

Differential pressure gauge Diaphragm type series DGC 370

Cryogenic gauge
Level measurements in closed tanks

General features

- Diaphragm type differential pressure gauge
- Differential pressure measuring ranges
0...750 mmH₂O to 0...50000 mmH₂O
- Max. working pressure 75 bar / 1000 psi
- Over range protection up to Max. working pressure
- Available in engineering polymer(EP) case
- Switch adjustment range between 30-100% of full scale deflection(FSD).

Application area

- Level measurements in closed tanks, particularly in cryotechnology
- Filter monitoring, Pump monitoring and control
- For gaseous and liquid media that not highly viscous

General specification

Accuracy

±2% of F.S (Ascending)

Differential pressure range

0...750 mmH₂O to 0...50000 mmH₂O

Sensing element

Diaphragm

Wetted parts

Body material, SUS 302 spring, ceramic magnet & seals

Case material & Dial size

St. steel (SUS 304)	: 150 mm
Engineering polymer	: 115, 150 mm
Bayonet	: 100, 150 mm

Mounting

Direct, Panel, 2" pipe & surface mounting

Max. working pressure

75 bar / 1000 psi

Seal/Diaphragm

Buna-N, Viton (Standard)

Window

Float glass(Standard)
Toughened glass, acrylic & safety glass



Diaphragm type diff. pressure gauge series DGC 370

Connection

1/4" NPT (F), 1/4" BSP (F) (Standard)
and others (through adaptor)

Porting

In-line, Bottom, top vent

Over range protection

Up to the max. working pressure from high side

Protection for gauge & switch

IP 65 / NEMA-4

Option

Liquid filling (Glycerin, Silicon)
Red follower pointer
Dual scale
Clourband
Filter mesh in(+) connection
"USE NO OIL" for Oxygen tank level application

Switches

1 or 2 SPSTs with a DIN plug
1 or 2 SPSTs with a terminal strip
1 or 2 SPDTs with a DIN plug
1 or 2 SPDTs with a terminal strip



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Ordering Information

Model code **DGC370**

Dial size

5 : 100 mm(4.0")
6 : 115 mm(4.5")
7 : 150 mm(6.0")

Porting

1 : Bottom (standard)
3 : Back
5 : End connection
In-line

Liquid filling

0 : Dry type
1 : Glycerin
2 : Silicon

Process connection

N4 : NPT 1/4"(F)
G4 : PF 1/4"(F)

Option

Refer to option table

Body material

A : Aluminium
B : Brass
S : Stainless steel

Pressure range

Refer to pressure range table

Unit of measurement

B : bar/mbar K : kPa
W : mmH₂O X : others
P : psi

Differential Pressure Range Code

Code	Range
R131	0...1000 mmH ₂ O
R132	0...1500 mmH ₂ O
R134	0...2000 mmH ₂ O
R135	0...2500 mmH ₂ O
R138	0...5000 mmH ₂ O
R23	0...10000 mmH ₂ O
R25	0...15000 mmH ₂ O
R27	0...20000 mmH ₂ O
R28	0...25000 mmH ₂ O
R30	0...40000 mmH ₂ O
R31	0...50000 mmH ₂ O
RYY	Others

Option


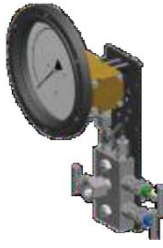

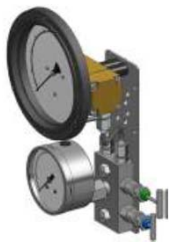
Case material : P - Engineering polymer (115, 150 mm only), B - Bayonet (100, 150 mm)
Window : A - Acrylic, T - toughened glass, S - Safety glass
Seals : B - Buna-N, V - Viton
Switch : 1SD - One SPST with DIN Plug (Top), 10VA, 100V, 0.5 Amp
2SD - Two SPSTs with DIN plug (Top), 10VA, 100V, 0.5 Amp
1DD - One SPDT with DIN plug (Top), 3VA, 30V, 0.3 Amp
2DD - Two SPDTs with DIN plug (Back), 3VA, 30V, 0.3 Amp

How to Order

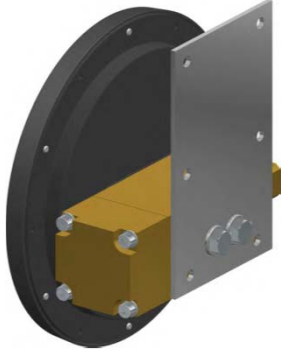
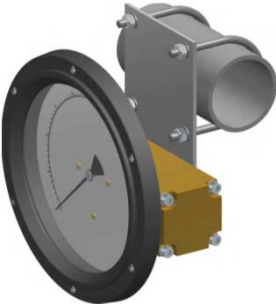
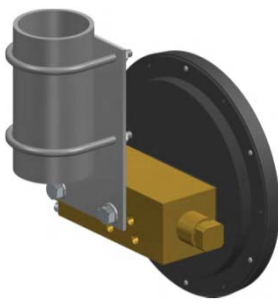
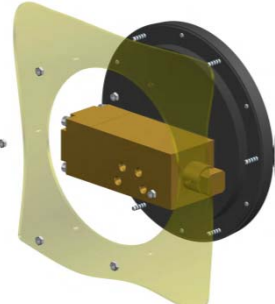
DGC370.710.N4WR23S.P

DGC370, 150mm, Cl. 2.0% of FS, Bottom connection, Dry, NPT 1/4"(F), 0...10000 mmH₂O, Body SUS, Eng. Polymer

Combination

Gauge + Switch	Gauge + Manifold	Gauge + Switch + Manifold	Gauge + Pressure gauge + Manifold
			

Mounting brackets

Surface mounting bracket	Horizontal pipe mounting bracket	Vertical pipe mounting bracket	Panel mounting for EP Case
			

Engineering polymer case

 <p>150 mm</p>	 <p>115 mm</p>	<ul style="list-style-type: none"> ● Removable glass cover ● Strong and durable ● Panel mounting possible ● Condensation can be cleaned ● Light weight
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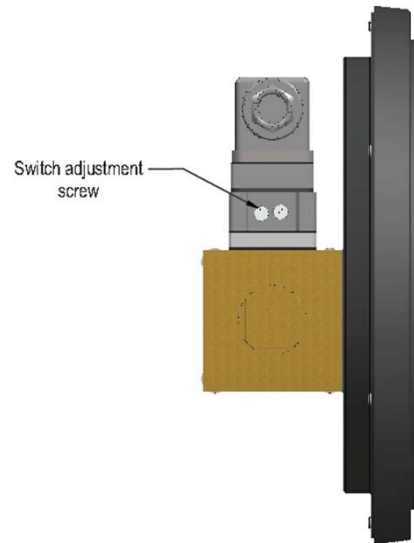
Switch setting

Please follow these instructions when your differential pressure instruments are supplied with switch.

CAUTION Supply should not exceed switch rating. For higher supply, use of relay circuit is recommended.

Reed switch specification

Reed switch type	Max. VA	Max. voltage V AC/DC	Max. Current Amps.
SPST	10	100	0.5
	40	230	1
	100	300	1
	60	240	3
SPDT	3	30	0.3
	5	125	0.25
	5	175	0.25



View from Low pressure side

Switch adjustment

Switch adjustment screw is located on plastic cover.

Rotate the screw anti-clockwise to increase the set point and clockwise to decrease the set point.

One or two trials may be necessary to attain the exact set point.

Above procedure to be followed by putting the instrument on test bed or while in actual service.

NOTE Instrument and switch has IP65 protection.

PG7 or PG9 gland provided for cables. Use cable size dia 3 to 3.5 mm and dia 4 to 8 mm respectively.

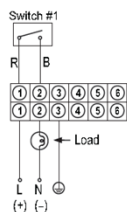
SPST Switch

SPDT Switch

Switches are provided as per customer equipment. Please refer gauge label for switch specification.

One SPST switch

Reed switches & terminal strip connection

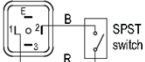


Reed switches & Din plug connection

View of socket for supply connections

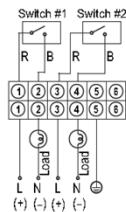


View of plug after removing the socket



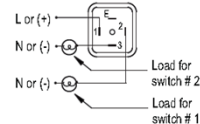
Two SPST switches

Reed switches & terminal strip connection

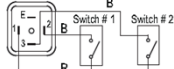


Reed switches & Din plug connection

View of socket for supply connections

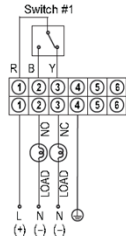


View of plug after removing the socket



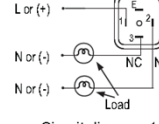
One SPDT switch

Reed switches & terminal strip connection

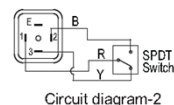


Reed switches & Din plug connection

View of socket for supply connections

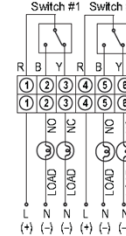


View of plug after removing the socket



Two SPDT switches

Reed switches & terminal strip connection (for earth, see note)



Reed switches & Din plug connection

Refer Circuit diagram 1 & 2 for connection.

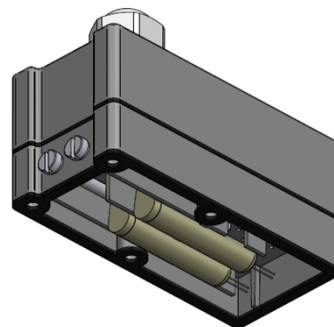
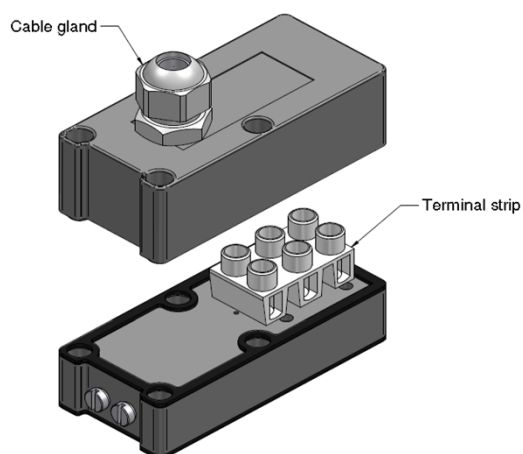
Note: For terminal strip option

Caution : Chassis ground is provided on exterior of the gauge, not in the connector. It is the responsibility of the end customer to connect ground wire to chassis ground provided.

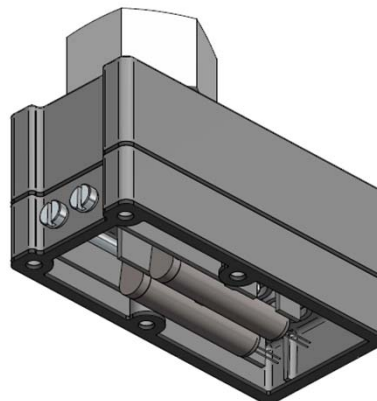
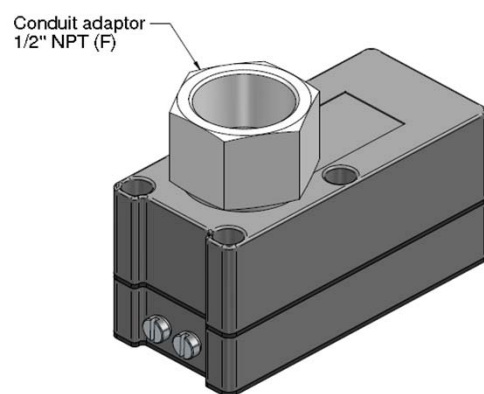
Legend R=Red, B=Black, Y=Yellow, L=Live or +ve supply, N=Nutral or -ve supply

Switch cover combinations

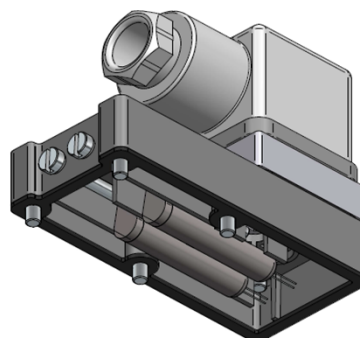
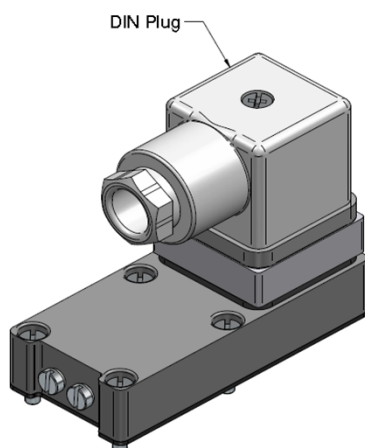
Terminal strip and cable gland



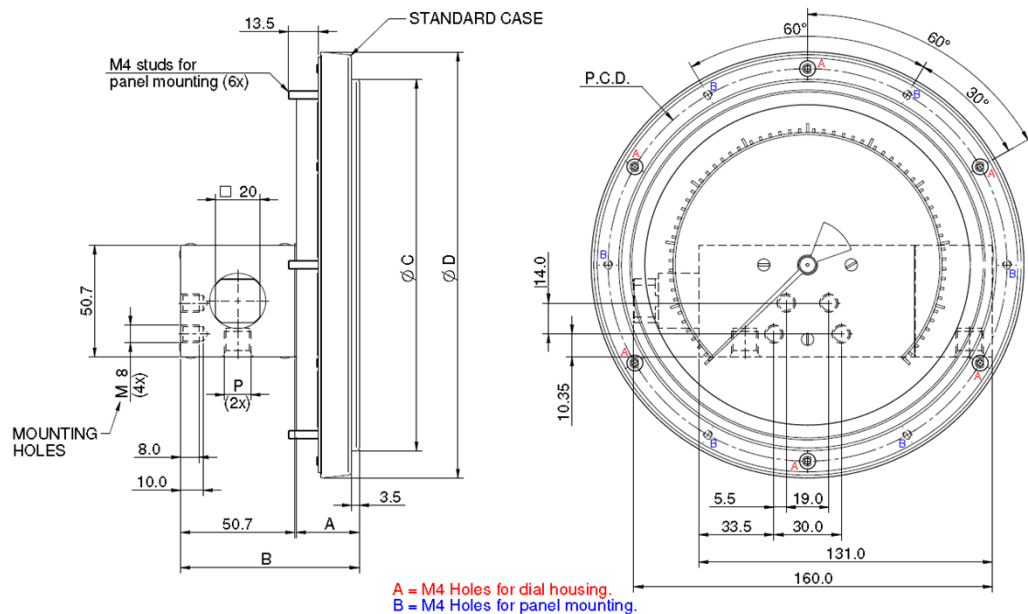
1/2" NPT (F) Conduit adaptor



Switch with DIN Plug



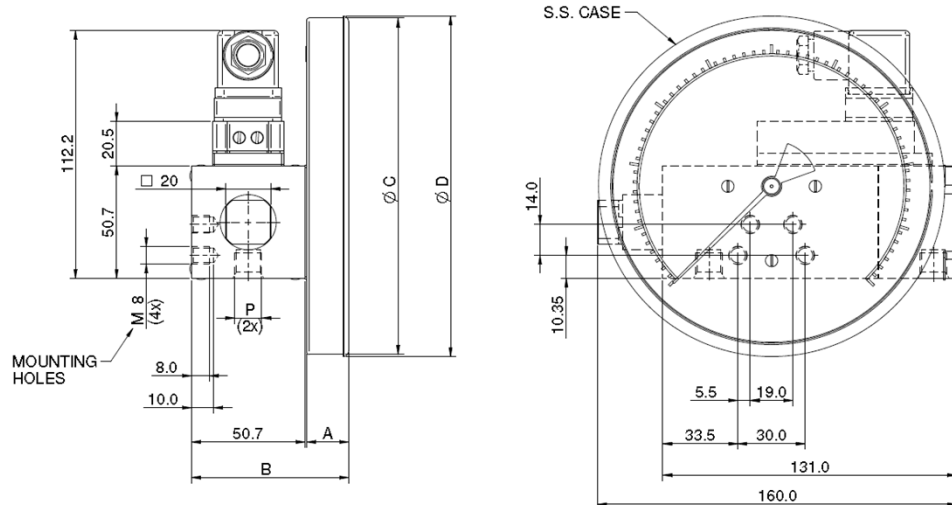
Standard Dimension



(Unit : mm)

Dial size	P	A	B	ø C	ø D	P.C.D
115	1/4" BSP - 1/4" NPT	28.10	79.30	133.30	157.93	143.00
150	1/4" BSP - 1/4" NPT	28.10	79.50	168.30	192.93	177.80

Gauge + Reed switch with DIN Plug



(Unit : mm)

Dial size	P	A	B	ø C	ø D
100	1/4" BSP - 1/4" NPT	18.50	69.70	102.00	104.30
115	1/4" BSP - 1/4" NPT	18.56	69.76	117.00	119.30
150	1/4" BSP - 1/4" NPT	18.71	70.11	152.40	154.30