

# Bourdon Tube Pressure Gauge

## Model 213.40 Industrial Series Liquid Filled

WIKA Data Sheet 213.40

### Applications

- Intended for adverse service conditions where pulsation or vibration exists
- Suitable for gaseous or liquid media that will not obstruct the pressure system
- Hydraulics & compressors

### Product features

- Vibration and shock resistant
- Solid forged-brass case and socket
- Pressure ranges up to 15,000 psi

### Specifications

#### Design

ASME B40.100 & EN 837-1

#### Sizes

2½" & 4" (63 & 100 mm)

#### Accuracy class

2½": ± 2/1/2% of span (ASME B40.100 Grade A)

4": ± 1% of span (ASME B40.100 Grade 1A)

#### Ranges

Vacuum / Compound to 200 psi

Pressure from 15 psi to 15,000 psi

or other equivalent units of pressure or vacuum

#### Working pressure

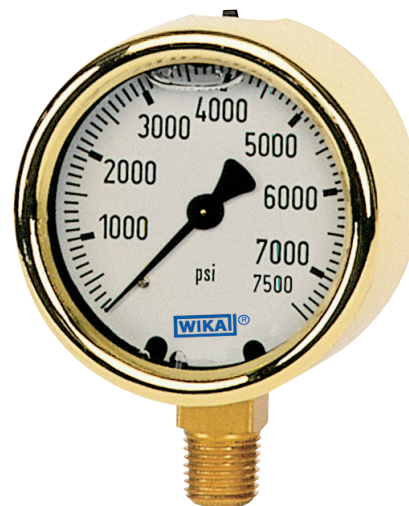
2½": Steady: 3/4 scale value  
Fluctuating: 2/3 full scale value  
Short time: full scale value

4": Steady: full scale value  
Fluctuating: 0.9 x full scale value  
Short time: 1.3 x full scale value

#### Operating temperature

Ambient: -4 °F to +140 °F (-20 °C to +60 °C) - glycerine filled  
-40 °F to +140 °F (-40 °C to +60 °C) - silicone filled

Medium: max. +140 °F (+60 °C)



Bourdon Tube Pressure Gauge Model 213.40

#### 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.

#### Weather protection

Weather tight (NEMA 4X / IP 66)

#### Pressure connection

Material: copper alloy

Lower mount (LM) or center back mount (CBM) - 2½" (63 mm)

Lower mount (LM) or lower back mount (LBM) - 4" (100 mm)

1/4" NPT or 1/2" NPT limited to wrench flat area

#### Bourdon tube

2½" (63 mm) ≤ 870 psi (60 bar): C-shape copper alloy

2½" (63 mm) > 870 psi (60 bar): Helical copper alloy

4" (100 mm) ≤ 1,000 psi (70 bar): C-shape copper alloy

4" (100 mm) > 1,000 psi (70 bar): Helical stainless steel

#### Movement

Copper alloy

#### Dial

White aluminum with black lettering, 2½" with stop pin

#### Pointer

Black aluminum

**Case**

Gold-painted forged brass with integral connection and vent plug

**Bezel ring**

Gold-plated ABS cover ring (2½")  
 Chrome-plated brass cover ring (4")

**Window**

Acrylic with Buna-N gasket

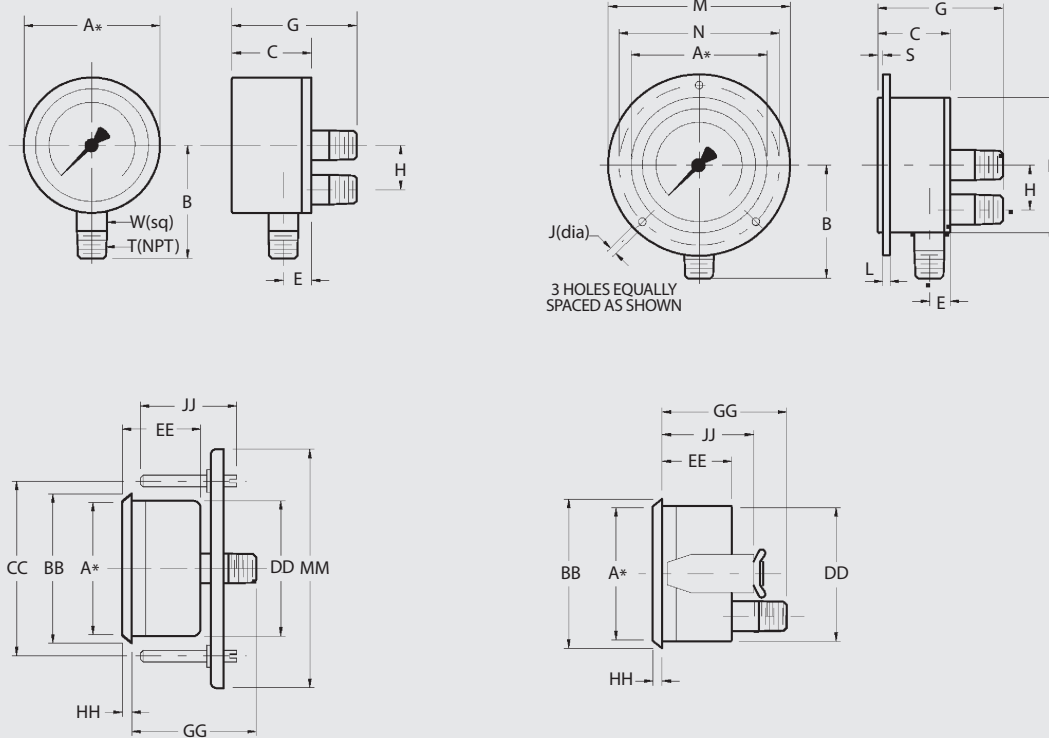
**Case fill**

Glycerine 99.7%

**Optional extras**

- Brass restrictor
- Front or rear flange
- U-clamp mounting
- Laminated safety glass or flat glass window
- Red drag pointer or mark pointer
- Silicone or Halocarbon Oil case filling
- Special connections limited to wrench flat area
- Custom dial layout
- Other pressure scales available  
 bar, kPa, MPa, kg/cm<sup>2</sup> and dual scales

**Dimensions**



Size		A	B	C	D	E	G	H	J	K	L	M	N	O	P	R
2.5"	mm	63	53	37	63	11	63	-	3.5	14	2	85	75	79	39	5.5
	in	2.5	2.09	1.46	2.48	0.43	2.48	-	0.14	0.55	0.08	3.35	2.95	3.11	1.54	0.22
4"	mm	100	80	49	101	13.5	74	30	5	17	2	132	115	122	52.5	5.5
	in	4.0	3.15	1.93	3.98	0.53	2.91	1.18	0.20	0.67	0.08	5.20	4.53	4.80	2.07	0.22

Size		S	T	W	BB	CC	DD	EE	GG	HH	JJ	MM	Weight
2.5"	mm	2	-	14	68	72	63	36.5	61	3	50	91	
	in	0.08	1/4"	0.55	2.68	2.83	2.48	1.44	2.40	0.12	1.97	3.58	0.66 lb.
4"	mm	3.5	-	22	107	-	101	48	75.5	5	59	-	
	in	0.14	1/2"	0.87	4.21	-	3.98	1.89	2.97	0.20	2.32	-	2.43 lb.

**Recommended panel cutout is dimension D + 1.8 mm = 102.8 mm**

# Quick Order Guide - 213.40 2 1/2"



Specifications according to data sheet  
 Measuring System  
 Case  
 Movement




APM 213.40 (APM 02.06)  
 Copper Alloy  
 Forged Brass, Black Painted  
 copper alloy

## Standard features

Type 213.40  
 Unit of outer Scale psi / -inHg  
 Case Forged Brass, Gold Painted  
 Bezel ring Gold Plated ABS Ring  
 Accuracy Class +/- 2/1/2% (ASME B40.100 Grade A)  
 Case filling Glycerin

## Ordering information

Nominal size		2.5"					
Process Connection		1/4 NPT					
Connector location							
Scale range	2nd Scale / Special Scale	without	2nd scale bar	2nd scale kPa	without	2nd scale bar	2nd scale kPa
0/15 psi		9310673	9734117	9456155	9318143	9734215	56041940
0/30 psi		9310681	9734125	52905255	9318151	9734223	52910775
0/60 psi		9310690	9734134	9456210	9318160	9734231	52910237
0/100 psi		9310703	9734142	52910106	9318178	9746072	52903200
0/160 psi		9310711	8986216	9456180	9318186	52909352	9455981
0/200 psi		9310720	9310720-0001	9456236	9318194	50078518	9442979
0/300 psi		9310738	9798870	9442871	9318208	9734265	9442987
0/400 psi		9310746	50288512	9611452	9318216	4237164	9455990
0/600 psi		9310754	8985815	9456244	9318224	56045239	52903611
0/1000 psi		9310770	9798404	9456252	9318240	9746048	9456015
0/1500 psi		9310789	52909693	9456260	9318259	8985829	9207511
0/2000 psi		9310797	4360695	9455906	9318267	8985830	9456023
0/3000 psi		9310800	8985566	9455914	9318275	8985831	9435220
0/5000 psi		9310819	9746064	9456279	9318283	8985832	9442995
0/7500 psi		9325107	52910723	9455922	9318291	9318291-0004	9128840
0/10000 psi		9790454	9790454-0008	52910801	52014541	52871755	50745417
-30 inHg/0 psi		9318003	9734109	9456198	9318070	9734312	9455930
-30 inHg/15 psi		9318011	52910724	9613862	9318089	52910756	9325662
-30 inHg/30 psi		9318020	52910725	9456163	9318097	52910754	9325689
-30 inHg/60 psi		9318038	52830811	52904385	9318100	52910753	9325816
-30 inHg/100 psi		9318046	52910726	9679928	9318119	52910752	9149872
-30 inHg/160 psi		52910747	52910729	9679936	9318127	52910751	52910779
-30 inHg/200 psi		9318062	52910730	9442863	9318135	52910750	9326251

	available on stock
	available after production
	not available



# Quick Order Guide - 213.40 4"

Specifications according to data sheet  
 Measuring System  
 Movement




APM 213.40 (APM 02.06)  
 Copper Alloy  
 copper alloy




## Standard features

Unit of outer Scale  
 Case  
 Bezel ring  
 Window  
 Accuracy Class

psi / -inHg  
 Forged Brass, Gold Painted  
 Brass, Chrome Plated  
 acrylic (PMMA)  
 +/- 1% (ASME B40.100 Grade 1A)

## Ordering information

Nominal size		4"		
Process Connection		1/4 NPT		1/2 NPT
Scale range	Connector location			
0/15 psi		9314644	9314385	9314121
0/30 psi		9314652	9314393	9314130
0/60 psi		9314660	9314407	9314148
0/100 psi		9314679	9314415	9314156
0/160 psi		9314687	9314423	9314164
0/200 psi		9314695	9314431	9314172
0/300 psi		9314709	9314440	9314180
0/400 psi		9314717	9314458	9314199
0/600 psi		9314725	9314466	9314202
0/1000 psi		9314741	9314482	9314229
0/1500 psi		9314750	9314490	9314237
0/2000 psi		9314768	9314504	9314245
0/3000 psi		9314776	9314512	9314253
0/5000 psi		9314784	9314520	9314261
0/10000 psi		9314792	9314539	9314270
-30 inHg/0 psi		9314555	9314296	52813616
-30 inHg/15 psi		9314563	9314300	52875468
-30 inHg/30 psi		9314571	9314318	50082914
-30 inHg/60 psi		9314580	9314326	52826207
-30 inHg/100 psi		9314598	9314334	50082931
-30 inHg/160 psi		9314601	9314342	52826208
-30 inHg/200 psi		9314610	52544711	50082957

	available on stock
	available after production
	not available

# Standard Order Code - 213.40 2½"

		<b>Nominal size</b>	
1	<input type="checkbox"/>	E	4"
		<b>Unit of outer Scale</b>	
		B	bar
		P	psi / -inHg
		L	kPa
		E	MPa
2	<input type="checkbox"/>	K	kg/cm2
		<b>Measuring range</b>	
		G	gauge pressure range
3	<input type="checkbox"/>	V	vacuum- or compound-range
		<b>Scale range</b>	
		269	0/10 psi
		310	0/15 psi (-30°Hg.0)
		321	0/30 psi (-30°Hg/15 psi)
		341	0/60 psi
		369	0/100 psi
		411	0/160 psi
		414	0/200 psi
		421	0/300 psi
		428	0/400 psi
		441	0/600 psi
		455	0/800 psi
		469	0/1000 psi
		510	0/1500 psi
		514	0/2000 psi
		521	0/3000 psi
		528	0/4000 psi
		534	0/5000 psi
		541	0/6000 psi
		552	0/7500 psi
		569	0/10000 psi
		610	0/15000 psi
		331	-30 inHg/30 psi
		352	-30 inHg/60 psi
		379	-30 inHg/100 psi
		412	-30 inHg/160 psi
		415	-30 inHg/200 psi
4	<input type="checkbox"/>	422	-30 inHg/300 psi
		<b>2nd Scale / Special Scale</b>	
		Z	without
		B	2nd scale bar
		P	2nd scale psi
		L	2nd scale kPa
		E	2nd scale MPa
5	<input type="checkbox"/>	K	2nd scale kg/cm2
		<b>Process Connection</b>	
		GD	G 1/2 B
		GB	G 1/4 B
		NB	1/4 NPT
		ND	1/2 NPT
6	<input type="checkbox"/>	UA	7/16-20 UNF SAE #4 J1926 male

		<b>Connector location</b>	
		U	lower mount
		3	lower back mount
		?	Please give customer's specifications!
		D	12 o'clock
		E	3 o'clock
7	<input type="checkbox"/>	G	9 o'clock
		<b>Case</b>	
8	<input type="checkbox"/>	K	Forged Brass, Gold Plated
		<b>Bezel ring</b>	
		Z	Without (standard)
9	<input type="checkbox"/>	2	Brass, Chrome Plated
		<b>Mounting flange/bracket</b>	
		Z	without (standard)
		B	back flange, black steel
		D	front flange, black steel
		I	front flange, chrome plated brass
10	<input type="checkbox"/>	5	narrow panel ring, chrome plated, rolled on, with mounting bracket
		<b>Window</b>	
		A	acrylic (PMMA) (standard)
		H	laminated safety glass
11	<input type="checkbox"/>	S	Acrylic with Pressure Compensating Membrane
		<b>Restrictor</b>	
		Z	Without (standard)
12	<input type="checkbox"/>	L	Orifice 0.3mm(0.012 inches)
		<b>Accuracy Class</b>	
13	<input type="checkbox"/>	L	±- 1% (ASME B40.100 Grade 1A) (standard)
		<b>Set / Drag Pointer</b>	
		Z	Without (standard)
		B	Adjustable Red Mark Pointer(Set Pointer)
14	<input type="checkbox"/>	K	Adjustable Red Maximum Drag Pointer
		<b>Case filling</b>	
		A	Glycerin (standard)
		G	Glycerin-water mixture
15	<input type="checkbox"/>	P	Silicone, 1000 cst
		<b>Certificates</b>	
		Z	without (standard)
16	<input type="checkbox"/>	1	quality certificates
		<b>Approvals</b>	
17	<input type="checkbox"/>	Z	without
		<b>Additional ordering information</b>	
		Z	Without (standard)
18	<input type="checkbox"/>	T	Additional text

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

**Modelcode: 213.40 - E - - - K - L - Z - Z**

**Additional Text:**

Additional scale ranges and options are available. Please contact the factory or access the product configurator for model 213.40 on the WIKA US website.

**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.

