Bi-metal thermometers for industrial application series TBS

General features

- Bi-metal thermometer
- All stainless steel construction (case & stem)
- Hermetically sealed / weather resistant design
- Degree of protection up to IP65 / IP66
- Wide temperature ranges available

Application area

- Suitable for outdoor and harsh environments
- Chemical and petrochemical industry
- Oil & gas, refineries
- Power plants and heavy industry
- Food & beverage, pharmaceutical industry
- General industrial process measurement



General specification

Bi-metal thermometer, series TBS

Size
25mm, 33mm, 40mm, 50mm
63 mm, 80 mm, 100 mm, 160 mm

Type of mounting
Bottom connection (radial)
Back connection (axial)

Temperature ranges
-70…70℃, -70…30℃,
-60…50℃, -50…50℃, -50…100℃
-50…200℃, -50…300℃, -50…400℃, -50…500℃
-40…40℃, -40…60℃, -40…80℃, -40…160℃
-30…30℃, -30…50℃, -30…70℃
-20…40℃, -20…60℃, -20…80℃
-20…100℃, -20…120℃, -20…140℃, '-10…50℃
0…60℃, 0…80℃, 0…100℃, 0…120℃, 0…160℃
0…200℃, 0…250℃, 0…300℃, 0…400℃
0…500℃, 0…600℃

Accuracy class
± 5.0% of Full scale
± 2.0% of Full scale
±1.0% of full scale

Stem
St. steel 304 or 316
4, 6, 8 mm diameter

Stem length
approx. 45 mm up to 400 mm
Special lengths on request

Protection
IP65
IP66
IP67
IP68 (continuous immersion to 5 m [16.4 ft])

Process connection
Material: St. steel
G 1/4, G 3/4, G1/2 B, G1/4 B, G 1/8 B
G1/2 B female
NPT 1/2, NPT 1/2 Female
M8 x 1.25, M18*1.5, M20x1.5, M24x1.5
Others on request

Materials

Case	Stainless steel 304 / 316
Dial face	Aluminium, white background with black marking
Window	Instrument glass / safety glass
Pointer	Aluminium, black
Stem	Stainless steel 304 / 316
Connection	Stainless steel 304 / 316

Option
Liquid filling (typically up to 150℃ ambient)
Dual scale (℃ / °F, °F / ℃)
Adjustable stem and dial orientation
Safety glass
Thermowell (DIN / EN or custom design)
Special temperature ranges
Higher accuracy (±1.0% F.S)
Stainless steel 316 execution
Silicone oil filling (vibration resistance)

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Ordering information

Model code **TBS** · ☐ · ☐ · ☐ · ☐ · ☐ · ☐ · ☐ · ☐ · ☐

Dial size	
X	25mm
0	33mm
1	40mm
2	50mm
3	63mm
4	80mm
5	100mm
8	160mm

Mounting type	
L	Bottom connection
T	Back connection

Temp.range
Refer to temp range code table

Stem material	
S1	St. steel 304
S2	St. steel 316

Stem O.D	
Standard	
E	Ø6.4 mm
F	Ø8.0 mm
H	Ø10.0 mm
Optional	
B	Ø4.0 mm
C	Ø5.0 mm
D	Ø6.0 mm
K	Ø12.0 mm

Process connection	
O	none
T	thread
F	Compression fitting

Stem Length	
100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm
1500	1500mm
2000	2000mm

Thread	
G2	G 1/2"
G3	G 3/8"
G4	G 1/4"
N2	NPT 1/2"
N3	NPT 3/8"
M2	M20X1.5
M6	M16X1.5
M8	M18X1.5

Option code

Code	Description
NO	"USE NO OIL" for Oxygen application
PCA	Adapter
TP	St. steel tag plate, 60 x 20 x 0.5t
DMCC	Manufacture calibration certificate
KC	KOLAS Ilac-MRA calibration certificate
CC	Certificate of conformance / origin

Temperature range

Code	Range (℃)	Code	Range (℃)	Code	Range (℃)	Code	Range (℃)
T05	-70…30℃	T16	-40…40℃	T27	-20…80℃	T41	0…160℃
T06	-70…70℃	T17	-40…60℃	T28	-20…100℃	T42	0…200℃
T08	-60…50℃	T18	-40…80℃	T29	-20…120℃	T43	0…250℃
T09	-50...50℃	T19	-40…160℃	T30	-20...140℃	T44	0…300℃
T10	-50...100℃	T20	-30…30℃	T33	-10...50℃	T45	0…400℃
T12	-50…200℃	T21	-30…50℃	T36	0…60℃	T46	0…500℃
T13	-50…300℃	T22	-30…70℃	T37	0…80℃	T47	0…600℃
T14	-50…400℃	T24	-20…40℃	T38	0…100℃		
T15	-50…500℃	T26	-20…60℃	T39	0…120℃		

How to order

TBS-5-L-T05-S1-H-T-N2-100*

TBS, Bottom connection, 100mm, -70…30℃, SUS 304, 10.0ø, male thread, NPT 1/2", Stem L 100mm*

* Please indicate the actual stem length in the order form.

DAHO