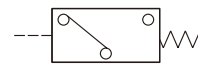




Features

- 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. ± 1 digit.
- Programmable pressure unit: kPa, MPa, kgf/cm², bar, psi, inHg.
- Applicable for semiconductor manufacturing process, please consult us for further information.

Symbol



Specification

Model	MP45P (Positive)	MP45V (Vacuum)	MP45C (Compound)
Rated pressure range	0 ~ 1.0 MPa	- 101.3 ~ 0.0 kPa	- 100.0~100.0 kPa
Setting pressure range	- 0.1 ~ 1.0 MPa	- 101.3 ~ 10.0 kPa	- 101.0~101.0 kPa
Withstand pressure	1.5 MPa	300 kPa	
Fluid	Filtered air, Non-corrosive / Non-flammable gas		
Set pressure resolution	kPa, MPa	— / 0.001	0.1 / —
	kgf/cm ² / 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 (UL class 2)		
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	Hysteresis mode / Window comparator mode	Adjustable (*1)	
Response time	$\leq 2.5\text{ms}$ (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selectable)		
Output short circuit protection	Yes		
LCD display	3½ digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate : 5 times/sec.)		
Indicator accuracy	$\pm 2\%$ F.S. ± 1 digit (Ambient temperature: $25 \pm 3^\circ\text{C}$)		
Switch on indicator	Orange indicator 1: OUT1 & Orange indicator 2: OUT2		
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 (Voltage output) (*3)	Output Current: 4 to 20mA $\pm 2.5\%$ F.S. (within rated pressure range) Linearity: $\pm 1\%$ F.S. Max. load impedance: 250 Ω at power supply of 12V, 600 Ω at power supply of 24V Min. load impedance: 50 Ω		
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 Ω (at 500V DC, between case and lead wire)	
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scan for 1 minute, 2 hours each direction of X, Y and Z	
	Shock	100m/s ² (10G),3 times each in direction of X, Y and Z	

(Continued)

Specification

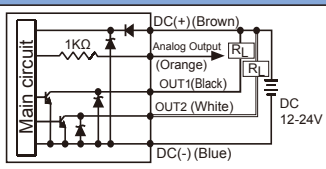
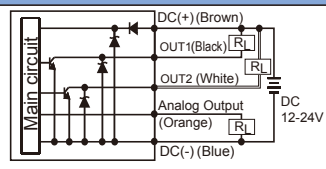
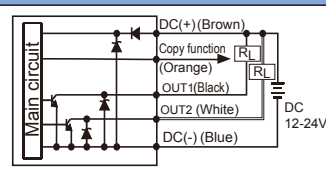
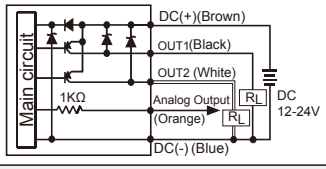
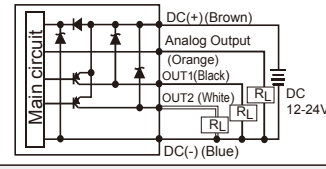
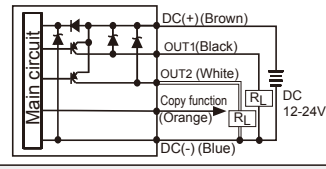
Model	MP45P (Positive)	MP45V (Vacuum)	MP45C (Compound)
Temperature characteristic	±2% F.S. of detected pressure (25°C) at temp. Range of 0~50°C		
Port size	F1(C):R1/8, M5; F2(C):NPT1/8, #10~32UNF; F3(C):G1/8(BSPP), M5		
Lead wire	ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 5 cores		
Weight	Port F1~F3 approx. 86g; Port F1C~F3C approx. 114g (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.

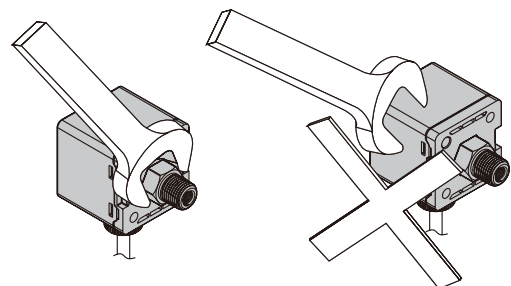
*3. If analog current output is selected, the analog voltage output cannot be selected at the same time.

Output circuit wiring graph

Model	MP45□-010	MP45□-011	MP45□-02
Connect diagram			
Output method	2 NPN+Analog(Voltage) output (1~5V)	2 NPN+Analog(Current) output (4~20mA)	2 NPN+Copy function
Model	MP45□-030	MP45□-031	MP45□-04
Connect diagram			
Output method	2 PNP+Analog(Voltage) output (1~5V)	2 PNP+Analog(Current) output (4~20mA)	2 PNP+Copy function

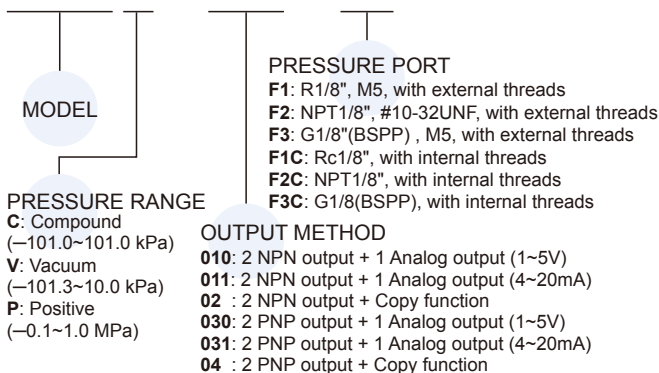
Installation precautions

- 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.



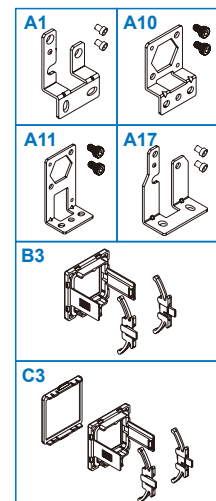
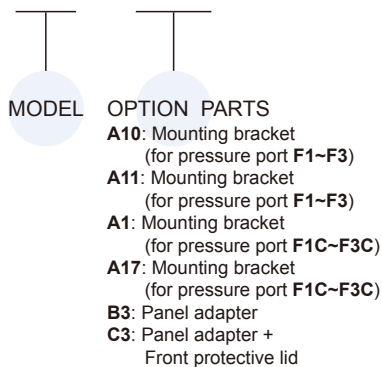
Order example

MP45C — 010 — F1



Mounting accessories (Option)

MP — A10



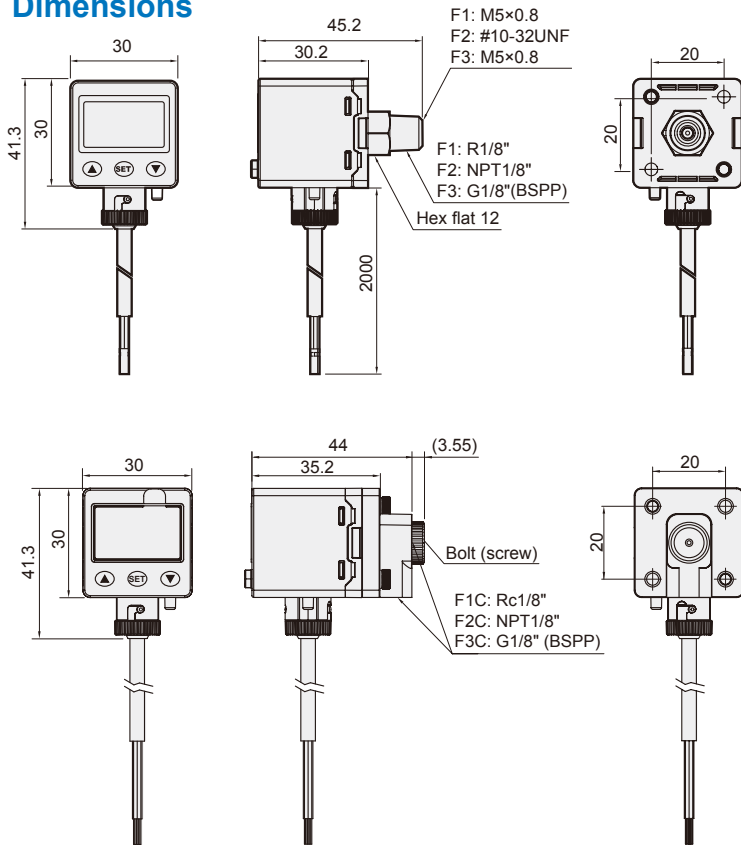
MP45 Dimensions

HIGH PRECISION DIGITAL PRESSURE SWITCH

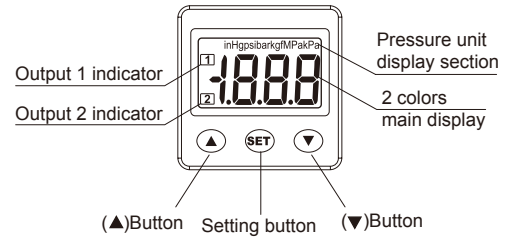


Mindman

Dimensions

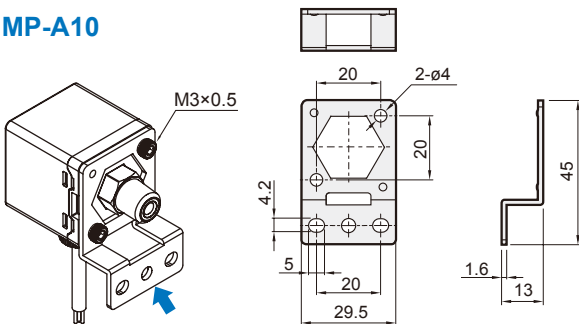


Panel instructions

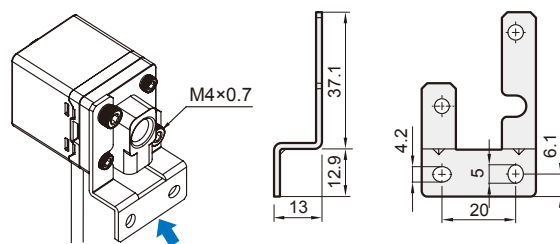


Mounting bracket

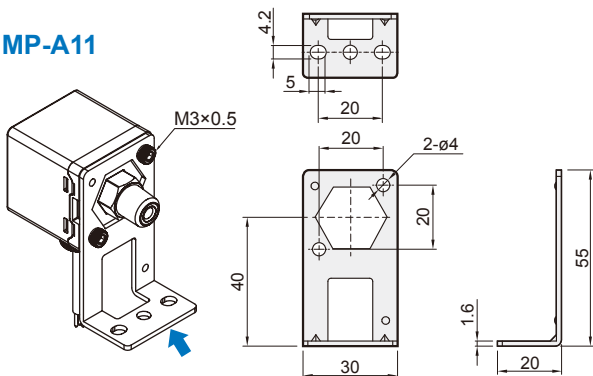
MP-A10



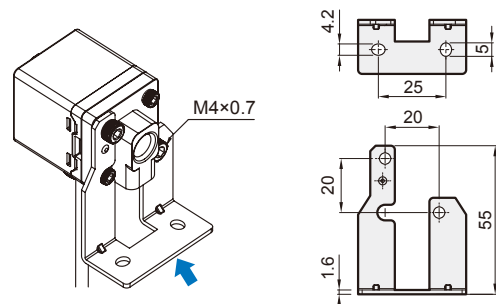
MP-A1



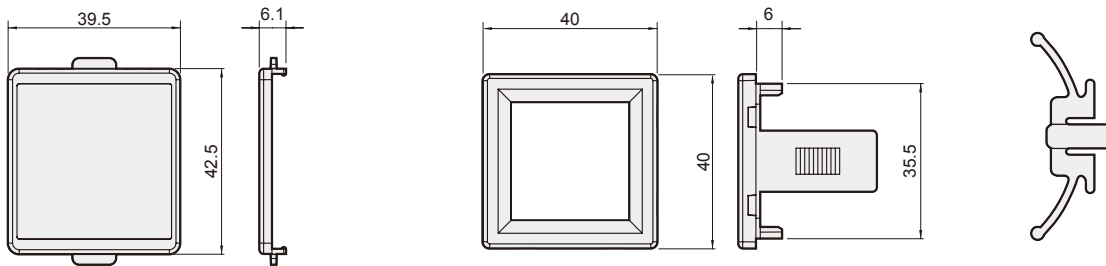
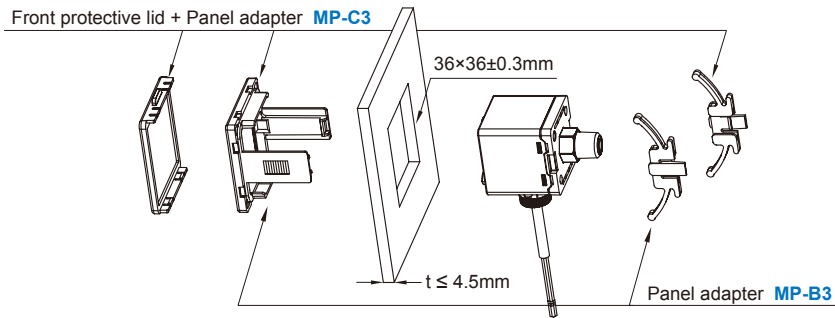
MP-A11



MP-A17

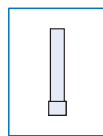
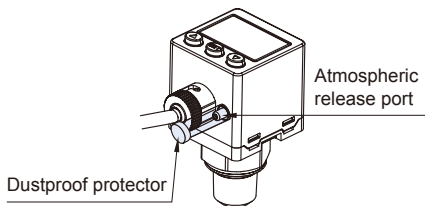


Panel type



Accessory

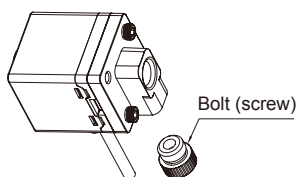
IP65 protector



⚠ Caution

This device must be installed to maintain IP 65 (Dust and splash proof) enclosure rating.

Accessory for pressure port F1C ~ F3C



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