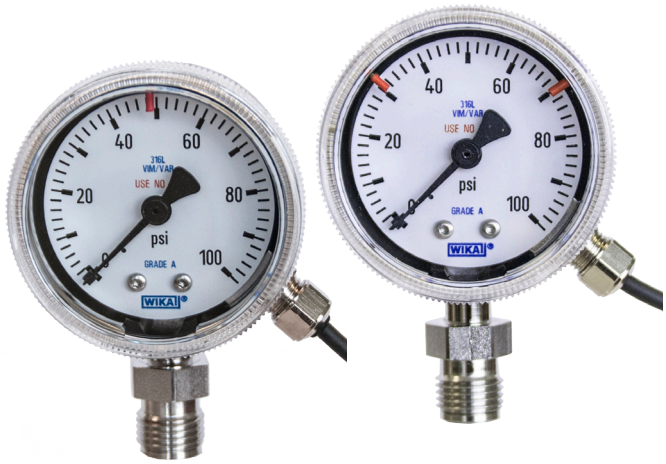
Bourdon Tube Pressure Gauges
Ultra High Purity (UHP) Series
Type 230.25 with 851 Series Alarm Contacts

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 with up to 2 SPDT Reed Switches
- Field configurable
- 316L SS and 316L SS VIM/VAR wetted parts
- Electropolished stainless steel case & face-seal connection
- Positive and compound pressure ranges to 5000 psi



Bourdon Tube Pressure Gauge Model 230.25 2” with Dual Switch

Standard Features

Design
ASME B40.100

Size
2” (50 mm)

Accuracy Class
Gauge: ± 2/1/2% of span (ASME B40.100 Grade A)
Switch: ± 5% of span at Switch Point

Ranges
Vacuum / compound to 30”Hg/0/300 psi
Pressure from 60 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 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, UNS S20161
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 < 0.25µm (R_a < 10µinch)

Bourdon Tube
Material: 316L SS
30”Hg (vac) to 5000 psi, C-type
Helium leak tested 1 x 10^{-9} scc/sec (inboard)

Socket
Material: 316L VIM/VAR electropolished
R_a < 0.25µm (R_a < 10µinch) - 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

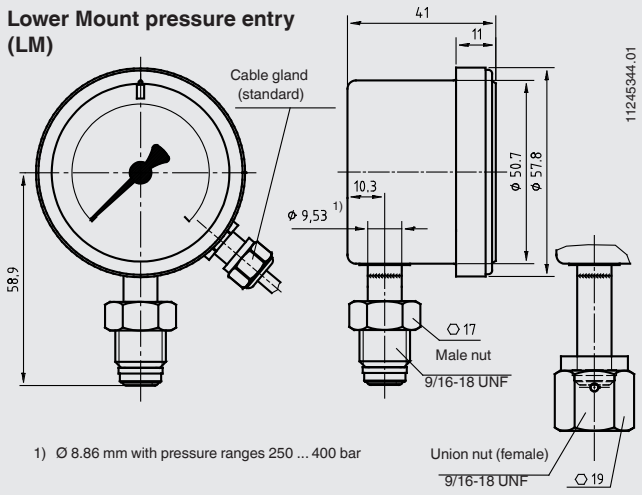
Alarm contact
- Reed contact Model 851.XX; The switching function is identified by the index '3'. 851.3 = One SPDT contact. 851.33 = Two SPDT contacts
- Setting the switching point
  In order to adjust the switching point, the gauge should be disconnected from the monitoring device and the window unscrewed.
  The switches are set via the mark pointer(s) on the dial's circumference. The set value of the switching point is adjustable up to 80 % of the scale range, 15% from low end and 5% from high end of scale.
- 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

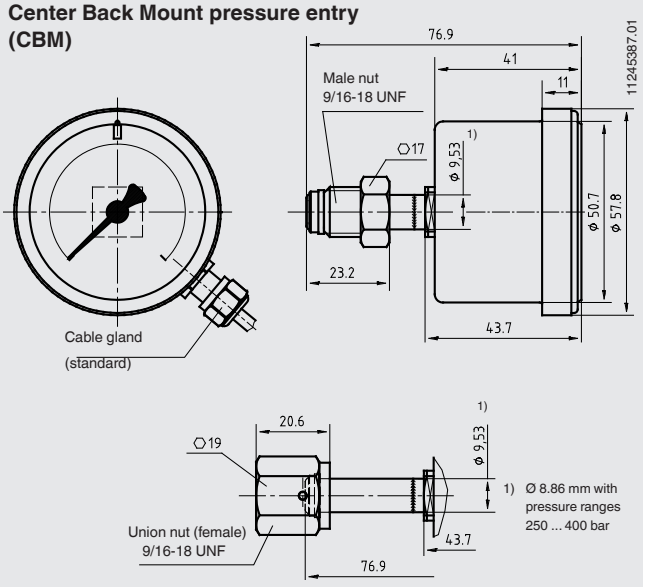
Order Options (minimum order may apply)
Custom dial layout
Dual pressure scales
Optional Materials for Male / Female Face-seal Nuts - 316 SS, UNS S20161

Standard version

Lower Mount pressure entry (LM)

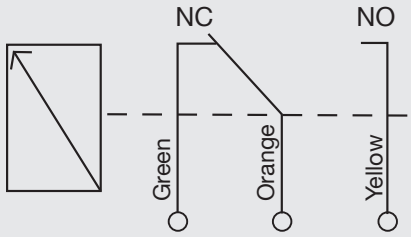


Center Back Mount pressure entry (CBM)

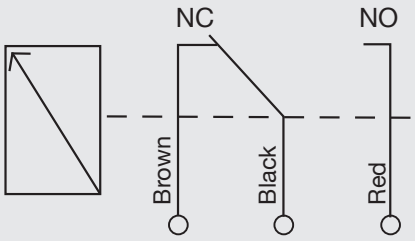


Wiring Diagram

High Pressure Switch (SP2)



Low or Single Pressure Switch (SP1)



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)
Cleanliness	UHP 'clean' for semiconductor gas applications - in accordance with SEMI/SEMATECH
Packaging	Double bagged, nitrogen purged

Field No.	Code	Feature
		Nominal Case Size
1	7	2.0" (50 mm)
		Primary (Outer) Scale
	P	psi
	B	bar
	L	kPa
	E	MPa
	K	Kg/cm2
2	S	Special pressure range
		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
	G341	0 ... 60 psi
	G369	0 ... 100 psi
	G410	0 ... 150 psi
	G411	0 ... 160 psi
	G414	0 ... 200 psi
	G417	0 ... 250 psi
	G421	0 ... 300 psi
	G428	0 ... 400 psi
	G434	0 ... 500 psi
	G441	0 ... 600 psi
	G455	0 ... 800 psi
	G469	0 ... 1000 psi
	G510	0 ... 1500 psi
	G514	0 ... 2000 psi
	G521	0 ... 3000 psi
	G528	0 ... 4000 psi
3	G534	0 ... 5000 psi

Field No.	Code	Feature	
		Secondary (Inner) Scale	
	Z	without	
	P	psi	
	B	bar	
	L	kPa	
	E	MPa	
	K	Kg/cm2	
4	?	Special scale	
		Process Connection	
	WH	¼" swivel male face seal	(FSM)
	WI	¼" swivel female face seal	(FSF)
	WG	¼" fixed male face seal	(FSFM)
	NB	¼" NPT - male	
	VN	¼" weld stub	
	9F	¼" swivel female face seal, 9/16-18 UNF, UNS S20161	(FSF-GR)
	9M	¼" swivel male face seal, 9/16-18 UNF, UNS S20161	(FSM-GR)
5	??	other - please specify	
		Connector Position	
	B	Center back mount	
6	U	Lower mount	
		Mounting Flange/Bracket	
7	Z	Without	
		Switch Type	
	R	Reed - Single contact (851.3) switch	
8	D	Reed - Dual contact (851.33) switch	
		Electrical Connection	
9	DA	Flying leads, 10' (3 meters)	
		Approvals	
10	Z	without	
		Quality Certificates	
	Z	without	
	2	Certificate 2.2 EN 10204	
	3	Certificate 3.1 EN 10204	
11	A	2.2 and 3.1 certificates acc. EN 10204	
		Additional Order Details	
	Z	without	
12*	T	Additional text*	

Order Code:

	1		2	3	4		5		6	7		8		9	10		11	12*
230.25		-				-		-			-		-			-		

*Additional order details _____

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