Digital Pressure Gauge
& Digital Manometer

DPG-10

Digital Differential Pressure Gauge

❚ Power supply voltage 12~24VDC
❚ Accuracy ± 1.0% F.S(at 20℃)
❚ Ambient Temp range 0 ~ 70 ℃
❚ Zero temperature effect ± 0.2 F.S/℃
❚ Output temperature effect ± 0.2 F.S/ ℃
❚ Operating pressure MAX. 10KPa
❚ Burst pressure MAX. 15KPa
❚ Pressure connect port : 9/16-18UNF VCR Fitting
❚ Sensor input 4~20mA or 1~5V
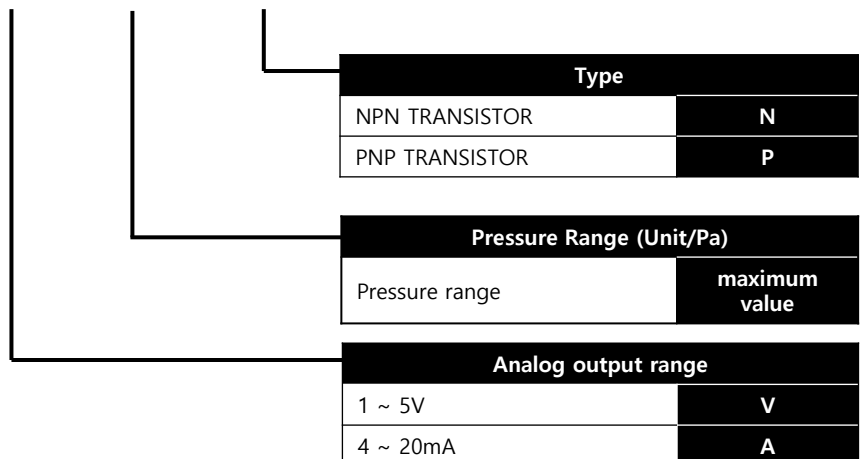❚ Process connection : 6Ø hose (inside size5Ø)
❚ Mounting bracket

❒ Pressure Range

Order code (For Pressure range)	Pressure Range	LED Display
100	0~100Pa	0~100
200	0~200Pa	0~200
300	0~300Pa	0~300
500	0~500Pa	0~500
750	0~750Pa	0~750
1000	0~1,000Pa	0~1000

※ **You can change to the range you want to use in the setting mode yourself.**

Order code

DPG -10 - A - 500 - N

Type	
NPN TRANSISTOR	N
PNP TRANSISTOR	P

Pressure Range (Unit/Pa)	
Pressure range	maximum value

Analog output range	
1 ~ 5V	V
4 ~ 20mA	A

PARTS DIMENSIONS

5.2 φ5

Detail A

48
48
8
69
44
44

A
5
6
4

최소~60mm
최소~60mm
45±0.5
45+0.5

DPG-10 AL1 ○ AL2 Pe
1
2
3
SET
DIFFERENTIAL PRESSURE GAUGE
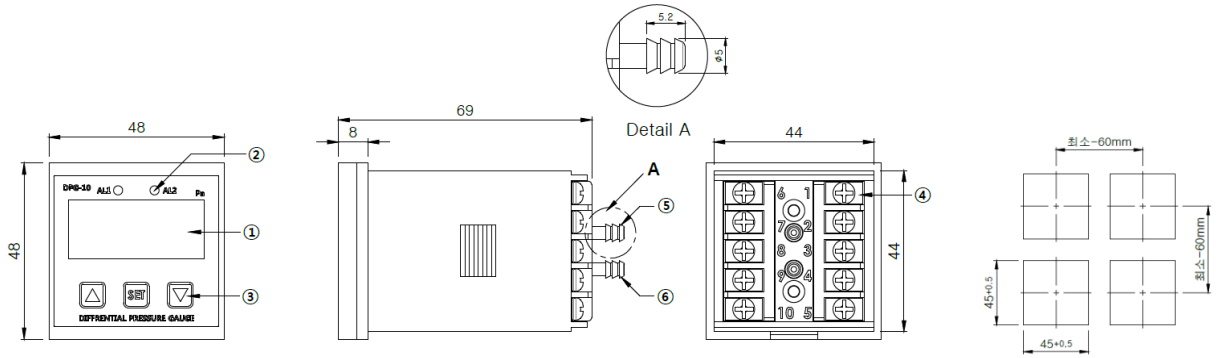
1: Display : Digital numeric display (4 digit)
2: Display of pressure setting output :
   AL1: Pressure 1 operational indication
   AL2: Pressure 2 operational indication
3: Setting key : Move to each setting mode
   ▲ : Move to upper menu and move between setting numbers
   ▼ : Move to lower menu for and move between setting numbers
4: Connection terminals : Terminals for power, output, setting output
5: High pressure port
6: Low pressure port

❏ Wiring connection
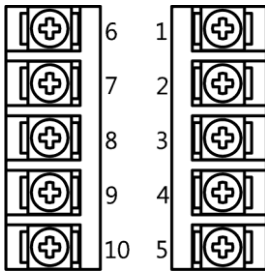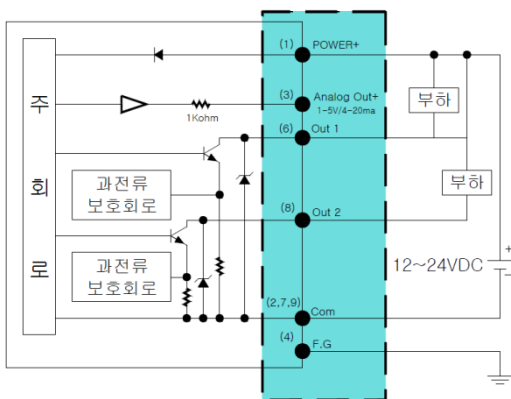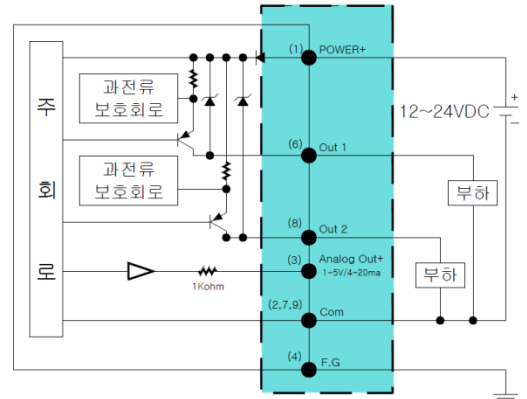
Connecting terminal		Connecting terminal No.			
6 1		1	Power	6	Input setting1 (AL1)
7 2		2	Com.	7	Com.
8 3		3	**Analog output**	8	Input setting2 (AL2)
9 4		4	F.G	9	COM.
10 5		5	N.C	10	N.C

❏ Inner circuit diagram

NPN open collector output	PNP open collector output
주 회 로 / 과전류 보호회로 / (1) POWER+ / (3) Analog Out+ 1-5V/4-20ma / (6) Out 1 / (8) Out 2 / (2,7,9) Com / (4) F.G / 1Kohm / 부하 / 12~24VDC	주 회 로 / 과전류 보호회로 / (1) POWER+ / (6) Out 1 / (8) Out 2 / (3) Analog Out+ 1-5V/4-20ma / (2,7,9) Com / (4) F.G / 1Kohm / 부하 / 12~24VDC

※ 괄호안의 숫자는 단자대 결선번호임.

DIGITAL DIFFERENTIAL PRESSURE GAUGE

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FRONT DISPLAY PANEL

Pressure setting 1
Green color LED

Pressure setting 2
Red color LED

Pa
Pressure unit

▲ Button
UP Key

▼ Button
DOWN Key

SET Button
Change of mode for setting

After changing the settings, you must exit the setup mode before returning to the operation mode.
(When set to SET, press for more than 3 seconds to exit.)

DPG-10 AL1 ● AL2 Pa

DIFFRENTIAL PRESSURE GAUGE

SETTING METHOD

OPERATON MODE

SET Button More 3 second	Param-eter Setting mode	Unit setting	Pressure setting output type	Pressure setting output Hysteresis	Response time setting	Analog output scale setting (1VDC)	Analog output scale setting (5VDC)	Setting of key lock	

SET Button	Input setting mode	Pressure setting1 [St1]	Pressure setting2 [St2]

	Troubl-eshoot-ing mode	Error indication [Er1]	Error indication (HHH)	Error indication [LLL]

|		
▲ + ▼ More 1 second	Zero Setting mode	Zero setting

ZERO ADJUSTMENT MODE

1. After opening the pressure port in the operation mode, press the ▲ and ▼ keys simultaneously for more than 1 second.
2. 2. 0.0 is displayed when zero setting is completed.
   ※Note 1. When adjusting the zero position with external pressure applied, the Erl flashes while pressing the key.
   ※Note 2. Remove the external pressure and re-adjust it under atmospheric pressure.
   ※Note 3. Perform a zero adjustment on a regular basis

PARAMETER SETTING MODE

1. Set the pressure display scale/output operation/response time/Analog output scale/key lock.
2. When the key lock is set, make sure to unlock the key before setting parameters.
(See Key Locking Related Settings)
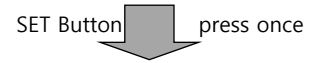
Operation mode

SET Button   more 3 second
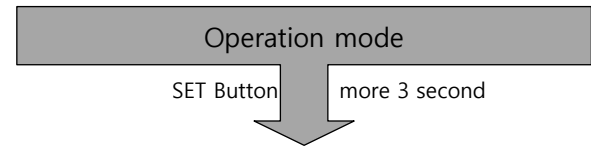
SETTING OF PRESSURE SCALE UNIT [ScL]

1. Display of the Scl and the previously set pressure range cross-marked at 0.5 second intervals.
2. Use ▲▼ to select the pressure range to be used.

| 100 | ◄► | 200 | ◄► | 300 | ◄► | 500 | ◄► | 750 | ◄► | 1000 |
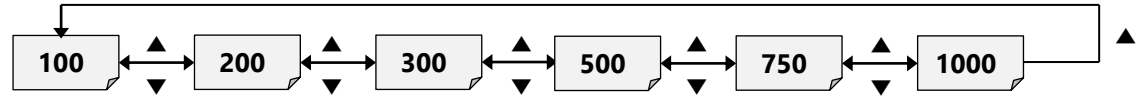
Press SET key once shortly to set the selected units and then enter the next mode

SET Button   press once

PRESSURE SETTING OUTPUT TYPE [oUt]

1 oUt and previously set output operating mode cross-display in 0.5 second cycles.
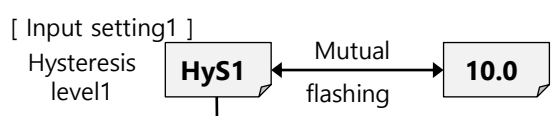2. Select the output mode to be used using ▲▼.

| St1o | ◄► | St1c | ◄► | St2o | ◄► | St2c |

Press SET key once shortly to set the selected output mode and then enter the next mode.
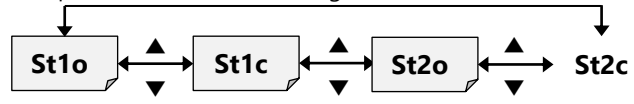
Parameter	OUT1 출력	OUT2 출력
St1o	Normally Open	Normally Open
St1c	Normally Open	Normally Closed
St2o	Normally Closed	Normally Open
St2c	Normally Closed	Normally Closed

SET Button   once press
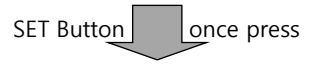
HYSTERESIS OF PRESSURE SETTING OUTPUT [HYS]

[Input setting1]
Hysteresis level1   **HyS1**   ←Mutual flashing→   **10.0**

※ Use ▲▼ to set hysteresis value
Setable range: Minimum value of the display pressure
< [**HYS1**] < [**St1**]

SET Key
Mutual flash ing

[Input setting 2]
Hysteresis level 2   **HYS2**   ◄►   **30.0**
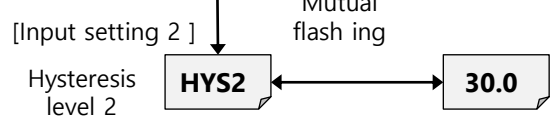
※ Use ▲▼ to set hysteresis value
Setable range: Minimum value of the display pressure
< [**HYS2**] < [**St2**]

Press SET key once shortly to set the selected output mode and then enter the next mode

SET Button ⬛ once press

⬇

RESPONSE SPEED   [Spd]

1. Spd and the previously set response time cross-marked in 0.5 second intervals.
2. Use ▲▼ to select the response time to use. (Units/ms)

| 2.5 | ↔ | 5.0 | ↔ | 100 | ↔ | 500 |
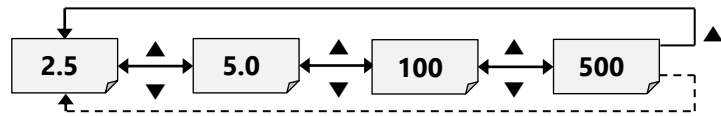
Press SET key once shortly to set the selected response time and then enter the next mode.

SET Button ⬛ press once

⬇

ANALOG OUTPUT SCALE(1VDC)   [A-1]

1. The A-1 and the previously set pressure cross-marked at 0.5 second intervals.
2. Use ▲▼ to set the pressure at which 1 VDC is output.
3. Set range: Minimum value of rated pressure < [A-1] ÷ 90% of rated pressure

Press SET key once shortly to set the selected pressure and enter the next mode

SET Button ⬛ press once

⬇

ANALOG OUTPUT SCALE(5VDC)   [A-5]

1. The A-5 and the previously set pressure cross-marked at half a second intervals.
2. Set the pressure at which 5 VDC is output using ▲▼.
3. Set range: [A-1] + 10% of rated pressure ≤ [A-5] ÷ Maximum rated pressure

Briefly press SET key once to set the selected pressure to 5 V scale and enter the next mode.

SET Button ⬛ press once

⬇

KEY LOCK   [KEy]

1. KEY and previously set key lock cross-marked at 0.5 second intervals.
2. Use ▲▼ to select the type of key lock to use.
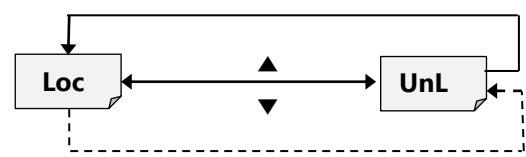
| Loc | ↔ | UnL |

※ Key lock type
● Loc: Unable to change preset and parameter values
● UnL: You can change preset values and parameter values.

SET Button ⬛ press more 3 seconds

⬇

OPERATION MODE RETURN

※ When entering parameter setting mode, "Settings category " and "Previous Settings value" cross-display every 0.5 second.
At this point, while pressing ▲ or ▼, the setting value will be displayed, if there is no keystroke for more than 1 second, cross again.
※ If the SET key is pressed at any point during parameter setup for more than 3 seconds, the value currently set is stored in the EEPROM and returned to the operation mode.
Also, if there is no keystroke for 60 seconds during setup, the setting is ignored until now and the previously set value is retained.

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INPUT SETTING MODE

1. Function mode for setting pressure settings 1 and 2 values
2. If key lock is enabled, set the preset value after key lock is released (see key lock setting).

OPERATION MODE

SET Button   press once
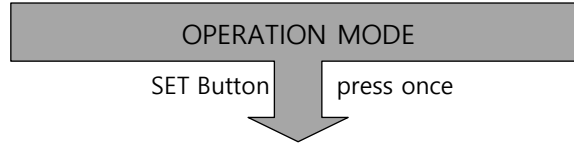
Pressure setting1   [St1]

1. The value of St1 and the previously set pressure setting1 flashes cross at 0.5 second intervals.
2. Use ▲▼ key to set the value of Pressure Set 1 .
3. Set range: Minimum value of the display pressure (< [St1] ≤ Max. of the display pressure

Briefly press SET once to complete the set value of Pressure Set1 and enter the next setting.

SET Button   press once
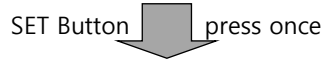
Pressure setting 2   [St2]

1. The value of St2 and the previously set pressure setting 2 flashes cross at 0.5 second intervals.
2. Use ▲▼ key to set the pressure setting 2.
3. Set range: The minimum value of the displayed pressure (< [St2] ≤The maximum value of the displayed pressure.

Briefly press SET key once to complete the set value of Pressure Set 2 and return to the operation mode.

SET Button   press more than 3 seconds
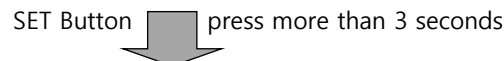
Operation mode return

FAILURE DIAGNOSIS MODE

Error Indication	Cause	Solution
[Er1]	When external pressure is applied during zero adjustment	Retry after removing external pressure
[HHH]	When the applied pressure exceed the display pressure range	Apply pressure within the display pressure range
[LLL]	Applied pressure exceeds the display pressure range downwards	Apply pressure within the display pressure range

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