

Model SMA(Differential pressure for Air)

Compact Size(30X30mm) Digital Differential Pressure Gauge / Switch

Description

SMA(DA) model contains Microprocessor in default. Moreover, it is a Differential Pressure Gauge / Switch with characteristics of LED Display, 0~5, 1~5, 0~10VDC or 4~20mA Analog Output, 2-Channel NPN or PNP Open Collector Output. As Pressure Sensor, Indicator and Switch are integrated in order to realize providing it at low price.

Features

- ▶ CE Certified
- ▶ Compact design(30mm×30mm)
- ▶ ±1999 Digit LED display
- ▶ 1~5, 0~5, 0~10VDC or 4~20mA analog output
- ▶ 2-channel NPN or PNP open collector output
- ▶ Piezoresistive silicon cell
- ▶ Measuring range : 0~50Pa ... 100kPa, ±50Pa ... ±100kPa
Use with non-corrosive, non-ionic media

Applications

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



Specifications

Range

| | | | |
|-----------------|-------------------|--------------------------------|---|
| 0~50Pa ±50Pa | 0~100Pa ±100Pa | 0~200, 300Pa ±200Pa, ±300Pa | 0~500Pa, 1, 2, 4, 10, 35, 100kPa ±500Pa, ±1, ±2, ±4, ±10, ±35, ±100kPa |
|-----------------|-------------------|--------------------------------|---|

Performance

| | | | | |
|-----------------------------|--------------------------------------|-------|---------|-------|
| Accuracy(Total 0~50°C) | ±5%FS | ±3%FS | ±1.5%FS | ±1%FS |
| Operating Temperature Range | -5~65°C(No freezing or condensation) | | | |

Electrical

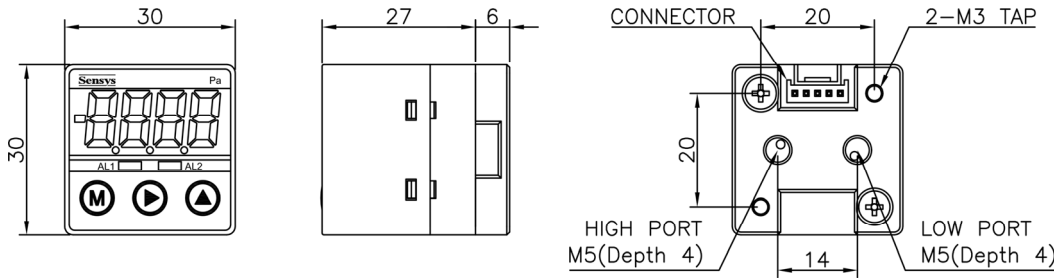
| | | | |
|---------------|-----------------------------------|--|--|
| Display | LED(Red Color) ±1999 Digit | | |
| Excitation | 12~24VDC±10%(Ripple P-P Max. 10%) | | |
| Output | Switching Signal | 2-Channel NPN or PNP open collector output | |
| | Analog Signal | 1~5, 0~5, 0~10VDC, 4~20mA | |
| Response Time | 5, 20, 100, 500, 1000, 2000ms | | |

Physical

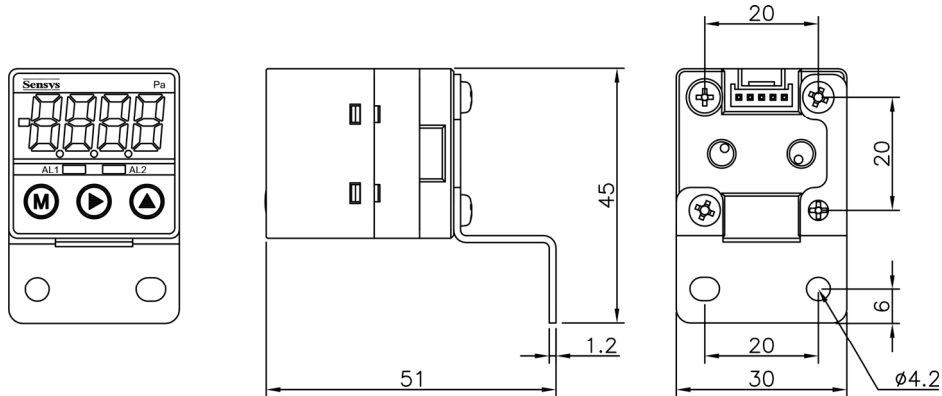
| | |
|----------------|---|
| Proof Pressure | 300%FS Max. |
| Burst Pressure | 500%FS Min. |
| Pressure Port | M5(F) Ø4.8 (Ø4.4 in the end) resin piping (Applicable to I.D. Ø4 air tubing) : Only ≤ ±10kPa |
| Media | Non-corrosive Gases |

Dimension

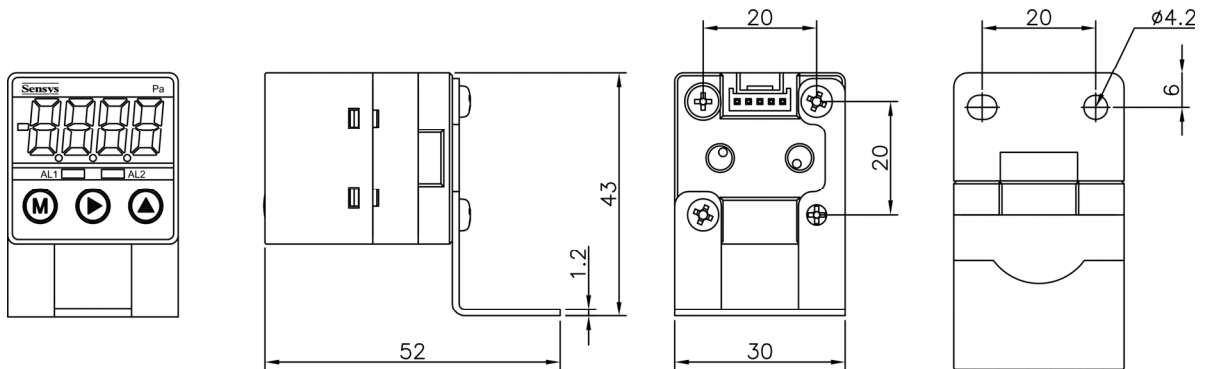
► Pressure Port (M5 Female Type)



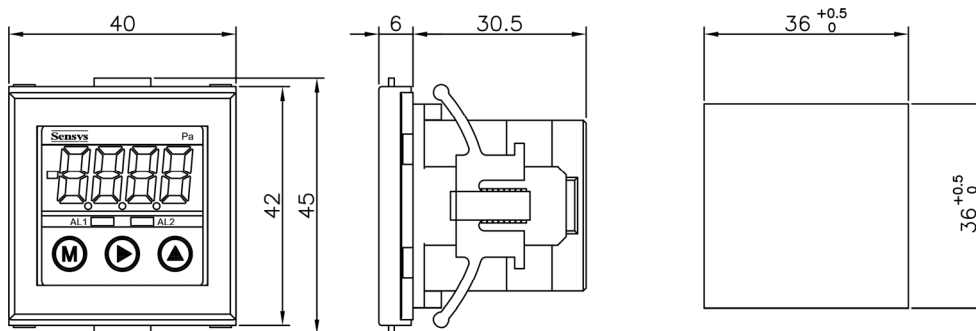
- Bracket A



- Bracket B

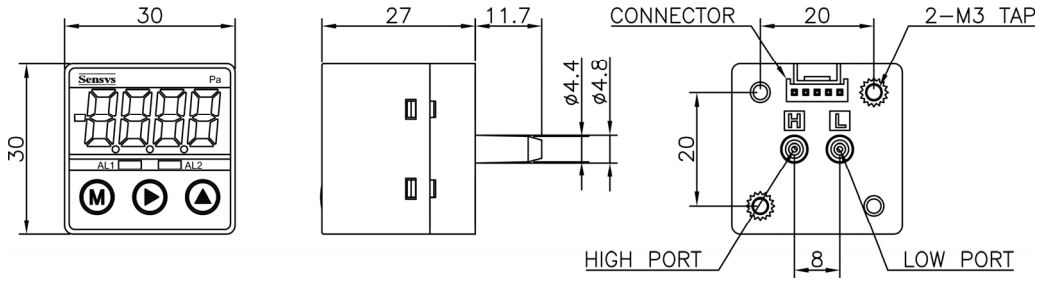


- Panel Mounting Bracket

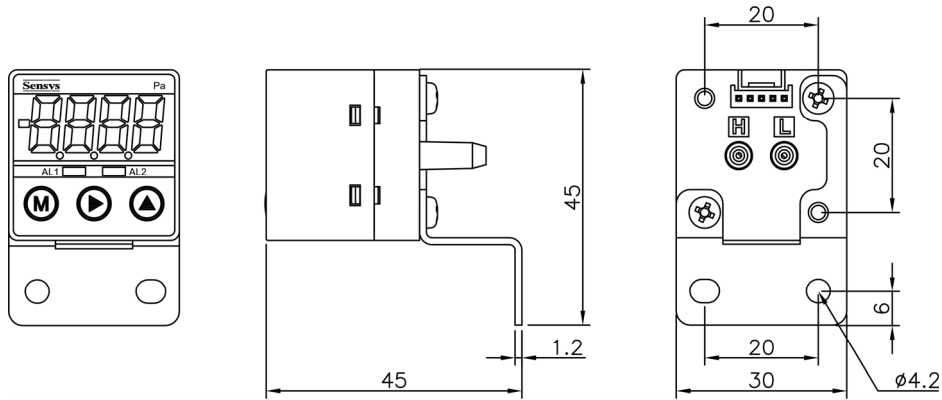


Panel Cut Size
(Panel Thickness 1~8mm)

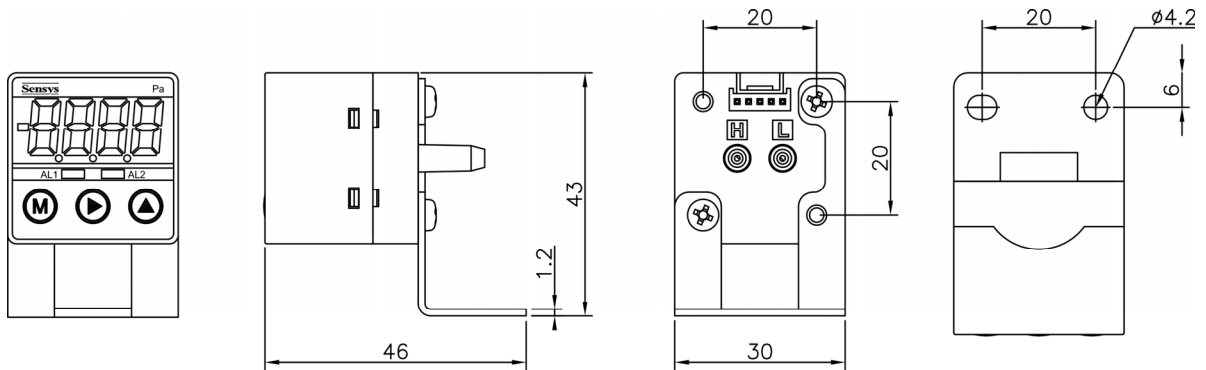
► Pressure Port (Ø4.8 Resin Piping Type - Applicable to I.D. ø4 air tubing)



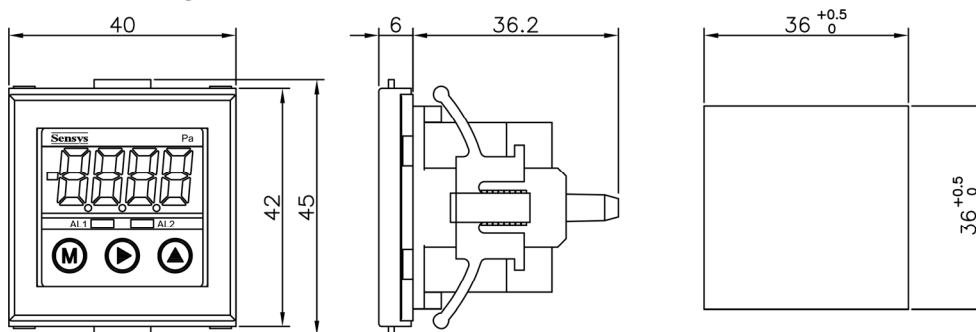
- Bracket A



- Bracket B

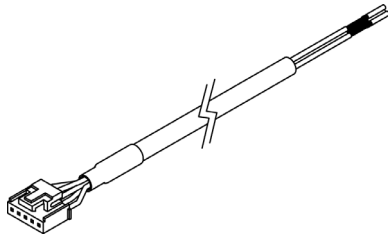


- Panel Mounting Bracket



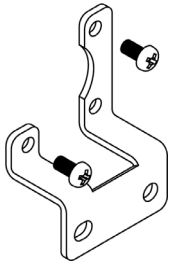
Panel Cut Size
(Panel Thickness 1~8mm)

▶ Accessory



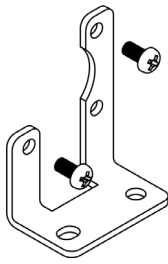
Connector Ass'y (Length : 2m)

▶ Option



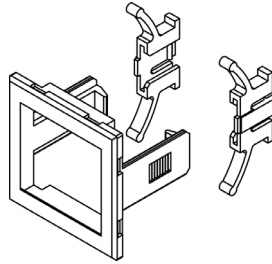
Bracket A

(O/C : SMA-O-A)



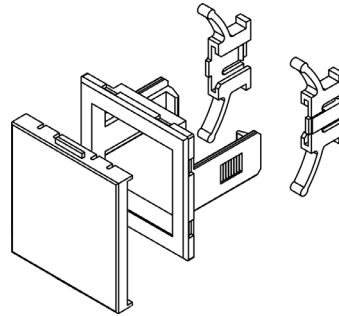
Bracket B

(O/C : SMA-O-B)



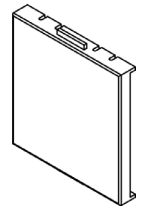
Panel Mounting Bracket Set

(O/C : SMA-O-C)



Panel Mounting Bracket Set
+ Front Protection Cover

(O/C : SMA-O-D)

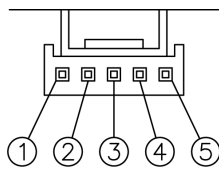


Front Protection Cover

(O/C : SMA-O-E)

*. O/C : Ordering Code

Connection



Connector

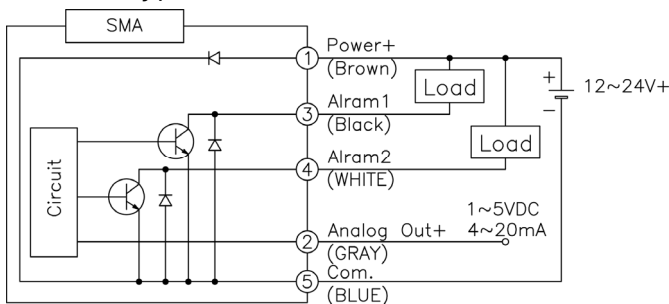
| Pin No. | Wire Color | Connections |
|---------|------------|------------------|
| 1 | Brown | Power+(12~24VDC) |
| 2 | Gray | Analog output+ |
| 3 | Black | Alram 1 |
| 4 | White | Alram 2 |
| 5 | Blue | Com. |

Function

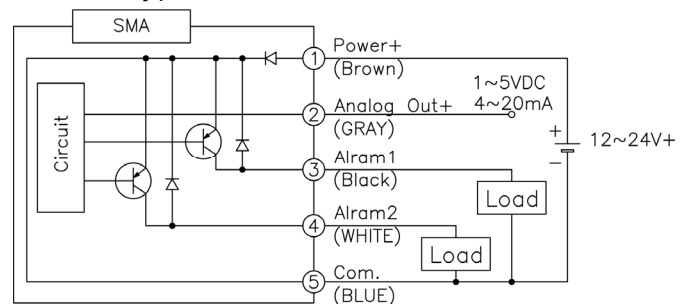
- ▶ Zero Adjustment
- ▶ 2channel Alarm(NPN or PNP), Alarm mode(High, Low, A, B)
- ▶ Anti-chattering(Alarm, Analog Output)
- ▶ Unit Conversion
- ▶ Analog Output Scale Adjustment
- ▶ Key Lock

Internal Circuit Diagram

▶ NPN Type

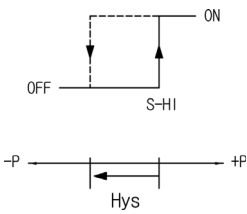


▶ PNP Type

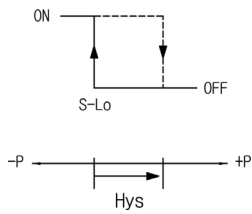


Alarm Mode

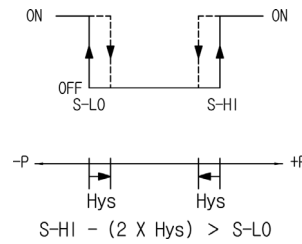
▶ Hi Mode



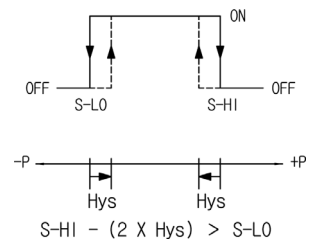
▶ Low Mode



▶ A Mode



▶ B Mode



Ordering Information

SMA D E N ±001 R 9 D - XXX - A

Model Name

Type

D : for Air / Differential Pressure

Analog Output

C : 0~5V

J : 0~10V

E : 1~5V

G : 4~20mA

Switch Output

N : NPN Open Collector

P : PNP Open Collector

Pressure Range

XXXX : Pressure

Option

A : Bracket A

B : Bracket B

C : Panel Mounting Bracket Set

D : Panel Mounting Bracket Set

+ Front Protection Cover

Port Option

Type of Pressure Measurement

D : Differential

Pressure port

9 : M5(F) V : Port Option

0 : Ø4.8 Resin Piping

Pressure Unit

A : Pa

R : kPa

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