mindman MPG-60 Series

For your safety, please read the following before using.

① Do not use corrosive or flammable gas or liquid with this product.
② Please use within the rated pressure range. Do not apply pressure beyond recommended maximum withstand pressure, permanent damage to the pressure gage may occur.
③ Do not drop, hit or allow excessive shock. Even if pressure gage body appears undamaged, internal components may be broken and can cause malfunction.
④ Do not use in environment containing steam or oil vapor.
⑤ This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.
⑥ Using filter can extend pressure gage's service life.

A. SPECIFICATIONS

TYPE		(Vacuum)		(Positive)	
		MPG-60V-□	MPG-60VL-□	MPG-60P-□	MPG-60PL-□
Rated pressure range		0 ~ -101kPa		0.000 ~ 1.000MPa	
Display pressure range		10 ~ -101kPa		-0.100 ~ 1.000MPa *1	
Withstand pressure		300kPa		1.5MPa	
Applicable fluid		Filtered air, incombustible and non-corrosive gases			
Pressure resolution	kPa	1		—	
	MPa	—		0.001	
	kgf/cm²	—		0.01	
	bar	0.01		0.01	
	psi	0.1		0.1	
	mmHg	1		—	
Battery		CR 2032 lithium			
Back light		No	Yes	No	Yes
Battery life		3 years (5 times/day)	1 year (5 times/day)	3 years (5 times/day)	1 year (5 times/day)
Low-power indicator		Yes			
Battery replaceable		Yes			
Turn-on interval		Display turn off after 60 sec.			
Sampling rate		2 Hz (2 times/sec.)			
Pressure unit		psi, bar, mmHg and kPa user selectable		psi, bar, kgf/cm² and MPa user selectable	
Repeatability		±1% F.S. ±1digit		±0.2% F.S. ±1digit	
Display		3 ½ digital, 7 segment LCD display (Black)			
Indicator accuracy		±2% F.S. ±1 digit (ambient temperature: 25 ±3 °C)			
Environment	Enclosure	IP65 *2			
	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)			
	Vibration	Total amplitude 1.5mm or 10G, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z			
	Shock	100m/s² (10G), 3 times each in direction of X, Y and Z			
Temperature characteristic		±2% F.S. of detected pressure (25°C) at temp. range of 0~50°C			
Port size		F1:R1/8", M5; F2:NPT1/8", #10-32 UNF; F3:G1/8"(BSPP), M5 F4:R1/4", M5; F5:NPT1/4", #10-32 UNF; F6:G1/4"(BSPP), M5			
Weight		Approx. 40g			

*1. When the pressure is -0.1MPa, LCD displays -100 MPa.
*2. Air tube must be installed to maintain IP65. (See section K)

B. ORDERING INFORMATION

M P G - 6 0 P L - F 1

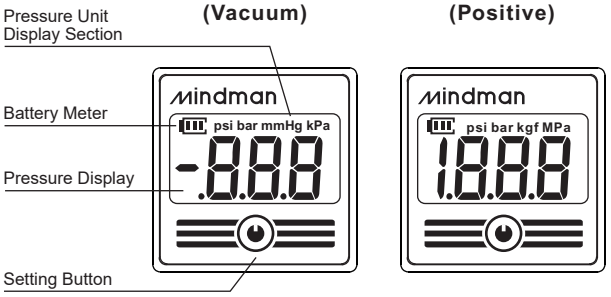
Pressure Range
V : Vacuum (10 ~ -101kPa)
P : Positive (-0.100 ~ 1.000MPa)

Back Light
Blank : Back light unavailable
L : Back light available

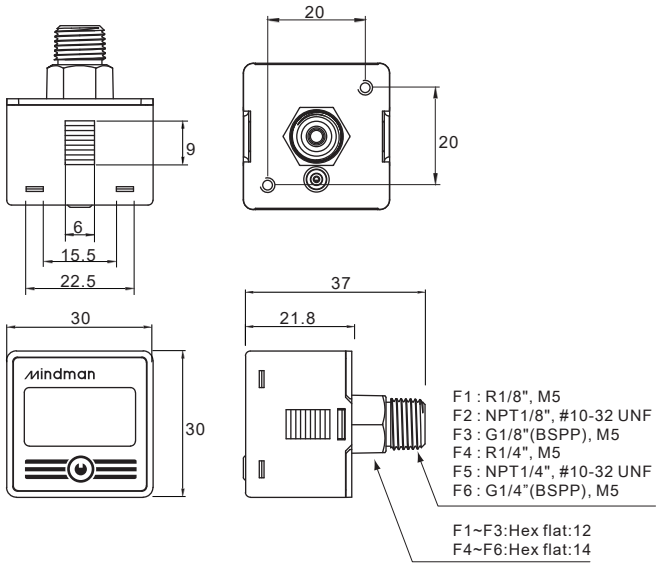
Pressure Port
F1 : R1/8", M5
F2 : NPT1/8", #10-32 UNF
F3 : G1/8"(BSPP), M5
F4 : R1/4", M5
F5 : NPT1/4", #10-32 UNF
F6 : G1/4"(BSPP), M5

Optional Parts
MP-A5 : Mounting bracket (BT-5)
MP-A6 : Mounting bracket (BT-6)
MP-B2 : Panel adapter (PA-C)
MP-C2 : Panel adapter + Front protective lid (PA-D)

C. PANEL DESCRIPTION



D. DIMENSIONS

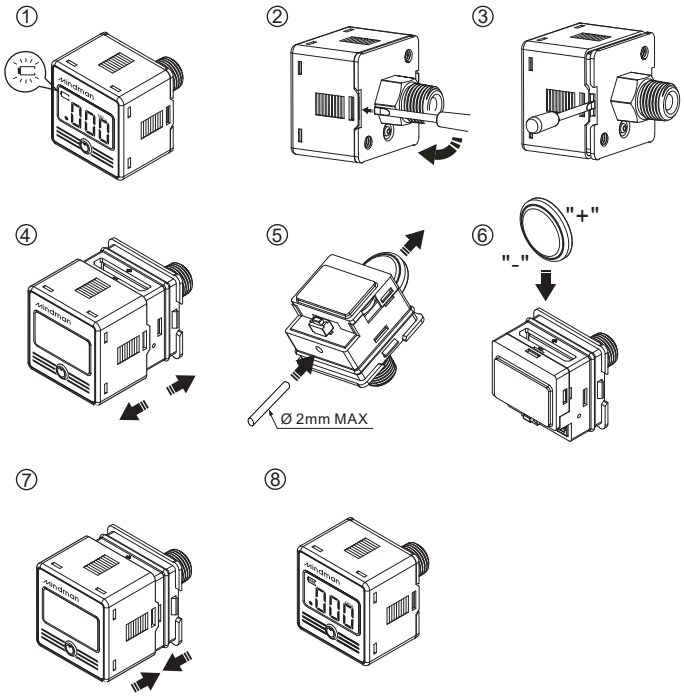


Unit:mm

E. BATTERY STATUS / INSTALLATION

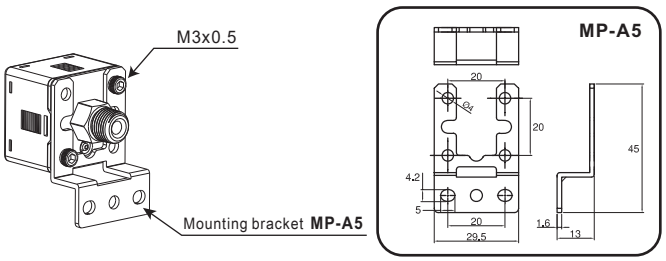
FOLLOW THE STEPS BELOW

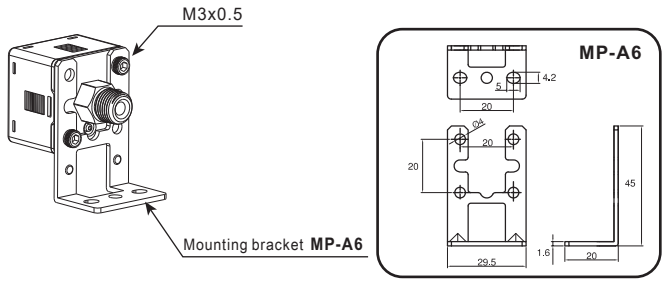
- Using a flat screwdriver size 1.4 ~ 3.0 mm insert into the back of the pressure gage as pictured. (See figure ②)
- Turn the screwdriver horizontally 90° to separate the case and the base. Repeat this process again for the other side. (See figure ③)
- Carefully remove the outer cover (See figure ④), and follow the diagrams below to replace battery and reassembly. Polarity must be observed, incorrect battery installation will cause malfunction.



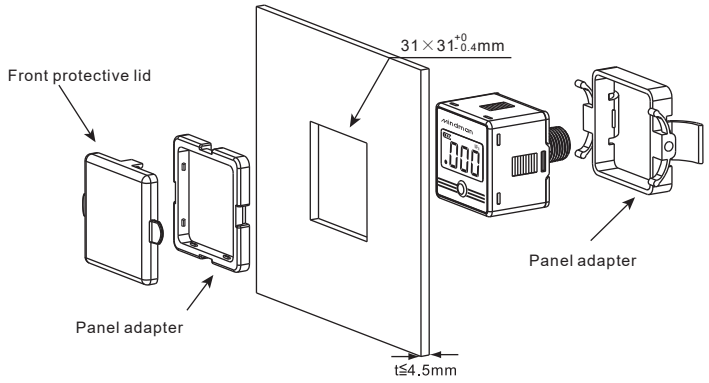
F. OPTIONAL PARTS DIMENSIONS

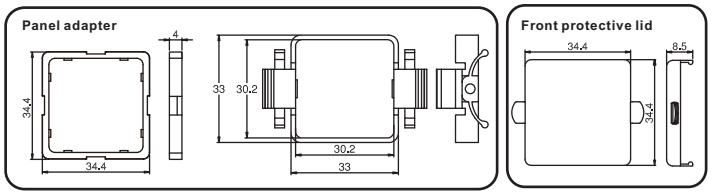
① Mounting bracket





② Panel mounting





Unit:mm

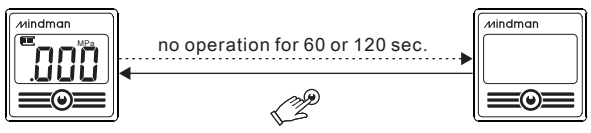
G. PRESSURE UNIT CONVERSION TABLE

From \ To	kPa	MPa	kgf/cm²	mmHg	psi	bar
1 kPa	1	0.001000	0.010197	7.500616	0.145038	0.010000
1 MPa	1000	1	10.197	7500.616	145.038	10
1 kgf/cm²	98.0665	0.0980665	1	735.559	14.2233	0.980665
1 mmHg	0.13332	0.000133	0.0013595	1	0.019336	0.0013332
1 psi	6.895	0.006895	0.07031	51.7157	1	0.06895
1 bar	100.0000	0.100000	1.01972	750.062	14.5038	1

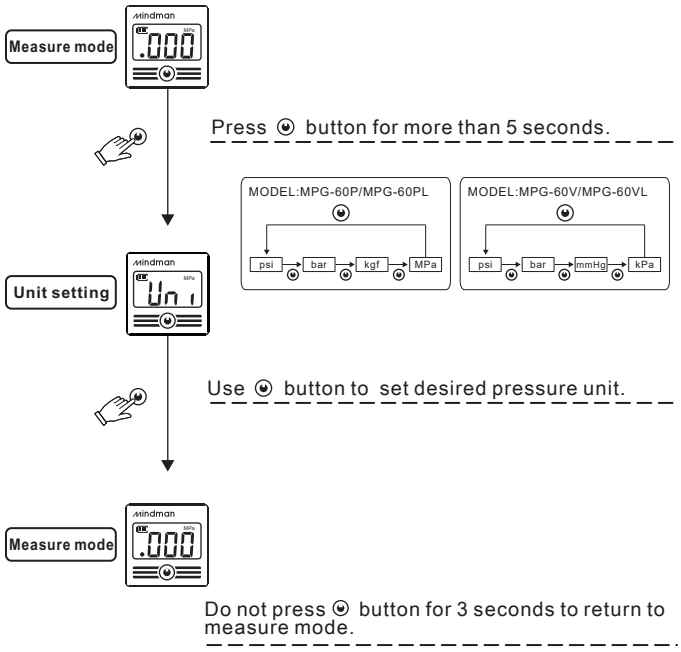
H. POWER-SAVE MODE

◎ The pressure gage will enter power saving mode if the ⊛ button is not pressed within 60 sec.

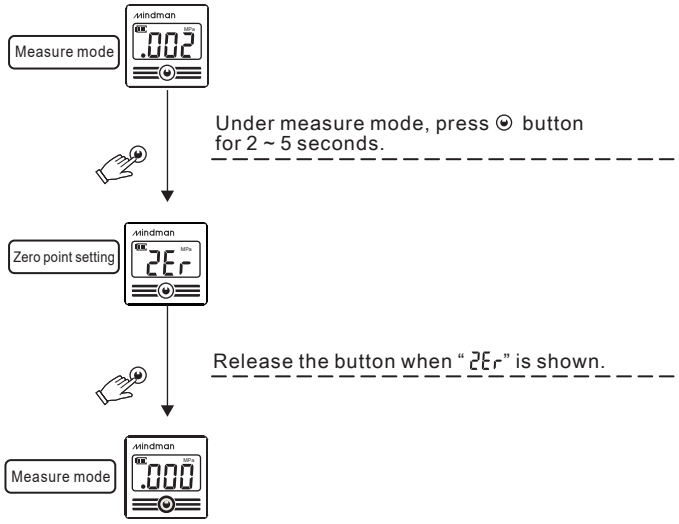
◎ In measure mode, press the ⊛ button to extend display for 120 sec.



I. PRESSURE UNIT SETTING MODE

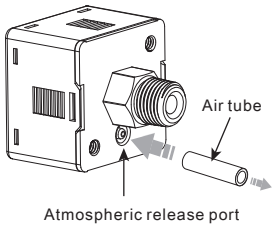


J. ZERO POINT RESET



K. DUST AND SPLASH ENVIRONMENT

- To maintain IP65, please insert an air tube (O.D.: 4mm) into atmospheric release port and pipe the other end away from dust / spattering liquid environment.
- Use proper air tube dimension of O.D.: 4mm, I.D.: 2.5mm, and the length is depending on the user's environment.



L. ERROR CODE INSTRUCTION

Error Type	Error code	Error Condition	Troubleshooting
Residual pressure error	Err	During zero reset, ambient pressure is over ±3% F.S.	Change input pressure to ambient pressure and perform zero reset again.
Applied pressure error	HHH	Supply pressure is exceeds the upper limit of pressure setting.	Adjust the pressure within operating pressure range.
	LLL	Supply pressure is exceeds the lower limit of pressure setting.	
Battery error	bAt	When battery level is under 2.40V, the battery symbol and bAt will flash 4 times then enter power save mode.	Replace battery.