

Bimetal thermometer

Chemical version With or without damping

Nominal size 3", 5"

Accuracy class 1



Description

The measuring element of the bimetal thermometer is a quick reacting bimetal coil. It is manufactured from two cold-welded metal strips with different thermal expansion coefficients and rotates in proportion to temperature. The rotary movement is conveyed to the pointer with low friction.

A version with liquid damping is available as an option for service at measuring points subject to strong vibration. The filling damps the measuring system when mechanical vibrations occur, thus producing a steady indication. At the same time, good lubrication of the moving parts is achieved.

A version with rotateabla (360°) and turnable case (90°) allow the thermometer to be aligned as desired under all installation conditions.

In conjunction with a corresponding thermowell, these thermometers can also be used with aggressive media.

A comprehensive range of standard versions enables a wide range of applications and uses. The case sizes are available in 3inch and 5inch. Special versions are also manufactured to customer specifications.

Features

- Short response time
- Nominal sizes 3" and 5"
- o Large selection of standard versions
- o Customized versions available
- For aggressive media

Options

- Filled versions for measuring points with high vibrations
- o Models with turnable and rotateable connection

Measuring ranges

-70 ... 30 °C up to 0 ... 600°C

Applications

Chemical and petrochemical industry Process engineering Food industry

Models: TM304, TM305, TM307, TM308

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Technical data

Model	TM304	TM307	TM305	TM308	Optionen					
Nopminal size	3" (76mm)	5" (127mm)	3" (76mm) to EN 13190	5" (127mm)						
Accuracy										
Scale range	-7	Other ranges								
Limits of error		-50 50 °C 1 °C								
	-30 50 °C -20 60 °C									
	-2	Scale °F								
		Double Scale								
	(<u>0 80 °C</u>) 100 °C			°C/°F					
	0 100 C 0 120 °C 1 °C									
) 160 °C			_					
			2 °C							
) 250 °C	- •							
	0 300 °C									
	() 400 °C								
	(
	(
Scale angle		_								
Range of use	Constant load (1 ye									
	Short time (\leq 24h):	_								
Max. pressure at stem		_								
Measuring element		_								
Zero adjustment Material case/stem		_								
Process connection	Back									
Window	Dduk	Safety glass								
Dial		Odlety glass								
Pointer		-								
Ingress protection										
Weight (kg)	0,3	0.4	529/ IEC 529) 0,4	0,5						

1) T_{max} = 250°C for thermometers with damping Thermowells: see data sheet DE 1060, DE 1061, DE1062

Dimensions (mm)

Model TM304, TM307

Model TM305, TM308





Model	Dimensions (mm)									
		b								
	D (NG)	G½A	G¼A	½NPT	¹∕₄NPT					
TM304, TM305	3" (76mm)	35	32	35	28					
TM307, TM308	5" (127mm)	35	32	35	28					

DE **10**26 a

Design of connection

	Male thread				Plain stem	Male nut			Union nut			Compression fitting, sliding on stem			
Stem-length I ₁	63 mm 2.5" 100 mm 4" 150 mm 6" 225 mm 9" 305 mm 12" 380 mm 15" 455 mm 18" 610 mm 24"				140 mm 200 mm 240 mm 290 mm	80 mm 140 mm 180 mm 230 mm			12 18 22	39 mn 26 mn 36 mn 26 mn 76 mn	า า า	variable minimum insertion length I _{min} = 60 mm Length I ≥ I ₁ + 35 mm			
Dimensions	SW D D D D D D D D D D D D D			ød	B 0 1	SW 			SW D D D D D D D D D D D D D D D D D D D			SW 35 L ₁			
Stem diameter Ød	Standard 6 mm Option: 8, 10mm														
Thread and		SW	d4	i			SW	i		SW	i		SW	d4	i
dimensions	G ½	27	26	14		G ½	27	20	G ½	27	8,5	G 1⁄2	27	26	14
[mm]	G ¼	22	18	12					G ¾	32	10,5	G ¾	32	32	16
				19					M24x1,5	32	13,5	M18x1,5	24	23	12
	1/2 NPT		-									1/2 NPT	22	-	19
	¼ NPT	17	-	15								¾ NPT	30	-	20
	Not possible with connection turnable/rotateable														

Order details

- 1. Model
- 2. Range
- 3. Design of connection
- 4. Stem length I₁
- 5. Thread
- 6. Options

Subject to technical modifications