

# 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 mmH<sub>2</sub>O to 0...50000 mmH<sub>2</sub>O
- 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 mmH<sub>2</sub>O to 0...50000 mmH<sub>2</sub>O

#### 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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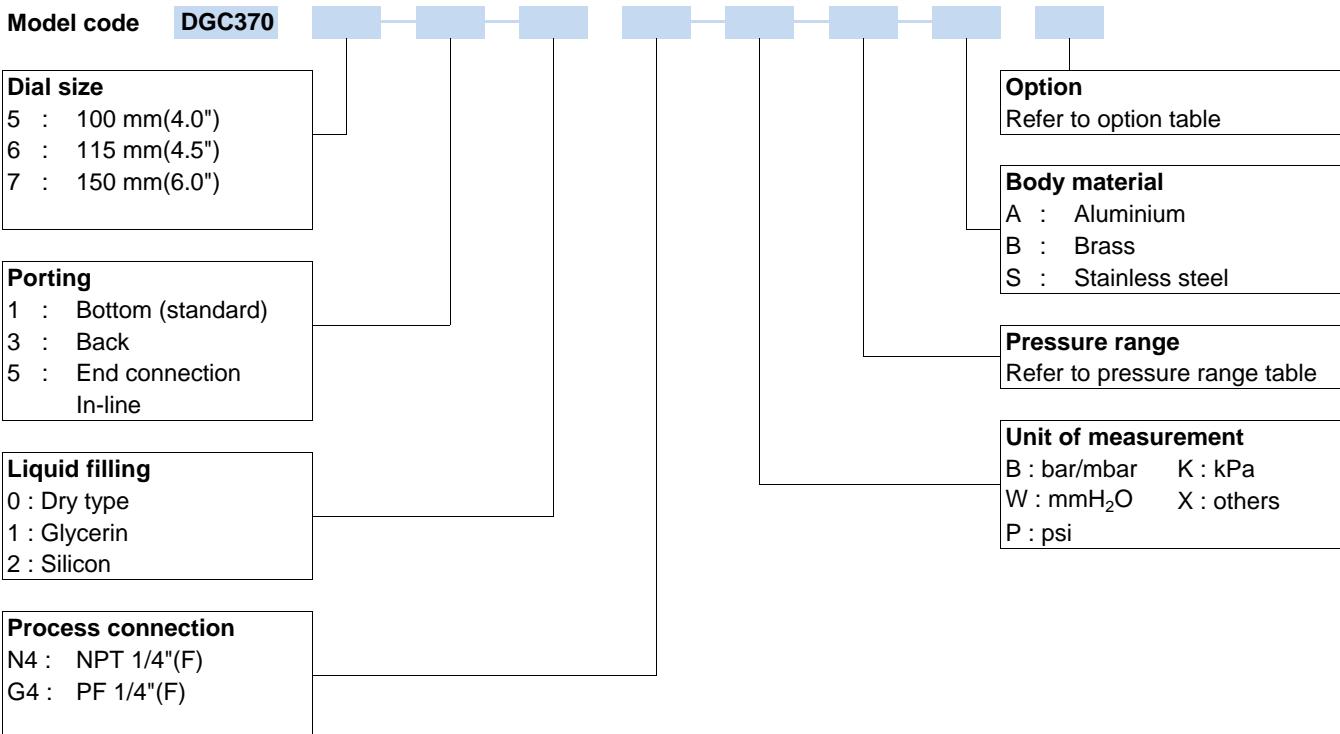
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## Ordering Information



### Differential Pressure Range Code

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

### Option

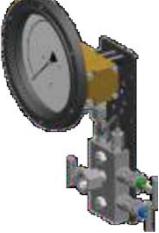
Case material : P - Engineering polymer (115, 150 mm only), B - Bayonet (100, 150 mm)  
 Window : A - Acrylic, T - toughrnrf glass, S - Safety glass  
 Seals : B - Buna-N, V- Viton  
 Switch : 1SD - One SPST with DIN Plug (Top), 10VA, 100V, 0.5 Amp  
           2SD - Two SPSTs with DIN plug (Top), 10VA,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

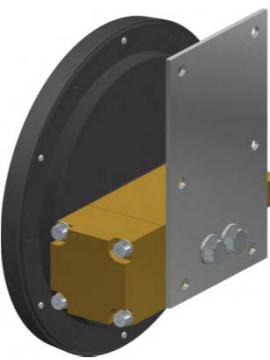
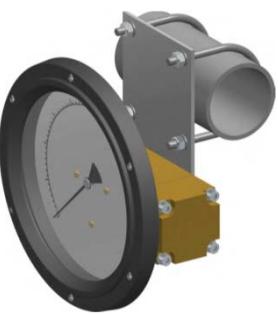
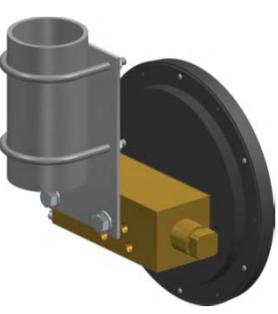
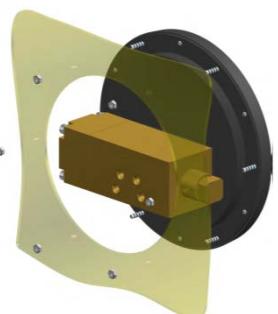
DGC370.710.N4WR23S.P  
 DGC370, 150mm, Cl. 2.0% of FS, Bottom connection, Dry, NPT 1/4"(F), 0...10000 mmH<sub>2</sub>O, Body SUS, Eng. Polymer

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## 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



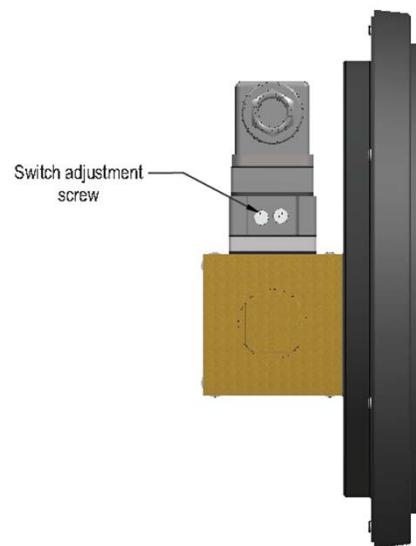
## Switch setting

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	Two SPST switches	One SPDT switch	Two SPDT switches
Reed switches & terminal strip connection	Reed switches & terminal strip connection	Reed switches & terminal strip connection	Reed switches & terminal strip connection (for earth, see note)
Reed switches & Din plug connection	Reed switches & Din plug connection	Reed switches & Din plug connection	Reed switches & Din plug connection
View of socket for supply connections	View of socket for supply connections	View of socket for supply connections	View of socket for supply connections
View of plug after removing the socket	View of plug after removing the socket	View of plug after removing the socket	View of plug after removing the socket
Legend	R=Red, B=Black, Y=Yellow, L=Live or +ve supply, N=Neutral or -ve supply	Circuit diagram-1	Circuit diagram-2

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

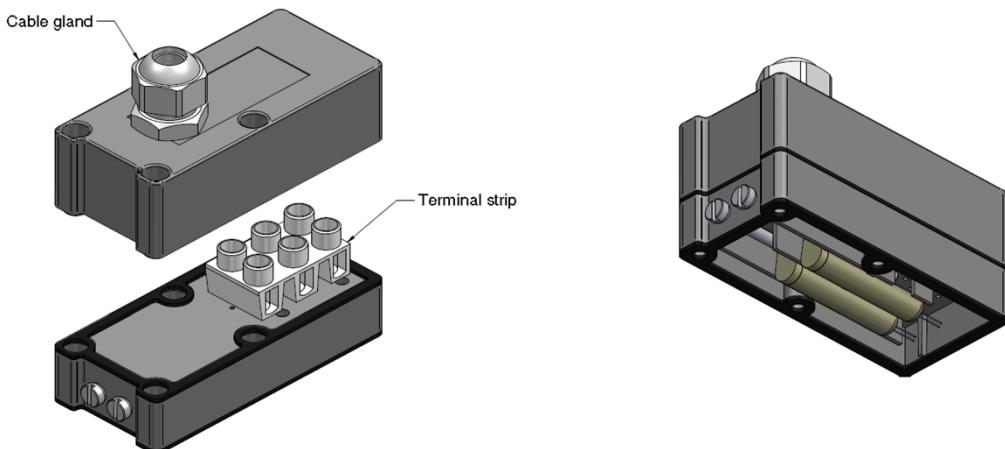
**Note:** For terminal strip option

**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.

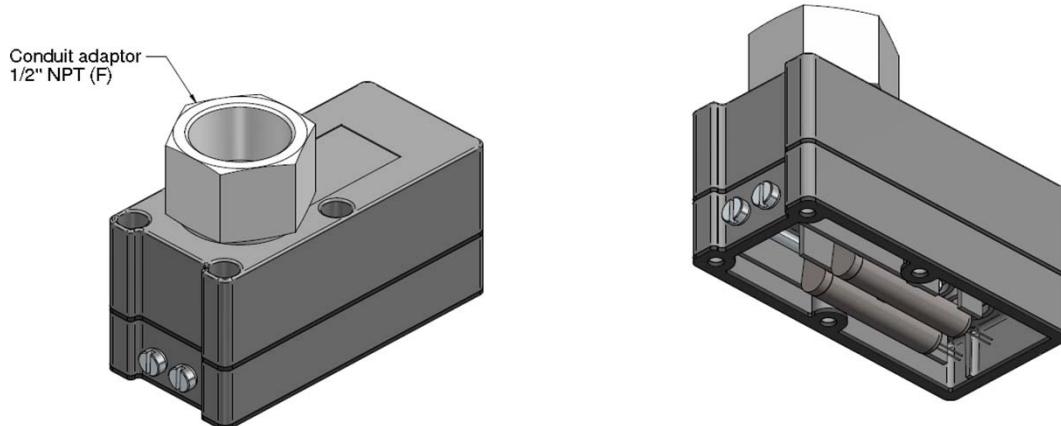
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## Switch cover combinations

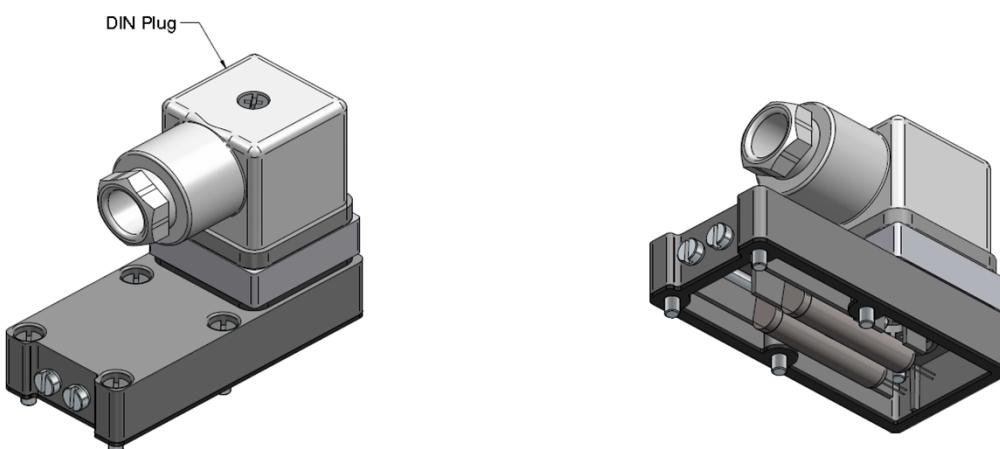
### Terminal strip and cable gland



### 1/2" NPT (F) Conduit adaptor

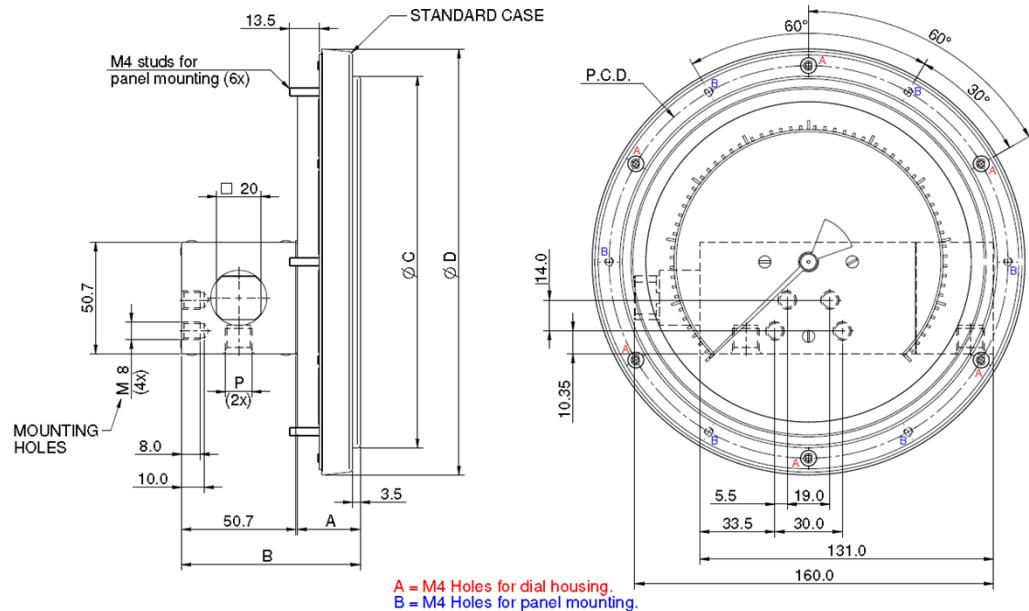


### Switch with DIN Plug



## Outline drawing

### Standard Dimension

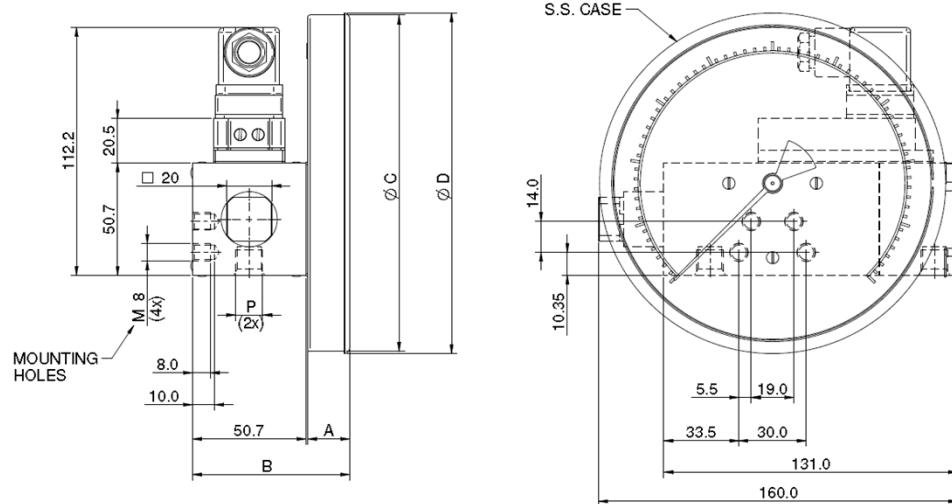


A = M4 Holes for dial housing.  
B = M4 Holes for panel mounting.

(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

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