

# Mechanical Measuring Instruments



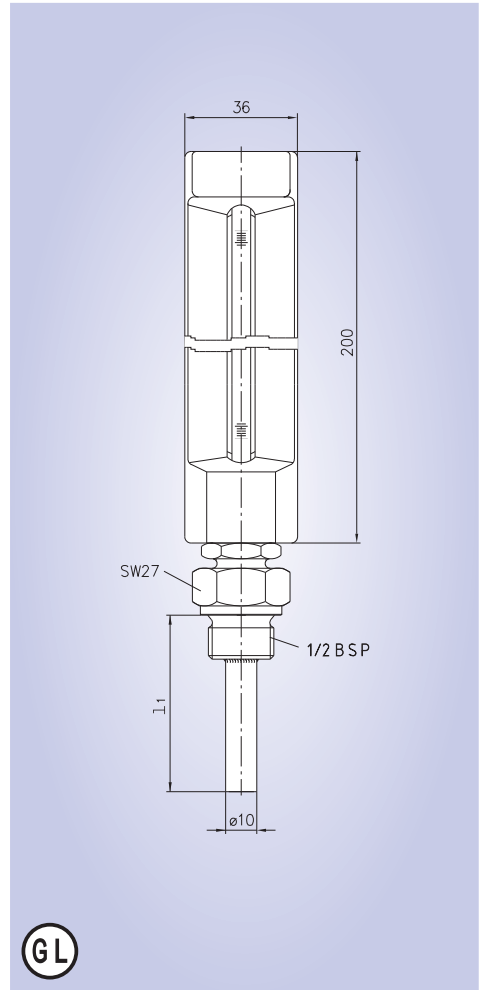
# SIKA Thermometers

## SIKA Thermometer Type 271 B, straight

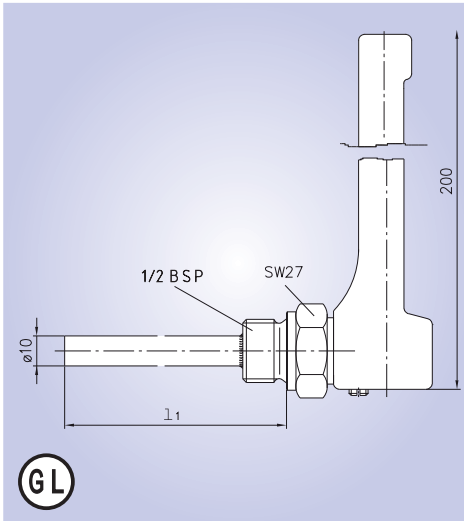
- Casing 200 x 36 mm
- DIN 16189 B
- Connection thread: ½ BSP
- Approved by Germanischer Lloyd Certificate No. 94 654-94 HH
- Original SIKA Thermometer, made in Germany

Range [°C]	Order code		
	Immersion tube length [l.] 63 mm		
	SIKA	ISSA	IMPA
-30...50	2712351106321	61.110.10	65 19 01
0...60	2712061106321	61.110.16	x
0...100	2712101106321	61.110.22	65 19 04
0...120	2712121106321	61.110.28	x
0...160	2712161106321	61.110.34	65 19 07
0...250	2712251106321	x	x
0...300	2712301206321	61.101.19	65 20 53
0...600	2717601206322	61.110.80	65 19 22
Range [°C]	Immersion tube length [l.] 100 mm		
-30...50	2712351110021	61.110.11	65 19 02
0...60	2712061110021	61.110.17	x
0...100	2712101110021	61.110.23	65 19 05
0...120	2712121110021	61.110.29	x
0...160	2712161110021	61.100.83	65 19 08
0...250	2712251110021	x	x
0...300	2712301210021	61.101.20	65 19 54
0...600	2712601210022	61.110.81	65 19 23
Range [°C]	Immersion tube length [l.] 160 mm		
-30...50	2712351116021	61.110.12	65 19 03
0...60	2712061116021	61.110.18	x
0...100	2712101116021	61.110.24	65 19 06
0...120	2712121116021	61.110.30	x
0...160	2712161116021	61.110.36	65 19 09
0...250	2712251116021	x	x
0...300	2712301216021	61.101.21	65 19 55
0...600	2712601216022	61.110.82	65 19 24

Also available with connection threads: ¾ BSP, M 20x1.5, M 27x2, ½ NPT



**SIKA Thermometer Type 272 B, angle 90°** ✕



- Casing 200 x 36 mm
- DIN 16190 B
- Connection thread: ½ BSP
- Approved by Germanischer Lloyd Certificate No. 94 654-94 HH
- Original SIKA Thermometer, made in Germany

Range [°C]	Order code		
	Immersion tube length [l <sub>1</sub> ] 63 mm		
	SIKA	ISSA	IMPA
-30...50	2722351106321	61.113.05	65 20 01
0...60	2722061106321	61.113.08	x
0...100	2722101106321	61.113.11	65 20 04
0...120	2722121106321	61.113.14	x
0...160	2722161106321	61.113.17	65 20 07
0...250	2722251106321	x	x
0...300	2722301206321	61.10123	65 20 13
0...600	2722601206322	61.113.40	65 20 22
Range [°C]	Immersion tube length [l <sub>1</sub> ] 100 mm		
-30...50	2722351110021	61.113.06	65 20 02
0...60	2722061110021	61.113.09	x
0...100	2722101110021	61.113.12	65 20 05
0...120	2722121110021	61.113.15	x
0...160	2722161110021	61.113.18	65 20 08
0...250	2722251110021	x	x
0...300	2722301210021	61.101.23	65 20 14
0...600	2722601210022	61.113.41	65 20 23
Range [°C]	Immersion tube length [l <sub>1</sub> ] 160 mm		
-30...50	2722351116021	61.113.07	65 20 03
0...60	2722061116021	61.113.10	x
0...100	2722101116021	61.113.13	65 2006
0...120	2722121116021	61.113.16	x
0...160	2722161116021	61.113.19	65 20 09
0...250	2722251116021	x	x
0...300	2722301216021	61.10124	65 20 15
0...600	2722601216022	61.113.42	65 20 24



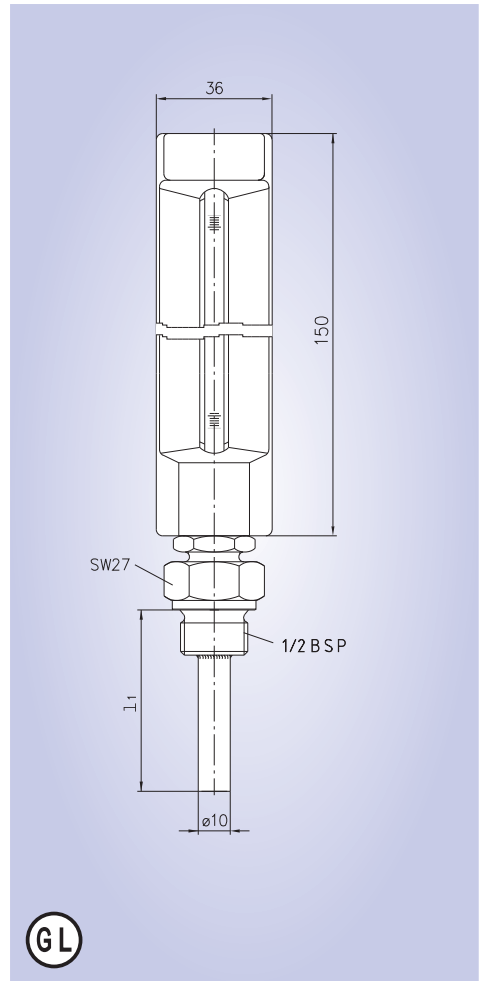
Also available with connection threads: ¾ BSP, M 20x1.5, M 27x2, ½ NPT

## SIKA Thermometer Type 291 B, straight

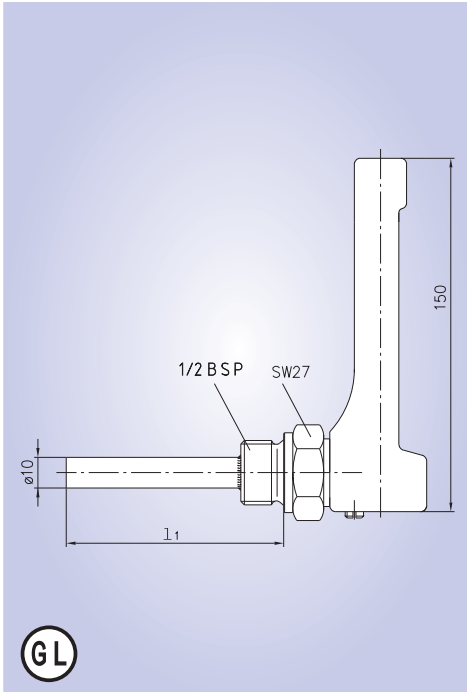
- Casing 150 x 36 mm
- DIN 16185 B
- Connection thread: ½ BSP
- Approved by Germanischer Lloyd Certificate No. 94 654-94 HH
- Original SIKA Thermometer, made in Germany

Order code			
Range [°C]	Immersion tube length [l.] 63 mm		
	SIKA	ISSA	IMPA
-30...50	2912351106321	61.111.10	65 19 41
0...60	2912061106321	61.111.16	x
0...100	2912101106321	61.111.22	65 19 44
0...120	2912121106321	61.111.28	x
0...160	2912161106321	61.111.34	65 19 47
0...250	2912251106321	x	x
0...300	2912301206321	61.111.50	65 19 53
0...600	2912601206322	61.111.80	65 19 62
Immersion tube length [l.] 100 mm			
Range [°C]	SIKA	ISSA	IMPA
-30...50	2912351110021	61.111.11	65 19 42
0...60	2912061110021	61.111.17	x
0...100	2912101110021	61.111.23	65 19 45
0...120	2912121110021	61.111.29	x
0...160	2912161110021	61.111.35	65 19 48
0...250	2912251110021	x	x
0...300	2912301210021	61.111.51	65 19 54
0...600	2912601210022	61.110.81	65 19 63
Immersion tube length [l.] 160 mm			
Range [°C]	SIKA	ISSA	IMPA
-30...50	2912351116021	61.111.12	65 19 43
0...60	2912061116021	61.111.18	x
0...100	2912101116021	61.111.24	65 19 46
0...120	2912121116021	61.111.30	x
0...160	2912161116021	61.111.36	65 19 49
0...250	2912251116021	x	x
0...300	2912301216021	61.111.52	65 19 55
0...600	2912601216022	61.111.82	65 19 64

Also available with connection threads: ¾ BSP, M 20x1.5, M 27x2, ½ NPT



**SIKA Thermometer Type 292 B, angle 90°** ↙



- Casing 150 x 36 mm, Type 292 B
- DIN 16186 B
- Connection thread: ½ BSP
- Approved by Germanischer Lloyd Certificate No. 94 654-94 HH
- Original SIKA Thermometer, made in Germany

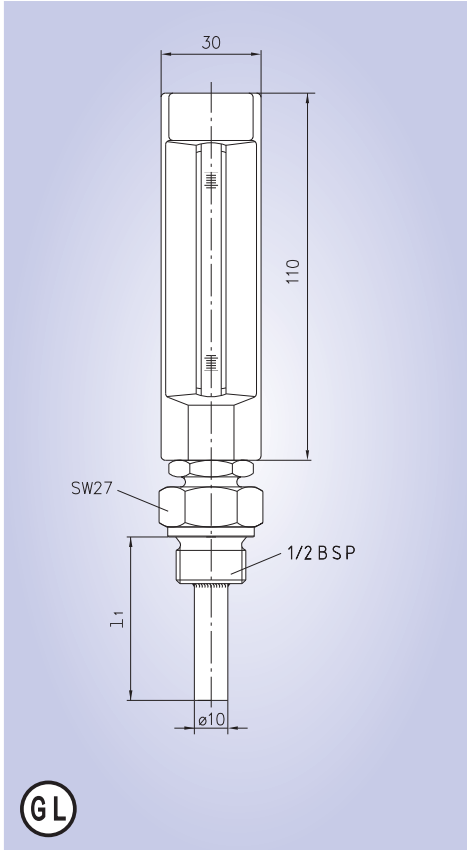
Range [°C]	Order code		
	Immersion tube length [l <sub>1</sub> ] 63 mm		
	SIKA	ISSA	IMPA
-30...50	2922351106321	61.114.08	65 20 41
0...60	2922061106321	61.114.13	x
0...100	2922101106321	61.114.18	65 20 44
0...120	2922121106321	61.114.23	x
0...160	2922161106321	61.114.28	65 20 47
0...250	2922251106321	x	x
0...300	2922301206321	61.114.38	65 20 53
0...600	2922 601206322	61.114.43	65 20 62
Range [°C]	Immersion tube length [l <sub>1</sub> ] 100 mm		
-30...50	2922351110021	61.114.09	65 20 42
0...60	2922061110021	61.114.14	x
0...100	2922101110021	61.114.19	65 20 45
0...120	2922121110021	61.114.24	x
0...160	2922161110021	61.114.29	65 20 48
0...250	2922251110021	x	x
0...300	2922301210021	61.114.39	65 20 54
0...600	2922601210022	61 114.44	65 20 63
Range [°C]	Immersion tube length [l <sub>1</sub> ] 160 mm		
-30...50	2922351116021	61.114.10	65 20 43
0...60	2922061116021	61.114.15	x
0...100	2922101116021	61.114.20	65 20 46
0...120	2922121116021	61.114.25	x
0...160	2922161116021	61.114.30	65 20 49
0...250	2922251116021	x	x
0...300	2922301216021	61.114.40	65 20 55
0...600	2922601216022	61.114.45	65 20 64



Also available with connection threads: ¼ BSP, M 20x1.5, M 27x2, ½ NPT

## SIKA Thermometer Type 174 B, straight

- Casing 110 x 30 mm
- DIN 16181 B
- Connection thread: ½ BSP
- Approved by Germanischer Lloyd Certificate No. 94 654-94 HH
- Original SIKA Thermometer, made in Germany



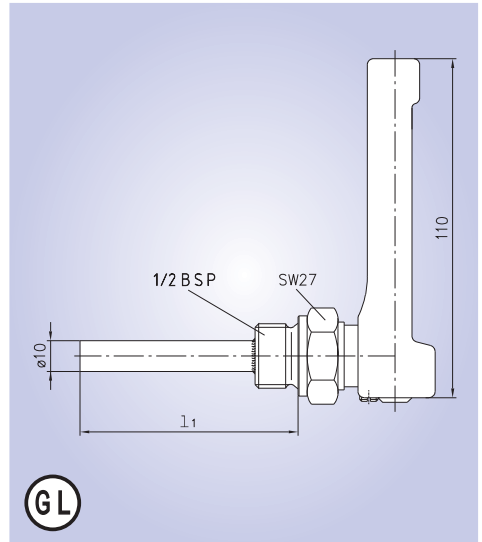
Range [°C]	Order code		
	Immersion tube length [l.] 30 mm		
	SIKA	ISSA	IMPA
-30...50	1742351103021	x	x
0...60	1742061103021	x	x
0...100	1742101103021	x	65 19 81
0...120	1742121103021	x	x
0...160	1742161103021	x	x
0...200	1742201103021	x	65 19 86
Range [°C]	Immersion tube length [l.] 40 mm		
-30...50	1742351104021	x	x
0...60	1742061104021	x	x
0...100	1742101104021		65 19 82
0...120	1742121104021	x	x
0...160	1742161104021	x	x
0...200	1742201104021	x	65 19 87
Range [°C]	Immersion tube length [l.] 63 mm		
-30...50	1742351106321	61.112.07	x
0...60	1742061106321	61.112.13	x
0...100	1742101106321	61.112.19	65 19 83
0...120	1742121106321	61.112.25	x
0...160	1742161106321	61.112.31	x
0...200	1742201106321	x	65 19 88
Range [°C]	Immersion tube length [l.] 100 mm		
-30...50	1742351110021	61.112.08	x
0...60	1742061110021	61.112.14	x
0...100	1742101110021	61.112.20	65 19 84
0...120	1742121110021	61.112.26	x
0...160	1742161110021	61.112.32	x
0...200	1742201110021	x	65 19 89
Range [°C]	Immersion tube length [l.] 160 mm		
-30...50	1742351116021	61.112.09	x
0...60	1742061116021	61.112.15	x
0...100	1742101116021	61.112.21	65 19 85
0...120	1742121116021	61.112.27	x
0...160	1742161116021	61.112.33	x
0...200	1742201116021	x	65 19 90

Also available with connection threads: ¼ BSP, M 20x1.5, M 27x2, ½"NPT

**SIKA Thermometer Type 175 B, angle 90°** ↗

Range [°C]	Order code		
	Immersion tube length [l,] 30 mm		
	SIKA	ISSA	IMPA
-30...50	1752351103021	x	x
0...60	1752061103021	x	x
0...100	1752101103021	x	65 20 81
0...120	1752121103021	x	x
0...160	1752161103021	x	x
0...200	1752201103021	x	65 20 86
Range [°C]	Immersion tube length [l,] 40 mm		
-30...50	1752351104021	61.115.06	x
0...60	1752061104021	61.115.11	x
0...100	1752101104021	61.115.16	65 20 82
0...120	1752121104021	61.115.21	x
0...160	1752161104021	61.115.26	x
0...200	1752201104021	x	65 20 87
Range [°C]	Immersion tube length [l,] 63 mm		
-30...50	1752351106321	61.115.08	x
0...60	1752061106321	61.115.13	x
0...100	1752101106321	61.115.18	65 20 83
0...120	1752121106321	61.115.23	x
0...160	1752161106321	61.115.28	x
0...200	1752201106321	x	65 20 88
Range [°C]	Immersion tube length [l,] 100 mm		
-30...50	1752351110021	61.115.09	x
0...60	1752061110021	61.115.14	x
0...100	1752101110021	61.115.19	65 20 84
0...120	1752121110021	61.115.24	x
0...160	1752161110021	61.115.29	x
0...200	1752201110021	x	65 20 89
Range [°C]	Immersion tube length [l,] 160 mm		
-30...50	1752351116021	61.115.10	x
0...60	1752061116021	61.115.15	x
0...100	1752101116021	61.115.20	65 20 85
0...120	1752121116021	61.115.25	x
0...160	1752161116021	61.115.30	x
0...200	1752201116021	x	65 20 90

- Casing 110 x 30 mm
- DIN 16182 B
- Connection thread: ½ BSP
- Approved by Germanischer Lloyd Certificate No. 94 654-94 HH
- Original SIKA Thermometer, made in Germany

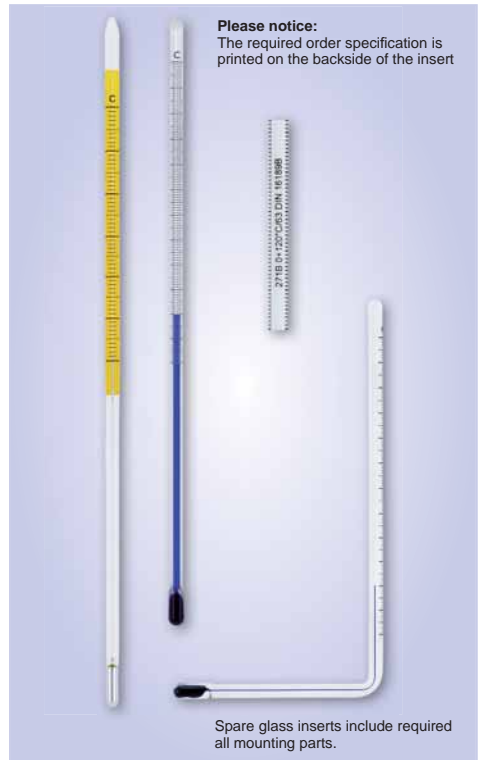


Also available with connection threads: ¼ BSP, M 20x1.5, M 27x2, ½ NPT

# SIKA Glass Inserts for replacement

## SIKA Glass Inserts for Thermometers

SIKA Order code			
<b>Thermometer type</b>			
straight	174		
	291		
	271		
angle 90°	175		
	292		
	272		
<b>Immersion tube</b>			
Type B		2	
<b>Measuring ranges</b>			
-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
<b>Scale</b>			
Celsius (°C)			1
Celsius + Fahrenheit (°C + °F)			2
<b>Filling</b>			
Standard fluid for ranges up to 250 °C	Fü =		1
Mercury for ranges above 250 °C	HG =		2
<b>Immersion tube length</b>			
Immersion length $l_1$ in mm			030
(according to complete thermometers)			040
for types B with fixed male connection thread			063
			100
			160
			250



## Quality by Tradition - Made in Germany

Since 1901 we at SIKA - Dr. Siebert and Kühn have been producing precision measuring and control instruments. 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 manufactured by our glassblowers in traditional handcraft.

Thanks to our long year experience and proven manufacturing processes in Germany, we are in the position to guarantee best quality. SIKA thermometers meet highest demands in precision as well as in mechanical stability. Original SIKA thermometers simply last longer than most others.

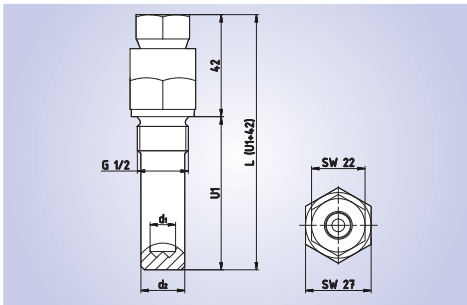


# Diesel Engine Protection Tubes

## As an accessory to the Diesel Engine Thermometer

Protection tubes are applied to protect thermometer immersion tubes against difficult chemical and / or mechanical process conditions. Furthermore it is far easier to dismount a thermometer e.g. for repair or other reasons when a protection tube remains at the measuring point.

SIKA ZVFG protection tubes with integrated compression fitting have been developed as a solution for Diesel engine dial thermometers. They are machined from solid material; their integrated compression fitting minimises the risk of breakage during operation.



## Order code

SIKA Order code			
Order code starting with	ZVFG		
Mounting length [U:]	100 mm	100	
	135 mm	135	
	160 mm	160	
	200 mm	200	
	250 mm	250	
	300 mm	300	
Thread Size	½ BSP	2	
	¾ BSP	3	
Material	1.4571 Stainless Steel	3	
Thermometer immersion tube	Ø 12 mm		4
	Ø 13 mm		6
Male thread			

M

Please ask for customised specifications

# Diesel Engine Thermometers

## Direct Mount Dial Thermometers

This range of instruments includes special precision dial thermometers optimised for marine engines, based on the nitrogen gas expansion principle.

### Typical Applications


- Cooling water
- Turbo charged air
- Lubricating oil
- Exhaust gas

### Diesel Engine Thermometers - Quality lasts longer

A problem to all Diesel engines is vibration, which reduces the life time of mechanical thermometers. SIKA has overcome this problem with their Diesel engine thermometer. This thermometer has a special mechanical sensor design, optimised for the use at marine engines. Furthermore, the case contains a shock absorbing liquid of high viscosity, which protects the internal meter movement against heavy vibration and at the same time lubricates internal parts and avoids corrosion. SIKA Diesel Engine Thermometers therefore last longer than many others.

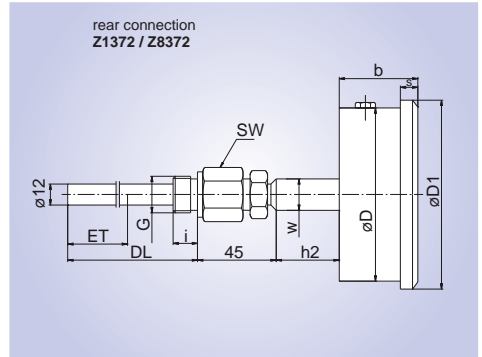
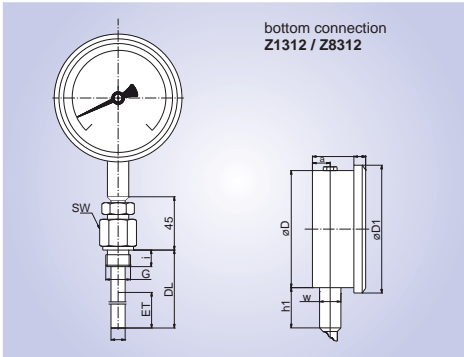


### Technical data

Measuring range	0...100 °C 0...120 °C 0...160 °C 0...250 °C 50...650 °C
	Double scale °C and °F available
Casing	Ø 80 or 100 mm stainless steel 1.4301
Dial	Silver coloured, black markings
System	Nitrogen filled system
Immersion tube	Stainless steel
Standard dimension lengths "DL" in mm	100, 135, 160, 200, 250, 300, 400
Thread connection	Adjustable compression fitting
Thread size	½ BSP, ¾ BSP
Accuracy	Class 1.0, Limits of error acc. DIN EN 13190
Approval	 Approved by Germanischer Lloyd, Certificate No. 12 026-98 HH

Please ask for customised specifications

## Dimensions



NG	a	b	D	D1	h1	h2	s	w
80	15	45	79	86	34	36	10	18
100	15	45	99	108	34	36	10	18

## Order code

SIKA Order code		ISSA-Code	IMPA-Code
<b>Type (case diameter)</b>	80 mm Z83 100 mm Z13		
<b>Case configuration</b>	Bottom connection 12 Rear connection 72		
<b>External thread</b>	male M		
<b>Temperature range</b>	0...100 °C 10 0...120 °C 12 0...160 °C 16 0...200 °C 20 0...250 °C 25 50...650 °C 56	Dial Thermometer	
<b>Temperature unit</b>	°C 1		
<b>Mounting length DL</b>	100 mm 100 135 mm 135 160 mm 160 200 mm 200 250 mm 250 300 mm 300 400 mm 400	Exhaust Gas Thermometer	65 25 (general number)
<b>Thread size</b>	½ BSP 2 ¾ BSP 3		
<b>Adjustable compression fitting, steel</b>			2
<b>Immersion tube</b>	Ø 12 mm, stainless steel		

When ordering standard types, please use the order numbers. If changes, e.g. in ranges, immersion tube materials, immersion lengths or connections are required, they have to be specified in your order.

# Diesel Engine Thermometers

## Remote reading Dial Thermometers

SIKA remote reading Diesel engine thermometers are based on the same system as our well-known direct mount thermometers. These instruments are available adapted to the customers present needs with any of the optional accessories: wall bracket, rear flange or U-clamp for panel mounting.

### Typical Applications


- Cooling water
- Turbo charged air
- Lubricating oil
- Exhaust gas

### Remote Diesel Engine Thermometer

The remote reading versions are of the same mechanical sensor design as the direct mount thermometers. The case is filled with a shock absorbing liquid of high viscosity. Furthermore, the capillary line is protected by a stable stainless steel spiral protection.

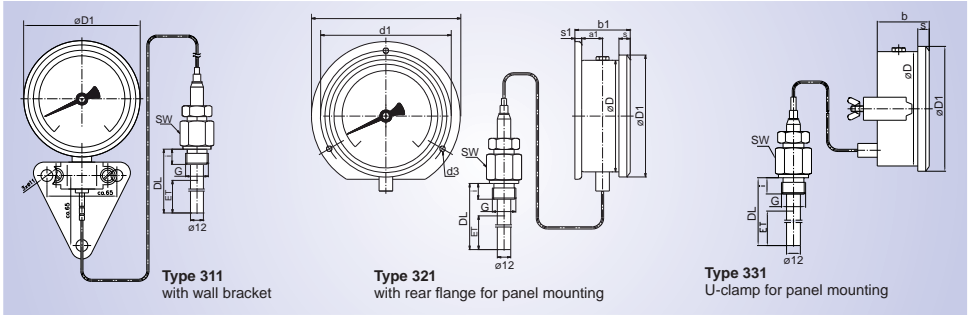
SIKA remote Diesel Engine Thermometers – vibration optimised quality for rough environments, ideal for the use at marine Diesel engines.



Technical data	
Display range	0...100 °C 0...120 °C 0...160 °C 0...250 °C 50...650 °C
	Dual scale °C and °F available
Casing	Ø 80 or 100 mm stainless steel 1.4301
Dial	Silver coloured, black markings
System	Nitrogen filled system
Immersion tube	Stainless steel
Standard dimension lengths "DL" in mm	100, 135, 160, 200, 250, 300, 400
Thread connection	Adjustable compression fitting
Thread size	½ BSP, ¾ BSP
Accuracy	Class 1.0, Limits of error acc. DIN EN 13190
Approval	 Approved by Germanischer Lloyd Certificate No. 12 027-98 HH

Please ask for customised specifications

## Dimensions



NG	a1	b1	D	D1	d1	d2	d3	s	s1
80	18	48	79	86	95	110	4,8	10	6
100	18.5	49	99	108	116	132	4,8	10	6

## Order code

SIKA Order code			ISSA-Code	IMPA-Code
<b>Type</b>	311 321 331	Z311 Z321 Z331		
<b>Case diameter</b>	80 mm 100 mm	B2 C2		
<b>Temperature range</b>	0...100 °C 0...120 °C 0...160 °C 0...250 °C 50...650 °C	10 12 16 25 56		
<b>Mounting length DL</b>	135 mm 160 mm 200 mm 250 mm 300 mm 400 mm	135 160 200 250 300 400	only Exhaust Gas Thermometer 61.129.01 - 61.129.13	65 25 (general number)
<b>Adjustable compression fitting</b>				
<b>Thread size</b>	½ BSP ¾ BSP			
<b>Immersion tube</b>	Ø 12 mm, stainless steel			
<b>Capillary line</b>	1 m 3 m 5 m			
<b>Capillary material</b>	stainless steel, spiral protection			

When ordering standard types, please use the order numbers. If changes, e.g. in ranges, immersion tube materials, immersion lengths or connections are required, they have to be specified in your order.

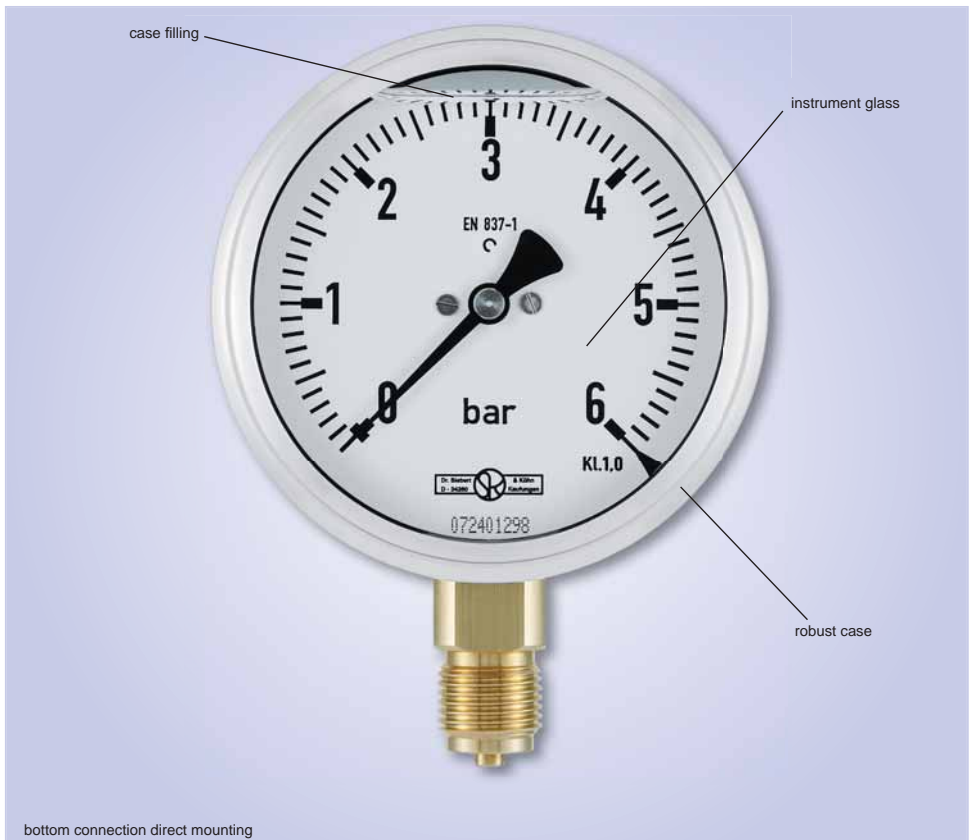
# Pressure Gauges

## SIKA-Pressure Gauges, Type MRE-M

SIKA Pressure gauges are Bourdon type quality gauges, manufactured according to EN 837-1. They are available in three different case sizes, as direct mount versions, with optional mounting flange or as a U-clamp panel mounting version. SIKA offers different measuring ranges starting from -0.6 up to 1600 bar.

These gauges can be used for any gaseous media or low viscous fluid that does not corrode the brass parts. Their special mechanical design and case filling provide best properties for the use in marine applications.

- Crimped on ring case, stainless steel 1.4301
- Case diameter 63, 80 and 100 mm
- Filled with glycerine
- Bottom or rear connection
- Connection thread: ½" BSP (¼" BSP for 63 mm), brass
- Optional with mounting flange or U-clamp
- Accuracy
  - class 1 for case diameter 80 and 100 mm
  - class 1.6 for case diameter 63 mm
- GL available on request





bottom connection with back flange



rear connection direct mounting



rear connection with front flange



rear connection with U-clamp fixing



## Dimensions and order code

NG	D	D1	a	a1	b	b1	b2	c	c1	c2	d1	d2	d3	e	G	g	h	s	s1	s2	s3	SW
63	62	67	12.5	15.5	35	36	38	5	2	13	75	85	3.7	-	½ BSP	58	54	8,5	5	1	4.5	14
80	79	86	16	21	44	38.5	46	6	3	20	95	110	4.8	-	½ BSP	82	76	9	5	1	6	22
100	99	106	20	23.5	55	55	58.5	6	3	20	116	132	4.8	30	½ BSP	97	87	10	6	1	6	22

SIKA Order code		ISSA-Code	IMPA-Code
	MREM		
<b>Dial size</b>	63 mm 80 mm 100 mm	1 2 3	
<b>Bottom connection</b>	¼ BSP (63 mm)	1	
<b>Bottom connection</b>	¼ BSP (80 mm / 100 mm)	1	
<b>Rear connection</b>	¼ BSP (63 mm)	5	
<b>Rear connection</b>	¼ BSP (80 mm / 100 mm)	2	
<b>Material thread connection</b>	brass stainless steel (for 1000 / 1600 bar , only)	1 3	
<b>Measuring range [bar]</b>	- 0.6...0 - 1...0 - 1...0.6 - 1...1.5 - 1...3 - 1...5 - 1...9 - 1...15 0...0.6 0...1 0...1.6 0...2.5 0...4 0...6 0...10 0...16 0...25 0...40 0...60 0...100 0...160 0...250 0...400 0...600 0...1000* (only 100 mm dial size) 0...1600* (only 100 mm dial size)	305 315 505 515 525 535 545 555 015 025 035 045 055 065 075 085 095 105 115 125 135 145 155 165 175 185	61.232.10 - 61.232.15
<b>Bottom connection</b>	direct mounting back flange	00 10	
<b>Rear connection</b>	direct mounting front flange U-clamp fixing	00 20 30	
<b>Case filling</b>	glycerine	G	

\* with stainless steel bourdon sprung connection

Please ask for customised specifications.

