

# Model DPI

## Differential Low Pressure Gauge / Transmitter

### Description

The DPI model is suitable for air conditioning systems because it can be used with non-corrosive gases and can measure low differential pressures, vacuum pressures and gauge pressures. You can use it by attaching it to the wall in 100X70 size. DPIA model is 4~20mA (2W) output, display type. DPIB model is 4~20mA (2W) output type. DPIC model is analog output, RS485 MODBUS RTU output, RELAY, NPN TR, PNP TR alarm output method. The pressure range can be adjusted. DPIA and DPIB models can be adjusted in 8 steps with a DIP switch, and DPIC models can be adjusted with a front button.

### Features

- ▶ CE Certified
- ▶ 100mm X 70mm Wall Mounting Type
- ▶ Auto Zero
- ▶ Pressure range adjustment
- ▶ DPIA Model : 4~20mA(2W), Display
- ▶ DPIB Model : 4~20mA(2W)
- ▶ DPIC Model : Analog Output, RS485, Alarm output
- ▶ Measuring range :  $\pm 100\text{Pa}$  ...  $\pm 100\text{kPa}$
- ▶ Use with non-corrosive, non-ionic media

### Applications

- ▶ Airflow Measurement
- ▶ Room Static Pressure
- ▶ VAV Box
- ▶ Lab/Fume Hood Control
- ▶ Clean Room Control



### Specifications

Model	DPIA	DPIB	DPIC
Range	$\pm 100\text{Pa}$ , $\pm 200\text{Pa}$ , $\pm 1\text{kPa}$ , $\pm 4\text{kPa}$ , $\pm 10\text{kPa}$ , $\pm 100\text{kPa}$		
Range Adjustment	$\pm 100$ , $\pm 75$ , $\pm 50$ , $\pm 25$ , $0\sim 100$ , $0\sim 75$ , $0\sim 50$ , $0\sim 25\%$		12.5 ~ 100%
Accuracy	$\pm 0.25\%FS \pm 1\text{digit}$ ( $< \pm 1\text{kPa} : \pm 0.5\%FS \pm 1\text{digit}$ ) <sup>1)</sup>		
Thermal Effect on Zero	$\pm 0.03\%FS/^{\circ}\text{C}$ ( $< \pm 1\text{kPa} : \pm 0.05\%FS/^{\circ}\text{C}$ ) <sup>1)</sup>		
Thermal Effect on Span	$\pm 0.03\%FS/^{\circ}\text{C}$ ( $< \pm 1\text{kPa} : \pm 0.05\%FS/^{\circ}\text{C}$ ) <sup>1)</sup>		
Compensated Temperature Range	$0\sim 50^{\circ}\text{C}$ (No freezing or condensation)		
Operating Temperature Range	$-20\sim 70^{\circ}\text{C}$ (No freezing or condensation)		
Display	4 Digit LCD(Backlight) <sup>2)</sup>	-	4 Digit LCD(Backlight) <sup>2)</sup>
Excitation	11~28Vdc, max. 100mA <sup>3)</sup> Class2		
Analog Output	4~20mA(2W)		1~5Vdc or 0~5Vdc or 0~10Vdc or 4~20mA(3W)
Switching Output	-		2 RELAY(5A 30Vdc) or 2-Channel NPN or PNP open collector output TR(80mA, 24Vdc)
Digital Output	-		RS485 MODBUS RTU(8N1) : 2400, 4800, 9600bps, 19.2k, 38.4k, 57.6k, 115kpbs
Response Time	100ms		20, 100, 500, 1000, 2000ms
Proof Pressure	300%FS Max.		
Burst Pressure	500%FS Min.		
Pressure Port	M5(F) $\varnothing 4.8$ ( $\varnothing 4.4$ in the end) resin piping (Applicable to I.D. $\varnothing 4$ air tubing) : Only $\leq \pm 10\text{kPa}$ $\varnothing 4.8$ , $\varnothing 5.9$ Stainless Steel Nipple(Applicable to I.D. $\varnothing 4$ or $\varnothing 5$ air tubing)		
Media	Non-corrosive Gases		
Protection	IP54		

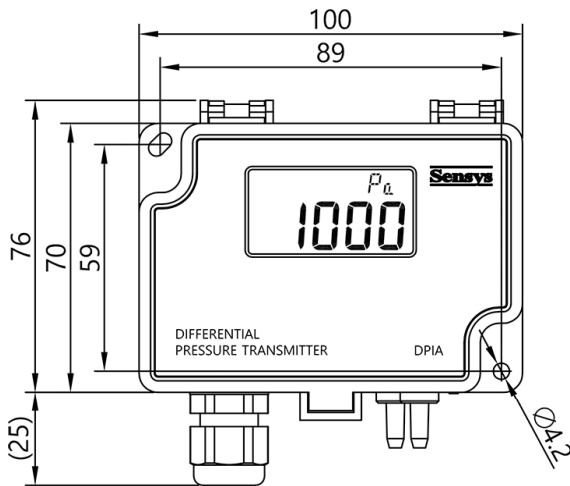
<sup>1)</sup> Accuracy and Thermal Effect is based on  $\pm 100\%$  range.(Accuracy is inversely proportional to the pressure range adjustment rate.)

<sup>2)</sup> Max. Display Range :  $-5000\sim 5000$ , LCD operating temperature range  $-10\sim 70^{\circ}\text{C}$

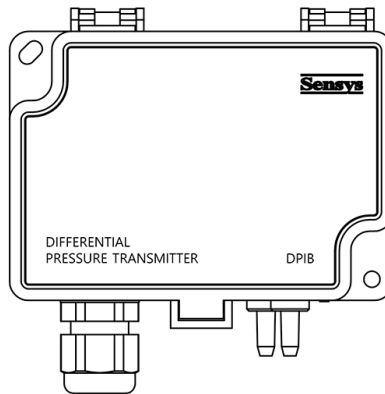
<sup>3)</sup> Switch output not included

## Dimension

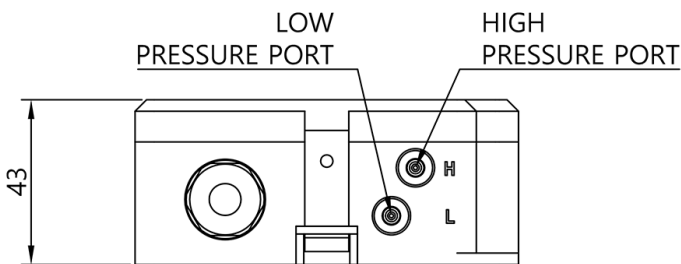
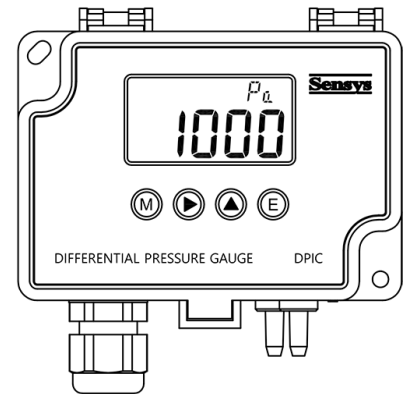
### ► DPIA



### ► DPIB



### ► DPIC



DPIA, DPIB

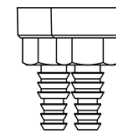
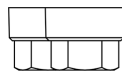
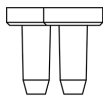
Pin No.	Connections
⊕	Input ⊕
⊖	Output ⊕
⊕	Earth

### ► PRESSURE PORT

- Ø4.8 resin piping

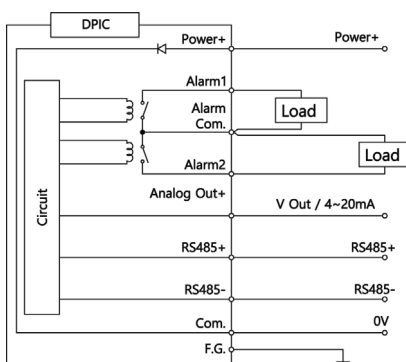
- M5(Female) : Depth 4

- Ø4.8, Ø5.9 Stainless Steel Nipple

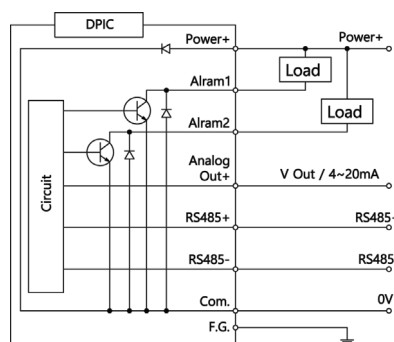


## Circuit Diagram(DPIC Model)

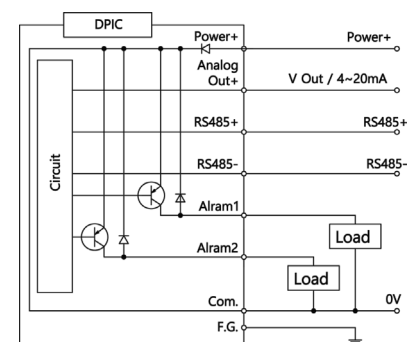
### ► Relay Output



### ► NPN Open Collector Tr. Output

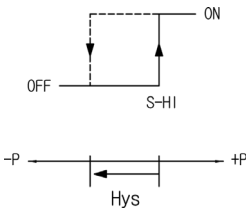


### ► PNP Open Collector Tr. Output

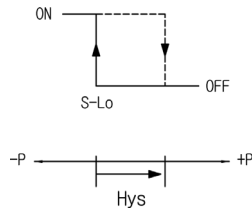


## Alarm Mode

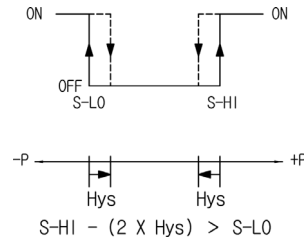
### ▶ Hi Mode



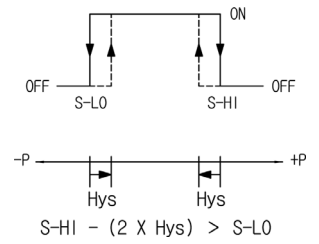
### ▶ Low Mode



### ▶ A Mode



### ▶ B Mode



## Ordering Information

Model Name		Sales Code	
<b>DPI A H X ±001 R V - A28 - □□□</b>			
<b>Type</b> A : 4~20mA(2Wire) + Display B : 4~20mA(2Wire) C : Alarm+RS485+Analog Output+Display		<b>Port Option</b> A28 : Ø4.8, Ø5.9 SS Nipple	
<b>Analog Output</b> H : 4~20mA(2Wire) (Only type A, B) C : 0~5V (Only type C) E : 1~5V (Only type C) J : 0~10V (Only type C) G : 4~20mA(3Wire) (Only type C)		<b>Pressure Port</b> 9 : M5(F) 0 : Ø4.8 Resin Piping V : Port option	
<b>Switching &amp; Digital Output</b> X : None R : 2CH. Relay, RS485 N : 2CH. NPN Open Collector, RS485 P : 2CH. PNP Open Collector, RS485		<b>Pressure Unit</b> A : Pa                      R : kPa E : mbar                     D : mmH <sub>2</sub> O N : inH <sub>2</sub> O	
		<b>Pressure Range</b> XXXX : Pressure	