## Model No. SS-3010 Series



Model No. 33-3010 Series

Ordering Information

SS-3011 × 100mm × 0~IMPa Connection: - PT1/8 (40mm SS-3011, SS-3013) - PF1/4 (50mm SS-3011) (60mm SS-3011, SS-3012) (60mm SS←3013, SS-3014) - PT1/4 (50mm SS-3013) - PF&PT 3/8 (75 mm Series, 100 mm Series) (150 mm Series, 200 mm Series) - PF&PT 1/2 (100mm) Range: - 40mm : 0,2  $\sim$  5 MPa  $-50 \, \text{mm} : 0.2 \sim 5 \, \text{MPa}$  $-60 \, \text{mm} : -0.1 \sim 2 \, \text{MPa}, -0.1 \sim 0 \, \text{MPa}. \, 0 \sim 35 \, \text{MPa}$  $-75\,\mathrm{mm}$  :  $-0.1\sim2$  MPa,  $-0.1\sim0$ MPa,  $0\sim35$ MPa - 100 mm : -0.1  $\sim$  2 MPa, -0.1 $\sim$ 0MPa, 0  $\sim$  100 MPa - 150 mm : -0.1  $\sim$  2 MPa. -0.1 $\sim$ 0MPa. 0  $\sim$  100MPa - 200mm: -0.1  $\sim$  2 MPa. -0.1 $\sim$ 0MPa. 0  $\sim$  100MPa Nominal Diameter & Accuracy : - 40mm (Accuracy: ±3.0% of Full Scale) - 50mm (Accuracy: ±1.5% of Full Scale) - 60mm (Accuracy: ±1.5% of Full Scale) - 75 mm (Accuracy: ±1.5% of Full Scale) - 100mm (Accuracy: ±1.5% of Full Scale) - 150 mm (Accuracy: ±1,5% of Full Scale) - 200mm (Accuracy: ±1.5% of Full Scale)

## Base Model & Mounting Type:

- SS-3011(A:Rimless type) : Bottom Connection, Direct
- SS-3012(B:Surface type): Bottom Connection, Surface
- SS-3013(D:Flush mounting type): Lower Back Connection, Direct
- SS-3014(BD:Panel attachment type): Lower Back Connection, Flush
  - ▶ 40 mm, 50 mm: Only available with SS-3011, SS-3013
  - ▶ 200mm: Only available with SS-3012

# **General Pressure Gauge**

## Model No. SS-3010 Series





SS-3011



SS-3014

### Summary

This gauge is the most widely used pressure gauge. It has high durability by doing special process in bourdon tube. It also has high elasticity because it uses copper alloy in the part of connection and it is very useful in measuring general pressure.

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.
- Do not use fluid for measuring which has high viscosity, temperature lower than 40°C and coagulability,

## Purpose of Use

- For pipe where static pressure is put or gas & steam line which does not have corrosiveness.
- Pressure measurement and monitoring of small instrument in various sites such as supply air, instrument air.

## **Production Specification**

- Diameter
  - · 40, 50, 60, 75, 100, 150mm
- Accuracy
  - $\cdot$  40mm :  $\pm 3.0\%$  of Full Scale
  - $\cdot$  50mm :  $\pm 3.0\%$  or  $\,\pm 1.5\%$  of Full Scale  $\cdot$  60, 75, 100, 150mm :  $\pm 1.5\%$  of Full Scale
- ► Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure : 60% of Full Scale
- Working Temperature
- · Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$ 
  - · Fluid : 20  $\sim$  40  $^{\circ}\mathrm{C}$

## ► Range

40mm 50mm	0.2 $\sim$ 5 MPa
60mm 75mm	$-$ 0.1 $\sim$ 2 MPa $-$ 0.1 $\sim$ 0 MPa $-$ 0 $\sim$ 35 MPa
100mm 150mm	$-$ 0.1 $\sim$ 2 MPa $-$ 0.1 $\sim$ 0 MPa $-$ 0.0 MPa

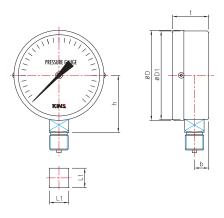
- + Case
  - · Steel(SPCD)
  - · Black coating
- + Cover
  - · Steel(SPCD)
  - · Black coating
- + Connection
  - · Brass(C3604BE)
  - · PF ↔ 3/8
- + Window
- · General glass

- + Type
  - · A-Type (Rimless type)
- · B-Type (Surface type)
- · D-Type (Flush mounting type)
- · BD-Type(Panel attachment type)
- + Pointer
- · Aluminum
  - Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black (MPa), red (bar) gradations and characters

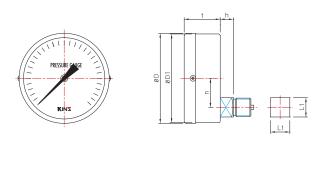
- + Element
  - · Brass(C2700T)
  - · C type bourdon tube, helical type bourdon tube
- + Movement
  - · Brass
- + Option
  - BracketThrottles
  - · Accessories

# Model No. SS-3010 Series

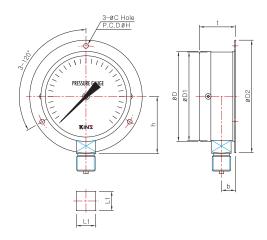
Model No. | SS-3011 A Type (40, 50, 60, 75, 100, 150mm)



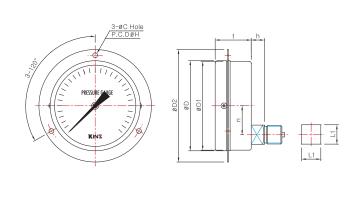
Model No. | SS-3013 D Type (60, 75, 100, 150mm)



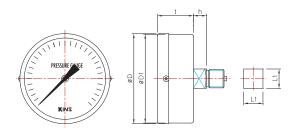
Model No. | SS-3012 B Type (60, 75, 100, 150mm)



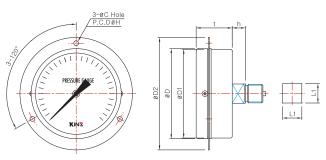
Model No. | SS-3014 BD Type (100, 150mm)



Model No. | SS-3013 D Type (40, 50, 60, 75mm)



Model No. | SS-3014 BD Type (60, 75mm)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L1	h	øс	ØН
40mm	SS-3011	NPT & PT 1/8	42	41	_	8	_	(24)	12	(30)	-	_
4011111	SS-3013	NPT & PT 1/8	42	41	_	-	_	(26)	12	(9)	-	_
	SS-3011	PF 1/4			-	9.5	_	(30)	14	(36)	-	_
50mm	33-3011	NPT & PT 1/4	53	51.5	_	_	_	(30)	14	(30)	_	_
5011111	SS-3013	PF 1/4	33	31.3	_	9.5	_	(30)	14	(10)	_	_
	55-3013	NPT & PT 1/4			_	-	_	(30)	14	(10)	)	_
60mm	SS-3011 & SS-3012	PF & PT 1/4	63	62	80	10.5	_	(33)	14	(40)	15	72
OUTITI	SS-3013 & SS-3014	PF & PT 1/4	03	02	80	-	_	(33)	14	(10)	4,0	12
7Emm	SS-3011 & SS-3012	PF & PT 3/8	78	76	100	12	_	(35)	17	(52)	4.5	88
75mm	SS-3013 & SS-3014	PF & PT 3/8	70	70	100	_	_	(30)	17	(14)	4,0	00
100mm	SS-3011 & SS-3012	PF & PT 3/8	102	100	128	13.5	_	(36)	22	(63)		115
IOOMM	SS-3013 & SS-3014	PF & PT 3/8	102	100	128	-	21.5	(30)	22	(15)	- 5.5	115
150	SS-3011 & SS-3012	PF & PT 1/2	15.4	150	188	17	_	(44)	47	(94)		445
150mm	SS-3013 & SS-3014	PF & PT 1/2	154	152	188	-	33	(41)	17	(24)	- - - - - 4.5	115

 $<sup>\</sup>ensuremath{^{*}\!(}$  )The measurement in the blanket is approximate.

## Model No. SS-3010 Series



Model No. 33-3010 Series

Ordering Information

SS-3011 × 100mm × 0~IMPa Connection: - PT1/8 (40mm SS-3011, SS-3013) - PF1/4 (50mm SS-3011) (60mm SS-3011, SS-3012) (60mm SS←3013, SS-3014) - PT1/4 (50mm SS-3013) - PF&PT 3/8 (75 mm Series, 100 mm Series) (150 mm Series, 200 mm Series) - PF&PT 1/2 (100mm) Range: - 40mm : 0,2  $\sim$  5 MPa  $-50 \, \text{mm} : 0.2 \sim 5 \, \text{MPa}$  $-60 \, \text{mm} : -0.1 \sim 2 \, \text{MPa}, -0.1 \sim 0 \, \text{MPa}. \, 0 \sim 35 \, \text{MPa}$  $-75\,\mathrm{mm}$  :  $-0.1\sim2$  MPa,  $-0.1\sim0$ MPa,  $0\sim35$ MPa - 100 mm : -0.1  $\sim$  2 MPa, -0.1 $\sim$ 0MPa, 0  $\sim$  100 MPa - 150 mm : -0.1  $\sim$  2 MPa. -0.1 $\sim$ 0MPa. 0  $\sim$  100MPa - 200mm: -0.1  $\sim$  2 MPa. -0.1 $\sim$ 0MPa. 0  $\sim$  100MPa Nominal Diameter & Accuracy : - 40mm (Accuracy: ±3.0% of Full Scale) - 50mm (Accuracy: ±1.5% of Full Scale) - 60mm (Accuracy: ±1.5% of Full Scale) - 75 mm (Accuracy: ±1.5% of Full Scale) - 100mm (Accuracy: ±1.5% of Full Scale) - 150 mm (Accuracy: ±1,5% of Full Scale) - 200mm (Accuracy: ±1.5% of Full Scale)

## Base Model & Mounting Type:

- SS-3011(A:Rimless type) : Bottom Connection, Direct
- SS-3012(B:Surface type): Bottom Connection, Surface
- SS-3013(D:Flush mounting type): Lower Back Connection, Direct
- SS-3014(BD:Panel attachment type): Lower Back Connection, Flush
  - ▶ 40 mm, 50 mm: Only available with SS-3011, SS-3013
  - ▶ 200mm: Only available with SS-3012



# **General Pressure Gauge**

## Model No. SS-3010 Series





SS-3011



SS-3014

### Summary

This gauge is the most widely used pressure gauge. It has high durability by doing special process in bourdon tube. It also has high elasticity because it uses copper alloy in the part of connection and it is very useful in measuring general pressure.

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.
- Do not use fluid for measuring which has high viscosity, temperature lower than 40°C and coagulability,

## Purpose of Use

- For pipe where static pressure is put or gas & steam line which does not have corrosiveness.
- Pressure measurement and monitoring of small instrument in various sites such as supply air, instrument air.

## **Production Specification**

- Diameter
  - · 40, 50, 60, 75, 100, 150mm
- Accuracy
  - $\cdot$  40mm :  $\pm 3.0\%$  of Full Scale
  - $\cdot$  50mm :  $\pm 3.0\%$  or  $\,\pm 1.5\%$  of Full Scale  $\cdot$  60, 75, 100, 150mm :  $\pm 1.5\%$  of Full Scale
- ► Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure : 60% of Full Scale
- Working Temperature
- · Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$ 
  - · Fluid : 20  $\sim$  40  $^{\circ}\mathrm{C}$

## ► Range

40mm 50mm	0.2 $\sim$ 5 MPa
60mm 75mm	$-$ 0.1 $\sim$ 2 MPa $-$ 0.1 $\sim$ 0 MPa $-$ 0 $\sim$ 35 MPa
100mm 150mm	$-$ 0.1 $\sim$ 2 MPa $-$ 0.1 $\sim$ 0 MPa $-$ 0.0 MPa

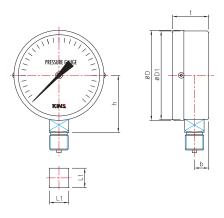
- + Case
  - · Steel(SPCD)
  - · Black coating
- + Cover
  - · Steel(SPCD)
  - · Black coating
- + Connection
  - · Brass(C3604BE)
  - · PF ↔ 3/8
- + Window
- · General glass

- + Type
  - · A-Type (Rimless type)
- · B-Type (Surface type)
- · D-Type (Flush mounting type)
- · BD-Type(Panel attachment type)
- + Pointer
- · Aluminum
  - Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black (MPa), red (bar) gradations and characters

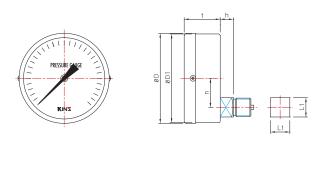
- + Element
  - · Brass(C2700T)
  - · C type bourdon tube, helical type bourdon tube
- + Movement
  - · Brass
- + Option
  - BracketThrottles
  - · Accessories

# Model No. SS-3010 Series

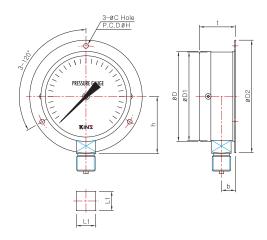
Model No. | SS-3011 A Type (40, 50, 60, 75, 100, 150mm)



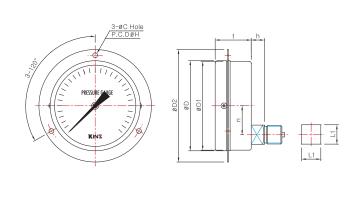
Model No. | SS-3013 D Type (60, 75, 100, 150mm)



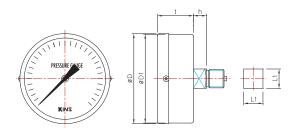
Model No. | SS-3012 B Type (60, 75, 100, 150mm)



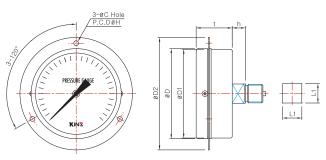
Model No. | SS-3014 BD Type (100, 150mm)



Model No. | SS-3013 D Type (40, 50, 60, 75mm)



Model No. | SS-3014 BD Type (60, 75mm)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L1	h	øс	ØН
40mm	SS-3011	NPT & PT 1/8	42	41	_	8	_	(24)	12	(30)	-	_
4011111	SS-3013	NPT & PT 1/8	42	41	_	-	_	(26)	12	(9)	-	_
	SS-3011	PF 1/4			-	9.5	_	(30)	14	(36)	-	_
50mm	33-3011	NPT & PT 1/4	53	51.5	_	_	_	(30)	14	(30)	_	_
5011111	SS-3013	PF 1/4	33	31.3	_	9.5	_	(30)	14	(10)	_	_
	55-3013	NPT & PT 1/4			_	-	_	(30)	14	(10)	)	_
60mm	SS-3011 & SS-3012	PF & PT 1/4	63	62	80	10.5	_	(33)	14	(40)	15	72
OUTITI	SS-3013 & SS-3014	PF & PT 1/4	03	02	80	-	_	(33)	14	(10)	4,0	12
7Emm	SS-3011 & SS-3012	PF & PT 3/8	78	76	100	12	_	(35)	17	(52)	4.5	88
75mm	SS-3013 & SS-3014	PF & PT 3/8	70	70	100	_	_	(30)	17	(14)	4,0	00
100mm	SS-3011 & SS-3012	PF & PT 3/8	102	100	128	13.5	_	(36)	22	(63)		115
IOOMM	SS-3013 & SS-3014	PF & PT 3/8	102	100	128	-	21.5	(30)	22	(15)	- 5.5	115
150	SS-3011 & SS-3012	PF & PT 1/2	15.4	150	188	17	_	(44)	47	(94)		445
150mm	SS-3013 & SS-3014	PF & PT 1/2	154	152	188	-	33	(41)	17	(24)	- - - - - 4.5	115

 $<sup>\</sup>ensuremath{^{*}\!(}$  )The measurement in the blanket is approximate.



# KINZ SS-3012 200mm

#### **Summary**

This gauge is the most widely used pressure gauge. It has high durability by doing special process in bourdon tube. It also has high elasticity because it uses copper alloy in the part of connection and it is very useful in measuring general pressure.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical,
- Do not use fluid for measuring which has high viscosity, temperature lower than 40°C and coagulability.

## **Production Specification**

- Diameter
  - · 200 mm
- Accuracy
  - $\cdot$   $\pm 1.5\%$  of Full Scale
- ▶ Working Pressure
  - $\cdot$  Static pressure : 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

Range	
	- 0.1 ~ 2 MPa
200mm	$-$ 0.1 $\sim$ 0 MPa
	0 ~ 5 MPa

## Purpose of Use

- For pipe where static pressure is put or gas & steam line which does not have corrosiveness
- Pressure measurement and monitoring of small instrument in various sites such as supply air, instrument air.

- + Case
  - · Steel(SPCD)
  - · Black coating
- + Cover
  - Steel(SPCD)
  - · Black coating
- + Connection
- Brass(C3604BE)
- PF ↔ 3/8

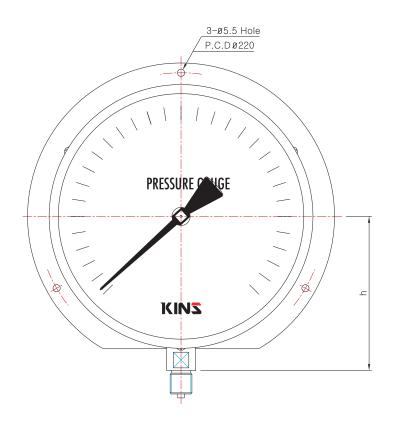
- + Window
  - · General glass
- + Type
  - · B-Type (Surface type)
- + Pointer
  - · Aluminum
  - Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black (MPa), red (bar) gradations and characters

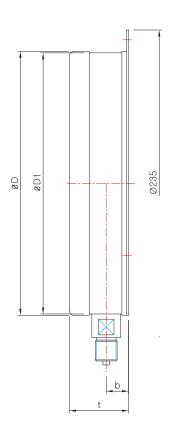
- + Element
  - · Brass(C2700T)
  - · C type bourdon tube
- + Movement Brass

  - · Accessories
- + Option

# Model No. SS-3010 Series

## Model No. | SS-3012 (200mm) B Type (Surface type)







2								
Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L1	h
SS-3012	PF 3/8	200	198	17.5	_	(50)	19	(117)

<sup>\*( )</sup>The measurement in the blanket is approximate.

# **Special Pressure Gauge**

## Model No. SS-3020 Series



Ordering Information

SS-3021 × 100mm × 0~1MPa × PF3/8

#### CONNECTION:

- UNF7/16 (Not available 40mm, 50mm, 150mm, 200mm)
- PF1/8 (Not available 150mm, 200mm)
- NPT&PT1/8 (Not available 150mm, 200mm)
- PF1/4 (Not available 150mm, 200mm, 40mm)
- NPT&PT1/4 (Not available 150mm, 200mm, 40mm)
- PF3/8 (Not available 60mm, 40mm, 50mm)
- NPT&PT3/8 (Not available 60mm, 40mm, 50mm)
- PF1/2 (Not available 60mm, 75mm, 40mm, 50mm)
- NPT&PT1/2 (Not available 60mm, 75mm, 40mm, 50mm)

#### RANGE:

 $-40 \, \text{mm}$  : 0.2  $\sim 25 \, \text{MPa}$   $-50 \, \text{mm}$  : 0.2  $\sim 25 \, \text{MPa}$ 

#### - NOMINAL DIAMETER & ACCURACY:

- 40mm (Accuracy: ±3.0% of Full Scale)
- 50mm (Accuracy: ±1.5% of Full Scale)
- 60mm (Accuracy: ±1.5% of Full Scale)
- 75 mm (Accuracy: ±1.5% of Full Scale)
- 100mm (Accuracy: ±1.0% of Full Scale)
- 150 mm (Accuracy: ±1.0% of Full Scale)
- 200mm (Accuracy: ±1.0% of Full Scale)

### BASE MODEL & MOUNTING TYPE:

- SS-3021(A:Rimless type) : Bottom Connection, Direct
- SS-3022 (B:Surface type): Bottom Connection, Surface
- SS-3023 (D:Flush mounting type) : Lower Back Connection, Direct
- SS-3024 (BD:Panel attachment type): Lower Back Connection, Flush
  - ▶ 200mm : Only available with SS-3022, SS-3024



# **Special Pressure Gauge**

## Model No. SS-3020 Series





SS-3021



SS-3024

#### Summary

This gauge has high corrosive resistance and it is properly built to measure fluid pressure which can withstand outside condition change. It has high accuracy because its connecting part is made of stainless steel,

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical

## **Production Specification**

- Diameter
  - · 40, 50, 60, 75, 100, 150 mm
- Accuracy
  - · 40mm: ±3% of Full Scale
  - · 50mm이상: ±1.5% of Full Scale
- $\cdot$  100, 150mm :  $\pm 1.0\%$  of Full Scale
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65 °C
  - · Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$
- ► Degree of Protection
   IP67

## ► Range

_	40mm 50mm	0.2 ~ 25 MPa
	60mm 75mm	$-$ 0.1 $\sim$ 2 MPa $-$ 0.1 $\sim$ 0 MPa $-$ 0 $\sim$ 35 MPa
-	100mm 150mm	$-$ 0.1 $\sim$ 2 MPa $-$ 0.1 $\sim$ 0 MPa $-$ 0.0 $\sim$ 200 MPa

#### Purpose of Use

- Various plants such as petrochemistry, etc. (corrosive atmosphere, steam, place where exists a lot of dust, outdoor)
- Special fluid line for industrial use,

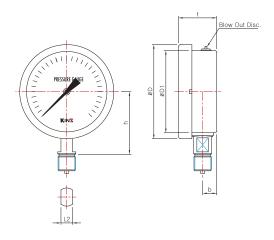
- + Case
  · STS 304
- + Cover
  - · STS 304
  - · Slip-on-Fit
- + Connection
  - · PF. PT. NPT ↔ 1/4, 3/8, 1/2
  - · UNF 7/16
- + Window
- Tempered safety glass,
   Laminated safety glass

- + Type
  - A-Type (Rimless type)
  - · B-Type (Surface type)
- $\cdot$  D-Type (Flush mounting type)
- · BD-Type(Panel attachment type)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
- · Black (MPa), red (bar) gradations and characters

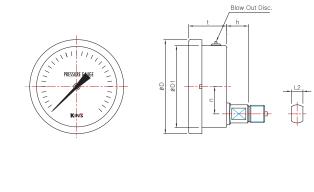
- + Element
  - · STS 304, STS 316
  - $\cdot$  C type bourdon tube, helical type bourdon tube
- + Movement
  - · STS 304
- + Option
  - · Blow out protection on the Top Rubber Disc
  - Bracket
  - · Throttles
  - · Accessories

# Model No. SS-3020 Series

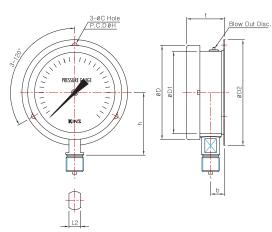
Model No. | SS-3021 A Type (60, 75, 100, 150mm)



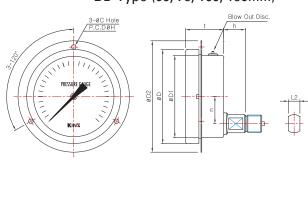
Model No. | SS-3023 D Type (60, 75, 100, 150mm)



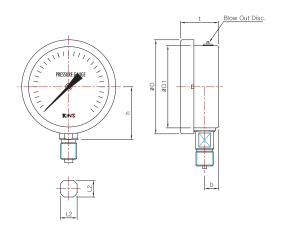
Model No. | SS-3022 B Type (60, 75, 100, 150mm)



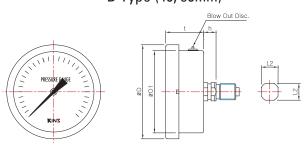
Model No. | SS-3024 BD Type (60, 75, 100, 150mm)



Model No. | SS-3021 A Type (40, 50mm)



Model No. | SS-3023 D Type (40, 50mm)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	ØС	ØН
40mm	SS-3021	NPT & PT, PF 1/8	46.2	41	_	7.5	_	(26.5)	12	(26.5)	_	_
40111111	SS-3023	NPT & PT, PF 1/8	46.2	41	_	_	_	(26.5)	12	(7.5)	_	_
	CC 2021	NPT & PT, PF 1/8	E0.0	E1 7		O.E.		(30)	1.4	(DE E)	_	
50mm	SS-3021	NPT & PT, PF 1/4	- 58.2	51.7	_	9.5	_	(30)	14	(35.5)	_	_
3011111	SS-3023	NPT & PT, PF 1/8	58.2	51,7	_	_	_	(30)	14	(7.5)		
	33-3023	NPT & PT, PF 1/4	30.2	31.7				(30)	14	(7.5)		
		UNF 7/16										
	SS-3021 & SS-3022	NPT & PT, PF 1/8	72	64	84	12	_	(39)	12	(48)	4.5	72
60mm		NPT & PT, PF 1/4										
60mm		UNF 7/16										
	SS-3023 & SS-3024	NPT & PT, PF 1/8	72	64	90	_	17	(39)	12	(20)	4.5	81
		NPT & PT, PF 1/4										
		UNF 7/16										
	SS-3021 & SS-3022	NPT & PT, PF 1/4	87	77	100	14	_	(40)	14	(54)	4.5	88
7E		NPT & PT, PF 3/8										
75mm		UNF 7/16										
	SS-3023 & SS-3024	NPT & PT, PF 1/4	87	77	107	_	22	(40)	14	(17)	4.5	97
		NPT & PT, PF 3/8										
		UNF 7/16										
	SS-3021 & SS-3022	NPT & PT, PF 1/4	114	100	128	17	_	(46)	17	(76)	5.5	115
	33-3021 & 33-3022	NPT & PT, PF 3/8	114	100	120	17		(40)	17	(70)	0.0	110
100mm		NPT & PT, PF 1/2										
100111111		UNF 7/16										
	00 2022 8 00 2024	NPT & PT, PF 1/4	11.4	100	105		33	(46)	17	(26)	E E	120
	SS-3023 & SS-3024	NPT & PT, PF 3/8	114	100	135		33	(40)	17	(20)	5.5	120
		NPT & PT, PF 1/2										
		UNF 7/16										
	CC 2021 8 CC 2022	NPT & PT, PF 1/4	160	150	100	17		(EO)	17	(100)	E E	17/
	SS-3021 & SS-3022	NPT & PT, PF 3/8	168	152	188	17	_	(50)	17	(100)	5.5	174
150		NPT & PT, PF 1/2										
150mm		UNF 7/16										
	CC 2022 0 CC 2024	NPT & PT, PF 1/4	160	150	100		20	(EO)	17	(06)	EE	17/
	SS-3023 & SS-3024	NPT & PT, PF 3/8	168	152	188	_	33	(50)	17	(26)	5.5	174
		NPT & PT, PF 1/2	1									

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Liquid Filled Special Pressure Gauge

## Model No. SS-3020 Series





## SS-3022 200mm

## Production Specification

- ► Diameter · 200 mm
  - Accuracy
  - · ±1.0% of Full Scale
- ▶ Working Pressure
- Static pressure: 75% of Full Scale
   Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20\sim65$  °C
  - · Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$
- ▶ Degree of Protection

Range

Summary

stainless steel.

 $\begin{array}{c|c} - 0.1 \sim 2 \text{ MPa} \\ - 0.1 \sim 0 \text{ MPa} \\ \hline 0 \sim 100 \text{ MPa} \\ \end{array}$ 

This gauge has high corrosive resistance and it is properly built to measure fluid pressure which can withstand outside condition change. It has high accuracy because its connecting part is made by

#### Purpose of Use

Safety Management

vibration and pulsation.

horizontal and vertical

- Do not give impact during the

- Be sure to install a protecting device

where exist abrupt change of pressure,

transportation, installation and usage,

- Be sure to install pressure gauge to be

- Various plants such as petrochemistry, etc. (corrosive atmosphere, steam, place where exists a lot of dust, outdoor)
- Special fluid line for industrial use.

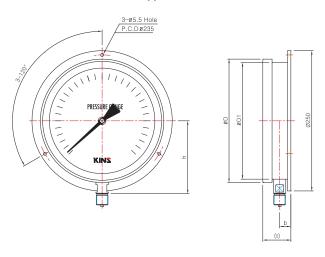
- + Case
  - · Aluminum (Hammer tone coating)
- + Cover
  - · Aluminum (Hammer tone coating)
- + Connection
  - · STS 316
  - · PF, PT, NPT ↔ 3/8, 1/2
- + Window
  - Tempered safety glass,
     Laminated safety glass

- + Type
- · B-Type (Surface type)
- · D-Type (Flush mounting type)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black (MPa), red (bar) gradations and characters

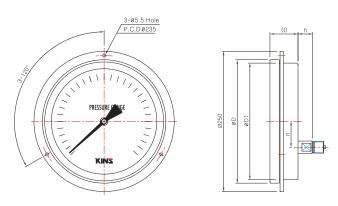
- + Element
  - STS 304, STS 316
  - · C type bourdon tube, helical type bourdon tube
- + Movement
  - · STS 304
- + Option
  - · Bracket
  - $\cdot \text{ Throttles}$
  - · Accessories

# Model No. SS-3020 Series

## Model No. | SS-3022 (200mm) B Type (Surface type)



## Model No. | SS-3024 (200mm) BD Type (Panel attachment type)



	Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L2	h
	SS-3022	NPT & PT, PF 1/4		208	20			17	
		NPT & PT, PF 3/8	220			_	(58)		(130)
200		NPT & PT, PF 1/2							
200mm	SS-3024	NPT & PT, PF 1/4		208 –				17	
		NPT & PT, PF 3/8	220		_	33	(58)		(26)
		NPT & PT, PF 1/2							

 $<sup>\</sup>ensuremath{^{*}}\xspace($  )The measurement in the blanket is approximate.

# **Euro Pressure Gauge (DIN)**

## Model No. SD-3020 Series





SD-3021



SD-3024

## Summary

This gauge has high corrosive resistance and inner chemical capability. This is built to be proper for corrosive atmosphere. The appearance looks beautiful because the case, cover and the connecting part are made of stainless steel and it has high accuracy.

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical

## **Production Specification**

- Diameter
  - · 63, 80, 100, 160 mm
- Accuracy
  - · 63, 80mm: ±1.6% of Full Scale · 100, 160mm: ±1.0% of Full Scale
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65 °C
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$
- ▶ Degree of Protection

## Range

63mm	$-$ 0.1 $\sim$ 0 MPa
80mm	$0\sim25$ MPa
100mm	$-$ 0.1 $\sim$ 0 MPa
160mm	0 ∼ 200 MPa

#### Purpose of Use

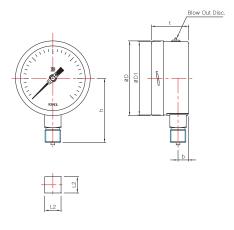
- Generators (thermal, hydraulic, nuclear power plant)
- Various plants of chemistry, refinery, shipbuilding, etc.
- Food industry

- + Case
  · STS 304
- + Cover
  - · STS 304
  - · Bayonet Type
- + Connection
  - · STS 316
  - · UNF 7/16
  - · PF, PT, NPT ↔ 1/4, 3/8, 1/2
- + Window
  - Tempered safety glass,
     Laminated safety glass

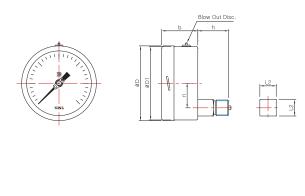
- + Type
  - · A-Type (Rimless type)
- · B-Type (Surface type)
- · D-Type (Flush mounting type)
- · BD-Type(Panel attachment type)
- + Pointer
- · Aluminum
- · Black coating
- + Dial
- · Aluminum
- · White color coating
- · Black (MPa), red (bar) gradations and characters

- + Element
  - · STS 304, STS 316
  - $\cdot$  C type bourdon tube, helical type bourdon tube
- + Movement
  - · STS 304
- + Option
  - · Top & Back
  - · Bracket
  - · Throttles
  - · Accessories

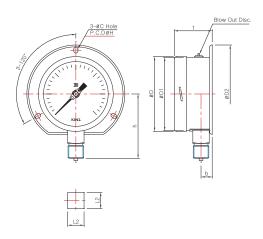
## Model No. | SD-3021 A Type (63, 80, 100, 160mm)



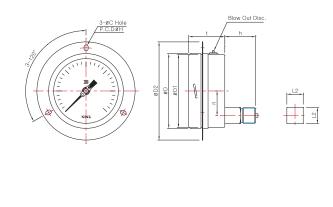
## Model No. | SD-3023 D Type (80, 100, 160mm)



## Model No. | SD-3022 B Type (63, 80, 100, 160mm)

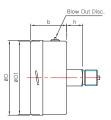


## Model No. | SD-3024 BD Type (80, 100, 160mm)



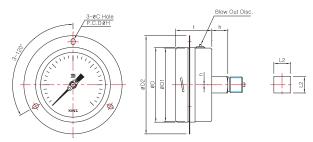
## Model No. | SD-3023 D Type (63 mm)







## Model No. | SD-3024 BD Type (63 mm)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	ØC(OB)	ØН
		UNF 7/16										
	SD-3021 & SD-3022	NPT & PT, PF 1/8	63.6	61.5	85	9	_	(33)	14	(40.5)	4.5x6.5	75
63mm		NPT & PT, PF 1/4										
0311111		UNF 7/16										
	SD-3023 & SD-3024	NPT & PT, PF 1/8	63.6	61.5	92	_	_	(33)	14	(12.5)	4.5x6.5	78
		NPT & PT, PF 1/4										
		UNF 7/16										
	SD-3021 & SD-3022	NPT & PT, PF 1/4	79.5	77.5	111	13	_	(40)	17	(53)	4.5x6.5	95
80mm		NPT & PT, PF 1/8										
OUITIITI		UNF 7/16										
	SD-3023 & SD-3024	NPT & PT, PF 1/4	79.5	77.5	112	_	22	(40)	17	(16)	4.5x6.5	95
		NPT & PT, PF 3/8										
	SD-3021 & SD-3022	UNF 7/16	100.5					(48.5)		(66,5)	5.5x8	
		NPT & PT, PF 1/4		98.7	132	15	_		22			118
	30-3021 & 30-3022	NPT & PT, PF 3/8	100.5	90.7	102	15	_	(40.3)		(00.5)	5.586	110
100mm		NPT & PT, PF 1/2										
10011111		UNF 7/16										
	SD-3023 & SD-3024	NPT & PT, PF 1/4	100.5	98.7	132	_	32	(48.5)	22	(20.5)	5.5x8	118
	30-3023 & 30-3024	NPT & PT, PF 3/8	100.5	90.7	132		32	(40.5)	22	(20.5)	5.500	110
		NPT & PT, PF 1/2										
		NPT & PT, PF 1/4										
	SD-3021 & SD-3022	NPT & PT, PF 3/8	160	146	182.5	17	_	(51)	22	(102)	5.5x8	162
160mm		NPT & PT, PF 1/2										
100111111		NPT & PT, PF 1/4										
	SD-3023 & SD-3024	NPT & PT, PF 3/8	160	146	192	_	48	(51)	22	(20)	5.5x8	178
100mm —		NPT & PT, PF 1/2										

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Solid Front Safety Pressure Gauge

# Model No. SF-3020 Series





## SF-3021 100mm

### **Summary**

This gauge is very safe even when the pressure increases because the front side is strong and made of blow out back, The appearance is beautiful because the case, cover and the connecting part are made of stainless steel and the pressure gauge has high corrosive resistance and inner chemical capability.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Power plants (thermal, hydraulic, nuclear)
- Various plants of chemistry, refinery, shipbuilding, etc,
- Food industry

## **Production Specification**

- ► Diameter
  - · 100 mm
- ► Accuracy • ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  1  $\sim$  0 to 0  $\sim$  200 MPa
- ▶ Working Pressure
  - $\cdot$  Static pressure : 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$
  - · Fluid : 20 ~ 80 ℃

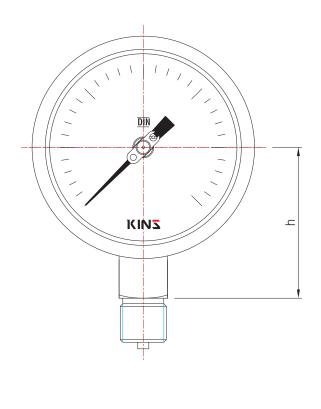
- + Case
  - · STS 304
- + Window
  - · Tempered safety glass, Laminated safety glass
- + Cover
  - · STS 304
  - · Bayonet Type
- + Connection
- · STS 316
- · PF, PT, NPT ↔ 3/8, 1/2

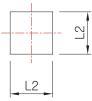
- + Pointer
  - · Aluminum
  - · Black coating
- + Element
  - · STS 304, STS 316
  - · C type bourdon tube, helical type bourdon tube
- + Movement
  - · STS 304
- + Type
- · A-Type (Rimless type) [Soild Front Type]

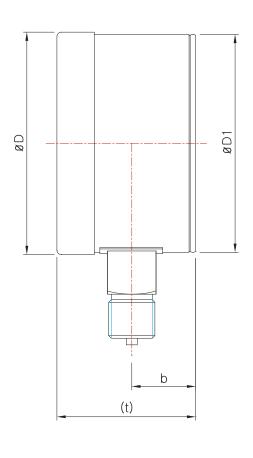
- + Dial
- · Aluminum
- · White color coating
- · Black (MPa), red (bar) gradations and characters
- + Option
  - Bracket
  - · Throttles
  - · Accessories

# Model No. SF-3020 Series

## Model No. | SF-3021 (100mm) A Type (Rimless type)







Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L2	h
CE 2021	NPT & PT, PF 3/8	101	99	29	_	(63)	22	(66.5)
SF-3021	NPT & PT, PF 1/2	101						

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Solid Front Safety Pressure Gauge

# Model No. SF-3020 Series





## SF-3022 125mm

#### Summary

This gauge is very safe even when the pressure increases because the front side is strong and made of blow out back. For corrosive resistance and thermostability, the case and cover are built by 4 1/2 phenolic resin,

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Power plants (thermal, hydraulic, nuclear)
- Various plants of chemistry, refinery, shipbuilding, etc.
- Food industry

## **Production Specification**

- Diameter
  - · 125 mm
- Accuracy
  - · 0.5% and ±1.0% of Full Scale
- ► Scale Range
  - 1  $\sim$  0 to 0  $\sim$  200 MPa
- ▶ Working Pressure
  - Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$
  - · Fluid :  $-20 \sim 80 \, ^{\circ}\mathrm{C}$

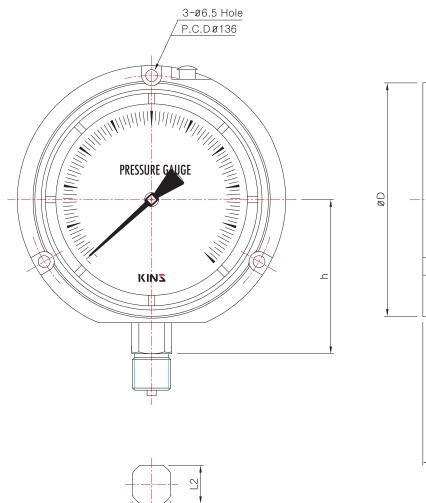
- + Case
  - · Phenolic Resin
- + Cover
  - Phenolic Resin
- + Connection
  - · STS 316
  - · PF, PT, NPT ↔ 3/8, 1/2
- - Tempered safety glass, Laminated safety glass

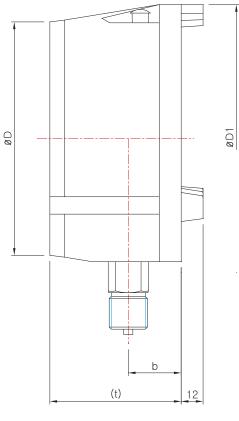
- B-Type (Surface type) [Soild Front Type]
- + Pointer
  - · Aluminum
  - Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters

- + Element
  - · STS 304, STS 316
  - · C type bourdon tube, helical type bourdon tube
- + Movement
- STS 304
- + Option
  - · Bracket · Throttles
  - · Accessories

# Model No. SF-3020 Series

## Model No. | SF-3022 (125mm) B Type (Surface type)





Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L2	h
OF 2022	NPT & PT, PF 3/8	104	147	29	_	(72)	22	(85)
SF-3022	NPT & PT, PF 1/2	124						

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Solid Front Safety Pressure Gauge

# Model No. SF-3020 Series





## Summary

This gauge is very safe even when the pressure increases because the front side is strong and made of blow out back. The appearance is beautiful because the case, cover and the connecting part are made of stainless steel and the pressure gauge has high corrosive resistance and inner chemical capability.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Power plants (thermal, hydraulic, nuclear)
- Various plants of chemistry, oil, ship, etc.
- Food industry

## **Production Specification**

- Diameter · 160 mm
- Accuracy ±1.0% of Full Scale
- ► Scale Range
  - 1  $\sim$  0 to 0  $\sim$  200 MPa
- ▶ Working Pressure
  - Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$
  - · Fluid :  $-20 \sim 80 \, ^{\circ}\mathrm{C}$

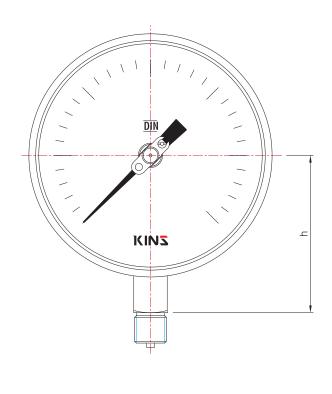
- + Case
  - · STS 304
- + Cover
  - STS 304
  - · Bayonet Type
- + Window
- Tempered safety glass, Laminated safety glass
- + Connection
- STS 316
- · PF, PT, NPT ↔ 3/8, 1/2

- + Pointer
  - Aluminum
  - Black coating
- + Element
  - · STS 304, STS 316
  - C type bourdon tube, helical type bourdon tube
- + Movement
  - · STS 304
- + Type
  - A-Type (Rimless type) [Soild Front Type]

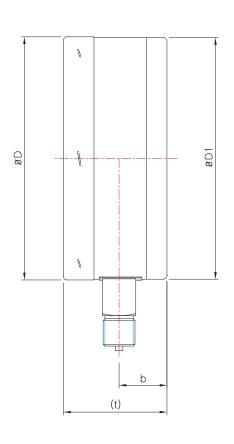
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters
- + Option
  - Bracket
  - Throttles
  - · Accessories

# Model No. SF-3020 Series

## Model No. | SF-3021 (160mm) A-Type (Rimless type)







Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L2	h
SF-3021	NPT & PT, PF 3/8	160	159	31.5	_	(68)	22	(112)
SF-3021	NPT & PT, PF 1/2	160						

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Model No. SS-3025~8 Series



Ordering Information

SS-3025 x 100mm x  $0 \sim 10$ MPa x 2P x L,H x PF3/8 Connection: - PF1/4 - NPT&PT1/4 - PF3/8 - NPT&PT3/8 - PF1/2 - NPT&PT1/2 Contacts Type: - L : Low Contact (SPST\*1) - H : High Contact(SPST\*1) - L.H: Low & High Contact(SPST \*2) - L.L: Low & Low Contact(SPST\*2) - H.H: High & High Contact(SPST\*2) Number of Contacts: - 1P: SPST \*1 - 2P: SPST\*2 - Range : – 100 mm : –0.1  $\sim$  2 MPa. –0.1  $\sim$  0MPa, 0  $\sim$  100 MPa  $-150\,\mathrm{mm}$  :  $-0.1\sim2$  MPa,  $-0.1\sim0$  MPa,  $0\sim100$ MPa Nominal Diameter & Accuracy: - 100mm (Accuracy: ±1.0% of Full Scale) - 150 mm (Accuracy: ±1.0% of Full Scale) Base Model & Mounting Type: - SS-3025(A:Rimless type): Bottom Connection, Direct

- SS-3026(B:Surface type): Bottom Connection, Surface

SS-3027 (D:Flush mounting type): Lower Back Connection, Direct
 SS-3028 (BD:Panel attachment type): Lower Back Connection, Flush



# Pressure Gauge (with Electric Contact)

## Model No. SS-3025~8 Series





SS-3025



SS-3028

#### Summary

This gauge has a contact device inside the indicator, Not only indicating of pressure but also it is able to control and report by sending a electric signal in a built-in contact device which was already set up.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage,
- Be sure to install pressure gauge to be horizontal and vertical

#### Purpose of Use

- Various pressure controlling, warning system
- Oil pressure press
- Special fluid line for industrial use, etc.

## **Production Specification**

- Diameter
  - · 100. 150 mm
- Accuracy
  - $\pm 1.0\%$  of Full Scale
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- Working Temperature
  - · Ambient :  $-20\sim65$  °C
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

#### Range

100mm	$-$ 0.1 $\sim$ 2 MPa
150mm	$-$ 0.1 $\sim$ 0 MPa
	0 $\sim$ 100 MPa

#### **Product Specification**

- + Case
  - · STS 304
- + Cover
  - STS 304
- · Slip-on-Fit
- + Connection

  - · PF, PT, NPT ↔ 1/4, 3/8, 1/2
- + Window
  - · Poly Carbonate
- + Type
- · A-Type (Rimless type)
- · B-Type (Surface type)
- · D-Type (Flush mounting type)
- · BD-Type(Panel attachment type)

- Pointer
- · Phosphor bronze
- Black coating

Contact indicator High ↔ Red Contact indicator Low ← Green

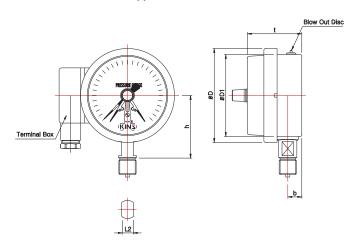
- + Dial
  - Aluminum
  - · White color coating
  - · Black (MPa), red (bar) gradations and characters
- + Contact rating
  - AC 125 0.5A / 250V 0.25A
  - DC 24V 0,25A
- + Movement
- STS 304

- + Element

  - C type bourdon tube, helical type bourdon tube
- + Contact Form
  - SPST \* 1, SPST \* 2
  - High, low 2 contact (high or Low, High & High High & Low, Low & Low)
- + Option
  - Bracket
  - Throttles
  - · Accessories

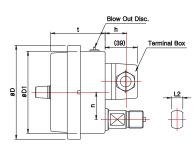
Model No. SS-3025~8 Series

## Model No. | SS-3025 A Type (100, 150mm)

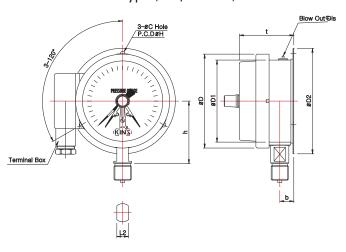


## Model No. | SS-3027 D Type (100, 150mm)

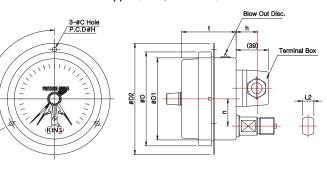




## Model No. | SS-3026 B Type (100, 150mm)



## Model No. | SS-3028 BD Type (100, 150mm)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	ØС	ØН
100mm :	SS-3025 & SS-3026	NPT & PT, PF 1/4	114	100	128	17	_	(66)	17	(76)	5.5	115
		NPT & PT, PF 3/8										
		NPT & PT, PF 1/2										
		NPT & PT, PF 1/4			128	_	33	(66)	17	(26)	5.5	
	SS-3027 & SS-3028	NPT & PT, PF 3/8	114	100								115
		NPT & PT, PF 1/2										
150mm :		NPT & PT, PF 1/4	168	152	188	17	_	(66)	22	(100)	5.5	173
	SS-3025 & SS-3026	NPT & PT, PF 3/8										
		NPT & PT, PF 1/2										
		NPT & PT, PF 1/4	168					3 (66)	22			
	SS-3027 & SS-3028	NPT & PT, PF 3/8		152	188	_	33			(26)	5.5	173
		NPT & PT, PF 1/2										

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Diaphragm Seal Type Pressure Gauge

# Model No. SS-3031/4 Series





## SS-3031

# Summary This devices

This device was designed to guarantee the performance and the lifespan when measuring pressure in chemical industry even when measuring fluid is mixed with powder which has coagulation or with strong corrosiveness,

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

## Purpose of Use

- Corrosive fluid such as petrochemistry, etc.
- Fluid which is mixed with dust and solid matter in the plant of cement, papers, etc.
- High temperature, high viscosity fluid, special fluid line for industrial use, etc.

#### **Production Specification**

- Diameter
- Accuracy
  - ±1.0% of Full Scale
- ▶ Scale Range
  - $\cdot$  0.1 MPa  $\sim$  0, 0.1 MPa  $\sim$  2 MPa, 0  $\sim$  35 MPa (  $\times$  1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$
  - · Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

#### **Product Specification**

- + Case & Cover
  - · STS 304
- + Upper Flange
  - · STS 304, STS 316
- + Under Flange
  - · STS 304, STS 316
- + Connection
  - · STS 316
  - · PF, PT ↔ 1/4, 3/8, 1/2, 3/4
- + Window
  - · Tempered safety glass, Laminated safety glass

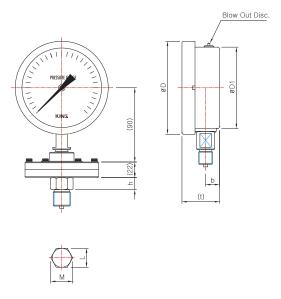
- + Type
- · SS-3031-Type (Direct type Screw)
- · SS-3034-Type (Flexible type Screw)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters
- + Movement
- · STS 304

#### + Element

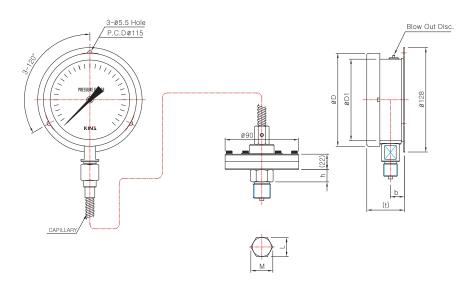
- · STS 304, STS 316
- · C type bourdon tube
- + Diaphragm
  - · STS 304, STS 316
  - · Teflon(Lining, Coating), Titanium
  - $\cdot$  Able to produce teflon(lining, coating)titanium, tantalum, hastelloy, etc

# Model No. SS-3031/4 Series

## Model No. | SS-3031 (100mm) A-Type (Rimless type), Direct Type



## Model No. | SS-3035 (100mm) B-Type (Surface type), Remote Type



2									
Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L	М	h
SS-3031 & 3034	NPT & PT, PF 3/8	114	100	17	_	(46)	24	(27.7)	(20)
	NPT & PT, PF 1/2								

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Diaphragm Seal Type Pressure Gauge

# Model No. SS-3032/5 Series





## SS-3032

# Summary This gauge

This gauge is designed to guarantee the performance and the life span when measuring pressure in chemical industry even when measuring fluid is mixed with powder which has coagulation or with strong corrosiveness,

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

## Purpose of Use

- Corrosive fluid such as petrochemistry, etc.
- Fluid which is mixed with dust and solid matter in the plant of cement, papers, etc.
- High temperature, high viscosity fluid, special fluid line for industrial use, etc.

## **Production Specification**

- Diameter
- Accuracy
  - ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  0.1 MPa  $\sim$  0, 0.1 MPa  $\sim$  2 MPa, 0  $\sim$  10 MPa (  $\times$  1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20 \sim 65$  °C · Fluid :  $-20 \sim 80$  °C

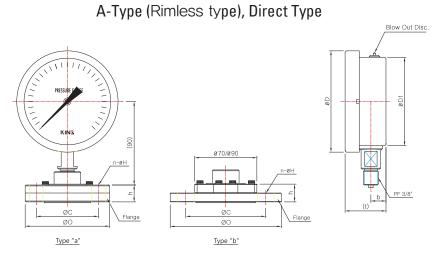
- + Case & Cover
  - · STS 304
- + Upper Flange
- · STS 304, STS 316
- + Under Flange
  · STS 304, STS 316
- + Window
  - · Tempered safety glass, Laminated safety glass

- + Type
- · SS-3032-Type (Direct flange)
- · SS-3035-Type (Flexible flange)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters

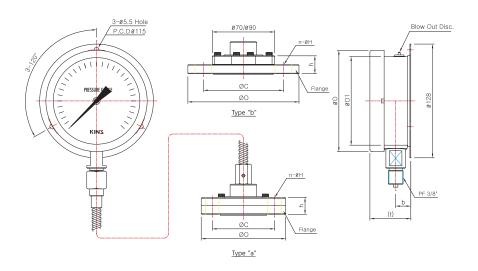
- + Movement
  - · STS 304
- + Element
  - · STS 304, STS 316
  - $\cdot$  C type bourdon tube
- + Diaphragm
- · STS 304, STS 316
- · Teflon(Lining, Coating), Titanium
- · Able to produce teflon(lining, coating)titanium, tantalum, hastelloy, etc

# Model No. SS-3032/5 Series

## Model No. | SS-3032 (100mm)



# Model No. SS-3035 (100mm) B-Type (Surface type), Remote Type



Model No.	ØD	ØD1	b	t	JIS 10kgf/cm²(Type)	ØO	ØС	n-ØH	h	ANSI CLASS #150(Type)	ØO	ØС	n-ØH	h
					15A (Type "a")	95	70	4-Ø15	22	1/2B (Type "a")	89	60.3	4-Ø16	21.5
					20A (Type "b")	100	75	4-Ø15	24	3/4B (Type "a")	98	69.9	4-Ø16	23.0
SS-3032 &	114	100	17	(46)	25A (Type "b")	125	125 90 4-Ø19 24 1B (Type "b")	1B (Type "b")	108	79.4	4-Ø16	24.5		
SS-3035	114		17	(40)	32A (Type "b") 135 100 4-Ø19 26 1 1/4B (Type "b")	1 1/4B (Type "b")	117	88.9	4-Ø16	26.0				
					40A (Type "b")	40A (Type "b") 140 105 4-Ø19 26 1 1/2B (Type "b")	1 1/2B (Type "b")	127	98.4	4-Ø16	27.5			
					50A (Type "b")	155	120	4-Ø19	26	, , , ,	152	120.6	4-Ø19	29.5

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Diaphragm Seal Type Pressure Gauge

## Model No. SS-3033/6 Series





## SS-3033

## Summary

This gauge is designed to guarantee the performance and the life span when measuring pressure in chemical industry even when measuring fluid is mixed with powder which has coagulation or strong corrosiveness.

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Corrosive fluid such as petrochemistry, etc.
- Fluid which is mixed with dust and solid matter in the plant of cement, papers, etc.
- High temperature, high viscosity fluid, special fluid line for industrial use, etc.

#### **Production Specification**

- Diameter
- Accuracy
  - · ±1.0% of Full Scale
- ▶ Scale Range
  - $\cdot$  0.1 MPa  $\sim$  0, 0.1 MPa  $\sim$  2 MPa, 0  $\sim$  10 MPa (  $\times$  1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20 \sim 65$  °C · Fluid :  $-20 \sim 80$  °C

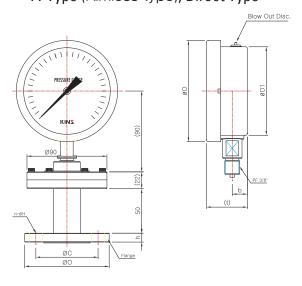
- + Case & Cover
  - · STS 304
- + Upper Flange
  - · STS 304, STS 316
- + Under Flange
  - · STS 304, STS 316
  - · See flange standard table
- + Window
- Tempered safety glass,
   Laminated safety glass

- + Type
  - · SS-3033-Type (Direct flange)
- · SS-3036-Type (Flexible flange)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters

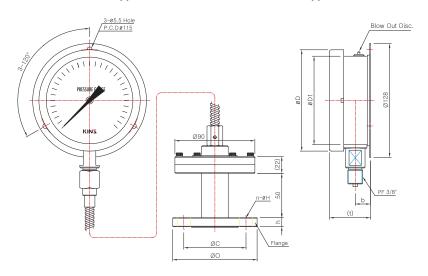
- + Movement
  - · STS 304
- - · C type bourdon tube
- + Diaphragm
- · STS 304, STS 316
- · Teflon(Lining, Coating), Titanium
- Able to produce teflon(lining, coating)titanium, tantalum, hastelloy, etc

# Model No. SS-3033/6 Series

## Model No. | SS-3033 (100mm) A-Type (Rimless type), Direct Type



## Model No. | SS-3036 (100mm) B-Type (Surface type), Remote Type



וו) פווטופוושווום	1111/													
Model No.	ØD	ØD1	b	t	JIS 10kgf/cm²	ØO	ØС	n-ØH	h	ANSI CLASS #150	ØO	ØС	n-ØH	h
					15A	95	70	4-Ø15	12	1/2B	89	60.3	4-Ø16	11.5
					20A	100	75	4-Ø15	14	3/4B	98	69.9	4-Ø16	13.0
SS-3033 &	114	100	0 17	(46)	25A	125	90	4-Ø19	14	1B	108	79.4	4-Ø16	14.5
SS-3036	114			(46)	32A	135	100	4-Ø19	16	1 1/4B	117	88.9	4-Ø16	16.0
					40A	140 105 4-Ø19 16 1 1/2B	1 1/2B	127	98.4	4-Ø16	17.5			
					50A	155	120	4-Ø19	16	,	152	120.6	4-Ø19	19.5

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Ring Diaphragm Type Pressure Gauge

## Model No. SS-3037 Series





## SS-3037

[Patent application] 10-2002-0004393

#### Summary

This gauge is designed to measure various fluid's pressure flowing in a pipe effectively and accurately. It also has corrosive resistance and heat resistance. We complemented the imported goods' disadvantages, Therefore, it does not get affected by the direction of the installation and we can move it as we want to after the installation,

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage,
- Be sure to install pressure gauge to be horizontal and vertical.

## Purpose of Use

- Oil pressure line
- Chemical industry, power plant
- Sanitary
- Waste water treatment line, pulp and paper line, etc.

## **Production Specification**

- Diameter
  - · 100 mm, 150 mm
- Accuracy
  - $\cdot$   $\pm 1.0\%$  of Full Scale
- ► Scale Range
  - 0.1 MPa  $\sim$  0, 0.1 MPa  $\sim$  2 MPa, 0  $\sim$  2 MPa (\*\* 1 MPa = 10.19716 kgf/cm²)
- ► Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : -5  $\sim$  40 °C
  - · Fluid : − 10  $\sim$  60  $^{\circ}\mathrm{C}$

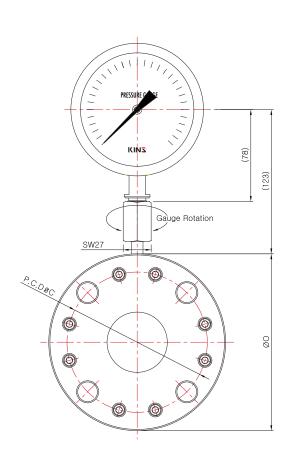
- + Case & Cover
  · STS 304
- + Body Flange
  · STS 304, STS 316
- + Side Flange
  - · STS 304, STS 316, C-PVC
- + Window
  - · Tempered safety glass, Laminated safety glass

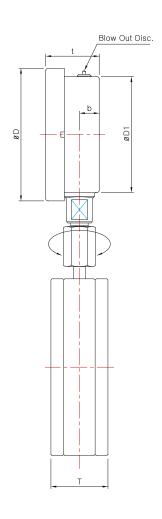
- + Pointer
  - · Aluminum
- · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters
- + Movement
  - · STS 304

- + Element
  - · STS 304
  - · C type bourdon tube
- + Diaphragm
  - Viton

## Model No. SS-3037 Series

## Model No. | SS-3037 (100mm) A-Type (Rimless type)





Model No.	ØD	ØD1	b	ANSI CLASS #150	ØO	P.C.D ØC	t (STS304, STS316)	t (CPVC)
				1B	108	79.4		
				1 1/2B	127	98.4		
				2B	152	120.6		
				2 1/2B	178	139.7		
SS-3037	114	100	17	3B	191	152,4	49	54
				4B	229	190.5		
		5B 6B	254	215.9				
				6B	279	241.3		
				8B	343	298		

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Diaphragm Seal Pressure Gauge (for High Temp.)

## Model No. SS-3040 Series





#### **Summary**

This gauge is designed to be suitable in measuring high viscosity fluid pressure with room temperature and pressure measurement of an element which has high temperature melting condition.

## Safety Management

- Do not give impact during the transportation, installation and usage,
- Be sure to install pressure gauge to be horizontal and vertical.
- Use material of high temperature  $(0\sim330^{\circ}\text{C})$  and corrosive resistance.

#### Purpose of Use

- Fluid of high viscosity, high temperature and high pressure.
- Injection Machine
- Chemical industry, etc.

## **Production Specification**

- Diameter
  - · 100, 150 mm
- Accuracy
  - · ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  5  $\sim$  70 MPa
  - (\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20\sim330$  °C
  - $\cdot$  Fluid : 20  $\sim$  330  $^{\circ}\!\text{C}$

- + Case & Cover
  - · STS 304
  - · Slip-on-Fit
- + Connection · PF ↔ 3/4, 1'
- + Window
  - · Tempered safety glass, Laminated safety glass

- 3043-Type (Direct type 18mm)
- 3044-Type (Direct type 23.6mm)
- 3047-Type (Flexible type 18mm)
- 3048-Type (Flexible type 23.6mm)
- + Pointer
  - Aluminum · Black coating

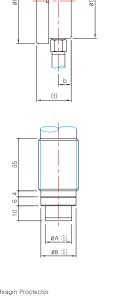
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters
- + Movement
  - · STS 304
- + Mounting Bolt · SM45C(Heat treatment)
- + Diaphragm
  - STS 316

## Model No. SS-3040 Series

## Model No. | SS-3043/3044 (100mm) A-Type (Rimless type), Direct Type

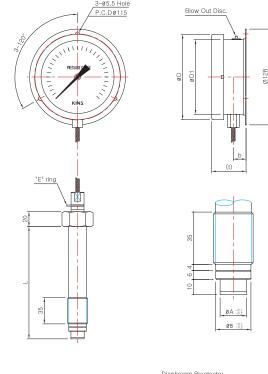
# Blow Out Disc. Diaphragm Proctecto







## Model No. | SS-3047/3048 (100mm) B-Type (Surface type), Remote Type







Billionolono (Illini)											
Model No.	Conn'n (d)	ØD	ØD1	b	t	ØΑ	ØВ	L	Capillary Length		
SS-3043	PF 3/4"					18	24				
SS-3044	PF 1"	11.4	100	17	(40)	23.6	30	00 150 000	4M - FM		
SS-3047	PF 3/4"	114			(46)	18	24	80, 150, 300	$_{ m 1M}\sim$ 5M		
SS-3048	PF 1"					23.6	30				

<sup>\*( )</sup>The measurement in the blanket is approximate.

## General Low Pressure Gauge

## Model No. SS-3050 Series





## SS-3051

#### Summary

This gauge is specially designed to measure low pressure which cannot be measured by a bourdon pipe pressure gauge. This gauge uses a specially designed chamber as the element,

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

## Purpose of Use

- Measurement of micro pressure for various uses
- Measuring by converting liquid level inside various tanks to pressure,
- Measurement of pressure of various gas pipes arrangement.

## **Production Specification**

- Diameter
- · 75, 100 mm
- ► Accuracy
- $\cdot$  ±1.5% of Full Scale
- ▶ Working Pressure · Static pressure : 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ► Working Temperature
  - · Ambient :  $-20 \sim 65 ^{\circ}$
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

## ► Range

75mm 100mm - 5 kPa ~ - 50 kPa - 5+5 kPa ~ - 50+50 kPa 5 kPa ~ 50 kPa

#### **Product Specification**

- + Case
  - · SS-3051, 3052 Steel(SPCD)
  - ► Cr-Plating
  - · SS-3053, 3054 STS 304
- + Cover
  - · SS-3051, 3052 Steel(SPCD)
  - ► Cr—Plating
  - · SS-3053, 3054 STS 304
- + Connection
- · Brass(C3604BE) . STS 304
- · PF, PT ↔ 1/4, 3/8, 1/2

- + Window
  - · General glass
- + Type

· A-Type (Rimless type)

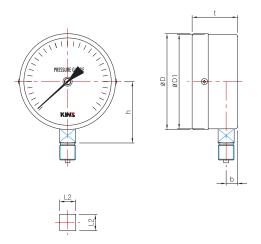
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
- · black (kPa), red (mbar) gradation and characters

- + Movement

  · Brass
- + Element
  · Phosphor Bronze
- + Option
  - · Accessories

## Model No. SS-3050 Series

## Model No. | SS-3051 A Type (75, 100mm)



Dillicitate													
	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	ØС	ØН	
75mm	SS-3051	NPT & PT, PF 1/4	78	76.5	100	13	_	(50)	17	(50)	4,5	88	
75mm	00 0001	NPT & PT, PF 3/8	70	70.5	100	13	_	(50)	17	(50)	4.0		
100mm	SS-3051	NPT & PT, PF 1/4	101.5	100	128	12	_	(48)	17	(65)	5.5	115	
	20 0001	NPT & PT, PF 3/8	101.0	100	120	12		(40)	17	(00)	0.0		

<sup>\*( )</sup>The measurement in the blanket is approximate.

## **Special Low Pressure Gauge**

## Model No. SS-3050S Series







# Summary

This gauge is specially designed to measure low pressure which cannot be measured by a bourdon pipe pressure gauge. This gauge uses a specially designed chamber as the element.

## SS-3054S

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

# **Production Specification**

- - · 75, 100, 150 mm
- Accuracy
- $\cdot$   $\pm 1.5\%$  of Full Scale
- Working Pressure
  - $\cdot$  Static pressure : 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- Working Temperature
  - · Ambient : 20  $\sim$  65 °C
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

Degree of Protection

#### Range

i (di i	90
	$-$ 5 kPa $\sim$ $-$ 50 kPa
75mm	$-$ 5+5 kPa $\sim$ $-$ 50+50 kPa
	5 kPa $\sim$ 50 kPa
100mm	- 2 kPa ~ - 100 kPa
150mm	$-$ 1+1 kPa $\sim$ $-$ 50+50 kPa
130111111	2 kPa $\sim$ 100 kPa

## Purpose of Use

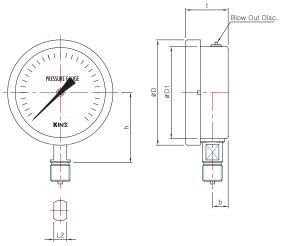
- Measurement of micro pressure which is for various uses
- Measuring by converting liquid level inside various tanks to pressure
- Measurement of pressure of various gas pipes arrangement

- + Case
  - · STS 304
- + Cover STS 304
  - · Slip-on-Fit
- + Connection
- STS 316
- · PF, PT, NPT ↔ 1/4, 3/8, 1/2
- + Window
  - Tempered safety glass, Laminated safety glass

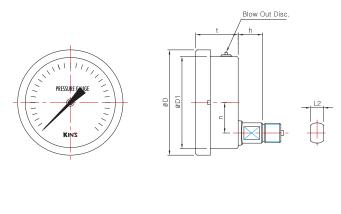
- + Type
  - · A-Type (Rimless type)
  - B-Type (Surface type)
  - D-Type (Flush mounting type)
  - BD-Type (Panel attachment type)
- + Pointer
  - · Aluminum
  - Black coating
- + Dial
  - Aluminum
  - · White color coating
  - · black (kPa), red (mbar) gradation and characters

- + Movement · Brass
- + Element
- · STS 304, STS 316
- + Option
  - Accessories

## Model No. | SS-3051S A Type (75, 100, 150mm)

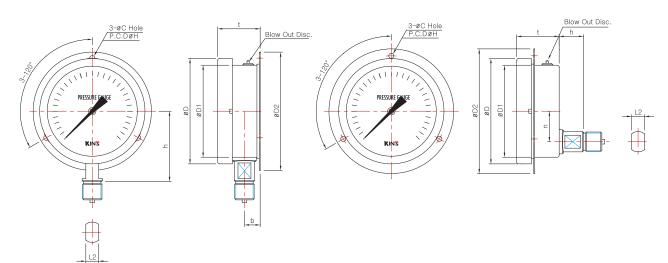


Model No. | SS-3053S D Type (75, 100, 150mm)



Model No. | SS-3052S B Type (75, 100, 150mm)





# KINZ

	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	ØС	ØН
	SS-3051S & SS-3052S	NPT & PT, PF 1/4	87	77	100	13	_	(40)	14	(58)	4.5	88
75mm	00 00010 4 00 00020	NPT & PT, PF 3/8		.,	100	10		(40)	1-7	(00)	7.0	
7011111	SS-3053S & SS-3054S	NPT & PT, PF 1/4	87	77	107	_	22	(40)	14	(20)	4.5	97
	000000000000000000000000000000000000000	NPT & PT, PF 3/8	01	,,	107			(40)	1-7	(20)	7.0	
		NPT & PT, PF 1/4										
	SS-3051S & SS-3052S	NPT & PT, PF 3/8	114	100	128	13	_	(46)	17	(75)	5.5	115
100mm		NPT & PT, PF 1/2										
	SS-3053S & SS-3054S	NPT & PT, PF 1/4	114	100	135							
		NPT & PT, PF 3/8				_	33	(46)	17	(25)	5.5	120
		NPT & PT, PF 1/2										
		NPT & PT, PF 1/4										
	SS-3051S & SS-3052S	NPT & PT, PF 3/8	168	152	188	17	_	(50)	17	(100)	5.5	173
150mm		NPT & PT, PF 1/2										
10011111		NPT & PT, PF 1/4										
	SS-3053S & SS-3054S	NPT & PT, PF 3/8	168	152	188	_	33	(50)	17	(25)	5.5	173
		NPT & PT, PF 1/2			100							

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Diaphragm Type Low Pressure Gauge

## Model No. SS-3055 Series





## SS-3055

## Summary

This gauge is designed to guarantee the performance and the lifespan of the equipment which measures low temperature in case measuring fluid mixed with powder that has coagulation in pressure measurement in chemical industry or with high corrosiveness.

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical,
- Do not disassemble the measuring device at your discretion

#### Purpose of Use

- Measuring of Slurry micro pressure in terminal disposal plant of sewage
- Measuring of liquidity gas micro pressure in incinerator
- For measuring micro pressure in hard condition where measuring cannot be done by other measurement devices due to other unfavorable conditions.

## **Production Specification**

- - · 100, 150 mm
- Accuracy
  - $\cdot$  ±1.5% of Full Scale
- ▶ Scale Range
  - $\cdot$  2 kPa  $\sim$  0, 1 + 1 kPa  $\sim$  20 + 20 kPa,  $0\sim35~\mathrm{kPa}$ (\* 1 kPa = 101.9716 mmH<sub>2</sub>O)
- ▶ Working Pressure
  - Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  80 °C
  - · Fluid :  $-20 \sim 80 \, ^{\circ}\mathrm{C}$

#### **Product Specification**

- + Case & Cover STS 304
- + Upper Flange STS 304, STS 316
- + Under Flange
- STS 304, STS 316
- + Connection STS 316 · PF, PT ↔ 3/8, 1/2
- Tempered safety glass, Laminated safety glass

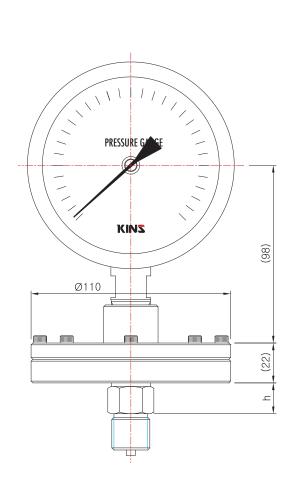
Window

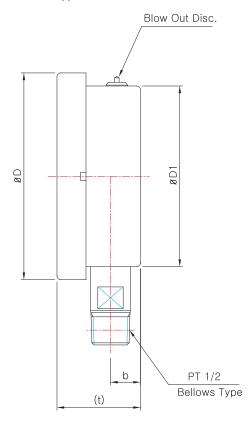
- SS-3031-Type (Direct type Screw)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - Aluminum
  - · White color coating
  - · black (kPa), red (mbar) gradation and characters

- + Movement
  - Brass
- + Diaphragm STS 304, STS 316
  - · Teflon(Lining, Coating), Titanium Able to produce teflon(lining, coating)titanium, tantalum, hastelloy, etc

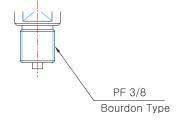
## Model No. SS-3055 Series

## Model No. | SS-3055 (100mm) A-Type (Rimless type), Direct Type









Difficusions (fillif)	Annother (min)												
Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L	М	h				
SS-3055	NPT & PT, PF 3/8		100	17		(46)	22	(25.4)	(20)				
33 3033	NPT & PT, PF 1/2	114	100	''		(40)		(20.4)	(20)				

 $<sup>\</sup>ensuremath{^{*}\!(}$  )The measurement in the blanket is approximate.

## Diaphragm Type Low Pressure Gauge

## Model No. SS-3056 Series





## SS-3056 100mm

## Summary

This gauge is designed to guarantee the performance and the life span of the equipment which measures low temperature in case when measuring fluid mixed with powder that has coagulation in pressure measurement in chemical industry or with high corrosiveness.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.
- Do not disassemble the measuring device at your discretion,

#### Purpose of Use

- Measuring of Slurry micro pressure in terminal disposal plant of sewage
- Measuring of liquidity gas micro pressure in incinerator
- For measuring micro pressure in hard condition where measuring cannot be done by other measurement devices due to other unfavorable conditions.

## **Production Specification**

- Diameter
  - · 100, 150 mm
- Accuracy
  - ±1.5% of Full Scale
- ► Scale Range
  - · 2 kPa  $\sim$  0, 1 + 1 kPa  $\sim$  20 + 20 kPa, 0  $\sim$  35 kPa ( $\times$  1 kPa = 101,9716 mmH₂0)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  80  $^{\circ}\mathrm{C}$
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

#### **Product Specification**

- + Case & Cover
  - · STS 304
- + Upper Flange

· STS 304, STS 316

- + Under Flange
  - · STS 304, STS 316
- + Connection
  - · STS 316
  - · See flange standard table

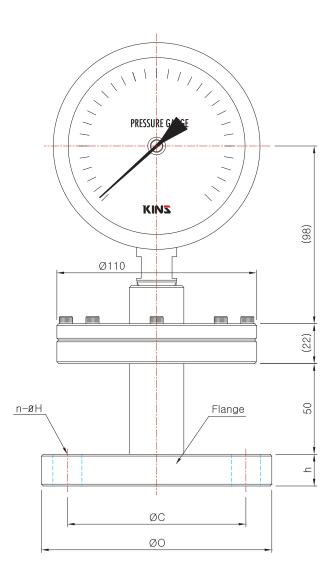
- + Window
- · Tempered safety glass, Laminated safety glass
- + Type
  - · SS-3056-Type (Direct- flange type)
- + Pointer
  - · Aluminum
    · Black coating
- + Dia
  - · Aluminum
  - · White color coating
  - · black (kPa), red (mbar) gradation and characters

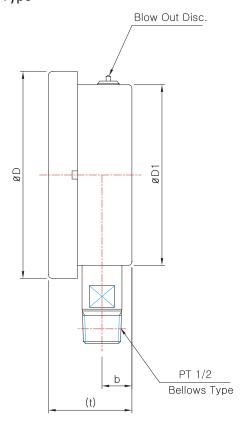
#### + Movement

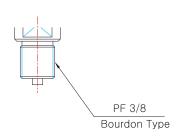
- · Brass
- + Diaphragm
  · STS 304, STS 316
- Teflon(Lining, Coating), Titanium Able to produce teflon(lining, coating)titanium, tantalum, hastelloy, etc

## Model No. SS-3056 Series

## Model No. | SS-3056 (100mm) A-Type (Rimless type), Direct Type







Model No.	ØD	ØD1	b	t	JIS 10kgf/cm²	ØO	ØС	n-ØH	h	ANSI CLASS #150	ØO	ØС	n-ØH	h
					15A	95	70	4-Ø15	12	1/2B	89	60.3	4-Ø16	11.5
SS-3056					20A 100 75 4-Ø15 14 3		3/4B	98	69.9	4-Ø16	13.0			
	114	100	0 17	(46)	25A	125	90	4-Ø19	14	1B	108	79.4	4-Ø16	14.5
33-3030	114			(40)	32A	135	100	4-Ø19	16	1 1/4B	117	88.9	4-Ø16	16.0
					40A	140	105	4-Ø19	16	1 1/2B	127	98.4	4-Ø16	17.5
					50A	155	120	4-Ø19	16	6 2B		120.6	4-Ø19	19.5

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Pressure Gauge (with Micro Contact)

## Model No. SS-3060 Series





## SS-3062 100mm

to buzzer, bell, pilot lamp, etc.

Summary

This equipment is a contact pressure gauge which has a micro switch inside the equipment, It produces an electric signal of ON, OFF by working the switch, It shows the information by sending electric signal

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

## Purpose of Use

- Various pressure control, information system
- Oil pressure press
- Special fluid line for industrial use,

## **Production Specification**

- Diameter · 100 mm
- Accuracy
  - $\cdot$  Grade :  $\pm 1.5\%$  of Full Scale · Dead Band: ±4.0% of Full Scale
- ▶ Scale Range
  - $\cdot$  0,1 MPa  $\sim$  2 MPa,
  - 0.1 MPa  $\sim$  0 MPa, 0  $\sim$  35 MPa (\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20\sim65$  °C
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

- - · Aluminum(Hammer tone coating)
- - · Aluminum(Hammer tone coating)
- + Connection
  - · STS 316
  - · PF, PT, NPT ↔ 3/8, 1/2
- - Tempered safety glass, Laminated safety glass
- - B-Type (Surface type)
  - · BD-Type (Panel attachment type)

- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - Aluminum
  - · White color coating
  - · Black gradation and characters
- + Contact rating

  - · AC 125V 5A / 250V 3A · DC 30V 4A / 125V 0.4A / 250V 0.2A
- + Element
- · STS 304, STS 316
- · C type bourdon tube

- + Movement STS 304
- + Contact Form
  - · Micro Contact Type
- SPDT \* 1, SPDT \* 2, DPDT \* 1 (High, Low, High & High High & Low, Low & Low)
- + Option

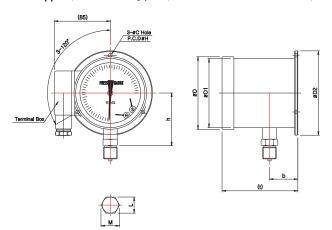
  - · Accessories

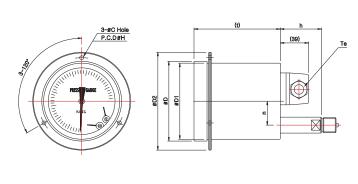
# Model No. SS-3060 Series

# Model No. | SS-3062 (100mm) B-Type (Surface type / Bottom connection)

Model No. | SS-3064 (100mm)

B-Type (Surface type / Lower back connection)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	М	h	ØС	ØН
	SS-3062	NPT & PT, PF 3/8	110	105	128	43	_	(115)	22	25.4	(80)	5.5	115
100mm	00 0002	NPT & PT, PF 1/2	110	100	120	40		(110)		20.4	(00)	0.0	110
100111111	SS-3064	NPT & PT, PF 3/8	110	105	135		33	(115)	17	_	(57)	5.5	120
	33-3004	NPT & PT, PF 1/2	110	100	100		33	(113)	17		(07)	0.0	120
	SS-3062	NPT & PT, PF 3/8	170	156	190	43	-	(115)	22	25.4	(128)	5.5	174
150mm	SS-3062	NPT & PT, PF 1/2								20.4	(120)	0.0	174
10011111	SS-3064	NPT & PT, PF 3/8	- 170 156	156	56 200	_	33	(115)	17	_	(57)	5.5	185
	SS-3064 _	NPT & PT, PF 1/2		100		_	33	(115)	17		(01)	5.0	100

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Pressure Gauge (with Electric Contact)

## Model No. SS-3065~6 Series





## SS-3065 100mm

## Purpose of Use

- Various pressure control, information system
- Oil pressure press
- Special fluid line for industrial use, etc.

## Summary

This gauge has a contact device in the indicator. Not only indicating the pressure but also it is able to control and report by sending an electric message from the built—in contact device where the pressure was set up beforehand

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

## **Production Specification**

- ▶ Diameter
  - · 100 mm
- Accuracy
  - ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  0.1 MPa  $\sim$  0, 0.1 MPa  $\sim$  2 MPa, 0  $\sim$  100 MPa  $(\times$  1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20 ~ 65 °C
- · Fluid :  $-20 \sim 80 \, ^{\circ}\mathrm{C}$

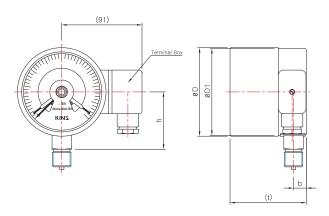
- + Case
  - · STS 304
- + Cover
  - · STS 304
  - · Slip-on-Fit
- + Connection
- · STS 316
- · PF, PT, NPT ↔ 1/4, 3/8, 1/2
- + Window
  - Tempered safety glass,
     Laminated safety glass
- + Type
  - · A-Type (Rimless type)
  - $\cdot \text{ B--Type (Surface type)}$
  - · D-Type (Flush mounting type)
  - · BD-Type (Panel attachment type)

- + Pointer
- · Phosphor bronze
- · Black coating
- Contact indicator High ↔ red Contact indicator Low ↔ Green
- + Dial
  - · Aluminum
  - · White color coating
  - · Black (MPa), red (bar) gradations and characters
- + Contact rating
- · AC 125V 1.0A / 250V 0.7A
- + Element
  - · STS 304, STS 316
  - · C type bourdon tube, helical type bourdon tube

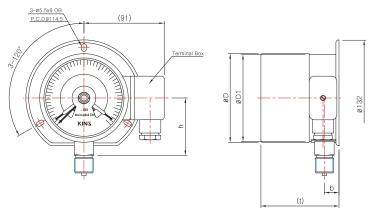
- + Movement
- · STS 304
- + Contact Form
  - · SPST \* 1, SPST \* 2
    - High, low 2 contact(High or Low, High & High High & Low, Low & Low)
- + Option
  - · Bracket
  - · Throttles
  - · Accessories

## Model No. SS-3065~6 Series

## Model No. | SS-3065 (100mm) A-Type (Rimless type)



## Model No. | SS-3066 (100mm) B-Type (Surface type)



	Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L2	h
		NPT & PT, PF 1/4							
	SS-3065	NPT & PT, PF 3/8	100.5	98.7	15	_	(86.5)	22	(65)
100		NPT & PT, PF 1/2							
100mm		NPT & PT, PF 1/4							
	SS-3066	NPT & PT, PF 3/8	114	100	17	_	(88.5)	22	(65)
		NPT & PT, PF 1/2							

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Liquid Filled Pressure Gauge

## Model No. SS-3070 Series





SS-3071

SS-3074

## **Summary**

Range

60mm

75mm

100mm

150mm

This gauge is proper for measuring the pressure in place where mechanical vibration and pulsation are heavy because its interior devices are precipitated in silicon liquid and by doing this, it is able to suppress vibration which is used by the viscosity resistance of liquid. This pressure gauge guarantees its performance and the life span as it has relatively better durability than other general pressure gauges because it prevents abrasion of the interior devices using lubricative fluid.

- 0.1  $\sim$  2 MPa

- 0.1  $\sim$  0 MPa

 $-01\sim2$  MPa

- 0.1  $\sim$  0 MPa

 $0\sim35~\mathrm{MPa}$ 

 $0\sim 200~\text{MPa}$ 

## Safety Management

- Do not give impact during the transportation, installation and usage
- Be sure to install pressure gauge to be horizontal and vertical,

## Diameter

· 60, 75, 100, 150 mm

Accuracy

 $\cdot$  60, 75mm :  $\pm 1.5\%$  of Full Scale · 100, 150mm: ±1.0% of Full Scale

**Production Specification** 

▶ Working Pressure

· Static pressure: 75% of Full Scale

· Fluctuating pressure: 60% of Full Scale

Working Temperature

· Ambient : - 20  $\sim$  65 °C

· Fluid :  $-20 \sim 80 \, ^{\circ}\mathrm{C}$ 

Degree of protection

IP67

## Purpose of Use

- Various plants such as petrochemistry, etc.
- Oil pressure press, etc. where a lot of vibration and pulsation exist
- Where a lot of temperature changes exist
- For shipbuilding and power plant
- For industrial use, special fluid line, etc.

## + Filling Liquid

- · Silicone oil or Glycerin oil
- + Element
  - STS 304, STS 316
  - C type bourdon tube, helical type bourdon tube

## + Movement

STS 304

## + Option

- Bracket

#### **Product Specification**

#### + Case

STS 304

#### + Cover

- STS 304
- Slip-on-Fit

#### + Connection STS 316

- · PF, PT ↔ 1/4, 3/8
- · UNF 7/16

#### + Window

Tempered safety glass, Laminated safety glass

- - A-Type (Rimless type)
- · B-Type (Surface type)
- D-Type (Flush mounting type)
- · BD-Type (Panel attachment type)

#### + Pointer

- Aluminum
- Black coating

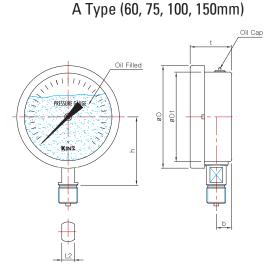
## + Dial

- Aluminum
- · White color coating
- $\cdot$  Black (MPa), red (bar) gradations and characters

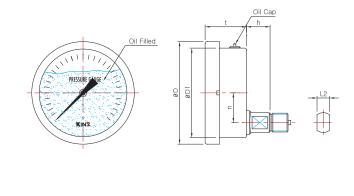
- Throttles
- · Accessories

Model No. SS-3070 Series

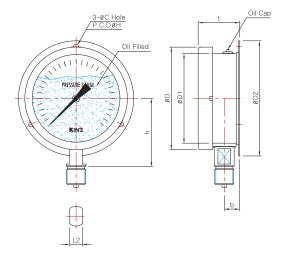
# Model No. | SS-3071



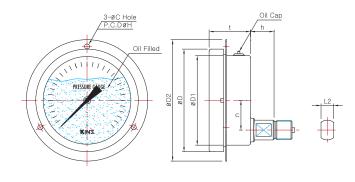
## Model No. | SS-3073 D Type (60, 75, 100, 150mm)



## Model No. | SS-3072 B Type (60, 75, 100, 150mm)



## Model No. | SS-3074 BD Type (60, 75, 100, 150mm)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	ØC(OB)	ØН
		UNF 7/16										
	SS-3071 & SS-3072	NPT & PT, PF 1/8	72	64	84	12	_	(39)	12	(48)	4.5	72
00		NPT & PT, PF 1/4										
60mm		UNF 7/16										
	SS-3073 & SS-3074	NPT & PT, PF 1/8	72	64	90	-	18	(39)	12	(20)	4.5	81
		NPT & PT, PF 1/4										
		UNF 7/16										
	SS-3071 & SS-3072	NPT & PT, PF 1/4	87	77	100	14	_	(40)	14	(54)	4.5	88
75		NPT & PT, PF 3/8										
75mm		UNF 7/16										
	SS-3073 & SS-3074	NPT & PT, PF 1/4	87	77	107	_	22	(40)	14	(17)	4.5	97
		NPT & PT, PF 3/8										
	SS-3071 & SS-3072	UNF 7/16	114									
		NPT & PT, PF 1/4		100	128	17		(46)	17	(76)	5.5	115
		NPT & PT, PF 3/8		100	128	17	_	(40)	17	(70)	0.0	113
100mm		NPT & PT, PF 1/2										
IUUIIIII		UNF 7/16										
	SS-3073 & SS-3074	NPT & PT, PF 1/4	114	100	135	_	33	(46)	17	(26)	5.5	120
	35-30/3 & 55-30/4	NPT & PT, PF 3/8	114	100	133	_	33	(40)	17	(20)	0.0	120
		NPT & PT, PF 1/2										
		UNF 7/16										
	SS-3071 & SS-3072	NPT & PT, PF 1/4	168	152	188	17	_	(50)	17	(100)	5.5	174
	55-30/1 & 55-30/2	NPT & PT, PF 3/8	100	102	100	17	_	(50)	17	(100)	0.0	1/4
150mm		NPT & PT, PF 1/2										
13011111		UNF 7/16										
	00 0070 0 00 0074	NPT & PT, PF 1/4	100	150	100		20	(50)	47	(00)		174
	SS-3073 & SS-3074	NPT & PT, PF 3/8	168	152	188	3 -	33	(50)	17	(26)	5.5	174
		NPT & PT, PF 1/2										

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Liquid Filled Euro Pressure Gauge (DIN)

## Model No. SD-3070 Series





SD-3071



SD-3074

## Summary

This gauge is proper for measuring the pressure in place where mechanical vibration and pulsation are heavy because its interior devices are precipitated in silicon liquid and by doing this, it is able to suppress vibration which is used by the viscosity resistance of liquid. This pressure gauge guarantees its performance and the life span as it has relatively better durability than other general pressure gauges because it prevents abrasion of the interior devices using lubricative fluid.

## Safety Management

- Do not give impact during the transportation, installation and usage,
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Power plants (thermal, hydraulic, nuclear)
- Oil pressure press, etc, where a lot of vibration and pulsation exist
- Various plants such as chemistry, refinery, shipbuilding industry, etc.
- For industrial use, special fluid line, etc.
- Food industry

## **Production Specification**

- Diameter
  - · 63, 80, 100, 160 mm
- Accuracy
  - · 63, 80mm: ±1.6% of Full Scale · 100mm: ±1.0% of Full Scale
- Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

## ► Range

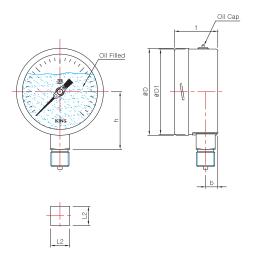
63mm	- 0.1 ~ 0 MPa
80mm	0 ~ 35 MPa
100mm	- 0.1 ~ 0 MPa
160mm	0 ~ 200 MPa

- + Case
  - · STS 304
- + Cover
  - · STS 304
  - · Slip-on-Fit
- + Connection
  - · STS 316
  - · UNF 7/16
  - · PF, PT, NPT ↔ 1/4, 3/8, 1/2
- + Window
- Tempered safety glass,
   Laminated safety glass

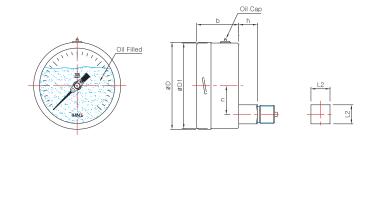
- + Type
  - · A-Type (Rimless type)
  - · B-Type (Surface type)
  - · D-Type (Flush mounting type)
- · BD-Type (Panel attachment type)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters

- + Element
  - · STS 304, STS 316
  - · C type bourdon tube, helical type bourdon tube
- + Movement
  - · STS 304
- + Filling Liquid
  - · Silicone oil or Glycerin oil
- + Option
  - · Bracket
  - · Throttles
  - · Accessories

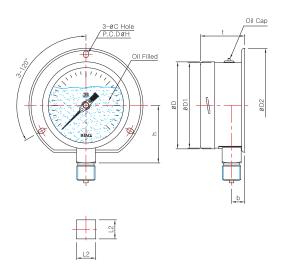
Model No. | SD-3071 A Type (63, 80, 100, 160mm)



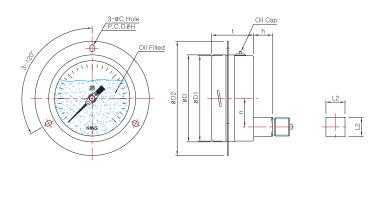
Model No. | SD-3073 D Type (63, 80, 100, 160mm)



Model No. | SD-3072 B Type (63, 80, 100, 160mm)



Model No. | SD-3074 BD Type (63, 80, 100, 160mm)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	ØC(OB)	ØН
		UNF 7/16		61.5	85	9	_	(33)	14	(40.5)	4.5x6.5	75
	SD-3071 & SD-3072	NPT & PT, PF 1/8	63.6									
63mm		NPT & PT, PF 1/4										
0311111		UNF 7/16										
	SD-3073 & SD-3074	NPT & PT, PF 1/8	63.6	61.5	92	_	_	(33)	14	(12.5)	4.5x6.5	78
		NPT & PT, PF 1/4										
		UNF 7/16										
	SD-3071 & SD-3072	NPT & PT, PF 1/4	79.5	77.5	111	13	_	(40)	17	(53)	4.5x6.5	95
00		NPT & PT, PF 3/8										
80mm	SD-3073 & SD-3074	UNF 7/16	79.5	77.5	112	_	22	(40)	17	(16)	4.5x6.5	
		NPT & PT, PF 1/4										95
		NPT & PT, PF 3/8										
	SD-3071 & SD-3072	UNF 7/16	100.5	98.7	132		-	(48.5)	22	(66.5)	5.5x8	
		NPT & PT, PF 1/4				15						118
		NPT & PT, PF 3/8				10						110
100mm		NPT & PT, PF 1/2										
10011111		UNF 7/16		98.7	132	_	32	(48.5)	22	(20.5)	5.5x8	
	SD-3073 & SD-3074	NPT & PT, PF 1/4	100.5									118
	30-30/3 & 30-30/4	NPT & PT, PF 3/8	100.5									
		NPT & PT, PF 1/2										
		UNF 7/16										
	SD-3071 & SD-3072	NPT & PT, PF 1/4	160	146	182.5	17	_	(51)	22	(102)	5.5x8	162
	30-3071 & 30-3072	NPT & PT, PF 3/8	100	140	102,5	17		(31)		(102)	3.380	102
160mm		NPT & PT, PF 1/2										
10011111		UNF 7/16				_	48	(51)	22	(20)	5.5x8	178
	SD-3073 & SD-3074	NPT & PT, PF 1/4	160	146	192							
	00 -00/0 & 00-00/4	NPT & PT, PF 3/8			192							
		NPT & PT, PF 1/2										

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Liquid Filled Pressure Gauge

## Model No. SS-3075/8 Series





SS-3075



SS-3078

## 33-3070

 Do not give impact during the transportation, installation and usage.

Safety Management

 Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Oil pressure line
- Places with a lot of vibration, pulsation
- Places where a lot of temperature changes exist
- Compressor, press, etc.

## **Production Specification**

- Diameter
  - · 60, 75, 100 mm
- Accuracy
  - $\cdot$   $\pm 1.5\%$  of Full Scale
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20\sim65$  °C
  - · Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

#### Summary

This gauge is proper for measuring the pressure in place where mechanical vibration and pulsation are heavy because its interior devices are precipitated in silicon liquid and by doing this, it is able to suppress vibration which is used by the viscosity resistance of liquid. This pressure gauge guarantees its performance and the life span as it has relatively better durability than other general pressure gauges because it prevents abrasion of the interior devices using lubricative fluid.

#### ► Range

60mm 75mm	$-$ 0.1 $\sim$ 2 MPa $-$ 0.1 $\sim$ 0 MPa $-$ 0.0 $\sim$ 35 MPa
100mm	$-$ 0.1 $\sim$ 2 MPa $-$ 0.1 $\sim$ 0 MPa $-$ 0 $\sim$ 35 MPa

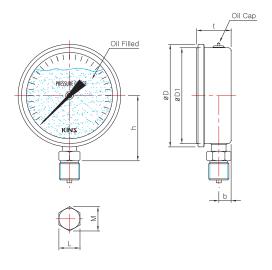
- + Case
  - · STS 304
- + Cover
  - · STS 304
  - · Press Corking
- + Connection
  - · Brass(C3604BE) -> Cr-Plating
  - · PF, PT ↔ 3/8, 1/2
- + Window
  - Tempered safety glass,
     Laminated safety glass

- + Type
  - · A-Type (Rimless type)
  - · B-Type (Surface type)
  - · D-Type (Flush mounting type)
  - · BD-Type (Panel attachment type)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black (MPa), red (bar) gradations and characters

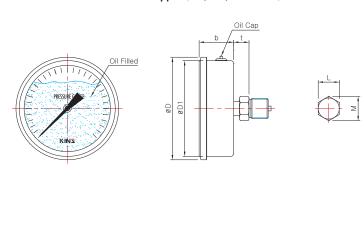
- + Filling Liquid
  - · Silicone oil or Glycerin oil
- + Element
  - · Brass(C2700T)
  - · C type bourdon tube, helical type bourdon tube
- + Movement
  - Brass
- + Option
  - · Bracket(SS-3077, 3078)
  - · Throttles
  - · Accessories

# Model No. SS-3075/8 Series

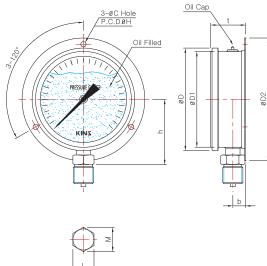
Model No. | SS-3075 A Type (60, 75, 100mm)



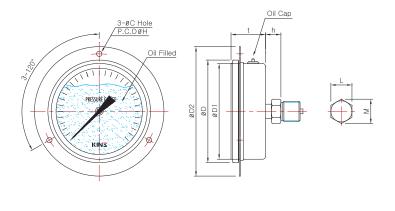
Model No. | SS-3077 D Type (60, 75, 100mm)



Model No. SS-3076 B Type (60, 75, 100mm)



Model No. | SS-3078 BD Type (60, 75, 100mm)





	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L	М	h	øс	ØН
60mm	SS-3075 & SS-3076	NPT & PT, PF 1/4	72	63	84	10	_	(34)	15	(17.3)	(46)	4.5	72
	SS-3077 & SS-3078	NPT & PT, PF 1/4	72	63	90	_	_	(34)	15	(17.3)	(13)	4.5	81
75mm	SS-3075 & SS-3076	NPT & PT, PF 3/8	86	77	100	14	_	(36)	17	(19.6)	(57)	4.5	88
	SS-3077 & SS-3078	NPT & PT, PF 3/8	86	77	107	_	_	(36)	17	(19.6)	(16)	4.5	97
	SS-3075 & SS-3076	NPT & PT, PF 3/8	- 107	100	128	14	_	(46)	17	(19,6)	(68)	5.5	115
100mm		NPT & PT, PF 1/2						22	(25.4)	(10.0)			110
10011111	SS-3077 & SS-3078	NPT & PT, PF 3/8	107	100	135	_	_	(46)	· /	(19.6)	(16)	5.5	120
		NPT & PT, PF 1/2	107					22		(10.0)			120

 $<sup>\</sup>ensuremath{^{*}\!(}$  )The measurement in the blanket is approximate.

## Receiver Gauge

## Model No. SS-3080 Series





SS-3081



SS-3084

## Summary

This gauge is used for various kinds of receiver gauges which measure the amount, flux, differential pressure, pressure of the transfer system of pneumatic pressure and it uses bourdon pipes which have high viscosity and sensitiveness as an element

## Safety Management

- -Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- -Do not give impact during the transportation, installation and usage.
- -Be sure to install pressure gauge to be horizontal and vertical,

## Purpose of Use

 Various pneumatic pressure transmitter, amount of control valve (open, close)

#### **Production Specification**

- Diameter
  - · 100, 150 mm
- Accuracy
  - ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  Linear Scale : 0  $\sim$  100%
  - $\cdot$  Square Root Scale : 0  $\sim$  10 Root
- ► Working Pressure
  - · Static pressure: 75% of Full Scale · Fluctuating pressure: 60% of Full Scale
- ► Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65 °C  $\cdot$  Fluid : 20  $\sim$  80 °C

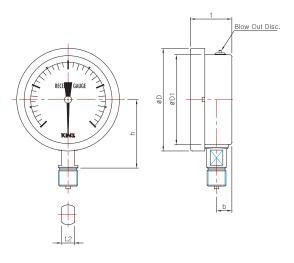
- + Case
  - · STS 304
- + Cover
  - · STS 304 · Slip-on-Fit
- + Connection
  - STS 316
  - · PF, PT ↔ 1/4(Female), 3/8, 1/2
- + Window
- Tempered safety glass,
   Laminated safety glass

- + Type
- · A-Type (Rimless type)
- · B-Type (Surface type)
- · D-Type (Flush mounting type)
- · BD-Type (Panel attachment type)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - · Black gradation and characters

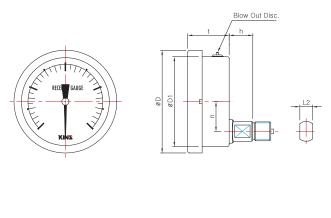
- + Element
  - · STS 304, STS 316
  - · C type bourdon tube
- + Movement
  - · STS 304
- + Option
  - Bracket Accessories

# Model No. SS-3080 Series

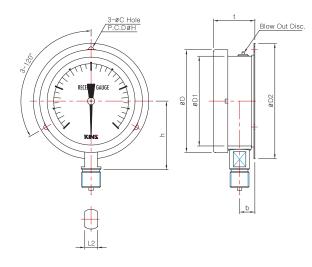
Model No. | SS-3081 A Type (100, 150mm)



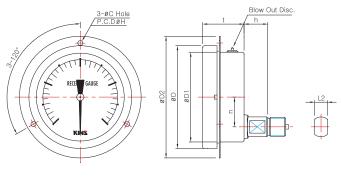
Model No. | SS-3083 D Type (100, 150mm)



Model No. | SS-3082 B Type (100, 150mm)



## Model No. | SS-3084 BD Type (100, 150mm)



# KINZ

	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	øс	ØН
		Female (1/4)	114	100	128	17	_	(46)	(17)	(76)	5.5	
100mm .	SS-3081 & SS-3082	NPT & PT, PF 1/4										115
	00 0001 & 00 0002	NPT & PT, PF 3/8							(17)			110
		NPT & PT, PF 1/2										
		Female (1/4)	- 114	100	135	_	33	(46)	(17)	(26)	5.5	
	SS-3083 & SS-3084	NPT & PT, PF 1/4										120
		NPT & PT, PF 3/8										.20
		NPT & PT, PF 1/2										
	SS-3081 & SS-3082	Female (1/4)		152	188	17	_	(50)	(17)	(100)	5.5	
		NPT & PT, PF 1/4	168									174
		NPT & PT, PF 3/8	100									174
150mm		NPT & PT, PF 1/2										
10011111		Female (1/4)					33	(50)				
	SS-3083 & SS-3084	NPT & PT, PF 1/4	168	152	188	_			(17)	(26)	5.5	174
	35-3063 & 55-3064	NPT & PT, PF 3/8	100	102	100							174
		NPT & PT, PF 1/2										

<sup>\*( )</sup>The measurement in the blanket is approximate.

## **Duplex Pressure Gauge**

## Model No. SS-3090 Series





SS-3091 100mm



SS-3092 100mm

#### Summary

This gauge has a structure that 2 pressure gauges are combined as a one equipment, It consists of two pressure openings, two bourdon pipes, two indicators (concentric trommel movement) and two types of amplification devices, etc. Therefore, it can measure two places' pressures with one gauge. This gauge has limitation in installation and usually it is for vehicles and has high durability.

## Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- For railroad car, ships, equipment of generators
- Potential difference of pressure line, etc.

## **Production Specification**

- Diameter
- ► Accuracy
- ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  0.4 MPa  $\sim$  3.5 MPa, 0.1 + 0.6  $\sim$  2 MPa (\* 1 MPa = 10.19716 kgf/cm²)
- ► Working Pressure
  - Static pressure: 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65 °C
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

## **Product Specification**

#### + Case

· STS 304

## + Cover · STS 304

#### + Connection

- · STS 316
- · PF, PT, NPT ↔ 1/4, 3/8, 1/2 (Duplex)

#### + Window

· Tempered safety glass, Laminated safety glass

#### + Type

- · A-Type (Rimless type)
- · B-Type (Surface type)
- · D-Type (Flush mounting type)
- · BD-Type (Panel attachment type)

#### + Pointer

- · Aluminum
- · Black (high), red (low)

#### + Dial

- · Aluminum
- · White color coating
- · Black (MPa), red (bar) gradations and characters

#### + Element

- · Brass
- · C type bourdon tube

#### + Movement

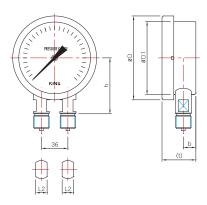
· Brass

## + Option

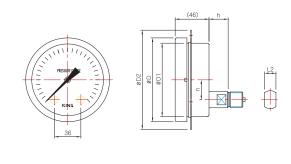
· Accessories

# Model No. SS-3090 Series

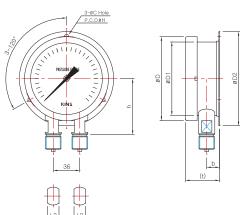
## Model No. | SS-3091 (100mm) A-Type (Rimless type)



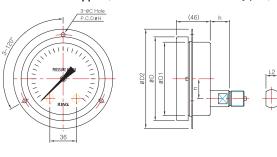
# Model No. | SS-3093 (100mm) D-Type (Flush mounting type)



# Model No. SS-3092 (100mm) B-Type (Surface type)



## Model No. | SS-3094 (100mm) BD-Type (Panel attachment type)



Difference (film)												
	Model No.	Conn'n (d)	ØD	ØD1	ØD2	b	n	t	L2	h	ØС	ØН
100mm -	SS-3091 & SS-3092	NPT & PT, PF 1/4	114	100	128	17	_	(46)	17	(76)	5.5	
		NPT & PT, PF 3/8										115
		NPT & PT, PF 1/2										
		NPT & PT, PF 1/4										
	SS-3093 & SS-3094	NPT & PT, PF 3/8	114	100	135	_	27	(46) 17	17	(26)	5.5	120
		NPT & PT, PF 1/2										

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Level Pressure Gauge

## Model No. SS-3100 Series





## SS-3100

## **Summary**

This gauge has a chamber and has high accuracy and durability. It is easy to be attached and that's the difference with other level gauges.

## Safety Management

- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

## Purpose of Use

- Chemistry plant, ships, fuel tank with bulk storage
- Use when measuring level of liquid.

## **Production Specification**

- Diameter
  - · 150 mm
- ► Accuracy • ±1.5% of Full Scale
- ► Scale Range
  - $\cdot$  Depth of tank : 1  $\sim$  50(M)
- ▶ Working Pressure
  - · Static pressure : 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  70  $^{\circ}\mathrm{C}$
  - · Fluid : 20  $\sim$  120  $^{\circ}\mathrm{C}$

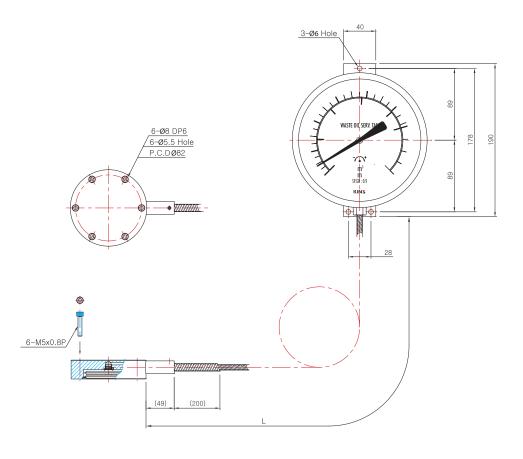
- + Case
  - · STS 304
- + Cover
  · STS 304
  - · Slip-on-Fit
- + Connection
  - · Flange (See the drawing)
- + Window
  - · Tempered safety glass

- + Type · Bracket
- + Pointer
  · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White color coating
  - $\cdot$  Black gradation and characters

- + Element
- · STS 304, STS 316
- + Movement
  - · Brass
- + CaPillary Tube
- · STS304
- · Max. 10M
- + Option

## Model No. SS-3100 Series

## Model No. | SS-3100 (150mm)





### Pressure Recorder Gauge

### Model No. SS-3111 Series





### SS-3111 [1PEN]

### Purpose of Use

- Chemistry plant, LPG, LNG storage
- Various uses such as observation, checking, recording, etc.

#### Summary

This gauge is a wall—mounted tightness test recording instrument which records pressure changes while running with a pen on a paper for recording according to the flow of time with a recording device.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### **Production Specification**

- Diameter
- ► Accuracy
- · ±1.5% of Full Scale
- ► Scale Range
  - · 0.1 MPa ~ 2 MPa, 0 ~ 100 MPa (\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20 \sim 65$  °C · Fluid :  $-20 \sim 80$  °C

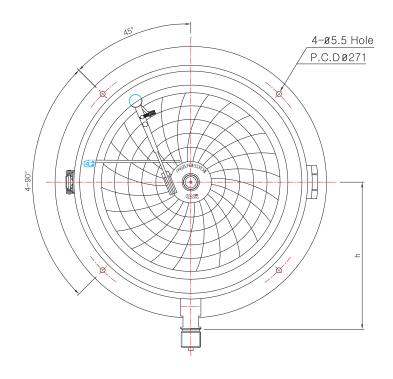
- + Case
- · Aluminum(Black coating)
- + Cover
  - · Aluminum(Black coating)
- + Connection
  - · STS 316
  - · PF, PT, NPT ↔ 3/8, 1/2
- + Window
- · Tempered safety glass, Laminated safety glass

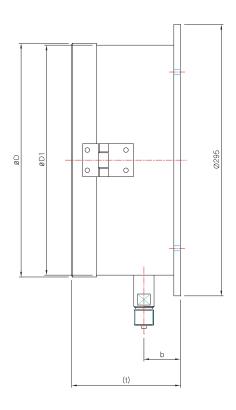
- + Type
- · B-Type (Surface type)
- + Recorder Pen
  - · 1 pen (Pressure)
- + Revolution Time
  - · Stationary type (spring type)
  - $\sim$  10min, 30min
  - · Controlling type (battery type)
  - $\sim$  30min, 1hr, 3hr, 4hr, 12hr, 24hr 2Day, 4Day, 7Day, 8Day, 16Day

- + Chart Paper
- · 30 papers
- + Element
  - · STS 304, STS 316 · C type bourdon tube
- + Movement
- · STS 304
- + Option
- · Accessories

### Model No. SS-3111 Series

### Model No. | SS-3111 (250mm) B-Type (Surface type)





Model No.	Conn'n (d)	ØD	ØD1	b	t	L2	h
SS-3111	NPT & PT, PF 3/8	254	250	40	(118)	17	(160)
30 3111	NPT & PT, PF 1/2	204	250	40	(110)	17	(100)

<sup>\*( )</sup>The measurement in the blanket is approximate.

### Leak Testing Recorder(for Portable)

### Model No. SS-3112 Series





#### SS-3112

### Purpose of Use

- Checking leakage of LPG, LNG tank line
- Places where the danger of explosion by electric spark exist, etc.
- Facility standard of gas equipment permission

#### Summary

This instrument is a wall-mounted tightness test recording instrument which records pressure changes while running with a pen on a paper for recording according to the flow of time with a recording device.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### **Production Specification**

- ► Diameter · 100 mm
  - . 100 mm
- ► Accuracy
  - $\cdot$   $\pm 1.5\%$  of Full Scale
- Scale Range
  - · 10 kPa ~ 50 kPa (\* 1 kPa = 101,9716 mmH₂0)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65 °C
  - · Fluid : 20 ~ 80 ℃

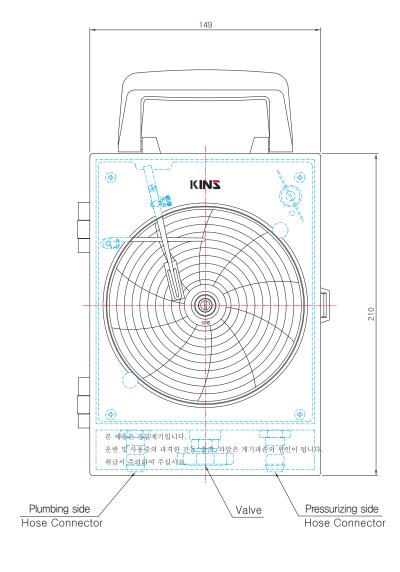
- + Case
  - · ENG'G Plastic
- + Cover
   ENG'G Plastic
- + Connection
  - · Brass
  - · Hose Connector
- + Window
- · ENG'G Plastic

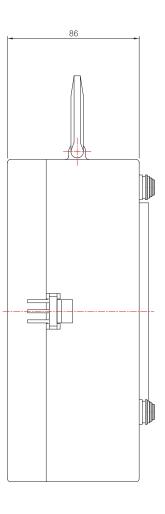
- Type
- · Portable (square)
- + Recorder Pen
  - · 1 pen
- + Revolution Time
  - · Hand operated spring type (no power)
  - · 10min/R, 30min/R
- + Chart Paper
  - · 100 papers

- + Element
  - · Phosophor Bronze
- + Movement
  · Brass
- + Option
  - · Accessories

### Model No. SS-3112 Series

### Model No. | SS-3112 (100mm)





### Leak Testing Recorder (200mm)

### Model No. SS-3113 Series





### SS-3113

## Summary This instrumen

This instrument is a wall-mounted tightness test recording instrument which records pressure changes while running with a pen on a paper for recording according to the flow of time with a recording device.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Checking leakage of LPG, LNG tank line
- Places where the danger of explosion by electric spark exist, etc.
- Facility standard of gas equipment permission

#### **Production Specification**

- Diameter
  - . 200 mm
- ► Accuracy
  - $\cdot$   $\pm 1.5\%$  of Full Scale
- ► Scale Range
  - · 0.1 MPa ~ 2 MPa, 0 ~ 100 MPa (\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

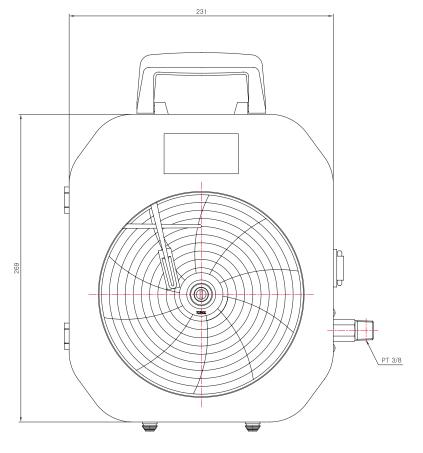
- + Case
- · Aluminum(Hammer tone coating)
- + Cover
  - · Aluminum(Hammer tone coating)
- + Connection
  - · Brass
  - · PT ↔ 3/8(Cr-Plating)
- + Window
- · ENG'G Plastic

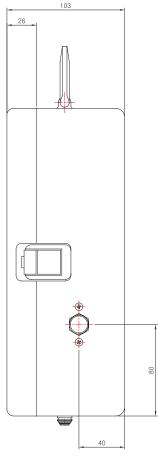
- + Type
- · Portable (square)
- + Recorder Pen
  - · 1 Pen Type
- + Revolution Time
  - · Stationary type (spring type)
  - $\sim$  10min, 30min
  - · Controlling type (battery type)
  - $\sim$  30min, 1hr, 3hr, 4hr, 12hr, 24hr 2Day, 4Day, 7Day, 8Day, 16Day

- + Chart Paper
- · 30 papers
- + Element
  · STS 304
  - · C type bourdon tube
- + Movement
  - · Brass
- + Option
- · Accessories

## Model No. SS-3113 Series

### Model No. | SS-3113 (200mm)





### Test Pressure Gauge

### Model No. SS-3120 Series





SS-3121 150mm

SS-3124 150mm

#### Summary

In these days, as the service condition is diverse, the need of measuring high level pressure increases. This gauge is proper for measuring the changes of high levels or for calibrating instrument for general level (level 1.5, 3.0),

#### Safety Management

- Do not give impact during the transportation, installation and usage
- Be sure to install the pressure gauge to be horizontal and vertical
- Avoid places where exist a lot of steam, poisonous gas.

#### Purpose of Use

- Various laboratories, standard equipment
- Various line such as precise pressure measuring line
- General type, correction of other pressure gauges, for inspection, etc.

#### **Production Specification**

- Diameter
- · 150 mm
- Accuracy ±0.5% of Full Scale
- ▶ Scale Range
  - $\cdot$  0.1 MPa  $\sim$  100 MPa (\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - Ambient:  $-20\sim65$  °C · Fluid : - 20  $\sim$  80  $^{\circ}\mathrm{C}$

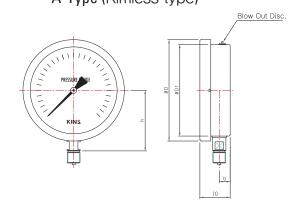
- + Case
  - · STS 304
- + Cover
  - STS 304 · Slip-on-Fit
- + Connection
- STS 316
- · PF, PT, NPT ↔ 1/4, 3/8, 1/2
- + Window
  - Tempered safety glass, Laminated safety glass

- - A-Type (Rimless type)
  - · B-Type (Surface type)
- D-Type (Flush mounting type)
- · BD-Type(Panel attachment type)
- + Pointer
  - Aluminum
  - · Black coating
- + Dial
- · Aluminum
- · White coating
- · Black (MPa), red (bar) gradations and characters

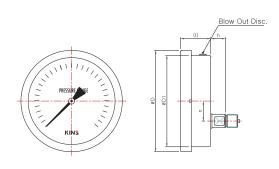
- · STS 304, STS 316
- · C type bourdon tube, helical type bourdon tube
- + Movement
  - · STS 304
- + Option
  - · Bracket
  - · Throttles · Accessories

### Model No. SS-3120 Series

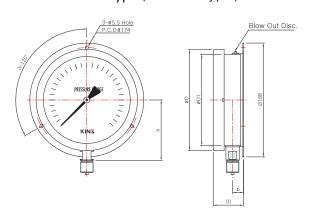
## Model No. SS-3121 (150mm) A-Type (Rimless type)



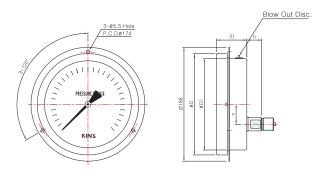
## Model No. | SS-3123 (150mm) D-Type (Flush mounting type)



## Model No. SS-3122 (150mm) B-Type (Surface type)



## Model No. | SS-3124 (150mm) BD-Type (Panel attachment type)



	Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L2	h	ØС	ØН
		NPT & PT, PF 1/4									
	SS-3121 & SS-3122	NPT & PT, PF 3/8	168	152	17	_	(50)	17	(100)	5.5	174
1E0		NPT & PT, PF 1/2									
IOUIIII	150mm	NPT & PT, PF 1/4									
	SS-3123 & SS-3124	NPT & PT, PF 3/8	168	152	_	33	(50)	17	(26)	5.5	174
		NPT & PT, PF 1/2									

<sup>\*( )</sup>The measurement in the blanket is approximate.

### Test Pressure Gauge

### Model No. SS-3122 Series





### SS-3122 200mm

### Safety Management

- Do not give impact during the transportation, installation and usage.
- Be sure to install the pressure gauge to be horizontal and vertical,
- Avoid places where exist a lot of steam, poisonous gas.
- Various laboratories, standard equipment

Purpose of Use

- Various line such as precision pressure measuring line
- General type, correction of other pressure gauges, for inspection, etc.
- Diameter
- · 200 mm
- Accuracy ±0.5% of Full Scale
- ► Scale Range
  - $\cdot$  0.1 MPa  $\sim$  100 MPa (\* 1 MPa = 10.19716 kgf/cm²)

**Production Specification** 

**Summary** 

level (level 1.5, 3.0),

In these days, as the service condition is diverse, the need of measuring high level pressure increases. This gauge is proper for measuring the changes of high levels or for calibrating instrument for general

- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$ · Fluid : - 20  $\sim$  80  $^{\circ}\mathrm{C}$

#### **Product Specification**

- · Aluminum(Hammer tone coating)
- + Cover
  - Aluminum(Hammer tone coating)
- + Connection
  - · STS 316
  - · PF, PT, NPT ↔ 1/2, 3/8
- Tempered safety glass, Laminated safety glass

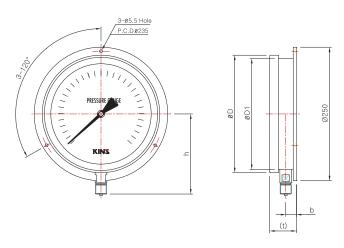
- B-Type (Surface type)
- BD-Type (Panel attachment type)
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White coating
  - · Black (MPa), red (bar) gradations and characters

- · STS 304, STS 316
- · C type bourdon tube, helical type bourdon tube
- + Movement
- STS 304
- + Option
  - · Accessories

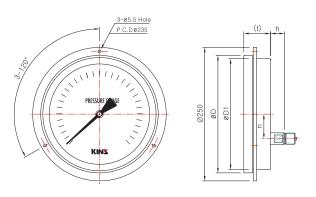
### · Throttles

### Model No. SS-3122 Series

### Model No. | SS-3122 (200mm) B-Type (Surface type)



## Model No. | SS-3124 (200mm) BD-Type (Panel attachment type)



Dillielisio	ons (mm)										
	Model No.	Conn'n (d)	ØD	ØD1	b	n	t	L2	h	ØС	ØН
	00 0100	NPT & PT, PF 3/8	220	200	20		(58)	17	(130)	5.5	235
SS-3122	NPT & PT, PF 1/2	220	208	20	_	(36)	17	(130)	0.0	230	
200mm	NPT & PT, PF 3/8	220	200		33	(58)	17	(26)	EE	225	
	SS-3124	NPT & PT, PF 1/2	220	208	_	33	(38)	17	(26)	5.5	235

<sup>\*( )</sup>The measurement in the blanket is approximate.

### Sanitary Pressure Gauge

### Model No. SS-3131/2 Series





SS-3131 100mm



SS-3132 100mm

#### Summary

This gauge is designed to guarantee the performance and the lifespan of the equipment which measures pressure of fluid which is mixed with powder that has coagulation in chemical industry such as food and various devices and lines for sanitation, etc. It also guarantees the performance and the lifespan when measuring fluid which has high corrosiveness.

#### Safety Management

- Do not give impact during transportation, installation and usage
- Be sure to install the pressure gauge to be horizontal and vertical

#### Purpose of Use

- Food processor, tank
- Fluid with high viscosity, high temperature, high pressure

#### **Production Specification**

- Diameter
- ► Accuracy
- ±1.0% of Full Scale
- Scale Range
  - $\cdot$  SS-3131 : 0.1 MPa  $\sim$  2 MPa, 0  $\sim$  10 MPa
  - $\cdot$  SS-3132 : 15  $\sim$  70 MPa (\*\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - $\cdot$  Static pressure : 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65  $^{\circ}\mathrm{C}$
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

#### **Product Specification**

#### + Case

· STS 304

#### + Cover

STS 304

#### · Slip-on-Fit

+ Under Flange
· STS 304, STS 316

#### + Type

- · 3131(A)-Type (Heatsink type)
- · 3132(A)-Type (I type)

#### + Connection

- · STS 316
- · See the flange standard table(SS-3131)
- · See the product drawing(SS-3132)

#### + Window

· Tempered safety glass, Laminated safety glass

#### + Pointer

- · Aluminum
- · Black coating

#### + Dial

- · Aluminum
- · White coating
- · Black (MPa), red (bar) gradations and characters

#### + Element

- · STS 304, STS 316
- · C type bourdon tube

#### + Movement

· STS 304

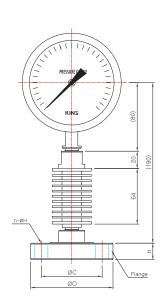
#### + Diaphragm

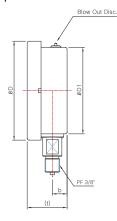
· STS 304, STS 316

## Model No. SS-3131/2 Series

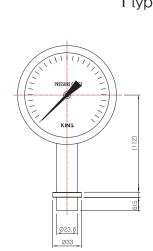
### Model No. | SS-3131 (100mm)

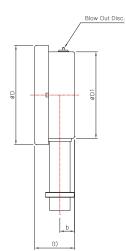
Heatsink type





### Model No. | SS-3132 (100mm) I type





Model No.	ØD	ØD1	b	t	JIS 10kgf/cm²	ØO	ØС	n-ØH	h	ANSI CLASS #150	ØO	ØС	n-ØH	h
					15A	95	70	4-Ø15	22	1/2B	89	60.3	4-Ø16	21.5
					20A	100	75	4-Ø15	24	3/4B	98	69.9	4-Ø16	23.0
SS-3131	11 /	100	17	(46)	25A	125	90	4-Ø19	24	1B	108	79.4	4-Ø16	24.5
55-3131	114	100	17	(46)	32A	135	100	4-Ø19	26	1 1/4B	117	88.9	4-Ø16	26.0
					40A	140	105	4-Ø19	26	1 1/2B	127	98.4	4-Ø16	27.5
					50A	155	120	4-Ø19	26	2B	152	120.6	4-Ø19	29.5

Model No.	ØD	ØD1	b	t
SS-3132	114	100	17	(46)

 $<sup>^{*}(</sup>$  )The measurement in the blanket is approximate.

### Sanitary Pressure Gauge

### Model No. SS-3133/4 Series





SS-3133 100mm



SS-3134 100mm

#### Summary

This gauge is designed to guarantee the performance and the life span of the equipment which measures low temperature in case when measuring fluid which is mixed with powder that has coagulation in pressure measurement in chemical industry or when corrosiveness is very high.

#### Safety Management

- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical,

#### Purpose of Use

- Food processor, tank
- Fluid with high viscosity, temperature, pressure

#### **Production Specification**

- ▶ Diameter · 100 mm
- · 100 mm
- ► Accuracy · ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  SS-3133 : 0.1 MPa  $\sim$  2 MPa, 0  $\sim$  10 MPa
  - $\cdot$  SS-3134 : 0.1  $\sim$  0.3 + 2 MPa, 0  $\sim$  10 MPa (\*\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  80  $^{\circ}\mathrm{C}$
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

#### **Product Specification**

#### + Case

· STS 304

#### + Cover

· STS 304 · Slip-on-Fit

#### + Flange

· STS 304, STS 316

#### + Type

- · 3133(A)-Type (Male screw portable type)
- · 3134(A)-Type (Flange portable type)

#### + Connection

- · STS 316
- · PF ↔ 1 1/4, PF 1 1/2(SS-3133)
- · See the flange standard table(SS-3134)

#### + Window

- Tempered safety glass,
   Laminated safety glass
- + Pointer
  - · Aluminum
  - · Black coating

#### + Dial

- · Aluminum
- · White coating
- · Black (MPa), red (bar) gradations and characters

#### + Element

- · STS 304, STS 316
- · C type bourdon tube

#### + Movement

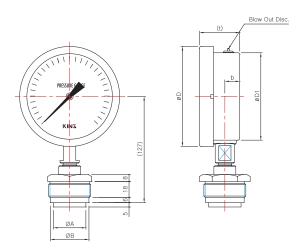
· STS 304

#### + Diaphragm

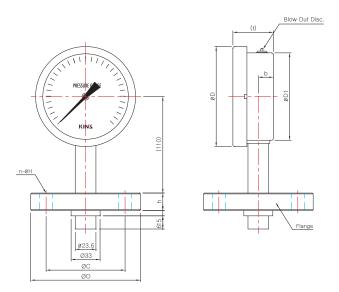
· STS 304, STS 316

## Model No. SS-3133/4 Series

## Model No. | SS-3133 (100mm) Male screw portable type



### Model No. | SS-3134 (100mm) Flange portable type



Model No.	Conn'n (d)	ØD	ØD1	b	t	h	ØΑ	ØВ	L	М
SS-3133	PF 1 1/4	114	100	17	(46)	(107)	22	38.7	46	(53.1)
33-3133	PF 1 1/2	114	100	17	(40)	(121)	33	44.2	50	(57.7)

Model No.	ØD	ØD1	b	t	JIS 10kgf/cm²	ØO	ØС	n-ØH	h	ANSI CLASS #150	ØO	ØС	n-ØH	h
					15A	95	70	4-Ø15	22	1/2B	89	60,3	4-Ø16	21.5
					20A	100	75	4-Ø15	24	3/4B	98	69.9	4-Ø16	23.0
SS-3134	114	100	15	(46)	25A	125	90	4-Ø19	24	1B	108	79.4	4-Ø16	24.5
55-3154	114	100	13	(46)	32A	135	100	4-Ø19	26	1 1/4B	117	88.9	4-Ø16	26.0
					40A	140	105	4-Ø19	26	1 1/2B	127	98.4	4-Ø16	27.5
					50A	155	120	4-Ø19	26	2B	152	120.6	4-Ø19	29.5

<sup>\*( )</sup>The measurement in the blanket is approximate.

### Sanitary Pressure Gauge

### Model No. SS-3135/6 Series





SS-3135 100mm



SS-3136 100mm

#### Summary

This gauge is designed to guarantee the performance and the lifespan of the equipment which measures pressure of fluid which is mixed with powder that has coagulation in chemical industry such as food and various devices and lines for sanitation, etc. It also guarantees the performance and the lifespan when measuring fluid which has high corrosiveness.

#### Safety Management

- Do not give impact during transportation, installation and usage
- Be sure to install the pressure gauge to be vertical and horizontal

#### Purpose of Use

- Food processor, tank
- Fluid with high viscosity, temperature, pressure

#### **Production Specification**

- Diameter
- ► Accuracy
  - · ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  SS-3135 : 0.1 + 0.2 MPa  $\sim$  2 MPa, 0  $\sim$  10 MPa
  - $\cdot$  SS-3136 : 15  $\sim$  70 MPa (\*\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  80  $^{\circ}\mathrm{C}$
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

#### **Product Specification**

#### + Case

· STS 304

#### + Cover

- · STS 304
- · Slip-on-Fit

#### + Type

- · 3135(A)-Type (Female screw type)
- $\cdot$  3136(A)-Type (Jig type)

#### + Connection

- · STS 316
- · IDF & DIN 1 1/2S, 2S, 2 1/2S, 3S
- : Female(SS-3135)
- · See the drawing of product(SS-3136)

#### + Window

· Tempered safety glass, Laminated safety glass

#### + Pointer

- · Aluminum
- · Black coating

#### + Dial

- · Aluminum
- · White coating
- · Black (MPa), red (bar) gradations and characters

#### + Element

- · STS 304, STS 316
- · C type bourdon tube

#### + Movement

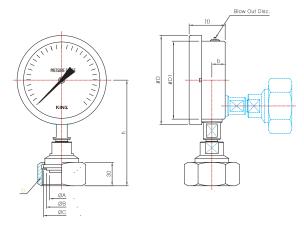
· STS 304

#### + Diaphragm

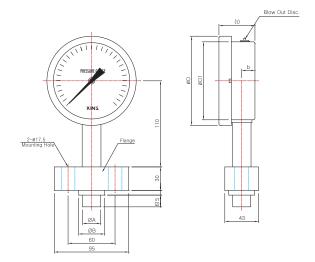
· STS 304, STS 316

## Model No. SS-3135/6 Series

### Model No. | SS-3135 (100mm) Female screw type



### Model No. | SS-3136 (100mm) Jig type



Model No.	Conn'n (d)	ØD	ØD1	b	t	h	ØΑ	ØВ	ØС	L	М
	1 1/2 S						35	43	47	61	(70.4)
SS-3135	2 S	114	100	17	(46)	(127)	47	56	60	76	(87.7)
30-3100	2 1/2 S	114	100	17	(40)	(121)	58	69.7	74	91	(105)
	3 S						70	82.6	87.5	106.5	(122.9)

Model No.	ØD	ØD1	b	t	ØA	ØB
SS-3136	114	100	17	(46)		

 $<sup>^{\</sup>ast}\!($  )The measurement in the blanket is approximate.

### Sanitary Pressure Gauge

### Model No. SS-3137/8 Series





SS-3137 100mm



SS-3138 100mm

#### Summary

This gauge is designed to guarantee the performance and the lifespan of the equipment which measures pressure of fluid which is mixed with powder that has coagulation in chemical industry such as food and various devices and lines for sanitation, etc. It also guarantees the performance and the lifespan when measuring fluid which has high corrosiveness,

#### Safety Management

- Do not give impact during transportation, installation and usage
- Be sure to install the pressure gauge to be vertical and horizontal

#### Purpose of Use

- Food processor, tank
- Fluid with high viscosity, temperature, pressure

#### **Production Specification**

- Diameter · 100 mm
- Accuracy
  - $\pm 1.0\%$  of Full Scale
- ▶ Scale Range
  - $\cdot$  SS-3137 : 0.1  $\sim$  0.3 MPa + 2 MPa, 0  $\sim$  3.5 MPa
  - $\cdot$  SS-3138 : 0.1  $\sim$  2 MPa, 0  $\sim$  10 MPa ( \* 1 MPa = 10.19716 kgf/cm<sup>2</sup> )
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
- · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  80  $^{\circ}\mathrm{C}$
  - · Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

- + Case
  - · STS 304
- + Cover
  - STS 304
- Slip-on-Fit
- - 3137(A)-Type (Clamp type)
  - 3138(A)-Type (Male screw stationary type)
- + Connection
  - STS 316
  - · Clamp: 1 S, 1 1/2S, 2S, 2 1/2S, 3S, 4S (SS-3137)
  - · IDF & DIN 1 1/2S, 2S, 2 1/2S, 3S: Male(SS-3138)

- - · Tempered safety glass, Laminated safety glass
- + Pointer
  - Aluminum
  - · Black coating
- + Dial
  - Aluminum

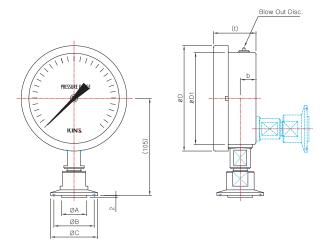
  - Black (MPa), red (bar) gradations and characters
- + Element
- - · C type bourdon tube

- Movement STS 304
- + Diaphragm
- STS 304, STS 316

- STS 304, STS 316

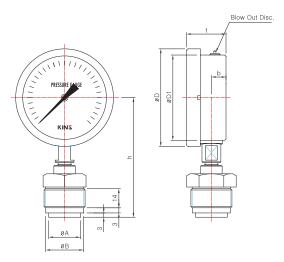
## Model No. SS-3137/8 Series

### Model No. | SS-3137 (100mm) Clamp type



### Model No. | SS-3138 (100mm)

Male screw stationary type





Model No.	Conn'n (d)	ØD	ØD1	b	t	h	ØA	ØВ	ØС
	1 S						33	43.5	50.5
	1 1/2 S						33	43.5	50.5
SS-3137	2 S	114	100	17	(46)	(105)	47	46.5	64
33-3137	2 1/2 S	114	100	17	(40)	(103)	58	70.5	78
	3 S						70	83.5	91
	4 S						98	110	119

Model No.	Conn'n (d)	ØD	ØD1	b	t	h	ØΑ	ØВ
	1 1/2 S						33	43
SS-3138	2 S	114	100	17	(46)	(105)	47	56
33–3130	2 1/2 S	114	100	17	(40)	(103)	58	69.7
	3 S						70	82.6

<sup>\*( )</sup>The measurement in the blanket is approximate.

### Sanitary Pressure Gauge

### Model No. SS-3139 Series





### SS-3139 100mm

### **Summary**

This gauge is designed to guarantee the performance and the lifespan of the equipment which measures pressure of fluid which is mixed with powder that has coagulation in chemical industry such as food and various devices and lines for sanitation, etc. It also guarantees the performance and the lifespan when measuring fluid which has high corrosiveness.

#### Safety Management

- Do not give impact during transportation, installation and usage
- Be sure to install the pressure gauge to be vertical and horizontal

#### Purpose of Use

- Food processor, tank
- Fluid with high viscosity, temperature, pressure

#### **Production Specification**

- Diameter · 100 mm
- Accuracy
  - $\pm 1.0\%$  of Full Scale
- ▶ Scale Range
  - $\cdot$  0.1  $\sim$  0.3 MPa + 2 MPa, 0  $\sim$  10 MPa (\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - Ambient : 20 ~ 80 °C
  - · Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$

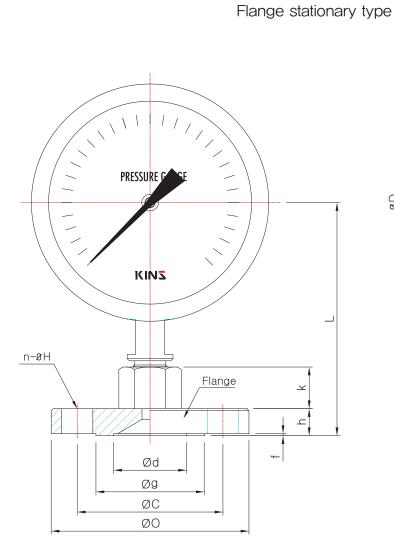
- + Case
  - · STS 304
- + Cover
  - STS 304
  - · Slip-on-Fit
- - · 3139(A)-Type (Flange stationary type)
- + Connection
  - · STS 316
  - · See flange standard table

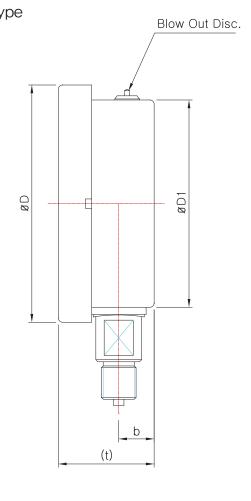
- Tempered safety glass, Laminated safety glass
- + Pointer
  - · Aluminum
  - Black coating
- Dial
  - · Aluminum
  - · White coating
  - · Black (MPa), red (bar) gradations and characters

- · STS 304, STS 316
- · C type bourdon tube
- + Movement
- STS 304
- + Diaphragm
  - · Able to produce titanium, tantalum, hastelloy, etc.

### Model No. SS-3139 Series

### Model No. | SS-3139 (100mm)





Model No.	αD	ØD1	h		IIC 101cot /or2/True o			Flar	nge			Diaph	ragm	le.	
Model No.	ØD	וטש	b	(	JIS 10kgf/cm²(Type)	0	С	g	f	h	n-ØH	Diame	ter Ød	k	L
					10A	90	65	48	1	12	4-15	3	5	20	106
					15A	95	70	52	1	12	4-15	3	5	20	106
					20A	100	75	58	1	14	4-15	35	47	20	108
					25A	125	90	70	1	14	4-19	35	47	50	138
SS-3139	114	100	17	(46)	32A	135	100	80	2	16	4-19	35	47	50	140
00-0109	114	100	17	(40)	40A	140	105	85	2	16	4-19	35	47	50	140
					50A	155	120	100	2	16	4-19	4	.7	50	140
					65A	175	140	120	2	18	4-19	5	8	50	142
					80A	185	150	130	2	18	4-19	7	0	50	142
					100A	210	175	155	2	18	8–19	10	00	50	142

 $<sup>\</sup>ensuremath{^{*}\!(}$  )The measurement in the blanket is approximate.

## Differential Pressure Gauge (with Contact)

### Model No. SS-3301 Series





SS-3301

#### [The utility model registration] 20-0435022

#### Purpose of Use

- orotecting device Measure the influx of pipe line using orifice as a differential pressure type flow meter
  - Measure sealed tank's liquid level as a differential pressure liquid level motor.
  - Application line of potential difference of pressure, etc

#### Summary

This gauge has L (low pressure side) and H (high pressure side) in pressure access port. By indicating the differential of pressure (differential pressure) of 2 places', it is able to measure the differential pressure and by using that, able to measure liquid level and flux too.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage,
- Be sure to install pressure gauge to be horizontal and vertical.
  - Caution: If internal pressure on only one side of accessing port is put, it might get damage,
  - Must use 3-WAY VALVE

#### **Production Specification**

- Diameter
  - · 100, 150mm
- Accuracy
  - $\cdot$  ±1.5% of Full Scale
- Scale Range
  - $\cdot$  5  $\sim$  50 kPa, 0  $\sim$  1 MPa
- Working Pressure
  - $\cdot$  Static pressure : 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ► Working Temperature
  - · Ambient : 20  $\sim$  80 °C
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$
- ▶ Degree of Protection
  - · IP65

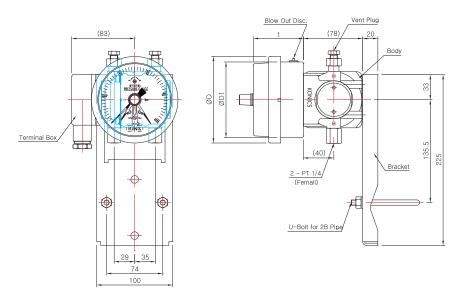
- + Case
  · STS 304
- + Cover
  · STS 304
- + Connection
  · STS 316
  - · PT ↔ 1/4(Female)
- + Window
- · Poly-carbonate

- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - · Aluminum
  - · White coating
  - · Black (MPa), red (bar) gradations and characters
- + Bellows(Element)
  - · STS304, STS316
- + Movement
  · STS 304

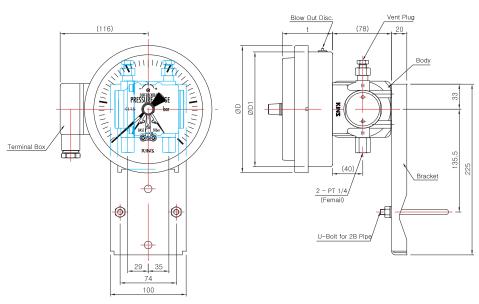
- + Connecting method
  - · U-Bolt for 2B Pipe
- + Base Pressure
  - · 5 MPa
- + Contact rating
  - · AC 125V 0.5A / 250V 0.25A
- · DC 24V 0.25A
- + Option
- · 3-Way or 5-Way Manifold valve
- · Accessories

### Model No. SS-3301 Series

### Model No. | SS-3301 (100mm) Bracket For 2B Pipe Type



### Model No. | SS-3301 (150mm) Bracket For 2B Pipe Type



Difficultions (film)									
Model No.	Con'n (d)	ØD	ØD1	t					
SS-3301-100	DT 1/4 (Famail)	114	100	(66)					
SS-3301-150	PT 1/4 (Femail)	168	152	(66)					

<sup>\*( )</sup>The measurement in the blanket is approximate.

### **Differential Pressure Gauge**

### Model No. SS-3302 Series





SS-3302

#### [The utility model registration] 20-0435022

## Purpose of Use

- Measure the influx of pipe line using orifice as a differential pressure type flow meter
- Measure sealed tank's liquid level as a differential pressure liquid level meter.
- Application line of potential difference of pressure, etc

#### Summary

This gauge has L (low pressure side) and H (high pressure side) in pressure access port. By indicating the differential of pressure (differential pressure) of 2 places, it is able to measure the differential pressure and by using that, it is able to measure liquid level and flux too.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.
  - Caution: If internal pressure on only one side of accessing port is put, it might get damage,
    - Must use 3-WAY VALVE

#### **Production Specification**

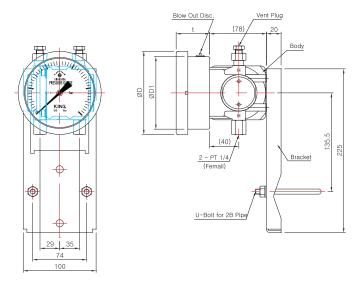
- Diameter
  - · 100, 150mm
- Accuracy
  - $\cdot$   $\pm 1.5\%$  of Full Scale
- ► Scale Range
  - $\cdot$  5  $\sim$  50 kPa, 0  $\sim$  1 MPa
- Working Pressure
  - $\cdot$  Static pressure : 75% of Full Scale
  - · Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65 °C
  - $\cdot$  Fluid : 20  $\sim$  80  $^{\circ}\mathrm{C}$
- ► Degree of Protection
  - · IP65

- + Case
  - · STS 304
- + Cover
  · STS 304
- + Connection
  - · STS 316
  - $\cdot$  PT  $\leftrightarrow$  1/4(Female)
- + Window
- Tempered safety glass,
   Laminated safety glass

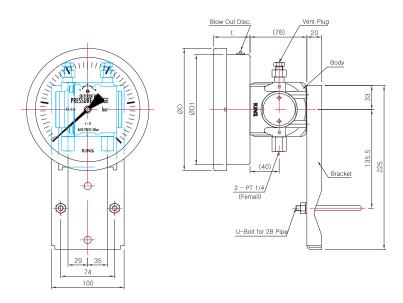
- + Pointer
  - · Aluminum
  - · Black coating
- + Dial
  - $\cdot \; \text{Aluminum}$
  - · White coating · Black (MPa), red (bar) gradations and characters
- + Bellows(Element)
  - · STS304, STS316

- + Movement
  · STS 304
- + Connecting method
  - · U-Bolt for 2B Pipe
- + Base Pressure
  · 5 MPa
- + Option
  - · 3-Way or 5-Way Manifold Valve
  - · Accessories

### Model No. | SS-3302 (100mm) Bracket For 2B Pipe Type



### Model No. | SS-3302 (150mm) Bracket For 2B Pipe Type



Differisions (film)								
Model No. Con'n (d)		ØD	ØD1	t				
SS-3302-100	DT 1/4 (Famail)	114	100	(46)				
SS-3302-150	PT 1/4 (Femail)	168	152	(50)				

<sup>\*( )</sup>The measurement in the blanket is approximate.

## Differential Pressure Gauge (with Micro Switch)

### Model No. KDG-17 Series





#### **KDG-17**

### Summary

This gauge has a pressure inlet port, The pressure inlet port measures the differential pressure between low pressure side and high pressure side. It also measures warning liquid level of a tank, etc. It is proper in measuring high pressure and corrosive fluid.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.
- Do not use it over than the limitation of switch capacity.

#### Purpose of Use

- Indicating, warning, controlling of tank
- Influx indicating, warning, controlling which applied the pressure differential of orifice line.
- Indicating, warning and controlling of differential pressure of both end sides'

#### **Production Specification**

- Diameter
  - · 150mm
- Accuracy
  - $\cdot$  Grade :  $\pm 1.5\%$  of Full Scale
  - · Repeatability: ±1.0% of Adj Range
  - · Dead Band :  $\pm 4.0\%$
- ► Scale Range
  - $\cdot$  5  $\sim$  50 kPa, 0  $\sim$  1 MPa
  - · (\* 1 MPa = 10.19716 kgf/cm²)
- ► Base Press
  - · 5 MPa
- ► Working Pressure
  - · Static pressure: 75% of Full Scale · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65°C · Fluid :  $-20 \sim 80 ^{\circ}\mathrm{C}$

- · Aluminum(Hammer tone coating)
- + Case Structure
  - Weather Proof
- + Cover
  - · Aluminum (Hammer tone coating) · Body: STS 304, STS 316
- + Connection
  - STS 316
  - · PT ↔ 1/4(Female)
- + Window
  - Tempered safety glass, Laminated safety glass

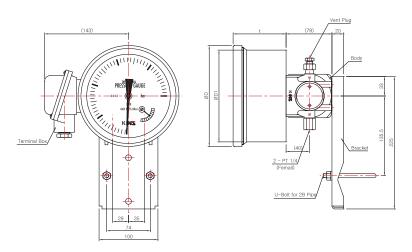
- + Pointer
  - Aluminum
  - Black coating
- + Dial
  - Aluminum
  - · White coating
  - · Black gradation and characters
- + Contact rating

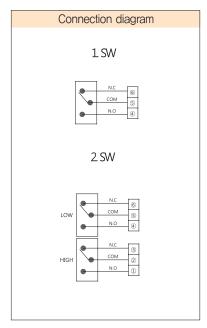
  - · AC 125V 5A / 250V 3A · DC 30V 4A / 125V 0,4A / 250V 0,2A
- + Bellows(Element)
- STS 316

- + Movement STS 304
- + Contact Form · Micro Contact Type
  - · SPDT \* 1, SPDT \* 2 (High, Low, High & High
  - High & Low, Low & Low)
- + Option
  - · 3-Way or 5-Way Manifold Valve
  - · Accessories

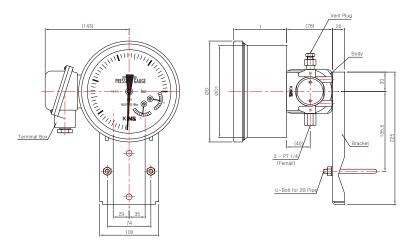
### Model No. KDG-17 Series

### Model No. | KDG- 17 (1P) Bracket For 2B Pipe Type





### Model No. | KDG- 17 (2P) Bracket For 2B Pipe Type



Model No.	Con'n (d)	ØD	ØD1	t
KDG-17 (1P)	PT 1/4 (Femail)	172	156	(90)
KDG-17 (2P)	FT 1/4 (Femall)	112	100	(117)

<sup>\*( )</sup>The measurement in the blanket is approximate.

### **Differential Pressure Gauge**

### Model No. MAGNETIC 2000 Series





### **MAGNETIC 2000**

[The Patent] 0291603

#### **Summary**

This gauge has L (low pressure side) and H (high pressure side) in pressure access port. By indicating the differential of pressure (differential pressure) of 2 places, it is able to measure the differential pressure and by using that, able to measure liquid level and flux too.

\*\*Able to check whether the filter has blocked.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Measuring differential pressure of air filter
- Application line for differential pressure

#### **Production Specification**

- Diameter
  - · 100mm
- Accuracy
  - $\cdot$   $\pm 2.0\%$  of Full Scale
- ▶ Scale Range
  - $\cdot$  -0.25 $\sim$ 0.25kPa  $\sim$  -10 $\sim$ 10kPa, 0 $\sim$ 50kPa (\*\* 1 kPa = 101.9716 mmH₂0)
- ► Working Pressure
  - · Static pressure: 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ► Working Temperature
- · Ambient : 10  $\sim$  60  $^{\circ}\mathrm{C}$

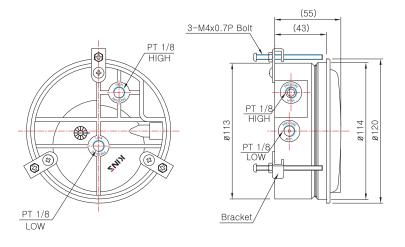
- + Case
- · Aluminum(Hammer tone coating)
- + Cover
  - · Aluminum(Hammer tone coating)
- + Connection
  - · PT ↔ 1/8(Female)
- + Type
  - · BD-Type (Panel attachment type-Bracket)

- + Window
  - · Poly Carbonate
- + Pointer
  - $\cdot \text{ Aluminum}$
  - · Pointer : Red color
- + Dial
  - · Aluminum
  - · White coating
  - · Black gradation and characters

- + Element
  - · Silicon Rubber, NBR
- + Base Pressure
- · 0.1 MPa

## Model No. MAGNETIC 2000 Series

Model No. | M - 2000 Bracket Type





# Differential Pressure Gauge (with Switch)

### Model No. MAGNETIC 2010 Series





#### **MAGNETIC 2010**

## **Summary**

This gauge has a structure like MAGNETIC 2000 MODEL with contact signal. Therefore, it produces a warning signal by sending it to buzzer, bell, polot-lamp

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.
- Do not use it over than the limitation of switch capacity.

#### Purpose of Use

- Indicating, warning and controlling of differential pressure of air filter line such as dust collector, etc.
- Indicating, warning and controlling of differential pressure of differential pressure application line.
- Indicating, warning and controlling of extremely low pressure, vacuum and compound pressure line,

#### **Production Specification**

- Diameter
  - · 100mm
- Accuracy
  - ±2.0% of Full Scale
- ► Scale Range
  - $-0.25\sim$ 0.25kPa  $\sim$   $-10\sim$ 10kPa, 0 $\sim$ 50kPa (\* 1 kPa = 101.9716 mmH<sub>2</sub>O)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
- · Ambient : 10  $\sim$  60  $^{\circ}\mathrm{C}$

- - · Aluminum(Hammer tone coating)
- + Cover
  - Aluminum(Hammer tone coating)
- + Connection
  - · PT ↔ 1/8(Female)
- + Type
  - BD-Type (Panel attachment type-Bracket)

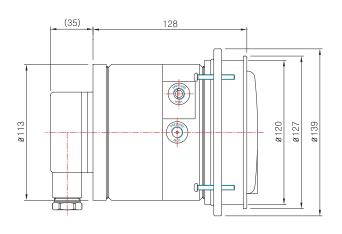
- + Window
- Poly Carbonate
- + Pointer
  - · Aluminum
  - · Pointer: Red color, Green color
- + Dial
  - · Aluminum
  - · White coating
  - · Black gradation and characters

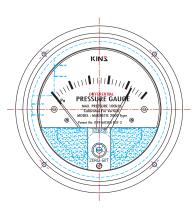
- + Element
  - · Silicon Rubber, NBR
- + Base Pressure
  - 0.1 MPa
- + Switch
  - · Type: 2-SPDT (2 contact)
  - · Capacity of switch: 220V AC 10A
  - · Set up method : exterior
  - · Dead band: below 4 % of the total range

# Differential Pressure Gauge (with Switch)

### Model No. MAGNETIC 2010 Series

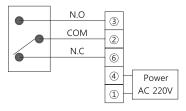
### Model No. | M- 2010 Bracket Type

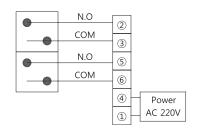




#### Connection diagram

1-Point





2-Point

### **Differential Pressure Gauge**

### Model No. MAGNETIC 3000 Series





### **MAGNETIC 3000**

#### Summary

This gauge has L (low pressure side) and H (high pressure side) in pressure access port. By indicating the differential of pressure (differential pressure) of 2 places, it is able to measure the differential pressure and by using that, able to measure liquid level and flux too.

\*\*Able to check whether the filter has blocked.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Measuring of differential pressure of air filter
- Application line for differential pressure
- Gas filter, filter line

#### **Production Specification**

- Diameter
  - · 50mm, 80mm, 100mm
- Accuracy

±2.0% of Full Scale

- ► Scale Range
  - · 50kPa ~ 400kPa (\* 1 kPa = 0.01 bar)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 10  $\sim$  60 °C

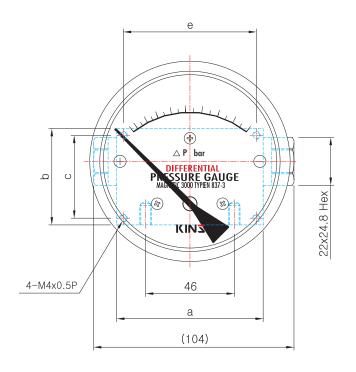
- + Case
  - · STS 304
- + Cover
  · Rubber
- + Connection
  - · Aluminum
  - · PT ↔ 1/4 (2×Female)

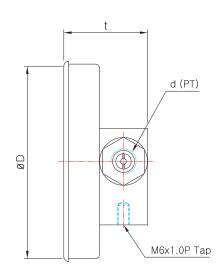
- + Window
- · General glass
- + Pointer
  - $\cdot \; \text{Aluminum}$
  - · Pointer : Black color
- + Dial
  - · Aluminum
  - · White coating
  - · Black, red gradations and characters

- + Base Pressure
  - · Aluminum : 2MPa

### Model No. MAGNETIC 3000 Series

### Model No. | M-3000 Direct Type





Dimonorono (mm)								
	Model No.	Conn'n (d)	ØD	а	b	С	е	t
	M-3000-50		51					
	M-3000-80	PT 1/4	80	76	50	43	69	(43)
	M-3000-100		101					

<sup>\*( )</sup>The measurement in the blanket is approximate.

# Differential Pressure Gauge (with Electric Contact)

### Model No. MAGNETIC 3010 Series





### **MAGNETIC 3010**

#### **Summary**

This gauge has L (low pressure side) and H (high pressure side) in pressure access port. By indicating the differential of pressure (differential pressure) of 2 places, it is able to measure the differential pressure and by using that, able to measure liquid level and flux too.

\*\*Able to check whether the filter has blocked.

#### Safety Management

- -Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- -Do not give impact during the transportation, installation and usage.
- -Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Measuring of differential pressure of air filter
- Application line for differential pressure
- Gas filter, filter line

#### **Production Specification**

- Diameter
  - · 50mm, 80mm, 100mm
- Accuracy
  - $\cdot$  ±2.0% of Full Scale
- ► Scale Range
  - $\cdot$  50kPa  $\sim$  400kPa (\*\* 1 kPa = 0.01 bar)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - $\cdot$  Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 10  $\sim$  60 °C

#### **Product Specification**

- + Case
  - · STS 304

Rubber

- + Cover
- + Connection
  - $\cdot \text{ Aluminum}$
  - · PT ↔ 1/4 (2×Female)
- + Window
- · General glass

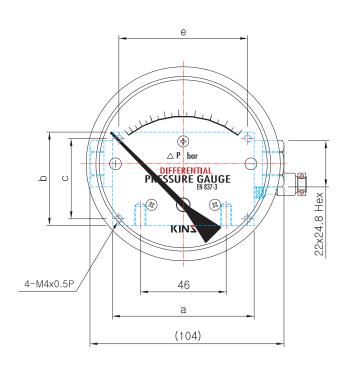
- + Pointer
- · Aluminum
- · Pointer : Black color
- + Dial
  - · Aluminum
  - · White coating
  - $\cdot$  Black, red gradations and characters
- + Element
  - · Viton

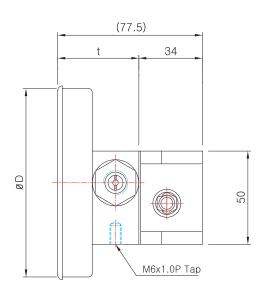
- + Base Pressure
  - · Aluminum : 2MPa
- + Contact Form
  - · SPST \* 1
  - · High (High 1 contact), Low (Low 1 contact)

# Differential Pressure Gauge (with Electric Contact)

### Model No. MAGNETIC 3010 Series

### Model No. | M-3010 Direct Type

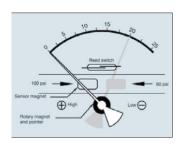




#### Dimensions (mm)

Model No.	Conn'n (d)	ØD	а	b	С	е	t
M-3010-50		51					
M-3010-80	PT 1/4	80	76	50	43	69	(43)
M-3010-100		101					

<sup>\*( )</sup>The measurement in the blanket is approximate.

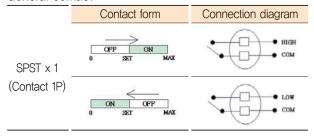


Switch: Reed switches are located adjacent to the pressure chamber and are activated by the magnetic field.

Mount the instrument at least 50 mm away from ferro magnetic surfaces, else calibration may be shifted.

Sandard instruments are not suitable for oxygen service.

#### General contact



# Explosion-Protected Pressure Indicating Switch

### Model No. KCD-21 Series





#### KCD-21

#### [Explosion-protected of protection] Ex d IIC T4

#### Safety Management

- Do not give impact during transportation, installation and usage.
- Be sure to install the equipment to be horizontal and vertical,
- Do not use it over the capacity of the switch (the standard is under AC 220V 15A)

#### Purpose of Use

- Indicating, warning, controlling of pipe pressure in explosion district
- Indicating, warning, controlling of LNG, LPG plant's pressure
- Indicating, warning, controlling of chemical industry plant which has the possibility of explosion.

#### Summary

This gauge is an internal explosion-proof type of pressure switch for prevention of explosion of plants, etc. The advantage is that it is easy to set the contact from outside as a switch,

#### **Production Specification**

#### Accuracy

· Grade: ±1.5% of Full Scale · Repeatability: ±1.0% of Adj Range

· Dead Band: ±4.0%

#### ► Scale Range

 $\cdot$  -0.1  $\sim$  2MPa, 0  $\sim$  35MPa · (\* 1 MPa = 10.19716 kgf/cm²)

#### ▶ Working Pressure

Static pressure: 75% of Full Scale · Fluctuating pressure: 60% of Full Scale

#### ▶ Working Temperature

· Ambient :  $-20\sim65^{\circ}\mathrm{C}$ · Fluid : - 20  $\sim$  80°C

#### ► Explosion—Protected of Protection

Ex d IIC T4

#### **Product Specification**

· Aluminum(Hammer tone coating)

#### + Cover

Aluminum(Hammer tone coating)

#### + Connection

- · STS 316
- PF, PT, NPT ↔ 1/2

Tempered safety glass

#### + Contact rating

- · AC 125V, 250V 15A
- · DC 30V 2A / 125V 0.4A / 250V 0.2A

#### + Pointer

- · Aluminum
- · Pointer black coating
- · High Pointer: Red color Low Pointer: Black color

### + Bourdon tube(Element)

STS 304. STS 316

#### + Movement

STS 304

#### + Contact Form

SPDT \* 1, SPDT \* 2 (High, Low, High & High High & Low, Low & Low)

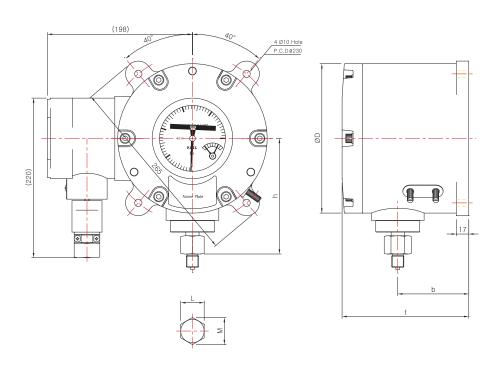
#### + Option

- · Diaphragm Seal
- · Cable Gland
- · Accessories

# Explosion-Protected Pressure Indicating Switch

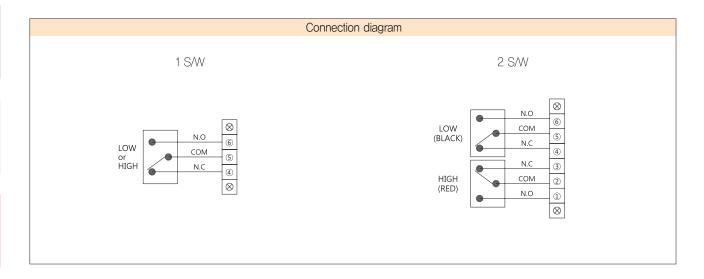
### Model No. KCD-21 Series

### Model No. | KCD-21



Model No.	Conn'n (d)	ØD	b	t	L	М	h
KCD-21	NPT & PT, PF 1/2	204	97	(170)	32	(36.9)	(156)

<sup>\*( )</sup>The measurement in the blanket is approximate.



# chap legista

# Explosion-Protected Pressure Gauge with Contact(Small Type)

# Model No. KCD-22 Series





KCD-22

## [Explosion-protected of protection] Ex d IIC T4

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Indicating and warning of piping pressure in explosion district.
- Indicating and warning of the pressure at LNG, LPG plant
- Indicating and warning of chemical industry plant which has the possibility of explosion.

#### **Summary**

This gauge is to prevent explosion disaster of plants, etc. It is an internal explosion—proof type of pressure switch. In places where combustible gas or liquid exist at petro chemistry, chemical fiber factory, be sure to use a pressure gauge which is internal explosion—proof type as an electric device.

#### **Production Specification**

- Diameter
- · 100 mm
- ► Accuracy • ±1.0% of Full Scale
- ► Scale Range
  - $\cdot$  0.1  $\sim$  2 MPa, 0  $\sim$  35 MPa, 5  $\sim$  50 kPa (\*\* 1 MPa = 10.19716 kgf/cm²)
  - Others also can be made up
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - $\cdot$  Ambient : 20  $\sim$  65°C
  - $\cdot$  Fluid : 20  $\sim$  80°C
- ► Explosion—Protected of Protection
  - · Ex d IIC T4

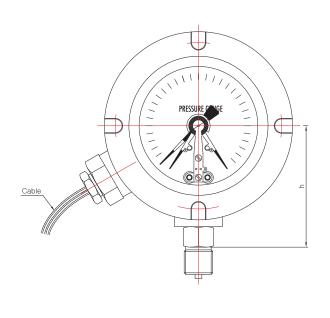
- + Case
- · Aluminum(Hammer tone coating)
- + Cover
  - Aluminum(Hammer tone coating)
- + Connection
  - · STS 316
  - · PF, PT, NPT ↔ 1/2, 3/8
- + Window
- · Tempered safety glass

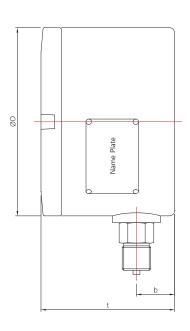
- + Contact rating
  - · AC 125V 0.5A / 250V 0.25A
  - · DC 24C 0,25A
- + Pointer
  - $\cdot \text{ Aluminum}$
  - · Pointer black coating
  - · High Pointer: Red color Low Pointer: Green color
- + Dial
  - · Aluminum
  - · White coating
  - · Black gradation and characters

- + Bellows & Bourton tube (Element)
  - · STS304, STS316
- + Movement
  - · STS 304
- + Contact Form
  - · SPDT \* 1, SPDT \* 2
  - (High, Low, High & High High & Low, Low & Low)
- + Option
  - · Throttles
  - · Accessories

Model No. KCD-22 Series

# Model No. | KCD-22 A-Type (Rimless type)

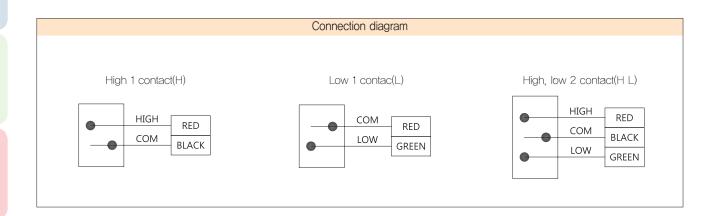






Model No.	Conn'n (d)	ØD	b	t	L	М	h
KCD-22	NPT & PT, PF 3/8	120	30	(100)	22	(25.4)	(98)
NCD-22	NPT & PT, PF 1/2	138	30		22		

<sup>\*( )</sup>The measurement in the blanket is approximate.



# Explosion-Protected Pressure Gauge with Contact(Small Type)

# Model No. KCD-23 Series





## KCD-23

## [Explosion-protected of protection] Ex d IIC T4

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.

#### Purpose of Use

- Indicating and warning of piping pressure in explosion district.
- Indicating and warning of the pressure at LNG, LPG plant
- Indicating and warning of chemical industry plant which has the possibility of explosion.

#### Summary

This gauge is to prevent explosion disaster of plants, etc. It is an internal explosion—proof type of pressure switch. In places where combustible gas or liquid exist at petrochemistry or chemical fiber factory, be sure to use a pressure gauge which is an internal explotion—proof type as an electric device.

#### **Production Specification**

- ▶ Diameter · 100 mm
- Accuracy
- · ±1.0% of Full Scale
- Scale Range
  - $\cdot$  0.1  $\sim$  2 MPa, 0  $\sim$  35 MPa, 5  $\sim$  50 kPa MPa (\*\* 1 MPa = 10.19716 kgf/cm²)
  - · Others also can be made up
- ▶ Working Pressure
  - $\cdot$  Static pressure : 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20 \sim 65^{\circ}\mathrm{C}$
  - $\cdot$  Fluid : 20  $\sim$  80°C
- ► Explosion—Protected of Protection
  - · Ex d IIC T4

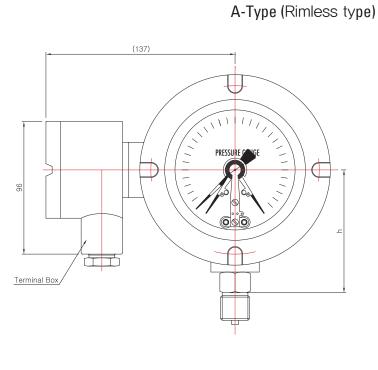
- + Case
  - · Aluminum(Hammer tone coating)
- + Cover
  - · Aluminum(Hammer tone coating)
- + Connection
  - · STS 316
  - · PF, PT, NPT ↔ 1/2, 3/8
- + Window
- · Tempered safety glass,

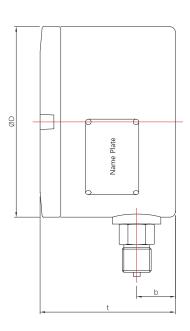
- + Contact rating
  - · AC 125V 0.5A / 250V 0.25A
  - · DC 24C 0,25A
- + Pointer
  - · Aluminum
  - · Pointer black coating
  - · High Pointer: Red color Low Pointer: Green color
- + Dial
  - · Aluminum
  - · White coating
  - · Black gradation and characters

- + Bellows & Bourton tube (Element)
  - · STS304, STS316
- + Movement
- · STS 304
- + Contact Form
  - · SPDT \* 1, SPDT \* 2 (High, Low, High & High High & Low, Low & Low)
- + Option
  - · Throttles
  - · Accessories

Model No. KCD-23 Series

# Model No. | KCD-23

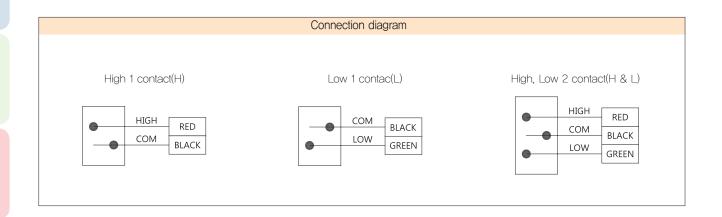






Model No.	Conn'n (d)	ØD	b	t	L	М	h
1400 00	NPT & PT, PF 3/8	100	30	(100)	22	(25.4)	(90)
KCD-23	NPT & PT, PF 1/2	138					

<sup>\*( )</sup>The measurement in the blanket is approximate.



# **Explosion-Protected Pressure Switch**

# Model No. KCD-30 Series





**KCD-30** 

## [Explosion-protected of protection] Ex d IIC T4

#### Safety Management

- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical,
- Do not use it over the capacity of the switch (the standard is under AC 220V 15A)

#### Purpose of Use

- Indicating and warning of piping pressure in explosion district.
- Indicating and warning of the pressure at LNG, LPG plant
- Indicating and warning of chemical industry plant which has the possibility of explosion.

#### Summary

This gauge is a diaphragm type and applied to the change of processing line. The micro switch located inside the gauge works according to various fluid and pressure of atmosphere.

#### **Production Specification**

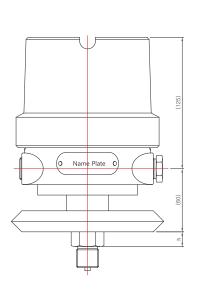
- ▶ Pointer Type
  - · No indication
- Accuracy
  - · Repeatability: ±1.0% of Adj Range
  - · Dead Band: ±4.0%
- ► Scale Range
  - $\cdot$  0.5kPa  $\sim$  50kPa ( $\times$  1 kPa = 101.9716 mm H<sub>2</sub>O)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20 \sim 65^\circ\mathrm{C}$
  - · Fluid : 20  $\sim$  80°C
- ► Explosion—Protected of Protection
  - · Ex d IIC T4

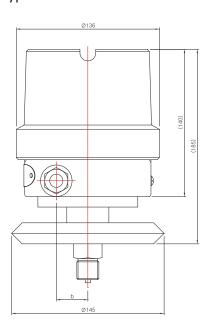
- + Case
- · Aluminum(Hammer tone coating)
- + Cover
  - · Aluminum(Hammer tone coating)
- + Connection
  - $\cdot$  STS 316, Other special material
  - · PF, PT, NPT ↔ 1/2, 3/8

- + Cable Gland
  - · 2-PF 1/2(Standard)
- + Contact rating
  - · AC 125V, 250V 15A
  - · DC 30V 2A / 125V 0.4A / 250V 0.2A
- + Contact Form
  - · Micro Contact Type
  - · SPDT \* 1, SPDT \* 2, DPDT \* 1
  - (High, Low, High & High High & Low, Low & Low)

- + Wetted part material
  - · Hastelloy, Titanium, Tantalum etc.
  - · Rubber
- + Option
  - · In case of diaphragm seal slurry
  - · 2B Pipe Stanchion
  - Accessories

# Model No. | KCD-30 Direct Type

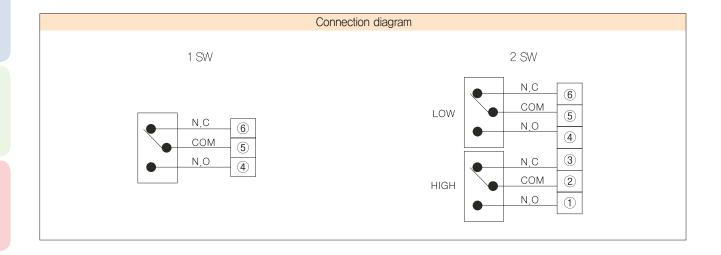






Model No.	Conn'n (d)	b	L	М	h
1/07, 20	NPT & PT, PF 3/8	20	07	(311)	(14)
KCD-30	NPT & PT, PF 1/2	30	21		(14)

<sup>\*( )</sup>The measurement in the blanket is approximate.



# Explosion-Protected Differential Pressure Switch

# Model No. KCD-31 Series





## KCD-31

## [Explosion-protected of protection] Ex d IIC T4

#### Safety Management

- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical,
- Do not use it over the capacity of the switch.

## Purpose of Use

- Indicating, warning, controlling of tank level in explosion district,
- Indicating, warning, controlling of fluid which was applied by differential pressure of orifice line in explosion district,
- Indicating, warning and controlling differential pressure of both end sides' filter in explosion district,

#### **Summary**

This gauge has the same structure as KCD-21 Series, It is a contact switch for differential pressure which can measure simple differential pressure and can be used as measuring sealed tank level, flux or for the prevention of blockage of filter,

#### **Production Specification**

- Accuracy
  - · Grade: ±1.5% of Full Scale
  - · Repeatability:  $\pm 1.0\%$  of Adj Range
  - · Dead Band: ±4.0%
- ► Scale Range
  - $0\sim50$  kPa,  $0\sim1$  MPa (st 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20 \sim 65^{\circ}$ C
  - · Fluid : 20  $\sim$  80°C
- ► Explosion—Protected of Protection
  - · Ex d IIC T4

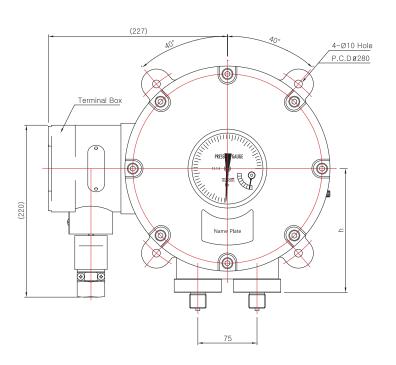
- + Case
  - · Aluminum(Hammer tone coating)
- + Cover
  - · Aluminum(Hammer tone coating)
- + Connection
  - · STS 316
  - · PF, PT, NPT ↔ 1/2
- + Window
- · Tempered safety glass,

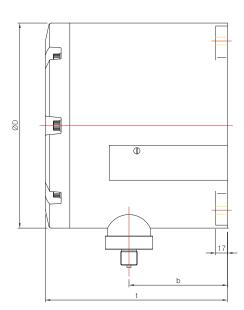
- + Contact rating
- · AC 125V, 250V 15A
- · DC 30V 2A / 125V 0.4A / 250V 0.2A
- + Pointer
  - · Aluminum
  - · Pointer black coating
- + Dial
  - · Aluminum
  - · White coating
  - · Black gradation and characters
- + Base Press
  - · 5MPa

- + Bellows(Element)
  - · STS 316
- + Movement
- · STS 304
- + Contact Form
  - Micro Contact TypeSPDT \* 1, SPDT \* 2
  - (High, Low, High & High High & Low, Low & Low)
- + Option
  - · Diaphragm Seal
  - · Accessories

# Model No. KCD-31 Series

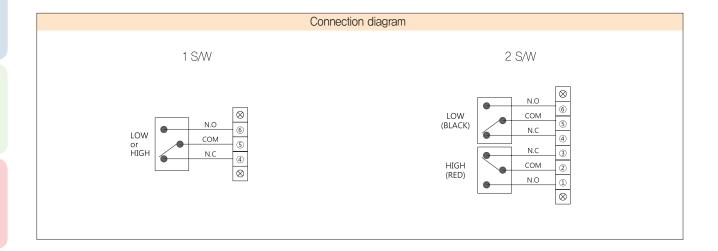
## Model No. | KCD-31





Model No.	Conn'n (d)	ØD	b	t	h
KCD-31	NPT & PT, PF 1/2	260	125	(230)	(156)

<sup>\*( )</sup>The measurement in the blanket is approximate.



# **Explosion-Protected Pressure Switch**

# Model No. KCD-32 Series





KCD-32

#### [Explosion-protected of protection] Ex d IIB T5

## Purpose of Use

- Indicating, warning and controlling pipe pressure in explosion district.
  - Indicating, warning and controlling LNG, LPG plant's pressure
  - Indicating, warning and controlling of chemical industry plan which has the posibility of explosion.

#### **Summary**

This pressure switch is proper for pressure control, flow control, liquid level control such as oil pressure, air pressure, water pressure and so on. It was designed considering shock resistance, durability, etc, It has high accuracy, high reliability by using bourdon as an element. The micro switch works on various kinds of fluid and atmosphere pressure,

#### Safety Management

- Do not give impact during the transportation, installation and usage.
- Be sure to install pressure gauge to be horizontal and vertical.
- Do not use over the capacity of the switch (The standard of using is under AC 220V 15A).

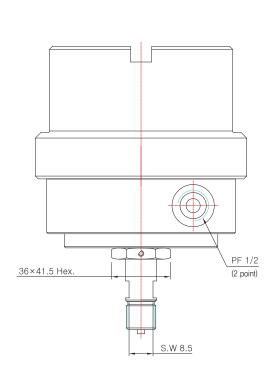
#### **Production Specification**

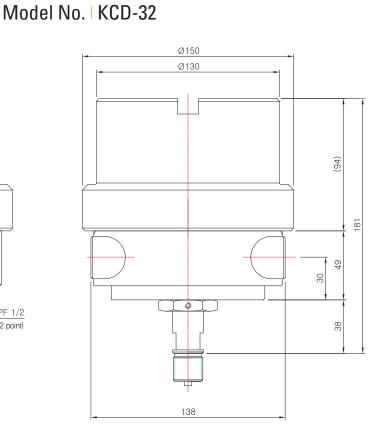
- Pointer Type
  - No indication
- Accuracy
  - · Repeatability: ±1.0% of Adj Range
  - Dead Band: ±4,0%
- ▶ Scale Range
  - $\cdot$  0.1  $\sim$  0 MPa. 0.05  $\sim$  10 MPa (\* 1 MPa = 10.19716 kgf/cm²)
- Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient : 20  $\sim$  65°C
  - · Fluid : 20 ~ 80℃
- ► Explosion—Protected of Protection
  - Ex d IIB T5

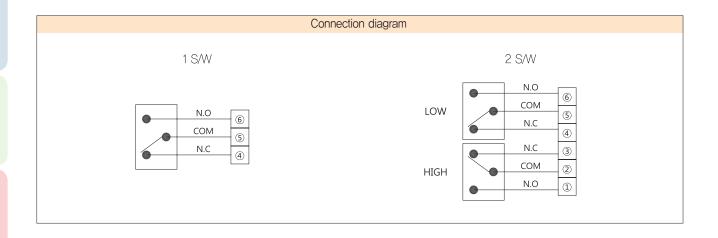
- · Aluminum(Hammer tone coating)
- - Aluminum(Hammer tone coating)
- + Connection
  - · STS 316, Other special material · PF, PT, NPT ↔ 1/2, 3/8
- + Cable Gland
  - 2-PF 1/2"(Standard)
- + Contact rating
  - AC 125V, 250V 15A
  - DC 30V 2A / 125V 0.4A / 250V 0.2A
- + Contact Form
  - · Micro Contact Type
  - SPDT \* 1, SPDT \* 2, DPDT \* 1
  - (High, Low, High & High High & Low, Low & Low)

- + Bourdon tube(Element)
  - STS 316
- + Option
  - Diaphragm Seal
  - · Accessories

Model No. KCD-32 Series









## KCQ-21

# Summary

This pressure switch is proper for various pressure controlling such as oil pressure, air pressure, water pressure, etc and also flow control, pressure control, liquid level control, etc. It is designed considering shock resistance, durability, etc. Therefore, it is enough proper for ships.

#### Safety Management

- Be sure to use valves
- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation.
- Do not give impact during the transportation, installation and usage.

#### Purpose of Use

- Measurement of various liquid
- Application line of potential differential of pressure

#### **Production Specification**

- Diameter
  - Square
  - · 165mm x 130mm x 60mm (W x H x D)
- Accuracy
  - · Repeatability:  $\pm 1.0\%$  of Adj Range
  - $\cdot$  Dead Band :  $\pm 4.0\%$
- Scale Range
  - $\cdot$  0.1  $\sim$  2 MPa, 0  $\sim$  35 MPa ( $\times$  1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - · Static pressure: 75% of Full Scale
  - · Fluctuating pressure: 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20 \sim 65^{\circ}\mathrm{C}$
  - · Fluid : 20 ~ 80℃

- + Case
- · Aluminum(Hammer tone coating)
- + Case Structure
  - · Weather Proof
- + Cover
  - · Aluminum(Hammer tone coating)
- + Connection
  - · STS 316
  - $\cdot$  PF, PT, NPT  $\leftrightarrow$  1/2, 3/8

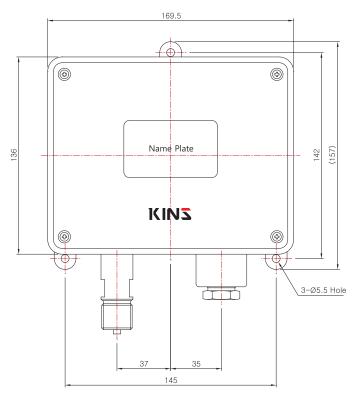
- + Type
  - · Surface Type
- + Contact Form

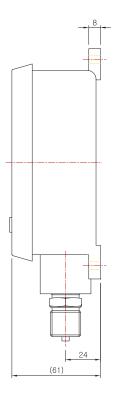
  · Micro Contact Type
  - · SPDT \* 1 (High or Low)
- + Contact rating
  - · AC 125V 5A / 250V 3A
  - · DC 30V 4A / 125V 0.4A / 250V 0.2A

- + Bourdon tube(Element)
- STS304, STS 316
- + Option
  - · Accessories
  - · Throttles

# Model No. KCQ-21 Series

# Model No. | KCQ-21







			ι	L2	k	h	f	е	С	Ød1	а
	PF 3/8					(50)	18	2	3	5	_
KCQ-21 NPT & PT 3/8 PF 1/2 NPT & PT 1/2	24	(61)	17	10	(48)	16	_	_	_	6.35	
				12	(52)	20	2	3	5	_	
	PT & PT 1/2					(50)	18	_	_	_	8.16

Connection diagram

NO H
COM
OR
HIGH
N.C
L

 $<sup>^{\</sup>ast}\!($  )The measurement in the blanket is approximate.

# Model No. KCQ-30 Series





## **KCQ-30**

# **Summary**

This pressure switch is proper for various pressure controlling such as oil pressure, air pressure, water pressure, etc and also flow control, pressure control, liquid level control, etc. It is designed considering shock resistance, durability, etc. Therefore, it is enough proper for ships.

#### Safety Management

- Be sure to install a protecting device where exist abrupt change of pressure, vibration and pulsation,
- Do not give impact during the transportation, installation and usage.
- Be sure to avoid places where a lot of steam and poisonous gas exist,

#### Purpose of Use

- Various pressure controlling, information system
- Oil pressure press power plant, petrochemistry, etc
- Special fluid line for industrial use. etc.

#### **Production Specification**

- Diameter
  - Square
  - · 124mm x 127mm x 90mm (W x H x D)
- Accuracy
  - · Repeatability: ±1.0% of Adj Range
  - · Dead Band: ±4.0%
- ► Scale Range
  - 0.1 MPa  $\sim$  2MPa, 0.1 MPa  $\sim$  0,  $0\sim35~\mathrm{MPa}$ (\* 1 MPa = 10.19716 kgf/cm²)
- ▶ Working Pressure
  - Static pressure: 75% of Full Scale
  - · Fluctuating pressure : 60% of Full Scale
- ▶ Working Temperature
  - · Ambient :  $-20\sim65^{\circ}\mathrm{C}$
  - · Fluid :  $-20\sim80^\circ\!\!\mathrm{C}$

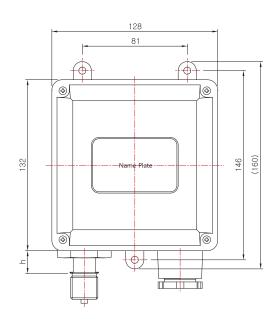
- - · Aluminum(Hammer tone coating)
- + Case Structure
  - Weather Proof
- + Cover
  - · Aluminum(Hammer tone coating)
- + Connection
  - STS 316
  - · PF, PT, NPT ↔ 1/2, 3/8

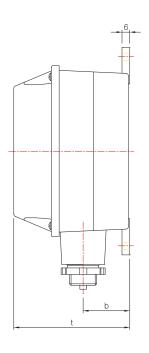
- + Type
  - · Surface Type
- + Contact Form
  - Micro Contact Type SPDT \* 1 (High or Low)
  - (High, Low, High & High High & Low, Low & Low)
- + Contact rating
- AC 125V, 250V 15A
- DC 30V 2A / 125V 0.4A / 250V 0.2A

- + Bourdon tube(Element)
  - STS304, STS 316
- + Option
  - Throttles
  - Accessories

# Model No. KCQ-30 Series

# Model No. | KCQ-30

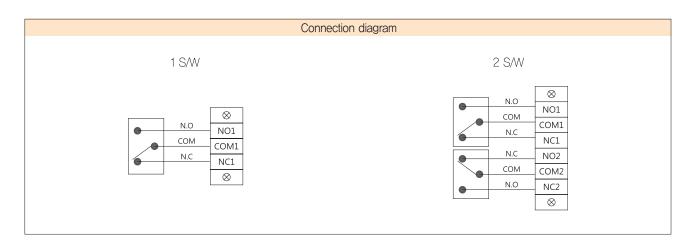






Model No.	Conn'n (d)	b	t	L2	h
KCQ-30	NPT & PT, PF 3/8	36	(90)	17	(18)
100 30	NPT & PT, PF 1/2	30	(90)	17	(10)

 $<sup>\</sup>ensuremath{^{*}\!\!}($  )The measurement in the blanket is approximate.



# Model No. KCQ- 2020 Series





## KCQ-2020

## [The Utility Model Registration Number] 20-2003-0016468

#### Safety Management

- Be sure to install a protecting device in places where sudden change of pressure, vibration, pulsation exist.
- Do not give impact during transportation, installation and usage
- Avoid places where a lot of steam and poisonous gas exist

#### Purpose of Use

- Various pressure controlling. information system
- Oil pressure press power plant, petrochemistry, etc
- Special fluid line for industrial use, etc.

#### **Summary**

This pressure switch is proper for various pressure control such as oil pressure, air pressure, water pressure, etc and also flow control, pressure control, liquid level control, etc. It is designed considering shock resistance, durability, etc. Therefore, it is enough proper for ships.

#### **Production Specification**

#### Diameter

- Square
- · 115mm x 90mm x 74mm (W x H x D)

#### Accuracy

±1.5% of Full Scale

#### Scale Range

· Proof Pressure : 0.3  $\sim$  3 MPa  $\cdot$  Differential : 0.03  $\sim$  0.6MPa (\* 1 MPa = 10,19716 kgf/cm²)

#### ▶ Working Pressure

· Static pressure: 75% of Full Scale · Fluctuating pressure: 60% of Full Scale

#### ▶ Working Temperature

· Ambient :  $-20 \sim 65^{\circ}$ C  $\cdot$  Fluid : - 20  $\sim$  80°C

- - · Steel (SS41, Liquid coating)
- + Cover
  - Steel (SS41, Liquid coating)
- + Connection
  - · Brass(C3604BE) -> Cr-Plating
  - PT3/8

- + Type
  - Surface Type
- + Contact Form
  - Micro Contact Type
  - SPDT \* 1
- + Contact rating
- · AC 125V 12A / 250V 10A
- DC 24V 3A

- + Bellows(Element)
  - Brass
- + Option
- Accessories
- Throttles

# Model No. KCQ- 2020 Series

## Model No. | KCQ- 2020

