

# Conventional Subsea Gauge - Stainless Steel Type 233.34 - Special Compensated

WIKA Datasheet 233.34 Subsea

## Applications

- In compensated subsea environments: tested to working depths of 10,000 ft. of sea water
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system

## Special Features

- Excellent load-cycle stability and shock resistance
- Solid front reinforced thermoplastic case
- Positive pressure ranges to 30,000 psi (2,000 bar)
- Black dial face with white enlarged numerals for subsea visualization
- Optional easy-to-assemble Lexan Shield kit for impact protection

## Standard Features

### Design

ASME B40.100

### Sizes

4½" (115 mm) dial size

### Accuracy class

± 0.5% of span (ASME B40.100 Grade 2A)  
± 1.0% of span (ASME B40.100 Grade 1A)  
(for 20,000 psi /1,600 bar) range and above)

### Temperature error

Additional error when temperature changes from reference temperature of 68°F (20°C) ±0.4% of span for every 18°F (10°K) rising or falling.

### Operating temperature

Ambient: -4°F to +150°F (-20°C to +66°C) - glycerine filled  
Medium: max. +212°F (+100°C)

### Ranges

Vacuum/compound to 200 psi (16 bar)  
Pressure from 15 psi (1 bar) to 30,000 psi (2,000 bar)  
or other equivalent units of pressure or vacuum



Bourdon Tube Pressure Gauge Model 233.34  
Shown with Lexan Shield Kit (optional)

### Working pressure

Steady: full-scale value  
Fluctuating: 0.9 x full-scale value  
Short time: 1.5 x full-scale value

### Pressure connection

Material: 316L SS  
Lower mount (LM) or lower back mount (LBM)  
Optional: ½" NPT (male)  
High-pressure autoclave, F250C (9/16-18 UNF RH female)  
or consult factory

### Bourdon tube

Material: 316L SS  
≤ 1,000 psi (70 bar): C-shape  
> 1,000 psi (70 bar): Helical

### Weather protection

IP 68  
Protected against continuous submersion in up to 10,000 feet (3048 m) of ocean depth

### Movement

Stainless steel. Internal stop pin at 1.1 x full scale  
Overload and underload stops - standard

### Dial

Black dial face with white enlarged numerals for subsea visualization

### Pointer

White aluminum, adjustable

### Case

Black fiberglass-reinforced thermoplastic (POCAN)  
Solid front, blowout back  
Turret-style case with built in rear flange lugs

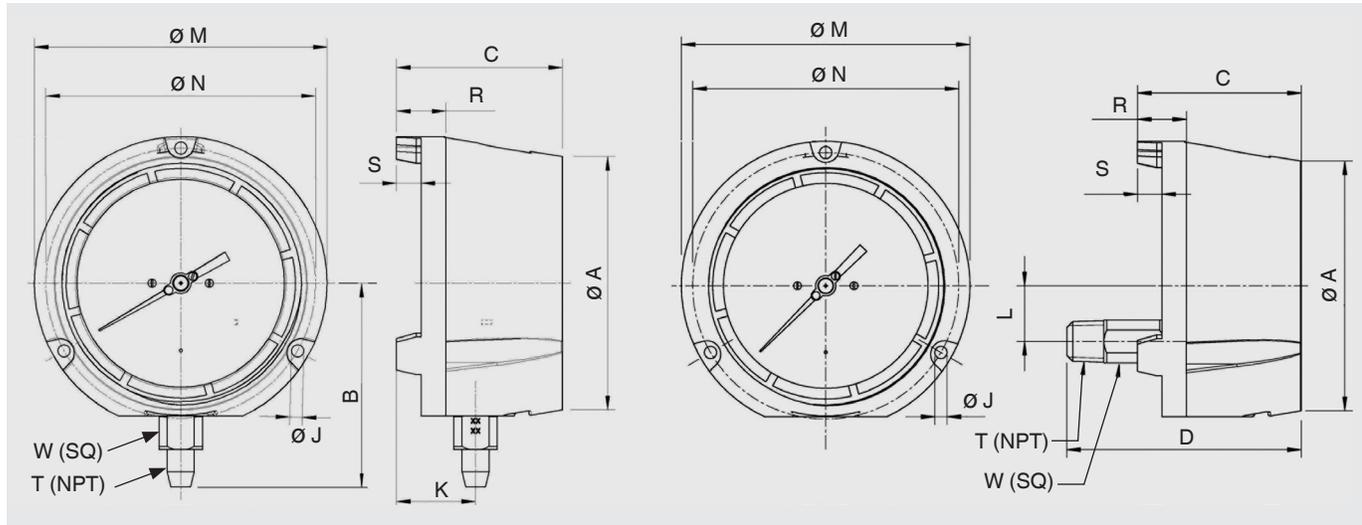
### Window

Dual pane safety glass (increases stability/integrity and minimizes deflection from external seawater pressure)

### Case filling

- Glycerin / water mixture 86.5 / 13.5%
- FDA compliant
- Degassed to remove any impurities (N<sub>2</sub>, Oxygen, entrained gases) in order to minimize/eliminate compressibility of fill fluid
- 99% case fill, (air bubble no larger than 1/2" on window when gauge is laid flat)

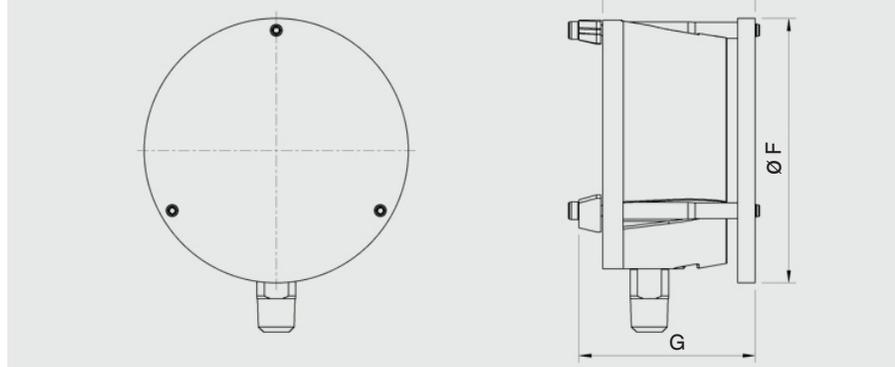
### Dimensions



### Optional extras

- Lexan Shield kit for impact protection
- Special process connections
- Custom dial layout
- Anti-glare window
- Restrictor (for NPT connections only)
- Monel wetted parts (263.34 special)
- Magnifying Lexan Shield kit

### With Lexan Shield Installed



Size		A	B	C	D	E	F	G	J	K	L	M	N	R	S	T	W	Weight <sup>1</sup>	
4.5"	mm	128	103	84	120.3	86.5	150	100	6.3	40	28.5	148	136.5	25	12.5	22	2 lb.	dry	
	in	5	4.06	3.31	4.74	3.41	5.91	3.94	0.248	1.57	1.12	5.83	5.37	0.99	0.49	0.5	0.87	3 lb.	filled

<sup>1</sup> Weight without optional accessories

### Ordering information

Pressure gauge model / Nominal size / Scale range / Size of connection / Optional extras required.  
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.  
Modifications may take place and materials specified may be replaced by others without prior notice.



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