

Model SMA

Compact Size(30X30mm) Digital Pressure Gauge / Switch

Description

SMA model contains Microprocessor in default. Moreover, it is a 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
- ▶ SMAA Model
Measuring range : -100~0~100 ... 1000kPa
Use with non-corrosive, non-ionic media
- ▶ SMAV, SMAH Model
Measuring range : -100~0~100kPa ... 70MPa
Stainless steel(316L) media-wetted materials



Applications

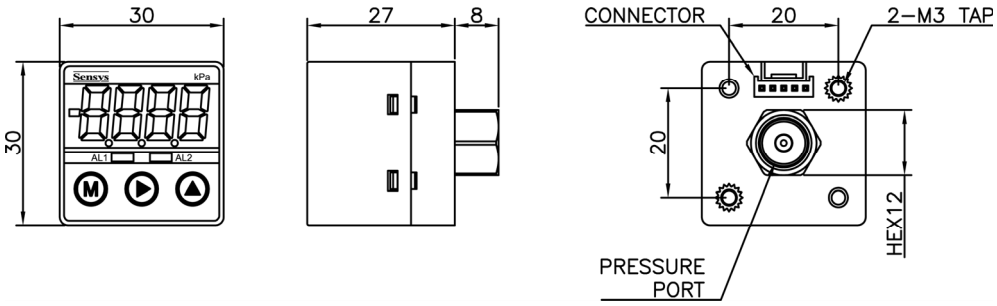
- ▶ Process control
- ▶ Hydraulics & Pneumatic
- ▶ Compressor Control
- ▶ Chillers
- ▶ Refrigeration Equipment

Specifications

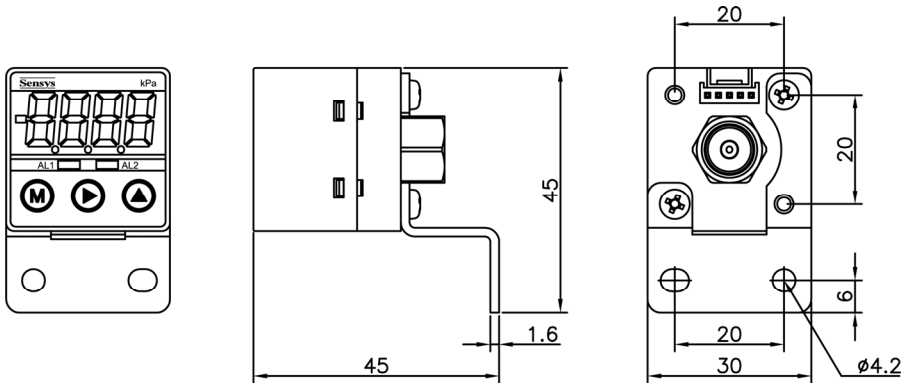
Model	SMA <input type="checkbox"/>	SMA <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	SMA <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Range	0~100kPa, 1MPa(Gauge) -100kPa~100kPa, 1MPa(Gauge) 0~-100kPa(Gauge)	0~0.1, 1, 3.5, 7, 20, 35, 70MPa(Gauge/Absolute) -0.1~0.1, 1, 3.5, 7, 20, 35, 70MPa(Gauge) 0~-100kPa(Gauge)	
Display Accuracy	±0.5%FS (25°C)		
Thermal Effect	±3%FS (0~50°C)		
Operating Temperature Range	-10~50°C		
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(±2%FS) or 4~20mA(3Wire)(±2%FS)	4~20mA(2Wire)(±2%FS)
Response Time	2.5, 20, 100, 500, 1000, 2000ms		
Proof Pressure	150%FS Max.		
Pressure Port	Rc(PT)1/8", M5(F)	R(PT)1/4", LOK, VCR	
Media	Non-corrosive Gases	Corrosive Gases/Liquids compatible with STS316L	

Dimension

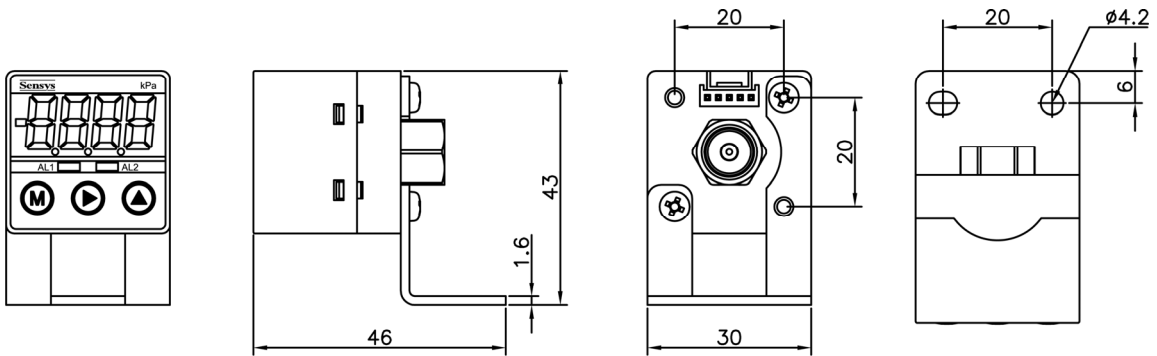
► SMAA (Only Air Type)



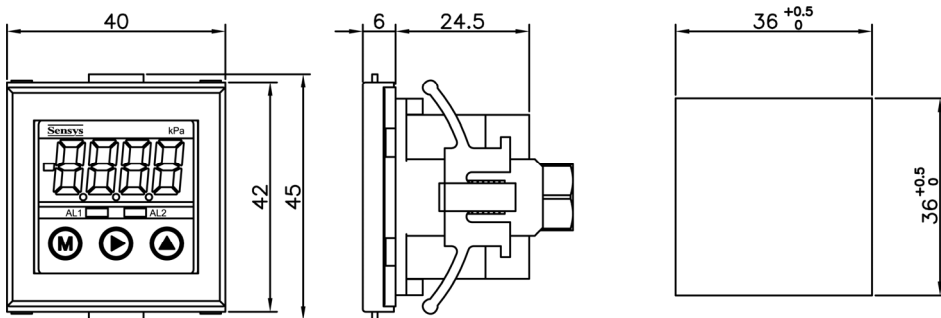
- Bracket A



- Bracket B

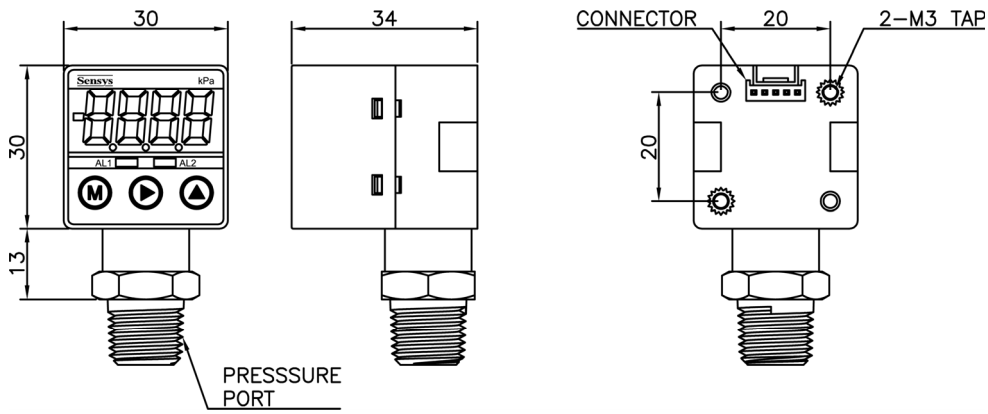


- Panel Mounting Bracket

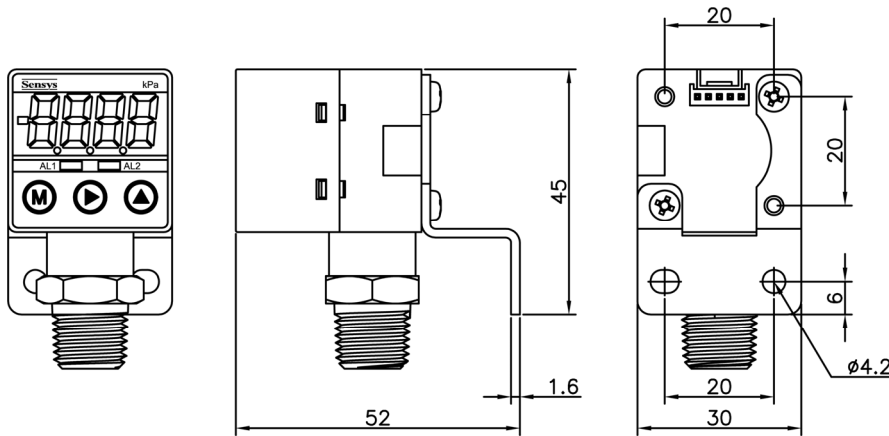


Panel Cut Size
(Panel Thickness 1~8mm)

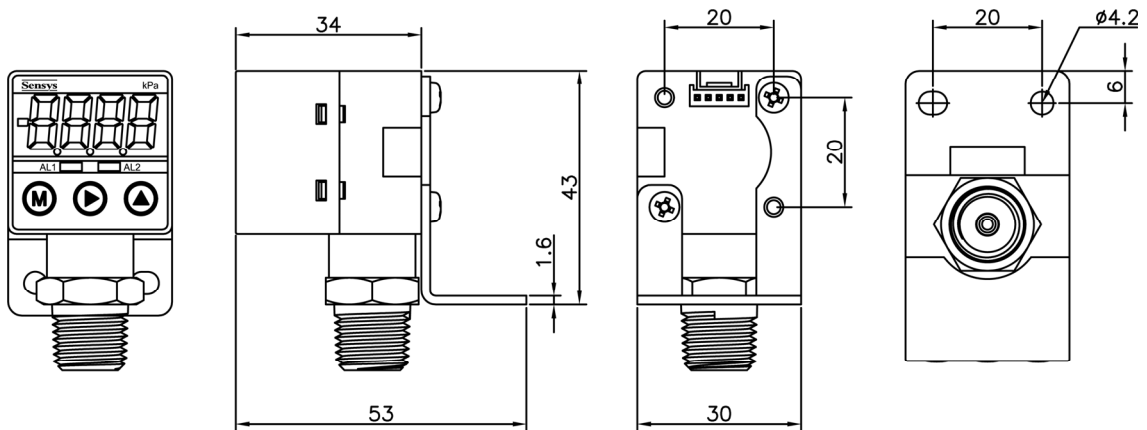
► SMAV (Liquid / Vertical installation Type)



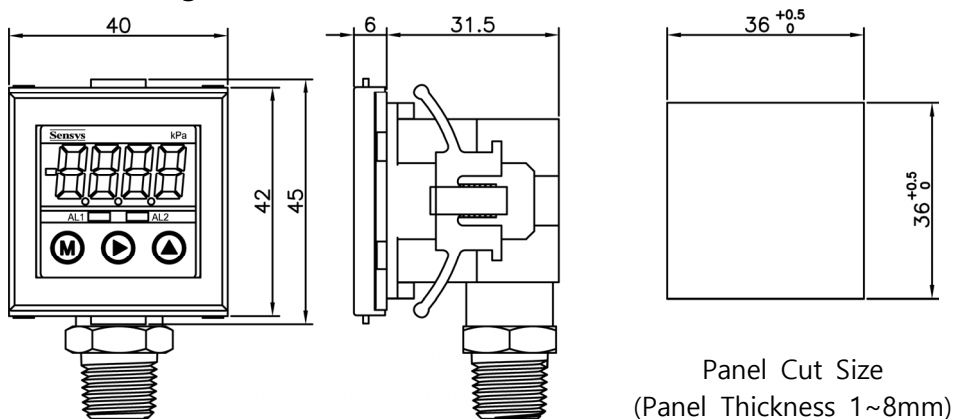
- Bracket A



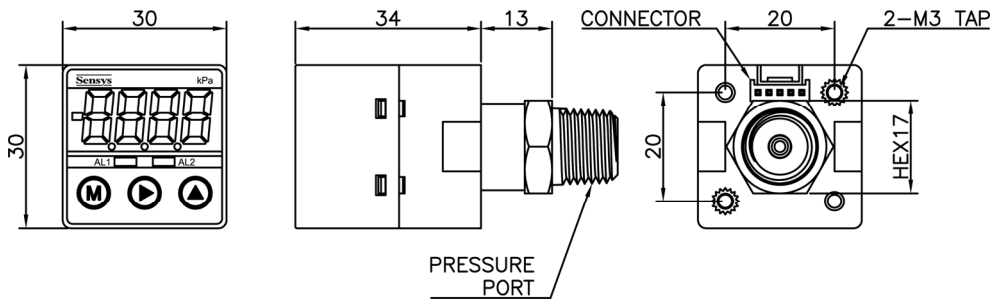
- Bracket B



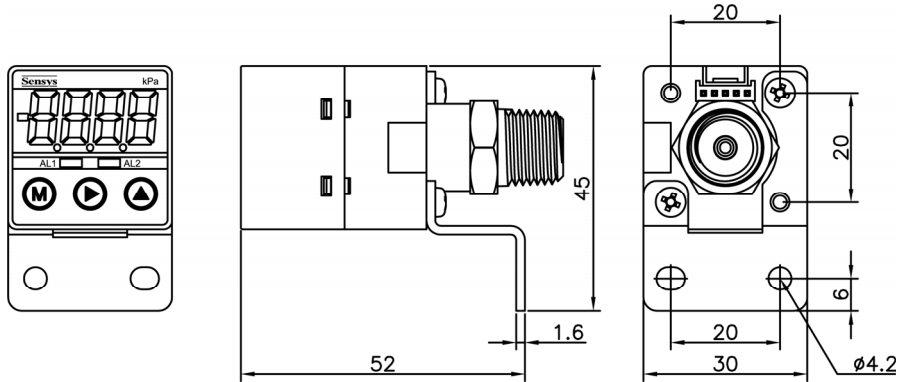
- Panel Mounting Bracket



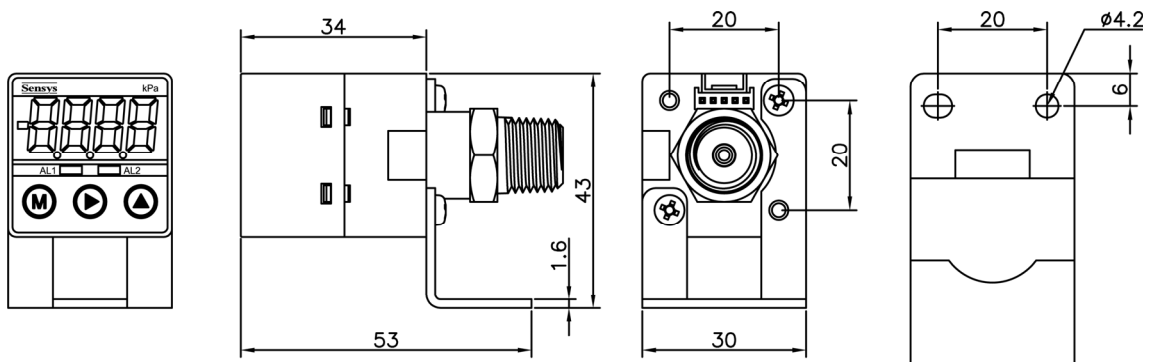
► SMAH (Liquid / Horizontal installation Type)



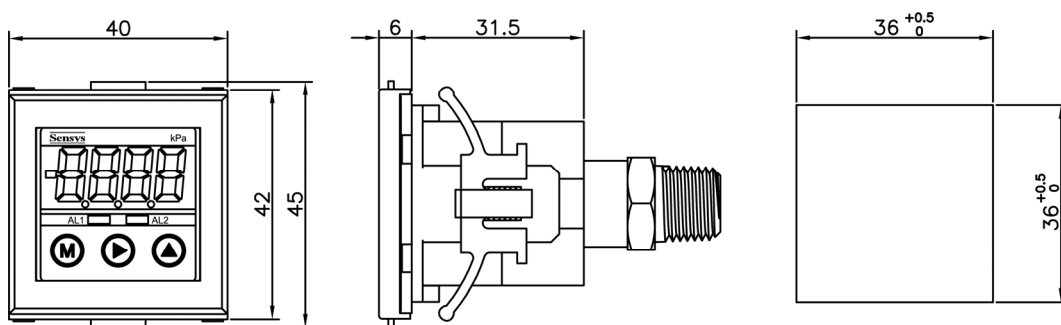
- Bracket A



- Bracket B

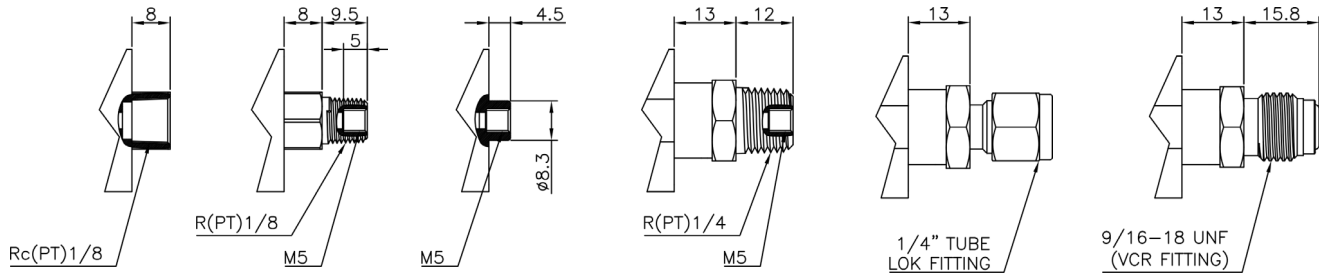


- Panel Mounting Bracket



Panel Cut Size
(Panel Thickness 1~8mm)

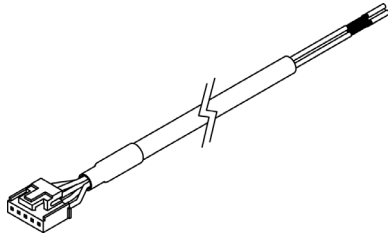
► Pressure Port



O/C: SMAA□□□□8□ SMAA□□□□G□ SMAA□□□□9□ SMA $\frac{V}{H}$ □□□□C□ SMA $\frac{V}{H}$ □□□□V□-A04 SMA $\frac{V}{H}$ □□□□V□-A05

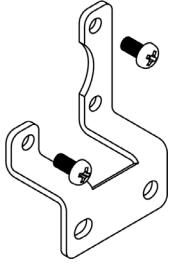
*. O/C : Ordering Code

► Accessory



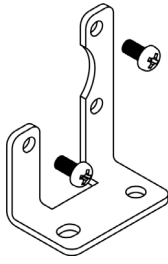
Connector Ass'y (Length : 2m)

► Option



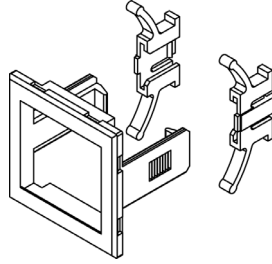
Bracket A

(O/C : SMA-O-A)



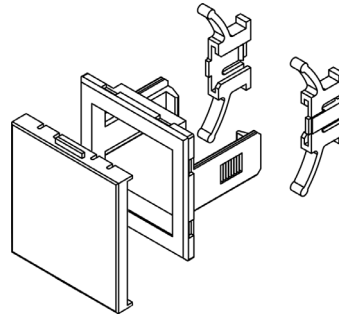
Bracket B

(O/C : SMA-O-B)



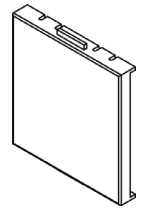
Panel Mounting Bracket Set

(O/C : SMA-O-C)



Panel Mounting Bracket Set + Front Protection Cover

(O/C : SMA-O-D)

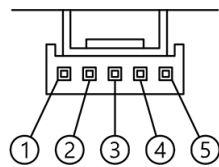


Front Protection Cover

(O/C : SMA-O-E)

*. O/C : Ordering Code

Connection



Connector

Pin No.	Wire Color	Connections	Connections 4~20mA(2Wire)
1	Brown	Power+(12~24VDC)	+
2	Gray	Analog output+	NC
3	Black	Alram 1	NC
4	White	Alram 2	NC
5	Blue	Com.	-

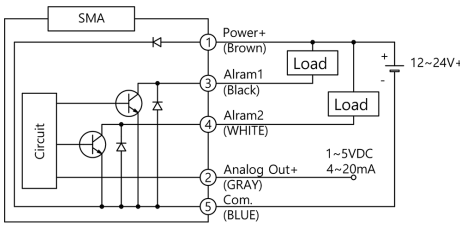
Function

- Zero Adjustment
- 2channel Alarm(NPN or PNP), Alarm mode(High, Low, A, B)¹⁾
- Anti-chattering(Alarm, Analog Output)
- Unit Conversion
- Analog Output Scale Adjustment
- Key Lock

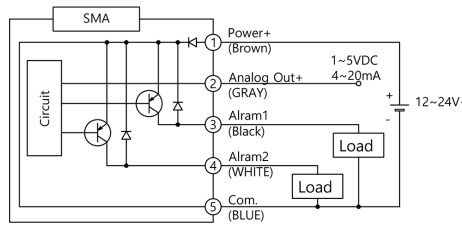
¹⁾ Except for 4~20mA(2wire) output type

Internal Circuit Diagram

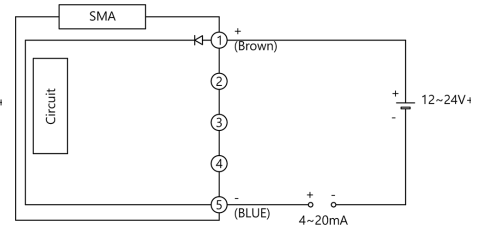
▶ NPN Type



▶ PNP Type

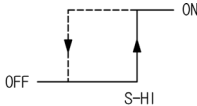


▶ 4~20mA(2Wire) Output Type

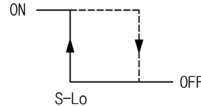


Alarm Mode

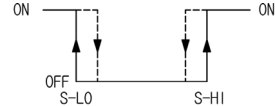
▶ Hi Mode



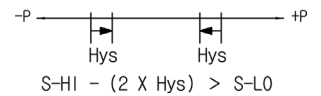
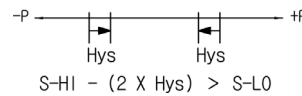
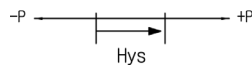
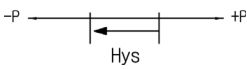
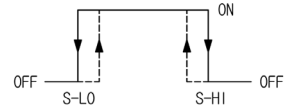
▶ Low Mode



▶ A Mode



▶ B Mode



Ordering Information

SMA V E N 0001 M V G-A04-A

Model Name

Type

- A : for Air
- V : for Liquid / Vertical installation
- H : for Liquid / Horizontal installation

Analog Output

- C : 0~5V J : 0~10V
- E : 1~5V G : 4~20mA(3Wire)
- H : 4~20mA(2Wire)¹⁾

Switch Output

- N : NPN Open Collector
- P : PNP Open Collector
- X : No Switch Output²⁾

Pressure Range

- XXXX : Pressure
- CXXX : Compound Pressure
- XXX : Vacuum Pressure

Option

- A : Bracket A
- B : Bracket B
- C : Panel Mounting Bracket Set
- D : Panel Mounting Bracket Set + Front Protection Cover

Port Option

- A04 : 1/4" LOK Fitting
- A05 : 9/16-18UNF VCR

Type of Pressure Measurement

- G : Gauge(Type A, V, H)
- J : Absolute(Type V, H)

Pressure port

- | | |
|------------|-----------------|
| Type A | Type V, H |
| 8 : Rc1/8" | C : R1/4" |
| 9 : M5(F) | V : Port Option |
| G : R1/8" | |

Pressure Unit

- R : kPa
- M : MPa

¹⁾ Liquid Type only(SMA V, SMA H)

²⁾ 4~20mA(2wire) output type only