

Features

- 3-color digital LCD display
- Copy function
- Programmable pressure unit :
kPa 、MPa 、kgf/cm² 、bar 、psi 、inHg 、mmHg
- Dual LCD display allows setting value to be displayed
- Key lock indicator
- Power-save mode



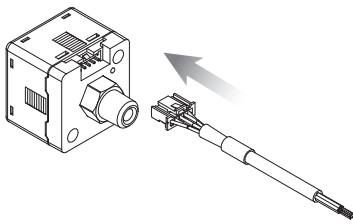
SPECIFICATION

TYPE	Compound	Vacuum	Positive
MODEL	AP43C	AP43V	AP43P
1.000 MPa			
100.0 kPa			
0			
-101.3 kPa			
Rated pressure range	-100.0 ~ 100.0 kPa (-14.50 ~ 14.50 psi)	0.0 ~ -101.3 kPa (0.0 ~ -29.9 inHg)	0.000 ~ 1.000 MPa (0.0 ~ 145.0 psi)
Setting pressure range	-101.0 ~ 101.0 kPa (-14.50 ~ 14.50 psi)	-101.3 ~ 10.0 kPa (1.45 psi ~ -29.9 inHg)	-0.100 ~ 1.000 MPa (-14.5 ~ 145.0 psi)

FEATURES HIGHLIGHT

1 Quick Installation

- Save Installation Time
- Easy Removal



(Connection Mode)

2 Copy Setting

- Avoid setting errors
- Reduce setting time



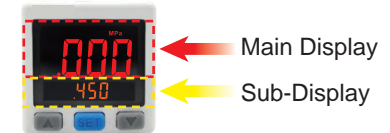
(Original Parameter)

(Copied)

3 Setting Value Easy Indication

- User can easily observe the setting value from sub-display.

Main/Sub Display



Main Display

Sub-Display

4 3 Color Main Display

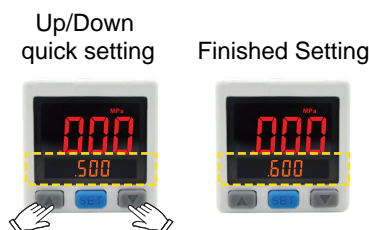
- User programmable color mode, for different setting conditions.



	Gold	Sor	urn	rEd
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

5 OPS Quick Setting

- Sub-display allows changing the parameter directly, reduce setting step by 3/4.

Up/Down
quick setting


Finished Setting

6 Easy Unit Identification

- Conversion unit is on display and easy to read.

mmHg | inHg | psi | bar | kgf/cm² | MPa | kPa

■ SPECIFICATION

MODEL		AP43C (Compound)	AP43V (Vacuum)	AP43P (Positive)
				
Rated pressure range		-100.0 ~ 100.0 kPa (-14.50 ~ 14.50 psi)	0.0 ~ -101.3 kPa (0.0 ~ -29.9 inHg)	0.000 ~ 1.000 MPa (0.0 ~ 145.0 psi)
Set pressure range		-101.0 ~ 101.0 kPa (-14.50 ~ 14.50 psi)	-101.3 ~ 10.0 kPa (1.45 psi ~ -29.9 inHg)	-0.100 ~ 1.000 MPa (-14.50 ~ 145.0 psi)
Withstand pressure		300 kPa (43.5 psi)		1.5 MPa (217.6 psi)
Fluid		Filtered air, Non-corrosive / Non-flammable gas		
Set pressure resolution	kPa	0.1		-
	MPa	-		0.001
	kgf/cm ²	0.001		0.01
	bar	0.001		0.01
	psi	0.01		0.1
	inHg	0.1		-
	mmHg	1		-
Power supply voltage		12 to 24V DC $\pm 10\%$, Ripple (P-P) 10% or less		
Current consumption		$\leq 40\text{mA}$ (With no load)		
Switch output		NPN: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 30V DC Residual voltage: $\leq 1.5\text{V}$	PNP: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 24V DC Residual voltage: $\leq 1.5\text{V}$	
Repeatability(Switch output)		$\pm 0.2\%$ F.S. ± 1 digit		
Hysteresis	One point set mode	Adjustable(*1)		
	Hysteresis mode			
	Window comparator mode			
Response time		$\leq 2.5\text{ms}$ (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selectable)		
Output short circuit protection		Yes		
7 segment LCD display		Two color(Red/Green) main & unit display, Orange sub-display (Sampling rate: 5 times/1sec.)		
Indicator accuracy		$\pm 2\%$ F.S. ± 1 digit (ambient temperature: $25 \pm 3^\circ\text{C}$)		
Switch ON Indicator		Orange (OUT1 and OUT2 indicator)		
Analog output (Voltage Output) (*2)		Output Voltage: 1 to 5V $\pm 2.5\%$ F.S. (within rated pressure range) Linearity: $\pm 1\%$ F.S. Output impedance: about 1k Ω		
Analog output (Current Output) (*3)		Output Current: 4 to 20mA $\pm 2.5\%$ F.S.(within rated pressure range) Linearity: $\pm 1\%$ F.S. Max.Load Impedance: 300 Ω at power supply of 12V 600 Ω at power supply of 24V Min.Load impedance: 50 Ω		
Environment	Environment	IP 40		
	Ambient temp. range	Operation: 0 ~ 50°C, Storage:-10 ~ 60°C (No condensation or freezing)		
	Ambient humidity range	Operation/Storage: 35 ~ 85% RH (No condensation)		
	Withstand voltage	1000V AC in 1-min (between case and lead wire)		
	Insulation resistance	50M Ω (at 500V DC, between case and lead wire)		
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z		
Shock		100m/s ² (10G), 3 times each in direction of X, Y and Z		
Temperature characteristic		$\pm 2.5\%$ F.S. of detected pressure (25°C) at temp. Range of 0~50°C		
Port size		F1 : R1/8", M5; F2 : NPT1/8", #10-32 UNF; F3 : G1/8"(BSPP), M5		
Lead wire		Oil-resistance cable(0.15mm ²)		
Weight		Approx. 80g (with 2 meter lead wire)		

[NOTE] *1 : Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.

*2 : If analog voltage output is selected, the analog current output cannot be selected at the same time.

*3 : If analog current output is selected, the analog voltage output cannot be selected at the same time.

AP43 SERIES



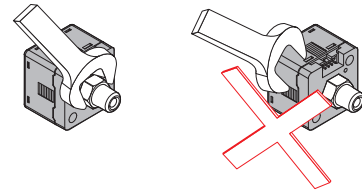
Pressure Sensor

PANEL DESCRIPTION



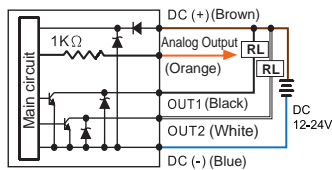
INSTALLATION PRECAUTIONS

- When mounting, always use the wrench on the metallic area near the pressure port. Never apply a wrench to the plastic body, it will damage the sensor.
- Over tightening may cause damages to the port thread, mounting bracket and pressure sensor. Under tightening may result loosen or leakage.
- Apply pressure and power after installation and make necessary adjustments and inspect any possible signs of leakage to ensure proper installation.

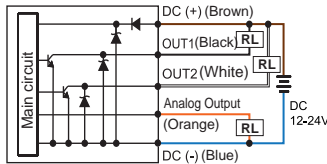


OUTPUT CIRCUIT WIRING DIAGRAMS

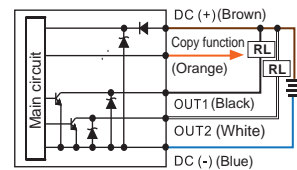
AP43 □ - 010 - □
2 NPN + Analog Output(1~5V)



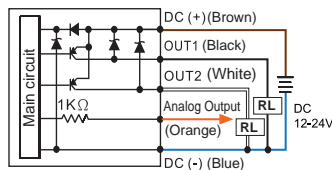
AP43 □ - 011 - □
2 NPN + Analog Output(4~20mA)



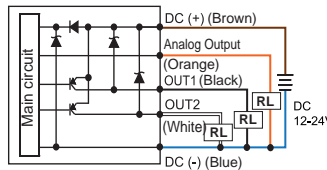
AP43 □ - 02 - □
2 NPN + Copy Function



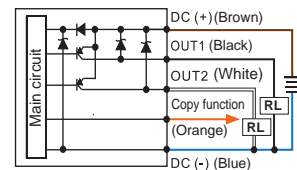
AP43 □ - 030 - □
2 PNP + Analog Output(1~5V)



AP43 □ - 031 - □
2 PNP + Analog Output(4~20mA)



AP43 □ - 04 - □
2 PNP + Copy Function



ORDERING INFORMATION

A P 4 3 C - 0 1 0 - F 1

Pressure Range

- C** : Compund (-101.0 ~ 101.0kPa)
(-14.50 ~ 14.5 psi)
- V** : Vacuum (10.0 ~ -101.3kPa)
(1.45 psi ~ -29.9 inHg)
- P** : Positive (-0.100~1.000MPa)
(-14.5 ~145.0 psi)

Output Specifications

- 010** : 2 NPN Output & Analog Output(1~5V)
- 011** : 2 NPN Output & Analog Output(4~20mA)
- 02** : 2 NPN Output & Copy Function
- 030** : 2 PNP Output & Analog Output(1~5V)
- 031** : 2 PNP Output & Analog Output(4~20mA)
- 04** : 2 PNP Output & Copy Function

Pressure Port

- F1** : R 1/8", M5
- F2** : NPT 1/8", #10-32UNF
- F3** : G 1/8"(BSPP), M5

Optional Parts

- BT-12** : Mounting bracket
- BT-13** : Mounting bracket
- PA-C** : Panel adapter
- PA-D** : Panel adapter + Front protective lid
- CN0048M84QD0.3M** : M8, 4-Pin, male conversion cable

Optional Parts

Mounting bracket



■ BT-12 ■ BT-13

Panel adapter



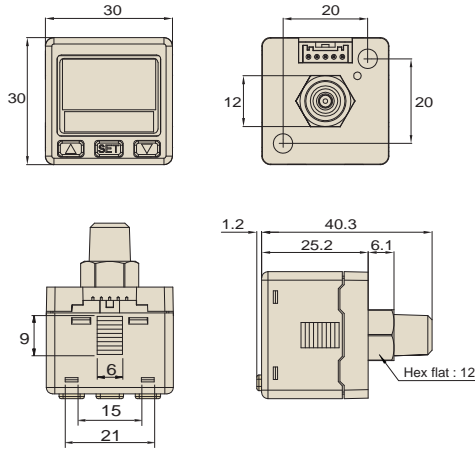
■ PA-C

Panel adapter + Front protective lid

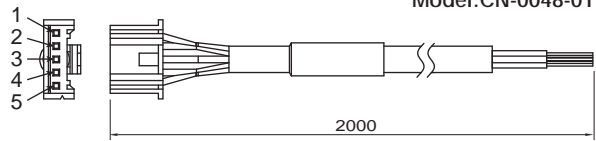


■ PA-D

■ DIMENSION

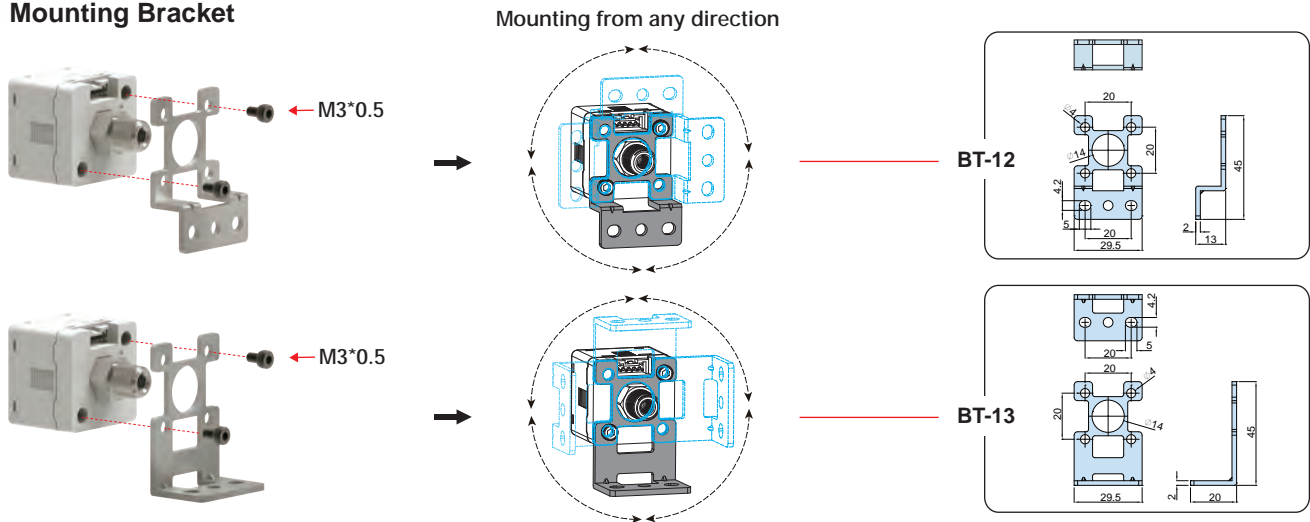


PIN No.	Wire Color
1	DC(+)(Brown)
2	Analog output(Orange)
3	OUT2(White)
4	OUT1(Black)
5	DC-(Blue)

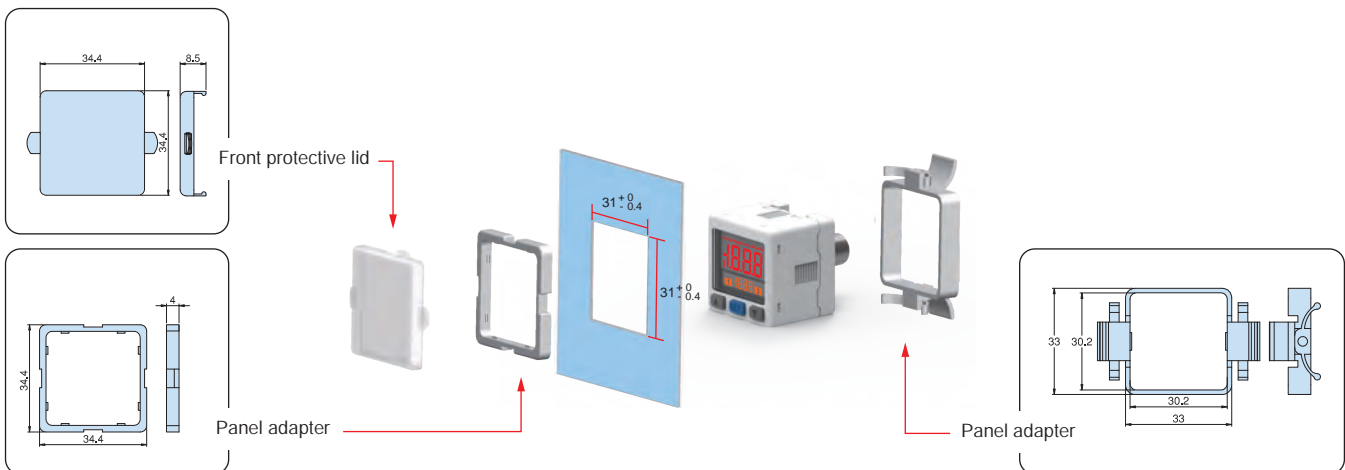


■ OPTIONAL PARTS DIMENSIONS

1 Mounting Bracket



2 Panel Mount Adapter + Front Protective Lid



Unit:mm