



User manual



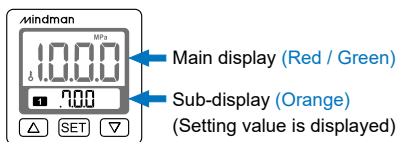
Features

- 3 color digital LCD display.
- Programmable pressure unit: kPa, MPa, kgf/cm², bar, psi, mmHg, inHg.
- Dual LCD display allow setting value to be displayed.
- Key lock indicator.
- Analog output : 1 ~ 5 V or 4 ~ 20 mA
- Sensor input : 1 ~ 5 V or 4 ~ 20 mA
- 12 pressure ranges for transducer.

Features highlight

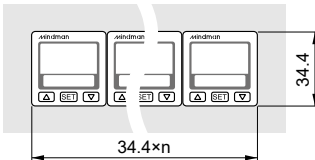
3-color digital LCD display

- Main display color change with output status.



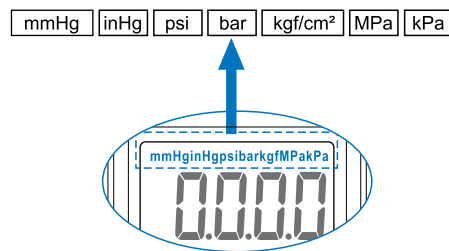
Save installation space

- Actual dimension after installation



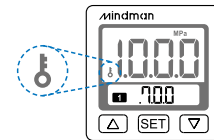
Easy unit identification

- Conversion unit is on display and easy to read.



Key-lock function

- Key-lock icon is shown on the display when the function is enabled.



Specification

Model	MP400													
Sensor type	S-0	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	
Rated pressure range	Self-Setting *1	-101.3 ~ 0 kPa	0 ~ 100 kPa	0 ~ 2 kPa	0 ~ 5 kPa	-100 ~ 100 kPa	-101 ~ 500 kPa	0 ~ 1 MPa	0 ~ 2 MPa	0 ~ 2.5 MPa	0 ~ 10 MPa	0 ~ 25 MPa	0 ~ 40 MPa	
Setting pressure range		-101.3 ~ 10 kPa	-10 ~ 100 kPa	-0.2 ~ 2 kPa	-0.5 ~ 5 kPa	-100 ~ 100 kPa	-101 ~ 500 kPa	-0.1 ~ 1 MPa	-0.1 ~ 2 MPa	-0.1 ~ 2.5 MPa	0 ~ 10 MPa	0 ~ 25 MPa	0 ~ 40 MPa	
Set Pressure Range (Auto-Shift Input)	—	-101.3 ~ 101.3 kPa	-100 ~ 100 kPa	-2 ~ 2 kPa	-5 ~ 5 kPa	-100 ~ 100 kPa	-500 ~ 500 kPa	-1 ~ 1 MPa	-2 ~ 2 MPa	-2.5 ~ 2.5 MPa	-10 ~ 10 MPa	-25 ~ 25 MPa	-40 ~ 40 MPa	
Set pressure resolution	Self-Setting	KPa	0.1	0.1	0.01	0.01	0.1	1	—	—	—	—	—	
		MPa	—	—	—	—	—	—	0.001	0.01	0.01	0.01	0.1	0.1
		kgf/cm ² / bar	0.001	0.001	—	—	0.001	0.01	0.01	0.1	0.1	0.1	1	1
		psi	0.01	0.01	—	—	0.01	0.1	0.1	1	1	1	1 *2	1 *2
		InHg	0.1	—	—	—	0.1	—	—	—	—	—	—	—
		mmHg	1	—	0.1	0.1	1	—	—	—	—	—	—	—
Power supply voltage	12 ~ 24 V DC ± 10 %, Ripple (P-P) ≤ 10 %													
Current consumption	≤ 40 mA (with no load)													
Sensor input	1 ~ 5 V or 4 ~ 20 mA													

Specification

Model	MP400
Switch output	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 2 NPN : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 30 V DC Residual Voltage : ≤ 1.5 V </div> <div style="width: 45%;"> 2 PNP : open collector 2 outputs Max. Load Current : 125 mA Max. Supply Voltage : 24 V DC Residual Voltage : ≤ 1.5 V </div> </div>
Repeatability	± 0.1 % F.S. ± 1 digit
Hysteresis	Adjustable *3
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> One point set mode Hysteresis mode Window comparator mode </div> <div style="width: 65%;"></div> </div>	
Response time	≤ 2.5 ms (Chattering-proof function : 25 ms, 100 ms, 250 ms, 500 ms, 1000 ms and 1500 ms selectable)
Output short circuit protection	Yes
Display	3 ½ digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate : 5 times / sec.)
Indicator accuracy	± 1 % F.S. ± 1 digit (Ambient temperature : 25 ± 3 °C)
Switch on indicator	Orange Indicator 1 : OUT1 & Orange Indicator 2 : OUT2
Analog Output (Voltage Output) *4	Output Voltage : 1 ~ 5 V ± 2 % F.S. (within rated pressure range) Linearity : ± 1 % F.S. Output Impedance : about 1 kΩ
Analog output (Current Output) *5	Output Current : 4 ~ 20 mA ± 2 % F.S. (within rated pressure range) Linearity : ± 1 % F.S. Max. Load Impedance : 300 Ω at power supply of 12 V, 600 Ω at power supply of 24 V Min. Load Impedance : 50 Ω
Enclosure	IP40
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	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 or 10 G, 10 Hz ~ 55 Hz ~ 10 Hz scan for 1 minute, 2 hours each direction of X, Y and Z
Shock	100 m/s ² (10 G), 3 times each in direction of X, Y and Z
Temperature characteristic	± 0.5 % F.S. of detected pressure (25 °C) at temp. (Range of 0 ~ 50 °C)
Lead wire	ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 5 cores
Weight (with 2 meter lead wire)	Approx. 67 g

*1. S-0 : Set the sensor range (1999 ~ -1999) by self. The decimal place can be adjusted.

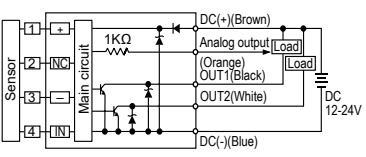
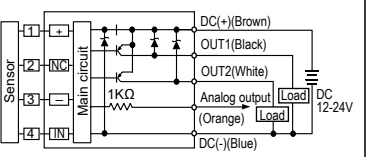
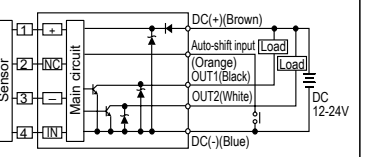
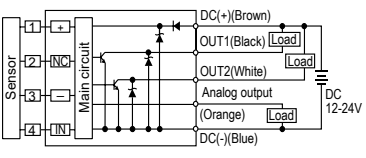
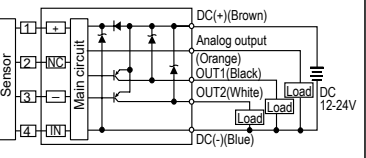
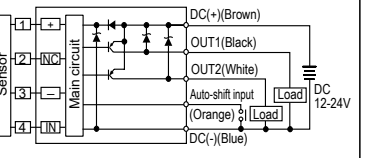
*2 : If set pressure unit is psi, the value requires to ten multiply by display value.

*3 : Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.

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

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

Output circuit wiring graph

Model	MP4□0-010	MP4□0-030	MP4□0-05
Connect diagram			
Output method	2 NPN + Analog Output (1 ~ 5 V)	2 PNP + Analog Output (1 ~ 5 V)	2 NPN Output + Auto-shift input
Model	MP4□0-011	MP4□0-031	MP4□0-07
Connect diagram			
Output method	2 NPN + Analog Output (4 ~ 20 mA)	2 PNP + Analog Output (4 ~ 20 mA)	2 PNP Output + Auto-shift input

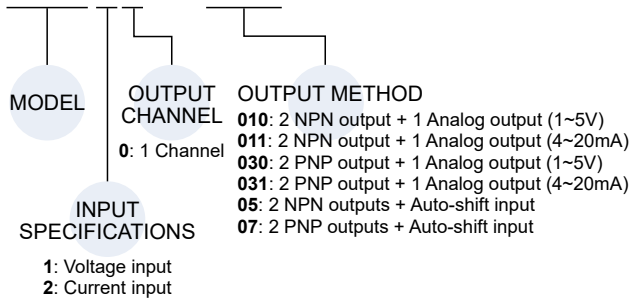
MP400 Dimensions

MULTI-CONTROLLER

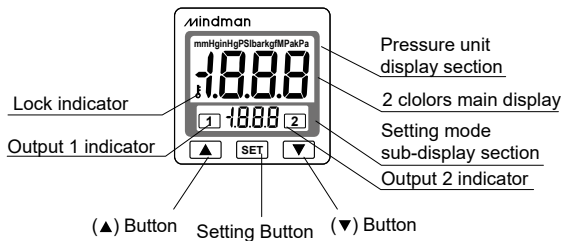


Order example

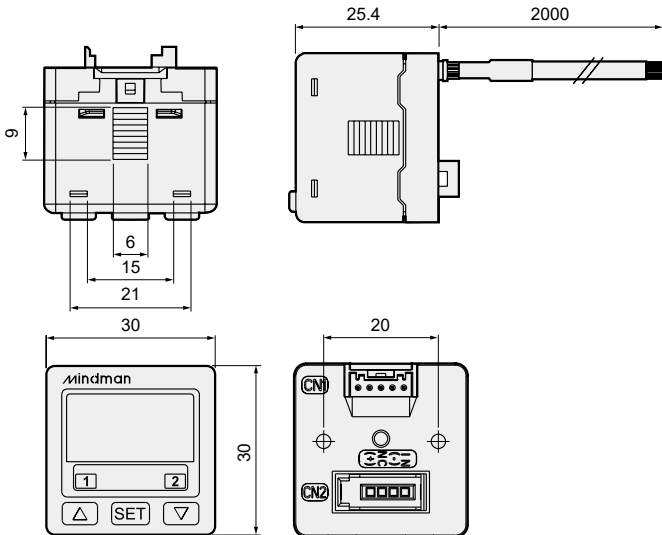
MP410 — 010



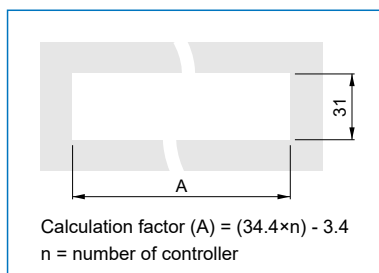
Panel instructions



Dimensions

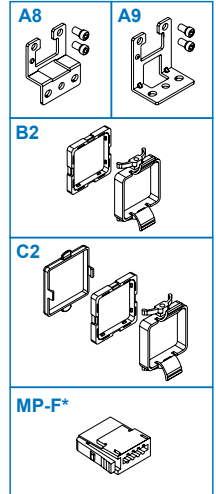
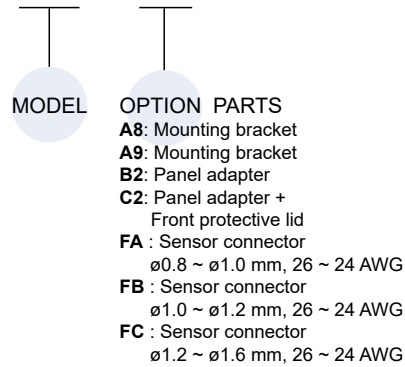


Panel opening for multiple pressure controller.



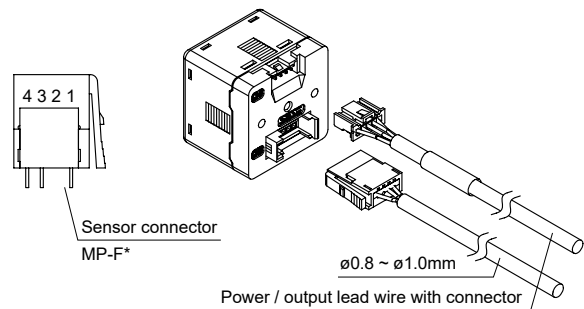
Mounting accessories (Option)

MP — A8

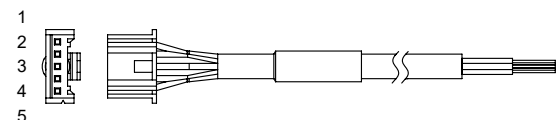


Connector

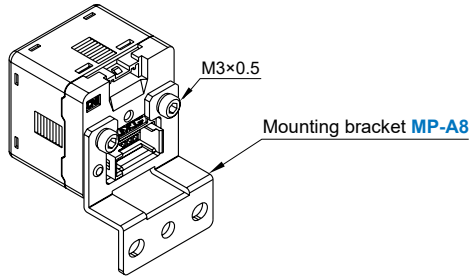
Pin No.	Line color	Content
①	Brown	DC+
②	—	No used
③	Blue	DC-
④	Black	IN



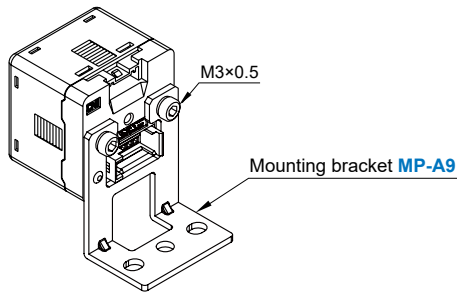
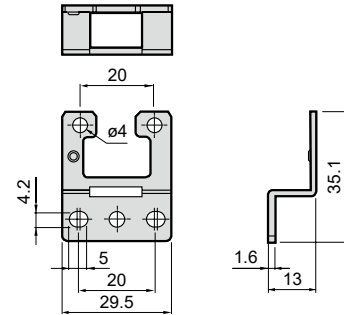
Pin No.	Line color	Content
①	Brown	DC+
②	Orange	Analog or auto shift
③	White	OUT 2
④	Black	OUT 1
⑤	Blue	DC-



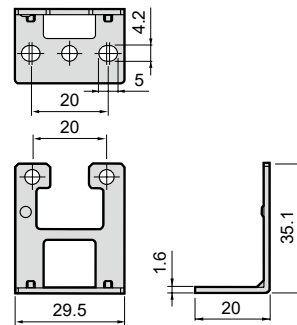
Mounting bracket



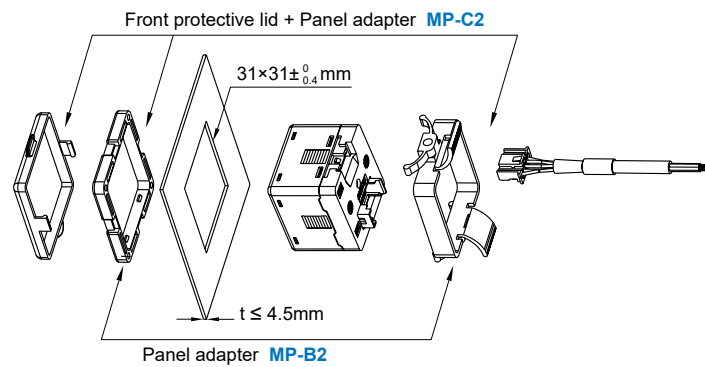
MP-A8



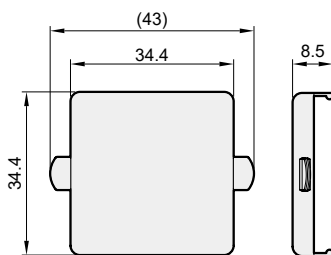
MP-A9



Panel type



Front protective lid



Panel adapter

