

Gas-actuated Thermometers, Every Angle

Crimped-on ring case stainless steel, turnable and adjustable

TGelChg
TGelChgG

Standard Versions

This data sheet contains detailed information on our standard versions and available options. In overview 8000 you will find additional information on selection, metrological features, permissible ambient and storage temperatures as well as error limits, etc. Information on the metrologically optimal design of thermometers can be found in our technical information sheet T08-000-031.

Measuring Unit

With nitrogen filling (inert gas, physiologically safe)

Accuracy (DIN EN 13 190)

Class 1

Case

With polished crimped-on ring, stainless steel 1.4301 (304)

Degree of Protection (DIN EN 60 529/IEC 529)

IP65

Case Filling

For model TGelChgG: silicone oil

Nominal Case Sizes

63, 80, 100, 160 mm (2½, 3, 4, 6")

Case Configuration

Connection temperature

sensor (stem):

pivot (every angle)

Stem position:

centre back position,

compared to case approx.

135° adjustable and 360° turnable

Mounting device:

without

Temperature Ranges (DIN EN 13 190)

Temperature differences (spans) from 80 K up to 600 K

Temperature Sensor (Stem)

Made of stainless steel 1.4571 (316Ti)

Max. static operating pressure: 25 bar

Stem models optionally: A1, A3, A4, A4.1, A5 or A6

Stem Ø dF: 8, 10 or 12 mm

Stem length L: from Lmin or L1min up to 2.50 m

Please regard the minimum stem length depending on active length (La) and stem model, see page 3

Window

Instrument glass

Movement

Brass/German silver

Dial

Aluminum white, scale black

Pointer

Aluminum black

Indication Adjustment (±6 %)

Externally via screw



Ordering Information, Standard Ranges, Options

See page 4

Special Versions and Further Options

- Other stem models, stem Ø, connection threads and materials upon request
- Other temperature ranges and/or special scales, e.g. dual scale °C/°F, coloured fields or ranges, dial inscriptions
- Case parts stainless steel 1.4404 (316L) upon request
- Model TGelChg for ambient temperatures to -60 °C;
Model TGelChgG for ambient temperatures to -40 °C,
to -60 °C NCS 100 and 160
- GOST version for Russia, Ukraine, Kazakhstan, Belarus

Thermowells

See data sheets 8.8110ff.

www.armano-messtechnik.com

ARMANO

ARMANO Messtechnik GmbH

Location Beierfeld

Am Gewerbepark 9 • 08344 Grünhain-Beierfeld
Tel.: +49 3774 58 - 0 • Fax: +49 3774 58 - 545
mail@armano-beierfeld.com

Location Wesel

Manometerstraße 5 • 46487 Wesel-Ginderich
Tel.: +49 2803 9130 - 0 • Fax: +49 2803 1035
mail@armano-wesel.com

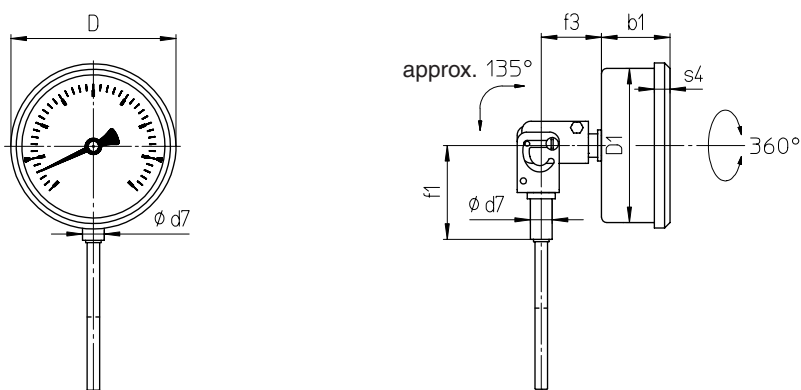
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Stem Position, Dimensional Data and Weights

Centre Back Stem Position, with Pivot (Every Angle)

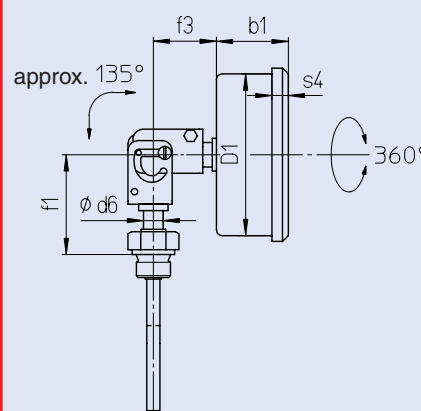
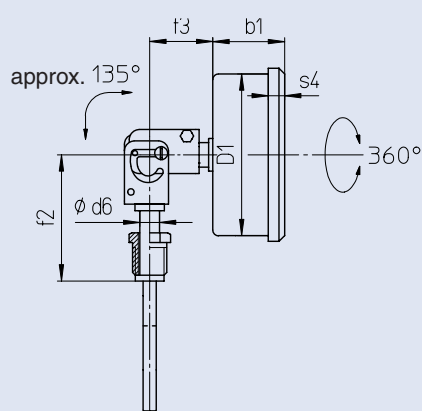
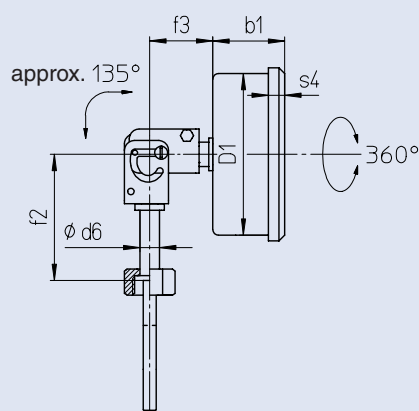
Stem model A1 (also A5)



Stem model A3 (also A6)

Stem model A4

Stem model A4.1



Dimensional Data (mm) and Weights (kg)

NCS	b1	D	D1	d6	d7	f1 ¹⁾	f2 ¹⁾	f3	s4	approx. weight ²⁾	
										TGelChg	TGelChgG
63	39	67	62	12	14	63	80	40	8	0.35	0.43
80	42	86	79	12	14	63	80	40	8	0.44	0.58
100	43	106	99	12	14	63	80	40	10	0.55	0.75
160	51	167	159	12	14	63	80	40	11	0.88	1.60

¹⁾ Temperature ranges ≥ 400 °C: extended dimension for small stem lengths, see T08-000-031

²⁾ The data are examples and relate to the version with stem A1, Ø 10 mm, length 200 mm

Stem Models

Stem Models											
Process connection:		Without screw fitting, plain stem									
Stem model:	A1										
Form acc. to DIN EN 13 190:	Form 1										
Stem material:	1.4571										
Stem Ø dF:	8, 10, 12 mm										
Order length:	L										
Suitable thermowell models: (data sheet)	SK1 (8.8140), SK2 (8.8141)										
Process connection:		Union nut			Male thread, turnable			Male thread, rigid			
Stem model:	A3										
Form acc. to DIN EN 13 190:	Form 5										
Stem material:	1.4571										
Stem Ø dF:	8, 10, 12 mm										
Screw fitting material:	1.4571										
Order length:	L										
Suitable thermowell models: (data sheet)	SF4.1 (8.8111), SF4.1F (8.8113) SF8 (8.8130), SF9 (8.8131)			SF4 (8.8110), SF4F (8.8112) SF5 (8.8120), SF6, SF7 (8.8121)			SF4 (8.8110), SF4F (8.8112) SF5 (8.8120), SF6, SF7 (8.8121)				
Thread (dimensional data in mm):	G	SW	i	G	SW	i	G	SW	i		
	G ½	27	10	G ½B	22	20	G ½B	27	14		
	G ¾	32	12	G ¾B	27	23	G ¾B	32	16		
	M20x1.5	27	10	M18x1.5	22	14	½" NPT	27	19		
	M24x1.5	32	12	M20x1.5	22	20	¾" NPT	27	19		
	M27x2	32	12				M18x1.5	24	14		
							M20x1.5	27	14		
Thermowell required!											
Process connection:		Male thread/compression fitting				Male thread, turnable/double male adapter					
Stem model:	A5										
	(A1 with compression fitting)										
Form acc. to DIN EN 13 190:	Form 2 (cylindrical thread) Form 3 (conical thread)										
Stem material:	1.4571										
Stem Ø dF:	8, 10, 12 mm										
Screw fitting material:	1.4571										
Order length:	L										
Suitable thermowell models: (data sheet)	SF4 (8.8110), SF4F (8.8112) SF5 (8.8120), SF6, SF7 (8.8121)				SF4 (8.8110), SF4F (8.8112) SF5 (8.8120), SF6, SF7 (8.8121)						
Thread (dimensional data in mm):	G	SW1	SW2	i	Lk	G1	G2	SW1	SW2	i	Lv
	G ½B	27	22	14	42	G ½B	G ½B	27	27	14	28
	G ¾B	32	22	16	42	G ¾B	G ½B	32	27	16	28
	½" NPT	27	22	19	42	½" NPT	G ½B	27	27	19	28
	¾" NPT	27	22	19	42	¾" NPT	G ½B	27	27	19	28
	M20x1.5	27	22	14	42	M20x1.5	M20x1.5	27	27	14	28
						M24x1.5	M20x1.5	32	27	14	28
						M27x2	M20x1.5	32	27	16	28
Minimum Stem Length, Active Length and Maximum Feasible Stem Length (mm)											
			up to max. 500 °C			500 °C and above					
			Stem Ø dF:			Stem Ø dF:					
			12			12			10		
			10			10			8		
			8			8			8		
Stem model:	Length:	Thread:									
all models	La	all standard threads	35	45	75	75	105	165	The minimum length Lmin/L1min is the smallest feasible stem length.		
A1/A3/A4	Lmin	all standard threads	55	65	95	95	125	185	Important: Please note the technical information sheet T08-000-031 on the metrologically optimal stem length.		
A4.1	Lmin	G ½B, M18x1.5, M20x1.5	49	59	89	89	119	179	The active length La is the temperature-sensitive part of the stem.		
		G ¾B	51	61	91	91	121	181	The maximum feasible stem length is 2.50 m. With a capillary line, greater lengths are possible, e.g. with special stems A3.2, A4.2 and A4.3 (data sheet 8299.1).		
		½" NPT, ¾" NPT	54	64	94	94	124	184			
A5	Lmin	all standard threads	90	100	130	130	160	220			
A6	L1min	G ½B, M20x1.5	49	59	89	89	119	179			
		G ¾B, M24x1.5, M27x2	51	61	91	91	121	181			
		½" NPT, ¾" NPT	54	64	94	94	124	184			
others			upon request			upon request					

