



### Features

- IP65
- Copy setting.
- 2 NPN / PNP open collector + analog output (1~5V or 4~20mA).
- 2-color digital LCD display.
- Repeatability  $\pm 0.2\%$  F.S.  $\pm 1$  digit.
- Programmable pressure unit: KPa, MPa, kgf/cm<sup>2</sup>, bar, psi, InHg

### Specification

Model		MP45P (Positive)	MP45V (Vacuum)	MP45C (Compound)
Rated pressure range		0 ~ 1.000 MPa	— 101.3 ~ 0.0 kPa	— 100.0~100.0 kPa
Set pressure range		— 0.100 ~ 1.000 MPa	— 101.3 ~ 10.0 kPa	— 101.0~101.0 kPa
Withstand pressure		1.5 MPa	300 kPa	
Fluid		Air, Non-corrosive / Non-flammable gas		
Set pressure resolution	kPa / MPa	— / 0.001	0.1 / —	
	kgf/cm <sup>2</sup> / bar	0.01	0.001	
	psi	0.1	0.01	
	InHg	—	0.1	
Power supply voltage		12 to 24V DC $\pm 10\%$ , Ripple (P-P) 10% or less		
Current consumption		$\leq 40$ mA (With no load)		
Switch output		NPN: open collector 2 outputs Max. load current : 125mA Max. supply voltage: 30V DC Residual voltage : $\leq 1.5$ V	NPN: open collector 2 outputs Max. load current : 125mA Max. supply voltage: 24V DC Residual voltage : $\leq 1.5$ V	
Repeatability (Switch output)		$\pm 0.2\%$ F.S. $\pm 1$ digit		
Hysteresis		Adjustable (*1) Hysteresis mode/ Window comparator mode		
Response time		$\leq 2.5$ ms (chattering-proof function: 25ms, 100ms,250ms,500ms,1000ms and 1500ms selections)		
Output short circuit protection		Yes		
LCD display		3 ½ digit, 7 segment (Red/Green)		
Indicator accuracy		$\pm 2\%$ F.S. $\pm 1$ digit (ambient temperature: 25 $\pm 3$ °C )		
Switch ON Indicator		Orange (1 & 2 Indicator) OUT1 / OUT2		
Analog output (Voltage Output) (**2)		Output Voltage: 1 to 5V $\pm 2.5\%$ Linearity: $\pm 1\%$ F.S. Output impedance: about 1k $\Omega$		
Analog output (Current Output) (**3)		Output Current: 4 to 20mA $\pm 2.5\%$ Linearity: $\pm 1\%$ F.S. Max. Load Impedance:250 $\Omega$ at power supply of 12V, 600 $\Omega$ at power supply of 24V Min. Load impedance:50 $\Omega$		
Environment	Enclosure	IP65		
	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 $\Omega$ (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 <sup>2</sup> (10G),3 times each in direction of X,Y and Z		

(Continued)

# MP45 Dimensions



## HIGH PRECISION DIGITAL PRESSURE SWITCH

mindman

### Specification

Model	MP45P (Positive)	MP45V (Vacuum)	MP45C (Compound)
Temperature characteristic	±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,#10~32UNF; F3:G1/8, M5		
Lead wire	Oil-resistance cable(0.15mm <sup>2</sup> )		
Weight	Appro.86g(with 2-meter lead wire)		

- ※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.

### Output circuit wiring diagrams

Model	MP45□-010	MP45□-011
Connect diagram		
Output method	2 NPN+Analog(Voltage) output (1~5V)	2 NPN+Analog(Current) output (4~20mA)
Model	MP45□-030	MP45□-031
Connect diagram		
Output method	2 PNP+Analog(Voltage) output (1~5V)	2 PNP+Analog(Current) output (4~20mA)

### Order example

**MP45C - 010 - F1**

MODEL

PRESSURE PORT  
F1: R1/8, M5  
F2: NPT1/8, #10-32UNF  
F3: G1/8, M5

PRESSURE RANGE  
C: Compound  
(-101~101 kPa)  
V: Vacuum  
(-101.3 ~ 10.0 kPa)  
P: Positive  
(-0.1~1.000 MPa)

OUTPUT METHOD  
010: 2 NPN output + 1 Analog output (1~5V)  
011: 2 NPN output + 1 Analog output (4~20mA)  
030: 2 PNP output + 1 Analog output (1~5V)  
031: 2 PNP output + 1 Analog output (4~20mA)

### Mounting accessories

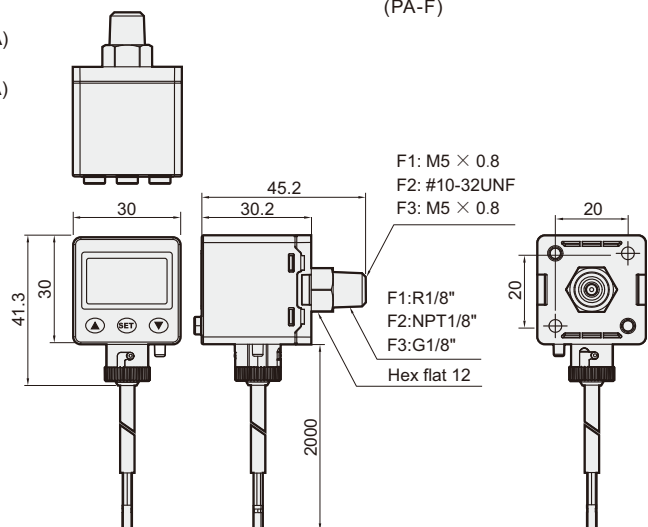
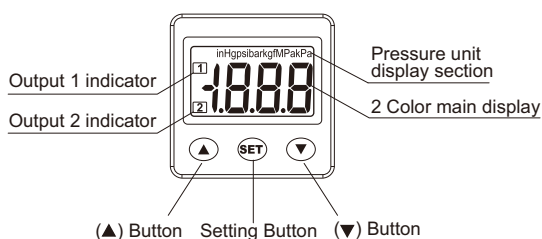
**MP - A10**

MODEL

OPTION PARTS

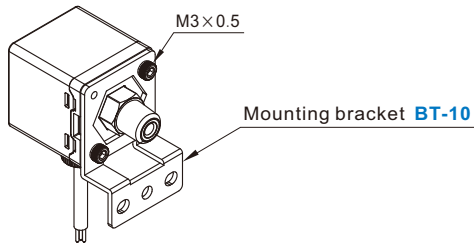
- A10: Mounting bracket (BT-10)
- A11: Mounting bracket (BT-11)
- B3: Panel adapter (PA-E)
- C3: Panel adapter + Front protective lid (PA-F)

### Unit dimension / Panel instructions

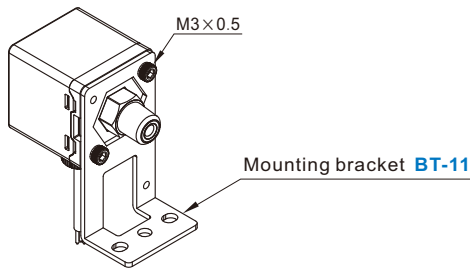
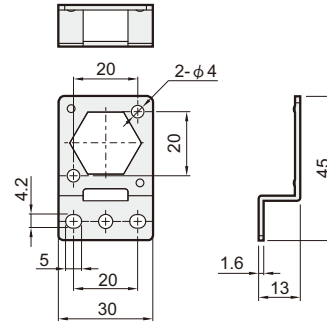


### Type of option parts / Dimension graph

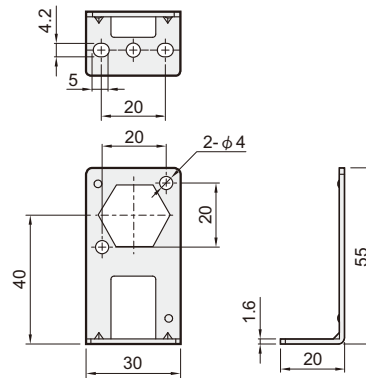
#### Mounting bracket



BT-10



BT-11



#### Panel type

