

MP75A series

HIGH PRECISION DIGITAL PRESSURE SWITCH



User manual



Selection table



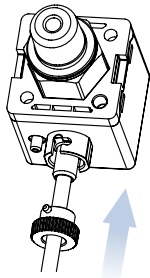
Features

- 2 color digital LCD display.
- Programmable pressure unit: kPa, MPa, kgf/cm², bar, psi, inHg.
- Sensor parts & fitting parts: Stainless steel 316L.
- Corrosive fluid or gas available.
- IP65 enclosure.
- IOT pneumatic & hydraulic pressure sensor (multi-medium)
- Remote control / Real-time monitoring
- RS485 Modbus RTU / ASCII

Features highlight

Quick installation

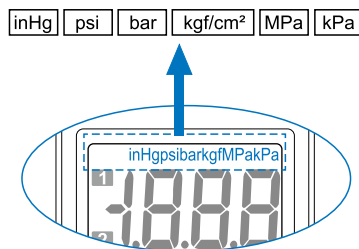
- Save installation time.
- Easy removal.



(Removable data cable)

Easy unit identification

- Unit conversion easy to read.



IP65 enclosure

- Protected against water and dustsplash from all directions.



2-Color Main display

- User selectable color mode, for different conditions use.



	500	500	000	red
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

Applicable for Corrosive Fluid or Gas

- Sensor parts & Fitting parts are SUS316L, applicable for corrosive fluid or gas equipment.



MP75A Specification & Output circuit wiring graph



HIGH PRECISION DIGITAL PRESSURE SWITCH

Mindman

Specification

Model	MP75AP (Positive)	MP75AH02 (High)	MP75AC (Compound)
Rated pressure range	0 ~ 1.0 MPa	0.0 ~ 2.0 MPa	- 100.0 ~ 100.0 kPa
Setting pressure range	- 0.1 ~ 1.0 MPa	- 0.1 ~ 2.0 MPa	- 101.0 ~ 101.0 kPa
Allowable pressure	3 MPa		300 kPa
Set pressure resolution	KPa	—	0.1
	MPa	0.001	0.001(~1.999) / 0.01(2.00~)
	kgf/cm ² / bar	0.01	0.01(~19.99) / 0.1(20.0~)
	psi	0.1	0.1(~199.9) / 1(200~)
	InHg	—	—
Switch output	1 NPN or 1 PNP open collector Max. Load Current : 125 mA Max. Supply Voltage : 1 NPN 30 V DC, 1 PNP 24 V DC Residual Voltage : ≤ 1.5 V		
Switch ON indicator	Orange indicator 1: OUT		
Communication interface	RS485		
Fluid	Fluids do not corrode stainless steel 316L		
Sealed liquid	Silicon oil		
Power supply voltage	12 ~ 24V DC ±10%, Ripple (P-P) 10% or less		
Current consumption	≤ 40mA (With no load)		
Repeatability	± 0.3% F.S. ±1 digit		
Response time	≤ 2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selectable)		
Output short circuit protection	Yes		
Display	3 ½ digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate : 5 times / sec.)		
Indicator accuracy	±2% F.S. ±1 digit (Ambient temperature: 25 ± 3°C)		
Environment	Enclosure classification	IP65 *1	
	Ambient temp. range	Operation: 0 ~ 50°C, storage : -10 ~ 60°C (No condensation or freezing)	
	Ambient humidity range	35 ~ 85% RH (No condensation)	
	Withstand voltage	250V AC in 1-min. (between case and lead wire)	
	Insulation resistance	≥ 50MΩ (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	
Temperature characteristic	±3% F.S. of detected pressure (25°C) at temp. range of 0 ~ 50°C		
Port size *2	F1: R1/4", M5; F2: NPT1/4", #10-32 UNF; F3: G1/4"(BSPP), M5		
Lead wire	ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 5 cores		
Weight (with 2 meter lead wire)	Approx. 110 g (Rear ported), Approx. 150 g (Bottom ported)		

*1. Dustproof protector must be installed to maintain IP65.

*2. G port O-ring material is NBR. If any special request, please contact us.

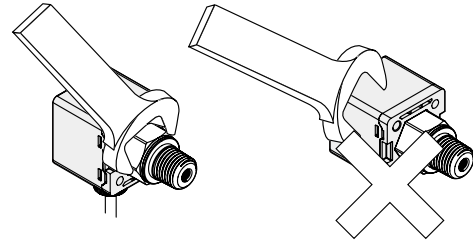
Output circuit wiring graph

Model	MP75A□-02-□	MP75A□-04-□
Connect diagram		
Output method	NPN output + RS485	PNP output + RS485

* Procedure to wiring RS485 products:
To prevent product damage due to short circuit, MUST do RS485 line connection before power line connection.

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 (MOQ: 100 pcs, except [MP75AC-02-F1](#) & [MP75AP-02-F1](#))

MP75A C – 02 – F1 □

1 2 3 4 5

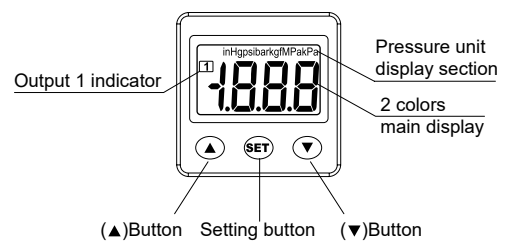
1 2 3

MODEL	PRESSURE RANGE	OUTPUT METHOD
MP75A	P: Positive (–0.1~1.0 MPa) H02: High (–0.1~2.0 MPa) C: Compound (–101.0~101.0 kPa)	02: NPN output + RS485 04: PNP output + RS485

4 5

PRESSURE PORT	PIPING DIRECTION
F1: R1/4, M5×0.8 F2: NPT1/4", #10-32UNF F3: G1/4"(BSPP), M5×0.8	Blank: Rear ported L: Bottom ported

Panel instructions



Mounting accessories (Option)

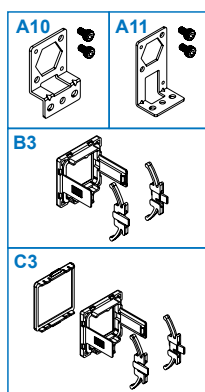
MP – A10

MODEL

OPTION PARTS

- A10:** Mounting bracket
- A11:** Mounting bracket
- B3:** Panel adapter
- C3:** Panel adapter + Front protective lid
- E1:** Snubber (for Pressure Port F1 & F3)
- E2:** Snubber (for Pressure Port F2)

* **MP75AP & MP75AH02** suggest to select a snubber.

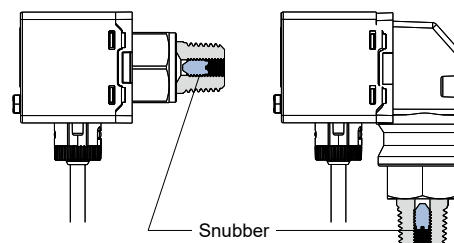


MP-E*

Removable snubber installed

- Pressure port equipped with snubber can avoid damage caused by sudden pressure surge of water or oil, improve product durability.

* When snubber is clogged with contaminants, please use a flat head screwdriver to remove the snubber, clean and reinstall.

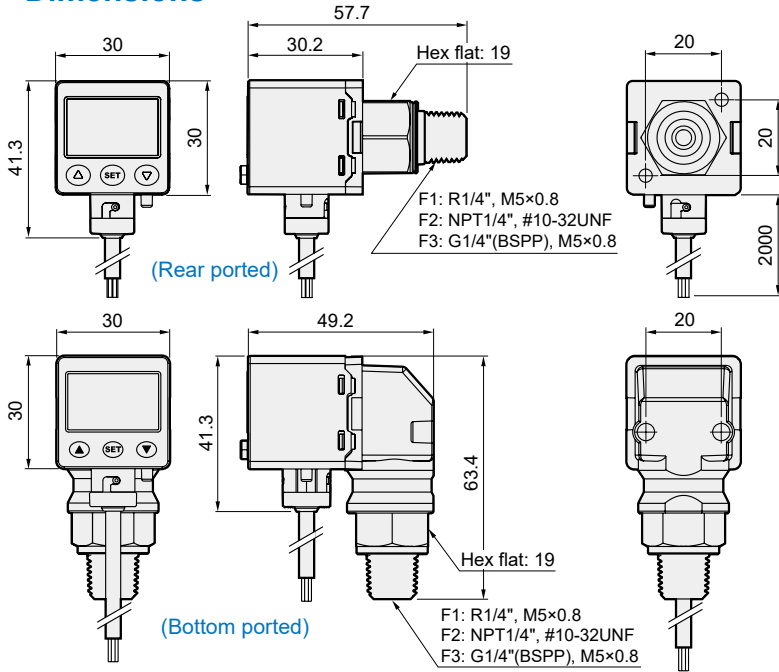


MP75A Dimensions

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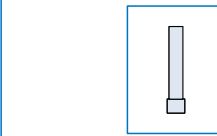
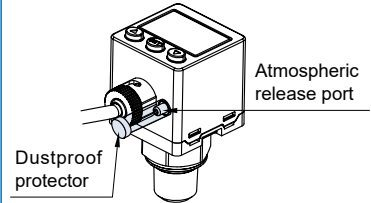


Dimensions



Accessory

IP65 protector

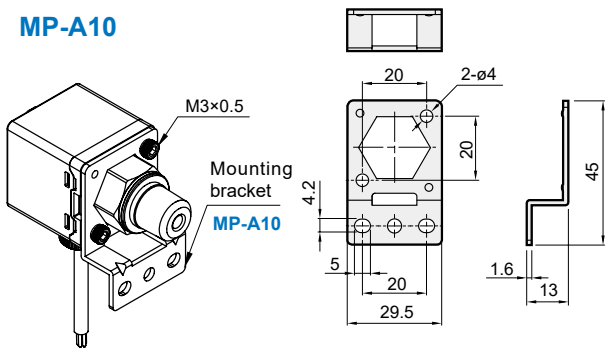


Caution

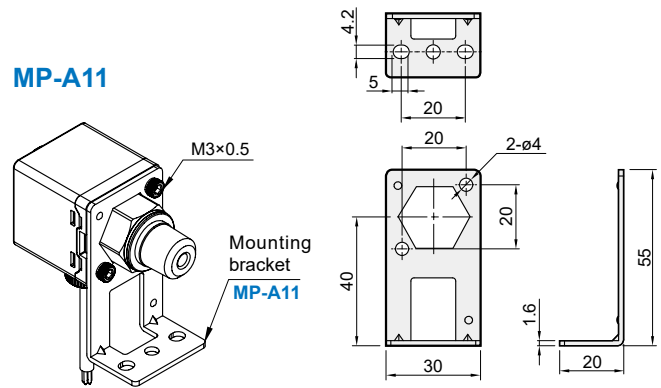
This device must be installed to maintain IP 65 (Dust and splash proof) enclosure rating.

Mounting bracket

MP-A10

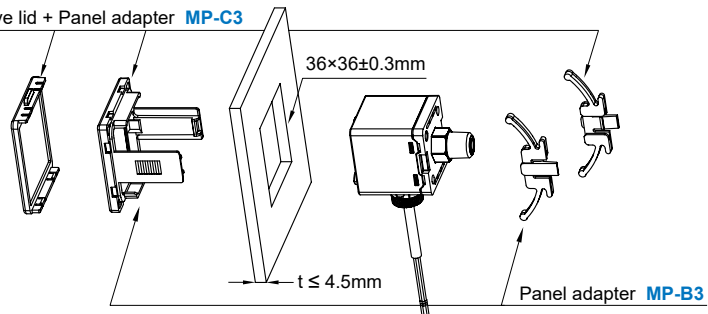


MP-A11

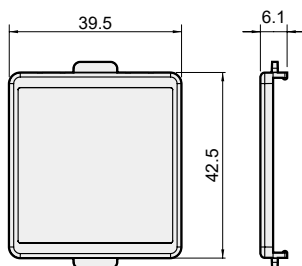


Panel type

Front protective lid + Panel adapter MP-C3



Front protective lid



Panel adapter

