MPDS series

HIGH DIFFERENTIAL **PRESSURE SENSOR**

mindman

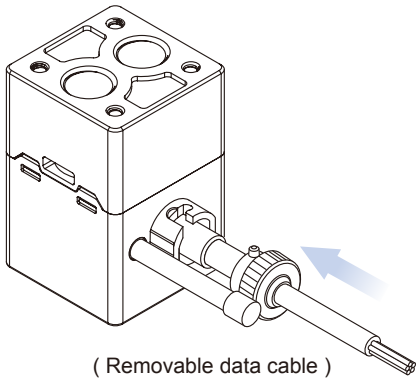
Features

- Digital LCD display
- IP65 enclosure
- Pressure range : 0 ~ 1000 kPa
- RS485 Modbus RTU
- High-resolution (10x)
- Selectable NPN or PNP open collector

Features highlight

Quick installation

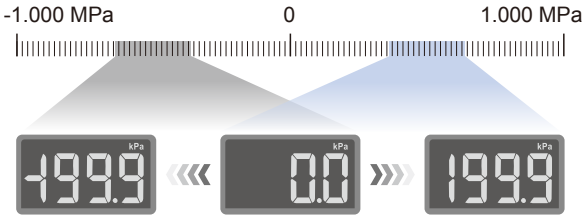
- Save Installation Time.
- Easy Removal.



(Removable data cable)

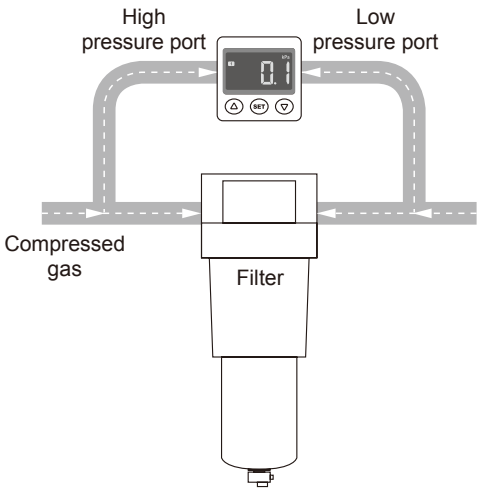
High resolution mode

- High resolution mode is settable in differential pressure range: -199.9 kPa ~ 199.9 kPa.
  Under high resolution mode, the detection are 10 times accuracy that able to meansure differential pressure.



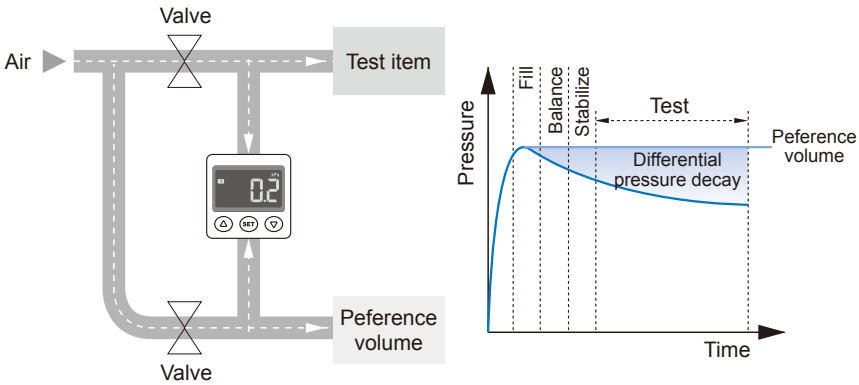
Filter air monitoring

- To monitor the clogging of filter by detecting the differential pressure.



Leakage test

- To detect the differential pressure decay by sensing the change of line pressure.



MPDS Specification

HIGH DIFFERENTIAL **PRESSURE SENSOR**

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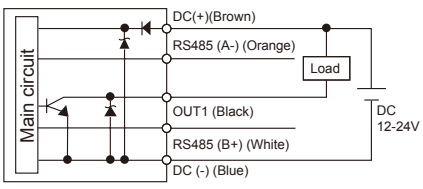
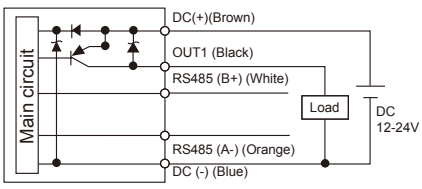
Specification

Model		MPDS-P-02	MPDS-P-04
Rated pressure range		–1000 ~ 1000 kPa	
Operating pressure range		0 ~ 1000 kPa	
Withstand pressure		1200 kPa	
Fluid		Filtered air, Non-corrosive / Non-flammable gas	
Set pressure Resolution	Standard mode 1 kpa	1 kPa	
	High resolution mode *1	0.1 kPa	
Power supply voltage		12 ~ 24 V DC ± 10 %, Ripple (P-P) ≤ 10 %	
Current consumption		≤ 20 mA	
Switch output		1 NPN open collector *2 Max. Load Current: 200 mA Max. Supply Voltage: 30 V DC Residual Voltage: ≤ 1.5 V	1 PNP open collector *2 Max. Load Current: 200 mA Max. Supply Voltage: 24 V DC Residual Voltage: ≤ 1.5 V
Repeatability (switch output)		± 0.2 % F.S. ± 1 digit	
Hysteresis	Hysteresis mode	1 ~ 15 digits	
	Window comparator mode		
Output short circuit protection		Yes	
7 Segment lcd display		3 ½ digital, 7 segment LCD display (White) (Sampling rate: 5 times / sec.)	
Indicator accuracy	Standard mode	± 0.3 % F.S. ± 1 digit (Ambient temperature: 25 ± 3 °C)	
	High resolution mode	± 0.1 % F.S. ± 1 digit (Ambient temperature: 25 ± 3 °C)	
Switch on indicator		White indicator 1: OUT	
Environment	Enclosure	IP65 *3	
	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	1000 V AC in 1-min (between case and lead wire)	
	Insulation resistance	≥ 50 MΩ (at 500 V DC, between case and lead wire)	
	Vibration	Total amplitude 1.5 mm, 10 Hz ~ 150 Hz ~ 10 Hz scan for 1 minute, 2 hours each direction of X, Y and Z	
	Shock	100 m/s² (10 G), 3 times each in direction of X, Y and Z	
Temperature characteristic	Standard mode	± 0.5 % F.S. of detected pressure (25 °C) at temp. Range of 0 ~ 50 ºC	
	High resolution mode	± 5 % F.S. of detected pressure (25 °C) at temp. Range of 0 ~ 50 °C	
Communication interface		RS485 RTU	
Port size		M5 : M5 female thread	
Lead wire		ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm²) - 5 cores	
Weight (with 2 meter lead wire)		Approx. 104 g	
Output circuit wiring graph *4	Connect diagram		
	Output method	NPN + RS485	PNP + RS485

*1. High resolution mode is settable in differential pressure range : -199.9 kPa ~ 199.9 kPa
*2. Selectable NPN or PNP open collector circuits in setting.
*3. Dustproof protector must be installed to maintain IP65.

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

MPDS Order example & Dimensions

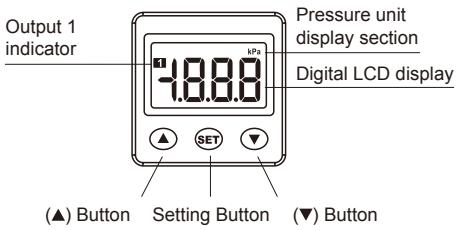
HIGH DIFFERENTIAL **PRESSURE SENSOR**

Order example

MPDS — P — 02 — M5

- MODEL
- PRESSURE RANGE
  P: Positive (0~1000 kPa)
- OUTPUT METHOD
  02: 1 NPN output + RS485
  04: 1 PNP output + RS485
- PRESSURE PORT

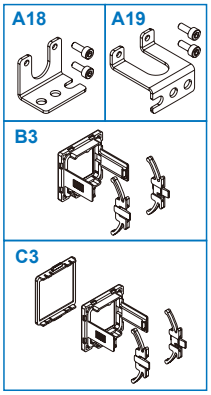
Panel instructions



Mounting accessories (Option)

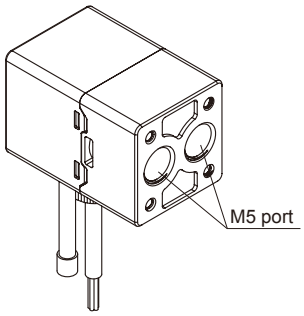
MP — A18

- MODEL
- OPTION PARTS
  A18: Mounting bracket
  A19: Mounting bracket
  B3: Panel adapter
  C3: Panel adapter + Front protective lid

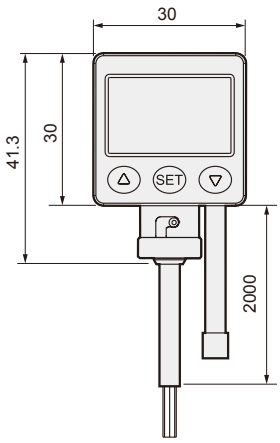


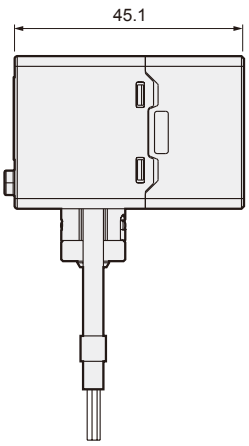
Installation precautions

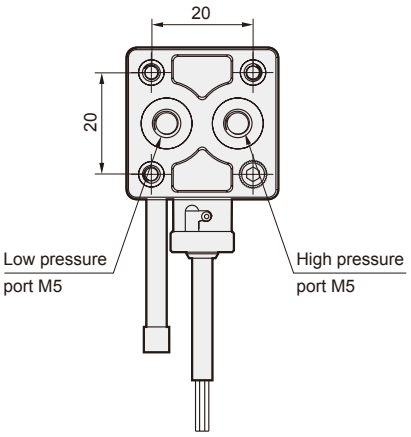
- While connecting a joint to the pressure port, be sure that tightening torque must NOT exceed 1.0 N•m.



Dimensions



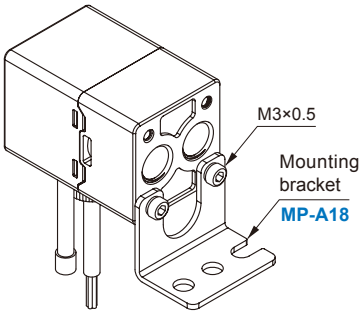


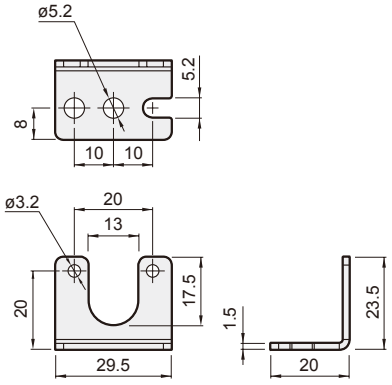


Mounting accessories

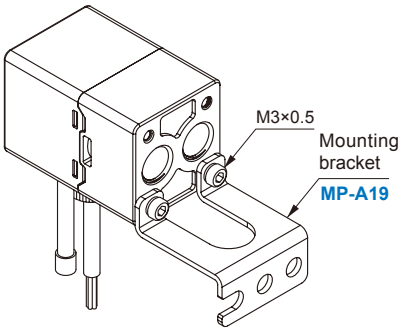
Mounting bracket

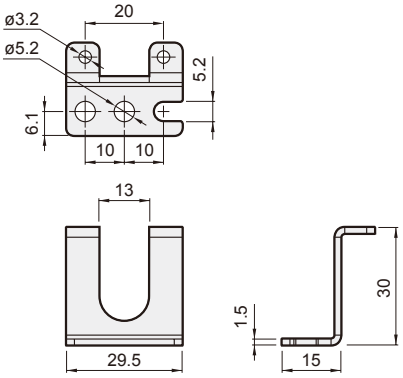
MP-A18



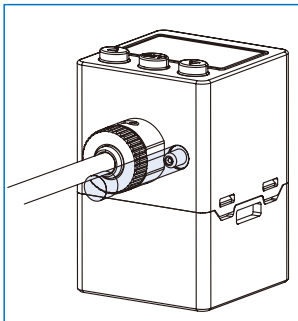


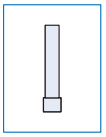
MP-A19





Dustproof

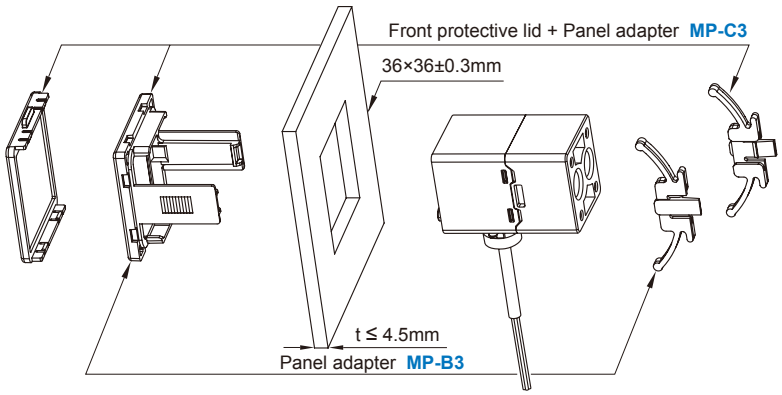




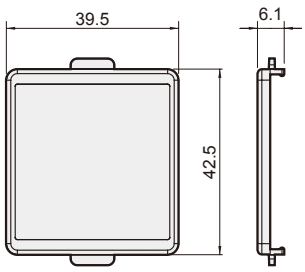
Caution

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

Panel type



Front protective lid



Panel adapter