

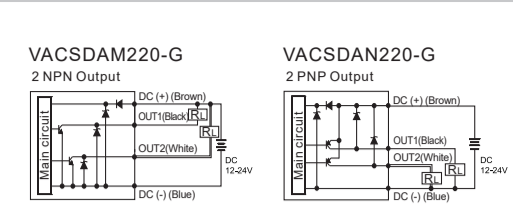
For your safety, please read the following before using.

- Do not use corrosive or flammable gas or liquid with this product.
- Please use within the rating pressure range. Do not apply pressure beyond recommended maximum withstand pressure, permanent damage to the pressure sensor may occur.
- Do not drop, hit or allow excessive shock. Even if switch body appears undamaged, internal components may be broken and can cause malfunction.
- Turn power off before connecting wiring. Wrong wiring or short circuit will damage and / or cause malfunction.
- Do not use in environment containing steam or oil vapor.
- This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.
- Wiring for pressure sensor should avoid power source line and high voltage line. If use in the same circuit, noise may cause malfunction.

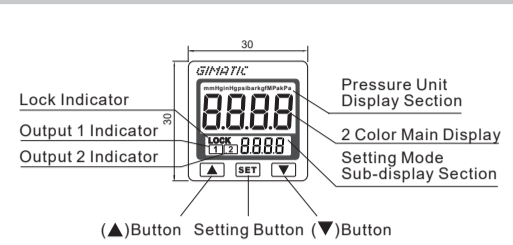
A. SPECIFICATIONS

TYPE	VACSDAM220-G (Vacuum)	VACSDAN220-G (Vacuum)
Rated pressure range	0.0~101.3 kPa	0.0~101.3 kPa
Setting pressure range	10.0~103.0 kPa	10.0~103.0 kPa
Withstand pressure	500 kPa	500 kPa
Fluid	Air, Non-corrosive / Non-flammable gas	
Set Pressure Resolution	kPa	0.1
	MPa	—
	kgf/cm ²	0.001
	bar	0.001
	psi	0.01
	inHg	0.1
Power supply voltage	12 to 24V DC ±10%, Ripple (P-P) 10% or less	
	Current consumption ≤ 30mA (With no load)	
Switch Output	Output type	open collector output (NPN) / open collector output (PNP)
	Load current	Max. 80mA
Response time of device	Residual voltage	≤ 1.0V
	Response time	≤ 2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selections)
Display	Display	Two color (Red/Green) main & unit display, Orange sub-display (Sampling rate: 0.2, 0.5, 1 seconds/time selectable)
	Indicator accuracy	±1% F.S. ±1 digit (ambient temperature: 25±3°C)
Environment	Repeatability (Switch output)	±0.3% F.S. ±1 digit
	Switch ON indicator	Orange Indicator OUT
Enclosure	Enclosure	IP 40
	Operating temp.	0 ~ 50 °C
Temp. characteristic	Temp. characteristic	±2% F.S. of detected pressure (25°C) at temp. Range of 0~50°C
	Ambient temp. range	Storage: -10 ~ 60 °C (No condensation or freezing)
Vibration	Ambient humidity range	Operation / Storage: 35~85% RH (No condensation)
	Withstand voltage	1000V AC in 1-min. (between case and lead wire)
Shock	Insulation resistance	50MΩ (at 500V DC, between case and lead wire)
	Vibration	Total amplitude 1.5mm, 10Hz~150Hz~10Hz scan for 1 minute, two hours each direction of X, Y and Z
Port size	G1/8"(BSPP)	
Lead wire	Oil-resistance cable(0.15mm ²)	
Weight	Approx. 67g (with 2 meter lead wire)	

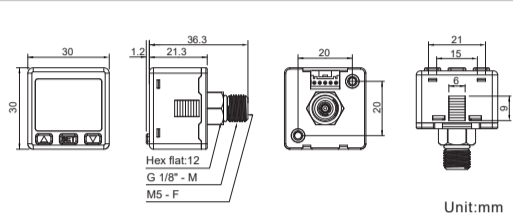
B. OUTPUT CIRCUIT WIRING DIAGRAMS



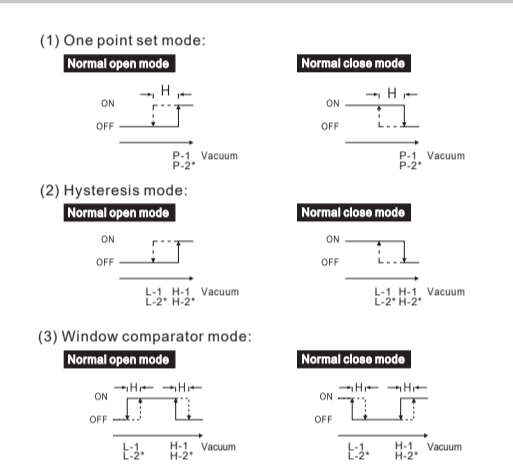
C. PANEL DESCRIPTION



D. DIMENSIONS

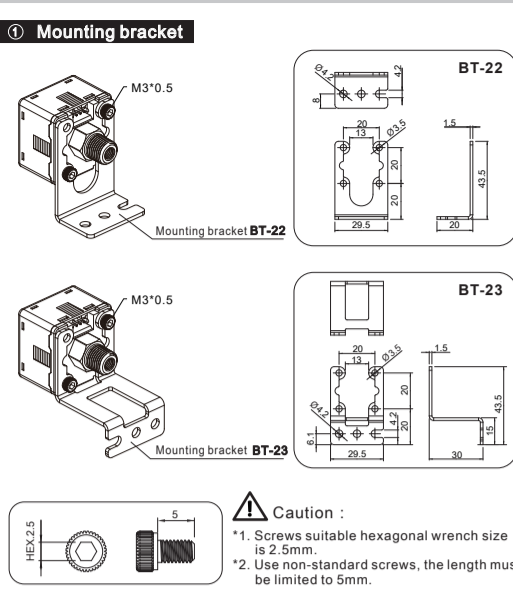


E. OUTPUT TYPE

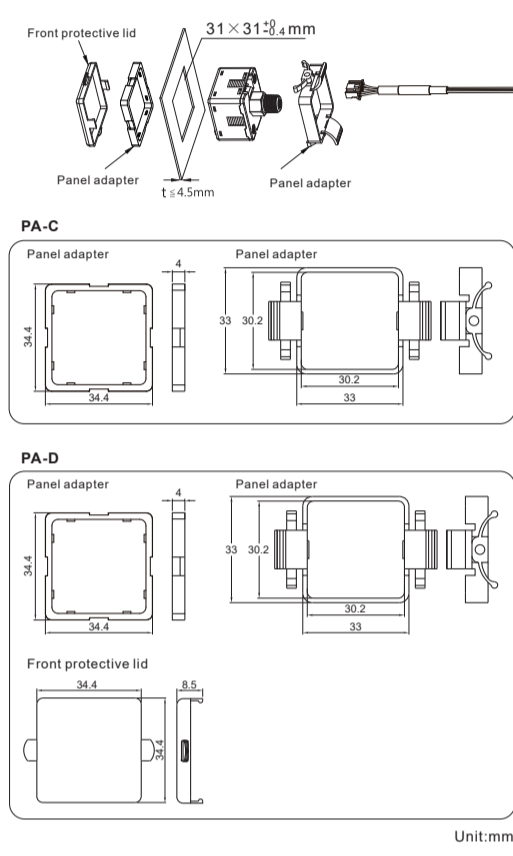


[NOTE:]
 *1. In case hysteresis is set at less than or equal to 2 digits, switch output may chatter if input pressure fluctuates near the set point.
 *2. When using window comparator mode, the difference between two set points must be greater than the fixed hysteresis, otherwise will cause the switch output to malfunction.

F. OPTIONAL PARTS DIMENSIONS

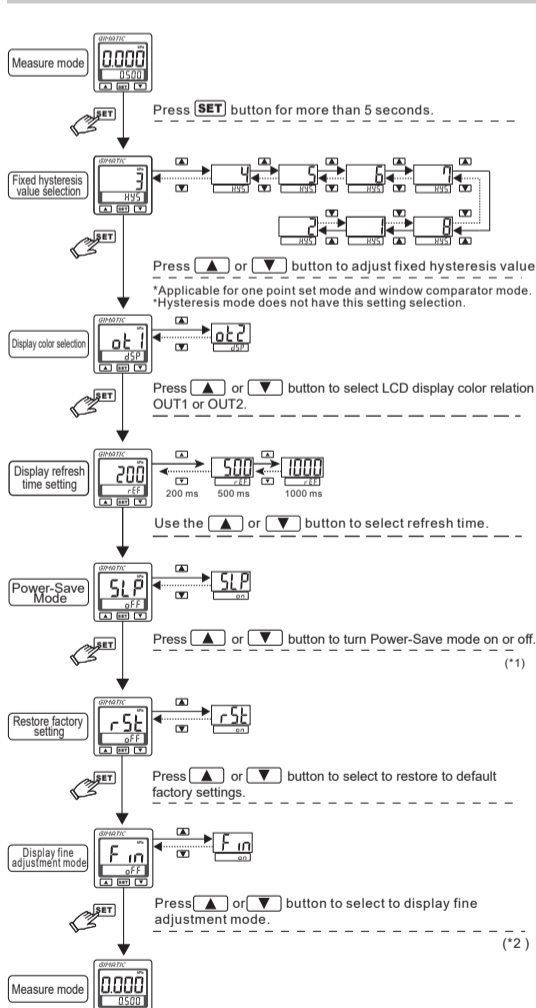


G. INITIAL SETTING MODE



[NOTE:]
 *1. This setting mode will not display when output 2 is set to OFF.

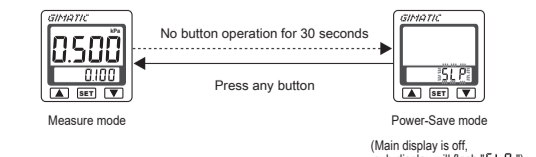
H. ADVANCE SETTING MODE



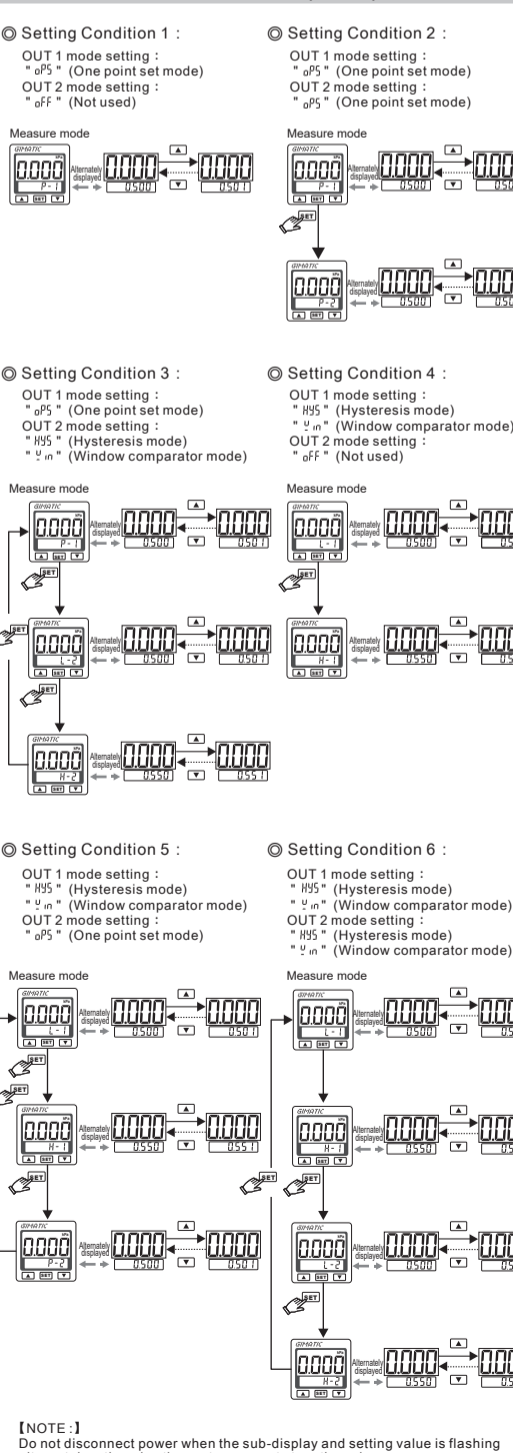
[NOTE:]
 *1. When setting is "SLP", the power-save mode is active. Please refer to the item "POWER-SAVE MODE" in detailed.
 *2. When setting is "FADJ", the display fine adjustment mode is active. Please refer to the item "FINE ADJUSTMENT MODE" in detailed.

I. POWER-SAVE MODE

- During Power-Save mode, the main display will turned off if no buttons is pressed after 30 seconds.
- During Power-Save mode, the output LCD may not be synchronize with the output. It is normal and will not affect output operation.
- Press any button to turn-on main display temporarily.

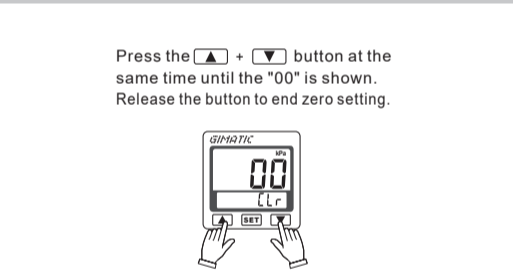


J. PRESSURE SETTING MODE (2 OUT)

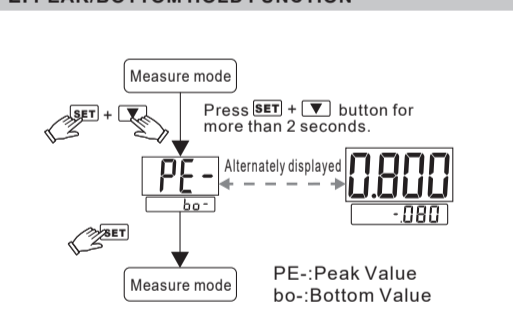


[NOTE:]
 Do not disconnect power when the sub-display and setting value is flashing alternately, otherwise the system cannot store the values.

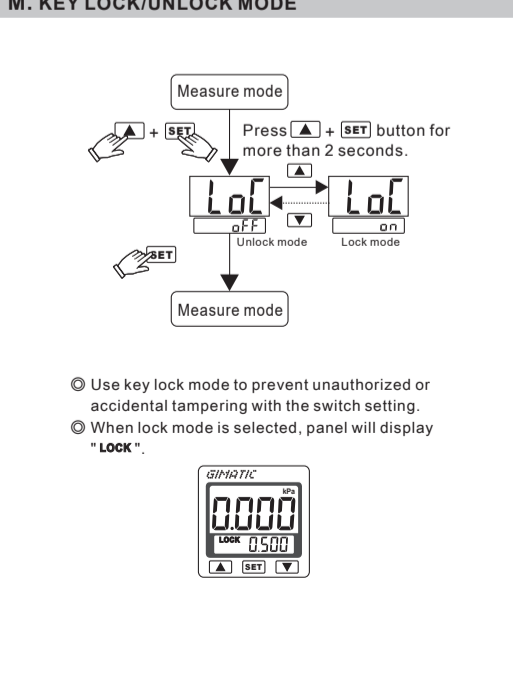
K. ZERO POINT SETTING



L. PEAK/BOTTOM HOLD FUNCTION

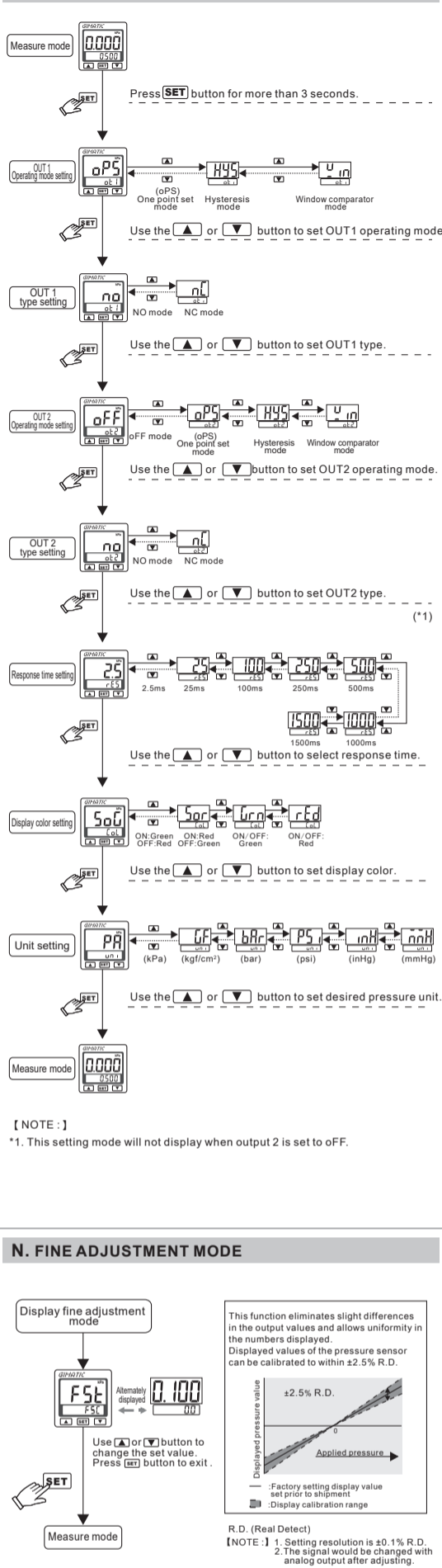


M. KEY LOCK/UNLOCK MODE



Use key lock mode to prevent unauthorized or accidental tampering with the switch setting.
 When lock mode is selected, panel will display "LOCK".

N. FINE ADJUSTMENT MODE



R.D. (Real Detect)
 [NOTE:]
 1. Setting resolution is ±0.1% R.D.
 2. The signal should be changed with analog output after adjusting.

O. ERROR CODE INSTRUCTION

Error Type	Error Code	Error Condition	Troubleshooting
Excess load current error	Er1	Output 1 load current is more than 80 mA	Turn power off and check the cause of overload current or lower the current load under 80 mA, then restart.
Residual pressure error	Er2	Output 2 load current is more than 80 mA	Turn power off and check the cause of overload current or lower the current load under 80 mA, then restart.
Applied pressure error	HRH	During zero reset, ambient pressure is over 25% F.S.	Change input pressure to ambient pressure and perform zero reset again.
System error	LLL	Supply pressure exceeds the upper limit of pressure setting.	Adjust the pressure within operating pressure range.
	LLL	Supply pressure exceeds the lower limit of pressure setting.	
System error	Er4	Internal system error	Turn power off, and then restart. If error condition remains, please return to factory for inspection.
	Er5	Internal system error	
	Er6	Internal data error	
	Er7	Internal data error	

P. PRESSURE UNIT CONVERSION TABLE

From	To	kPa	MPa	kgf/cm ²	mmHg	psi	bar	inHg
1 Pa	1	0.001	0.000001	0.0000102	0.00750062	0.000145038	0.00001	0.000295298
1 kPa	1000	1	0.001000	0.0101972	7.50062	0.145038	0.010000	0.295298
1 MPa	1000000	1000	1	10.197	7500.62	145.038	10	295.298
1 kgf/cm ²	98066.5	98.0665	0.0980665	1	735.559	14.2233	0.980665	28.9597
1 mmHg	133.322	0.133322	0.00133322	0.00133322	1	0.0193336	0.00133322	0.0392701
1 psi	6894.76	6.89476	0.00689476	0.070307	51.7147	1	0.0689476	2.03602
1 bar	100000.0	100.000	0.100000	1.01972	750.062	14.5038	1	29.5298
1 inHg	3386.39	3.38639	0.00338639	0.034530	25.4000	0.491141	0.0338639	1

Q. China RoHS

Part Name	Hazardous Substances					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Metal Part	X	O	O	O	O	O
Plastic Part	O	O	O	O	O	O
Electronic	X	O	O	O	O	O
Cable & Cabling accessories	O	O	O	O	O	O

This table is made according to SJ/T 11364.
 O: Indicates that the concentration of hazardous substance in all of the homogeneous materials for this part is below the limit as stipulated in GB/T 26572.
 X: Indicates that concentration of hazardous substance in at least one of the homogeneous materials used for this part is above the limit as stipulated in GB/T 26572.