensions



Dimensions (mm)		
NG	b	d
63	22	6
80	24	6

Order Details (Example: TBI-ARD40100 3M)

Model	Nominal size	Measuring range	Bulb length (L1)	Connection material	Connection
TBI-ARD40100..	63 mm	0 ... + 400 °C, Division 5 °C with coloured check fields and max. pointer	100 mm	St. steel 1.4571	..3M = magnet
TBI-ARD50150..	63 mm	0 ... + 500 °C, Division 5 °C	160 mm	Steel St 35	..3K = with brass conus
TBI-ARE50150..	80 mm	0 ... + 500 °C, Division 5 °C with max. pointer	300 mm	Steel St 35	..3K = with brass conus