

PISCO VUS-32. SEU-32 Series

HIR0075-0 1

For your safety, please read the following before using.

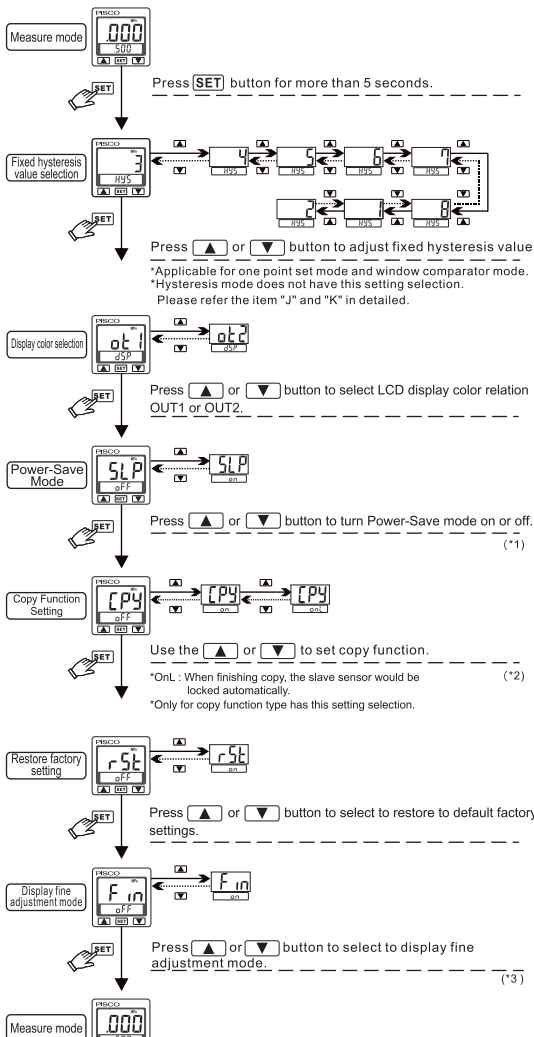
- Do not use corrosive or flammable gas or liquid with this product.
- Please use within the rating pressure range. Do not apply pressure beyond recommended maximum withstand pressure, permanent damage to the pressure sensor may occur.
- Do not drop, hit or allow excessive shock. Even if switch body 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	SEU-32 (Positive)	VUS-32 (Vacuum)	VUS-32R (Compound)
Rated pressure range	0.000~1.000MPa	0.0~~101.3kPa	-100.0~100.0kPa
Setting pressure range	-0.100~1.000MPa	10.0~~101.3kPa	-101.0~101.0kPa
Withstand pressure	1.5MPa	300kPa	
Fluid	Filtered air, Non-corrosive / Non-flammable gas		
Set pressure resolution (*2)	kPa	—	0.1
	MPa	0.001	—
	kgf/cm ²	0.01	0.001
	bar	0.01	0.001
	Psi	0.1	0.01
	inHg	—	0.1
Power supply voltage	12 to 24V DC ±10%, Ripple (P-P) 10% or less		
	Current consumption ≤ 40mA (With no load)		
Switch output	NPN: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 30V DC Residual voltage: ≤ 1.5V		
	PNP: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 24V DC Residual voltage: ≤ 1.5V		
Repeatability(Switch output)	±0.2% F.S. ±1 digit		
Hysteresis	One point set mode		
	Hysteresis mode		
	Window comparator mode		
Response time	≤ 2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selections)		
Output short circuit protection	Yes		
7 segment LCD display	Two color(Red/Green) main & unit display. Orange sub-display (Sampling rate: 5 times/1sec.)		
Indicator accuracy	±2% F.S. ±1 digit (ambient temperature: 25 ±3°C)		
Switch ON Indicator	Orange (1 & 2 Indicator) OUT1 OUT2		
Analog output (Voltage Output)	Output Voltage: 1 to 5V ±2.5% F.S. (within rated pressure range)		
	Linearity: ±1% F.S. Output impedance: about 1kΩ		
Environment	Enclosure IP 40		
	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 1000V 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, two 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	±2.5% F.S. of detected pressure (25°C) at temp. Range of 0~50°C		
Port size	01:R1/8", M5; N1U:NPT1/8", #10-32UNF; G1: G1/8", M5		
Lead wire	Oil-resistance cable(0.15mm")		
Weight	Approx. 80g (with 2 meter lead wire)		

- *1 Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.
*2 Pressure unit switching feature is disabled at the factory.
Setting steps for the function active.
1) Please shut the power off before following procedure.
2) Turn on pressing "set" and "down" key.
3) Press "Up" and "Down" key.
4) Press "down" key → display "on".
5) Press "set"

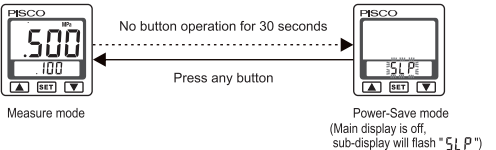
H. ADVANCE SETTING MODE



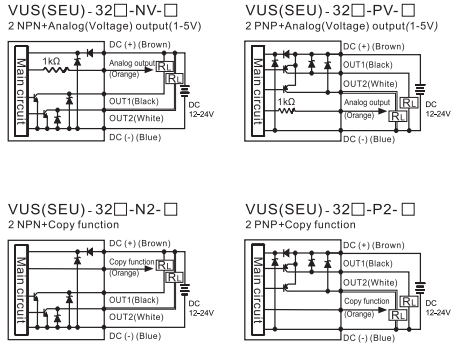
- [NOTE :]
*1. When setting is "Lo", the power-save mode would be started. Please refer the item "I" in detailed.
*2. When setting the item "Lo" or "Hi", the display copy function mode would be started. Please refer the item "I" in detailed.
*3. When setting is "Lo", the display fine adjustment mode would be started. Please refer the item "I" in detailed.

I. POWER-SAVE MODE

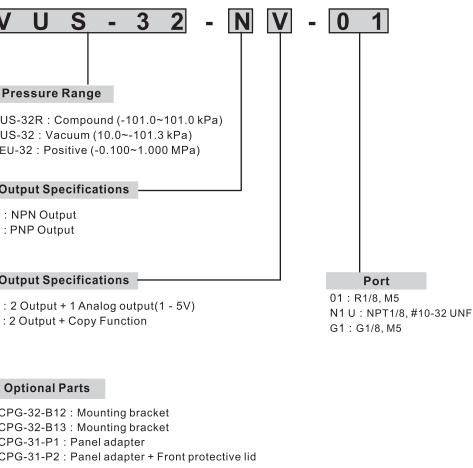
- During Power-Save mode, the main display will turned off if no buttons is pressed after 30 seconds.
- During Power-Save mode, the output LCD may not be synchronize with the output. It is normal and will not affect output operation.
- Press any button to turn-on main display temporarily.



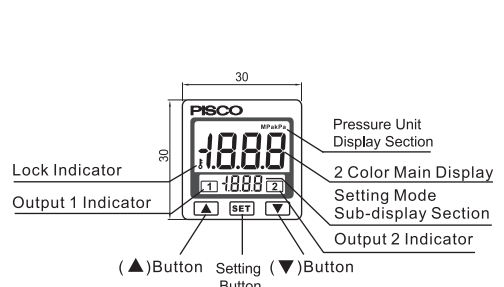
B. OUTPUT CIRCUIT WIRING DIAGRAMS



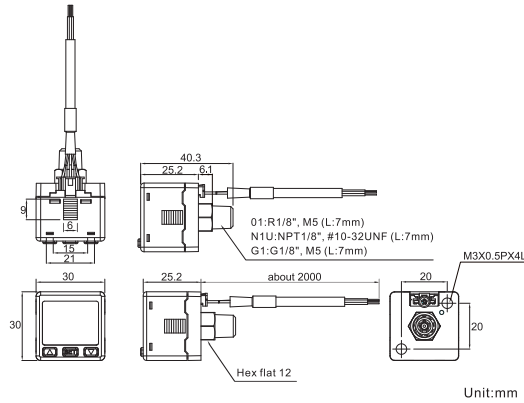
C. ORDERING INFORMATION



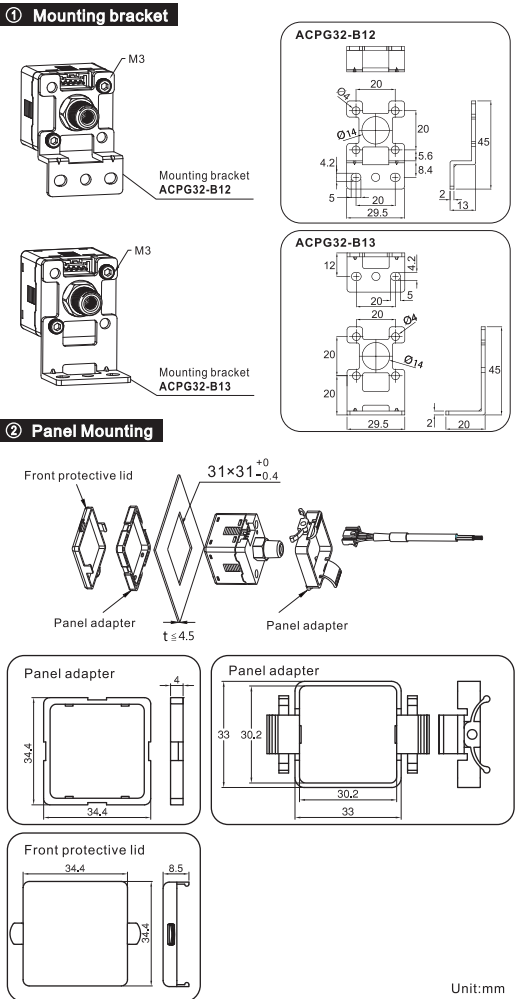
D. PANEL DESCRIPTION



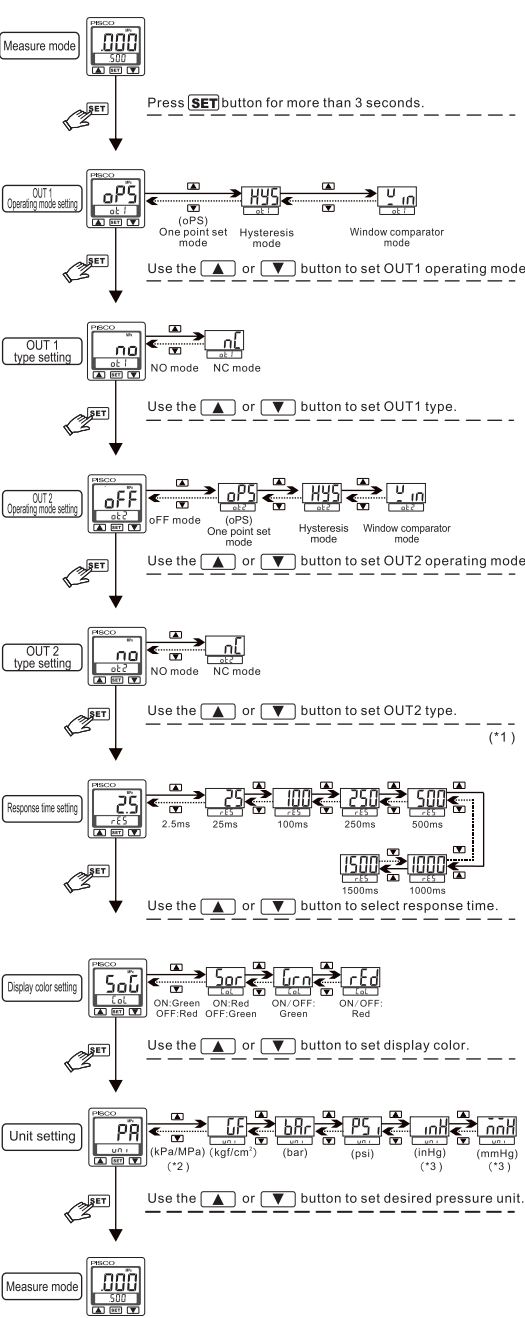
E. DIMENSIONS



F. OPTIONAL PARTS DIMENSIONS

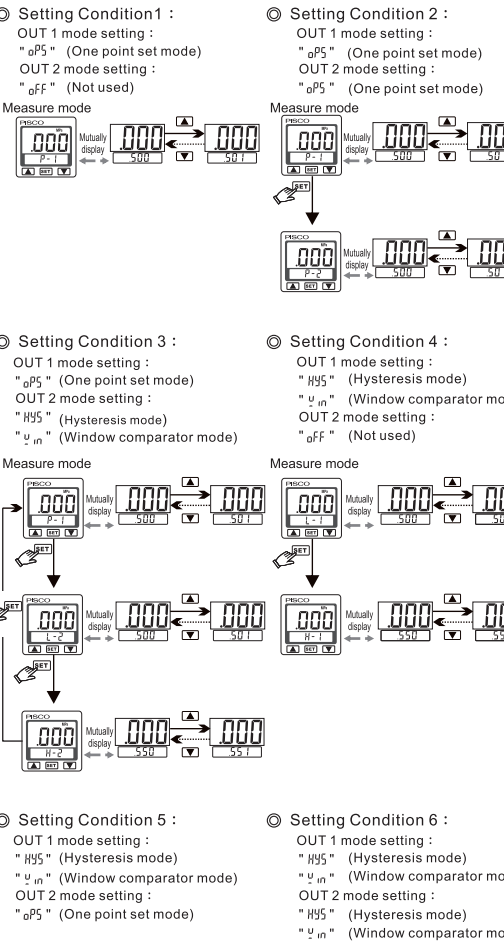


G. INITIAL SETTING MODE

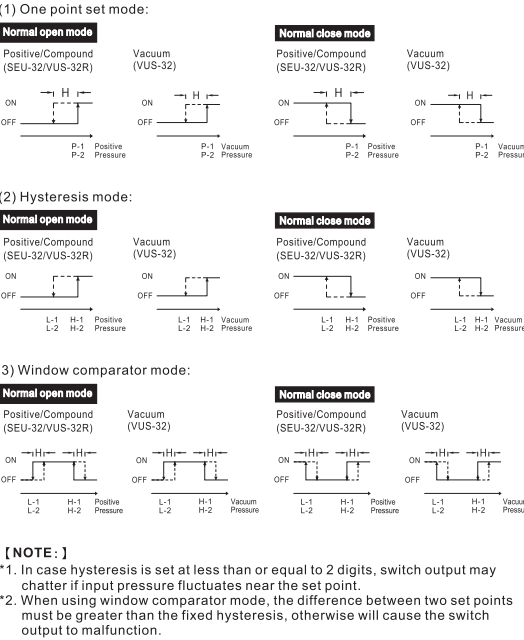


- [NOTE :]
*1. This setting mode will not display when output 2 is set to off.
*2. Pressure unit is MPa by positive & pressure unit is kPa by vacuum and compound
*3. Only applicable for Vacuum/Compound.

J. PRESSURE SETTING MODE

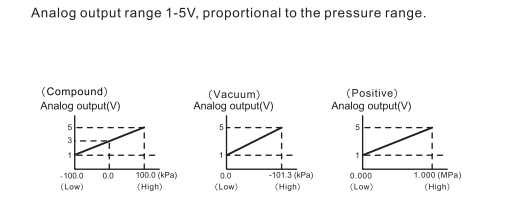


K. OUTPUT TYPE

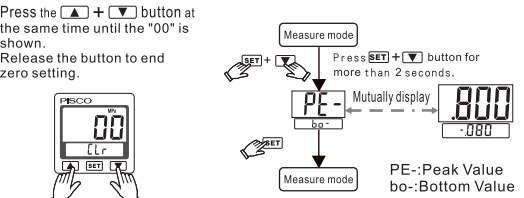


- [NOTE :]
*1. In case hysteresis is set at less than or equal to 2 digits, switch output may chatter if input pressure fluctuates near the set point.
*2. When using window comparator mode, the difference between two set points must be greater than the fixed hysteresis, otherwise will cause the switch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

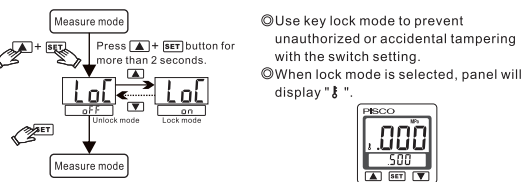
L. ANALOG OUTPUT DESCRIPTION



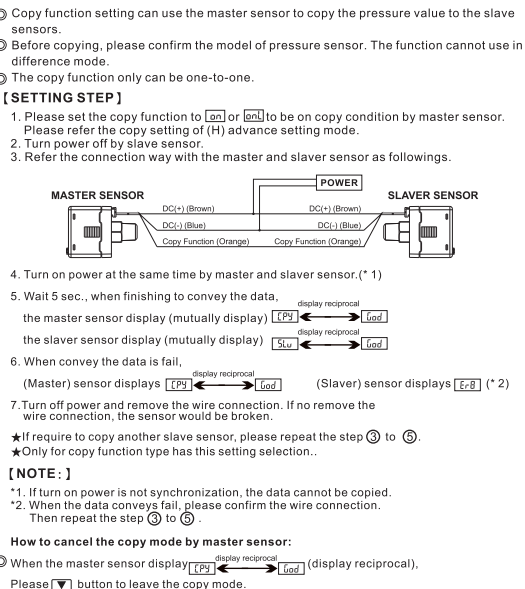
M. ZERO POINT SETTING



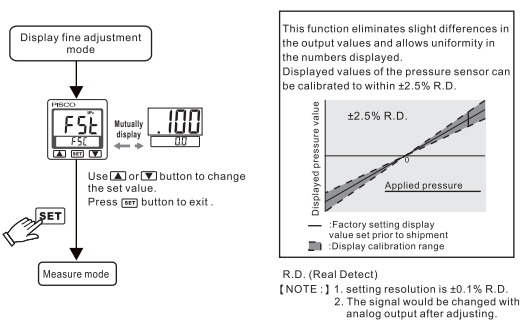
O. KEY LOCK/UNLOCK MODE



P. COPY FUNCTION SETTING



Q. FINE ADJUSTMENT MODE



R. ERROR CODE INSTRUCTION

Error Type	Error code	Error Condition	Troubleshooting
Excess load current error	Er 1	Output 1 load current is more than 125 mA	Turn power off and check the cause of overload current or lower the current load under 125 mA, then restart.
Residual pressure error	Er 2	Output 2 load current is more than 125 mA	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.
System error	LLL	Supply pressure is exceeds the lower limit of pressure setting.	Adjust the pressure within operating pressure range.
Internal system error	Err 1	Internal system error	Turn power off, and then restart.
Internal data error	Err 2	Internal data error	If error condition remains, please return to factory for inspection.
Copy data error	Err 3	Internal data error	Restart to turn on power if no return to normal condition, please return to factory for inspection.

S. PRESSURE UNIT CONVERSION TABLE

Unit	Pa	kPa	MPa	kgf/cm ²	mmHg	psi	bar	inHg
1 Pa	1	0.001	0.000001	0.000010197	0.00750062	0.000145038	0.00001	0.0002953
1 kPa	1000.000	1	0.001000	0.010197	7.500616	0.145038	0.010000	0.2953
1 MPa	1000000	1000	1	10.197	7500.616	145.038	10	295.298
1 kgf/cm ²	98066.5	9.80665	0.0980665	1	735.559	14.2233	0.980665	28.9579
1 mmHg	133.322	0.133322	0.00133322	0.00135951	1	0.0193368	0.00133322	0.0393701
1 psi	6895	6.895	0.006895	0.07031	51.7157	1	0.06895	2.036074
1 bar	100000.0	100.000	0.100000	1.01972	750.062	14.5038	1	29.5298
1 inHg	3386.388	3.386388	0.00338638	0.034530	25.4000	0.491141	0.0338638	1