

Features

- Smart pressure sensor
- Remote control
- Real-time monitoring
- RS-485 Modbus RTU/ASCII
- 4 digits, 7 segment LCD display



SPECIFICATIONS

TYPE	Compound	Vacuum	Positive
MODEL	AP70C	AP70V	AP70P
1.0 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)	10.0 ~ -101.3 kPa (1.45 psi ~ -29.9 inHg)	-0.100 ~ 1.000 MPa (-14.5 ~ 145.0 psi)

FEATURES HIGHLIGHT

1 Station Setting Display

- Provide 0 ~ 255 station to set the sensor.



ID number display

2 Modes Display

- Three modes show on the screen.



3 Setting Value Easy Indication

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



4 Easy Unit Identification

- Conversion unit is on display and easy to read.



5 2-Color Main Display

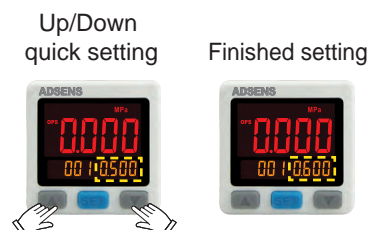
- User programmable color mode, for different setting conditions.



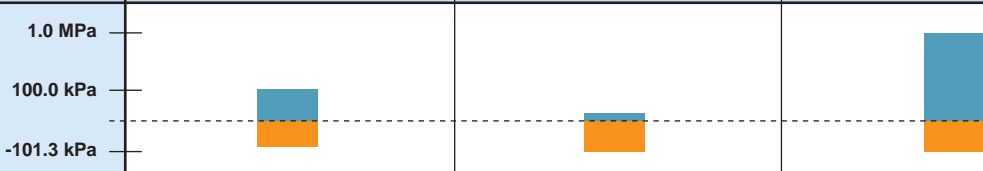
	SoG	SoR	Grn	Red
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

6 OPS Quick Setting

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

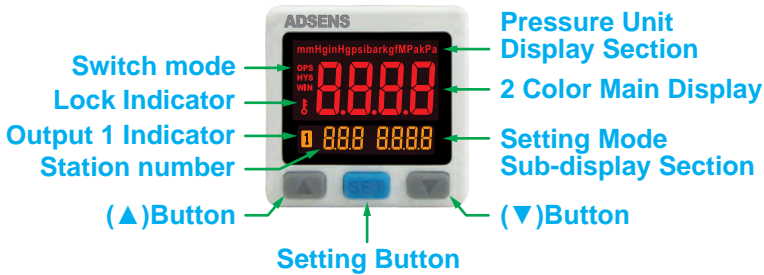


■ SPECIFICATIONS

MODEL		AP70C (Compound)	AP70V (Vacuum)	AP70P (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)
Setting pressure range		-101.0 ~ 101.0 kPa (-14.50 ~ 14.50 psi)	10.0 ~ -101.3 kPa (1.45 psi ~ -29.9 inHg)	-0.100 ~ 1.000 MPa (-14.50 ~ 145.0 psi)
Withstand pressure		500 kPa (72.5 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 1 outputs Max. load current: 125mA Max. supply voltage: 30V DC Residual voltage: $\leq 1.5\text{V}$	PNP: open collector 1 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, 1500ms, 2000ms and 5000ms selectable)		
Output short circuit protection		Yes		
7 segment LCD display		Two color(Red/Green) main & unit display, Orange sub-display (Sampling rate : 0.2 , 0.5 , 1 seconds/time selectable)		
Indicator accuracy		$\pm 2\%$ F.S. ± 1 digit (ambient temperature: $25 \pm 3^\circ\text{C}$)		
Switch ON Indicator		Orange (1 Indicator) OUT1		
Environment	Enclosure	IP40		
	Ambient temp. range	Operation: $0 \sim 50^\circ\text{C}$, Storage: $-10 \sim 60^\circ\text{C}$ (No condensation or freezing)		
	Ambient humidity range	Operation/Storage: $35 \sim 85\%$ 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 $0\sim 50^\circ\text{C}$		
Communication interface		RS-485		
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)		

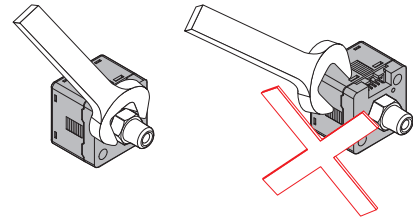
[NOTE] *1 : Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.

■ PANEL DESCRIPTION



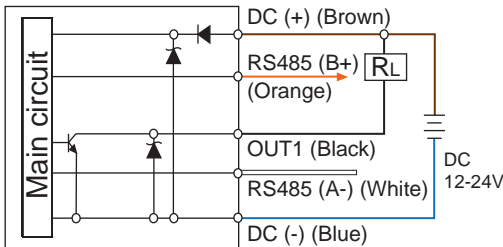
■ INSTALLATION PRECAUTIONS

- 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.

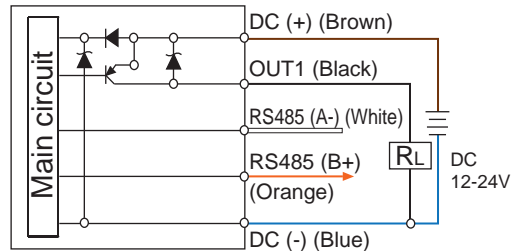


■ OUTPUT CIRCUIT WIRING DIAGRAMS

AP70 □ - 02 - □
NPN output + RS485



AP70 □ - 04 - □
PNP output + RS485



■ ORDERING INFORMATION

A P 7 0 C - 0 2 - F 1

Pressure Range

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

Output Specifications

- 02 : 1 NPN output + RS485
- 04 : 1 PNP output + RS485

Pressure Port

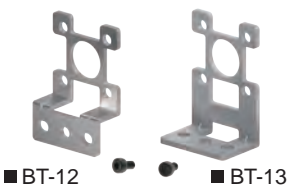
- F1 : R 1/8", M5
- F2 : NPT 1/8", #10-32UNF
- F3 : G 1/8"(BSPP), M5

Optional Parts

- BT-12 : Mounting bracket
- BT-13 : Mounting bracket
- PA-C : Panel adapter
- PA-D : Panel adapter + Front protective lid

Optional Parts

Mounting bracket



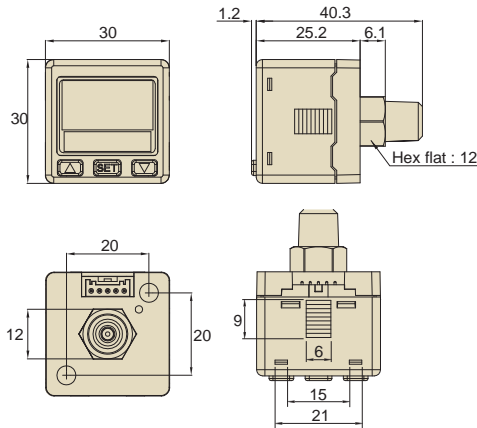
Panel adapter



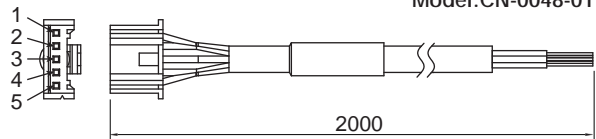
Panel adapter + Front protective lid



■ DIMENSIONS



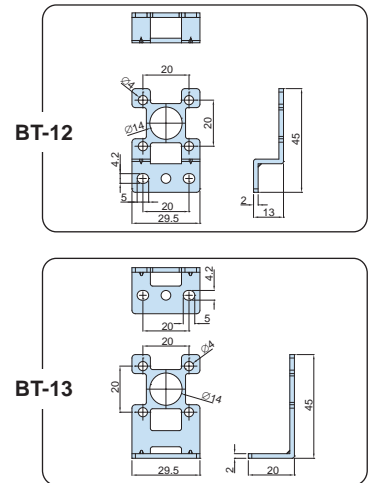
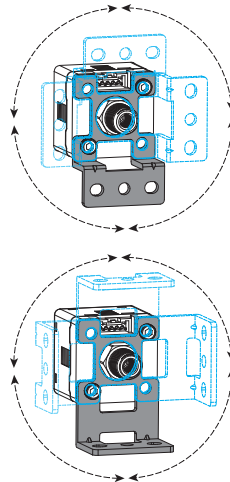
PIN No.	Wire Color
1	DC(+)(Brown)
2	Analog output(Orange)
3	OUT2(White)
4	OUT1(Black)
5	DC-(Blue)



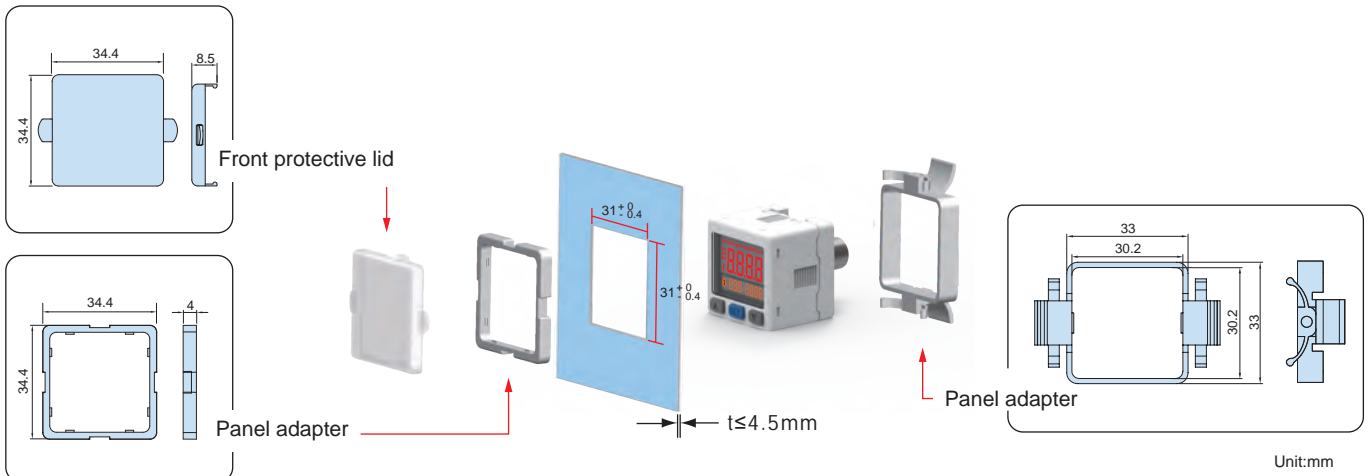
■ OPTIONAL PARTS DIMENSIONS

1 Mounting Bracket

4 mounting directions available



2 Panel Mount Adapter + Front Protective Lid



Unit:mm