AP25 SERIES

RoHS

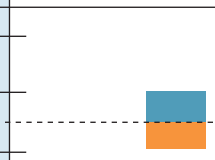
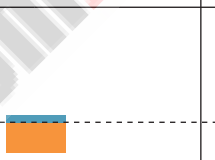
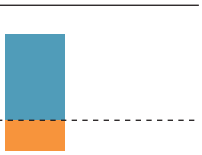
Pressure Sensor

Features



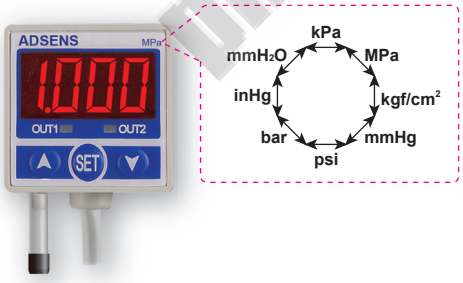
- Setting pressure range :
  Compound : -100.0~100.0 kPa (-14.50~14.50 psi)
  Vacuum : -101.3~10.0 kPa (-29.9 inHg~1.45 psi)
  Positive : -0.100~1.000 MPa (-14.5~145.0 psi)
- Two switch outputs & One analog output (1~5V)
- Hysteresis adjustable
- High display accuracy : ±0.2% F.S.
- Programmable pressure unit :
  kPa、MPa、kgf/cm^2、mmHg、psi、bar、inHg、mmH$_2$O
- IP65 enclosure, dust-proof and splash-proof

■ SPECIFICATION

TYPE	Compound	Vacuum	Positive
MODEL	AP25C	AP25V	AP25P
1.000 MPa (145.0 psi) 100.0 kPa (14.5 psi) 0 -101.3 kPa (-14.7 psi)			
Rated pressure range	-100.0 ~ 100.0 kPa (-14.50 ~ 14.50 psi)	-101.3 ~ 0.0 kPa (-29.9 ~ 0.0 inHg)	0.000 ~ 1.000 MPa (0.0 ~ 145.0 psi)
Setting pressure range	-100.0 ~ 100.0 kPa (-14.50 ~ 14.50 psi)	-101.3 ~ 10.0 kPa (-29.9 inHg ~ 1.45 psi)	-0.100 ~ 1.000 MPa (-14.5 ~ 145.0 psi)

■ FEATURES HIGHLIGHT

1 Programmable pressure unit



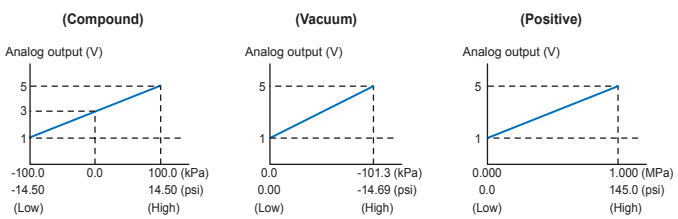
2 Dust-proof and splash-proof

Enclosure protection rating: IP 65



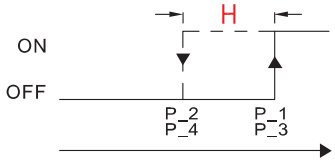
3 Analog output

Two sensor outputs & One analog output
Output range 1 to 5V, proportional to the pressure range



4 Hysteresis adjustable

Output hysteresis (H) is adjustable by user



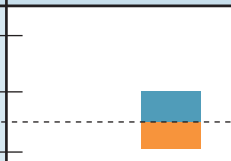
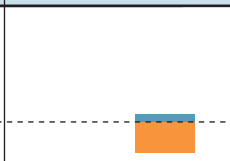
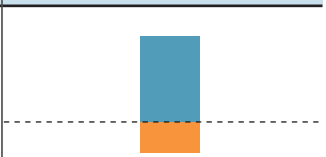
We reserve the right to change the specification without prior notice.

AP25 SERIES

RoHS

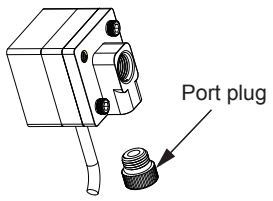
Pressure Sensor

SPECIFICATION

MODEL		AP25C (Compound)	AP25V (Vacuum)	AP25P (Positive)
1.000 MPa (145.0 psi) 100.0 kPa (14.5 psi) 0 -101.3 kPa (-14.7 psi)				
Rated pressure range		-100.0 ~ 100.0 kPa (-14.50 ~ 14.50 psi)	-101.3 ~ 0.0 kPa (-29.9 ~ 0.0 inHg)	0.000 ~ 1.000 MPa (0.0 ~ 145.0 psi)
Setting pressure range		-100.0 ~ 100.0 kPa (-14.50 ~ 14.50 psi)	-101.3 ~ 10.0 kPa (-29.9 inHg ~ 1.45 psi)	-0.100 ~ 1.000 MPa (-14.50 ~ 145.0 psi)
Withstand pressure		300.0 kPa (43.50 psi)		1.500 MPa (217.5 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		-
	mmH$_2$O	0.1		-
Power supply voltage		12 to 24V DC ±10%, Ripple (P-P) 10% or less		
Current consumption		≤ 55mA		
Switch output		NPN : open collector 2 outputs Max. load current : 80mA Max. supply voltage : 30V DC Residual voltage : ≤ 1V	PNP : open collector 2 outputs Max. load current : 80mA Max. supply voltage : 24V DC Residual voltage : ≤ 1V	
Repeatability(Sensor output)		±0.2% F.S. ±1 digit		
Hysteresis	Hysteresis mode	Adjustable		
	Window comparator mode	Fixed (3 digits)		
Response time		≤ 2.5ms (chattering-proof function: 24ms, 192ms and 768ms selectable)		
Output short circuit protection		Yes		
7 segment LED display		3 ½ digit LED display (Sampling rate: 5 times/1sec.)		
Indicator accuracy		±2% F.S. ±1 digit (Ambient temperature: 25 ±3°C)		
Indicator		OUT1 = Green, OUT2 = Red		
Analog output (Only type AP25 □- 01 - □, AP25 □- 03 - □)		Output voltage : 1 to 5V ± 5%F.S. (within rated pressure range) Linearity : ±1% F.S.	Output voltage : 1 to 5V ± 2.5%F.S. (within rated pressure range) Linearity : ±1% F.S.	
Environment	Enclosure	IP65 (Dust proof protector installed)		
	Ambient temp. range	Operation : 0 ~ 50°C, storage : -20 ~ 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 min. (at 500V DC, between case and lead wire)		
	Vibration	Total amplitude 1.5mm, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z		
	Shock	980m/s^2 (100G), 3 times each in direction of X, Y and Z		
Temperature characteristic		±2% F.S. of detected pressure (25°C) at temp. Range of 0~50°C		
Port size		F1:R1/8" ; F2:NPT1/8" ; F3:G1/8" (BSPP)		
Lead wire		Oil-resistance cable (0.15mm^2)		
Weight		Approx. 105g (with 2-meter lead wire), Approx. 71g (with M8, 4-pin male connector)		

INSTALLATION

- This product has two inlet pressure ports, select the one most convenient for installation.
- Please plug the unused inlet port with supplied port plug to prevent pressure leak.



We reserve the right to change the specification without prior notice.

AP25 SERIES

RoHS

Pressure Sensor

PANEL DESCRIPTION



3 ½ Digit LED Display
Pressure value display.

OUT1 Indicator (Green)

OUT2 Indicator (Red)

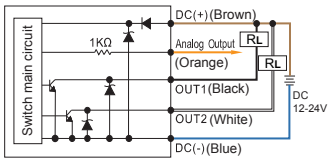
(▲) Button
Use the (▲) button to change setting mode and pre-set desired value.

(▼) Button
Use the (▼) button to change setting mode and pre-set desired value.

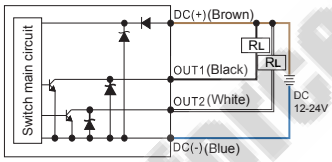
Setting Button
Change setting mode and pre-set final desired value.

OUTPUT CIRCUIT WIRING DIAGRAMS

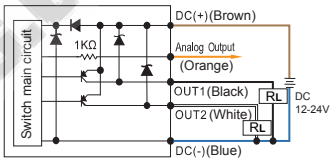
AP25 □- 01 - □- □
NPN Output & Analog Output



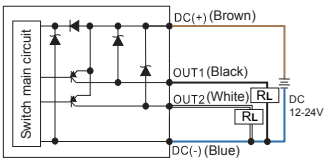
AP25 □- 02 - □- □
NPN Output



AP25 □- 03 - □- □
PNP Output & Analog Output



AP25 □- 04 - □- □
PNP Output



ORDERING INFORMATION

A P 2 5 C - 0 1 - F 1 - □

Pressure Range
C : Compund -100.0~100.0 kPa (-14.50~14.50 psi)
V : Vacuum -101.3~10.0 kPa (-29.9 inHg~1.45 psi)
P : Positive -0.100~1.000 MPa (-14.5~145.0 psi)

Output Specification
01 : 2 NPN output & 1 Analog output(1-5V)
02 : 2 NPN output
03 : 2 PNP output & 1 Analog output(1-5V)
04 : 2 PNP output
05 : 2 NPN output & Auto-shift input
07 : 2 PNP output & Auto-shift input

Pressure Port
F1 : R1/8"
F2 : NPT1/8"
F3 : G1/8" (BSPP)

Cable Length / Connector
Blank : With 2-meter cable
QD : With M8, 4-Pin male connector
*(Only type AP25 □- 02 - □, AP25 □- 04 - □)

Optional Parts
KM84R-PVC-2M / KM84R-PVC-5M : M8, 4-Pin female cordset
BT-1: Mounting bracket
BT-2 : Mounting bracket
PA-A : Panel adapter
PA-B : Panel adapter+Front protective lid

Optional Parts

M8, 4-Pin female cordset



■ KM84R-PVC-2M
KM84R-PVC-5M

Mounting bracket



■ BT-1 ■ BT-2

Panel adapter



■ PA-A

Panel adapter+Front protective lid



■ PA-B

We reserve the right to change the specification without prior notice.

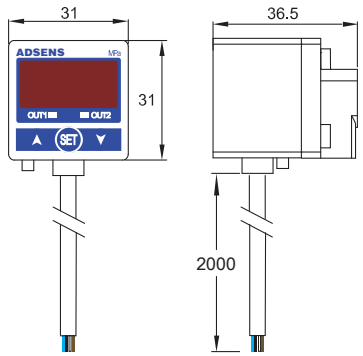
AP25 SERIES

RoHS

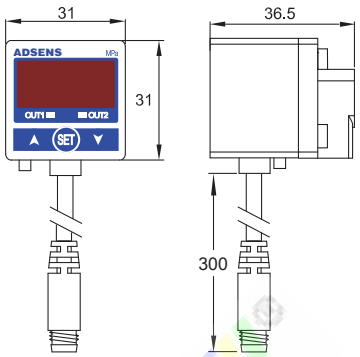
Pressure Sensor

■ DIMENSION

AP25□ - □ - □



AP25□ - □ - □ - QD



QD PINOUT



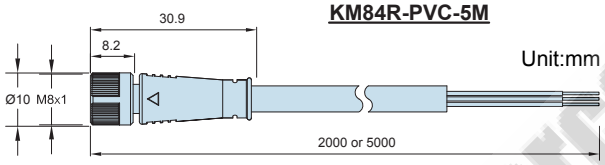
(1) Brown (+)
(2) White (OUT2)
(3) Blue (-)
(4) Black (OUT1)

Unit:mm

■ OPTIONAL PARTS DIMENSIONS

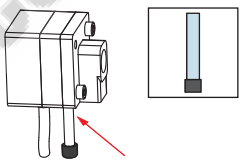
1 M8 Female Cordset

model : KM84R-PVC-2M
KM84R-PVC-5M



Unit:mm

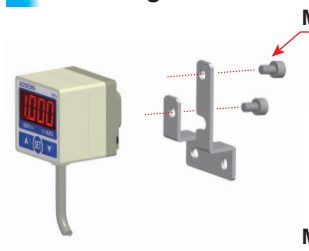
2 IP65 Protector

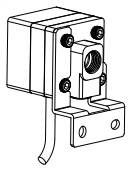


Dustproof protector

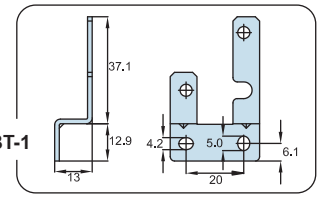
Caution:
This device must be installed to maintain IP65(Dust and splash proof) enclosure rating.

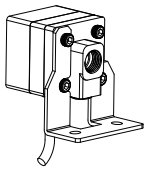
3 Mounting Bracket



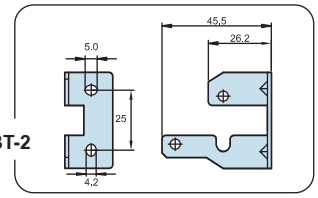


Mounting bracket **BT-1**

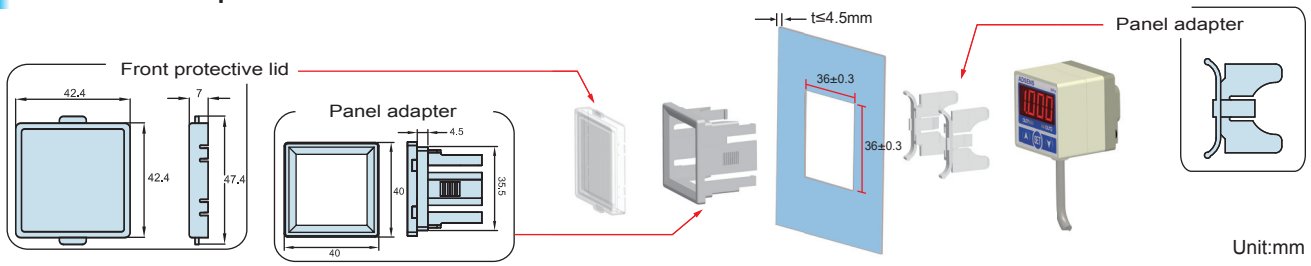




Mounting bracket **BT-2**



4 Panel Mount Adapter + Front Protective Lid



Unit:mm

We reserve the right to change the specification without prior notice.