

# MP20 / MP25 series

## HIGH PRECISION DIGITAL PRESSURE SWITCH



### Features

- Pressure range : Compound -100.0~100 kPa  
Positive 0~1 MPa  
Vacuum 0~-101.3 kPa.
- Two switch output & one analog output.
- Hysteresis adjustable.
- High accuracy and Resolution.
- Low cost.
- Pressure unit selectable : KPa, MPa, kgf/cm<sup>2</sup>, psi, bar, mmHg, InHg, mmH<sub>2</sub>O.

### Specification

Model		MP20/25C (Compound)	MP20/25V (Vacuum)	MP20/25P (Positive)
Rated pressure range		- 100.0~100.0 kPa	0.0 ~ - 101.3 kPa	0.000 ~ 1.000 MPa
Operating / Setting pressure range		- 100.0~100.0 kPa	10.0 ~ - 101.3 kPa	- 0.100 ~ 1.000 MPa
Allowable pressure		300 kPa		1.5 MPa
Fluid		Air, Non-corrosive gases ,incombustible gases		
Set pressure resolution	KPa	0.1		—
	MPa	—		0.001
	kgf/cm <sup>2</sup> , bar	0.001		0.01
	psi	0.001		0.01
	mmHg	1		—
	InHg	0.1		—
	mmH <sub>2</sub> O	0.1		—
Power supply voltage		12 to 24V DC 10%, Ripple (P-P) 10% or less		
Current consumption		≤ 55mA		
Switch output		NPN or PNP open collector 2 outputs Max. load current : 80mA Max. supply voltage: NPN:30V DC, PNP:24V DC Residual voltage : ≤1V (load current 80mA)		
Repeatability(Switch output)		≤ ± 0.2% F.S. ± 1digit		
Hysteresis	Hysteresis mode	Adjustable		
	Window comparator mode	Fixed (3 digits)		
Response time		≤ 2.5ms (chattering-proof function: 24ms, 192ms and 768ms selections)		
Output short circuit protection		Yes		
7 segment LED display		3 1/2 digit LED display (Sampling rate: 5 times/1sec.)		
Indicator accuracy		≤ ±2% F.S. ±1 digit (ambient temperature: 25 ±3°C)		
Indicator		Green LED (OUT1) Red LED (OUT2)		
Analog output *(Only type MP20/25□-01, MP20/25□-03)		Output voltage: 1 to 5V±5% (within rated pressure range) Linearity: ±1% F.S.	Output voltage: 1 to 5V ±2.5% (within rated pressure range) Linearity: ±1% F.S.	
Environment	Enclosure	MP20: IP40 , MP25: IP65		
	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	50Mohm min. (at 500VDC, 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 <sup>2</sup> (100G),3 times each in direction of X,Y and Z		



# MP20 / MP25 Dimensions

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## Specification

Model	MP20/25C (Compound)	MP20/25V (Vacuum)	MP20/25P (Positive)
Temperature characteristic	≤2% F.S. of detected pressure (25°C) at temp. Range of 0~50°C		
Lead wire	Oil-resistance cable(0.15mm <sup>2</sup> )		
Weight	Approx 105g (with 2-meter lead wire), Appro 71g (with meter connector)		

## Output circuit wiring graph

Model	MP20/25□-01	MP20/25□-02
Connect diagram		
Output method	NPN output	NPN output
Model	MP20/25□-03	MP20/25□-04
Connect diagram		
Output method	PNP output	PNP output

## Order example

**MP20C - 01 - F1 - QD**

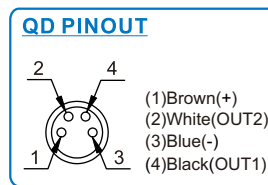
**MODEL**  
MP20: (IP40)  
MP25: (IP65)

**PRESSURE PORT**  
Female thread: F1: Rc1/8, F2: NPT1/8, F3: G1/8  
Male thread: M1: R1/8, M2: NPT1/8, N1: R1/4, N2: NPT1/4

**PRESSURE RANGE**  
C: Compound (-100.0~100.0 kPa)  
V: Vacuum (0.0~101.3 kPa)  
P: Positive (-0.10~1.00 Mpa)

**OUTPUT METHOD**  
01: 2 NPN output & Analog output  
02: 2 NPN output  
03: 2 PNP output & Analog output  
04: 2 PNP output

**CABLE LENGTH /CONNECTOR**  
Blank: With 2 meter cable  
QD: With M8, 4 Pin male connector (Only type MP20/25□-02, MP20/25□-04)



## Mounting accessories

**MP - A1**

**MODEL**

**OPTION PARTS**  
A1: Mounting bracket (BT-1)  
A2: Mounting bracket (BT-2)  
B1: Panel adapter (PA-A)  
C1: Panel adapter + Front protective lid (PA-B)

## Unit dimension / Panel instructions

3 ½ digit LED display  
Display the measured Pressure value. Each set Content and error code.

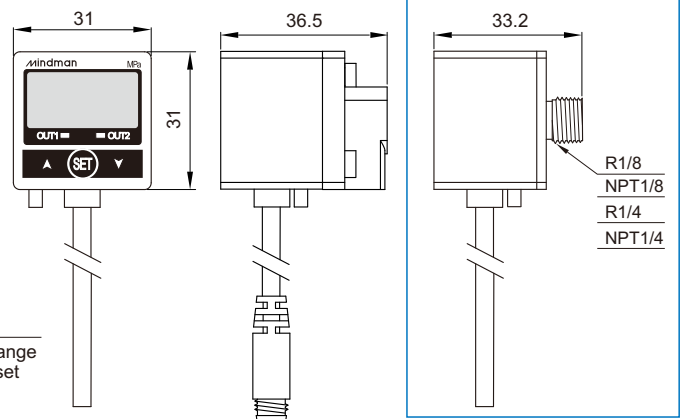
Switch (OUT1) (Green led)

Switch (OUT2) (Red LED)

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

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

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



# MP20 / MP25 / MP23 Accessory

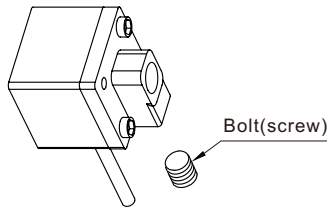
HIGH PRECISION DIGITAL PRESSURE SWITCH



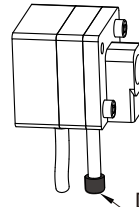
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## Installation

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.



## MP25 Accessory



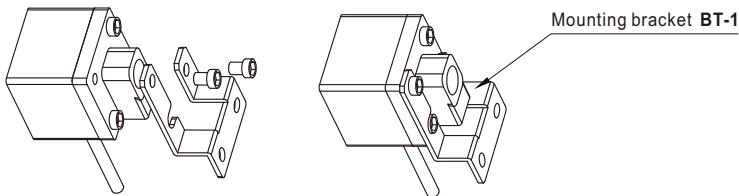
### Caution:

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

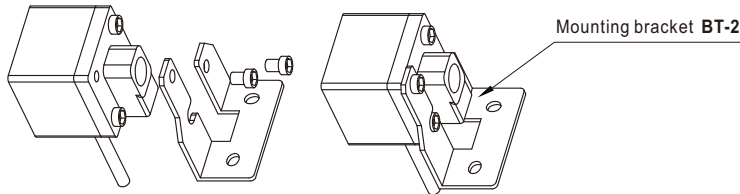
Dustproof protector

## Type of spare parts / Dimension graph

### Mounting bracket

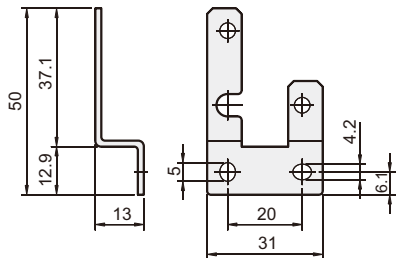


Mounting bracket BT-1

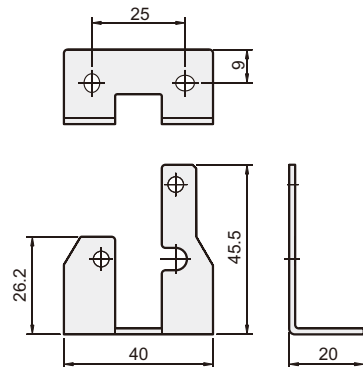


Mounting bracket BT-2

### BT-1

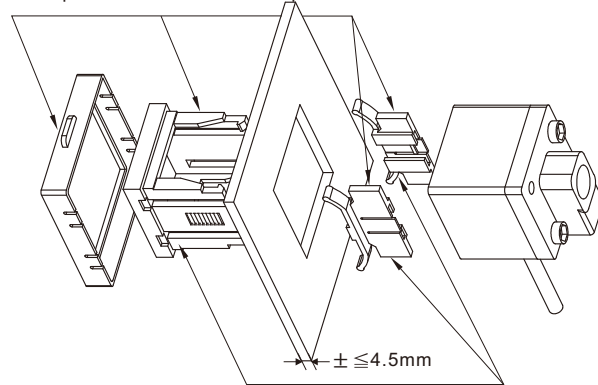


### BT-2

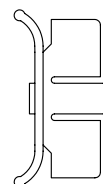
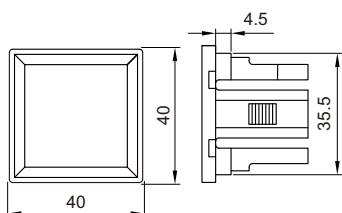
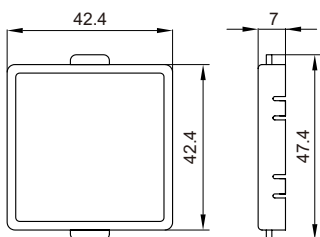


### Panel type

Front protective lid + Panel adapter PA-B



Panel adapter PA-A



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