

MP20 series

HIGH PRECISION DIGITAL PRESSURE SWITCH



Features:

- Pressure range : Compound -100.0~100 kPa
Positive 0~1MPa
Vacuum 0~-101.3kPa.
- Two switch output & one analog output.
- Hysteresis adjustable.
- High accuracy and Resolution.
- Low cost.
- Pressure unit selectable : KPa,MPa,kgf/cm², psi, bar, mmHg, InHg, mmH₂O.

Specification:

Model		MP20C (Compound)	MP20V (Vacuum)	MP20P (Positive)
Rated pressure range		-100.0~100.0 kPa	0.0 ~ -101.3kPa	0.000 ~ 1.000MPa
Operating / Setting pressure range		-100.0~100.0 kPa	10.0 ~ -101.3kPa	-0.100 ~ 1.000MPa
Withstand pressure		3 times of rated pressure range		1.5 times of rated pressure range
Fluid		Air, Non-corrosive gases ,incombustible gases		
Set pressure resolution	KPa	0.1		—
	MPa	—		0.001
	kgf/cm ² , bar	0.001		0.01
	psi	0.001		0.01
	mmHg	1		—
	InHg	0.1		—
	mmH ₂ O	0.1		—
Power supply voltage		12 to 24VDC 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: 30VDC Residual voltage : ≤1V (load current 80mA)		
Repeatability(Switch 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 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℃)		
Indicator		Green LED (OUT1) Red LED (OUT2)		
Analog output *(Only type MP20□-01, MP20□-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	IP40		
	Ambient temp. range	Operation: 0 ~ 50℃, Storage: -20 ~ 60℃ (No condensation or freezing)		
	Ambient humidity range	Operation/Storage: 35 ~ 85% RH (No condensation)		
	Withstand voltage	1000VAC in 1-min (between case and lead wire)		
	Insulation resistance	50Mohm min. (at 500VDC M, 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		

MP20 Dimensions

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Specification:

Model	MP20C (Compound)	MP20V (Vacuum)	MP20P (Positive)
Temperature characteristic	≤2% F.S. of detected pressure (25℃) at temp. Range of 0~50℃		
Port size	F1:PT 1/8, F2:NPT 1/8, F3:G 1/8		
Lead wire	Oil-resistance cable(0.15mm ²)		
Weight	Appro 105g(with 2-meter lead wire), Appro 71g(with meter connector)		

Output circuit wiring graph:

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

Order example:

MP20C - 01 - F1 - QD - A

MODEL

PRESSURE PORT

F1: PT 1/8
F2: NPT 1/8
F3: G 1/8

CABLE LENGTH /CONNECTOR

Blank: With 2 meter cable
QD: With M8, 4 Pin male connector
(Only type MP20□-02, MP20□-04)

OPTION SPARE PART

A: Mounting bracket (BT-1+BT-2)
B: Panel adapter (PA-1+PA-2)
C: Panel adapter + Front protective lid (PA-1+PA-2+FPC-1)

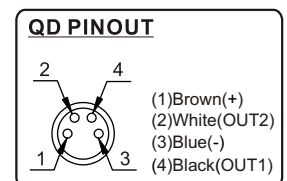
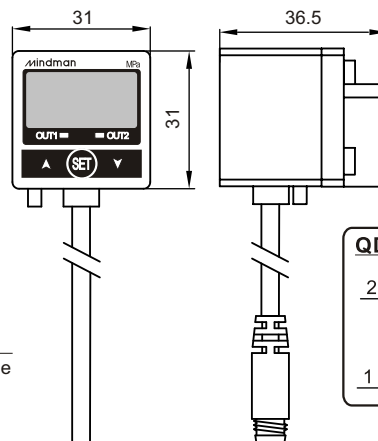
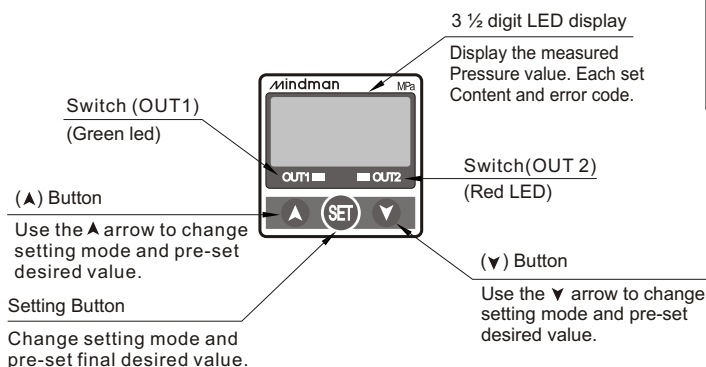
PRESSURE RANGE

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

Unit dimension / Panel instructions



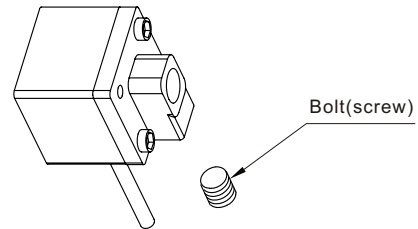
MP20 / MP23 Accessory

HIGH PRECISION DIGITAL PRESSURE SWITCH



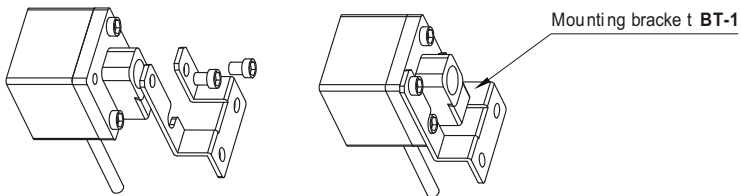
Installation:

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.

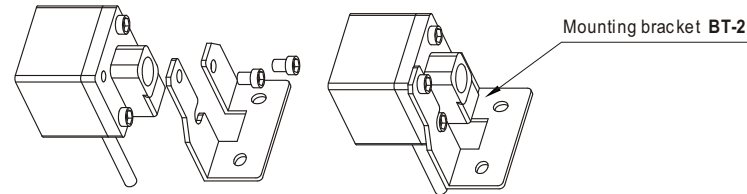


Type of spare parts / Dimension graph:

Mounting bracket

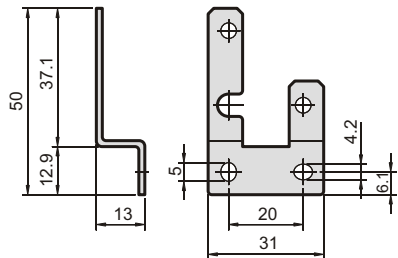


Mounting bracket BT-1

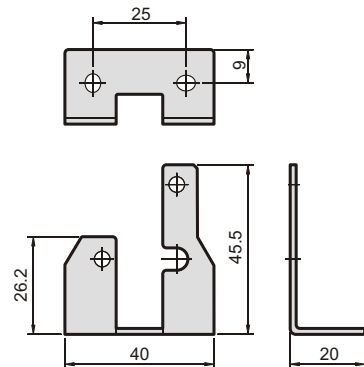


Mounting bracket BT-2

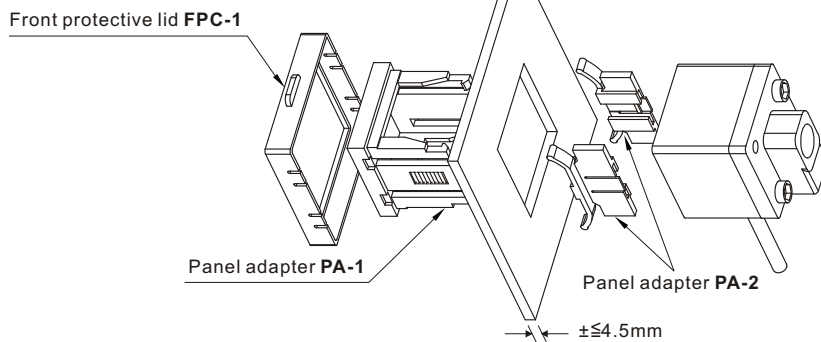
BT-1



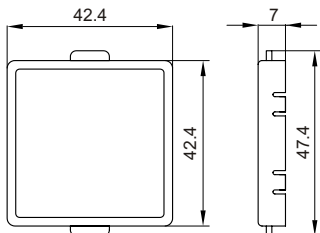
BT-2



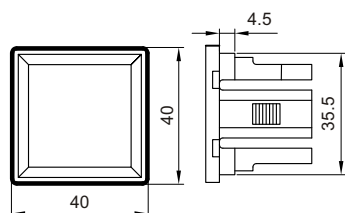
Panel type



FPC-1



PA-1



PA-2

