

Bourdon Tube Pressure Gauges Ultra High Purity (UHP) Series Type 230.15

WIKA Datasheet 230.15

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

- 316L wetted parts
- Electro-polished SS case & face-seal connection
- Positive and compound pressure ranges to 10,000 psi

Standard Features

Design

ASME B40.100

Sizes

2" (53 mm)
1 1/2" (40 mm)

Accuracy Class

2": $\pm 2\frac{1}{2}\%$ of span (ASME B40.100 Grade A)
1 1/2": $\pm 3\frac{2}{3}\%$ of span (ASME B40.100 Grade B)

Ranges

Vacuum / compound to 30"Hg/0/200 psi
Pressure from 0 psi up to 10,000 psi
or other equivalent units of pressure or vacuum

Working Pressure

Steady: 3/4 scale value
Fluctuating: 2/3 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) $\pm 0.4\%$ for every 18°F (10°C) rising or falling. Percentage of span.

Weather Protection

Weather resistant (NEMA 3 / IP 54)



Bourdon Tube Pressure Gauge Model 230.15

Pressure Connection

Material: Face-seal nut 316 stainless steel
Face-seal gland 316L

Position: Lower mount (LM)
Center back mount (CBM)

Type of Connection: Face-seal fixed male
Swivel male or female

Wetted Surface Finish: $R_a < 0.25\mu\text{m}$ ($R_a < 10\mu\text{inch}$)-internal
Pressure Connection Option, NPT

Material: 316L stainless steel
Position: Lower mount (LM) & center back mount (CBM)
Type of connection: 1/4" NPT - male
Wetted surface finish: $R_a < 1.0\mu\text{m}$ ($R_a < 40\mu\text{inch}$)-internal

Bourdon Tube

Material: 316L stainless steel
30"Hg (vac) to 1,000 psi, C-type
1,500 to 10,000 psi, helical type
Helium leak tested 1×10^{-9} scc/sec (inboard)

Socket

Material: 316L stainless steel
 $R_a < 0.5\mu\text{m}$ ($R_a < 20\mu\text{inch}$) - internal

Movement

Stainless steel

Dial

White aluminum with stop pin and black lettering

Pointer

Black aluminum

Case

304 stainless steel, electropolished

Window

Polycarbonate: twist-lock (2"); snap cap (1 1/2")

(Standard Features continued on Page 2 of 7)

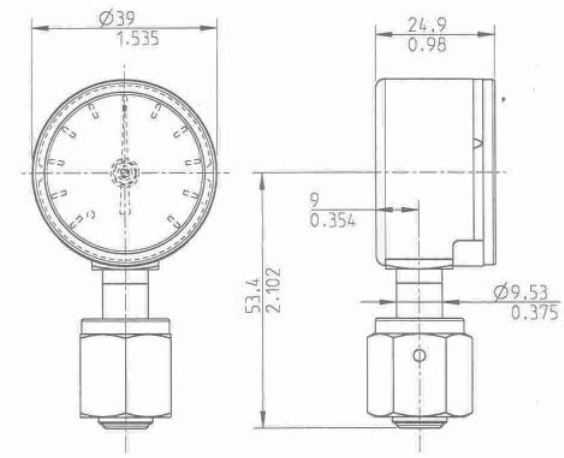
Cleanliness

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

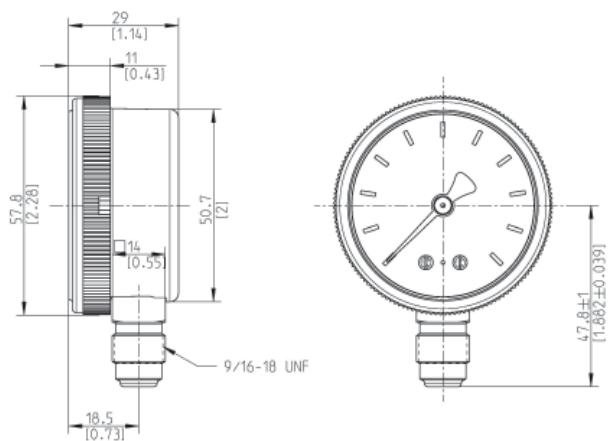
Order Options (minimum order may apply)

Alarm contact (830.1E), inductive
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

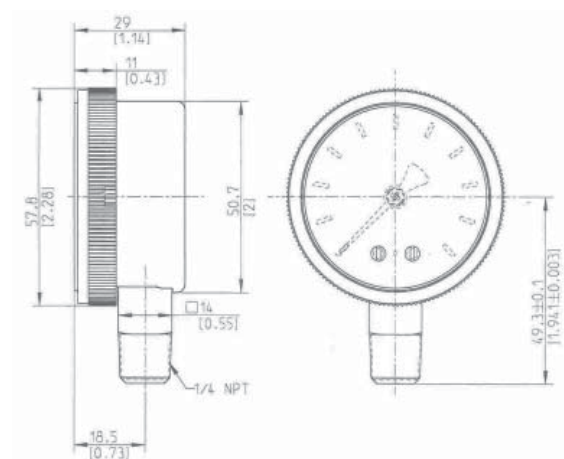
Dimensions



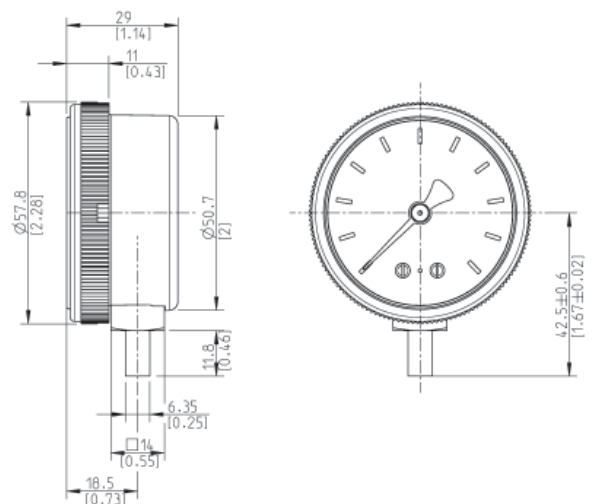
230.15 1 1/2" LM
FACE SEAL FEMALE SWIVEL (FSF)



230.15 2" LM
FACE SEAL FIXED MALE (FSFM)

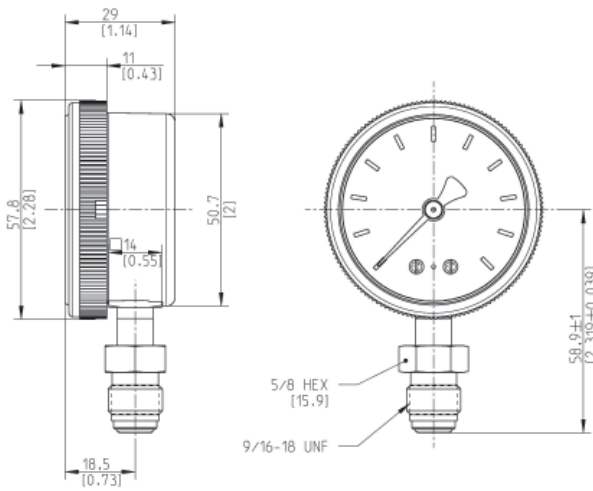


230.15 2" LM
1/4" NPT-MALE (NPTM)

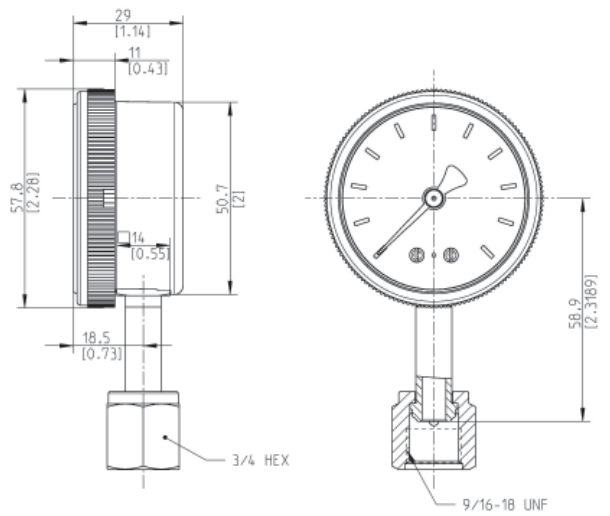


230.15 2" LM
1/4" WELD STUB

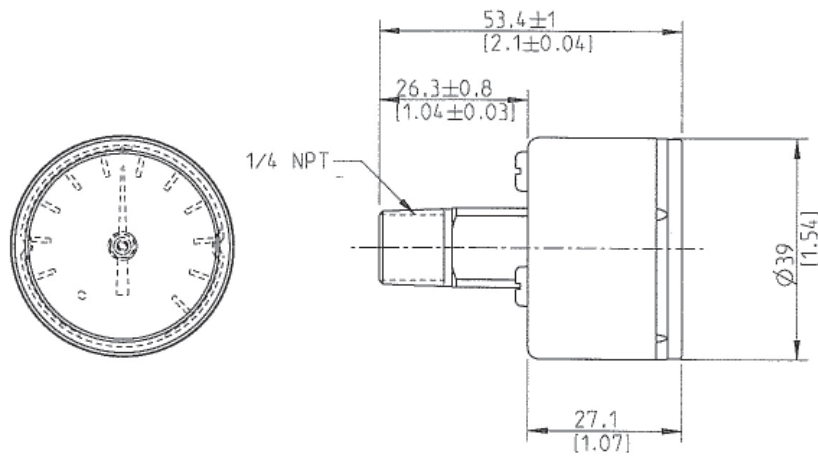
Dimensions



230.15 2" LM
FACE SEAL MALE SWIVEL (FSM)

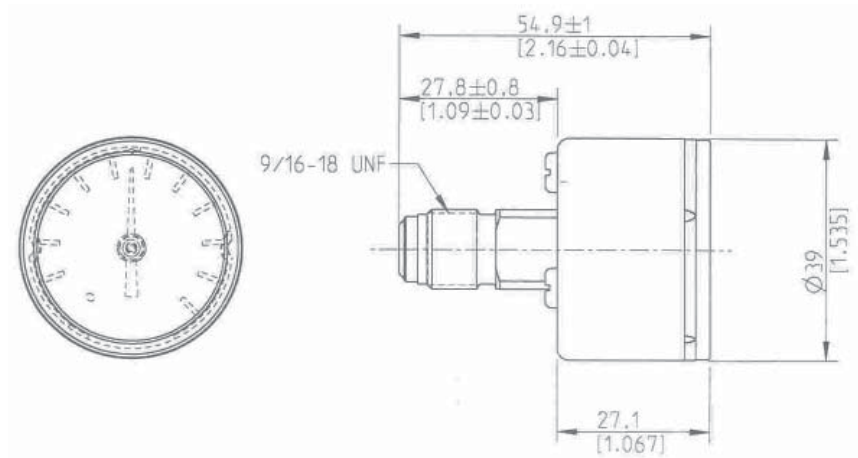


230.15 2" LM
FACE SEAL FEMALE SWIVEL (FSF)

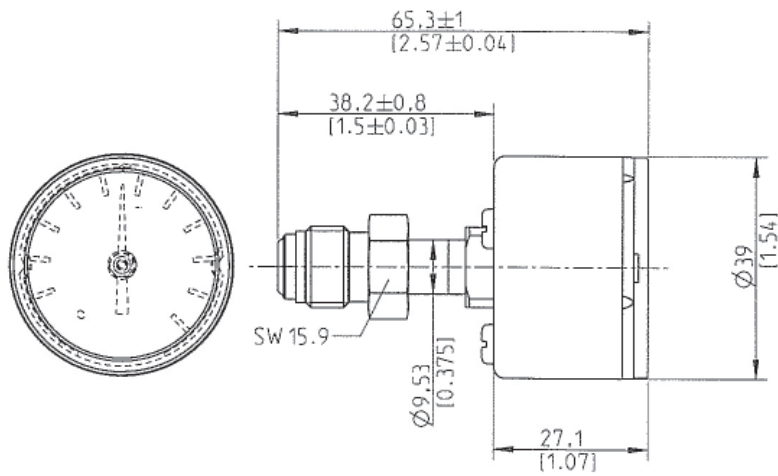


230.15 1 1/2" CBM
1/4" NPT-MALE (NPTM)

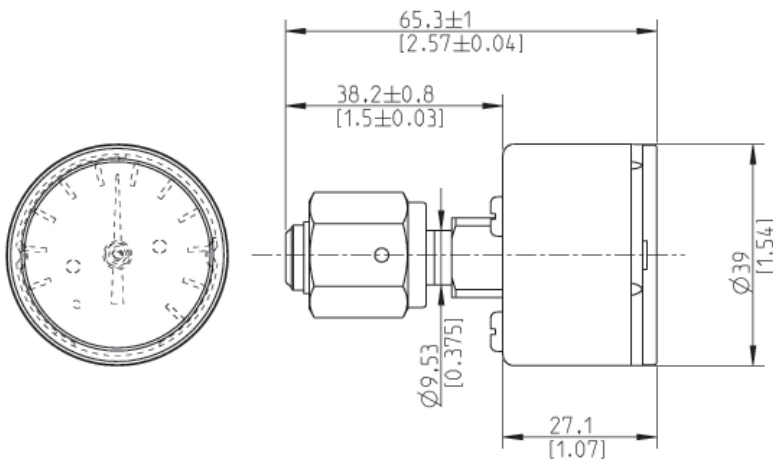
Dimensions



230.15 1 1/2" CBM
FACE SEAL FIXED MALE (FSFM)

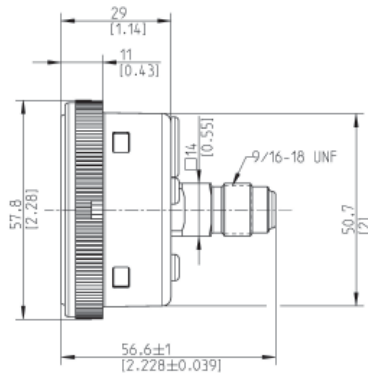


230.15 1 1/2" CBM
FACE SEAL MALE SWIVEL (FSM)

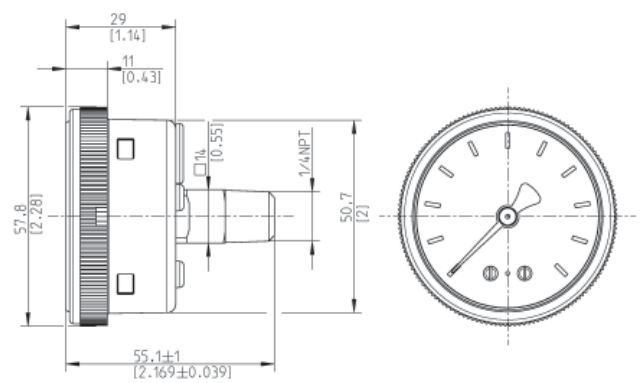


230.15 1 1/2" CBM
FACE SEAL FEMALE SWIVEL (FSF)

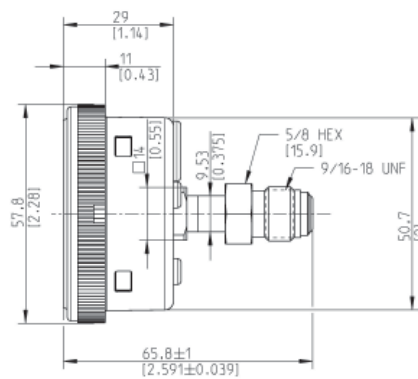
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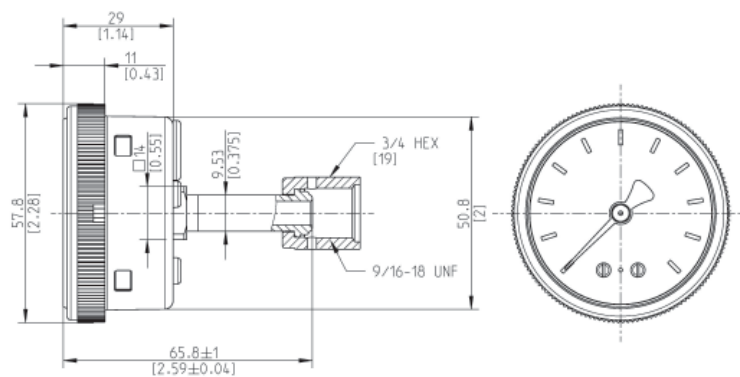
230.15 2" CBM
FACE SEAL FIXED MALE (FSFM)



230.15 2" CBM
1/4" NPT-MALE (NPTM)

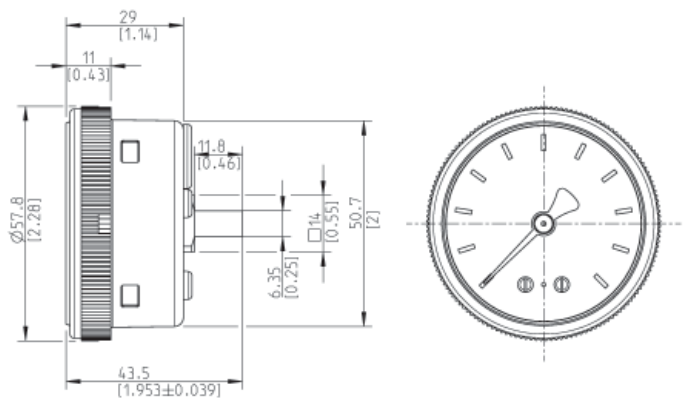


230.15 2" CBM
FACE SEAL MALE SWIVEL (FSM)

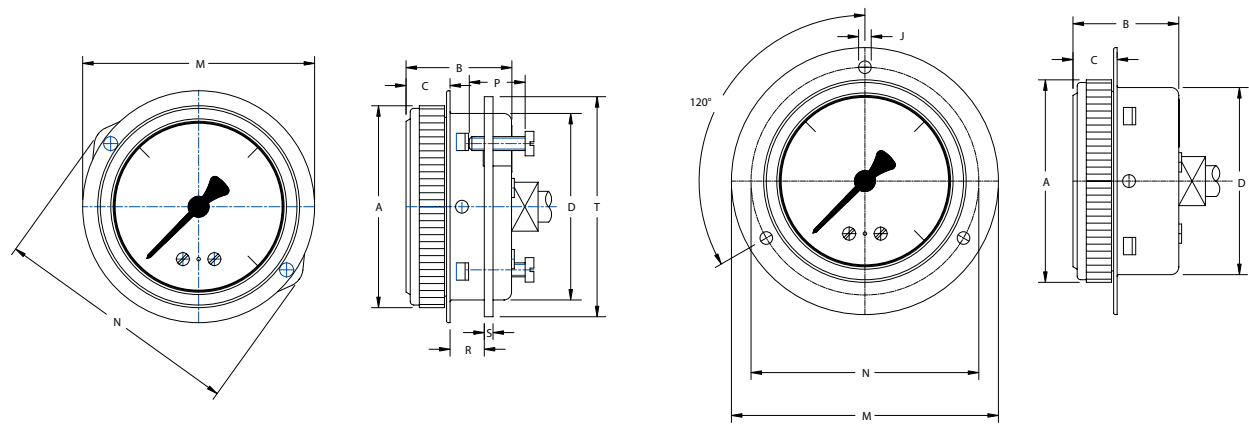


230.15 2" CBM
FACE SEAL FEMALE SWIVEL (FSF)

Dimensions



230.15 2" CBM
1/4" WELD STUB



230.15 2" CBM
U-CLAMP OPTION

230.15 2" CBM
FRONT FLANGE OPTION

TYPE/SIZE	WEIGHT	KEY	A	B	C	D	J	M	N	P	R	S	T
230.15 2" CBM / UC	0.44 lbs.	mm	57.8	30.3	12.6	53.4	-	66.4	71	16	9.80	2.5	63
		in	2.28	1.19	0.50	2.10	-	2.61	2.80	0.63	0.39	0.10	2.48
230.15 2" CBM / FF	0.38 lbs.	mm	57.8	30.2	12.6	53.4	3.6	76.2	65	-	-	-	-
		in	2.28	1.19	0.50	2.10	0.14	3.0	2.56	-	-	-	-

Recommended panel cutout = 55 mm (2.17 in.)

Case	304 stainless steel, electropolished
Wetted Material	316L stainless steel, electropolished
Window	Polycarbonate
Dial	Aluminum, white with stop pin
Pointer	Aluminum black
Accuracy	2" +/- 2/1/2% of span (ASME B40.1 Grade A) 1½" +/- 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

Code		Features
		Nominal Size, Case
1	A	1.5" (40mm)
	B	2.0" (50mm)
		Unit, Primary Scale
2	P	psi
	B	Bar
	L	kPa
	E	MPa
	K	Kg/cm2
	?	other - please specify
		Range
3	V310	-30 inHg...0
	V321	-30inHg...15 psi
	V331	-30 inHg...30 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 psi...15 psi
	G321	0 psi...30 psi
	G341	0 psi...60 psi
	G369	0 psi...100 psi
	G411	0 psi...160 psi
	G414	0 psi...200 psi
	G421	0 psi...300 psi
	G428	0 psi...400 psi
	G441	0 psi...600 psi
	G455	0 psi...800 psi
	G469	0 psi...1000 psi
	G510	0 psi...1500 psi
	G514	0 psi...2000 psi
	G521	0 psi...3000 psi
	G528	0 psi...4000 psi
	G541	0 psi...6000 psi
	G569	0 psi...10000 psi
	???	Other - Please Specify (psi)
		Unit, Secondary Scale
4	Z	Without
	P	psi
	B	Bar
	L	kPa
	E	MPa
	K	Kg/cm2
	?	other - please specify

5	Process connection	
	WH	1/4" Face Seal Male Swivel (FSM)
	WI	1/4" Face Seal Swivel Female (FSF)
	WG	1/4" Face Seal Fixed Male (FSFM)
	WK	1/2" Face Seal Male Swivel
	WL	1/2" Face Seal Female Swivel
	NB	1/4" NPT-male (NPTM)
	VN	1/4" Weld Stub
	WN	3/8" "T"-Connector
	???	Other-Please Specify
6	Connector position	
	B	Center Back Mount
	U	Lower Mount
7	Mounting Flange/Bracket	
	Z	Without
	K	Panel Mount with SS Mounting Bracket (2" Case Only)
	F	Front Flange, Polished SS (2" Case Only)
	?	other - please specify
8	Switch Type	
	Z	Without
	N	Inductive NPN (2" Case Only) 830.1E
	P	Inductive PNP (2" Case Only) 830.1E
	R	Reed (2" Case Only)
9	Switch Function	
	Z	Without
	1	Normally Open
	2	Normally Closed
	3	Single Pole Changeover
10	Electrical Connection	
	ZZ	Without
	DA	Flying Leads
	M4	Circular Connector M12 x 1, 4-Pin (Reed Switch Only)
	?	Other - Please Specify
11	Quality certificates	
	Z	without
12	Additional order details	
	Z	without
	T	additional text

Order Code:

1 2 3 4 5 6 7 8 9 10 11 12
 230.15 - - - - - -

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



WIKAL Instrument Corporation
 1000 Wiegand Boulevard
 Lawrenceville, GA 30043-5868
 Tel: 888-WIKA-USA • 770-513-8200
 Fax: 770-338-5118
 E-Mail: info@wika.com
 www.wika.com