

Diesel engine thermometers

Type 6312 - 1372

Diesel engine dial thermometer types 6312 to 1372 are the ideal solution for local temperature measurement of fluids and gases on large diesel engines, e.g. for marine propulsion or in the diesel electric power generation area. Depending on the display range, they are useful for measuring exhaust gas, cooling water, lubricating oil and charge air temperatures.

Measuring system

Nitrogen filled

Accuracy (EN 13190)

Class 1

Case

Crimped-on ring, stainless steel 1.4301

Case filling (silicone oil)

Degree of protection (EN 60529)

IP65

Nominal sizes

63, 80, 100 mm

Mechanical design

Rigid connection with neck tube

Connection position:

Bottom, central back

Mounting flange:

None

Scale range (EN 13190)

0...100 °C, 0...120 °C, 0...160 °C, 0...250 °C, 50...650 °C

Immersion tube

Stainless steel 1.4571

Max. static working pressure: 25 bar

Connection type: A, AK

Immersion tube diameter: 10 (not for NS 100 mm), 12 or 13 mm

Immersion tube length: up to max. 400 mm

Active length (ET): 80 mm

Window

Instrument glass

Pointer movement

German silver / brass

Dial

Aluminium, silver with black scale markings

Type 1312



Pointer

Aluminium, black

Display correction ($\pm 6\%$)

Adjustable pointer, externally accessible screw

Special versions

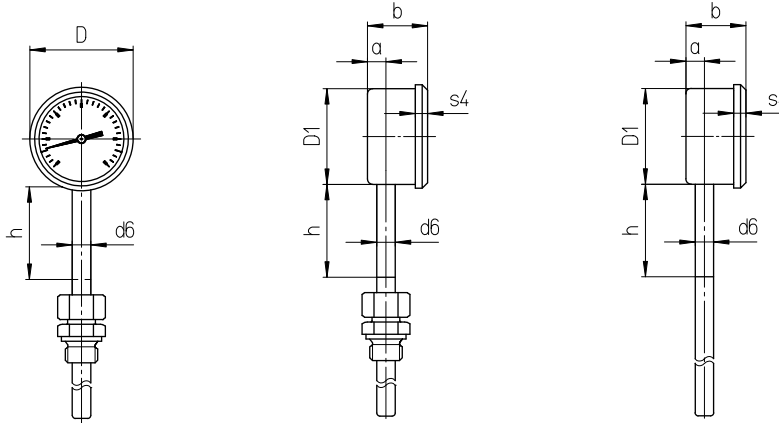
- Other connection types on request
- Other scale ranges and / or special scales, e.g. dual scale °C / °F, coloured zones or ranges, dial labelling, etc.
- Off-centered back connection (not for NS 63 mm)

Accessories

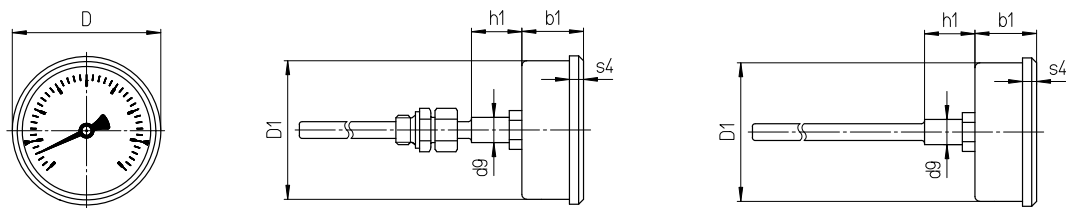
Mechanical: see thermometer protection tubes section

Dimensions and weights

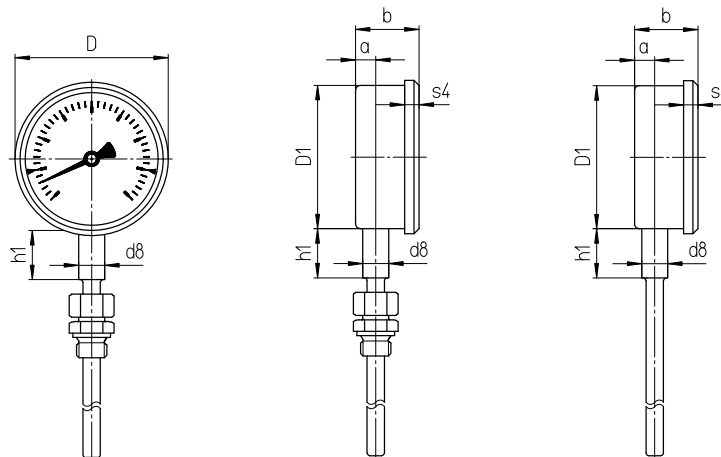
Type 6312



Type 6372, 8372 and 1372



Type 8312 and 1312



Dimensions [mm]											Weight [kg]
NG	a	b	D	D1	d6	d8	d9	h	h1	s4	
63	12	39	67	62	12		18	60		8	0.33
80	15	42	86	79	12	18	18		34	8	0.50
100	15	43	106	99	12	18	18		34	10	0.70



This information is provided as an example and relates to the version with connection type A Ø 10 mm and immersion tube length 200 mm.

Standard connection types

Connections and immersion tube lengths

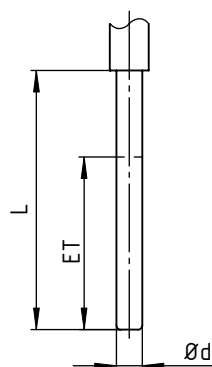
Connection type A: Plain immersion tube, general purpose.

Anschluss AK: With adjustable compression fitting, for direct installation or use with protection tubes.

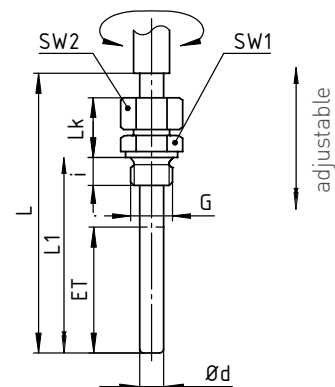
Connection type AK [mm]			
G	SW1	i	Lk
G½ B	27	14	35
G¾ B	32	16	37
M20 x 1.5	27	14	35
M27 x 2	32	16	37

Stem diameter [mm]	
Ø	SW2
10	19
12	22
13	24

Connection type A



Connection type AK



Other connection types, immersion tubes lengths and immersion tube diameters are available on request.



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 400 mm.

Active length (ET) and minimum feasible immersion tube length

The active length ET of a precision dial thermometer must be fully immersed in the medium to be measured. It depends on the scale range and the immersion tube diameter. The active length ET and the connection type determine the minimum immersion tube length necessary for engineering purposes.

Connection type	Length	
	ET	Lmin
A	80	150
AK	80	150

Options

Configure a thermometer suitable for your application here

Order example		Z	63	12	A	10	1	100	0	0	3
Nominal size											
63 mm		63									
80 mm		83									
100 mm		13									
Type											
Bottom connection				12							
Central back connection				72							
Connection type											
Connection type A, plain immersion tube					A						
Connection type Ak, adjustable compression fitting					M						
Scale range											
0...100 °C						10					
0...120 °C						12					
0...160 °C						16					
0...250 °C						25					
50...650 °C						56					
Temperature unit											
°C*							1				
Immersion tube length l₁ and L											
Immersion tube length l₁	Immersion tube length L										
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 thread											
Without - plain immersion tube, type A									0		
G½									2		
G¾									3		
½ NPT									B		
¾ NPT									C		
M20 x 1.5									7		
Connection thread material											
Without - plain immersion tube, type A										0	
Steel										2	
Immersion tube diameter											
10 mm (for NS 63 and NS 80 mm only)											3
12 mm											4
13 mm											6

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