

Bourdon Tube Pressure Gauges Ultra High Purity (UHP) Series Type 230.25 with Alarm Contact 851.3

WIKA Datasheet 230.25 w/Alarm Contact 851.3

Applications

- Semiconductor and electronic industry, medical industry, gene technology, biotechnology and pharmaceutical industries.
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Where measurement of high purity gases is needed without contamination of the process media.

Special Features

- Electrical contact (Reed Switch)
- 316L SS wetted parts
- Electropolished stainless steel case & face-seal connection
- Positive and compound pressure ranges to 10,000 psi

Standard Features

Design

ASME B40.100

Size

2" (53 mm)

Accuracy Class

± 2/1/2% of span (ASME B40.100 Grade A)

Ranges

Vacuum / compound to 30"Hg/0/200 psi
Pressure from 0 psi up to 5000 psi
or other equivalent units of pressure or vacuum
60 psi minimum span

Working Pressure

Steady: ¾ full-scale value
Fluctuating: ⅔ full-scale value
Short time: full-scale value

Operating Temperature

Ambient: -40°F to +140°F (-40°C to +60°C)
Medium: +212°F (+100°C) maximum

Temperature Error

Additional error when temperature changes from reference



Bourdon Tube Pressure Gauge Model 230.25 2" with Reed Contact

temperature of 68°F (20°C) ±0.4% for every 18°F (10°C) rising or falling. Percentage of span.

Weather Protection

Weather resistant (NEMA 3 / IP 54)

Pressure Connection

Material: Face-seal nut, 316 SS
Face-seal gland 316L SS VOD or VIM/VAR
Position: Lower mount (LM)
Center back mount (CBM)
Type of Connection: Face-seal fixed male, swivel male or female
Wetted Surface Finish: $R_a < 0.25\mu\text{m}$ ($R_a < 10\mu\text{inch}$)

Bourdon Tube

Material: 316L SS
30"Hg (vac) to 1000 psi, C-type
1500 to 5000 psi, helical type
Helium leak tested 1×10^{-9} scc/sec (inboard)

Socket

Material: 316L VIM/VAR electropolished
 $R_a < 0.25\mu\text{m}$ ($R_a < 10\mu\text{inch}$) - internal

Movement

Stainless steel
(Standard Features continued on Page 2 of 4)

Dial

White aluminum with stop pin and black lettering

Pointer

Black aluminum

Case

304 SS, electropolished

Window

Polycarbonate: twist-lock

Alarm contact

- Reed contact Model 851.3; The switching function is identified by the index '3'. 851.3 = SPDT contact

- Setting the switching point

In order to adjust the switching point, the gauge should be disconnected from the monitoring device and the window unscrewed.

The switches are set via the mark pointer on the dial's circumference. The set value of the switching point is adjustable up to 80 % of the scale range.

- Electrical load

Max. switching voltage: 24 VDC / VAC

Max. load: 10 W

Max. current: 0.5 A

- Electrical connection with cable gland

M8 x 1.25, cable output 3 m long (10'), conductor cross section 0.14 mm² (26 AWG), flying leads, the terminal assignment is stated on the pressure gauge's connection plate

Cleanliness

UHP 'clean' for semiconductor gas applications

- in accordance with SEMI/SEMATECH

Cleaned and packed in class 100/10 cleanroom

Packaged in two bags

Purged with Nitrogen

Protective cap over threaded connection

Order Options (minimum order may apply)

Other special connections limited to wrench flat area

Custom dial layout

Stainless steel restrictor

Particle test with certificate

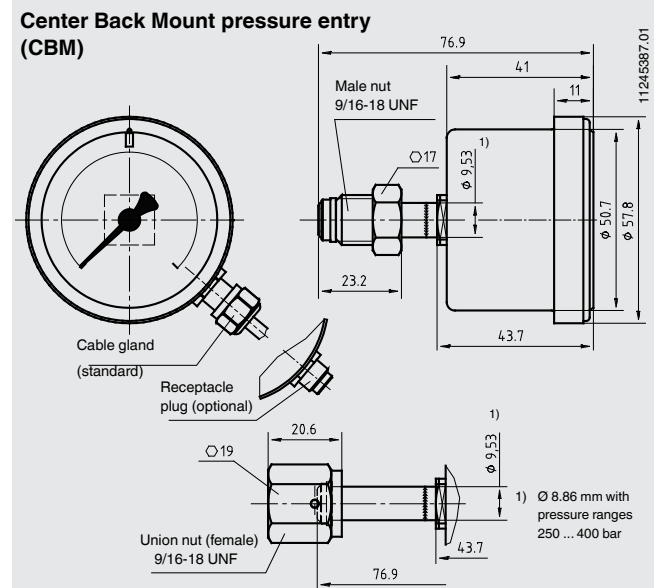
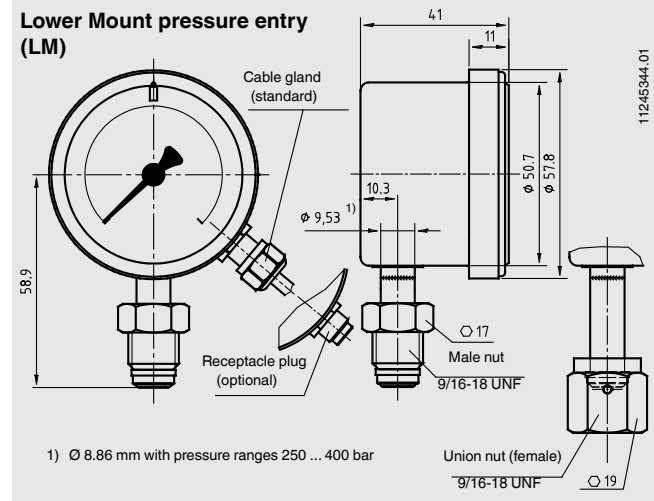
Dual pressure scales

Additional process wetted materials available per request

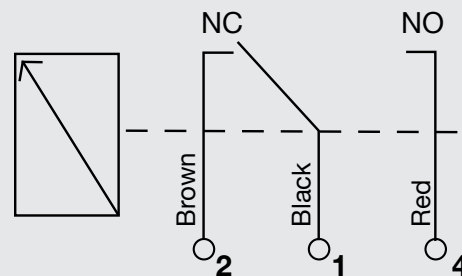
Electrical connection with receptacle plug

(binder plug M8 x 1)

Standard version



Wiring Diagram



Case	304 SS, electropolished
Wetted Material	316L and 316L VIM/VAR SS
Window	Polycarbonate
Dial	Aluminum, white with stop pin
Pointer	Aluminum black
Accuracy	+/- 2/1/2% of span (ASME B40.1 Grade A), +/- 2/3/2% of span (ASME B40.1 Grade B)
Cleanliness	UHP 'clean' for semiconductor gas applications - in accordance with SEMI/SEMATECH
Packaging	Double bagged, nitrogen purged

Field No.	Code	Feature
1	Nominal Case Size	
	B	2.0" (50 mm)
1	Unit	
	P	psi
	B	bar
	L	kPa
	E	mPa
	K	kg/cm ²
	?	other - please specify
2	Pressure Range	
	V340	-30 inHg ... 45 psi
	V352	-30 inHg ... 60 psi
	V379	-30 inHg ... 100 psi
	V412	-30 inHg ... 160 psi
	V415	-30 inHg ... 200 psi
	V422	-30 inHg ... 300 psi
	G310	0 ... 15 psi
	G321	0 ... 30 psi
	G341	0 ... 60 psi
	G369	0 ... 100 psi
	G411	0 ... 160 psi
	G414	0 ... 200 psi
	G421	0 ... 300 psi
	G428	0 ... 400 psi
	G441	0 ... 600 psi
	G455	0 ... 800 psi
	G469	0 ... 1000 psi
	G510	0 ... 1550 psi
	G514	0 ... 2000 psi
	G521	0 ... 3000 psi
	G528	0 ... 4000 psi
	G534	0 ... 5000 psi
	????	other - please specify
3	Unit	
	Z	without
	P	psi
	B	bar
	L	kPa
	E	MPa
	K	Kg/cm ²
	?	other
4		

Field No.	Code	Feature
5	Process Connection	
	WH	¼" swivel male face seal
	WI	¼" swivel female face seal
	WG	¼" fixed male face seal
	WE	MSM C 1-⅝" square
6	??	other - please specify
	Connector Position	
6	B	Center back mount
	U	Lower mount
7	Mounting Flange/Bracket	
	Z	Without
8	Switch Type	
	R	Reed
9	Electrical Connection	
	DA	Flying leads, 10' (3 m)
10	Quality Certificates	
	Z	without
	?	other - please specify
11	Additional Order Details	
	Z	without
	T	Additional text

Order Code: 1 2 3 4 5 6 7 8 9 10 11*

230.25 - - - - - **Z**

*Additional order details _____

Specifications provided in this datasheet 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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