


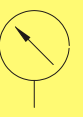

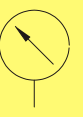



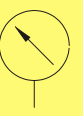

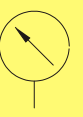


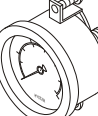
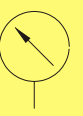

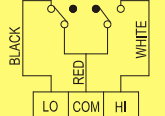

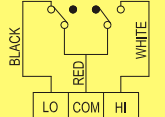

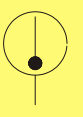




# PRESSURE GAUGE

PRESSURE GAUGES -LIQUID FILLED TYPE		Graphic Symbol	Material Of Casing	P Range bar(PSI)	Size Of Connection (PT/NPT/BSPP)	Ref Page
	SIZE: 40mm 50mm TYPE:121-21- 221-21-		Stainless Steel	0~350 (0~5000)	1/8"	403
	SIZE: 40mm 50mm TYPE:126-21- 226-21-		Stainless Steel			
	SIZE: 63mm 100mm TYPE:321-21- 521-21-		Stainless Steel			
	SIZE: 63mm 100mm TYPE:322-21- 522-21-		Stainless Steel	0~1000 (0~14500)	1/4"~1/2"	404
	SIZE: 63mm 100mm TYPE:324-21- 524-21-		Stainless Steel			
	SIZE: 63mm 100mm TYPE:326-21- 526-21-		Stainless Steel			
	SIZE: 63mm 100mm TYPE:328-21-L 528-21-L (L CLAMPS)		Stainless Steel			
	SIZE: 63mm 100mm TYPE:328-21-U 528-21-U (U CLAMPS)		Stainless Steel			
	SIZE: 100mm TYPE:451-21-**-2 BOTTOM, DOUBLE CONTACT		Stainless Steel			
	SIZE: 100mm TYPE:555-21-**-2 BACK, DOUBLE CONTACT		Stainless Steel			
	<b>Thermometers</b> SIZE: 40mm 50mm 63mm 100mm		Stainless Steel	-50°C +600°C	1/8"~1/2"	405
						406

G

## Ordering Code

3 2 3 - 1 1 - 2 2 2 - 250<sup>B/P</sup>

Dial Size	Basic Application	Type of Case	Material of Cap & Case	Material of Connector	Type of Connector	Size of Connector	Type of Liquid	Pres. Range and Scale

0	Special	Special	Special	Special	Special	Special	Special	Special	Pressure Range
1	40mm	General	Bottom Mount without Flange	Steel Black	Brass	PF (BSPP)	1/8"	Dry	-1 to +1000 bar
2	50mm	Crimped on Bezel	Bottom Mount with back Flange	Stainless Steel	Chrome Brass	PT (BSPT)	1/4"	Glycerin	Scale and Code PSI/bar/Kpa =P/B
3	63mm	Push Twist Removable Bezel	Lower Back Mount without Flange	Brass	Stainless Steel	NPT	3/8"	Silicone 1000 $\phi$	kg/PSI =K/P
4	75mm	Push Twist Removable Bezel Zero Adjusted Pointer	Center Back Mount without Flange	Steel Cap Chrome Case Black		UNF	1/2"	Silicone 100 $\phi$	PSI/Kpa =P/K
5	100mm	Electric Contact Point on/off	Lower Back Mount with Front Flange	Steel Wholly Chrome			7/16"		Mpa/kg =M/K Mpa/bar =M/B
6	150mm	Diaphragm	Center Back Mount with Front Flange					Type of Electric Contacts	Single Contact Point
7			Lower Back Mount without Flange with L Bracket						Double Contact Point off/on
8			Center Back Mount without Flange with U Bracket						Double Contact Point off/off

## Equivalent Table of Pressure Ranges

Unit	bar	mbar	kbar	Pa	kPa	MPa	psi	atms	Ft. Hd. H <sub>2</sub> O at 20 °C	in H <sub>2</sub> O	Kg/cm <sup>2</sup>	Metres H <sub>2</sub> O	in. Hg. at 20 °C	mm Hg.	cm Hg.	bar	Millibar (mbar)	kPa
1bar	1	1000	0.001	10 <sup>5</sup>	100	0.1	14.696	1	33.659	407.513	1.0330	10.351	30.019	762.480	76.284	1.0130	1013.0	101.325
1mbar	0.001	1	10 <sup>-6</sup>	100	0.1	10 <sup>-4</sup>	0.433	0.0290	1	12.000	0.0300	0.305	0.884	22.452	2.245	0.0300	29.837	2.984
1kbar	1000	10 <sup>6</sup>	1	10 <sup>8</sup>	10 <sup>5</sup>	100	14.233	0.9680	32.867	394.408	1	10.018	29.054	737.959	73.796	0.9810	980.662	98.066
1Pa	10 <sup>-5</sup>	0.01	10 <sup>-8</sup>	1	0.001	10 <sup>-6</sup>	1.422	0.0970	3.287	39.370	0.0990	1	2.905	73.796	7.379	0.0980	98.066	9.807
1kPa	0.01	10	10 <sup>-5</sup>	1000	1	0.001	0.489	0.0330	1.131	13.575	0.0340	0.345	1	25.400	2.540	0.0340	33.753	3.375
1MPa	10	10 <sup>4</sup>	0.01	10 <sup>6</sup>	1000	1	0.019	0.0013	0.045	0.534	0.0014	0.0136	0.039	1	0.100	0.0010	1.329	0.133
							0.193	0.0131	0.445	5.340	0.0140	0.1360	0.393	10.000	1	0.0133	13.290	1.328
							14.503	0.9870	33.514	402.164	1.0200	10.2110	29.625	752.470	75.247	1	1000.0	100.00
							0.014	0.0009	0.033	0.402	0.0010	0.0102	0.029	0.752	0.075	0.001	1	0.100
							0.145	0.0098	0.335	4.021	0.0100	0.1020	0.296	7.525	0.752	0.010	10.000	1

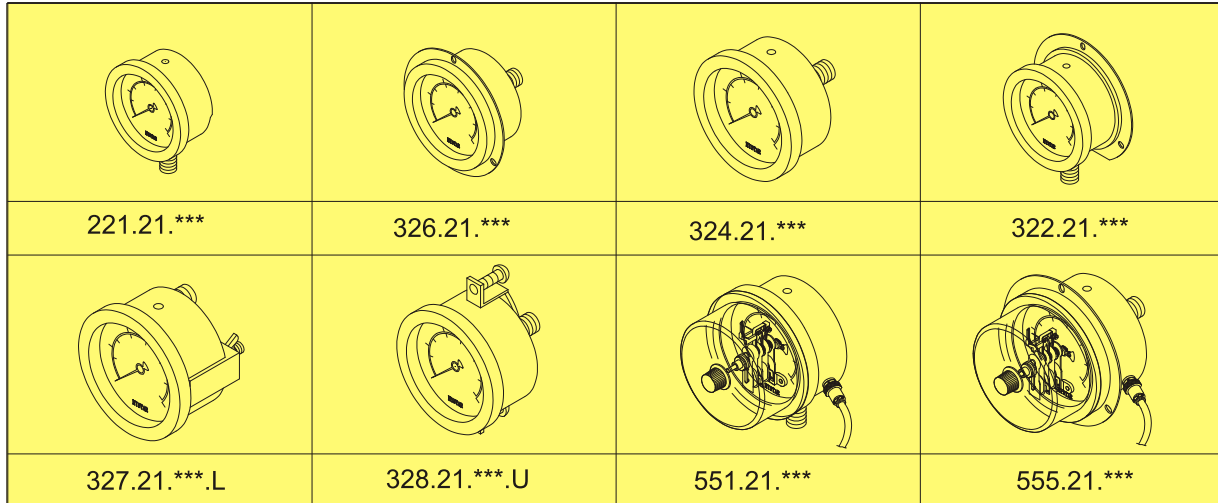
1Pa=1N/m<sup>2</sup> 1kPa=1kN/m<sup>2</sup> 1MPa=1MN/m<sup>2</sup>

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## DESCRIPTION

- GLYCERINE LIQUID FILLING BOURDON TUBE PRESSURE GAUGES
- ALL STAINLESS STEEL LIQUID FILLING PRESSURE GAUGES FOR CHEMICAL INDUSTRY APPLICATION
- BOURDON TUBE PRESSURE GAUGES WITH LIMIT SWITCH FOR INDUSTRY APPLICATION



### APPLICATION

For gaseous and liquid aggressive media which are not highly viscous and would crystallize. Can be used in aggressive environments. For measuring points subject to vibrations and high dynamic pressure load.

### ALL STAINLESS GAUGES

All stainless steel liquid filled pressure gauges for chemical and food industry application

### NOMINAL SIZE

40, 50, 63, 75, 100mm

### ACCURACY CLASS

Class	Size (mm)
2%	40, 50
1.0~1.5%	63, 75, 100

### PRESSURE RANGES

Pressure Range	Size (mm)
0/1 to 0/200 bar	40, 50
-1/0 to -1/+20 bar 0/1 to 0/1000 bar	63, 75, 100

### OPERATING TEMPERATURES

Ambient: T min=-25°C  
T max=+60°C  
Measured medium: T max=+60°C

### THERMAL CHARACTERISTICS

Inaccuracy in case of temperature deviated of +20°C from normal temperature at measuring system:  
with increasing temp. approx.  
± 0.3% / 10K  
with decreasing temp. approx.  
± 0.3% / 10K  
of max. or min. scale value

### STANDARD VERSION CONNECTION

Size	Wrench	Connection
40mm	12mm	1/8" PT,NPT,PF,BSF
50mm	14mm	1/4" PT,NPT,PF,BSF
60mm	14mm	1/4" PT,NPT,PF,BSF
75mm	14mm	1/4" PT,NPT,PF,BSF
100mm	22mm	3/8, 1/2" PT,NPT,PF,BSF

### MEASURING SYSTEM

Bourdon tube element,  
copper alloy  
≤ 70 bar circle  
> 70bar helical

### MOVEMENT SYSTEM

Brass  
All Stainless(Type all stainless only)

### FACE

Aluminum, white  
Graduation and figures black

### POINTER

Aluminum, black

### CASE

Stainless steel AISI 304

### BAYONET RING

Stainless steel AISI304

### TYPE OF LIQUID

Glycerine (99.5%)

Code	Liquid
1	Dry
2	Glycerine (99.5%)
3	Silicone
4	Silicone 100ø

### WINDOW

Acrylic or glass

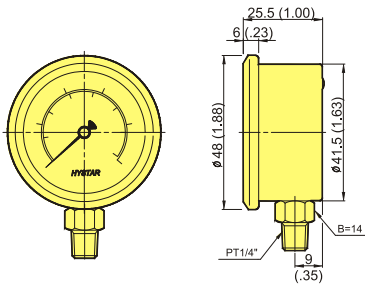
### OPTIONS

Rear fastening edge  
Three-square front ring  
Three-hole front flange  
Special scale

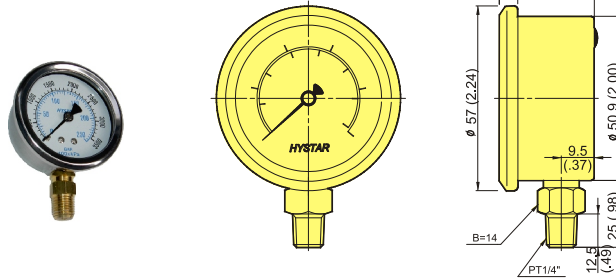
## INSTALLATION DETAILS

MILLIMETERS(INCHES)

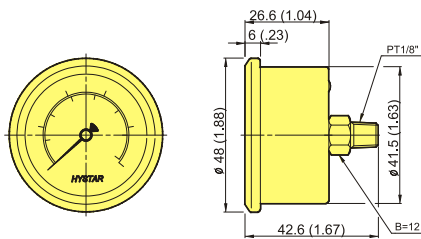
121.21.\*\*\*  
40 mm



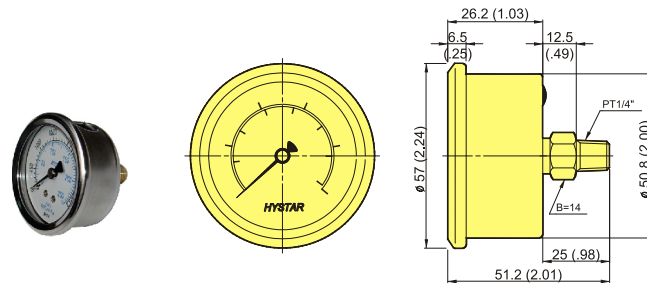
221.21.\*\*\*  
50 mm



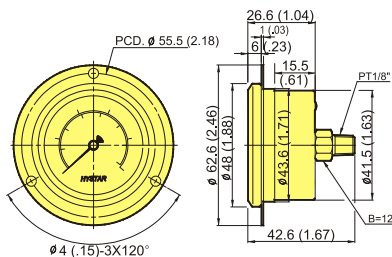
124.21.\*\*\*  
40 mm



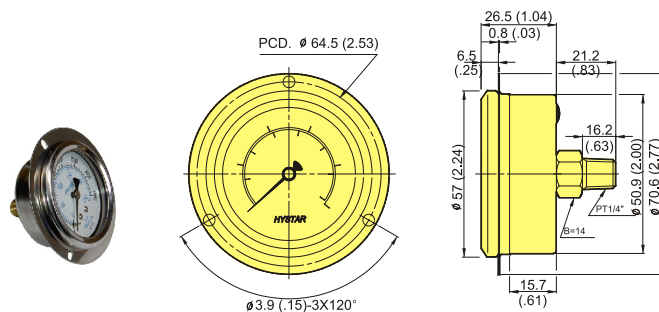
224.21.\*\*\*  
50 mm



126.21.\*\*\*  
40 mm

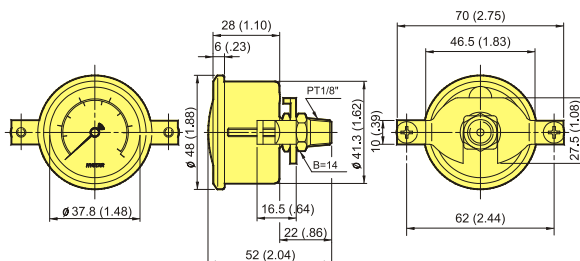


226.21.\*\*\*  
50 mm

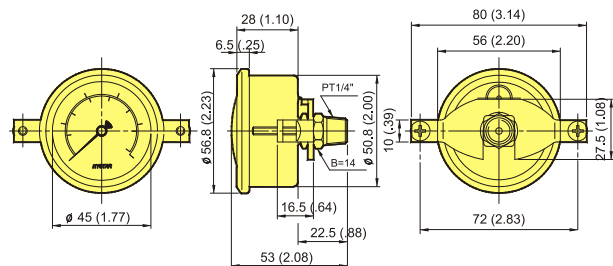


121.21.\*\*\*  
40 mm

128.21.\*\*\*



228.21.\*\*\*  
50 mm



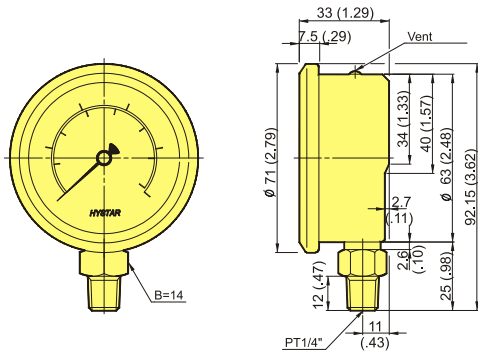




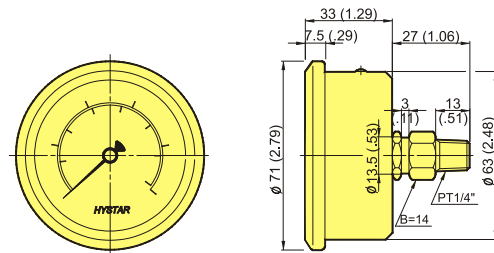
## INSTALLATION DETAILS

MILLIMETERS(INCHES)

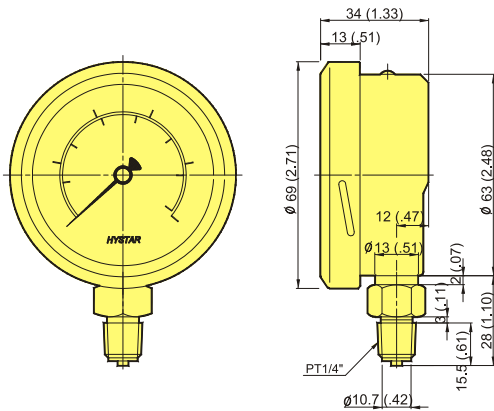
321.21.\*\*\*  
321.23.\*\*\* 63 mm



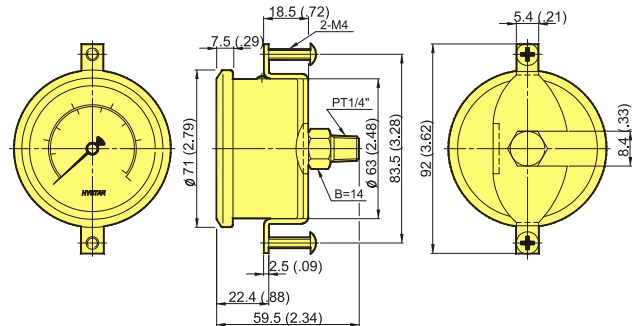
324.21.\*\*\*  
324.23.\*\*\* 63 mm



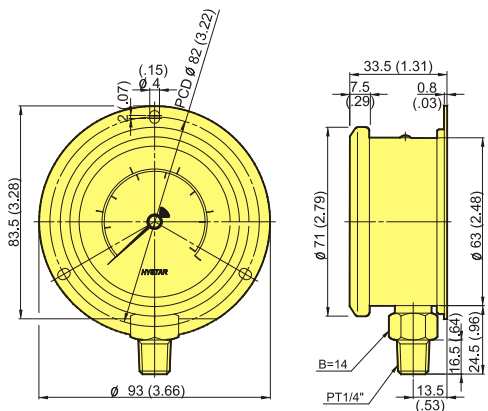
331.21.\*\*\*  
331.23.\*\*\* 63 mm



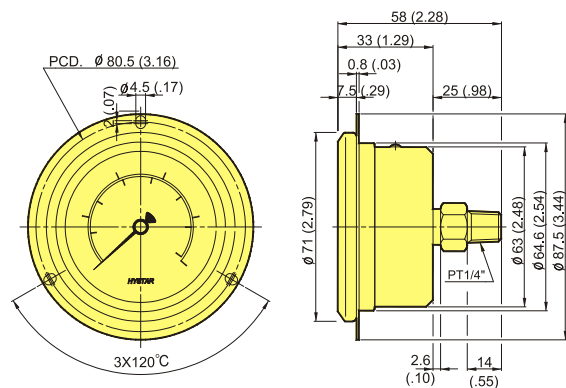
328.21.\*\*\*  
328.23.\*\*\* 63 mm



322.21.\*\*\*  
322.23.\*\*\* 63 mm



326.21.\*\*\*  
326.23.\*\*\* 63 mm

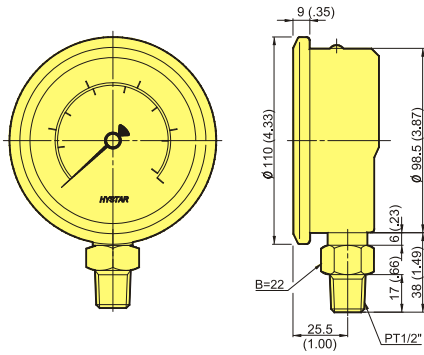


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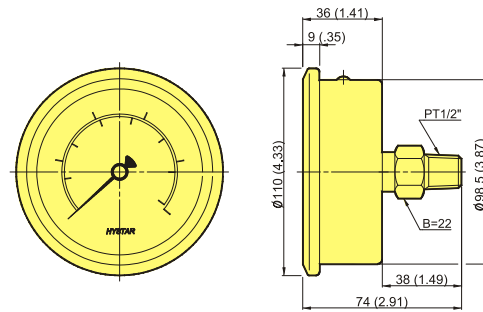
## INSTALLATION DETAILS

MILLIMETERS(INCHES)

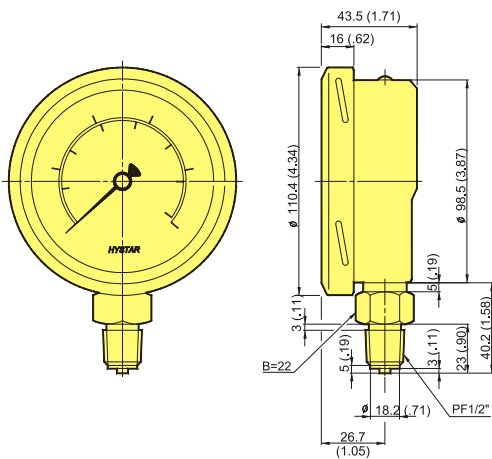
521.21.\*\*\*  
521.23.\*\*\* 100 mm



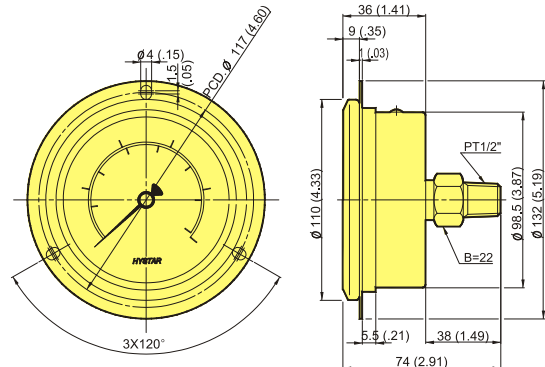
524.21.\*\*\*  
524.23.\*\*\* 100 mm



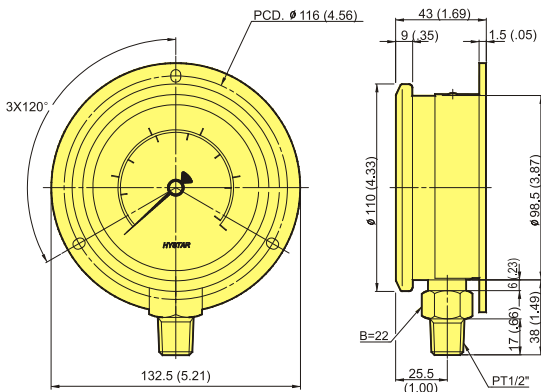
531.21.\*\*\*  
531.23.\*\*\* 100 mm



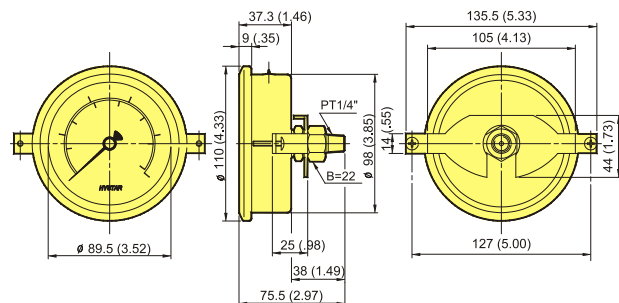
526.21.\*\*\*  
526.23.\*\*\* 100 mm



522.21.\*\*\*  
522.23.\*\*\* 100 mm



528.21.\*\*\*  
528.23.\*\*\* 100 mm

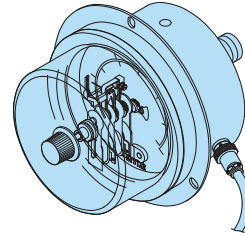
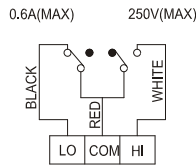
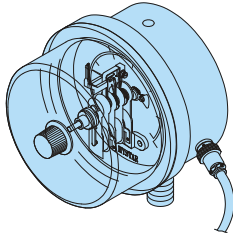




## INSTALLATION DETAILS

MILLIMETERS(INCHES)

ALL STAINLESS STEEL LIQUID FILLING PRESSURE GAUGES FOR CHEMICAL AND FOOD INDUSTRY APPLICATION



### APPLICATION

For gaseous and liquid media which are not highly viscous, do not crystallize and are not aggressive to copper alloys.  
For high measuring accuracy.

### NOMINAL SIZE

100m/m

### ACCURACY CLASS

Class 1.0%

### PRESSURE RANGES

-1/0 bar  
0/1 to 0/1000 bar

### CONTACT TYPES

Snap action contact (magnet)(MK)  
Inductive contact (IK)

### MINIMUM RANGES

MK single 1 bar  
MK double 2.5 bar  
IK single 1 bar  
IK double 1.6 bar

### OPERATING TEMPERATURES

Ambient:  $T_{min} = -25^{\circ}C$   
 $T_{max} = +60^{\circ}C$   
Measured medium:  $T_{max} = +100^{\circ}C$

### THERMAL CHARACTERISTICS

Inaccuracy in case of temperature deviated of  $+20^{\circ}C$  from normal temperature at measuring system:  
with increasing temp. approx.  
 $\pm 0.3\% / 10K$   
with decreasing temp. approx.  
 $\pm 0.3\% / 10K$   
of max. or min. scale value

### STANDARD VERSION CONNECTION

Brass, bottom, or back(eccentric)  
Size 100m/m - wrench 22m/m  
1/2 PT, NPT, PF, BSP

### MEASURING SYSTEM

Bourdon tube element  
 $\leq 70$  bar circle, copper alloy  
 $> 70$ bar helical, CrNi steel

### MOVEMENT SYSTEM

Stainless steel and Brass

### FACE

Aluminum, white  
Graduation and figures black

### POINTER

Aluminum, black

### CASE

Stainless steel SUS 304

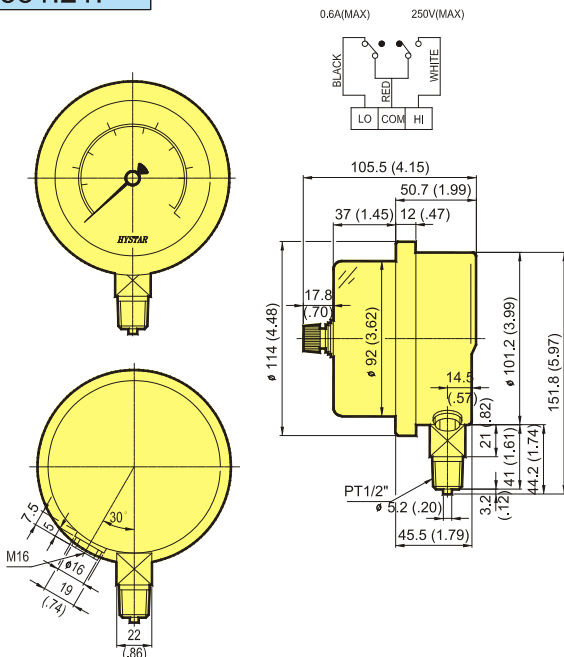
### BAYONET RING

Stainless steel AISI 304

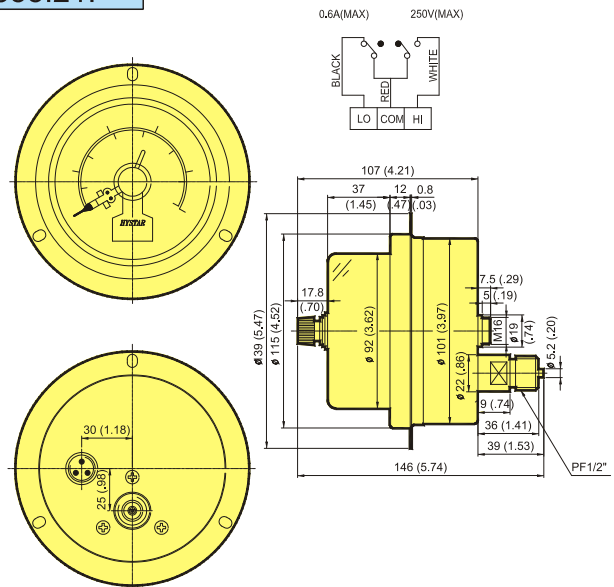
### WINDOW

Plastic window

551.21.\*\*\*



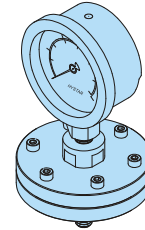
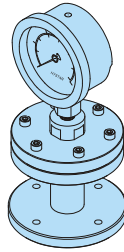
555.21.\*\*\*



## INSTALLATION DETAILS

MILLIMETERS(INCHES)

### DIAPHRAGM LIQUID FILLING PRESSURE GAUGES FOR CHEMICAL INDUSTRY APPLICATION



#### APPLICATION

For aggressive gaseous and liquid media. Can also be used in aggressive environments. With open connecting flange also suitable for viscous and polluted media. Designed for measuring points which are subject to vibrations and high dynamic pressure loads.

**NOMINAL SIZE**  
100m/m

**ACCURACY CLASS**  
Class 1.5%

**PRESSURE RANGES**  
0 to 0/25 bar.

#### OPERATING TEMPERATURES

Ambient:  $T_{min} = -20^{\circ}\text{C}$   
 $T_{max} = +60^{\circ}\text{C}$   
Measured medium:  $T_{max} = +100^{\circ}\text{C}$

#### THERMAL CHARACTERISTICS

Inaccuracy in case of temperature deviated of  $+20^{\circ}\text{C}$  from normal temperature at measuring system:  
with increasing temp. approx.  $\pm 0.3\% / 10\text{K}$   
with decreasing temp. approx.  $\pm 0.3\% / 10\text{K}$   
of max. or min. scale value

#### STANDARD VERSION CONNECTION WITH BOTTOM MEASURING FLANGE

Stainless steel, bottom  
1/2 PT, PF, NPT  
0 - wrench 22m/m

#### TOP MEASURING FLANGE

Stainless steel

#### MEASURING SYSTEM

Diaphragm, stainless steel

#### MOVEMENT SYSTEM

Stainless steel and Brass

#### FACE

Aluminum, white  
Graduation and figures black

#### CASE

Stainless steel SUS 304 with pressure relief opening

#### BAYONET RING

Stainless steel AISI 304

#### LIQUID FILLING

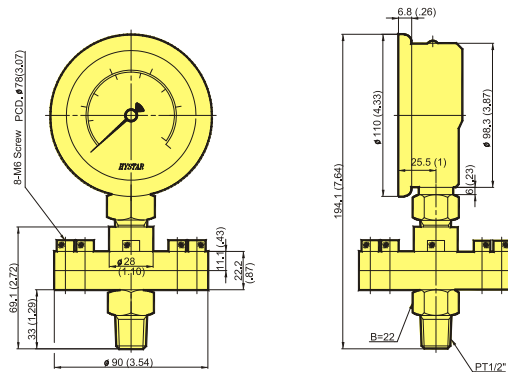
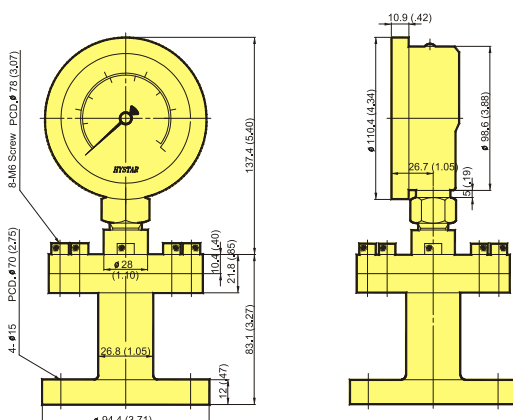
Glycerine (99.5%)

#### WINDOW

Multilayer safety glass

**JF-200-15-S316**  
Flange Connection

**JF-100-90-S316**  
Threaded Entry





**STANDARD GAUGE ASSEMBLY AND PARTS LIST**

No	Part Name
1	Flange
2	Connector Protective Cover
3	Snubber
4	Connective Part
5	Safety Device
6	Case Housing
7	Oil Seal
8	Bourdon Tube

**ASSEMBLY**

326.21.\*\*\*

No	Part Name
9	Brass Socket
10	Internal Kits
11	Internal Screw
12	Hexagon Screw
13	Dial-Scale
14	Stop Pointer
15	Dial Screw
16	Pointer
17	Packing
18	Window
19	Upper Cap



No	Part Name
1	Safety Device Plug
2	Case
3	Bourdon Tube
4	Brass Socket
5	Oil Seal
6	Connective Part
7	Snubber
8	Connector Protective Cover
9	Internal Kits
10	Internal Screw
11	Hexagon Screw
12	Dial-Scale

**ASSEMBLY**

321.21.\*\*\*

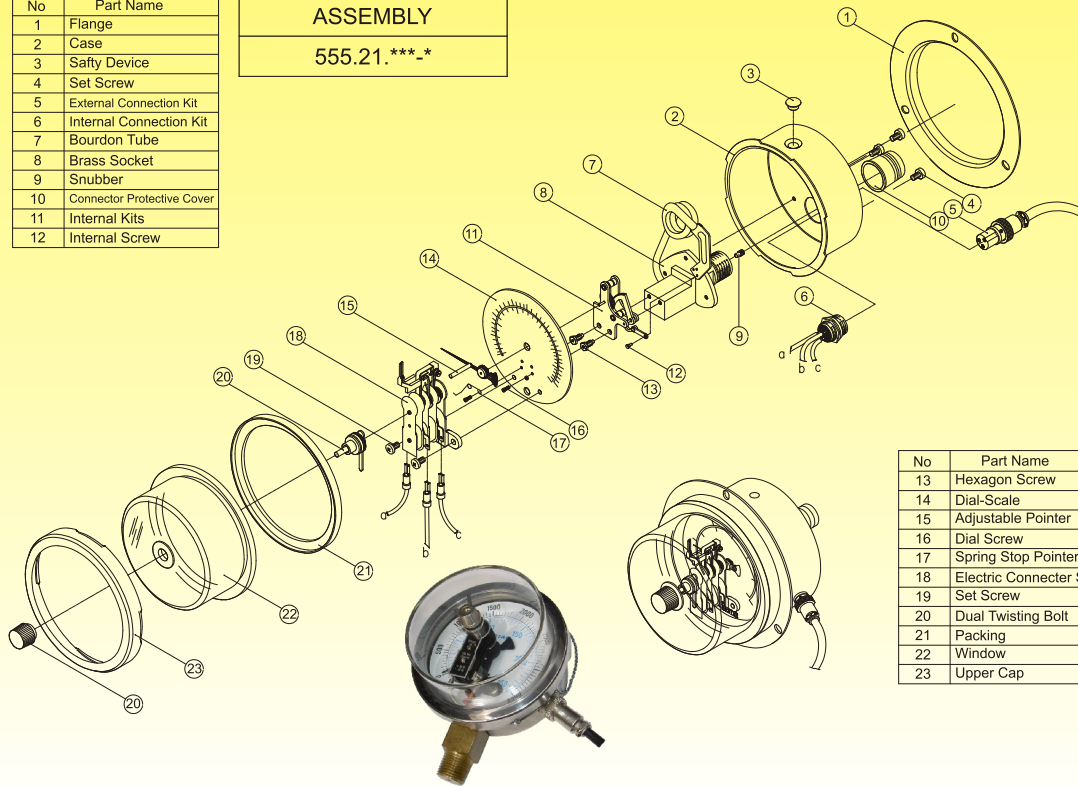
No	Part Name
13	Stop Pointer
14	Dial Screw
15	Pointer
16	Packing
17	Window
18	Upper Cap

## STANDARD GAUGE ASSEMBLY AND PARTS LIST

No	Part Name
1	Flange
2	Case
3	Safety Device
4	Set Screw
5	External Connection Kit
6	Internal Connection Kit
7	Bourdon Tube
8	Brass Socket
9	Snubber
10	Connector Protective Cover
11	Internal Kits
12	Internal Screw

### ASSEMBLY

555.21.\*\*\*\_\*

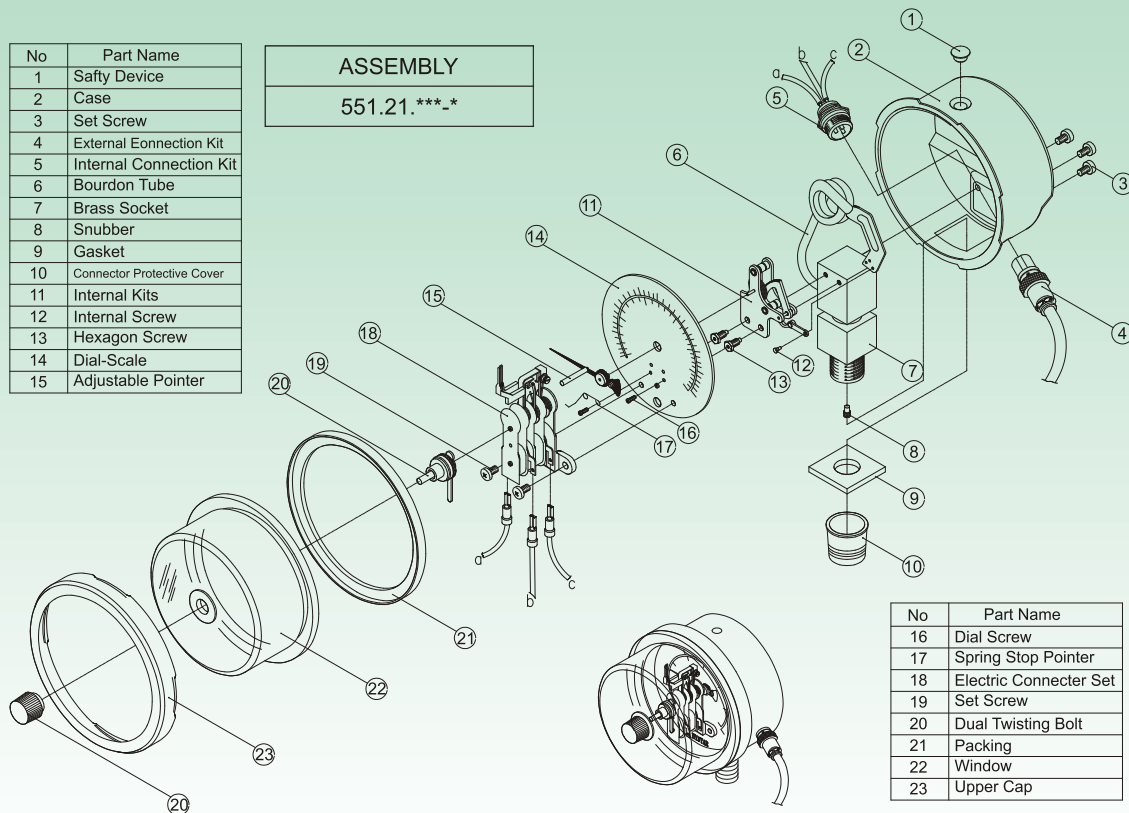


No	Part Name
13	Hexagon Screw
14	Dial-Scale
15	Adjustable Pointer
16	Dial Screw
17	Spring Stop Pointer
18	Electric Connector Set
19	Set Screw
20	Dual Twisting Bolt
21	Packing
22	Window
23	Upper Cap

No	Part Name
1	Safety Device
2	Case
3	Set Screw
4	External Connection Kit
5	Internal Connection Kit
6	Bourdon Tube
7	Brass Socket
8	Snubber
9	Gasket
10	Connector Protective Cover
11	Internal Kits
12	Internal Screw
13	Hexagon Screw
14	Dial-Scale
15	Adjustable Pointer

### ASSEMBLY

551.21.\*\*\*\_\*



No	Part Name
16	Dial Screw
17	Spring Stop Pointer
18	Electric Connector Set
19	Set Screw
20	Dual Twisting Bolt
21	Packing
22	Window
23	Upper Cap





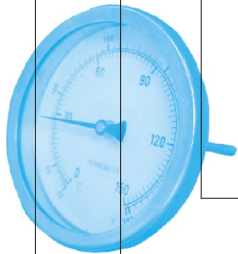
## DIMENSIONS

MILLIMETERS(INCHES)

### TBL Bi-metal Dial Thermometers (Radial Bottom Stem)

#### Ordering Code

TBL - 3 - PT - 1/8 - 6.3 - 250



Temp. Range and Scale  
See Fig-1

Length of Stem  
2~25" by order

Size of Connector  
1/8" 1/2"  
1/4" 7/16"  
3/8"

Type of Connector  
PF; PT; NPT; UNF

Nominal Size  
1" 3"  
1.5" 4"  
2" 5"  
2.5" 6"

MODEL  
TBL Bi-metal Dial Thermometers (Center Back Stem)  
TBS Bi-metal Dial Thermometers (Radial Bottom Stem)  
TBA Bi-metal Dial Thermometers (Adjustable Stem Type)



SYMBOL

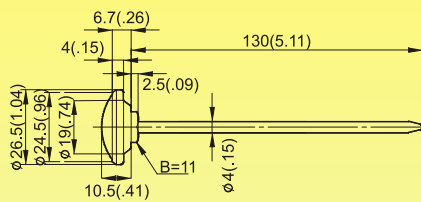
Temperature Range	
-60 to 120 F	-50 to 50 C
10 to 120 F	-10 to 50 C
30 to 210 F	0 to 100 C
30 to 250 F	0 to 120 C
30 to 300 F	0 to 150 C
30 to 400 F	0 to 200 C
50 to 450 F	0 to 250 C
30 to 550 F	0 to 300 C
30 to 750 F	0 to 400 C
100 to 900 F	0 to 500 C

Fig-1

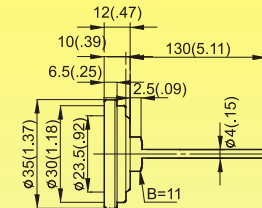
#### Specifications

Material of case, cover, and part of connection	SUS304
Material of sensitive stem	SUS304 (#316 also available)
Dial scale plate	Aluminum - white background with black figures & marks.
Temperature range	-50 ~ +600 XC
Outside dia. of stem	Nominal 6.30mm, Max. 4 ~ 12mm by orders.
Length of stem	2"~ 25" by orders.
Accuracy	± 1.0% on full scale

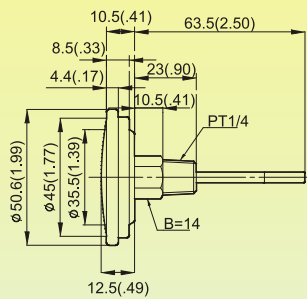
#### TBL-1"



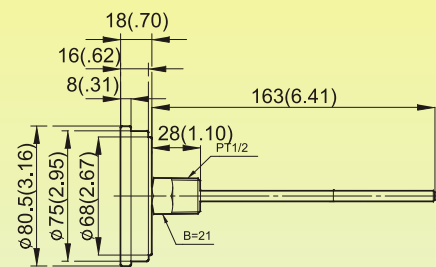
#### TBL-1.5"



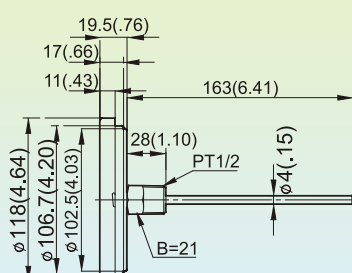
#### TBL-2"



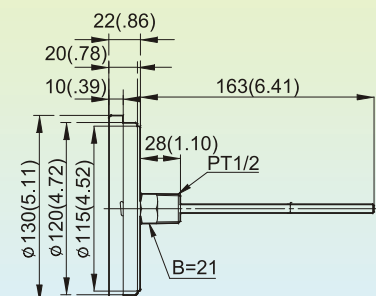
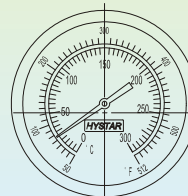
#### TBL-2.5"



#### TBL-3"



#### TBL-3.5"



## DIMENSIONS

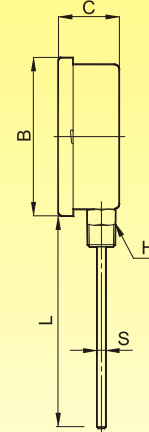
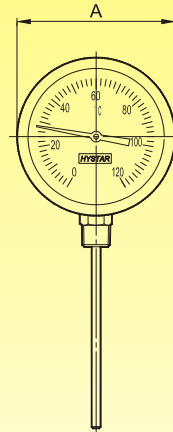
MILLIMETERS(INCHES)

### TBS Bi-metal Dial Thermometers (Radial Bottom Stem)



#### Specifications

Material of case, cover, and part of connection	SUS304
Material of sensitive stem	SUS304 (#316 also available)
Dial scale plate	Aluminum - white background with black figures & marks.
Temperature range	-50 ~ +600°C
Outside dia. of stem	Nominal 6.30mm, Max. 4 ~ 12mm by orders.
Length of stem	2" ~ 25" by orders.
Accuracy	± 1.0% on full scale



Temperature Range	
-60 to 120°F	-50 to 50°C
10 to 120°F	-10 to 50°C
30 to 210°F	0 to 100°C
30 to 250°F	0 to 120°C
30 to 300°F	0 to 150°C
30 to 400°F	0 to 200°C
50 to 450°F	0 to 250°C
30 to 550°F	0 to 300°C
30 to 750°F	0 to 400°C
100 to 900°F	0 to 500°C

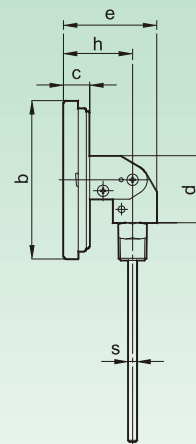
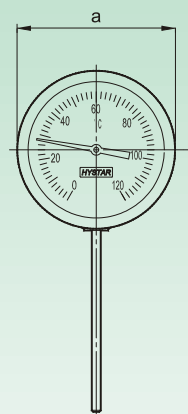
Code Model	A (mm)	B (mm)	C (mm)	H	L	S (mm)
TBS-3"	70 (2.75)	85 (3.34)	43 (1.69)	1/4 PT	2" ~ 25"	4 ~ 12 (.15 ~ .47)
TBS-4"	101 (3.97)	119 (4.68)	47 (1.85)	1/2 PT	2" ~ 25"	4 ~ 12 (.15 ~ .47)
TBS-6"	140 (5.51)	160 (6.29)	46 (1.81)	1/2 PT	2" ~ 25"	4 ~ 12 (.15 ~ .47)

### TBA Bi-metal Dial Thermometers (Adjustable Stem Type)



#### Specifications

Material of case, cover, and part of connection	SUS304
Material of sensitive stem	SUS304 (#316 also available)
Dial scale plate	Aluminum - white background with black figures & marks.
Temperature range	-50 ~ +600°C
Outside dia. of stem	Nominal 6.30mm, Max. 4 ~ 12mm by orders.
Length of stem	2" ~ 25" by orders.
Accuracy	± 1.0% on full scale



Temperature Range	
-60 to 120°F	-50 to 50°C
10 to 120°F	-10 to 50°C
30 to 210°F	0 to 100°C
30 to 250°F	0 to 120°C
30 to 300°F	0 to 150°C
30 to 400°F	0 to 200°C
50 to 450°F	0 to 250°C
30 to 550°F	0 to 300°C
30 to 750°F	0 to 400°C
100 to 900°F	0 to 500°C

Code Model	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	h	s (mm)
TBA-3"	70 (2.75)	80.5(3.16)	19 (.74)	75 (2.95)	94 (3.70)	1/4 PT	4 ~ 12 (.15 ~ .47)
TBA-4"	101 (3.97)	119 (4.68)	20 (.78)	75 (2.95)		1/2 PT	4 ~ 12 (.15 ~ .47)
TBA-5"	114 (4.48)	130 (5.11)	22 (.86)	75 (2.95)	97 (3.81)	1/2 PT	4 ~ 12 (.15 ~ .47)
TBA-6"	140 (5.51)	160 (6.29)	32 (1.25)	75 (2.95)	107 (4.21)	1/2 PT	4 ~ 12 (.15 ~ .47)



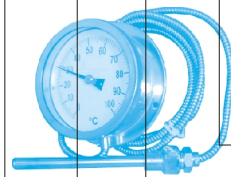
## DIMENSIONS

MILLIMETERS(INCHES)

### TCT&TCW Liquid Mercury Filled Thermometers

#### Ordering Code

TCW - 4 - PT - 1/4 - 2 - 6.3 - 250



Temp. Range and Scale  
See Fig-1

Length of Stem  
2-25" by order

Contactor type  
1: One contactor type  
2: Two contactors type

Size of Connector  
1/8" 1/2"  
1/4" 7/16"  
3/8"

Type of Connector  
PF; PT; NPT; UNF

Nominal Size  
1" 3"  
1.5" 4"  
2" 5"  
2.5" 6"

MODEL  
TCT: Direct Connection Type  
TCW: With Contactors, Drip-proof

Mechanism & Circuit Examples of Electric Contactor Thermometers with contactor have made possible the automation of temperature control and increased the safety of energy consuming.

Electric contacts are switching mechanisms designed to be actuated by travel of thermometer indicating. Pointer Points where the switch will open or close are regulated by adjustable (or fixed) "set" hands.

Thermometers equipped with this optional feature will turn alarm signals "on" or "off" as each set-hand. Switching point is reached. And where appropriate relays are incorporated in the installation circuit, contacts will turn "on" or "off" electric motors, heaters, valves, etc.



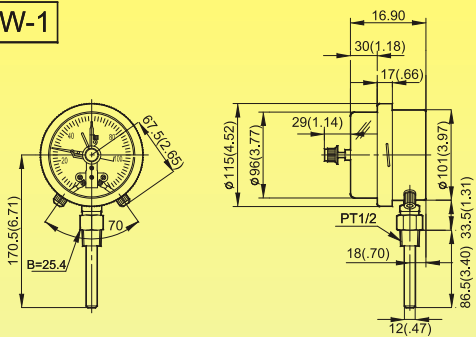
SYMBOL

HYSTAR

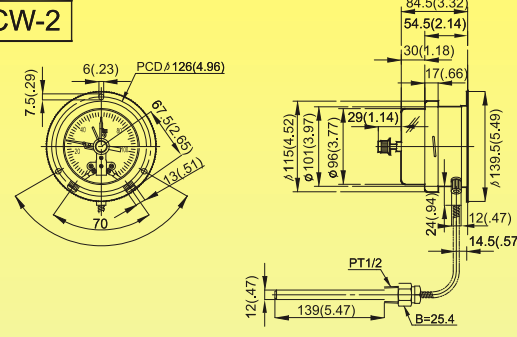
#### Specifications

Material of case and cover	SUS304
Material of sensitive stem	SUS304 (#316 also available)
Temperature range	-50 ~ +600 C
Capillary length	Normal 3m. Max. 15m
Contactor type	One contactor type / Two contactors type
External adjusting method	
Accuracy	± 0.5% on full scale
Applications	Transformer, Dyeing, Drier, Food, Boiler, Refrigerators, Air Conditioning equip, and other industrial machines.

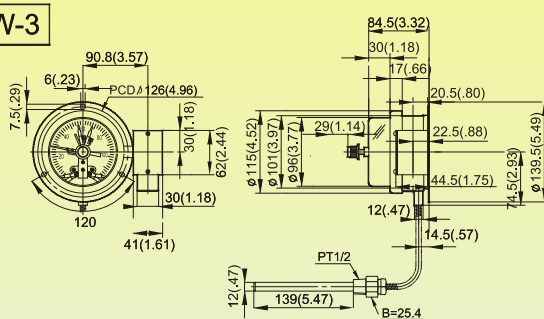
#### TCW-1



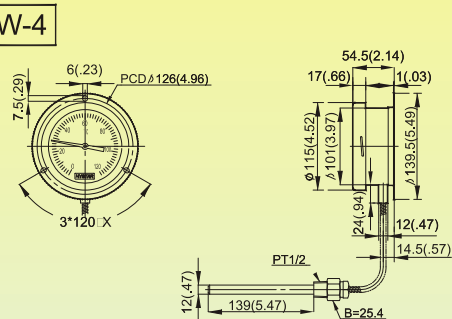
#### TCW-2



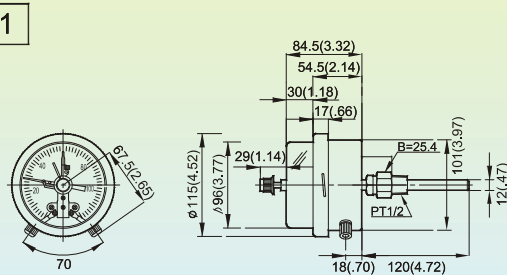
#### TCW-3



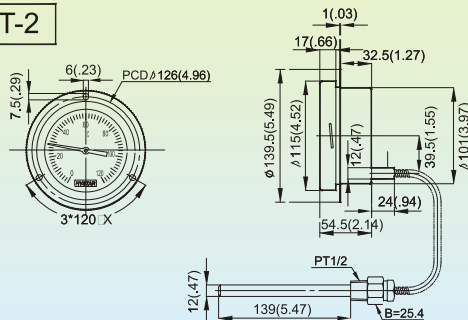
#### TCW-4



#### TCT-1



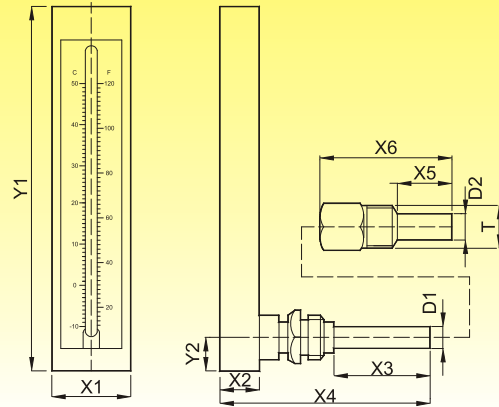
#### TCT-2



## DIMENSIONS

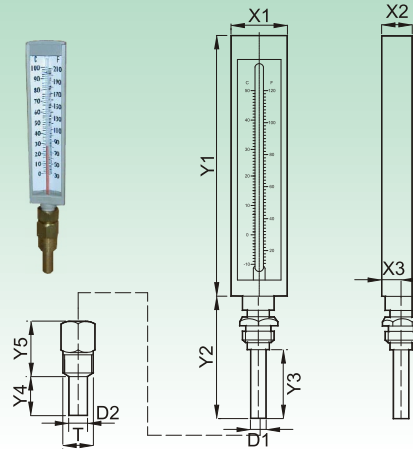
MILLIMETERS(INCHES)

### TL Thermometers



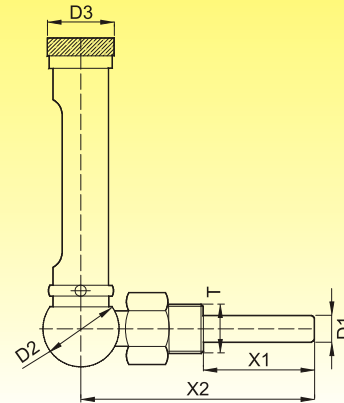
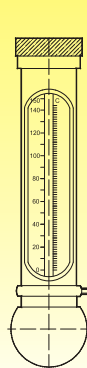
Size (M/M)	D1	D2	X1	X2	X3	X4	X5	X6	Y1	Y2	T
TL	0.39" (10)	0.51" (13)	1.5" (38)	0.68" (17)	1.97" (50)	3.66" (93)	1.26" (32)	2.51" (64)	6.45" (164)	0.47" (12)	0.8" (20)

### TS Thermometers



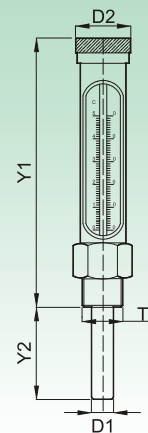
Size (M/M)	D1	D2	X1	X2	X3	Y1	Y2	Y3	Y4	Y5	T
TS	0.39" (10)	0.51" (13)	1.5" (38)	0.68" (17)	0.39" (10)	6.43" (163)	2.98" (76)	1.96" (50)	1.26" (32)	2.52" (64)	0.8" (21)

### TOL Thermometers



Size (M/M)	D1	D2	D3	Y	X1	X2	T
TOL	0.39" (10)	1.10" (28)	0.86" (22)	5.59" (142)	2.20" (51.4)	3.73" (95)	0.81" (20)

### TOS Thermometers



Size (M/M)	D1	D2	Y1	Y2	T
TOS	0.39" (10)	1.10" (28)	5.90" (150)	2.47" (63)	0.81" (20)

G