

Model DG95 · 96 · 97 · 98 Differential Pressure Gauges

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 of pressures at two points, or a pressure with smaller fluctuation.
One-sided pressure tight means the maximum differential pressure.

SPECIFICATION 1

Model:

- DG95 · 96 Differential pressure gauge
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:

- DG95-97 100 DIA.
DG96-98 150 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)

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
DG95 · 96 ADC12 · 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 200V DC 0.25A 50V DC 1A (Resistance load) | Non- continuation terminal interval 400V AC 1minute Between terminal and case 600V AC 1minute | 500V DC Over 100MΩ Between terminal and case |
| 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:

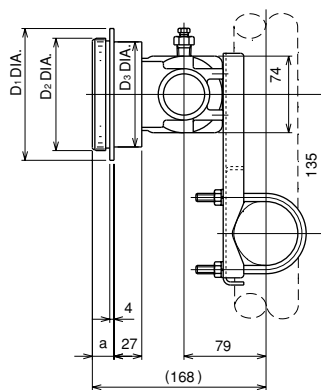
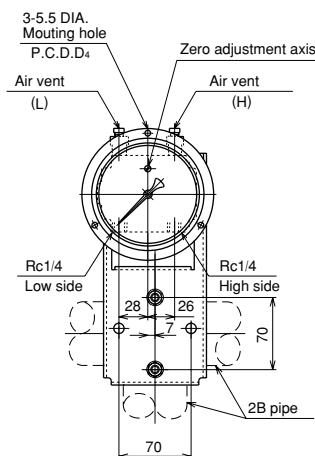
Conduit type PF3/4, PF1/2,

Rc1/2, 1/2NPT

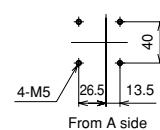
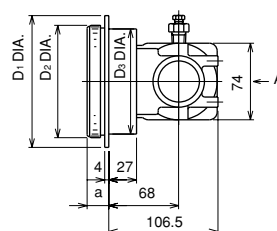
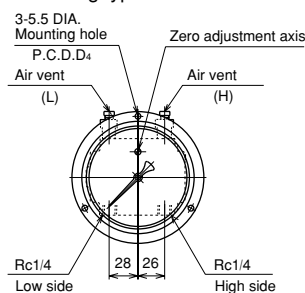
Gland JIS 20b

DIMENSION 1 (Unit:mm) DG95・96

2B Pipe installation



Wall mounting type



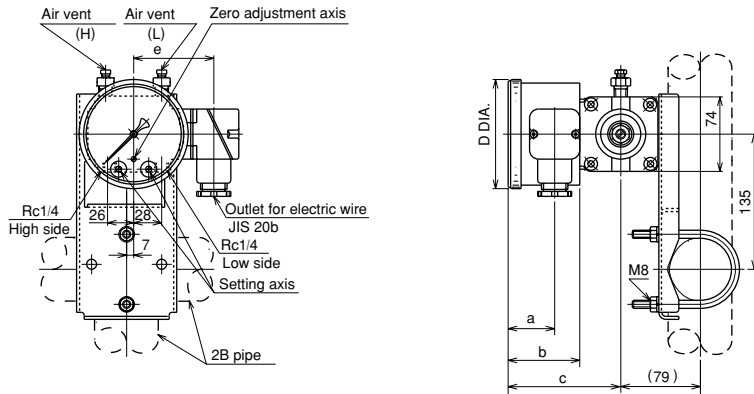
| Model | D1 | D2 | D3 | D4 | a |
|-------|-----|-----|-----|-----|------|
| DG95 | 128 | 109 | 102 | 119 | 21 |
| DG96 | 178 | 159 | 152 | 169 | 23.5 |

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

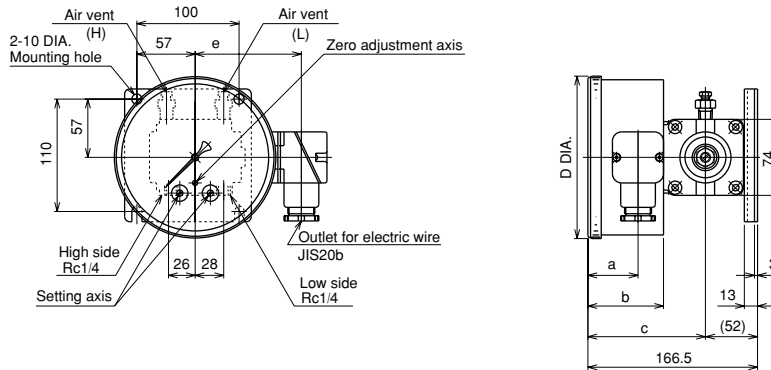
DIMENSION 2

(Unit: mm) DG97 • 98

2B Pipe installation



Wall mounting type

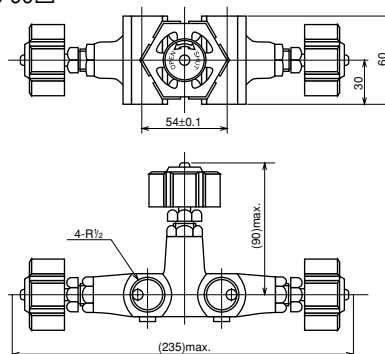


| Model | D | e | a | b | c |
|-------|-----|-----|------|------|-------|
| DG97 | 109 | 80 | 46.5 | 71.5 | 112.5 |
| DG98 | 159 | 104 | 49 | 74 | 115 |

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

Valve -manifold: (Option)

Type No.: FV43-99□



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

TYPE OF CONTACT POINT AND WIRING SYSTEM

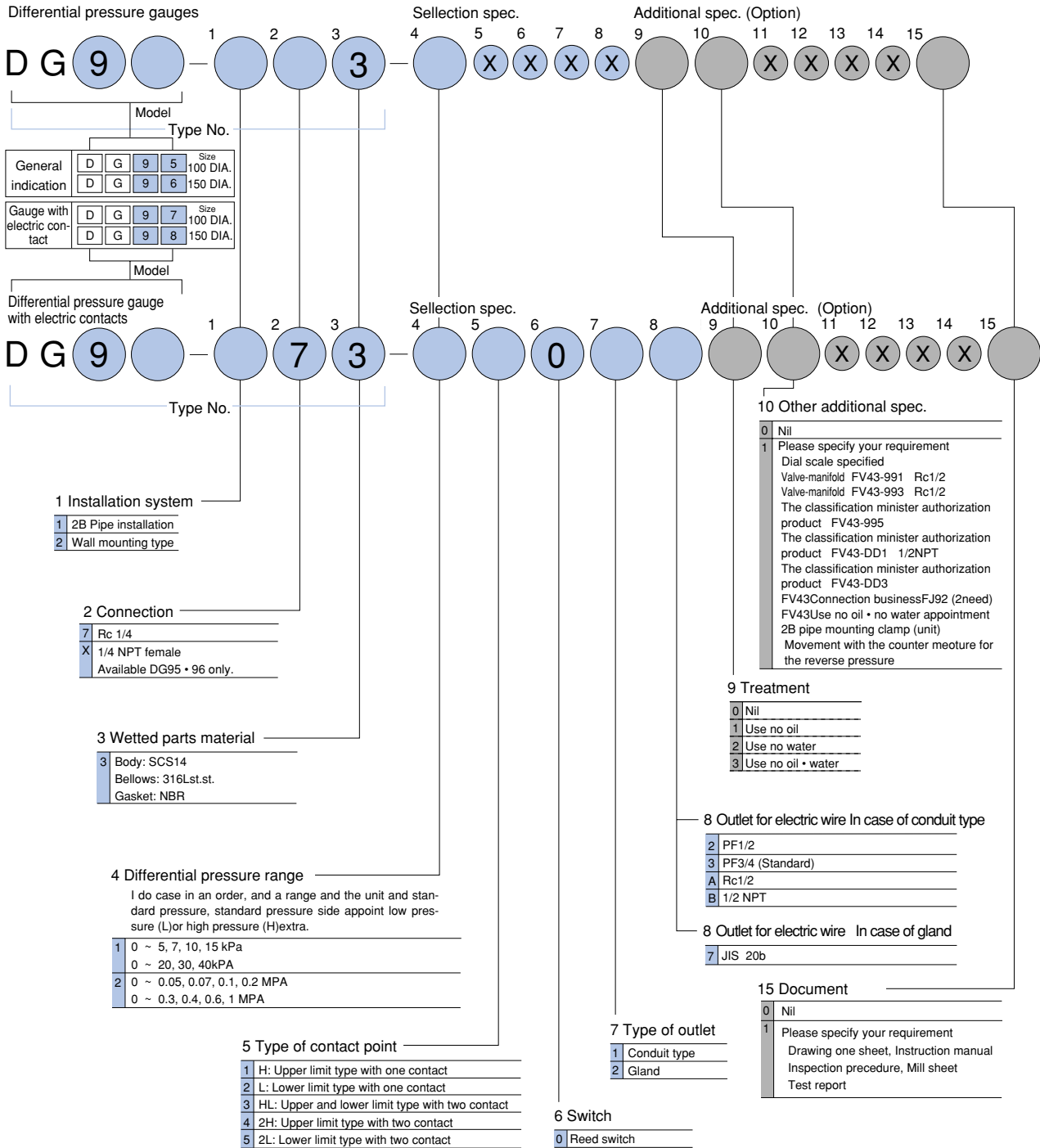
DG97 • 98 Differential pressure gauge with electric contacts

| 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). Pressure upk OFF ON 0 SET max. | 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). gPressure down ON OFF 0 SET max. | 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 |

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 X when ordering.



The contents in the catalogue are subject to change without notice.

NAGANO KEIKI CO., LTD.



UEDA FACTORY (JQA-0794)
MARUKO FACTORY (JQA-0789)

HEAD OFFICE & OVERSEAS : 1-30-4, HIGASHIMAGOME OHTA-KU, TOKYO, JAPAN.
TELEPHONE : 03 (3776) 5328
SALES DEPT FAX : 03 (3776) 5447
TELEX : 2468452 NKSTKY J

OVERSEAS PLANTS OR AFFILIATES: U.S.A., KOREA, GERMANY
OVERSEAS SALES NETWORK: AUSTRALIA, HONG KONG, INDONESIA, KOREA, MALAYSIA, PHILIPPINES, SINGAPORE, TAIWAN, THAILAND, U.S.A.

