



DG97-98 Differential Pressure Gauge With Contact Switch

OUTLINE

This is a compact differential pressure gauge, to check the pressure difference(differential pressure) between two points. This pressure gauge can also be used for measuring liquid level and flow rate. Reed switches are installed the differential pressure gauge used for measuring equipped with contactors, allowing use for warning and controlling.

FEATURES

- Pressure piping can be connected to either upper side or lower side of this pressure gauge, making the piping work easier.
- Because of the use of the reed switches, the contactors are not effected by the exterior environment, resulting in long life and high reliability. (for DG97 and DG98 models)
- Certified pressure gauges complying with the High Pressure Gas Control Law are also available. (option) (however, they cannot be applied to poisonous gas)

* The base pressure refers to the pressure to be used as the basis out pressures at two points, or a pressure with smaller fluctuation. One-sided pressure tight means the maximum differential pressure.

SPECIFICATION

Model : DG97 · 98 Differential pressure gauge with electric contacts

Fluid : Gas or liquid

Operating condition :

In case of DG97 · 98, Under the normal condition, where there is no inflammable gas and liquid which cause the ignition or explosion.

Installation system :

2B Pipe installation, Wall mounting type

Size : DG97 100 DIA.
DG98 150 DIA.

Connection : Rc1/4 (PT female), 1/4 NPT female

Wetted parts material :

Body SCS14
Bellows 316L st.st.
Gasket NBR

Differential pressure range :

0~5kPa→0~1MPa (0~500mmH₂O→0~10kgf/cm²)

Operating temperature :

Ambient : -5~40°C (Fluid : -20~80°C)

Base pressure :

0~5MPa (0~50kgf/cm²)

One side pressure tight :

0.2~1.2MPa (2~12kgf/cm²)
(Depend on differential pressure range)

Indication accuracy :

±1.5% F.S.
(DG97 · 98 Below 10kPa is ± 2%F.S.)

Case material · finishing :

DG97 · 98 AC7A · Black

Valve-manifold : (Option)

Three-way valve manifold which combined the stop valve for high and low pressure and stop valve. This valve manifold is suitable for checking zero point or zero adjustment during operation and also available to prevent excess differential pressure or reversal differential pressure.

Type No. : FV43-991、FV43-993

Dial scale specified : (Option)

Printed words, colored circle, customer's logo

Weight :

Approx. 2.9 kg~Approx. 4.3 kg

SPECIFICATION 2

Minimum graduation :

Differential pressure range	One side pressure tight	Minimum graduation
0~5kPa (0~500mmH ₂ O)	0.2MPa (2kgf/cm ²)	0.1kPa (10mmH ₂ O)
0~7 (0~700)		0.2 (20)
0~10 (0~1000)		0.2 (20)
0~15 (0~1500)		0.5 (50)
0~20 (0~2000)		0.5 (50)
0~30 (0~3000)	0.4MPa (4kgf/cm ²)	1 (100)
0~40 (0~4000)		1 (100)
0~50 (0~0.5kgf/cm ²)		1 (0.01kgf/cm ²)
0~70 (0~0.7)		2 (0.02)
0~100 (0~1)		2 (0.02)
0~200 (0~2)	1.2MPa (12kgf/cm ²)	5 (0.05)
0~300 (0~3)		10 (0.1)
0~400 (0~4)		10 (0.1)
0~600 (0~6)		20 (0.2)
0~1MPa (0~10)		20 (0.2)

Electrical characteristic (DG97 · 98) :

Switch	Rating	Withstand voltage	Insulation resistance
Reed switch	125V AC 0.2A	Non-continuation terminal interval	500V DC Over 100MΩ Between terminal and case
	200V DC 0.25A 50V DC 1A (Resistance load)	400V AC 1minute Between terminal and case 600V AC 1minute	
Summary			
<ul style="list-style-type: none"> The contact protective circuit is required especially when the inductive load or the other load with a flow of surge current is used as the load of the Reed switch. 200V AC should not be used. 			

DG97 · 98 DIFFERENTIAL PRESSURE GAUGE WITH ELECTRIC CONTACTS VARIOUS SPECIFICATION

Setting accuracy :

± 2 % F.S.

Repeatability :

1 % F.S.

Dead-band :

Fixed. within 5%F.S.

Temperature coefficient :

±0.05% F.S./°C

Switch :

Reed switch

Number of contact :

One contact or two contact

Setting system :

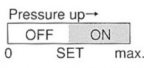
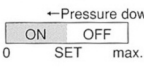
External adjustment type

Outlet for electric wire :

Conduit type PF3/4、PF1/2、
Rc1/2、1/2NPT
Gland JIS 20b

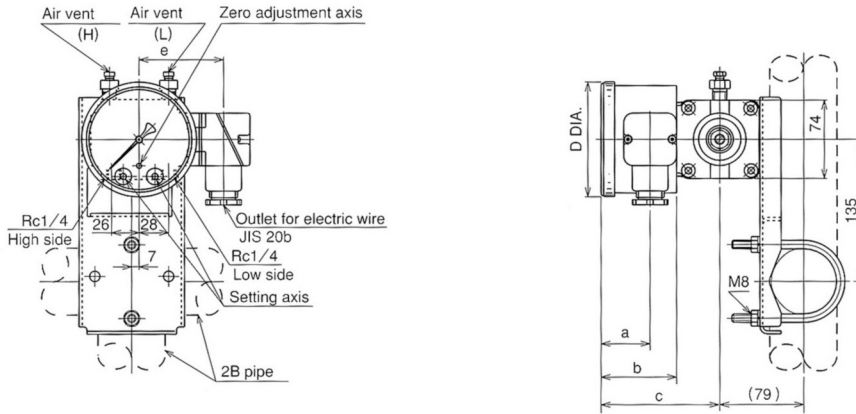
TYPE OF CONTACT POINT AND WIRING SYSTEM

DG97 · 98 Differential pressure gauge with electric contacts

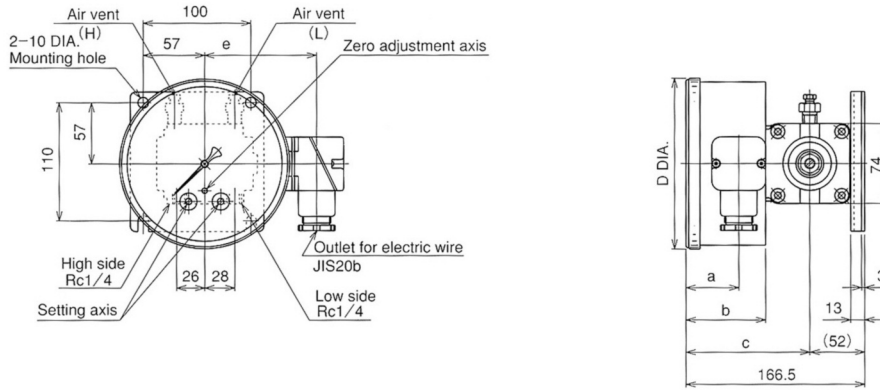
Model	Type of contact point	Mark	A figure of operation system and operation	Connection terminal number	Setting pointer	
DG97 DG98	Upper limit type with one contact (Reverse lower limit type with one contact)	H (LR)	When the differential pressure rises (decreases) to a set value, contact points work to turn a circuit ON (OFF). 	① — ②	Red pointer	
	Lower limit type with one contact (Reverse upper limit type with one contact)	L (HR)	When the differential pressure decreases (rises) to a set value, contact points work to turn a circuit ON (OFF). 	③ — ④	Yellow pointer	
	Upper and lower limit type with two contact (Reverse lower and upper limit type with two contact)	HL (HRLR)	This is the combination of the upper limit type(reverse lower limit type)and the lower limit type(reverse upper limit type)and each works independently.		① — ② ③ — ④	Red pointer Yellow pointer
	Upper limit type with two contact (Reverse lower limit type with two contact)	2H (2LR)	This is the combination of two upper limit types(reverse lower limit type)and each works independently.		① — ② ③ — ④	Red pointer Yellow pointer
	Lower limit type with two contact (Reverse upper limit type with two contact)	2L (2HR)	This is the combination of two lower limit types(reverse upper limit type)and each works independently.		① — ② ③ — ④	Red pointer Yellow pointer

DIMENSION 2 (Unit : mm) DG97 · 98

2B Pipe installation



Wall mounting type

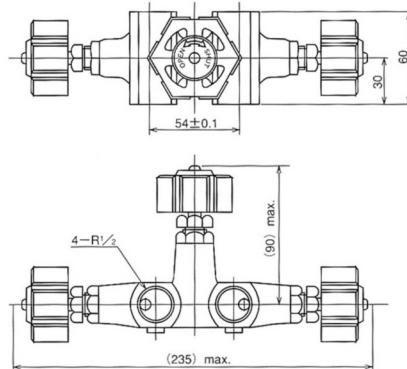


Model	D	e	a	b	c
DG97	109	80	46.5	71.5	112.5
DG98	159	104	49	74	115

※ The one of two orifices that is not used as a pressure induction orifice should be used as an air vent.

Valve -manifold : (Option)

TypeNo. : FV43 — 99 □



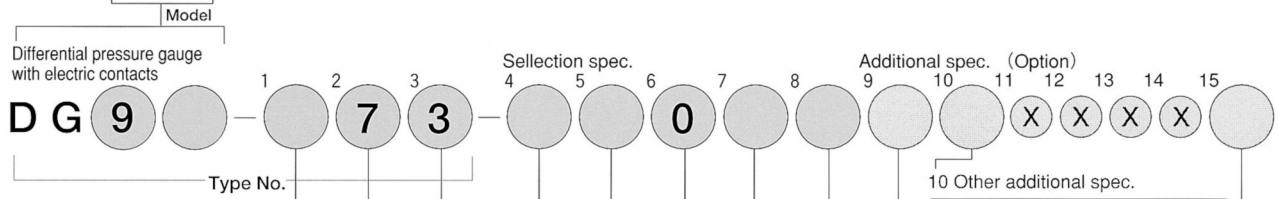
※ As for connection of differential pressure gauge and valve-manifold, FJ92-001 (2 pieces) is necessary

Type No. constitution

Please specify Type No., each specification and range when ordering.

Note : For this Model, there is no applicable item for the figures X, but please specify with X when ordering.

Gauge with electric contact	D	G	9	7	Size
	D	G	9	8	100 DIA.
					150 DIA.



- 1 Installation system**
- 1 2B Pipe installation
 - 2 Wall mounting type

- 2 Connection**
- 7 Rc 1/4
 - X 1/4 NPT female
- Available DG95 · 96 only.

- 3 Wetted parts material**
- 3 Body : SCS14
 - Bellows : 316 L st.st.
 - Gasket : NBR

- 4 Differential pressure range**
- I do case in an order, and a range and the unit and standard pressure, standard pressure side appoint low pressure (L) or high pressure (H) extra.
- 1 0 ~ 5, 7, 10, 15 kPa
 - 0 ~ 20, 30, 40 kPa
 - 2 0 ~ 0.05, 0.07, 0.1, 0.2 MPa
 - 0 ~ 0.3, 0.4, 0.6, 1 MPa

- 5 Type of contact point**
- 1 H : Upper limit type with one contact
 - 2 L : Lower limit type with one contact
 - 3 HL : Upper and lower limit type with two contact
 - 4 2H : Upper limit type with two contact
 - 5 2L : Lower limit type with two contact

- 7 Type of outlet**
- 1 Conduit type
 - 2 Gland

- 6 Switch**
- 0 Reed switch

- 10 Other additional spec.**
- 0 Nil
 - 1 Please specify your requirement
- Dial scale specified
- Valve-manifold FV43-991 Rc1/2
 - Valve-manifold FV43-993 Rc1/2
- The classification minister authorization product FV43-995
- The classification minister authorization product FV43-DD1 1/2NPT
- The classification minister authorization product FV43-DD3
- FV43 Connection business FJ92 (2need)
- FV43 Use no oil · no water appointment
- 2B pipe mounting clamp (unit)
- Movement with the counter meoture for the reverse pressure

- 9 Treatment**
- 0 Nil
 - 1 Use no oil
 - 2 Use no water
 - 3 Use no oil · water

- 8 Outlet for electric wire In case of conduit type**
- 2 P F 1/2
 - 3 P F 3/4 (Standard)
 - A R c 1/2
 - B 1/2 NPT

- 8 Outlet for electric wire In case of gland**
- 7 JIS 20b

- 15 Document**
- 0 Nil
 - 1 Please specify your requirement
- Drawing one sheet, Instruction manual
- Inspection procedure, Mill sheet
- Test report