SC_ _ Diaphragm-Seal type Pressure Gauges

Outline

These pressure gauges are constructed to use a liquid filled between the diaphragm seal and element as the pressure transmission medium. Our catalog introduces pressure indicator gauges, pressure gauges with electric contact, pressure switches, differential pressure gauges, differential pressure gauges with electric contact, and differential pressure switches. Since the diaphragm seal and bottom flange of the wetted part can be selected to match the application, these gauges are applicable to measurement of highly corrosive fluids, high viscosity fluids, and fluids which are mixed with solids or which solidify easily.

Features

- A highly corrosion resistant diaphragm is used at the diaphragm seal so that high viscosity fluids, as well as highly corrosive fluids, can be measured.
- ·When the diaphragm is welded, its surface can be easily cleaned by loosening the case mounting bolt.
- A zero adjustment pointer is used, and temperature error, elevation error, and other errors can be easily corrected.
- The danger of leaking of the filled liquid has been reduced by adopting a welded type diagram.
 (Except some diaphragm materials)



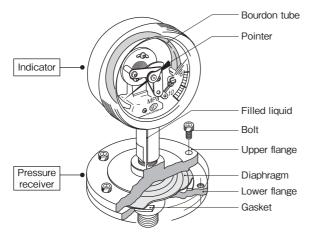
Pressure range Type Appearance Temperature		General pres	ssure gauge	Pressure with electri		Pressure switch			Differential pressure gauge	Differential pressure switch		
	Classification	Standard type, Sealed type (For JIS)	With glycerine	Microswitch	Electronic formula	Pressure switch (Explosion-proof construction)			Differential pressure gauge	Differential pressure switch (Explosion-proof construction)		
		AC, AE, AG, BC, BE, BG	GV42	JM□□	JD1□	CD30	CQ30	CB33, CD75	DG9□	CL71, CD71		
	Temperature range of fluid	-30 to 230℃	-5 to 100℃	-30 to 230℃	-5 to 100℃	-30 to 230°C	-30 to 230℃	-30 to 100℃	-5 to 100℃	-5 to 100℃		
	Appearance											
	Туре	Direct type, Remote type (Option)	Direct type, Remote type (Option)	Direct type, Remote type (Option)	Direct type, Remote type (Option)	Remote type	Remote type	Remote type	Remote type	Remote type		
Charles	Positive pressure	0 to 0.05MPa 0 to 6MPa	0 to 0.1MP 0 to 15MPa	0 to 0.1MPa 0 to 5MPa	0 to 0.2MPa 0 to 15MPa	0 to 0.2MPa 0 to 15MPa	0 to 0.2MPa 0 to 15MPa	0.04 to 0.4MPa	0 to 0.05MPa	0.01 to 0.05MPa		
	Compound	-0.1 to 0MPa -0.1 to 2.5MPa	-0.1 to 0MPa -0.1 to 2MPa	↓ ↓	-0.1 to 0.1MPa -0.1 to 2MPa	↓	-0.1 to 0.2MPa -0.1 to 2MPa	1 to 10MPa	0 to 0.5MPa	0.2 to 1MPa		
	Diaphragm diameter	φ40, φ60, φ80, φ110	φ40, φ60, φ80, φ110	φ60,φ80, φ110	φ40, φ60, φ80	φ40, φ60, φ80, φ110	φ40, φ60, φ80, φ110	φ60, φ110	φ110	φ110		

^{*} Available to the combination of pressure gauge with electric contacts, pressure transmitter, pneumatic pressure transmitter, differential pressure transmitter, etc. except the above list. Please contact NKS.



Construction

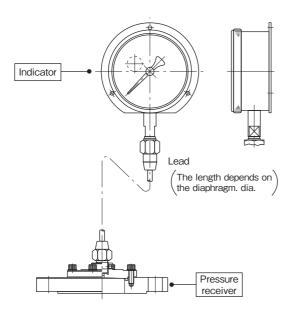
Direct type:



(In case of the screw type)

A liquid sealed in between the diaphragm and Bourdon tube. The pressure received by the diaphragm is transmitted to the Bourdon tube with the filled liquid as the pressure medium and the Bourdon tube is displaced. This displacement is used to rotate a pointer.

Remote type:



The indicating part and pressure receiver are connected by a lead filled with liquid.

Caution

When the pressure gauge is to be used with a high pressure gas, always consult NKS beforehand.

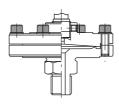


Diaphragm seal 1

Mounting:

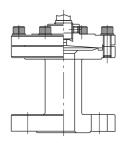
(Screw type) Model 100, Screw type

(Model: SC10)



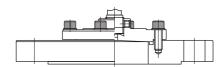
(Flange type) Model 200, Flange type

(Model: SC2□)



Model 300, Flange type

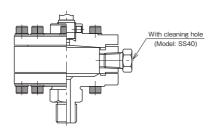
(Model: SC3□)



Others

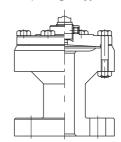
Model 410, Screw type with the intermediate flange

(Model: SC40)



Application: When the measurement fluid sticks to the gauge, the interior can be cleaned without removing the bottom flange by removing the cap.

Model 210, Flanged type nonmetal

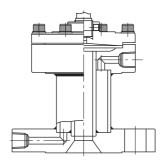


Flange material in case of the nonmetal Material: Hard vinyl chloride, polypropylene Flange mounting: FF (Flat face) flange Flange manufacturing range: JIS 10K15A to 40A (Diaphragm diameter ϕ 60, ϕ 80 only) Range maximum pressure: ϕ 60···0.6, 1MPa ϕ 80···0.1 to 0.4MPa

Operating temperature range: 0 to 60°C

Model 220, With the steam jacket

(Model: SJ2□)

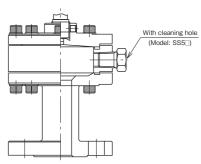


Application: Heats the interior by means of steam when you want to prevent freezing or increase the viscosity.

(Steam 0 to 230°C 2.7MPa maximum)

Model 500, Intermediate flange type

(Model: SC5□)



Application: When the measurement fluid sticks to the gauge, the interior can be cleaned without removing the bottom flange by removing the cap.



Diaphragm seal 2

Connection, connection flange:

Screw (SC10)	Flange (SC2□·3□)						
Screw (SC10)	Nominal pressure	Nominal diameter					
G3/8B (PF)	JIS10K, JIS16K,	10A, 15A, 20A,					
G1/2B (PF)	JIS20K, JIS30K,	25A, 32A, 40A,					
R3/8 (PT)	JIS40K, JIS63K	50A, 65A, 80A,					
R1/2 (PT)		100A					

Materials:

Standard (Model: SC□□)

Upper	Diaphragm	Lowe	r flange	Gasket*4	Bolt
flange	Diapi паді п	Screw	Flange	dasket	Boit
S25C Standard (Ni plating) SUS316	SUS316 SUS316L Tantalum Titanium Monel ® *1 Nickel *1 Hastelloy ® B equivalent Hastelloy ® C-276 equivalent SUS316 +FEP coating *1 SUS316 +Neoprene ® lined *2 SUS316 +FEP lined *2	S25C (Ni plating) SUS316 SUS316L Titanium Monel [®] Hastelloy [®] B equivalent Hastelloy [®] C-276 equivalent	S25C (Ni plating) SUS316 SUS316L S25C+Lining (Glass, PTFE, Neoprene ®, Caoutchouc) S25C+FEP coating SUS316+Lining (PTFE, Neoprene ®, Caoutchouc) SUS316+FEP coating Hard vinyl chloride (PVC) *3 Polypropylene *3	Less than 200°C PTFE 200°C or higher Exfoliated graphite (In only case there is indicated temperature)	A2-70

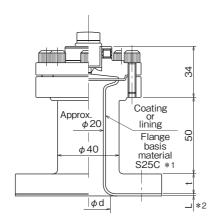
- *1 When the diaphragm material is Monel [®], nickel, or coating, the upper flange cannot be welded.
- *2 When the diaphragm material is FEP or Neoprene [®] lined, the maximum working temperature of the pressure receiving part is 100°C.
 - FEP or Neoprene $^{\circledR}$ is lined with in wetted side after the diaphragm made with SUS316 is welded to an upper flange. For vacuum and compound pressure gauges, please specify coating.
- *3 When the lower flange material is polyvinylchloride (PVC), polypropylene, or other resin, heat resistance, weather resistance, strength, and durability may be a problem. Therefore, use a metal flange as much as possible. (Model 210 only is manufactured.
 - (Polyvinylchloride (PVC) is manufactured by bonding not by machining.)
- *4 Regarding the gasket material, check the measurement fluid. (For fluids which may be transmitted, please contact NKS.)
- Note 1) Vacuum gauge is to be used with 2.7kPa abs. or over with accuracy.
- Note 2) When the pressure gauge is to be used with a high-pressure gas, NKS can provide a strength calculation report conforming to the High Pressure Gas Safety Act. Please request it when necessary.
- Note 3) When the diaphragm material is Monel [®], nickel, or coating, the upper flange cannot be welded. For the lined diaphragm, SUS316 is welded to the top flange and the connected side is lined with FEP or Neoprene [®].
 - However, for vacuum and compound pressure gauges, cannot use lined diaphragm.
- Note 4) Coating and Lining correspond to only a FF flange.



For lining, coating

Unit: mm

Lining or coating flange



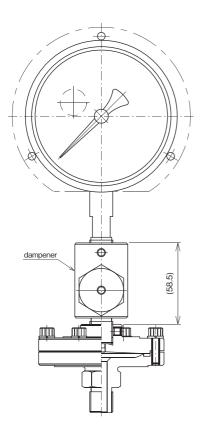
Product name	Thickness (L: mm)	Operating temperature range	
Glass lining	0.4 to 0.8	-30 to 230℃	
Neoprene lining	2	-20 to 100°C	
Caoutchouc lining	2	-15 to 80℃	
PTFE lining	2 *2	-20 to 150°C	
FEP coating	0.2 to 0.3	-30 to 180°C	

Since there are cases when ϕ d is larger than the flange rated value, pay careful attention to the gasket dimensions.

Flange mounting: available to FF flange process t length does not include the thickness of the coating and lining.

- * 1 Flange basis material SUS316 is also available except the glass lining.
- *2 Thickness of bottom part of PTFE lining is 5mm. Others part is 2mm.

For dampener



In applications where a severe pulsating pressure and surge pressure is applied to the pressure gauge, protect the pressure gauge by using a dampener.

Since the dampener is a variable aperture, the aperture can be adjusted according to the pressure change.

When a dampener is incorporated into a diaphragm puncture pressure gauge, since only the filled liquid is throttled, there is no danger of clogging by foreign matter and a stable throttling effect is obtained by the characteristic of the small viscosity change by temperature filled liquid.

Note) For direct type with dampener, measurement fluid temperature is -5 to 100°C. (Medium temperature is not available)



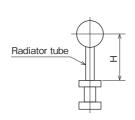
For radiator tube

For medium puncture pressure gauge (Over 100 to 230°C) direct type, pressure 180°C receiving section, use a heat dissipation tube as shown below so that the effect of temperature on the indicator is minimal. Specify the temperature of the measurement liquid. A similar effect is also obtained with the diaphragm-seal type.

With radiator tube (In case of model 200)

Unit: mm





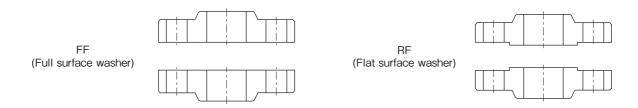
H length

Height	Sealed type φ100	Sealed type φ150
Н	213	228

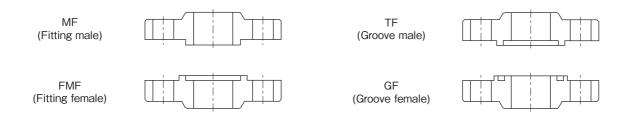
Material

Upper flange	S25C	SUS316
Radiator tube	SGD400-D	SUS316

Flange mounting



Selection: Suitable for use at nominal pressures of 16K or less.



Selection: Suitable in case needing the air tightness.

Selection: Suitable for dangerous fluid piping system or at when needing air tightness.

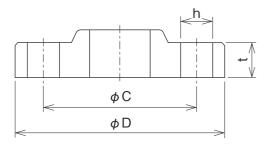
Flange standard has adopted the JIS B 2220-2001.



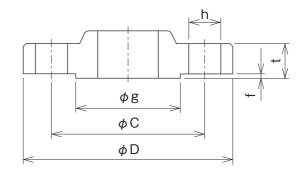
Flange dimensions 1

Unit: mm

FF (Full surface washer)



RF (Flat surface washer)



	JIS 10K										
Nominal	Flange dia.		Size			Bolt hole					
dia.	D	t	f	g	С	Number	h				
10A	90	12	1	46	65	4	15				
15A	95	12	1	51	70	4	15				
20A	100	14	1	56	75	4	15				
25A	125	14	1	67	90	4	19				
32A	135	16	2	76	100	4	19				
40A	140	16	2	81	105	4	19				
50A	155	16	2	96	120	4	19				
65A	175	18	2	116	140	4	19				
80A	185	18	2	126	150	8	19				
(90A)	195	18	2	136	160	8	19				
100A	210	18	2	151	175	8	19				

	JIS 20K										
Nominal	Flange dia.		Size		Bolt hole						
dia.	D	t	f	g	С	Number	h				
10A	90	14	1	46	65	4	15				
15A	95	14	1	51	70	4	15				
20A	100	16	1	56	75	4	15				
25A	125	16	1	67	90	4	19				
32A	135	18	2	76	100	4	19				
40A	140	18	2	81	105	4	19				
50A	155	18	2	96	120	8	19				
65A	175	20	2	116	140	8	19				
80A	200	22	2	132	160	8	23				
(90A)	210	24	2	145	170	8	23				
100A	225	24	2	160	185	8	23				

	JIS 30K										
Nominal	Flange dia.		Size			Bolt hole					
dia.	D	t	f	g	С	Number	h				
10A	110	16	1	52	75	4	19				
15A	115	18	1	55	80	4	19				
20A	120	18	1	60	85	4	19				
25A	130	20	1	70	95	4	19				
32A	140	22	2	80	105	4	19				
40A	160	22	2	90	120	4	23				
50A	165	22	2	105	130	8	19				
65A	200	26	2	130	160	8	23				
80A	210	28	2	140	170	8	23				
(90A)	230	30	2	150	185	8	25				
100A	240	32	2	160	195	8	25				

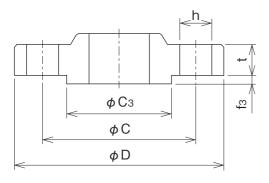


Flange dimensions 2

Conforms to JIS B 2220-2001

Unit: mm

MF (Fitting male)

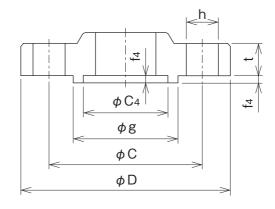


	JIS 10K										
Nominal	Flange	Size			Bolt hole						
dia.	dia. D	t	f3	Сз	С	Number	h				
10A	90	12	6	38	65	4	15				
15A	95	12	6	42	70	4	15				
20A	100	14	6	50	75	4	15				
25A	125	14	6	60	90	4	19				
32A	135	16	6	70	100	4	19				
40A	140	16	6	75	105	4	19				
50A	155	16	6	90	120	4	19				
65A	175	18	6	110	140	4	19				
80A	185	18	6	120	150	8	19				
(90A)	195	18	6	130	160	8	19				
100A	210	18	6	145	175	8	19				

	JIS 20K											
Nominal	Flange		Size		Bolt hole							
dia.	dia. D	t	f3	Сз	С	Number	h					
10A	90	14	6	38	65	4	15					
15A	95	14	6	42	70	4	15					
20A	100	16	6	50	75	4	15					
25A	125	16	6	60	90	4	19					
32A	135	18	6	70	100	4	19					
40A	140	18	6	75	105	4	19					
50A	155	18	6	90	120	8	19					
65A	175	20	6	110	140	8	19					
80A	200	22	6	120	160	8	23					
(90A)	210	24	6	130	170	8	23					
100A	225	24	6	145	185	8	23					

JIS 30K										
Nominal	Flange		Size			Bolt hole)			
dia.	dia. D	t	f3	Сз	С	Number	h			
10A	110	16	6	38	75	4	19			
15A	115	18	6	42	80	4	19			
20A	120	18	6	50	85	4	19			
25A	130	20	6	60	95	4	19			
32A	140	22	6	70	105	4	19			
40A	160	22	6	75	120	4	23			
50A	165	22	6	90	130	8	19			
65A	200	26	6	110	160	8	23			
80A	210	28	6	120	170	8	23			
(90A)	230	30	6	130	185	8	25			
100A	240	32	6	145	195	8	25			

FMF (Fitting female)



			J	IIS 10K				
Nominal	Flange		Si	ze			Bolt hole)
dia.	dia. D	t	f4	C4	g	С	Number	h
10A	90	12	5	39	46	65	4	15
15A	95	12	5	43	51	70	4	15
20A	100	14	5	51	56	75	4	15
25A	125	14	5	61	67	90	4	19
32A	135	16	5	71	76	100	4	19
40A	140	16	5	76	81	105	4	19
50A	155	16	5	91	96	120	4	19
65A	175	18	5	111	116	140	4	19
80A	185	18	5	121	126	150	8	19
(90A)	195	18	5	131	136	160	8	19
100A	210	18	5	146	151	175	8	19

			J	IIS 20K				
Nominal	Flange		Si	ze		Bolt hole)	
dia.	dia. D	t	f4	C4	g	С	Number	h
10A	90	14	5	39	46	65	4	15
15A	95	14	5	43	51	70	4	15
20A	100	16	5	51	56	75	4	15
25A	125	16	5	61	67	90	4	19
32A	135	18	5	71	76	100	4	19
40A	140	18	5	76	81	105	4	19
50A	155	18	5	91	96	120	8	19
65A	175	20	5	111	116	140	8	19
80A	200	22	5	121	132	160	8	23
(90A)	210	24	5	131	145	170	8	23
100A	225	24	5	146	160	185	8	23

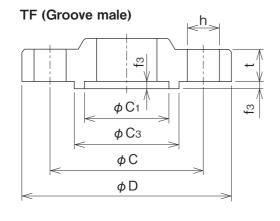
			J	IIS 30K				
Nominal	Flange		Si	ze	Bolt hole			
dia.	dia. D	t	f4	C4	g	С	Number	h
10A	110	16	5	39	52	75	4	19
15A	115	18	5	43	55	80	4	19
20A	120	18	5	51	60	85	4	19
25A	130	20	5	61	70	95	4	19
32A	140	22	5	71	80	105	4	19
40A	160	22	5	76	90	120	4	23
50A	165	22	5	91	105	130	8	19
65A	200	26	5	111	130	160	8	23
80A	210	28	5	121	140	170	8	23
(90A)	230	30	5	131	150	185	8	25
100A	240	32	5	146	160	195	8	25

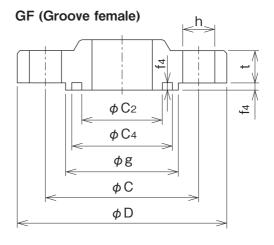


Flange dimensions 3

Conforms to JIS B 2220-2001

Unit: mm





	JIS 10K										
Nominal	Flange		Si	ze		Bolt hole					
dia.	dia. D	t	f3	C1	Сз	С	Number	h			
10A	90	12	6	28	38	65	4	15			
15A	95	12	6	32	42	70	4	15			
20A	100	14	6	38	50	75	4	15			
25A	125	14	6	45	60	90	4	19			
32A	135	16	6	55	70	100	4	19			
40A	140	16	6	60	75	105	4	19			
50A	155	16	6	70	90	120	4	19			
65A	175	18	6	90	110	140	4	19			
80A	185	18	6	100	120	150	8	19			
(90A)	195	18	6	110	130	160	8	19			
100A	210	18	6	125	145	175	8	19			

				JIS 10)K				
Nominal	Flange			Size	E	Bolt hole			
dia.	dia. D	t	f4	C2	C4	g	С	Number	h
10A	90	12	5	27	39	46	65	4	15
15A	95	12	5	31	43	51	70	4	15
20A	100	14	5	37	51	56	75	4	15
25A	125	14	5	44	61	67	90	4	19
32A	135	16	5	54	71	76	100	4	19
40A	140	16	5	59	76	81	105	4	19
50A	155	16	5	69	91	96	120	4	19
65A	175	18	5	89	111	116	140	4	19
80A	185	18	5	99	121	126	150	8	19
(90A)	195	18	5	109	131	136	160	8	19
100A	210	18	5	124	146	151	175	8	19

			JIS	20K				
Nominal	Flange		Si	ze	Bolt hole			
dia.	dia. D	t	f3	C1	Сз	С	Number	h
10A	90	14	6	28	38	65	4	15
15A	95	14	6	32	42	70	4	15
20A	100	16	6	38	50	75	4	15
25A	125	16	6	45	60	90	4	19
32A	135	18	6	55	70	100	4	19
40A	140	18	6	60	75	105	4	19
50A	155	18	6	70	90	120	8	19
65A	175	20	6	90	110	140	8	19
80A	200	22	6	100	120	160	8	23
(90A)	210	24	6	110	130	170	8	23
100A	225	24	6	125	145	185	8	23

	JIS 20K									
Nominal	Flange			Size	Е	Bolt hole				
dia.	dia. D	t	f4	C2	C4	g	С	Number	h	
10A	90	14	5	27	39	46	65	4	15	
15A	95	14	5	31	43	51	70	4	15	
20A	100	16	5	37	51	56	75	4	15	
25A	125	16	5	44	61	67	90	4	19	
32A	135	18	5	54	71	76	100	4	19	
40A	140	18	5	59	76	81	105	4	19	
50A	155	18	5	69	91	96	120	8	19	
65A	175	20	5	89	111	116	140	8	19	
80A	200	22	5	99	121	132	160	8	23	
(90A)	210	24	5	109	131	145	170	8	23	
100A	225	24	5	124	146	160	185	8	23	

			JIS	30K					
Nominal	Flange		Si	ze		Bolt hole			
dia.	dia. D	t	f3	C1	Сз	С	Number	h	
10A	110	16	6	28	38	75	4	19	
15A	115	18	6	32	42	80	4	19	
20A	120	18	6	38	50	85	4	19	
25A	130	20	6	45	60	95	4	19	
32A	140	22	6	55	70	105	4	19	
40A	160	22	6	60	75	120	4	23	
50A	165	22	6	70	90	130	8	19	
65A	200	26	6	90	110	160	8	23	
80A	210	28	6	100	120	170	8	23	
(90A)	230	30	6	110	130	185	8	25	
100A	240	32	6	125	145	195	8	25	

				JIS 30	K				
Nominal	Flange			Size	Bolt hole				
dia.	dia. D	t	f4	C2	C4	g	С	Number	h
10A	110	16	5	27	39	52	75	4	19
15A	115	18	5	31	43	55	80	4	19
20A	120	18	5	37	51	60	85	4	19
25A	130	20	5	44	61	70	95	4	19
32A	140	22	5	54	71	80	105	4	19
40A	160	22	5	59	76	90	120	4	23
50A	165	22	5	69	91	105	130	8	19
65A	200	26	5	89	111	130	160	8	23
80A	210	28	5	99	121	140	170	8	23
(90A)	230	30	5	109	131	150	185	8	25
100A	240	32	5	124	146	160	195	8	25

*SC__*_

Diaphragm-Seal type Pressure Gauges

Outline

These pressure gauges are constructed to use a liquid filled between the diaphragm seal and element as the pressure transmission medium. Our catalog introduces pressure indicator gauges.

Since the diaphragm seal and bottom flange of the wetted part can be selected to match the application, these gauges are applicable to measurement of highly corrosive fluids, high viscosity fluids, and fluids which are mixed with solids or which solidify easily.

Features

- · A highly corrosion resistant diaphragm is used at the diaphragm seal so that high viscosity fluids, as well as highly corrosive fluids, can be measured.
- ·When the diaphragm is welded, its surface can be easily cleaned by loosening the case mounting bolt.
- A zero adjustment pointer is used, and temperature error, elevation error, and other errors can be easily corrected.
- The danger of leaking of the filled liquid has been reduced by adopting a welded type diagram.
 (Except some diaphragm materials)



Caution •

When the pressure gauge is to be used with a high pressure gas, always consult NKS beforehand.

Specification

Fluid:

High corrosion and high viscosity fluid

Type

Direct type, Remote type (Option)

Mounting system:

Screw type, Flange type

Pressure range:

Positive pressure 0 to 0.06MPa→0 to 16MPa Vacuum, Compound -0.1 to 0MPa→-0.1 to 2.5MPa

Accuracy:

±1.6%F.S./20℃±10℃

Indicator

Pressure indicator gauge:

General industrial pressure gauges (Model: $A \square 1 \square$) Process industrial pressure gauges (Equivalent to IP43) (Model: $B \square 1 \square$)

Glycerine bath type pressure gauges (Model: GV42)

Size:

 $\phi 75$, $\phi 100$, $\phi 150$

Mounting:

Lower connection (Type A, Type B)

Main materials:

Socket CAC203 Bourdon tube C6872T, SUS316

Case materials, Finish:

Aluminum alloy, plastic, black

(Glycerine bath type pressure gauges:

SUS304, base material)

Case construction:

Indoor type, sealed type, (Equivalent to IP43)

* For details, refer to the catalog of each pressure indicator gauge.

Diaphragm, Filled liquid

Diaphragm diameter:

 ϕ 40, ϕ 60, ϕ 80, ϕ 110

*Determined by the temperature of pressure range and fluid

Diaphragm material:

For the material of the upper and lower flange, diaphragm, etc., please refer to diaphragm-seal pressure gauge catalog diaphragm seal part 2 column.

Filled liquid:

Silicone oil

-30 to 230°C (Operating temperature range)

Note: Vacuum gauge, Compound gauge are available in only temperature range -5 to 100°C.

*Daifloil[®], glycerine aqueous liquor and propylene-glycol are also available. Please contact us.

(However, the operating temperature range varies.

The vacuum, compound gauge except silicone oil for

cryogenic temperature cannot be used.) Maximum lead length:

In case of remote type (Option)

2m to 10m (Depends on the range)



Specification

Selecting the pressure and temperature range and diaphragm diameter: (When maximum lead length is remote type (option))

Filled liquid		e oil for cryo	<u> </u>		medium te	e oil for emperature
Fluid temperature range	Less than	-30 to -5°C		00°C*		to 230℃
Pressure range MPa	Diaphragm diameter	Maximum lead length	Diaphragm diameter	Maximum lead length	Diaphragm diameter	Maximum lead length
0 to 0.06 (GV42 is not available)	φ110	6m	φ110	6m	φ110	6m
0 to 0.1	φ110	6m	φ80	6m	φ110	6m
to 0.16	φ110	6m	φ80	6m	φ110	6m
to 0.25	φ80	4m	φ80	6m	φ80	4m
to 0.4	φ80	6m	φ80	8m	φ80	6m
to 0.6	φ80	6m	φ60	6m	φ80	6m
to 1	φ80	6m	φ60	10m	φ80	6m
to 1.6	φ60	2m	φ60	10m	φ60	2m
to 2.5	φ60	2m	φ60	10m	φ60	2m
to 4	φ60	2m	φ60	10m	φ60	2m
to 6	φ40	2m	φ40	2m	φ40	2m
to 10	φ40	2m	φ40	2m	φ40	2m
to 16	φ40	2m	φ40	2m	φ40	2m
-0.1 to 0MPa*1	_	_	φ110 φ80	6m 3m	_	_
to 0.06 *1 (GV42 is not available)	_	_	φ110 φ80	6m 3m	_	_
to 0.1	_	_	φ80	6m	_	_
to 0.16	_	_	φ80	6m	_	_
to 0.25	_	_	φ80	6m	_	_
to 0.4	_	_	φ80	8m	_	_
to 0.6	_	_	φ60	6m	_	_
to 1	_	_	φ60	10m	_	_
to 1.6	_	_	φ60	10m	_	_
to 2.5	_	_	φ60	10m		

^{*1} Diaphragm diameter of the direct type is only ϕ 80.

Installation shape and selecting the installation size by diaphragm diameter:

Mounting system				Flange	e type				Screw type
Diaphragm diameter	φ	40	φ	60	φ	80	φ1	10	φ40, φ60, φ80, φ110
Mounting Nominal diameter	Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 100 (sc1□)
10A	0	_	0	_	0	_	0	_	
15A	0	-	0	_	0	_	0	_	
20A	0	_	0	_	0	_	0	_	
25A	_	0	0	_	0	_	0	_	G3/8B
32A	_	0	0	_	0	_	0	_	G1/2B
40A	_	0	_	0	0	_	0	_	R3/8
50A	_	0	_	0	_	0	0	_	R1/2
65A	_	_	_	0	_	0	0	_	
80A	_	_	_	0	_	0	_	0	
100A	_	_	_	0	_	0	_	0	

^{*}Glycerine bath type pressure gauge (GV42) is available in only -5 to 100°C.

 * Please specify the lead length in 1m increments.

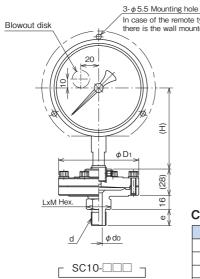


Dimensions Unit: mm

Standard (Model: SC ...)

(Screw type) Model 100, Screw

General industrial, Process industrial pressure gauges

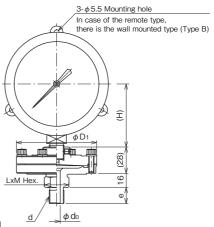


In case of the remote type, there is the wall mounted type (Type B)

Connection size

d	е	do	LxM
G3/8B	18	8	24x27.7
G1/2B	20	10	2412.1
G3/4B	24	15	26,41.6
G1B	28	20	36x41.6

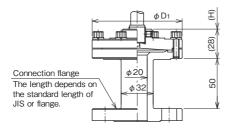
Glycerine bath type pressure gauges



r SC10-□□□ ¬

In case glycerine bath type pressure gauges, the range is -5 to 40°C in the ambient temperature, -5 to 100°C in the fluid temperature.

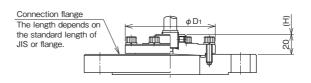
Model 200, Flange (Flange type)



For the details, please refer to the flange dimension.

_ SC2□-□□□ ¬

Model 300, Flange



For the details, please refer to the flange dimension.

r sc3□-□□□ ¬

General industrial, Process industrial pressure gauges Glycerine bath type pressure gauges indicator size

Case	Size	Н	Model number (Indicator)							
material	Size	П	Direct type	Remote type						
	75	56	AC10-1□□	AC10-2□□						
	75	30	BC10-1□□	BC10-2□□						
Metal	100	94	AE10-1□□	AE10-2□□						
IVICIAI	100	94	BE10-1□□	BE10-2□□						
	150	109	AG10-1□□	AG10-2□□						
	150	109	BG10-1□□	BG10-2□□						
	75	56	BC12-1□□	BC12-2□□						
Plastic	100	94	BE12-1□□	BE12-2□□						
	150	109	BG12-1□□	BG12-2□□						

indicator size

Case	Size	Н	Model numb	er (Indicator)
material	Size		Direct type	Remote type
SUS304	100	72	GV42-1□□	GV42-2□□

Pressure receiver diameter (ϕ D1) size

Diaphragm diameter	φD1
φ40	φ70
φ60	φ90
φ80	φ110
φ110	φ140

- * Please contact us about the dimension of remote type (Option)
- * For the details of the indicator dimension, please refer to the catalog of each pressure indicator gauge.

Diaphragm-Seal type Pressure Gauges

Diaphragm-Seal type Pressure Gauges Model 100 Screw type

Model number configuration For ordering, please specify the model number, each specs and the range. Model C 1 0 0 Diaphragm-seal type pressure gauges (2) (3) (4) (5) (6) 7 (8) (9) (10) 11) (12) (13) (14) (15) Model 100 screw type Selective spec Model number Additional spec. (Option) 3 G3/8B G R3/8 Connection 4 Н G1/2B R1/2 0 Screw type Mounting 2 S25C 6 Titanium Wetted parts 3 SUS316 7 Hastelloy® B equivalent material SUS316L Hastelloy® C-276 equivalent 4 8 (Lower flange) Monel ® 5 Fluid temperature range (°C) Diaphragm -30 to -4 -5 to 100 101 to 230 Please specify applicable diameter For medium temperature For cryogenic temperature For cryogenic temperature diaphragm diameter as well as pressure range 0 to 6, 10, 16 0 to 6, 10, 16 4 φ40 0 to 6, 10, 16 and engineering unit. 0 to 0.6, 1, 1.6, 2.5, 4 -0.1 to 0.6, 1, 1.6, 2.5 6 φ60 0 to 1.6, 2.5, 4 0 to 1.6, 2.5, 4 φ80 0 to 0.25, 0.4, 0.6, 1 8 0 to 0.25, 0.4, 0.6, 1 0 to 0.1, 0.16, 0.25, 0.4 -0.1 to 0, 0.06, 0.1, 0.16, 0.25, 0.4 (MPa) 9 0 to 0.06, 0.1, 0.16 0 to 0.06 0 to 0.06 0.1 0.16 φ110 to 0, 0.06)*1 SUS316 + FEP lined Hastelloy® B equivalent Diaphragm 2 SUS316 + FEP coating 8 Hastelloy® C-276 equivalent material 3 SUS316 Α Tantalum 4 SUS316L D Nickel 5 Monel ® J SUS316 + Neoprene® lined Titanium 6 Standard S250 (6) Upper flange 3 SUS316 material Nil (For cryogenic temperature) For medium В For medium temperature (100 over to 230°C) *1 Range in the () is, case of over the lead length 3m. temperature 0 Nil [Manufacturing range] Treatment 1 Use no oil ·Vacuum gauge, Compound gauge are not available to lined diaphragm. 2 Use no water •GV42 is available in -30 to 100°C only. 3 Use no oil & water However, the range 0.06MPa is impossible. A C 1 0 ϕ 75 General industrial pressure gauge standard spec. 9101112 Indicator gauge B C 1 0 φ75 Process industrial pressure gauge standard spec. ·Please specify filled liquid, lead type and length separately. (Indicator model) B C 1 2 ϕ 75 Process industrial pressure gauge standard spec. [Other additional specifications] A E 1 0 ϕ 100 General industrial pressure gauge standard spec. ·Filled liquid B E 1 0 φ 100 Process industrial pressure gauge standard spec. Standard For cryogenic temperature: Silicone For medium temperature: DC550 B E 1 2 φ 100 Process industrial pressure gauge standard spec. ·Lead A G 1 0 When ordering the φ 150 General industrial pressure gauge standard spec-SUS316, SUS + Corrugated tube, SUS + Vinyl corrugated tube other indicator. B G 1 0 φ 150 Process industrial pressure gauge standard spec. Option (Please specify separately. please contact us For the details, please refer to the separately page.) B G 1 2 φ 150 Process industrial pressure gauge standard spec. Radiator tube SGD400-D, SUS316 G V 4 2 ϕ 100 Glycerine bath type pressure gauges Dampener SUS316 General use (Without GV42) 1 Indicator 3 Corrosion-proof use (Without GV42) element material Caution -Direct type When the pressure gauge is to be used with a high 2 Construction Remote type pressure gas, always consult NKS beforehand. Please specify the lead type and length. 0 **Documents** Required (Please specify the desired documents separately.) Submission drawings, instruction manual, inspection procedure, mill sheet, test report (1 pc 1 copy), inspection / traceability certificate,

strength calculation, attended inspection

^{*}Specify by code "X" if there is no applicable specification. *When a strength calculation report is necessary, please request it.



Diaphragm-Seal type Pressure Gauges Model 200 Flange type

Model number configuration

	Model																		
	S C 2		_				_												
Diaphra	agm-seal type pro Model 200 flang		auges	s ①	2	3	J	4)	(5)	6	7	8	9	10	11)	12	13	(14)	15
	Model numbe	r						Sele	ctive s	spec.		Addi	tional	spec.	(Optio	n)			
	Model (Flange rating)		JIS					3	JIS 20K JIS 30K										
		2	JIS	16K				4	JIS :	30K					Di	anhrage	n diame	ntor.	
	① Flang	ge size		Fla	nge typ	oe .								40		60	80	eter	110
				2	15A 20A									0		<u> </u>	0		0
				3	25A									×		0	0		0
				4 5	32A 40A									×		© ×	0		0
				6	50A									×		×	×		0
				7	65A									×		×	×		0
		(2)		Α	10A	RF					4	GF		0		0	0		0
		Flange	mou	nting	2	FF					5	TF							
			<u></u>		3	MF 2	S250)			6	FMF	K	S250	C + Ca	outchou	uc lining	ξ.	
				ed parts	S	3	sus	316					S	Hard	vinyl c	chloride	[Note1		
			mate (Low	erial ver flang	e)	4 E	SUS:	316L C + Gla	ee linin	ø			T X			ne [No			
						F		+ GIA C + PTF					Y			FEP co			
						G		+ FEF					1				ne [®] lini		
		L			(4)	J	5250	+ Ned	prene	- iininį	5		ウ Fluid	SUS temper			houc lin	urıg	
	Please specify		e			hragm				For	-30 to		E.		o 100	roturo l		1 to 23	
	diaphragm diam well as pressure	e range		-	ulaili	etei		4	φ40	_	cryogenic o 6, 10,			to 6, 10			For medi		
l	and engineering	g unit.						6	φ60	O t	0 1.6, 2.	5, 4	0	to 0.6, 1	, 1.6, 2	2.5, 4	O to 1.6	3, 2.5,	4
								8	φ80	O to	0.25, 0	0.4, 0.6	, 1 0	to 0.1, 0	.16, 0.2	5, 0.4	0 to 0.2	5, 0.4,	0.6, 1
					(MPa	a)		9	φ11	0 O t	0 0.06, (0.1, 0.1	16 0	1 to 0, 0.06, to 0.06			0 to 0.0	06, 0.1	, 0.16
						(5)			1	SUS	316 + F	EP lin		0.1 to 0			y [®] B ed	guivale	nt
							hragm		2	SUS316 + FEP lined SUS316 + FEP coating					8 F	Hastello	y [®] C-2		
						Паце	паі		3		316 316L					antalun Nickel	n		
									5	Mon							3 + Neo	prene®	lined
									6	Titai 2	nium Stanc	dard S2	250						
*1 Ran	ge in the () is, (case of o	ver th	ne lead	length	Зm.		r flange	•	3	SUS								
[Manufa	acturing range]						mate				0	Niil /E	For one	ogonio i	ompor	aturo)			
	uum gauge, Comp I diaphragm.	oound gau	uge a	re not a	vailabl	e to		⑦ For m	nedium		В			ogenic 1 n tempei			er to 23	80°C)	
	2 is available in -	30 to 10	0°C ∩	only.				temp	erature										
	lowever, the rang				ible.				® Treat	ment		0	Nil Use	no oil					
·Note	1: Flange materi Material: Hard					e						2	Use	no wate					
	Flange mount	ting: FF (f	Flat f	ace) fla	nge				(9)(10)(വര		3 A C	Use 1 0	no oil 8			ressure ga	uge stand	lard spec
	(Diaphragm d	liameter ¢	b60,	ϕ 80 on	ly)		-		Indic	ator ga ator m		вс	1 0	φ75	Process	industrial p	oressure ga	uge stand	dard spec
	Operating ten		(φ80…0	.1 to 0				(II IGIC	atOr II	iouei)		1 2	_			oressure ga oressure ga		
·Plac	operating terr se specify filled li					anarata	lv					ВЕ	1 0	φ100	Process	industrial p	ressure ga	uge stand	dard spec
			ы туре	сани Ю	aigui Se	sparate	ıy.		\A/!-	n cr-1	ring +!		1 2	_			oressure ga oressure ga		
•Filled	additional specific d liquid	-			D:1:-	_			othe	r indica			1 0	_			oressure ga oressure ga		
		ogenic te dium tem				=			piea	se con	tact us.		1 2				oressure ga	-	
	SUS316, SUS + 0			e, SUS	+ Viny	/l corru	gated tu	ibe		(13)		G V	1	_			h type pi out GV4		Pankes
	on (Please specify For the details	s, please	refer		separat	ely pag	e.)			Indic	ator ent mat	erial	3	Corro	sion-p	roof use	e (Witho	ut GV	42)
		0400-D, 8 8316	SUS3	316						(14)	zc mat		1	Direc	et type				
S	Serration process										struction	1	2	Remo	ote typ		lead to	ne ond	lengt-
	Caution —									(F)			0	Nil	se spec	Jily IIIE	lead typ	ज्य वा IÛ	ici igili
	en the press	sure ga	aug	e is t	o be	used	with	a hig	gh	® Doc	uments		1	Requ		the deci-	rod doo:	onte oc-	arately.
	ssure gas, a													Subr	nission	drawings	ed docum s, instruc	ction ma	anual,
														test	report	(1 pc 1	ure, mill copy), ability c		
* Spec	cify by code "X"	if there i	is no	applic	able sp	pecifica	ition.										attende		
									*	When	a stren	gth ca	lculat	ion repo	ort is n	ecessa	ry, plea	se rec	uest it

¹⁴

Diaphragm-Seal type Pressure Gauges

Diaphragm-Seal type Pressure Gauges Model 300 Flange type

Model number configuration For ordering, please specify the model number, each specs and the range. Model 3 C Diaphragm-seal type pressure gauges (2) (3) (4) (5) (6) 7 (8) (9) (10) (11) (12) (13) (14) (15) Model 300 flange type Model number Selective spec. Additional spec. (Option) JIS 10K JIS 20K Model (Flange rating) 16K JIS 30K Diaphragm diameter 60 80 110 Flange size Flange type 40 25A 4 32A 0 × × × 40A 5 × 0 6 50A 65A × 8 80A В 90A 0 0 0 100/ RF GF FF TF Flange mounting 2 5 3 MF 6 FMF 2 S25C S25C + Neoprene® lining Wetted parts SUS316 S25C + Caoutchouc lining 3 material SUS316 + FEP coating SUS316L 4 (Lower flange) SUS316 + Neoprene® lining Е S25C + Glass lining G S25C + FEP coating SUS316 + Caoutchouc lining Fluid temperature range (°C) Please specify applicable diaphragm diameter as Diaphragm 101 to 230 -30 to -4 -5 to 100 For medium temperature For cryogenic temperature For cryogenic temperature well as pressure range φ40 0 to 6, 10, 16 0 to 6, 10, 16 0 to 6, 10, 16 and engineering unit. 0 to 0.6, 1, 1.6, 2.5, 4 -0.1 to 0.6, 1, 1.6, 2.5 6 φ60 0 to 1.6, 2.5, 4 0 to 1.6, 2.5, 4 φ80 O to 0.1, 0.16, 0.25, 0.4 -0.1 to 0, 0.06, 0.1, 0.16, 0.25, 0.4 8 0 to 0.25, 0.4, 0.6, 1 0 to 0.25, 0.4, 0.6, 1 9 0 to 0.06, 0.1, 0.16 (MPa) $\phi 110$ 0 to 0.06, 0.1, 0.16 0 to 0.06 (-0.1 to 0, 0.06)*1 SUS316 + FEP lined Hastelloy® B equivalent Hastelloy® C-276 equivalent SUS316 + FEP coating Diaphragm 2 8 3 SUS316 Tantalum Α SUS316L Nicke Monel ® SUS316 + Neoprene® lined 5 J 6 Titanium 2 Standard S25C Upper flange SUS316 3 material Nil (For cryogenic temperature) 0 *1 Range in the () is, case of over the lead length 3m. For medium В For medium temperature (100 over to 230°C) temperature 0 [Manufacturing range] Treatment Use no oil ·Vacuum gauge, Compound gauge are not available to lined diaphragm 1 2 Use no water •GV42 is available in -30 to 100°C only. However, the range 0.06MPa is impossible. 3 Use no oil & water A C 1 O φ75 General industrial pressure gauge standard spec. 9(10(11)(12) ·Please specify filled liquid, lead type and length separately. B C 1 0 Indicator gauge φ75 Process industrial pressure gauge standard spec (Indicator model) B C 1 2 φ75 Process industrial pressure gauge standard spec [Other additional specifications] ·Filled liquid A E 1 0 ϕ 100 General industrial pressure gauge standard spec. Standard For cryogenic temperature: Silicone ΒЕ 1 0 φ 100 Process industrial pressure gauge standard spec For medium temperature: DC550 B E 1 2 ϕ 100 Process industrial pressure gauge standard spec. SUS316, SUS + Corrugated tube, SUS + Vinyl corrugated tube When ordering the A G 1 0 φ 150 General industrial pressure gauge standard spec. Option (Please specify separately.

For the details, please refer to the separately page.) other indicator B G 1 0 ϕ 150 Process industrial pressure gauge standard spec. please contact us. B G 1 2 ϕ 150 Process industrial pressure gauge standard spec. Radiator tube SGD400-D, SUS316 Dampener SUS316 G ϕ 100 Glycerine bath type pressure gauges Dampener SU-Serration process General use (Without GV42) Indicator 3 Corrosion-proof use (Without GV42) element material Direct type Caution Construction 2 Remote type When the pressure gauge is to be used with a high Please specify the lead type and length. pressure gas, always consult NKS beforehand. 0 Nil Documents Required Submission drawings, instruction manual, inspection procedure, mill sheet, test report (1 pc 1 copy), inspection / traceability certificate,

strength calculation, attended inspection

* Specify by code "X" if there is no applicable specification.

^{*}When a strength calculation report is necessary, please request it.

SC___ Diaphragm-Seal Pressure Gauges With Switch

Specification

Fluid:

High corrosion and high viscosity fluid

Type:

Direct type, Remote type (Option)

Mounting system:

Screw type, Flange type

Accuracy:

±1.5%F.S./20°C±10°C



Indicator

Pressure indicator gauge:

Pressure gauge with microswitch contacts (Model: JM \square) Pressure gauge with electronic contacts (Model: JD1 \square)

Size:

 ϕ 100, ϕ 150

Mounting

Lower connection (Type A or Type B), Back connection

Main materials:

Socket CAC203, SCS14 Bourdon tube C6872T, SUS316

Number of contacts:

1 contact or 2 contacts

Setting system:

Internal adjustment type

Case materials, Finish:

ADC12 or AC7A

·Black or two-tone (Blue, Gray)

Case construction:

Drip-proof (Equivalent to IP43)

*For details, refer to the catalog of each pressure gauge with electric contacts.

Diaphragm, Filled liquid

Diaphragm diameter:

Pressure gauge with microswitch contacts ϕ 60, ϕ 80, ϕ 110

Pressure gauge with electronic contacts $\phi 40, \phi 60, \phi 80$

*Determined by the temperature of pressure range and fluid.

Diaphragm material:

For the material of the upper and lower flange, diaphragm, etc., refer to diaphragm-seal pressure gauge and differential pressure gauge (Switch) catalog diaphragm seal part 2 column.

Filled liquid:

Silicone oil

-30 to 230°C

Note: Vacuum gauge, Compound gauge are available in only temperature range -5 to 100°C.

*Daifloil®, glycerine aqueous liquor and propylene-glycol are also available.

Please contact us.

(However, the temperature range varies.

The vacuum, compound gauge except silicone oil for cryogenic temperature cannot be used.)

Maximum lead length:

In case of remote type (Option) 2m to 10m (Depends on the range)



Specification

Selecting the pressure and temperature range and diaphragm diameter:

(When maximum lead length is remote type (option))

Filled liquid Silicone oil for cryogenic temperature	(
Number of contacts 1 contact 2 contacts	Filled liquid											
Contacts Technact 2 contacts 2 contacts Technact 2 contacts 2 contacts												
Pressure range Diaphragm Maximum Dia												
MPa diameter lead length diameter												
to 0.2												
to 0.3	0 to 0.1											
to 0.4	to 0.2											
to 0.6	to 0.3											
to 1	to 0.4											
to 1.5	to 0.6											
to 2	to 1											
to 2.5	to 1.5											
to 3.5	to 2											
to 5	to 2.5											
to 7	to 3.5											
to 10 — — — — — — — — — — — — — — — — — —	to 5											
Ψ · · · · · · · · · · · · · · · · · · ·	to 7											
to 15	to 10											
to 15 - - - - - - - φ40 2m - - - -	to 15											
-0.1 to OMPa	-0.1 to 0MPa											
to 0.1	to 0.1											
to 0.2	to 0.2											
to 0.3 \phi 80 4m \phi 80 4m \phi 80 6m	to 0.3											
to 0.4	to 0.4											
to 0.6 \phi 80 8m \phi 80 8m \phi 60 6m	to 0.6											
to 1	to 1											
to 1.5 \ \phi \ \phi 60 \ \ 6m \ \phi 80 \ \ 6m \ \ \phi 60 \ \ 10m \ - \ - \ -	to 1.5											
to 2	to 2											

^{*}Pressure gauge with electronic contacts (JD1 \square) is available to only 2 contacts in -5 to 100 $^{\circ}$ C

Installation shape and selecting the installation size by diaphragm diameter:

Mounting system				Flange	e type				Screw type
Diaphragm diameter	φ	40	φ	60	φ	80	φ1	10	φ40, φ60, φ80, φ110
Mounting Nominal diameter	Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 100 (sc1□)
10A (3/8")	0	_	0	_	0	_	0	_	
15A (1/2")	0	_	0	_	0	_	0	_	
20A (3/4")	0	_	0	_	0	_	0	_	G3/8B
25A (1")	_	0	0	_	0	_	0	_	G1/2B
32A (1 1/4")	_	0	0	_	0	_	0	_	R3/8
40A (1 1/2")	_	0	_	0	0	_	0	_	R1/2
50A (2")	_	0	_	0	_	0	0	_	1/2NPT
65A (2 1/2")	_	_	_	0	_	0	0	_	3/8NPT
80A (3")	_	_	_	0	_	0	_	0	
100A (4")	_	_	_	0	_	0	_	0	

^{*}Please specify the capillary length in 1m increments.



Dimensions Unit: mm

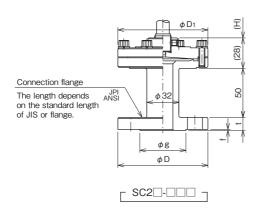
Standard (Model: SC ...)

(Screw type) Model 100, Screw

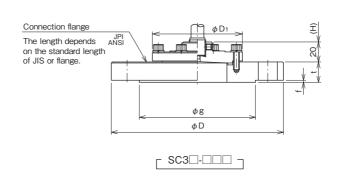
Pressure gauge with microswitch contacts

Pressure gauge with electronic contacts Mounting plate (Option) (104)3- φ 5.5 Mounting hole P.C.D.115 (116.5) $\widehat{\exists}$ $\widehat{\Xi}$ Gland: JIS20b Setting adjustment LxM Hex. Gland: JIS20b LxM Hex. Diaphragm Connection size ϕ do d do LxM е Diaphragm G3/8B 18 8 ϕdo 24x27.7 G1/2B 20 10 G3/4B 24 15 「 SC10-□□□ ¬ 36x41.6 _ SC10-□□□ ¬ 28 20 G1B

(Flange type) Model 200, Flange



Model 300, Flange



Indicator size

Case material	Size	Н	Model number (Indicator)
	100	74	JM11-□□□
Metal	100	74	JD10-2□3
ivietai	150	107	JM21-□□□

Note) In the case of the diaphragm diameter ϕ 110 and 300 form flange size 8, B, and C in size 100, H dimensions are 120mm.

Pressure receiver diameter (φD1) size

Diaphragm diameter	φD1
φ40	φ70
φ60	φ90
φ80	φ110
φ110	φ140

- * Please contact us about the dimension of remote type (Option)
- * For the details of the indicator dimension,
- please refer to the catalog of each pressure gauge.



	N	lodel																				
	SC	; 1	0	_		0		_							J	M						
	gm-seal typ			-	1 1	2	3	J	4	(5)	6)	7	8	9	10	(1)	(12)	13	14	(15)	
	Model r			9/10]	Sele	ctive s	spec.			Addit	tional	spec	. (Opti	ion)				
ı		1			3	G3/8	В				Н		R1/2			•	` '	,				
		Conn	ection		4	G1/2					L											
					G	R3/8		+			M		1/2N	PT								
			② Mour	nting		U	Scre	w type														
				3			2	S250						6	Titan							
				Wett mate	ed parts rial	;	3	SUS						7 8				uivalent 6 equiva	lont			
				(Low	er flange	e)	5	Mone						0	i iasti	GIIOy	0-27	o equiva	ueni			
						(4)									Fluid	tempe	erature	range (°	°C)			
	Please s					Diaph diame	nragm				_		-30 t				to 10	- 1		1 to 23		
	diaphrag well as p				\rightarrow	ulame	eter		6	φ60			yogenic 2.5, 3.	tempera			enic tem , 2, 2.5,	perature 35.5	For medi 0 to 2.5		erature	
	and engi	ineering	g unit.							(1 conta φ80	ict)				-(0.1 to 1	1.5, 2				. = 0	
									8	(1 conta	ict)	U to	0.4, 0.	6, 1, 1.5				4, 0.6, 1 0.4, 0.6, 1	0 to 0.4	, 0.6, 1,	1.5, 2	
									9	φ110 (1 conta	١,	0 to	0.1, 0.	2, 0.3) to 0.1 0.1 to (0 to 0.1	, 0.2, 0.3	3	
									6	φ60) (0 to	3.5, 5		О	to 2, 2	2.5, 3.5,	5	0 to 3.5	, 5		
									8	(2 contac φ 80		0 to	0.6, 1,	1.5, 2, 2		0.1 to 2 to 0.3		6, 1, 1.5	0 to 0.6	i, 1, 1.5,	2, 2.5	
						(MPa)	9	(2 contac φ 1 1 c		O to	01.0	2 0 3 0		0.1 to 0 to 0.1		1.6, 1, 1.5	0 to 0.1, 0.2, 0.3, 0.4				
											cts)	s) -(0, 0.1, 0					
							⑤ 1 Diaphragm 2				SUS316 + FEP lined SUS316 + FEP coating											
							mate	_		3	SUS316							Hastelloy [®] C-276 equivalent Tantalum				
										4	SUS316L						D Nickel					
										5	Monel [®] Titanium 2 Standard S25C						J	SUS316 + Neoprene® line				
										6												
								6 Uppe	er flange	9	3		SUS									
								mate	rial													
									7				0				tempe					
DA		1								nedium erature			В	For m	edium	tempe	erature	(100 0)	er to 23	30 C)		
	cturing ran um gauge,		und ga	uge are	e not av	ailable	to line	d diaph	ragm.	8				0	Nil							
·Pleas	e specify f	illed lia	uid. lea	ad tvne	and len	gth ser	aratel	/.		Treat	ment	t		1 2	Use	no oil no wa	ter					
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	dditional sp	oecifica	tions]							9101	1)(12)			J M	1 1	φ100	O Press	ure gauge	with JM co	ntact (1 c	ontact)	
·Filled St	liquid andard							ordering		Indica (Indic				J M		-			with JM co	•		
	For cryog							contac	-				,	J M J M		-			with JM co with JM co			
·Lead										(13)			3 141	1	_	neral us		00	(1 0			
	SUS316, SUS + Corrugated tube, SUS + Vinyl corrugated tube Option (Please specify separately.							эе		Ind	licat		oriol	3	Cor	rosion-	proof us	e				
Rs	For the adiator tube					eparate	ly page	e.)				Her	nt mate	cudi	1	Div	oot +					
	ampener	SUSS		2000	. •						(14) Cou	nstr	uction	,	2		ect type					
										Construction 2 Remote type Please specify the lead type					oe and	length.						
	re range 0										(15)				0	Nil						
Please	contact u	s it will	be a s	pecial	specific	ation.					Do	cun	nents		1		quired ase speci	ify the des	ired docum	ents sepa	arately.)	
c	autior	ı —														Sub	omission	n drawing	gs, instruc lure, mill	ction ma		
Whe	n the pr	essu								n						tes	t repor	t (1 pc 1	Г сору),			
	sure ga																		ability c , attende			
										 *	Whe	en a	stren	gth cal	culation	on rep	ort is	necessa	ary, plea	ase req	uest it.	

^{*}Specify by code "X" if there is no applicable specification.



	N	1odel																			
	S C	2		_				_							J	M					
	gm-seal typ			-	h ①	2	3		4	(5)	6	7	8		9)	10	11)	12	13	(14)	(15)
electri	Model r			ge type				1	Solo	ective s	noc		۸۵	lditio	വി	spec.	(Optic	n)			
	Model	lumbe	1	JIS	10K		4 J	IS 30K		7	1	1 300	AU	B	_	s 63K	• •) H	JPI 3	300	
	(Flange	rating)	2		16K			IS 40K		8		1 600		E		NSI 15		K	JPI 6		
			3	JIS	20K		6 A	NSI 1	50	Α	JIS	5K		G	JF	ย 150					
		①					_												phragm	_	
		Fiang	ge size		1 1	nge typ	e (1/2″)											60 ©	80 ©		110
					2		(3/4")											0	0		0
					3	25A	(1″)											0	0		0
					4		(1 1/4											0	0		0
					5 6	50A	(1 1/2 (2")	″)										×	×		0
					7		(2 1/2	″)										×	×		0
					Α	10A	(3/8″)											0	0		×
			2			1	RF			4	GF				7	RJ					
			Flang	ge mou	inting	3	FF MF			5 6	TF FMF										
				(3)		3	2	S250		U	i-ivii-				K	S250	C + Ca	outcho	uc lining	5	
				Wett	ted parts	S	3	SUS						_	S				Note1		
				mate (Low	erial øer flang	e)	4	SUS							Т			ne [No			
				,			E F			iss linin FE linin				_	X Y			PTFE I			
							G			P coatir					1 1				ene [®] lini	ing	
							J			oprene®	_	:		_	ウ				chouc lin		
						4								F	luid	temper	ature r	ange (°	C)		
	Please s diaphrag					Diap diam	hragm eter				For	-30 cryogenia	to -4	erature	For	-5 t cryoger	o 100		10 For medi	1 to 23	
	well as p	oressure	e range						6	φ60	0	to 2.5, 3.		oratare	0	to 1.5, 2	2, 2.5, 3		0 to 2.5		crataro
l	and engi	neering	g unit.						8	(1 conta φ80		to 0.4, 0.	6. 1.	1.5. 2		to 0.2, 0		. 0.6. 1	0 to 0.4	. 0.6. 1.	1.5. 2
						(1				(1 conta	ontact) -0				.1 to 0.2						
							6 (1				ntact) -0.1 t					to 0.1 0.1 to 0,	0.1		0 to 0.1	, 0.2, 0.	3
											60 0 to 3.5, 5 0 to 2, 2.5 tacts) 0 to 2, 2.5					5, 3.5, 5	5	0 to 3.5	, 5		
									8	φ 80 (2 conta	0	to 0.6, 1,	1.5,	2, 2.5	0	to 0.3, 0			0 to 0.6	, 1, 1.5,	2, 2.5
						(MPa	1)		9	φ11	0 0	to 0.1, 0.	2, 0.3	3, 0.4	0	to 0.1, (0.2		0 to 0.1	, 0.2, 0.	3, 0.4
										(2 conta		316 + F	FP	lined	-0	.1 to 0,			y [®] B eo	nuivaler	nt
							⑤ Diap	hragm		2		316 + F			ng				y [®] C-2	<u>. </u>	
							mate	erial		3	SUS							Tantalui	m		
										4	SUS					_		Nickel	C + N) (to)
										5 6	Mone Titar						J	505316	6 + Neo	prene	imea
	turing rang ım gauge,		und gau	uge are	e not av	ailable	to	(6)			2		dard	S250)						
lined o	diaphragm.							_	er flange	Э	3	SUS	316								
·Note 1	I: Flange r							паце				0	NIII	(For	cryc	genic t	omno-	aturo)			
	Material Flange r	nountin	g: FF (Flat fa	ce) flan	ge			7 For n	nedium		В							er to 23	80°C)	
	Flange r (Diaphra						5 40A		temp	erature											
	Range n			ure: φ		, 1MPa				8			0		lil	!!					
	Operation			range:	0 to 60	0°C 0 to				Treat	inent		2	_		no oil no wate	er				
	ANSI, JI	-I 1/2E	3 150 is	s not a	vailable								3			o oil &					
·Please	e specify fi	lled liqu	uid, lead	d type	and len	gth sep	arately	' .		9100	1)(12)			M 1	1				with JM co	ntact (1 c	ontact)
	Iditional sp	ecifica	tions]					orderin			ator ga ator m			M 1					with JM co		
•Filled Sta	liquid andard Fo	or cryos	genic te	empera	ture: Si	licone	pleas	e conta				/		M 2		_			with JM co with JM co		
·Lead					re: D0		NKS.				(13)			_	1		ral use				,
SU	JS316, SU				, SUS +	⊦ Vinyl	corruga	ated tub	e		Indic		oricl		3	Corro	sion-p	roof us	е		
	n (Please s For the o	details,	please	refer t		eparatel	y page	.)				ent mat	erial		1	Dira	t tues				
	diator tube		00-D,				-				①4 Cons	struction	1		2		t type ote typ	e			
	rration pro																		lead typ	oe and	length.
	re range 0										15			_	0	Nil					
Please	contact u	s it will	be a sp	oecial :	specific	ation.					Docu	uments			1	Requ (Please		the desi	red docum	ents sepa	arately.)
	aution									\neg						Subn	nission	drawing	s, instruc ure, mill	ction ma	
	the pr									ן ו						test	report	(1 pc 1	copy), ability c		
press	sure ga	s, alv	ways	cons	suit i\	ıks b	etor	enand	ג.	╛						stren	gth cal	culation	, attende	d inspec	tion
* Specif	y by code	"X" if	there i	s no a	nnlicah	ile spe	cificati	on		*	When	a stren	gth	calcu	latio	n repo	rt is n	ecessa	ary, plea	se req	uest it.

^{*} Specify by code "X" if there is no applicable specification.



	Model																			
S	2 3		_				_						J	N	1					
Diaphragm-seal ty					2	3		4	(5)	6	7	8	9			1) (12)	13	(14)	15	
electric contacts			ge type				1	Colo	otivo o	200		٨٨	ditions	al ana	o (On	tion\				
Model	numbe	er 1	JIS	10K		4 J	IS 30K		ctive s		300	Add	B	JIS 6	с. (Ор 3К	tion)	JPI 3	300		
(Flange	rating)	2		16K			IS 40K		8		SI 600		Е		1500	K	JPI 6			
		3	JIS	20K		6 A	NSI 15	50	Α	JIS	5K		G	JPI 1	50					
	① Flans	ge size		Fla	nge typ	oe										60	phragm 80		er 110	
				5		(1 1/2	″)									0	×		×	
				6	50A		"									0	0		×	
				7	80A	(2 1/2	″)									0	0		×	
				В	_	(3 1/2	″)									0	0		0	
				С		۹ (4″)										0	0		0	
		② Elano	ge mou	ınting	2	RF FF			4 5	GF TF			7	R	J					
		1 Idile	56 11100	11 1111 16	3	MF			6	FMF	=									
			3			2	S250						J			Neoprene				
			Wett	ted parts erial	S	3	SUS						K			Caoutcho + FEP c		3		
				er flang	ge)	4 E	SUSC S250	316L C + Glas	ss linin	g			Y 1			+ FEP c + Neopre		ing		
						G		+ FEF					ウ			+ Caoute				
					(4) Diam	la a. aa.							Flu			e range (4		
	specify agm dian			→	Diap diam	hragm eter				For	-30 f r cryogenic	to -4 tempe	erature		-5 to 10 ogenic te	00 mperature	10 For medi	1 to 23 um temp		
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	0	0						8	φ80	0	to 0.4, 0.	6, 1, 1	.5, 2	0 to 0	.2, 0.3, 0	0.4, 0.6, 1	0 to 0.4	, 0.6, 1,	1.5, 2	
	9 \$\phi\$110 0 to 0.1, 0.2, 0.3 0 to							0 to 0												
									(1 conta φ 60	0 0 to 3.5, 5					-0.1 to 0, 0.1 0 to 2, 2.5, 3.5, 5 0 to 3.5, 5					
					8				(2 contac φ 80	ntacts) -0.1					2	0.6, 1, 1.5	0 to 0.6		2.25	
									(2 contac	(tacts) -0.1 to 0.3, 0.4										
					(MPa) 9				(2 contac	tacts) -0.1 to 0, 0.										
						⑤ Dian	hragm		2	SUS316 + FEP lined 7 SUS316 + FEP coating 8						Hastelloy [®] B equivalent Hastelloy [®] C-276 equivalent				
						mate			3	SUS316 + FEP coating 8 SUS316 A						Tantalum				
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									5 6	Mon Titar					J	SUS31	6 + Neo	prene [®]) lined	
							(6)		U	2	_	dard	S25C							
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							mate	_			0	Niil	(Eor or	vogon	io tomo	erature)				
								⑦ For m	edium		В					e (100 o	ver to 23	80°C)		
[Manufacturing ra	ngel							tempe	erature											
·Vacuum gauge		ound ga	uge ar	e not av	/ailable	to line	d diaph	ragm.	® Treat	ment		0	Nil	e no o	il					
·Please specify	filled lic	quid, lea	d type	and ler	ngth se	paratel	y.		rical	TICITE		2	_	e no w						
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Other additional Filled liquid	specifica	ations]			1/	Vhen o	rdering t	the	910(1 Indica	1)12 ator ga	al IQO		M 1 1 M 1 6			sure gauge				
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For med					p	nease (contact	INNO.				JI	M 2 6	_		sure gauge	with JM co	ntact (1 c	contact)	
·Lead SUS316, S				e, SUS	+ Vinyl	corrug	ated tub	oe .		① India	cator		3		eneral u	use n-proof us	se.			
Option (Please For the	specify details			to the s	eparate	ely page	∍.)				nent mat	erial			J.1 J.J.IUI	. p. 501 us				
Radiator tu Dampener		400-D,								14)			1		rect typ					
Serration p										Con	struction	1	2		emote t ease sp	ype becify the	e lead tyr	oe and	length.	
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When the pressure g	oressi								ו					S ir te ir	ubmissionspections est reponspections reponspections	on drawing on procedure of the procedure of the procedure of tracedulation on the procedure of the procedure	gs, instruc dure, mill 1 copy), eability c	sheet, ertificat	inual, te,	
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^{*}Specify by code "X" if there is no applicable specification.

SC__

Diaphragm-Seal type Pressure Switch

(CQ30, CD30 Bourdon tube type for low, medium and high pressure)

Specification

Fluid:

High corrosion and high viscosity fluid

Type:

Remote type, Direct type (Option)

Mounting system:

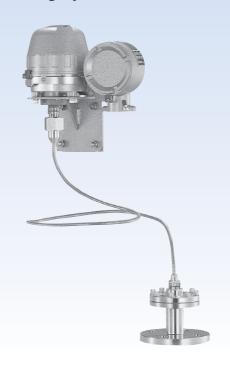
Screw type, Flange type

Accuracy:

±1.0%F.S./ Normal temperature (However, provided by constant temperature)

Operating temperature range:

CQ30 -20 to 60°C CD30 -5 to 40°C



Indicator

Pressure switch:

Pressure switch (Model: CQ30)
Explosion-proof construction pressure switch (Model: CD30)

Mounting:

Panel mounting, 2B pipe mounting

Main materials:

Socket SCS14
Bourdon tube SUS316

Case materials, Finish:

ADC12

·Gray crystal paint (CD30)

or two-tone (Blue, Gray) epoxy painted (CQ30)

Case construction:

Waterproof, drip-proof or outdoor type

*For details, refer to the catalog of each pressure switch.

Diaphragm, Filled liquid

Diaphragm diameter:

φ40, φ60, φ80, φ110

*Determined by the temperature of pressure range and fluid.

Diaphragm material:

For the material of the upper and lower flange, diaphragm, etc., refer to diaphragm-seal pressure gauge and differential pressure gauge (Switch) catalog diaphragm seal part 2 column.

Filled liquid:

Silicone oil

-30 to 230°C

Note: Vacuum gauge, Compound gauge are available in only temperature range -5 to 100°C.

*Daifloil[®], glycerine aqueous liquor and propylene-glycol are also available.

Please contact us.

(However, the temperature range varies.

The vacuum, compound gauge except silicone oil for cryogenic temperature cannot be used.)

Maximum lead length:

In case of remote type

2m to 10m (Depends on the range)



Specification

Diaphragm diameter, proof-pressure and temperature coefficient (Pro forma amount):

Diaphragm diameter	Diaphragm parts proof-pressure (MPa)	Switch parts temperature coefficient (%F.S./°C)	Lead parts temperature coefficient (Pa/°C/m)	Wetted parts temperature coefficient (Pa/°C)
φ110	0.5	-0.2	15	50
φ80	1.5	-0.2	30	100
φ60	5	-0.1	150	250
φ 40	15	-0.1	1500	5000

^{*}For titanium and other low strength material and when the contact temperature is high, the diaphragm parts proof-pressure is lower than this value.

Selecting the pressure and temperature range and diaphragm diameter: (When maximum lead length is remote type)

Fluid temperature range	Less than	-30 to -5°C	-5 to	100℃	100 over	to 230°C
Pressure range MPa	Diaphragm diameter	Maximum lead length	Diaphragm diameter	Maximum lead length	Diaphragm diameter	Maximum lead length
0 to 0.2	φ110	6m	φ80	6m	φ110	6m
to 0.4	φ80	6m	φ80	8m*1	φ80	6m
to 0.6	φ80	6m	φ60	6m	φ80	6m
to 1	φ80	6m	φ60	10m	φ80	6m
to 1.5	φ60	2m	φ60	10m	φ60	2m
to 2	φ60	2m	φ60	10m	φ60	2m
to 2.5	φ60	2m	φ60	10m	φ60	2m
to 3.5	φ60	2m	φ60	10m	φ60	2m
to 5	φ60	2m	φ60	10m	φ60	2m
to 7	φ40	2m	φ40 2m		φ40	2m
to10	φ40	2m	φ40	2m	φ40	2m
to15	φ40	2m	φ40	2m	φ40	2m
-0.1 to 0.2	_	_	φ80	6m	_	_
to 0.4	_	_	φ80	8m*1	_	_
to 0.6	_	_	φ60	6m	_	_
to 1	_	_ _		10m	_	_
to 1.5	_			φ60 10m		_
to 2	_	_	φ60	10m	_	_

^{*1} CQ30 is 6m.

Installation shape and selecting the installation size by diaphragm diameter:

Mounting system				Screw type					
Diaphragm diameter	φ	40	φ	60	φ	80	φ1	10	φ40, φ60, φ80, φ110
Mountin	g Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 200 (SC2□)	Model 300 (SC3□)	Model 100 (sc1□)
10A (3/8")	0	_	0	_	0	_	0	_	
15A (1/2")	0	_	0	_	0	_	0	_	
20A (3/4")	0	_	0	-	0	_	0	_	G3/8B
25A (1")	_	0	0	-	0	_	0	_	G1/2B
32A (1 1/4")	_	0	0	_	0	_	0	_	R3/8
40A (1 1/2")	_	0	_	0	0	_	0	_	R1/2
50A (2")	_	0	_	0	_	0	0	_	1/2NPT
65A (2 1/2")	_	_	_	0	_	0	0	_	3/8NPT
80A (3″)	_	_	_	0	_	0	_	0	
100A (4")	_	_	_	0	_	0	_	0	

^{*}Proof-pressure of the instrument is proof-pressure of the switch (1.5 times the pressure range) or the diaphragm, whichever is lower.

^{*}Please specify the lead length in 1m increments.



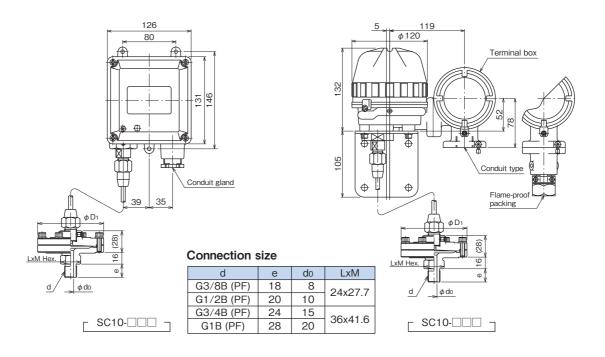
Dimensions Unit: mm

Standard (Model: SC□□)

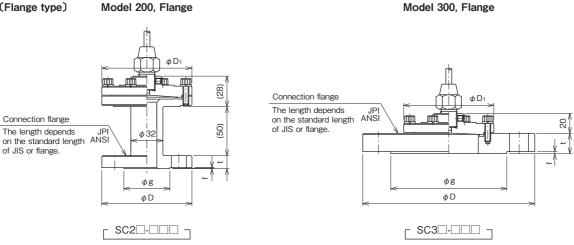
(Screw type) Model 100, Screw

CQ30 Pressure switch

CD30 Explosion-proof construction pressure switch



(Flange type) Model 200, Flange



Indicator size

Model number (Indicator)	Mounting
CQ30-□□3	Panel mounting
CD30-□□3	Panel mounting
CD30-	2B pipe mounting

Pressure receiver diameter (ϕ D1) size

Diaphragm diameter	φD1
φ40	φ70
φ60	φ90
φ80	φ110
φ110	φ140

- Please contact NKS about the dimension of the CQ30 direct (Option) For the details of the indicator dimension, please refer to the catalog
- of each pressure switch.

SC__

Diaphragm-Seal type Pressure Switch

(CB33, CD75 Bellows type for low and medium pressure)

Specification

Fluid:

High corrosion and high viscosity fluid

Type:

Remote type

Mounting system:

Screw type, Flange type

Accuracy:

±0.5%F.S./ Normal temperature (However, provided by constant temperature) (CB33) ±1%F.S./ Normal temperature (However, provided by constant temperature) (CD75)

Response speed:

Within 15 seconds

Operating temperature range:

-5 to 40°C



Indicator

Pressure switch:

Pressure switch (Model: CB33) Explosion-proof construction pressure switch (Model: CD75)

Mounting:

Panel mounting, 2B pipe mounting

Main materials:

Socket SUS316 Bellows SUS316L

Number of contacts:

1 contact or 2 contacts

Setting system:

Internal adjustment type

Case materials, Finish:

ADC12 or AC7A

·Two-tone (Blue, Gray) epoxy painted

Case construction:

Drip-proof or outdoor type

*For details, refer to the catalog of each pressure switch.

Diaphragm, Filled liquid

Diaphragm diameter:

 ϕ 60, ϕ 110

*Determined by the temperature of pressure range and fluid.

Diaphragm material:

For the material of the upper and lower flange, diaphragm, etc., refer to diaphragm-seal pressure gauge and differential pressure gauge (Switch) catalog diaphragm seal part 2 column.

Filled liquid:

Silicone oil -5 to 100℃

Maximum lead length:

2m to 8m (Depends on the range)



Specification

Pressure range, diaphragm diameter, proof-pressure and temperature coefficient (Pro forma amount):

Pressure range MPa	Diaphragm diameter	Diaphragm parts* proof-pressure (MPa)	Maximum lead length	Pressure switch parts ambient temperature coefficient (Lead include) (%max. P./°C)	Wetted parts temperature coefficient (Pa/°C)	
0.04 to 0.4	φ110	3	2m	-0.1		
0.06 to 0.6	φ110	3	3m	-0.1		
0.1 to 1	φ110	3	8m	-0.1	F0	
0.15 to 1.5	φ110	3	8m	-0.07	-50	
0.2 to 2	φ110	3	8m	-0.07		
0.3 to 3	φ110	3	8m	-0.07		
0.5 to 5	φ60	15	5m	-0.07		
0.7 to 7	φ60	15	5m	-0.07	-250	
1 to 10	φ60	15	5m	-0.07		

^{*}For titanium and other low strength material and when the contact temperature is high, the diaphragm parts proof-pressure is lower than this value.

Please specify the lead length in 1m increments.

Installation shape and selecting the installation size by diaphragm diameter:

Mounting system		Flang	e type		Screw type
Diaphragm diameter	φ	60	φ1	10	φ60, φ110
Mounting Nominal diameter	Model 200 (HH2□)	Model 300 (HH3□)	Model 200 (HH2□)	Model 300 (HH3□)	Model 100 (HH1□)
10A (3/8")	0	_	0	_	
15A (1/2")	0	_	0	_	
20A (3/4")	0	_	0	_	
25A (1")	0	_	0	_	G3/8B
32A (1 1/4")	0	_	0	_	G1/2B
40A (1 1/2")	0	_	0	_	R3/8
50A (2")	0	_	0	_	R1/2
65A (2 1/2")	_	0	0	_	1/2NPT
80A (3")	_	0	0	_	3/8NPT
100A (4")	_	0	0	0*	
125A (5")		0	_	0	
150A (6″)	_	0	_	0	

^{*}Nominal diameter 100A is available, in case of the nominal pressure 30K or higher.

^{*}Proof-pressure of the instrument is proof-pressure of the switch (1.5 times the pressure range) or the diaphragm, whichever is lower.



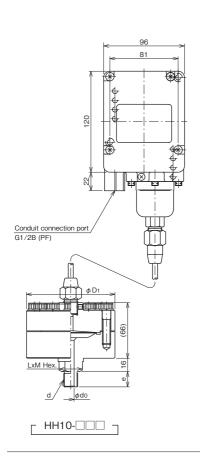
DimensionsUnit: mm

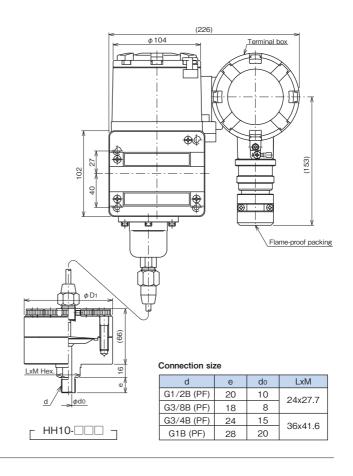
High proof-pressure type (Model: HH□□)

(Screw type) Model 100, Screw

CB33 Pressure switch

CD75 Explosion-proof construction pressure switch

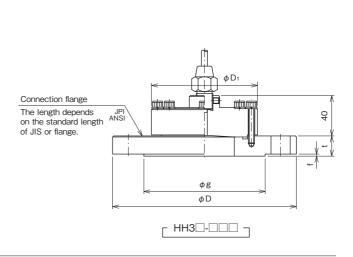






Connection flange
The length depends on the standard length of JIS or flange.

Model 300, Flange



Indicator size

Model number (Indicator)	Mounting
CB33-□□3	Panel mounting
CD75-3□□	Panel mounting
CD75-7□□	2B pipe mounting

Pressure receiver diameter (ϕ D1) size

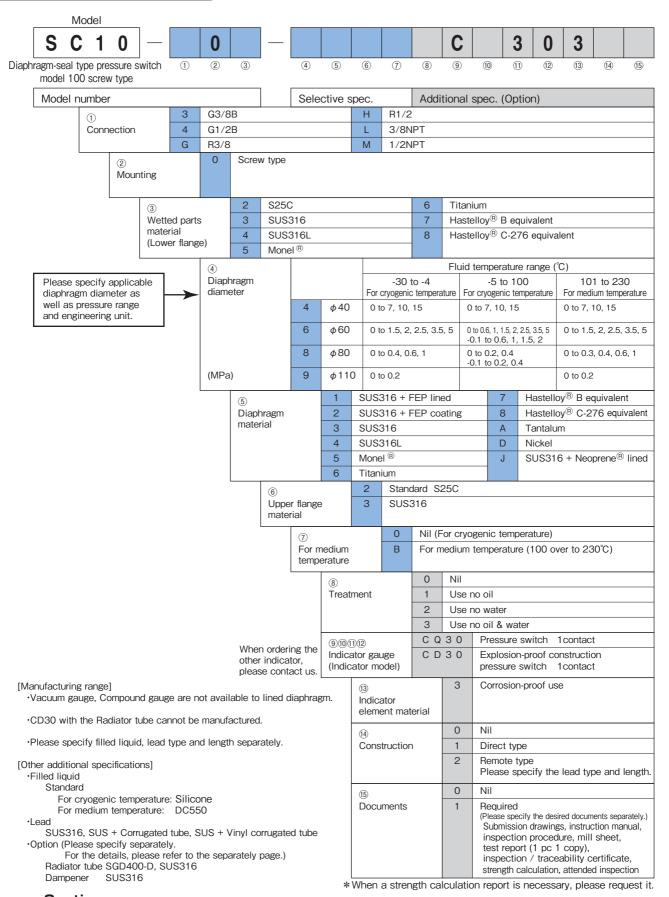
Diaphragm diameter	φD1
φ60	φ105
φ110	φ155

^{*}For the details of the indicator dimension, please refer to the catalog of each pressure switch.

Diaphragm-Seal type Pressure Switch

Model number configuration

For ordering, please specify the model number, each specs and the range.



Caution

When the pressure gauge is to be used with a high pressure gas, always consult NKS beforehand.

^{*}Specify by code "X" if there is no applicable specification.



	N	1odel																		
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Diaph	ragm-seal t model 20			witch	1	2	3	J	4)	(5)	6	7	8	9	10	(1)	(12)	13	(14)	(15)
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 * Specify by code "X" if there is no applicable specification.



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 * Specify by code "X" if there is no applicable specification.

SC___ Diaphragm-Seal type Differential Pressure Gauges

(Differential Pressure Gauges with Electric Contacts)

Specification

Fluid:

High corrosion and high viscosity fluid

Type:

Remote type

Mounting system:

Screw type, Flange type

Accuracy:

±1.5%F.S./ Normal temperature (However, provided by constant temperature)

Operating temperature range:

-5 to 40°C

Indicator

Pressure indicator gauge:

Differential pressure gauge (Model: DG95, 96) Differential pressure gauge with contacts (Model: DG97, 98)

Size:

φ100, φ150

Mounting:

Surface mounting, 2B pipe mounting

Main materials:

Body SCS14 Bellows SUS316L



Number of contacts: (DG97, 98) 1 contact or 2 contacts

Type of contact: (DG97, 98) External adjustment type

Case materials, Finish:

ADC12, Black

*For details, refer to the catalog of differential pressure gauges.

Diaphragm, Filled liquid

Type: Determined by the operating pressure (Maximum operating pressure)

Standard type (0.5MPa) (Model: SC) High proof-pressure type (2MPa) (Model: HD)

High proof procesure fully wolded type (EMDa)

High proof-pressure fully welded type (5MPa)

(Model: HE□□)

Diaphragm diameter:

φ110

Diaphragm material:

For the material of the upper and lower flange, diaphragm, etc., refer to diaphragm-seal pressure gauge and differential pressure gauge (Switch) catalog diaphragm seal part 2 column.

Filled liquid:

Silicone oil -5 to 100°C

Maximum lead length:

2m (Please indicate the length in 1m increments)

Note: ·Always install a diaphragm-seal section at both the H and L sides, to make the temperature difference small.
·Make the diaphragm-seal section the same height at the H and L sides.

(If there is a level difference, the correct differential pressure will not be displayed.)



Specification

Differential pressure range, single withstand pressure and temperature coefficient (Pro forma amount):

Differential pressure range MPa	Single withstand pressure (Differential proof-pressure) (MPa)	Indicator temperature coefficient (Lead include) (%F.S./°C)	Diaphragm temperature coefficient (H, L same temperature) (Pa/°C)			
0 to 0.05	0.2	±0.15				
to 0.07	0.2	±0.15	1			
to 0.1	0.2	±0.1	±50			
to 0.15	1.2 *1	±0.1				
to 0.2	1.2 *1	±0.1				
to 0.3	1.2 *1	±0.1				
to 0.4 1.2 *1		±0.1				
to 0.5	1.2 *1	±0.1				

^{*1 0.5}MPa in case of the diaphragm SC type

Installation shape and selecting the installation size by diaphragm diameter:

Mounting system		Screw type						
Mounting	Mode	1 200	Mode	I 300	Model 100			
*2 Type Nominal diameter	Standard (SC2□) High proof-pressure (HD2□)	High proof-pressure fully welded (HE2□)	Standard (SC3_) High proof-pressure (HD3_)	High proof-pressure fully welded (HE3□)	Standard (SC1 High proof-pressure (HD1 Proof-pressure fully welded (HE1			
10A (3/8")	0	\circ	_	_				
15A (1/2")	0	0	_	_				
20A (3/4")	0	\circ	_	-				
25A (1")	0	0	_	_	G3/8B			
32A (1 1/4")	0	0	_	-	G1/2B			
40A (1 1/2")	0	0	_	_	R3/8			
50A (2")	0	0	_	_	R1/2			
65A (2 1/2")	0	0	_	_	1/2NPT			
80A (3")	_	0	0	_	3/8NPT			
100A (4")	_	0	0	_				
125A (5″)	_	_	0	0				
150A (6″)	_	_	0	0				

^{*2} Please select the diaphragm type from the pressure (Standard pressure + differential pressure) which must be used.

[·]Standard type (Model: SC□□): Maximum operating pressure 0.5MPa

[·]High proof-pressure type (Model: HD \square): Maximum operating pressure 2MPa

 $[\]cdot \text{High proof-pressure fully welded type (Model: HE $\square\square$): Maximum operating pressure 5MPa}$

st Please indicate the actual maximum operating pressure certainly.

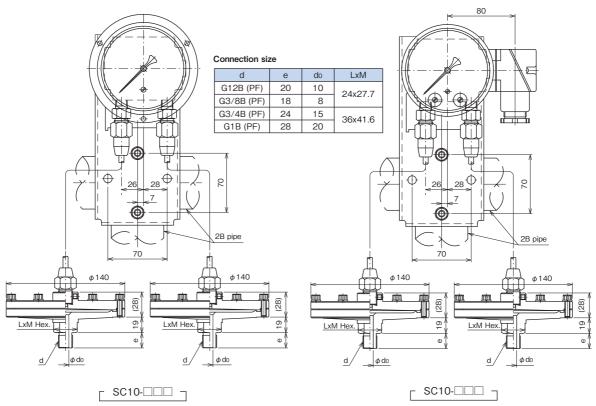


Standard type (Model: SC□□)

(Screw type) Model 100, Screw

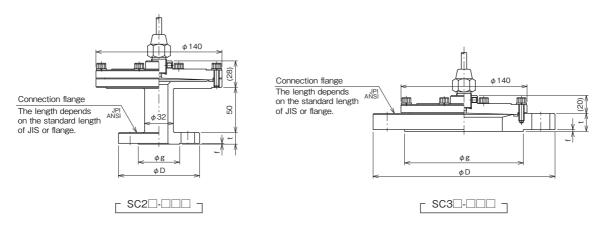
DG95, 96 Differential pressure gauge

DG97, 98 Differential pressure gauge with contacts



(Flange type) Model 200, Flange

Model 300, Flange



	Mounting	Size	Model number (Indicator)	Reference drawing
	2B pipe	100	DG95-W01	DG95-173
General	mounting	150	DG96-W01	DG96-173
indication	Surface	100	DG95-W02	DG95-273
	mounting	150	DG96-W02	DG96-273
	2B pipe	100	DG97-W01	DG97-173
With contacts	mounting	150	DG98-W01	DG98-173
	Surface	100	DG97-W02	DG97-273
	mounting	150	DG98-W02	DG98-273

^{*}For the details of the indicator dimension, please refer to the catalog of each differential pressure gauge.

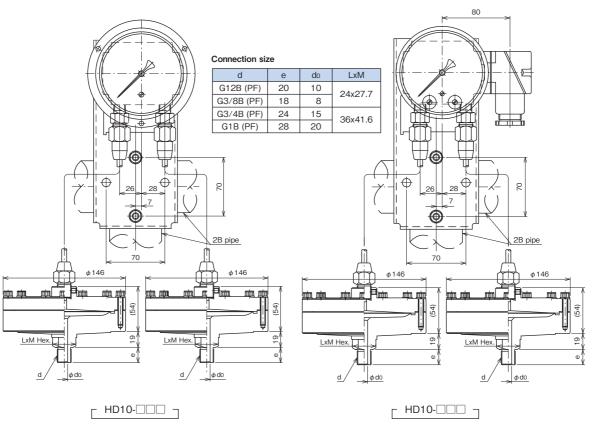


High proof-pressure type (Model: HD□□)

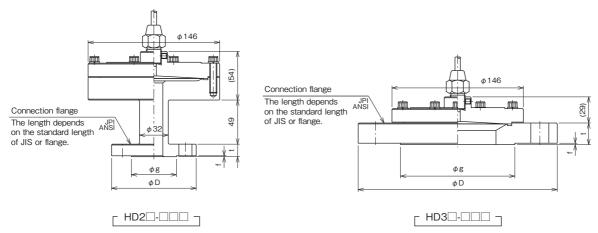
(Screw type) Model 100, Screw

DG95, 96 Differential pressure gauge

DG97, 98 Differential pressure gauge with contacts







	Mounting	Size	Model number (Indicator)	Reference drawing
	2B pipe	100	DG95-W01	DG95-173
General	mounting	150	DG96-W01	DG96-173
indication	Surface	100	DG95-W02	DG95-273
	mounting	150	DG96-W02	DG96-273
	2B pipe	100	DG97-W01	DG97-173
With contacts	mounting	150	DG98-W01	DG98-173
	Surface	100	DG97-W02	DG97-273
	mounting	150	DG98-W02	DG98-273

^{*}For the details of the indicator dimension, please refer to the catalog of each differential pressure gauge.



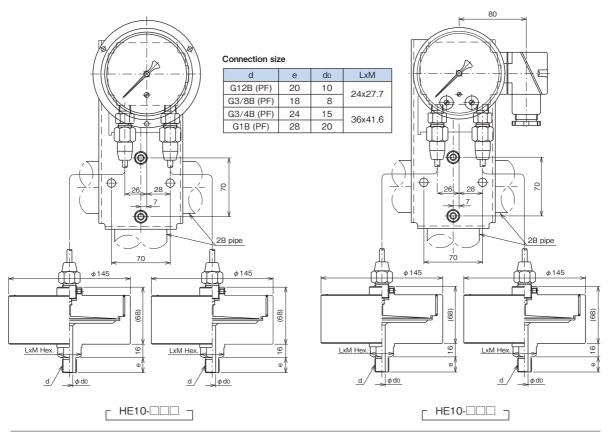
High proof-pressure fully welded type (Model: HE□□)

(Screw type) Model 100, Screw

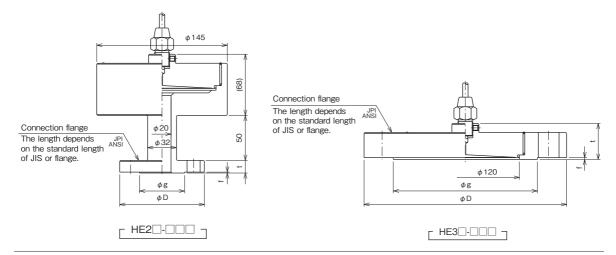
DG95, 96 Differential pressure gauge

DG97, 98 Differential pressure gauge with contacts

Model 300, Flange



(Flange type) Model 200, Flange



	Mounting	Size	Model number (Indicator)	Reference drawing
	2B pipe	100	DG95-W01	DG95-173
General	mounting	150	DG96-W01	DG96-173
indication	Surface	100	DG95-W02	DG95-273
	mounting	150	DG96-W02	DG96-273
	2B pipe	100	DG97-W01	DG97-173
With contacts	mounting	150	DG98-W01	DG98-173
	Surface	100	DG97-W02	DG97-273
	mounting	150	DG98-W02	DG98-273

^{*}For the details of the indicator dimension, please refer to the catalog of each differential pressure gauge.

SC___ Diaphragm-Seal type Differential Pressure Switch

Specification

Fluid:

High corrosion and high viscosity fluid

Type:

Remote type

Mounting system:

Screw type, Flange type

Accuracy:

±1.5%F.S./20°C±10°C

Operating temperature range:

-5 to 40°C



Indicator

Differential pressure switch:

Differential pressure switch

(Model: CL71)

Explosion-proof construction differential pressure switch

(Model: CD71)

Mounting:

Panel mounting, 2B pipe mounting

Main materials:

Diaphragm SUS316 + NBR (Beech N)

Body SCS14

Number of contacts:

1 contact or 2 contacts

Setting system:

Internal adjustment type

Case materials, Finish:

ADC12 ·Blue/ Gray two-tone epoxy painted

Case construction:

IP65

*For details, refer to the catalog of differential pressure switch.

Diaphragm, Filled liquid

Type: Determined by the operating pressure (Maximum operating pressure)

Standard type (0.5MPa) (Model: SC)

High proof-pressure type (2MPa) (Model: HD__)

High proof-pressure fully welded type (5MPa)

(Model: HE□□)

Diaphragm diameter:

φ110

Diaphragm material:

For the material of the upper and lower flange, diaphragm, etc., refer to diaphragm-seal pressure gauge and differential pressure gauge (Switch) catalog diaphragm seal part 2 column.

Filled liquid:

Silicone oil -5 to 100°C

Maximum lead length:

2m (Please indicate the length in 1m increments)

Note: •Always install a diaphragm-seal section at both the H and L sides, to make the temperature difference small.

•Make the diaphragm-seal section the same height at the H and L sides.

(If there is a level difference, the correct differential pressure will not be displayed.)



Specification

Differential pressure range and temperature coefficient (Pro forma amount):

Differential pressure range MPa	Differential pressure switch parts temperature coefficient (Lead include) (%F.S./°C)	Wetted parts temperature coefficient (H, L same temperature) (Pa/°C)
* 0 to 0.05	±0.2	
0.01 to 0.05	±0.2	
0.02 to 0.1	±0.15	
0.04 to 0.2	±0.1	
0.06 to 0.3	±0.1	±50
0.08 to 0.4	±0.1	
0.1 to 0.5	±0.1	
0.12 to 0.6	±0.07	
0.16 to 0.8	±0.07	
0.2 to 1	±0.07	

For ranges with the * mark, use the 0.01 to 0.05MPa range as much as possible. In addition, * mark ranges can be set near differential pressure 0 for both lower limit system and reverse lower limit system. However, take into account that the instrument has an inherent accuracy, temperature coefficient, etc. and that the operating pressure of the switch changes and decide the set point by forecasting an ample system safety factor.

Installation shape and selecting the installation size by diaphragm diameter:

Mounting system		Flang	e type	Screw type				
Mounting	Mode	I 200	Mode	1 300	Model 100			
*Type Nominal diameter	Standard (SC2□) High proof-pressure (HD2□)	High proof-pressure fully welded (HE2□)	Standard (SC3□) High proof-pressure (HD3□)	High proof-pressure fully welded (HE3□)	Standard (SC1□) High proof-pressure (HD1□) Proof-pressure fully welded (HE1□)			
10A (3/8")	0	0	_	_				
15A (1/2")	0	0	_	_				
20A (3/4")	0	0	_	_				
25A (1")	0	0	_	_	G3/8B			
32A (1 1/4")	0	0	_	_	G1/2B			
40A (1 1/2")	0	0	_	_	R3/8			
50A (2")	0	0	_	_	R1/2			
65A (2 1/2")	0	0	_	_	1/2NPT			
80A (3")	_	0	0	_	3/8NPT			
100A (4″)	_	0	0	_				
125A (5")	_	_	0	0				
150A (6")	_	_	0	0				

^{*} Please select the diaphragm type from the pressure (Standard pressure + differential pressure) which must be used.

[·]Standard type (Model: SC□□): Maximum operating pressure 0.5MPa

[·]High proof-pressure type (Model: HD□□): Maximum operating pressure 2MPa

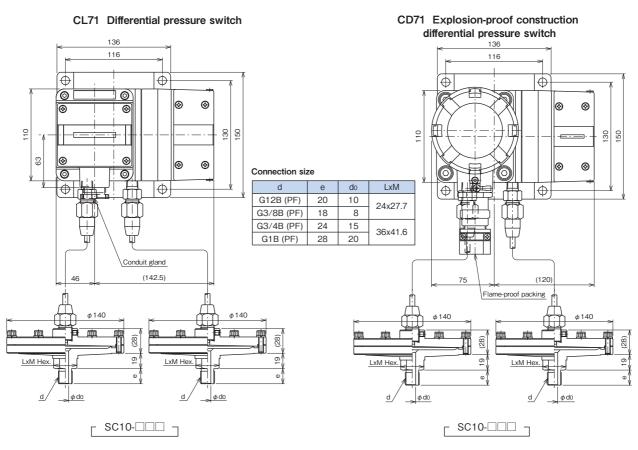
 $[\]cdot$ High proof-pressure fully welded type (Model: HE \square): Maximum operating pressure 5MPa

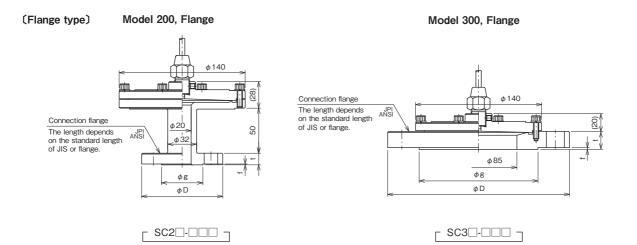
^{*} Please indicate the actual maximum operating pressure certainly.



Standard type (Model: SC□□)

(Screw type) Model 100, Screw





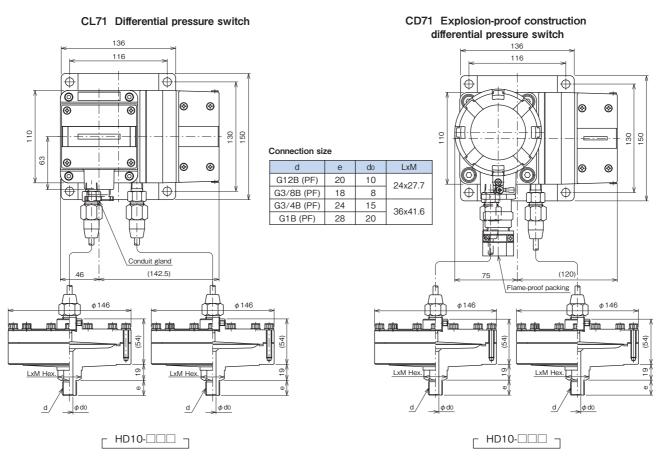
Model number (Indicator)	Mounting
CL71-173	Panel
-273	mounting
CL71-373	2B pipe
-473	mounting
CL71-373	Panel
-473	mounting
CL71-773	2B pipe
-873	mounting

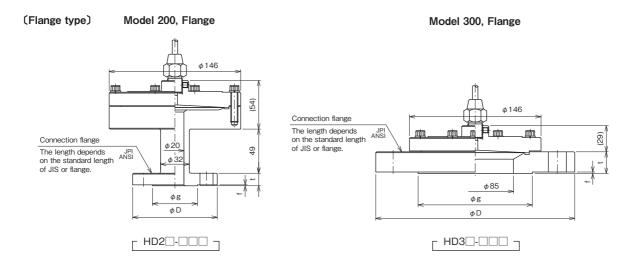
^{*} For the details of the indicator dimension, please refer to the catalog of each differential pressure switch.



High proof-pressure type (Model: HD□□)

(Screw type) Model 100, Screw





Model number (Indicator)	Mounting
CL71-173	Panel
-273	mounting
CL71-373	2B pipe
-473	mounting
CL71-373	Panel
-473	mounting
CL71-773	2B pipe
-873	mounting

^{*} For the details of the indicator dimension, please refer to the catalog of each differential pressure switch.

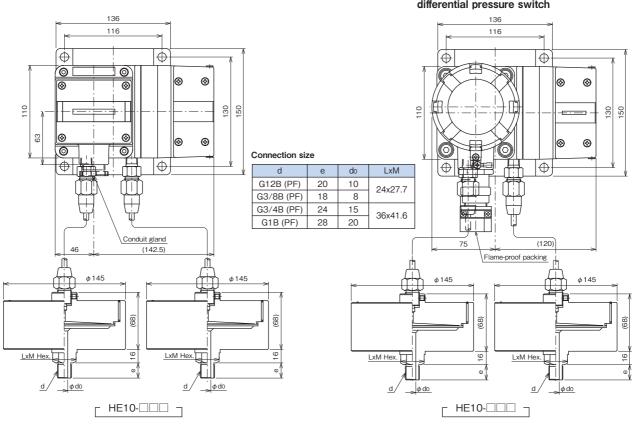


High proof-pressure fully welded type (Model: HE□□)

(Screw type) Model 100, Screw

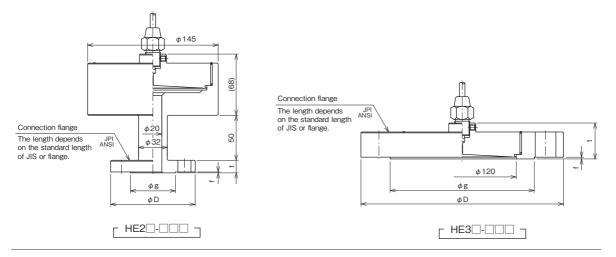
CL71 Differential pressure switch

CD71 Explosion-proof construction differential pressure switch



(Flange type) Model 200, Flange

Model 300, Flange



Model number (Indicator)	Mounting
CL71-173	Panel
-273	mounting
CL71-373	2B pipe
-473	mounting
CL71-373	Panel
-473	mounting
CL71-773	2B pipe
-873	mounting

^{*}For the details of the indicator dimension, please refer to the catalog of each differential pressure switch.

For ordering, please specify the model number, each specs and the range.

Model																		
S C 1 0		0		_	9			0						3	2			
aphragm-seal type differential pressure ferential pressure switch model 100 sc		2	3		4	(5)	6	7	8	9	10	11)	12	13	14)	(15)		
Model number	···]	Sele	ctive	spec.		Addi	tional	spec.	(Optio	n)					
(1)	3	G3/8	3B	ı			spec. Additional spec. (Option) H R1/2											
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	G	R3/8					M	1/21	NPT									
② Mour	iting	0	Scre	w type														
	(3)			6	6 Titanium													
	Wetted parts	6	3	SUS	316				7	Haste	elloy®	B equiv	/alent					
	material (Lower flang	<u>e)</u>	4	SUS	316L				8	Haste	elloy®	C-276	equival	ent				
	(LOWER HARB	· · · · · ·	5	Mone														
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			(5)			1	SUS	316 +	FEP lin	ed		7 F	lastello	у [®] В е	quivale	nt		
			Diap	hragm		2	SUS	316 +	FEP co	ating	8	3 H	lastello	y [®] C-2	76 equ	ivalen		
			mate	erial		3	SUS						antalun	n				
						4	SUS						lickel		(6			
						5 6	Mone			J SUS316 + Neoprene®						line		
						0	Titanium 2 Standard S25C											
				6 Uppe	er flange	ż	3		316									
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									2		Jse no water							
									3		Use no oil & water							
						1	ator gau	_		φ100 Differential pressure gaug (DG95-W01)								
						(Indic	ator mo	odel)		9 7	φ 100 Differential pressure gauge with contacts (DG97-W01) 1 contact							
									D G	9 6		0 Diffe 96-W0		pressur	e gauge	9		
									D G	98					e gauge 1) 1cor			
				orderin	_				C D	7 1			roof cor pressure		on 1 1cor	ntact		
				e conta					CL	7 1	Differ	ential _l	oressur	e switc	h 1cor	ntact		
[Manufacturing range] •Please specify filled liquid	rately.			13 Indica	ator ent ma	iterial	3	Corro	sion-pi	oof use	Э							
[Other additional specifications of the control of	-	ne					① Cons	tructio	n	2 Re				lead ty	pe and (Ur	length		
·Lead Until 2m							(15)			0	Nil							
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High proof-pressure type (Mo	odel: HD10)					*	When	a strer	ngth ca	lculatio								

High proof-pressure type (Model: HD10) High proof-pressure fully welded type (Model: HE10) has fundamentally the same spec.

^{*}Specify by code "X" if there is no applicable specification.



S C 2 S	Model																						
Disphragm-sed type differential pressure gauges 1		s c	2						_	9			0							3	2		
Model number	Diaphragm-seal type differential pressure gauges, 1 ② 3 4													(8)	9	(1	10)	<u>(11)</u>	(12)			(15)	
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Flarge rating 2														Add	litiona	al spe	ec. (0	ptior	ר)				
Flange size																							
Tange size		(Flange r	ating)															U	K	JPI	500		
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3 25A (1") 4 32A (1 1/4") 5 40A (1 1/2") 6 50A (2") 7 65A (2 1/2") 7 65A (2 1/2") 7 65A (2 1/2") 1 RF			Flang	ge size																			
S																							
1 RF																							
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3 MF 6 FMF					ge mou	unting									7	R	J						
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A SUS316 E S25C + Glass lining											_	_											
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A SUS316L D Nickel										8		•											
Susain the present the prese																				1			
Standard S25C																		_		+ Nec	prene®	lined	
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O Nil (For cryogenic temperature) S									_	er flange)												
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3 Use no oil & water											Treat				-								
Indicator gauge (Indicator model) [Manufacturing range] •Please specify filled liquid, lead type and length separately. [Manufacturing range] •D G 9 7 •D G 9 6 •D G 9 8 •D G 9 6 •D G 9 8																		ater					
[Manufacturing range] •Please specify filled liquid, lead type and length separately. D G 9 7 \$\phi\$ 100 Differential pressure gauge with contacts (DG97-W01) 1 contact D G 9 6 \$\phi\$ 150 Differential pressure gauge (DG96-W01) D G 9 8 \$\phi\$ 150 Differential pressure gauge													ıac	D (9 5				1	oressure	e gauge	€	
[Manufacturing range] •Please specify filled liquid, lead type and length separately. D G 9 6 φ150 Differential pressure gauge (DG96-W01) D G 9 8 φ150 Differential pressure gauge														D (9 7	4	100 I	Differ	ential p				
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For cryogenic temperature: Silicone please contact us. C L 7 1 Differential pressure switch 1 contact		For cryos	genic to	emperat	ture: S	Silicone				-				(
*Lead Until 2m SUS316, SUS + Corrugated tube, SUS + Vinyl corrugated tube Grading		Jntil 2m	SUS -	⊦ Corru	gated t	tube, SL	IS + Vi	nyl cor	rugated	tube		Indica		orial	3	С	·						
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(5) Documents 1 Required					_	menta					-d												
Documents I Hequired (Please specify the desired documents separately Submission drawings, instruction manual,												טטטט	iiiciils	(Please specify the desired documents									
High proof-pressure type (Model: HD2□) High proof-pressure fully welded type (Model: HE2□) has fundamentally the same spec inspection procedure, mill sheet, test report (1 pc 1 copy), inspection / traceability certificate,	High pro	oof-pressur	e fully	welded	type (HE2□)	1								i t i	nspec est rep nspec	tion poort (*) tion /	rocedu 1 pc 1 tracea	re, mill copy), ability c	sheet, ertificat	te,	
*Specify by code "X" if there is no applicable specification. *When a strength calculation report is necessary, please request		•				applical	ole spe	ecificat	ion.		*	When	a stren	gth ca	alcula								



Model																							
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	Model r			31.00 ()					Sele	ective	spec.	Ac	dition	nal sr	nec.	(Ontio	n)						
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	(Flange	rating)	2	JIS	16K		5	JIS 40k	(8	ANSI	600		Е	ANS	SI 15	500	K	JPI	600			
			3	JIS	20K		6 ANSI 150				JIS	5K		G	JPI	150							
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					С	100)A (4"))															
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							1116	ileriai		3 SUS316 4 SUS316L								Tantalum Nickel					
										5 Monel [®]									3 + Nec	prene®	lined		
											6 Titanium												
								6			2	Stan	ndard S25C										
								Uppe	er flange erial	e 3 SUS316 O Nil (For cryogenic temperature)													
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[Other a	additional :	specific	ationsl							9000	1)(12) ator gau	uge		u 9		, .	95-W0		pressur	e gauge	;		
•Filled	d liquid Standard	, , , , , , , ,									cator mo		D	G 9	7					e gauge			
·Lead	For cryo	genic te	empera	ture: S	ilicone								D	G 9		φ150	0 Diffe	rential i		e gauge			
	ı Jntil 2m SUS316	SI 12 -	- Corru	pated t	tuhe SI	IS + \	/invl o	Orri igateo	l tuhe				D	G 9	8	φ150		rential		e gauge			
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High pro	oof-pressu oof-pressu damentally	re fully	welded	type (HE2])				(4) Cons	truction	า	:			ote type se spec		lead ty	pe and (Un	length. til 2m)		
											(15)					Nil							
										(5) Documents						Required (Please specify the desired documents separately Submission drawings, instruction manual, inspection procedure, mill sheet, test report (1 pc 1 copy), inspection / traceability certificate, strength calculation, attended inspection					nual,		
*Speci	fy by cod	e "X" if	there	is no a	applica	ble sp	ecific	ation.		*	When	a strer	ngth	calcu	lation					ase req			