

Dial thermometer // gas filled // version for low temperatures

Type 301 // 302



Type 301

Highlights

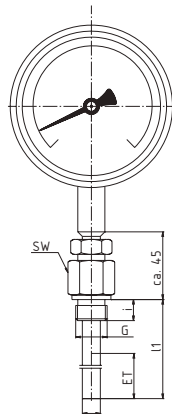
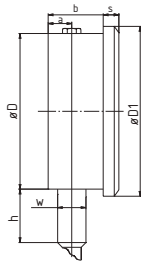
- For gas applications (LNG, CNG)
- Completely stainless steel - high-quality version
- Without electrical auxiliary power

Technical data

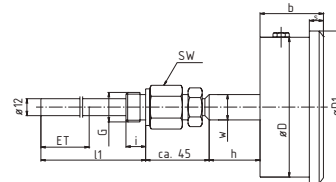
Type	301	302
Version	Rigid connection with neck tube	
Nominal size	Ø 63, 80 or 100 mm	
Display ranges according to EN 13190	-200...100 °C -150...100 °C -50...10 °C -100...50 °C	
Accuracy according to EN 13190	Class 1	
Medium / Application area	Frozen gases	
Immersion tube connection	Bottom	Central back
Immersion tube length	Between 63...400 mm	
Immersion tube diameter	Ø 10, 12 or 13 mm	
Process connection	Connection types: A, AK	
Nominal pressure	Max. 25 bar	
Measuring system	Nitrogen filled	
Degree of protection according to EN 60529	IP65	
Medium temperature	See selected display range	
Ambient temperature	-20...60 °C (only indoors)	
Storage temperature	-40...60 °C	

Technical drawings

Type 301



Type 302



Dimensions

Dimensions [mm]							
NS	a	b	D	D1	h	s	w
Type 301							
63	12	39	62	67	60	8	12
Type 302							
63	12	39	62	67	34	8	18
Type 301, 302							
80	15	42	79	86	34	8	18
Type 301, 302							
100	15	43	99	106	34	10	18

Material

Material	
Housing	Bayonet ring, Stainless steel 1.4301 filled with silicone oil
Window	Instrument glass
Pointer movement	German silver / brass
Dial	Aluminium white with black scale markings
Pointer	Aluminium black
Material in contact with media	
Process connection	Stainless steel 1.4571
Immersion tube	Stainless steel 1.4571

Standard connection types // Immersion tube // for type 301 / 302

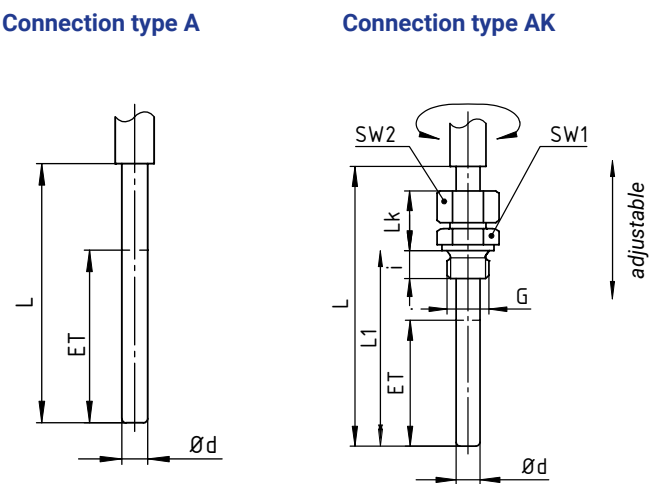
Connection type A
Plain immersion tube, universally usable

Connection type AK [mm]			
With adjustable compression fitting, for direct installation or use with protection tubes recommended			
G	SW1	i	Lk
G½ B	27	14	45
G¾ B	32	16	
½ NPT	27	20	
¾ NPT	27	20	
M20 x 1.5	27	14	

Stem diameter [mm]	
Ø d	SW2
10	22
12	22
13	22

Active length (ET) and minimum feasible immersion tube length		
Connection type	Length [mm]	
	ET L ₁	Immersion tube length L = l ₁ + 45 mm
A, AK	100 mm	145 mm
	135 mm	180 mm
	160 mm	205 mm
	200 mm	245 mm
	250 mm	295 mm
	300 mm	345 mm
	400 mm	445 mm

The minimum length L_{min} / l_{1min} of the immersion tube is the shortest possible immersion tube length for a given active length ET (bulb) and connection type. The active length ET of the immersion tube (bulb) must be fully immersed in the substance to be measured in order to obtain measurements corresponding to the stated accuracy class. The maximum realisable stem length is 2.5 m.

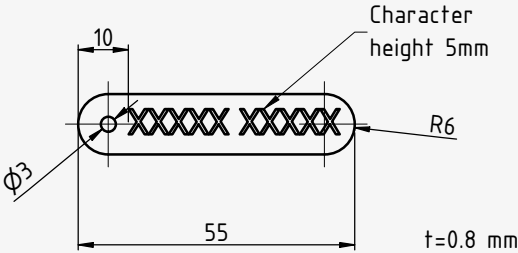



Article numbers

Order code											
Immersion tube connection											
Bottom connection		Z	301								
Central back connection		Z	302								
Nominal size											
63 mm				A2							
80 mm				B2							
100 mm				C2							
Display range											
-200...100 °C				F2							
-200...50 °C				A2							
-150...100 °C				E4							
-50...100 °C				F1							
-100...50 °C				95							
Immersion tube installation length l ₁		Immersion tube length L = l ₁ + 45 mm									
100 mm		145 mm									100
135 mm		180 mm									135
160 mm		205 mm									160
200 mm		245 mm									200
250 mm		295 mm									250
300 mm		345 mm									300
400 mm		445 mm			400						
Connection type											
Connection type A, Plain immersion tube											0
Connection type Ak, adjustable compression fitting											9
Process connection											
Without - Plain immersion tube, type A											0
G½											2
G¾											3
½ NPT											B
¾ NPT											C
M20 x 1.5											7
Material process connection											
Without - Plain immersion tube, type A											0
Stainless steel											3
Immersion tube diameter											
10 mm (only for NS 63 and NS 80 mm)										3	
12 mm										4	
13 mm										6	
Example order number		Z	301	A2	F2	100	0	0	0	3	

* Double scale °C and °F available on request.

Please use our order numbers for standard types or provide full technical specification in case of special non-standard thermometers.

Accessories	Article number
<div><p>Measuring point designation Laser-inscribed stainless steel plate with fixing wire for easy attachment to measuring points</p><p>→ Scope of delivery: Designation plate inscribed according to specification and enclosed fixing wire (sealing wire)</p><p>→ Fastening: Wire (included in delivery), alternatively sealing, cable ties or similar (not included in delivery)</p><p>→ Materials: Plate stainless steel 1.4571, wire stainless steel</p><p>→ Dimensions: Plate 55 x 10 x 0.8 mm, wire length 180 mm</p><p>→ Inscription: one-sided, single-line, max. 11 characters, character height 5 mm, designation width max. 40 mm, letters, numbers, symbols, barcodes, QR codes</p><p>→ Transmission of designations: digital list, file formats Excel, Word or CSV</p></div> <div></div>	<p>ONSITETAG</p>