

# Industrial thermometers type 271, 291, 174 HBZ, 272, 292, 175 WBZ

Fixed male thread // Nominal size 200, 150, 110 // Aluminium painted



271 HBZ



292 WBZ



## Highlights

- Accuracy according to DIN 16195
- No aging - no moving parts and no mechanical wear
- Lifetime warranty\*
- Series production for large volume use
- Completely without electrical auxiliary energy

## Technical data

Type	271 HBZ	272 WBZ	291 HBZ	292 WBZ	174 HBZ	175 WBZ
<b>Standard</b>	DIN 16181 bis 16190					
<b>Version</b>	Straight	Angle 90°	Straight	Angle 90°	Straight	Angle 90°
<b>Dimensions Housing</b>	200 x 36 mm		150 x 36 mm		110 x 36 mm	
<b>Measuring range according to DIN</b>	Between -30...200 °C					
<b>Error limits according to DIN 16195</b>	-30...100 °C = 2 °C 0...120 °C = 2 °C 0...200 °C = 4 °C		-30...120 °C = 2 °C 0...160 °C = 4 °C		2 °C	
<b>Medium / Application</b>	Liquid and gaseous media					
<b>Immersion tube length</b>	Between 63...250 mm					
<b>Immersion tube diameter</b>	Ø 10 mm					
<b>Process connection</b>	Fixed male thread G½					
<b>Pressure rating**</b>	→ Immersion tube brass, brazed → Immersion tube stainless steel, welded					
<b>Medium temperature</b>	See selected measurement range					
<b>Ambient temperature</b>	-20...160 °C					
<b>Storage temperature</b>	-40...100 °C					

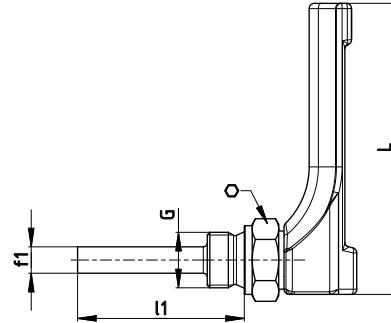
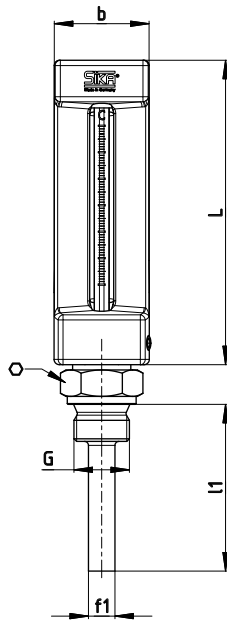
\* Except glass breakage and improper installation.

\*\* Non-binding guideline - For higher pressure loads, additional protection tubes have to be used.

# Technical drawings // Dimensions

Type 271 HBZ / 291 HBZ / 174 HBZ

Type 272 WBZ / 292 WBZ / 175 WBZ



## Dimensions [mm]

	L	f <sub>1</sub>	b	l <sub>1</sub>	G / ∅ Width across flats
271 HBZ / 272 WBZ	200	∅ 10	36	63	G½ / SW27
291 HBZ / 292 WBZ	150		36	100	
174 HBZ / 175 WBZ	110		36	250	

## Materials

### Material

#### Not in contact with media

<b>Housing</b>	die-cast aluminium, gold painted
<b>Thermometer capillary</b>	Prismatic capillary tube of solid glass, bar-shaped, diameter approx. ∅ 6 mm, scale permanently burnt in
<b>Thermometer filling</b> → Blue	Petroleum

#### In contact with media

<b>Process connection</b>	see immersion tube material
<b>Immersion tube material</b> → Standard → Optional	Brass, brazed Stainless steel, welded

# Article numbers

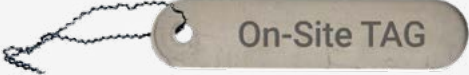
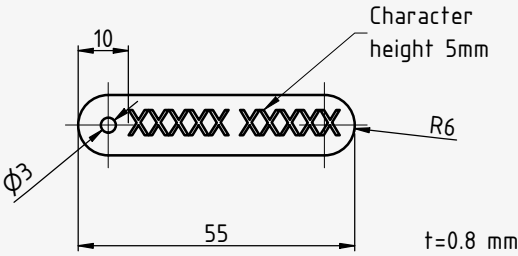
Order code									
<b>Version</b>									
<b>Nominal size 200</b>									
Gold-coloured, Straight immersion tube (HBZ)	271	8							
Gold-coloured, Angle 90° (WBZ)	272	4							
<b>Nominal size 150</b>									
Gold-coloured, Straight (HBZ)	291	8							
Gold-coloured, Angle 90° (WBZ)	292	4							
<b>Nominal size 110</b>									
Gold-coloured, Straight (HBZ)	174	8							
Gold-coloured, Angle 90° (WBZ)	175	4							
<b>Display ranges</b>									
-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								
<b>Scale</b>									
Celsius °C				1					
<b>Thermometer filling</b>									
Blue						1			
<b>Immersion tube length (l1)</b>									
63 mm							063		
100 mm							100		
160 mm							160		
250 mm							250		
<b>Process connection</b>									
G½ / SW27 (other threads on request)								2	
<b>Immersion tube material</b>									
Brass									1
Stainless steel									3
<b>Example order number</b>	<b>271</b>	<b>8</b>	<b>35</b>	<b>1</b>	<b>1</b>	<b>063</b>	<b>2</b>	<b>1</b>	

Note minimum order quantities.

BEST SELLER										
Type	Immersion tube length (l1)	Order number								
<b>291 HBZ</b>	Straight type, 0...120 °C with fixed male thread G½, Immersion tube brass	63 mm	<b>291</b>	<b>8</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>063</b>	<b>2</b>	<b>1</b>
		100 mm	<b>291</b>	<b>8</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>100</b>	<b>2</b>	<b>1</b>
<b>292 WBZ</b>	Angle type, 0...120 °C with fixed male thread G½, Immersion tube brass	63 mm	<b>292</b>	<b>4</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>063</b>	<b>2</b>	<b>1</b>
		100 mm	<b>292</b>	<b>4</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>100</b>	<b>2</b>	<b>1</b>

Note minimum order quantities.

# Accessories

Accessories	Article number
<p><b>Measuring point designation</b> Laser-inscribed stainless steel plate with fixing wire for easy attachment to measuring points</p> <ul style="list-style-type: none"><li>→ <b>Scope of delivery:</b> Designation plate inscribed according to specification and enclosed fixing wire (sealing wire)</li><li>→ <b>Fastening:</b> Wire (included in delivery), alternatively sealing, cable ties or similar (not included in delivery)</li><li>→ <b>Materials:</b> Plate stainless steel 1.4571, wire stainless steel</li><li>→ <b>Dimensions:</b> Plate 55 x 10 x 0.8 mm, wire length 180 mm</li><li>→ <b>Inscription:</b> one-sided, single-line, max. 11 characters, character height 5 mm, designation width max. 40 mm, letters, numbers, symbols, barcodes, QR codes</li><li>→ <b>Transmission of designations:</b> digital list, file formats Excel, Word or CSV</li></ul>  	<p><b>ONSITETAG</b></p>