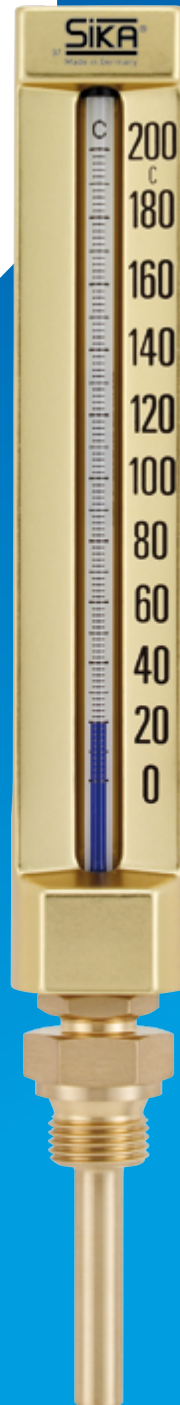


- SIKA thermometers for industry and marine sector
- Special versions and accessories
- SIKA thermometers for heating, air conditioning and ventilation (HVAC)



INDUSTRIAL THERMOMETERS



Contains products with:





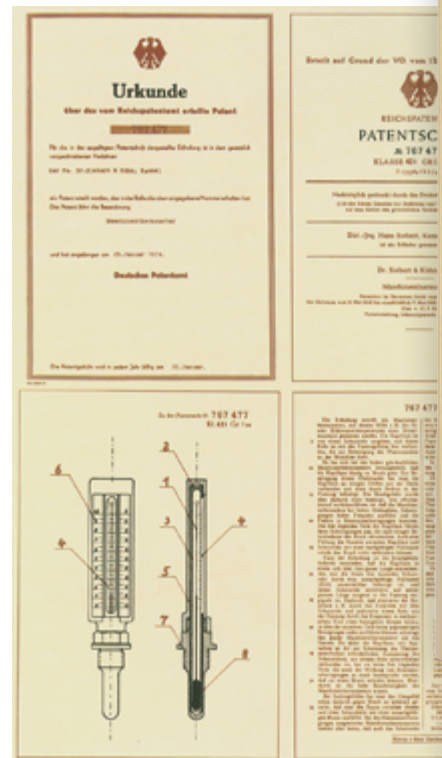
SIKA thermometers

Quality by tradition

Since 1901 we at SIKA - Dr. Siebert and Kühn have produced precision measuring and control instruments. The original "SIKA" thermometer was developed and brought to production stage by the engineer Hans Siebert. For its basic mechanical design, Dr. Siebert and Kuehn finally received the patent no. 767477 in 1939. From those early days on, we have been manufacturing these thermometers solely in Kassel / Kaufungen – that is real quality "made in Germany".

Since their invention, SIKA thermometers have been the very embodiment of robustness, reliability and accuracy. They harbour knowledge of many details and the experience of thousands of applications. For this reason, they are now completely indispensable in marine engineering, mechanical and plant engineering, as well as heating and air conditioning technology. Over 15 million reliable temperature monitors have already been produced in Kaufungen.

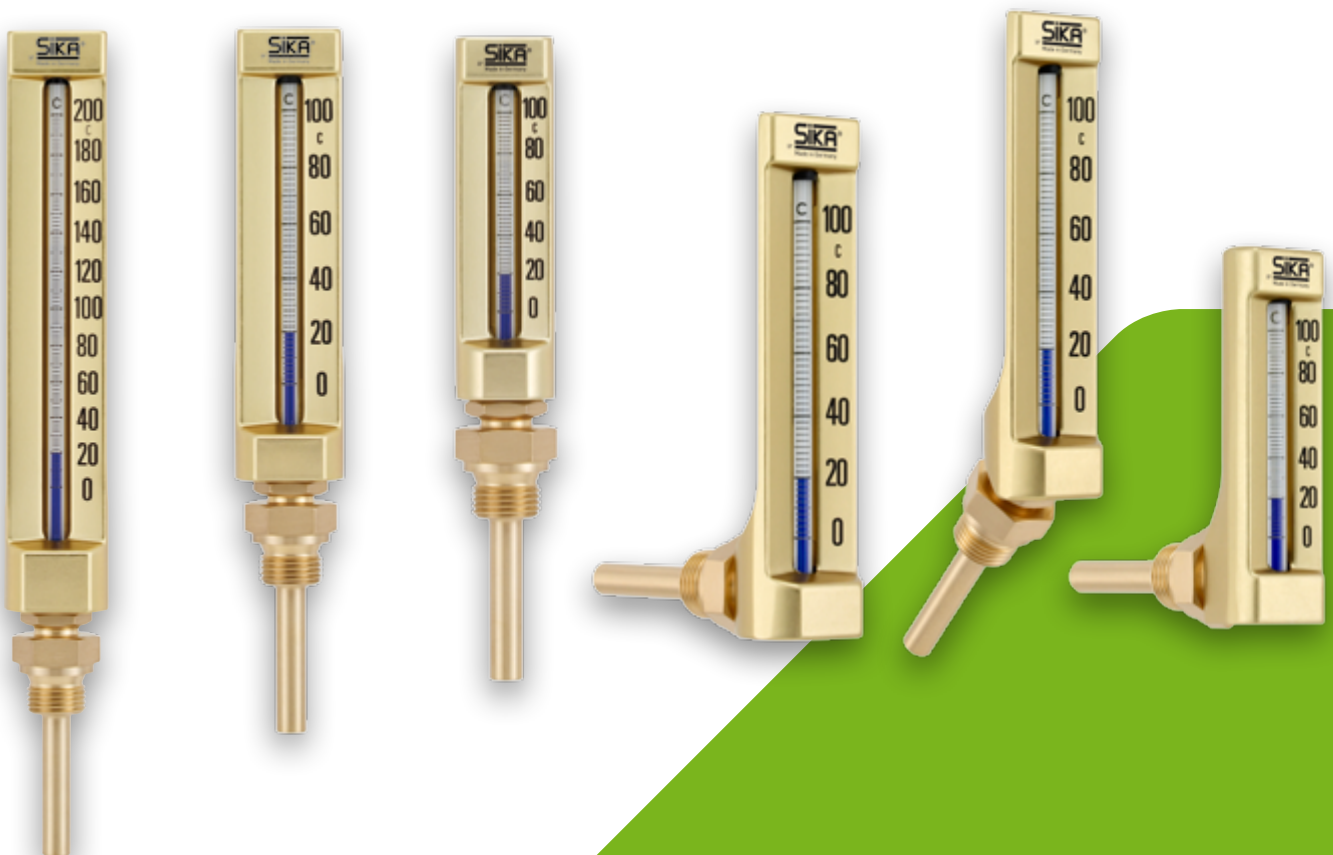
The advantages of a glass thermometer over other thermometers such as dial thermometers or electronic versions, are obvious: no mechanically moving parts, no material fatigue, no electrical energy requirement, but a high level of accuracy and a very long service life. In other words, as long as a glass thermometer is not mechanically destroyed, it remains accurate for the duration of its service life.



Our range

Mechanical parts as well as glass inserts of our standard types are produced in automated manufacturing processes. However, the glass inserts of special versions, e. g. high temperature versions are still produced by our glassblowers in traditional handcraft. Thanks to our long-year experience, we are in the position to produce custom versions on request. You can obtain popular types from us off the shelf or within a few days.

On the following pages you will find an overview of our extensive range of industrial thermometers. The range in this catalogue includes more than 17 000 different models. In addition, there is a multitude of customer-specific special designs that are used throughout the world.



Details of construction

Version for industry and marine sector

Casing

Aluminum, V-shaped, completely polished, gold-coloured anodized (or silver-coloured upon request). Numerals of reading scale printed on the right side. Printing black-colored for easy readability. Straight types adjustable to any desired viewing position and locked by brass nut, wrench size 22. Angle thermometers (90 degrees) have a grooved adapter piece with locking screw. Advantage: When mounting the thermometer, it is not necessary to turn the casing.

Glass inserts (Capillaries)

Capillary tube of solid glass, bar-shaped, prismatic (optic enlargement of the column, except for high temperature types), diameter approx. 6 mm, oval opening, with yellow background for mercury and white background for blue fluid column. Scale is deeply burnt in black, thus being absolutely resistant. The main graduations, which correspond with the printing on the casing, are especially clearly outlined.

Thermometric liquids

In the standard version from -30 to 250 °C blue thermometric fluid. For display ranges starting at 0...300 °C only mercury filling is technically possible. According to regulation no. 847 / 2012 of European Union, thermometers with mercury filling are only bound for export outside the EU. Placing them on the market inside the EU after April 10th, 2014 is prohibited. Concerned are industrial thermometers and glass inserts with display ranges 0...300 °C and higher, only. In this case, we are recommending the use of our dial or digital thermometers.

Immersion tube

Standard version made from brass for temperatures up to 300 °C, from steel for higher max. temperature. On request, high-strength brass or CuNiFe alloy suitable for sea water. Stainless steel for aggressive media. The diameter of the type "B" immersion tube is 10 mm; the wall thickness 1 mm.

Scale intervals and error limits

SIKA thermometers fulfil the requirements of DIN 16195 „Requirements and testing of industrial glass thermometers“. Scale intervals and error limits are defined in relation to the casing size and the display range.



Version for heating - air conditioning - ventilation (HVAC)

We have modified and optimally adapted our industrial thermometers to the requirements in the field of heating and air conditioning applications. In this way, we combine a completely reliable measuring instrument with an unbeatable price/performance ratio. Two different housing models and three different housing sizes are available specifically for heating and air conditioning applications. These thermometers are generally available in quantities of 10 units per model.



Thermometric liquid

In the standard version up to 200 °C blue wetting fluid („Fü“).

Immersion tube

Standard version made from brass, type B with connection thread G½. The diameter of this immersion tube is 10 mm, with a wall thickness of 1 mm. Stainless steel available as an option.

Scale intervals and error limits

SIKA thermometers fulfil the requirements of DIN 16195 „Requirements and testing of industrial glass thermometers“. Scale intervals and error limits are defined in relation to the casing size and the display range. For example, a 291 HBZ thermometer, typical for heating applications, with a display range of 0 to 120 °C, has a scale interval of 2 °C and an error limit of 1 °C.

Casing

Aluminium, v-shaped, painted in a gold colour. Alternatively, versions with plastic casing top section made from polyamide PA6, black-coloured, are available. The numbers of the display range are printed on the right side and are long-lasting. Connection of casing and immersion tube through grooved adapter piece and locking screw. Advantage: When mounting the thermometer, it is not necessary to turn the casing.

Glass inserts (Capillaries)

Capillary tube of solid glass, bar-shaped, prismatic, diameter approx. 6 to 8 mm, with white background for blue fluid column. Scale is deeply burnt in black, thus being absolutely resistant. The main graduations, which correspond with the printing on the casing, are especially clearly outlined.

Technical data and order codes

Industrial thermometers type B with male thread (nominal size 200)

Order example	271	2	35	1	1	063	2	1
Thermometer type								
Straight	271							
Angle 90°	272							
Angle 135°	273							
Immersion tube type								
Type B		2						
Display ranges								
-30...50 °C			35					
0...60 °C			06					
0...100 °C			10					
0...120 °C			12					
0...160 °C			16					
0...200 °C			20					
0...250 °C			25					
0...300 °C			30					
0...600 °C			60					
Scale								
Celsius °C				1				
Celsius and Fahrenheit (°C + °F)				2				
Thermometric liquid								
Standard blue fluid for display ranges up to 0...250 °C					1			
Mercury* for display ranges starting at 0...300 °C					2			
Immersion tube length (l₁)								
63 mm						063		
100 mm						100		
160 mm						160		
250 mm						250		
Fixed male thread								
G½ / SW27							2	
G¾ / SW32							3	
M20 x 1.5 / SW27							7	
M27 x 2 / SW32							9	
Immersion tube material								
Brass								1
Steel								2
Stainless steel								3
Special brass								4
Copper-nickel alloy								5

If required please ask for our specification sheet „Immersion tube material“

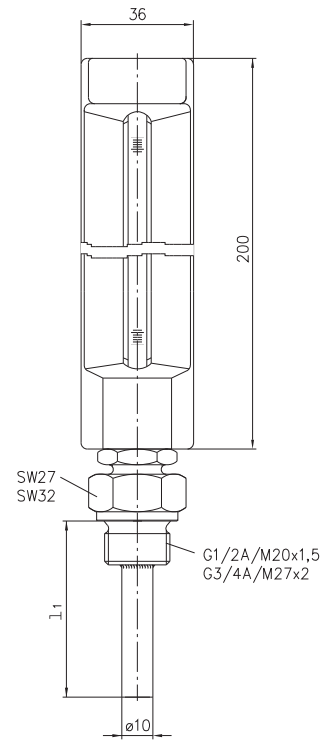
* See note on availability of thermometric liquids on page 10.

DIN 16189 B, DIN 16190 S, S1 and DIN 16191 B, B1

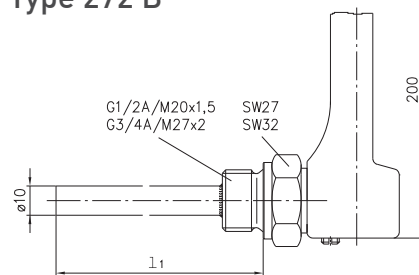
Type 271 B



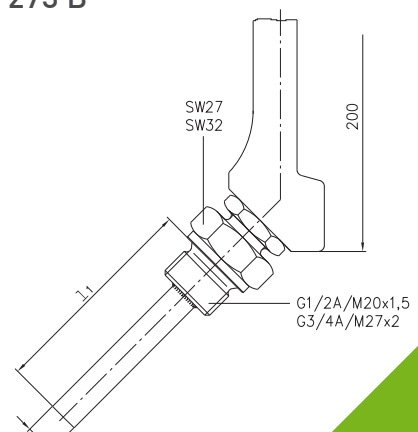
Type 271 B



Type 272 B



Type 273 B



Industrial thermometers type B with male thread (nominal size 150)

Order example	291	2	35	1	1	063	2	1
Thermometer type								
Straight	291							
Angle 90°	292							
Angle 135°	293							
Immersion tube type								
Type B		2						
Display ranges								
-30...50 °C			35					
0...60 °C			06					
0...100 °C			10					
0...120 °C			12					
0...160 °C			16					
0...200 °C			20					
0...250 °C			25					
0...300 °C			30					
0...600 °C			60					
Scale								
Celsius °C				1				
Celsius and Fahrenheit (°C + °F)				2				
Thermometric liquid								
Standard blue fluid for display ranges up to 0...250 °C					1			
Mercury* for display ranges starting at 0...300 °C					2			
Immersion tube length (l₁)								
63 mm						063		
100 mm						100		
160 mm						160		
250 mm						250		
Fixed male thread								
G½ / SW27							2	
M20 x 1.5 / SW27							7	
Immersion tube material								
Brass								1
Steel								2
Stainless Steel								3
Special brass								4
Copper-nickel alloy								5

If required please ask for our specification sheet „Immersion tube material“

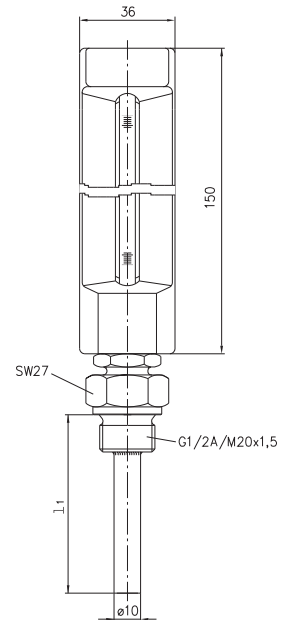
* See note on availability of thermometric liquids on page 10.

DIN 16185 B and DIN 16186 S

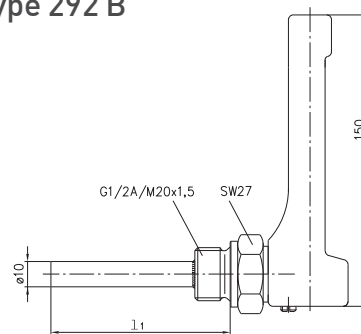
Type 291 B



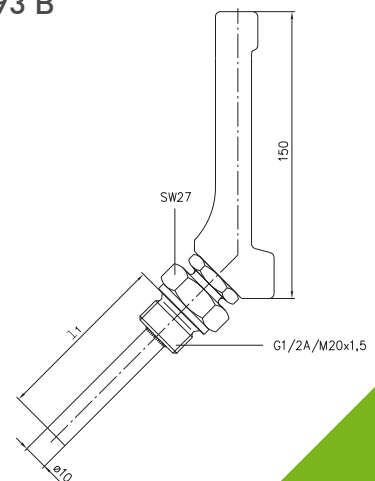
Type 291 B



Type 292 B



Type 293 B



Industrial thermometers type B with male thread (nominal size 110)

Order example	174	2	35	1	1	063	2	1
Thermometer type								
Straight	174							
Angle 90°	175							
Angle 135°	176							
Immersion tube type								
Type B		2						
Display ranges								
-30...50 °C			35					
0...50 °C			05					
0...60 °C			06					
0...100 °C			10					
0...120 °C			12					
0...160 °C			16					
0...200 °C			20					
Scale								
Celsius °C				1				
Celsius and Fahrenheit (°C + °F)				2				
Thermometric liquid								
Standard blue fluid					1			
Immersion tube length (l₁)								
30 mm						030		
40 mm						040		
63 mm						063		
100 mm						100		
160 mm						160		
250 mm						250		
Fixed male thread								
G ³ / ₈ / SW22							1	
G ¹ / ₂ / SW27							2	
M16 x 1.5 / SW22							5	
M20 x 1.5 / SW27							7	
Immersion tube material								
Brass								1
Steel								2
Stainless Steel								3
Special brass								4
Copper-nickel alloy								5

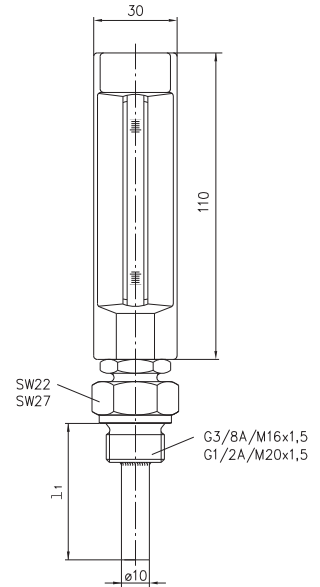
If required please ask for our specification sheet „Immersion tube material“.

DIN 16181 B, B1 and DIN 16182 S, S1

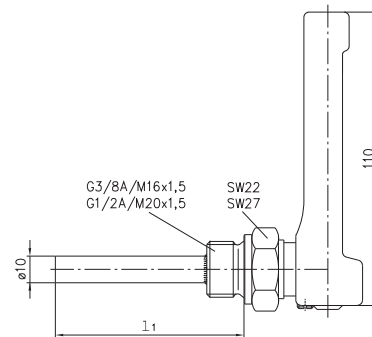
Type 174 B



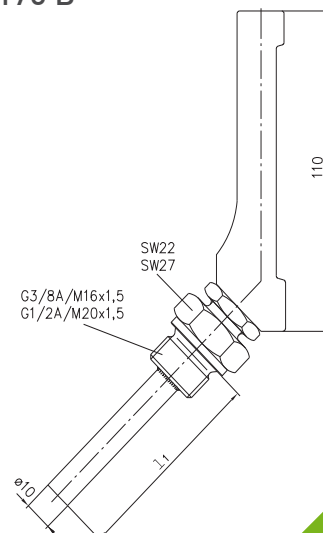
Type 174 B



Type 175 B



Type 176 B



Industrial thermometers type Da with union nut (nominal size 200)

Order example	271	3	35	1	1	089	2	A
Thermometer type								
Straight	271							
Angle 90°	272							
Angle 135°	273							
Immersion tube type								
Type Da		3						
Display ranges								
-30...50 °C			35					
0...60 °C			06					
0...100 °C			10					
0...120 °C			12					
0...160 °C			16					
0...200 °C			20					
0...250 °C			25					
0...300 °C			30					
0...600 °C			60					
Scale								
Celsius °C				1				
Celsius and Fahrenheit (°C + °F)				2				
Thermometric liquid								
Standard blue fluid for display ranges up to 0...250 °C					1			
Mercury* for display ranges starting at 0...300 °C					2			
Immersion tube length (l₁)								
with union nut G½, M20 x 1.5 (SW27)								
89 mm						089		
126 mm						126		
186 mm						186		
276 mm						276		
426 mm						426		
with union nut G¾, M27 x 2 (SW32)								
93 mm						093		
130 mm						130		
190 mm						190		
280 mm						280		
430 mm						430		
Union nut								
G½ / SW27							2	
M20 x 1.5 / SW27							7	
G¾ / SW32							3	
M27 x 2 / SW32							9	
Immersion tube material								
Standard: up to 250 °C = brass, above 250 °C = fitting: brass / tube: steel								A
Option: fitting and tube: stainless steel								C

Please consult our separate catalogue „Protection Tubes for Thermometers“ for further information.

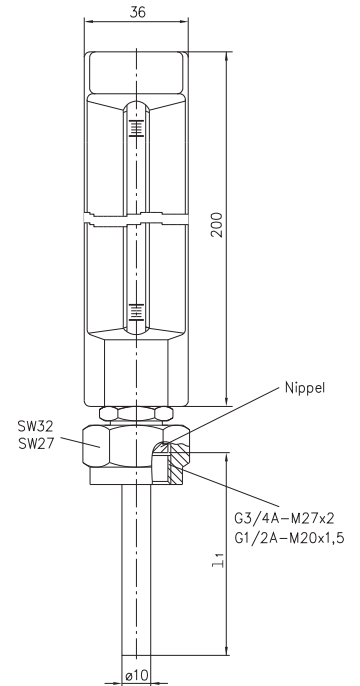
* See note on availability of thermometric liquids on page 10.

DIN 16189 C, C1, DIN 16190 S, S1 and DIN 16191 C, C1

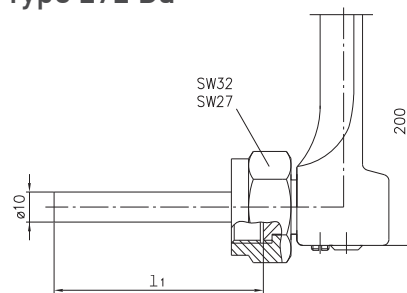
Type 271 Da



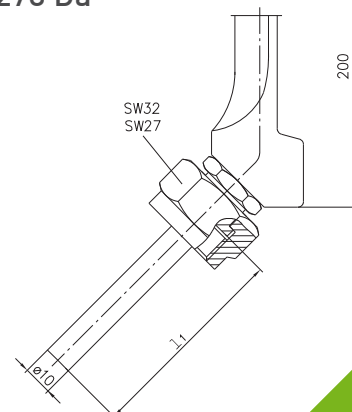
Type 271 Da



Type 272 Da



Type 273 Da



The lengths of the immersion tubes are in line with protection tubes DIN 16179, DIN 43772, form 8 and 9 and form CS. Please consult our separate chapter „Protection tubes for thermometers“ for further information.

Industrial thermometers type Dc with union nut (nominal size 200)

Order example	271	5	35	1	1	155	8	A
Thermometer type								
Straight	271							
Angle 90°	272							
Angle 135°	273							
Immersion tube type								
Type Dc		5						
Display ranges								
-30...50 °C			35					
0...60 °C			06					
0...100 °C			10					
0...120 °C			12					
0...160 °C			16					
0...200 °C			20					
0...250 °C			25					
0...300 °C			30					
0...600 °C			60					
Scale								
Celsius °C				1				
Celsius and Fahrenheit (°C + °F)				2				
Thermometric liquid								
Standard blue fluid for display ranges up to 0...250 °C					1			
Mercury* for display ranges starting at 0...300 °C					2			
Immersion tube length (l₃)								
Immersion tube length match protection tubes according to DIN 43772 form 4								
155 mm						155		
215 mm						215		
275 mm						275		
295 mm						295		
355 mm						355		
415 mm						415		
Union nut made of brass								
M24 x 1.5 / SW32							8	
Immersion tube material								
Fitting: brass / tube: stainless steel								

Please consult our separate catalogue „Protection Tubes for Thermometers“ for further information.

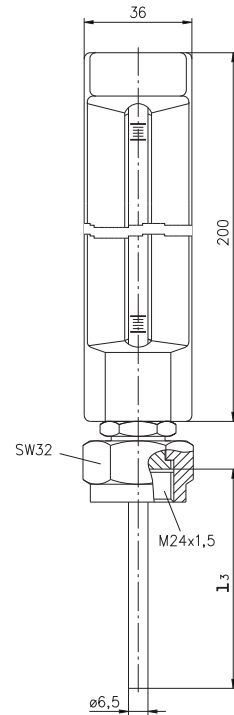
* See note on availability of thermometric liquids on page 10.

DIN 16189 F

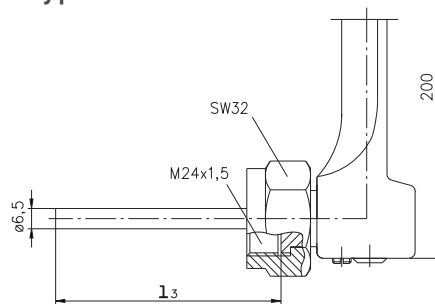
Type 271 Dc



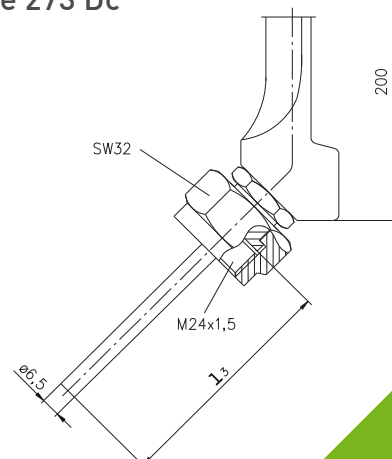
Type 271 Dc



Type 272 Dc



Type 273 Dc



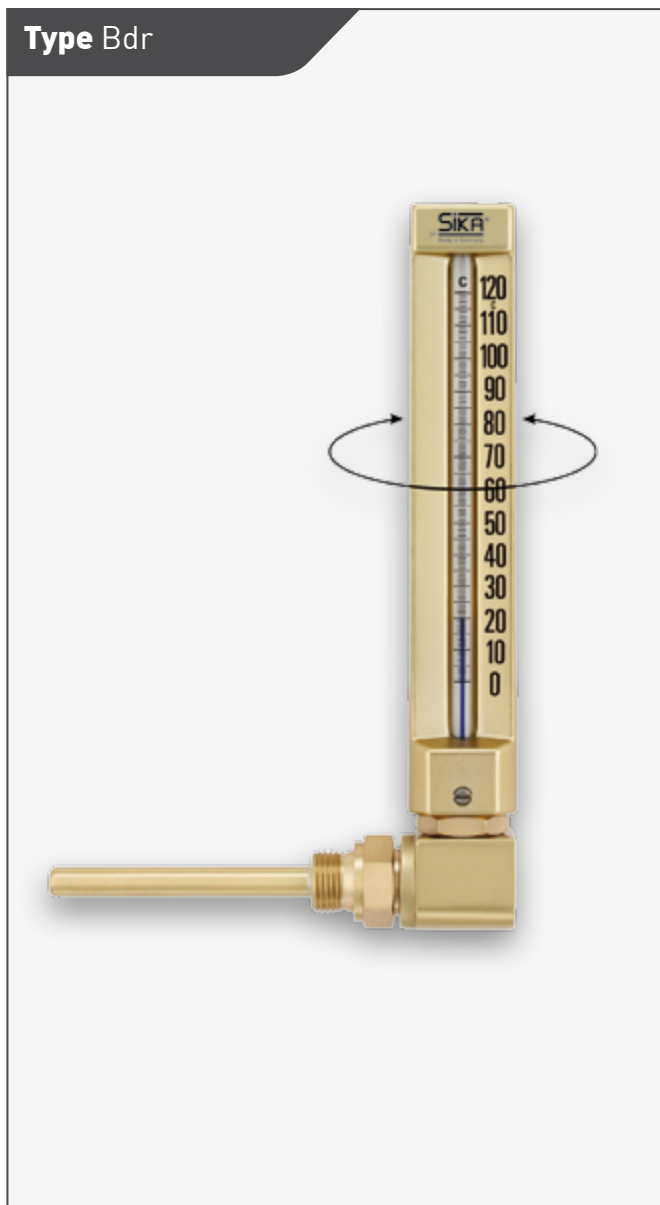
We supply thermometers in the Dc range with a \varnothing 6.5 mm steel tube over the bottom of the capillary tube, suitable for protection tubes with a bore of 7 mm. Please consult our chapter „Protection tubes for thermometers“ for further information.

Special models & options

For industrial versions

Bdr type rotatable angle model

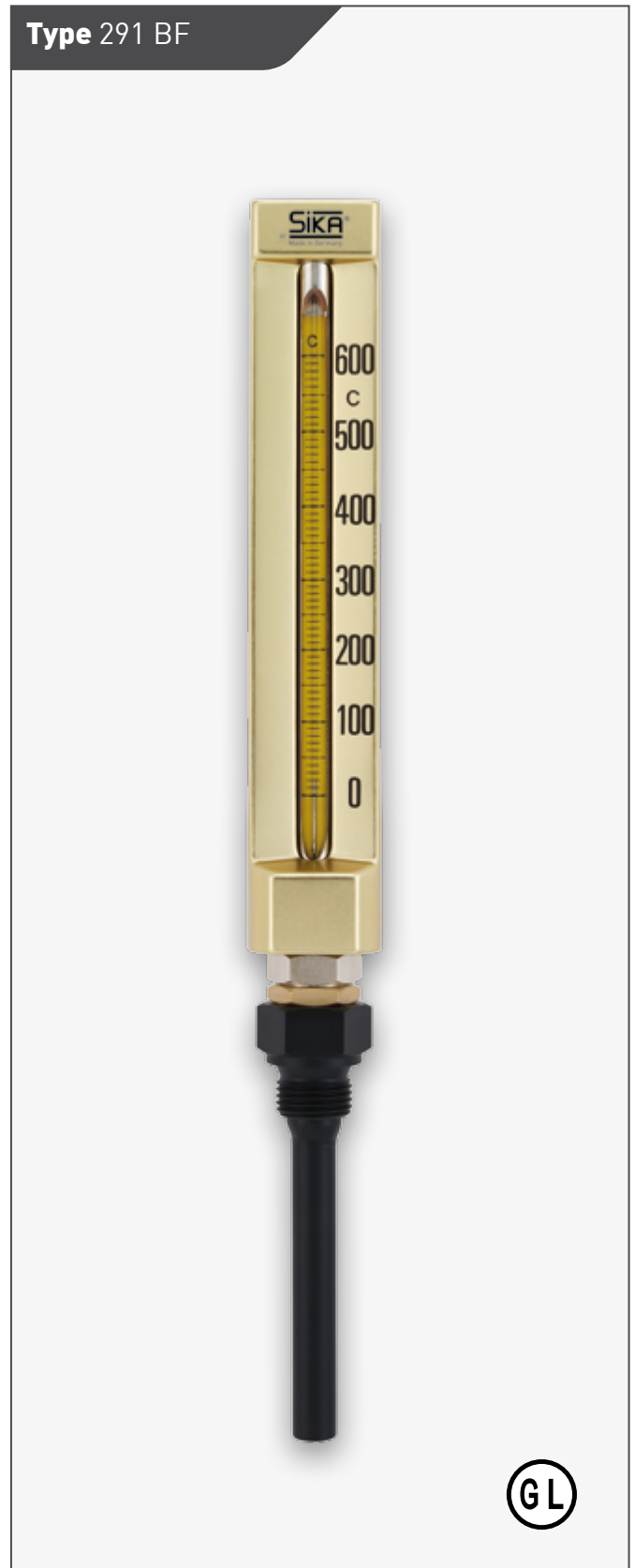
The casing of the original Bdr type SIKKA thermometer can be rotated axially through 360° and therefore be adjusted to be read from any angle. Available as Type 272, 292 and 175.



BF type vibration-resistant model

Thermometer for use in applications exposed to strong vibrations, e.g. on large diesel engines. The glass insert is glued into a steel nickel plated tube and this is spring-mounted in the casing. Highest possible resistance to column separation. Available as Type 271 BF and 291 BF, display ranges 0...100 °C and 0...600 °C..

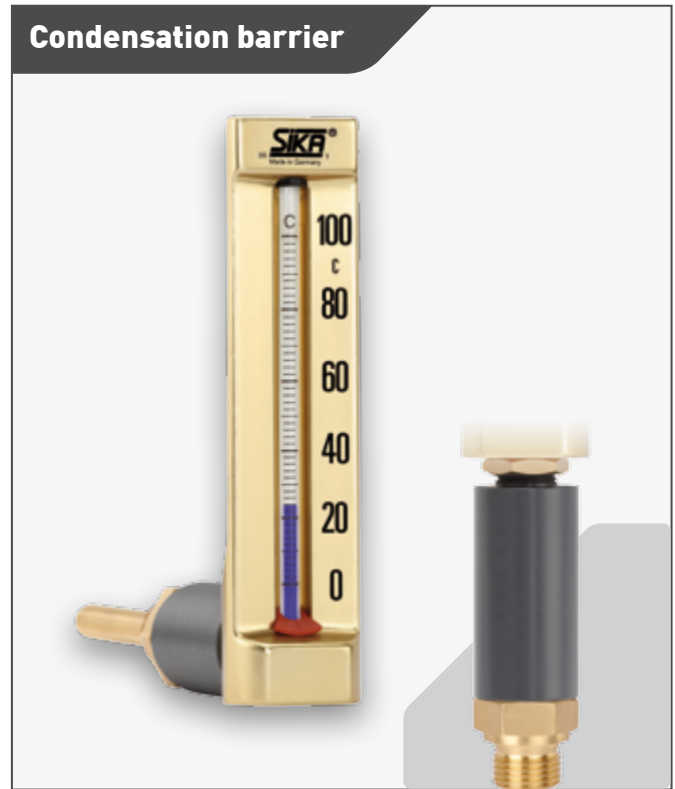
Type 291 BF



Thermometers with condensation barrier

When using industrial thermometers in cold applications, rapid cooling of the thermometer housing occurs due to the good thermal conductivity of the immersion tube and aluminium housing. In the event of high air humidity, condensation may form on the housing. This effect can be avoided by using a thermometer with a condensation barrier.

The length of the condensation barrier is 50 mm. As a secondary effect, this distance permits the bridging of thick tube insulation between the immersion tube nipple and thermometer housing.



Order example	291	2	35	1	1	063	2	1 ISO
Thermometer type								
Straight	291							
Angle 90°	292							
Immersion tube type								
Type B		2						
Display range								
-30...50 °C			35					
-10...50 °C			04					
Scale								
Celsius °C				1				
Thermometric liquid								
Standard blue fluid					1			
Immersion tube length (l₁)								
63 mm						063		
100 mm						100		
Fixed male thread								
G½							2	
Immersion tube material								
Brass								1 ISO
Stainless Steel								3 ISO

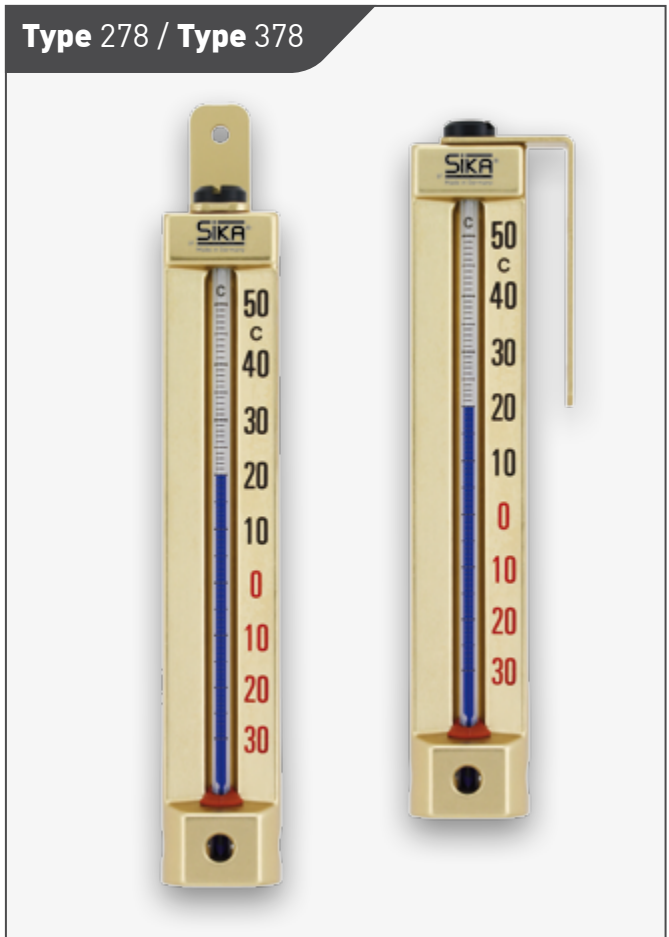
Please consult our separate catalogue „Protection Tubes for Thermometers“ for further information.

Room thermometers, model 278 / 378

SIKA room thermometers feature especially robust design and high accuracy for measuring air temperature in all situations where high quality, resistance to breakage and long service life are necessary. Example applications include measuring outdoor temperature in industrial environments and measuring temperatures in cooling cells or machine rooms where robust thermometers are necessary.

- Easy to use
- Various fitting options thanks to pivoting mounting bracket
- Good legibility
- Robust, breakproof glass tube
- Gold-anodised aluminium housing
- Glass tube with lifelong accuracy
- No electrical power necessary

For good legibility, the thermometers have a 200-mm aluminium housing with anodised gold-tone finish. The measuring area is permanently diffused into the anodising layer. The glass insert is filled with a blue fluid; the scale is permanently baked onto the glass. The scale graduation is 1 °C. Indoor thermometers have a mounting eye at the top and can be fixed with a screw. Outdoor thermometers are supplied with a mounting bracket.



Room thermometers (gold coloured anodized, 200 x 36 mm)

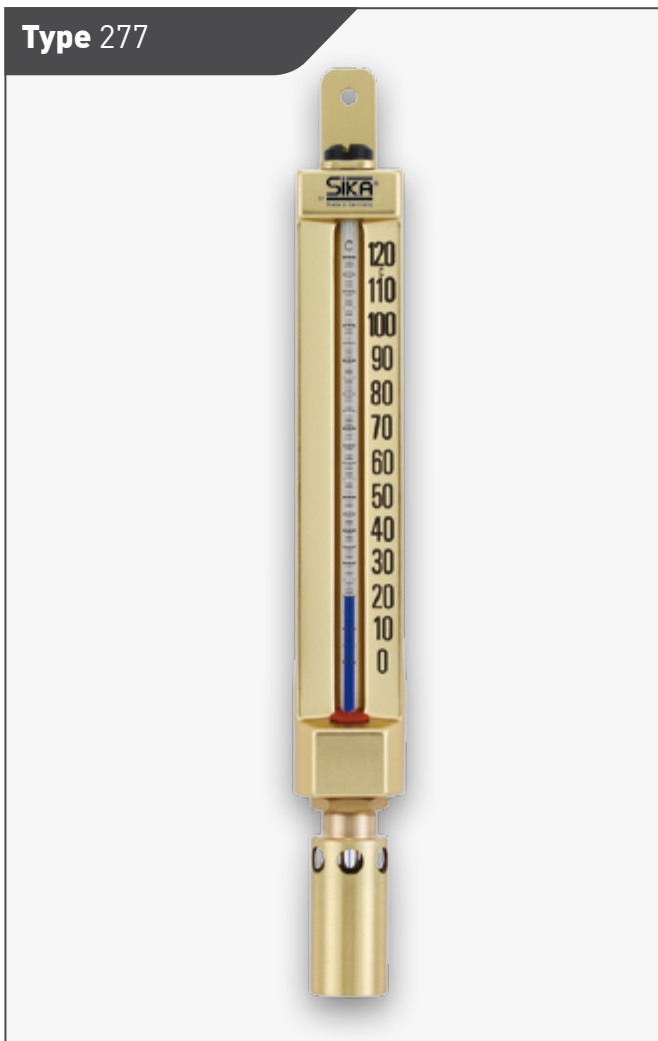
Display range	Order code
-30...50 °C	2780351100000
0...60 °C	2780061100000
0...100 °C	2780101100000

Outdoor thermometer (gold coloured anodized, 200 x 36 mm)

Display range	Order code
-30...50 °C	37803511
0...60 °C	37800611
0...100 °C	37801011

Tank thermometer Type 277

Thermometer for measuring temperatures in fluid tanks. With a perforated cup-shaped base. Display range 0...120 °C.



Options for all models (on request, at extra cost)

- Other measuring ranges
- Other immersion tube lengths and materials
- Other connection threads
- Silver-coloured casing
- Thermometer completely free of non-ferrous metal
- Limit thermometer with 1 pair of limit indicators - adjustable to any interval

Accessories



- Thermometer with sealing sleeve - reduces the penetration of moisture into the immersion tube (outdoor mounting, low temperature applications)

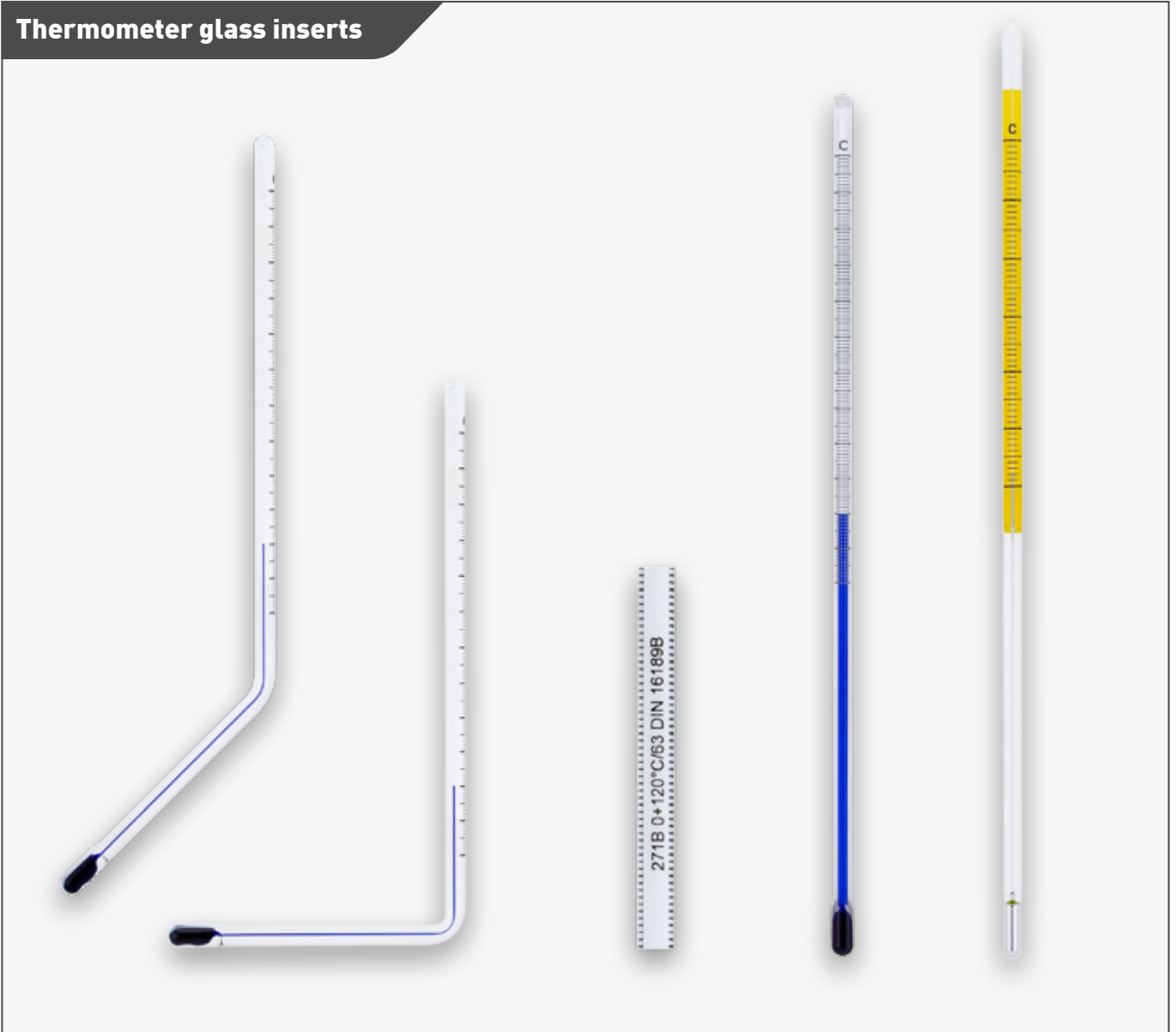
Spare parts for original SIKA thermometers

Thermometer glass inserts

Order example	271	2	35	1	1	30
Thermometer type						
Straight	174 291 271					
Angle 90°	175 292 272					
Angle 135°	176 293 273					
Immersion tube type						
For thermometers with male thread B		2				
For thermometers with union nut Da		3				
For thermometers with union nut Dc		5				
Display ranges						
-30...50 °C			35			
0...60 °C			06			
0...100 °C			10			
0...120 °C			12			
0...160 °C			16			
0...200 °C			20			
0...300 °C			30			
0...600 °C			60			
Scale						
Celsius °C				1		
Celsius and Fahrenheit (°C + °F)				2		
Thermometric liquid						
Standard blue fluid for display ranges up to 0...250 °C					1	
Mercury* for display ranges starting at 0...300 °C					2	
Immersion tube length (l₁ and l₃ respectively) (according to complete thermometers)						
For types B with male thread						
30 mm						30
40 mm						40
63 mm						63
100 mm						100
160 mm						160
250 mm						250
For types Da with union nut G½ or G¾						
89 mm						89
93 mm						93
126 mm						126
130 mm						130
186 mm						186
190 mm						190
276 mm						276
280 mm						280
426 mm						426
430 mm						430
For types Dc with union nut M24 x 1.5						
155 mm						155
215 mm						215
275 mm						275
295 mm						295
355 mm						355
415 mm						415

* See note on availability of thermometric liquids on page 10.

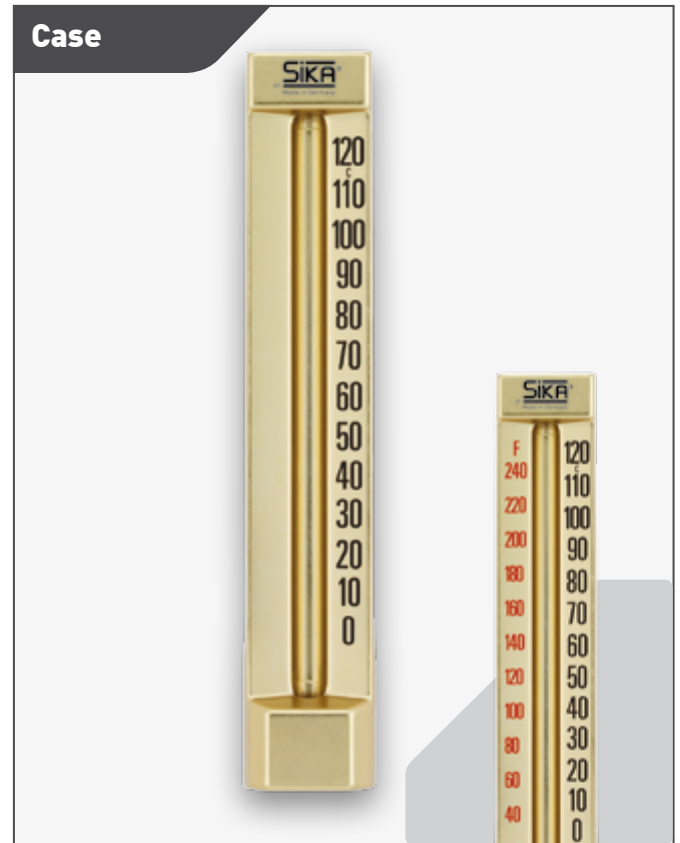
Thermometer glass inserts



*Please notice: The required order specification is written on the backside of the glass insert.
Spare glass inserts include required mounting parts.*

Aluminium case for industrial version

Order example	271	0	35	1
Thermometer type				
Nominal size 200				
Straight	271	0		
Angle 90°	272	0		
Angle 135°	273	0		
Nominal size 150				
Straight	291	0		
Angle 90°	292	0		
Angle 135°	293	0		
Nominal size 110				
Straight	174	0		
Angle 90°	175	0		
Angle 135°	176	0		
Display ranges				
-30...50 °C			35	
0...60 °C			06	
0...100 °C			10	
0...120 °C			12	
0...160 °C			16	
0...200 °C			20	
0...300 °C			30	
0...600 °C			60	
Scale				
Celsius °C				1
Celsius and Fahrenheit (°C + °F)				2



Immersion tubes for industrial versions

Order example	030	5	1	1
Immersion tube length (l₁)				
30 mm	030			
40 mm	040			
63 mm	063			
100 mm	100			
160 mm	160			
250 mm	250			
Fixed male thread				
G $\frac{3}{8}$		1		
G $\frac{1}{2}$		2		
G $\frac{3}{4}$		3		
G1		4		
M16 x 1.5		5		
M20 x 1.5		7		
M27 x 2		9		
Immersion tube material				
Brass			1	
Steel			2	
Stainless steel			3	
Special brass			4	
Copper-nickel alloy			5	
Type				
Straight or angle type 135°				1
Angle type 90°				2

Type B / straight and 135 °



Type B / 90 °



Technical data and order codes

HVAC version with painted aluminium case*

Order example	271	8	35	1	1	063	2	1
Thermometer casings								
Nominal size 200								
Gold-coloured, straight	271							
Gold-coloured, angle 90°	272							
Nominal size 150								
Gold-coloured, straight	291							
Gold-coloured, angle 90°	292							
Nominal size 110								
Gold-coloured, straight	174							
Gold-coloured, angle 90°	175							
Immersion tube type								
Straight		HBZ						
Angle 90°		WBZ						
Display range								
-30...50 °C			35					
-10...50 °C			04					
0...60 °C			06					
0...100 °C			10					
0...120 °C			12					
0...160 °C			16					
0...200 °C			20					
Scale								
Celsius °C				1				
Thermometric liquid								
Standard blue fluid					1			
Immersion tube length (l₁)								
63 mm						063		
100 mm						100		
160 mm						160		
250 mm						250		
Fixed male thread								
G½ / SW27 (other threads on request)							2	
Immersion tube material								
Brass								1
Stainless steel								3

Dimensions in accordance with DIN 16181-16190, accuracy in accordance with DIN 16195

* OEM version, only for volume quantities

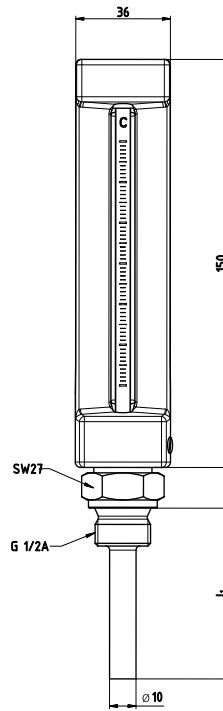


Max. ambient temperature 160 °C.

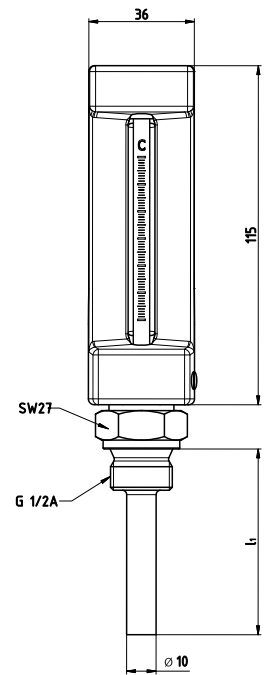
Type 271 HBZ



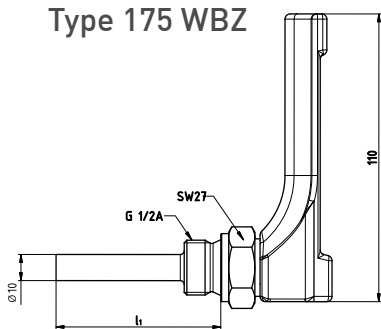
Type 291 HBZ



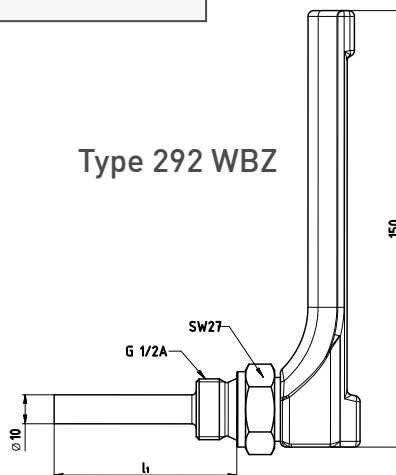
Type 174 HBZ



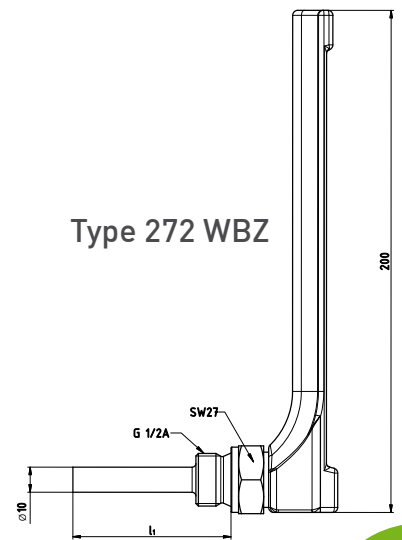
Type 175 WBZ



Type 292 WBZ



Type 272 WBZ



Technical data and order codes

Thermometers with polyamide case*

Order example	471	2	35	1	1	063	2	1
Thermometer type								
Nominal size 200								
Black, straight	471							
Black, angle 90°	472							
Nominal size 150								
Black, straight	491							
Black, angle 90°	492							
Nominal size 110								
Black, straight	474							
Black, angle 90°	475							
Immersion tube type								
Straight + Angle 90°		2						
Display range								
-30...50 °C			35					
-10...50 °C			04					
0...60 °C			06					
0...100 °C			10					
0...120 °C			12					
0...160 °C			16					
0...200 °C			20					
Scale								
Celsius °C				1				
Thermometric liquid								
Standard blue fluid					1			
Immersion tube length (l₁)								
63 mm						063		
100 mm						100		
160 mm						160		
250 mm						250		
Fixed male thread								
G½ / SW27 (other threads on request)							2	
Immersion tube material								
Brass								1
Stainless steel								3

Dimensions in accordance with DIN 16181-16190, accuracy in accordance with DIN 16195

* OEM version, only for volume quantities

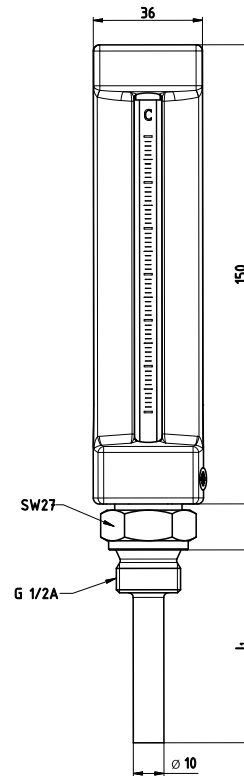


Max. ambient temperature 160 °C.

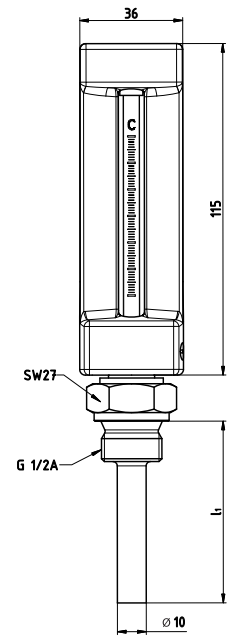
Type 471 B



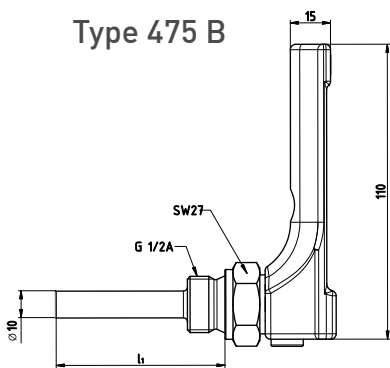
Type 491 B



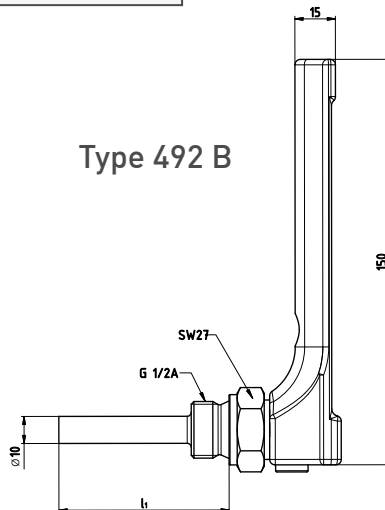
Type 474 B



Type 475 B



Type 492 B



Type 472 B

