



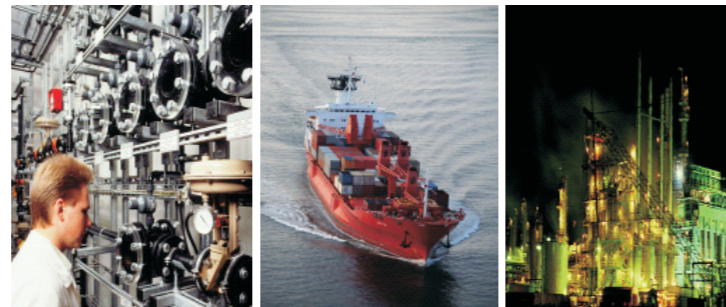
机械式温度测量技术概述 Mechanical temperature measurement technology reviews

机械式温度计：该仪表利用双金属或气体膨胀工作原理。显示范围在-80℃到700℃之间。根据用户需求的不同，产品覆盖了低成本应用领域以及带电子报警系统的高精度测量领域。

Mechanical thermometer: the principle based on bimetal or gas active. According to different requirements, the product including low cost applications and the applications with high quality requirement.

应用领域/Application fields

- 化学和石油工业 / Chemical and petrochemical industry
- 过程工业 / Process engineering
- 食品工业 / Food industry
- 加热系统 / Heating systems
- 一般温度的测量 / General temperature measurements
- 废气测量系统 / Waste gas measurements



选型基本参数 / Technical data

	轴向 axial	径向 radial	万向节 rotating and swivelling
连接方向 connection			
表圆直径 Nominal size	63、100、160mm可选; 63、100、160mm available		
量程和刻度间隔 Rang and scale apan	见表格4 see table 4		
允许介质压力最大 Max allowed medial pressure	最大25bar, 推荐使用DMASS温度计套管 Max 25bar, DMASS thermowell is recommended		
测量元件 Measuring element	双金属卷/气体膨胀 Bimetal / Gas pressure		
显示修正 Display correction	调节指针 Adjusting pointer		
外壳/钢圈 Case/Bezelst	st.st1.4301/铝可选 st.st1.4301 or Aluminium		
表面 Window	玻璃仪表片/安全玻璃可选 Glass lens or safety glass		
刻度盘 Dial	白色铝/黑刻度字 Aluminium white, scale and imprint black		
指针 Pointer	黑色铝/微调指针可选 Aluminium black		
防护等级 Ingress protection	IP 56 (En 60529/IEC 529) / IP54/IP43		

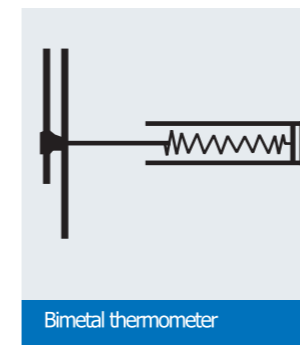
■ 双金属温度计 Bimetal thermometer

双金属温度计测量原理:

双金属温度计首先在其顶部的双金属片受热产生形变，其次通过螺旋状传动机构带动四连杆机构进行指针显示，从而实现测量需求。

Bimetallic thermometer measuring principle:

Bimetal strips are used in temperature-measurement technology firstly as "sensors" for bimetal thermometers and secondly as switching elements in temperature switches. Both processes are used in the Temperature Measurement Technology Division at DMASS.

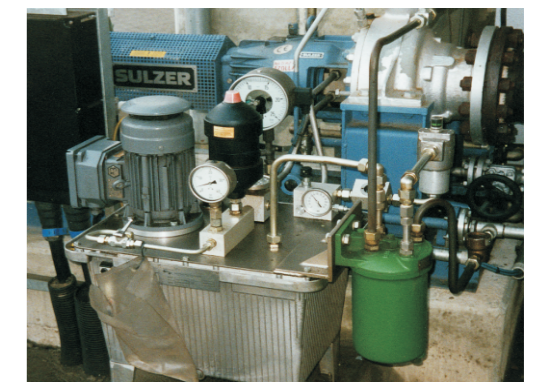


应用场合/Application

化工行业/Chemical Industry



机械行业/Mechanism Industries





DMASS

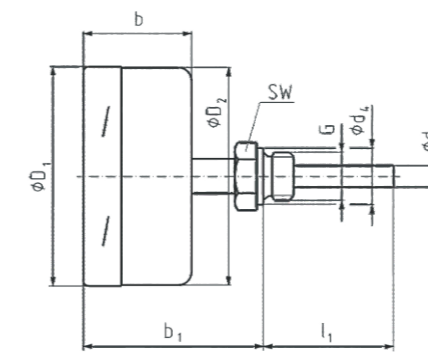
双金属温度计
Ordering Code

TB-{1}-{2}-{3}-{4}-{5}-{6}-{7}-{8}

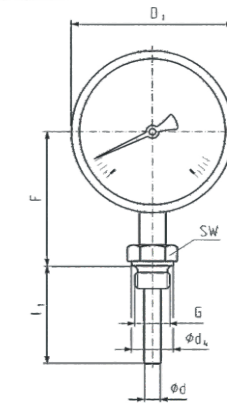
TB:

		应用场合 Applications:	
1	B	工业型 heavy duty	
	S	化工型 Chemical industry	
		表圆直径 Normal dimension:	
	040	表圆直径40mm normal size40 mm	
	050	表圆直径50mm normal size50mm	
	060	表圆直径63mm normal size63mm	
2	080	表圆直径80mm normal size80mm	
	100	表圆直径100mm normal size100mm	
	160	表圆直径160mm normal size160mm	
		连接方向: Connection position	
3	U	轴向 axial	
	B	径向 radial	
	S	万向节 rotating and swiveling	
		探杆长度 Stem length	
4	1	See table 5	
	999	Longer than 500mm	
			探杆直径 Stem diameter
	04	4mm	
	06	6mm	
	08	8mm	
5	10	10mm	
	12	12mm	
	999	其他 others	
			过程连接尺寸: Process connection
	Gxx	DIN标准平管螺纹G (例: G12=G1/2;G14=G1/4)	
Nxx	ANSI标准标准, 锥度螺纹NPT (例: N12=1/2NPT)		
6	Mxx	公制M螺纹 (例: M20x1.5;M14x1.5...)	
	999	其他 Others	
			连接方式: Connect mode
	1	光杆 plain stem	
	2	固定外螺纹 fixed male	
7	3	可旋转内螺纹 turnable female	
	4	可旋转外螺纹 turnable male	
	5	卡套式连接 compression fitting	
	999	其他 Others	
			量程: Measuring range
8	1	See table	
	999	其他 Others	
		优化选型: Option	
9	ZZ	none	
	999	表盘: 双刻度、OEM定制等 Dial: double scale or special design for OEM	

Centre back

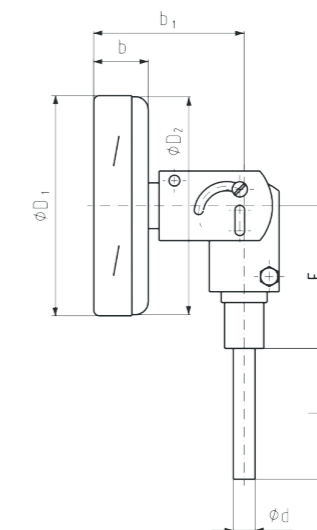


Radial bottom



ND	Dimensions in mm									Weight in kg	
	b	b1	d ¹⁾	d4	øD1	□D2	F	G	SW	Model TBU	Model TBB
63	35	60	8	26	64	62	57	G1/2B	27	0.25	0.25
100	50	83	8	26	101	99	83	G1/2B	27	0.8	0.8
160	50	83	8	26	161	159	113	G1/2B	27	1.1	1.1

Adjustable stem and dial



ND	Dimensions in mm							Weight in kg
	b	b1	d ¹⁾	øD1	□D2	F	Model TBS	
100	25	68	8	101	99	68	0.5	
160	25	68	8	161	159	68	0.7	