

TSS Thermometers Ø 63 - 80 - 100 - 160 - 250

Direct reading industrial thermometer

The stainless steel gas expansion thermometer is intended for the following processing industries: Oil, Chemicals, Energy, Agro-Food, Biotechnology and Pharmaceuticals

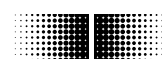


Specifications (20°C)

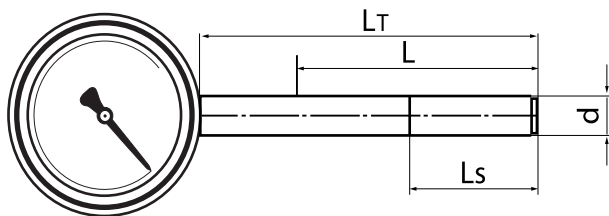
Measurement range	-200...800°C
Error limit	class 1 according to EN 13190
Case and sleeve	Stainless steel AISI 304/1.4301 Bayonet closing
Sight glass	4 mm glass Polycarbonate for additional appliance
Movement	brass
Face	white with black graduations DIN 16 109, 16 128 Succession of lines and figures to T0.305
Needle	black aluminium, DIN 16 099
Zero setting	on the side or back of the case
Degree of protection	IP 65 (DIN 40 050)
Plunger	Stainless steel 1.4541
Accessories	unions and thermometer wells, see sheets: B51.01 (AGF/AGW), T6.215 (Ø8), T6.120, T6.220 (Ø14)

Options

Filling liquid	glycerine standard silicon oil Code 0776 ondine ®
Movement stainless steel	Code 0651



Baumer



L_s = Minimum immersion depth
 L = immersion depth of the plunger
 L_T = $L + 50$ mm

Order codification

		TSSxxxxxxxxxxx									
Type	digits 1 ... 4										
Industrial thermometer	TSS										
Industrial thermometer with electrical contact*	TSSE										
Case diameter	digits 5 ... 7										
Ø 63 mm	063										
Ø 80 mm	080										
Ø 100 mm	100										
Ø 160 mm	160										
Ø 250 mm	250										
Case and sleeve	digits 8										
Stainless steel (304) 1.4301	2										
Stainless steel (316L) 1.4401	3										
Mounting type	digits 9										
Without flange	1										
Board mounting, front flang	2										
Wall mounting, 3 lashed	3										
Swiveling	4										
Wall mounting with mounting clamp	5										
Wall mounting with support console	6										
Plunger position	digits 10										
Bottom	1										
Back center	2										
Back excentric**	3										
Plunger diameter	digits 11										
Ø 6 mm	4										
Ø 8 mm	1										
Ø 11 mm	2										
Ø 14 mm	7										
Others	0										
Plunger material	digits 12										
Stainless steel 1.4541	6										
Plunger immersion length (L)	digits 13										
100 mm	2										
160 mm	4										
250 mm	6										
400 mm	7										
600 mm	8										
1000 mm	9										
Others (use Option /9003/LLLL)	0										
Measurement range	digits 14 ... 16										
See table											

* Only for case Ø 100 and 160 available

** Only in combination with digit 9 code 5 and digit 10 code 3

To be entered in clear language after codification

Types of connections

Filling liquid

Contacts: Electromechanical, see datasheet B22T4.105

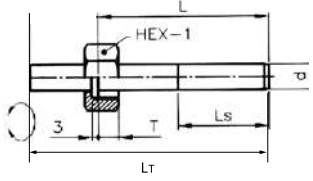
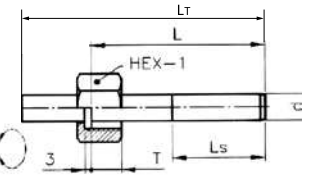
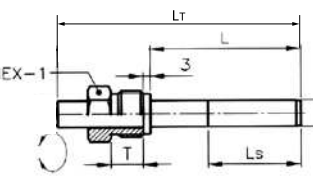
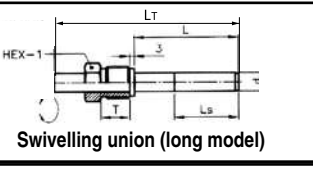
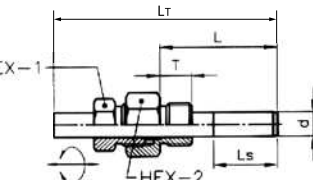
Induction, see datasheet B22T4.110.1

Overall length, L_T in mm

Code	Measurement ranges in °C	Code	Measurement ranges in °F
69T	-200 ... 50	68U	-100 ... 120
77T	-120 ... 40	09U	-50 ... 120
76T	-100 ... 50	08U	-40 ... 160
74T	-80 ... 40	02U	0 ... 200
68T	-70 ... 50	03U	0 ... 250
50T	-60 ... 40	04U	0 ... 300
65T	-40 ... 40	05U	0 ... 400
55T	-30 ... 170	06U	0 ... 500
51T	-30 ... 70	20U	+30 ... 250
61T	-30 ... 30	13U	+30 ... 320
84T	-20 ... 100	22U	+30 ... 400
54T	-20 ... 60	23U	+30 ... 580
52T	-20 ... 40	15U	+30 ... 750
11T	0 ... 60	28U	+100 ... 800
27T	0 ... 80	29U	+200 ... 1000
12T	0 ... 100		
20T	0 ... 120		
13T	0 ... 160		
22T	0 ... 200		
14T	0 ... 250		
23T	0 ... 300		
15T	0 ... 400		
25T	0 ... 500		
16T	0 ... 600		
82T	0 ... 800		
30T	+100 ... 500		

Code	Measurement ranges in °C / °F
51V	-30 ... 70 / -40 ... 160
68V	-70 ... 50 / -100 ... 100
55V	-30 ... 170 / 0 ... 350
11V	0 ... 60 / 30 ... 140
20V	0 ... 120 / 30 ... 250
13V	0 ... 160 / 30 ... 320
14V	0 ... 250 / 30 ... 500
15V	0 ... 400 / 30 ... 750
16V	0 ... 600 / 100 ... 1100

Types of capillary tube connection

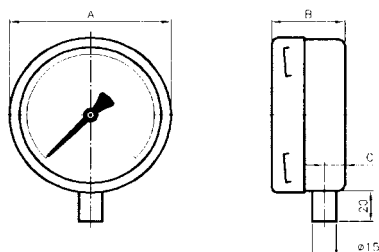
Models	Code	Type of union	HEX-1	HEX-2	T	max. Ø plunger
 Rotating nut (standart)	731A	1/4 Gas	22	-	7	6 to 8
	731B	3/8 Gas	27	-	9	6 to 11
	731C	1/2 Gas	27	-	9	6 to 15
	731D	3/4 Gas	32	-	9	6 to 20
	731E	1" Gas	41	-	13	6 to 20
	731P	M18x1,5	27	-	8	6 to 12
	731Q	M20x1,5	27	-	9	6 to 14
	731R	M24x1,5	32	-	9	6 to 18
 Swivelling union (long model)	732C	1/2 Gas	27	-	14	6 to 15
	732D	3/4 Gas	32	-	16	6 to 20
	732E	1" Gas	41	-	18	6 to 20
 Swivelling union (long model)	733A	1/4 Gas	17	-	12	6 to 8
	733B	3/8 Gas	22	-	12	6 to 11
	733C	1/2 Gas	22	-	14	6 to 15
	733D	3/4 Gas	30	-	16	6 to 20
	733E	1" Gas	36	-	18	6 to 20
	733P	M18x1,5	22	-	12	6 to 12
	733H	1/4 NPT	17	-	14	6 to 8
	733J	1/2 NPT	22	-	20	6 to 15
	733K	3/4 NPT	30	-	20	6 to 20
	733L	1" NPT	36	-	25	6 to 20
	733Q	M20x1,5	22	-	14	6 to 14
	733R	M24x1,5	27	-	14	6 to 18
 Swivelling union (long model)	734C	1/2 Gas	22	-	20	6 to 15
	734D	3/4 Gas	30	-	20	6 to 20
	734E	1" Gas	36	-	25	6 to 20
 Sliding union on plunger	738A	1/4 Gas	22	27	12	6 to 8
	738B	3/8 Gas	22	27	12	6 to 11
	738C	1/2 Gas	22	27	14	6 to 15
	738D	3/4 Gas	22	32	16	6 to 20
	738E	1" Gas	22	36	18	6 to 20
	738H	1/4 NPT	22	27	14	6 to 8
	738J	1/2 NPT	22	27	20	6 to 15
	738K	3/4 NPT	22	27	20	6 to 20
	738L	1" NPT	22	36	25	6 to 20
	738P	M18x1,5	22	27	12	126 to
	738Q	M20x1,5	22	27	14	6 to 14
	738R	M24x1,5	22	27	14	6 to 18

Note: minimum immersion length:

Ls for Ø 8 = 85 mm

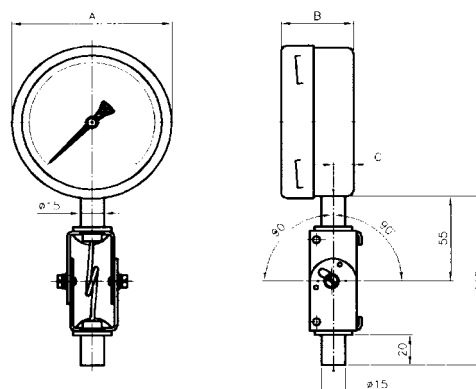
Ls for Ø 14 = 50 mm

Type D (Code 11)



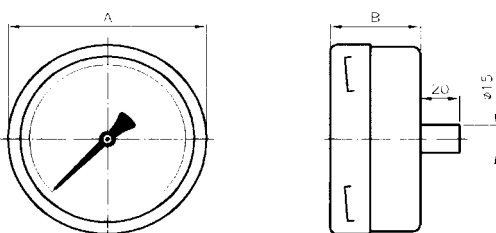
DIAMETER	DIMENSIONS in mm		
	A	B	C
63	63	38	13
80	83	37	13
100	101	45	13
160	161	45	13
250	252	55	13

Type D Swivelling (Code 41)



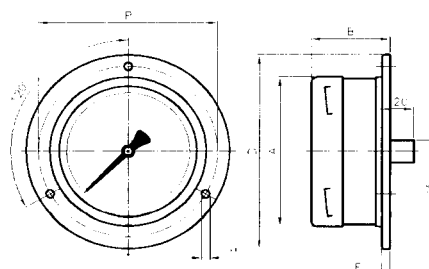
DIAMETER	DIMENSIONS in mm		
	A	B	C
63	63	38	13
80	83	37	13
100	101	45	13
160	161	45	13
250	252	55	13

Type F (Code 12)



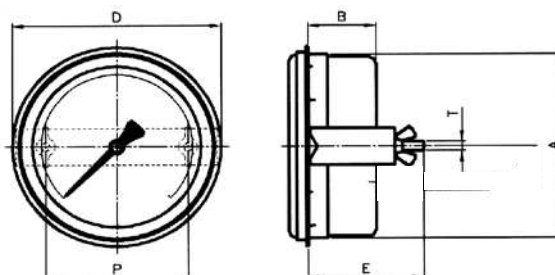
DIAMETER	DIMENSIONS in mm	
	A	B
63	65	38
80	83	37
100	101	45
160	161	45
250	252	55

Type E (Code 32)



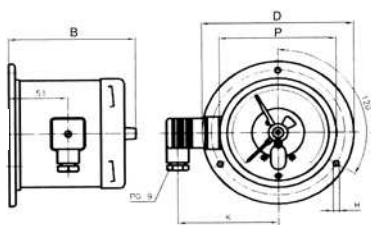
DIAMETER	DIMENSIONS in mm					
	A	B	D	F	H	P
63	65	41	86	5	3,5	75
80	83	40	110	5	4	95
100	101	51	132	5	5,5	116
160	161	51	196	5	6	178
250	252	57	285	2	6	270

Type G (Code 53)



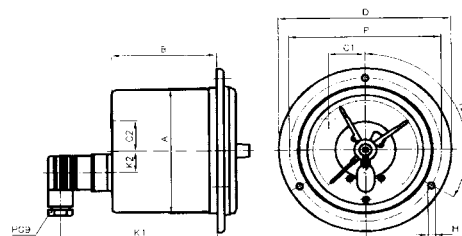
DIAMETER	DIMENSIONS in mm						
	A	B	C	D	E	P	T
63*	65	30	20**	70	50	33	M5
80	83	35	25	95	55	59	M5
100	101	35	20	112	60	75	M5
160	161	35	20	180	60	139	M5
250+	252	45	0	270	70	+	M5

Type E (Code 32)



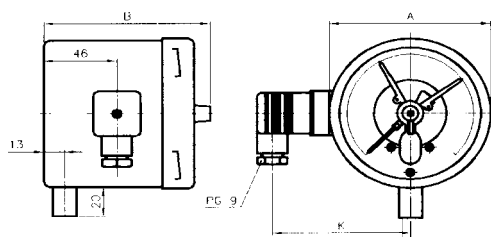
DIAMETER	DIMENSIONS in mm					
	A	B	D	H	P	K
100	101	110	132	5.5	116	92
160	161	114	196	6	178	122

Type B (Code 22)



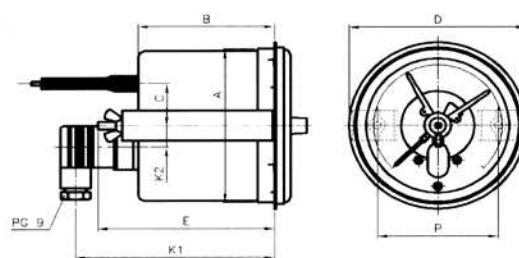
DIAMETER	DIMENSIONS in mm								
	A	B	C1	C2	D	H	P	K1	K2
100	101	80	26	10	101	5.5	116	123	15
160	161	83	0	0	196	6	178	126	0*

Type D (Code 11)



DIAMETER	DIMENSIONS in mm		
	A	B	K
100	101	104	92
160	161	108	122

Type G (Code 53)



DIAMETER	DIMENSIONS in mm							
	A	B	C	D	E	P	K1	K2
100	101	84	25	112	109	75	128	15
160*	161	88	0	180	113	139	131	54**

* U-Clamp, fitted vertically

** 54 mm, on the right (front view)

Equivalence table: mounting types

	Mounting type (7' digits)		Plunger position (8' digits)	
A =>	3	Wall mounting, rear flange	1	Bottom outlet
B =>	2	Board mounting, front flange	2	Rear outlet
C =>	2	Board mounting, front flange	1	Bottom outlet
D =>	1	Without flange	1	Bottom outlet
E =>	3	Wall mounting, rear flange	2	Rear outlet
F =>	1	Without flange	2	Rear outlet
G =>	5	Board mounting with mounting clamp	3	Rear outlet with clamp
H =>	6	Wall mounting with support console	1	Bottom outlet

Beispiel für die Entsprechungen: Typ A = Code 31 (Ziffer 7 und 8)