

Bourdon Tube Pressure Gauges Ultra High Purity (UHP) Series Type 230.15 with Alarm Contact 851.3

WIKA Datasheet 230.15 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
- Electro-polished stainless steel case & face-seal connection
- Positive and compound pressure ranges to 6000 psi

Standard Features

Design

ASME B40.100

Size

2" (50 mm)

Accuracy Class

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

Ranges

Vacuum / compound to 30"Hg/0/300 psi
Pressure from 60 psi up to 6000 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 230.15 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
Position: Lower mount (LM)
Center back mount (CBM)
Type of Connection: Face-seal fixed male
Swivel male or female
Wetted Surface Finish: Ra < 0.25µm (Ra < 10µinch)-internal
Pressure Connection Option, NPT
Material: 316L SS
Position: Lower mount (LM) & center back mount (CBM)
Type of connection: 1/4" NPT - male
Wetted surface finish: Ra < 0.5µm (Ra < 20µinch)-internal

Bourdon Tube

Material: 316L SS
30"Hg (vac) to 1,000 psi, C-type
1,500 to 6000 psi, helical type
Helium leak tested 1 x 10⁻⁹ scc/sec (inboard)

(Standard Features continued on Page 2 of 4)

Socket

Material: 316L SS

$R_a < 0.5\mu\text{m}$ ($R_a < 20\mu\text{inch}$) - internal

Movement

Stainless steel

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

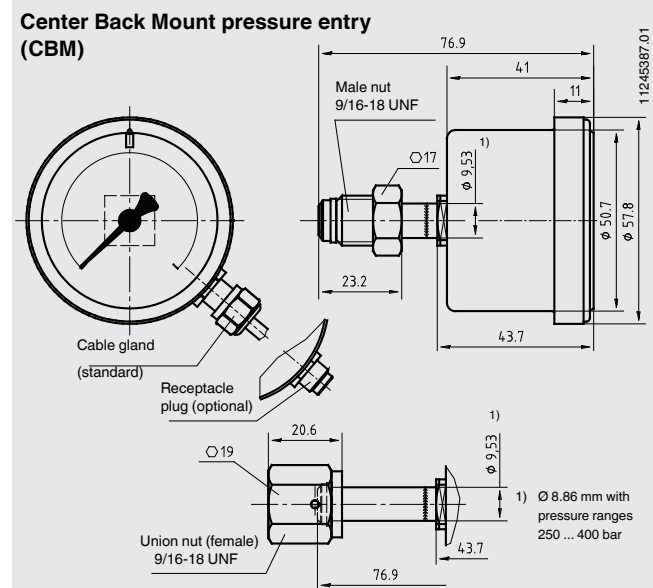
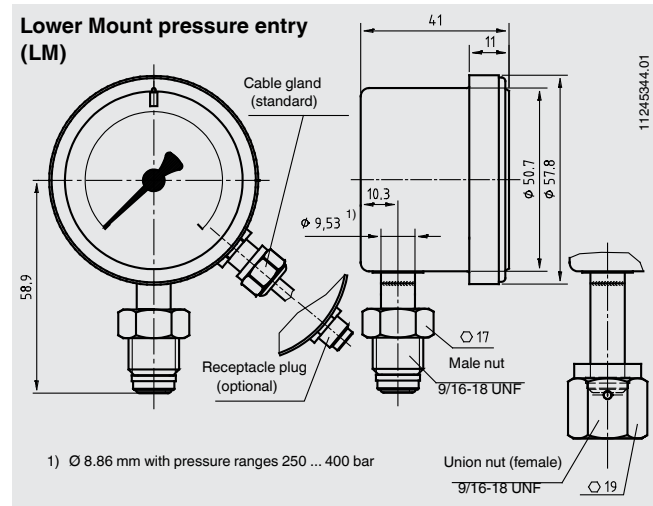
Cleanliness

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

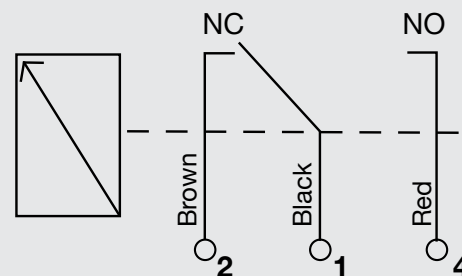
Order Options (minimum order may apply)

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 SS, electropolished
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 plastic bagged, nitrogen purged

Field No.	Code	Feature
1	Nominal Case Size	
	7	2.0" (50 mm)
2	Unit	
	P	psi
	B	bar
	L	kPa
	E	MPa
	K	Kg/cm2
	?	other - please specify
3	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
	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 ... 1500 psi
	G514	0 ... 2000 psi
	G521	0 ... 3000 psi
	G528	0 ... 4000 psi
G534	0 ... 5000 psi	
G541	0 ... 6000 psi (1/4" NPT only)	
????	other - please specify	
4	Unit	
	Z	without
	P	psi
	B	bar
	L	kPa
	E	MPa
4	K	Kg/cm2
	?	other

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

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

230.15 - - - - - **Z**

*Additional order details _____

Specifications provided in this datasheet represent the state of engineering at the time of printing.
Modifications may take place and the specified materials may change without prior notice



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