

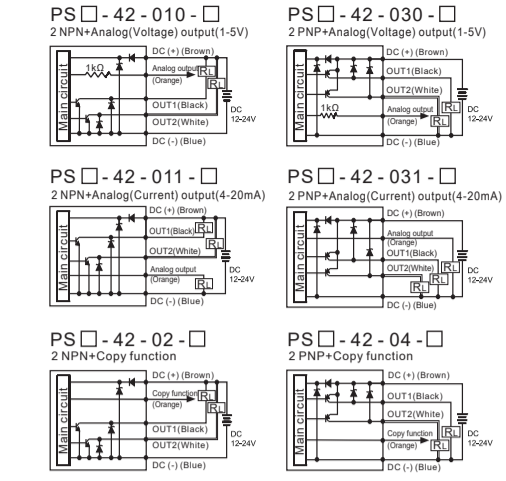
For your safety, please read the following before using.

- 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.

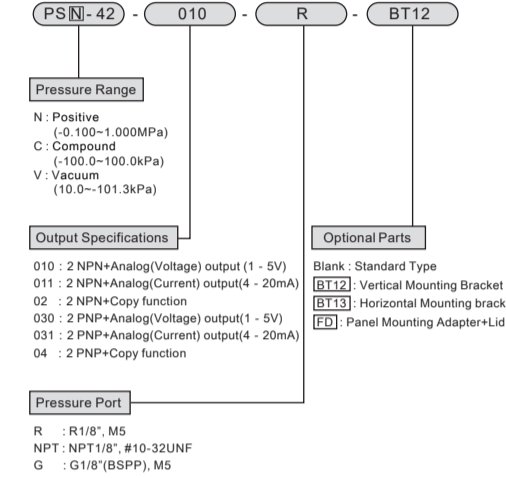
SPECIFICATIONS	PSN-42 (Positive)	PSV-42 (Vacuum)	PSC-42 (Compound)
Rated pressure range	0.000~1.000MPa	0.0~101.3kPa	-100.0~100.0kPa
Set pressure range	-0.100~1.000MPa	10.0~101.3kPa	-101.0~101.0kPa
Withstand pressure	1.5MPa	300kPa	
Fluid	Filtered air, Non-corrosive / Non-flammable gas		
Set pressure resolution	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
	mmHg	—	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 mode	One point set mode	Adjustable (*1)	
	Hysteresis mode	Adjustable (*1)	
	Window comparator mode	Adjustable (*1)	
Response time	≤ 2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms and 1500ms selections)		
Output short circuit protection	Yes		
Display	3 1/2 digital, 7 segment LCD display (Red / Green / Orange) (Sampling rate: 5 times / sec.)		
Indicator accuracy	±2% F.S. ±1 digit (ambient temperature: 25 ±3°C)		
Switch on Indicator	Orange Indicator 1: OUT1 & Orange Indicator 2: OUT2		
Analog output (Voltage Output) *2	Output Voltage: 1 to 5V ±2.5% F.S. (within rated pressure range) Linearity: ±1% F.S. Output impedance: about 1kΩ		
	Output Current: 4 to 20mA ±2.5% F.S. (within rated pressure range) Linearity: ±1% F.S. Max. Load Impedance: 300Ω at power supply of 12V 600Ω at power supply of 24V Min. Load Impedance: 50Ω		
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)		
Environment	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: 100ms (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	R1/8", M5, NPT1/8", #10-32UNF, G1/8"(BSPP), M5		
Lead wire	Ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 5 cores		
Weight	Approx. 80g (with 2 meter lead wire)		

*1. Hysteresis value is adjustable within 1 - 9 digits for one point set mode and window comparator mode.
*2. If analog voltage output is selected, the analog current output cannot be selected at the same time.
*3. If analog current output is selected, the analog voltage output cannot be selected at the same time.

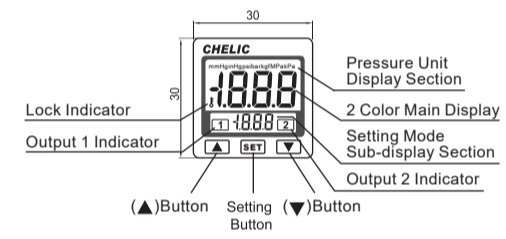
OUTPUT CIRCUIT WIRING DIAGRAMS



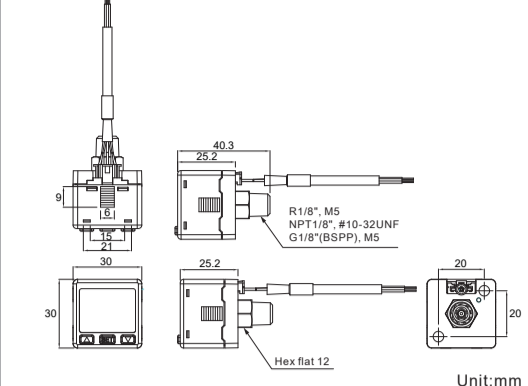
ORDERING INFORMATION



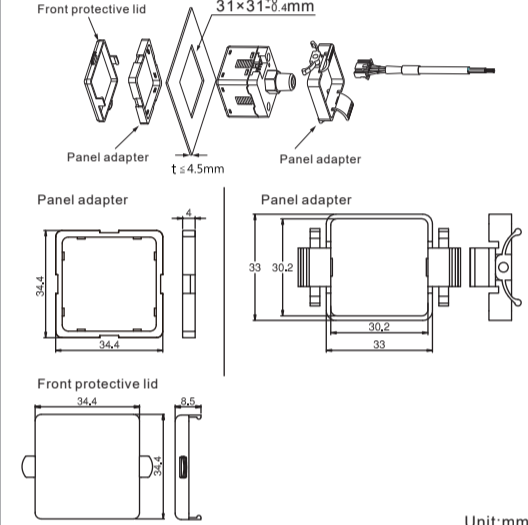
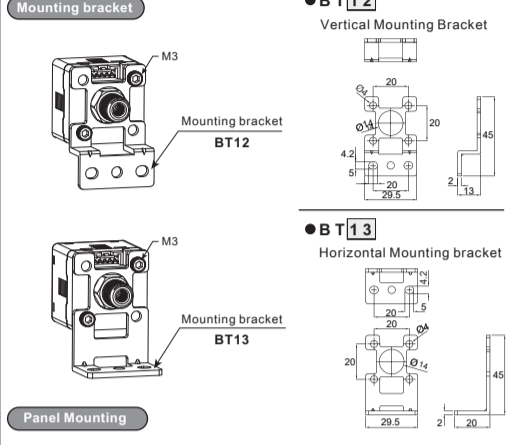
PANEL DESCRIPTION



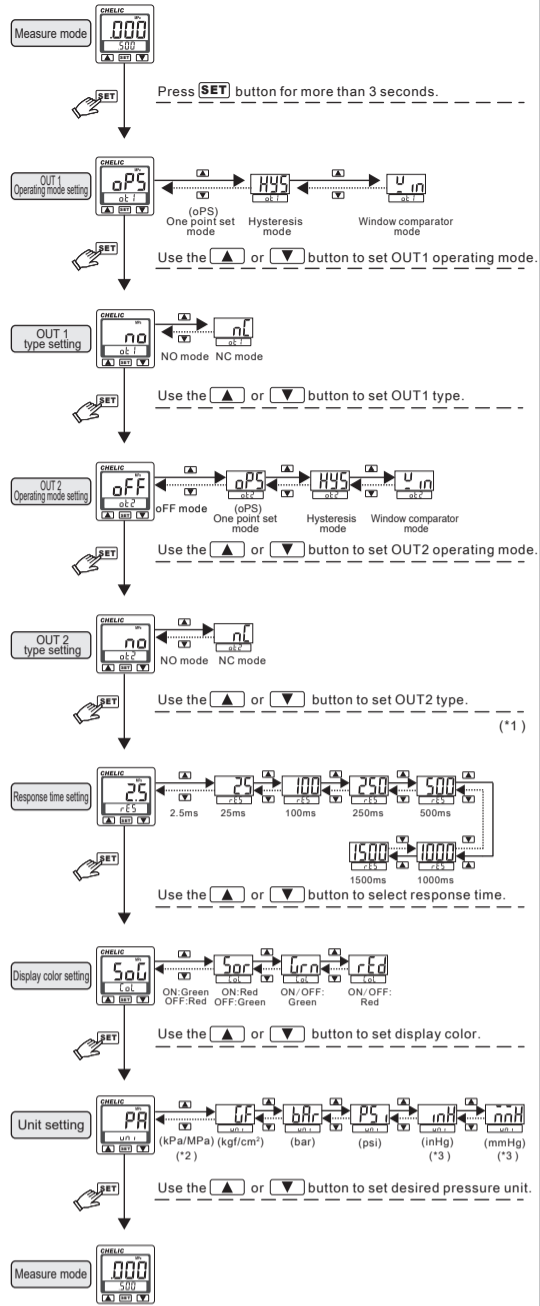
DIMENSIONS



OPTIONAL PARTS DIMENSIONS

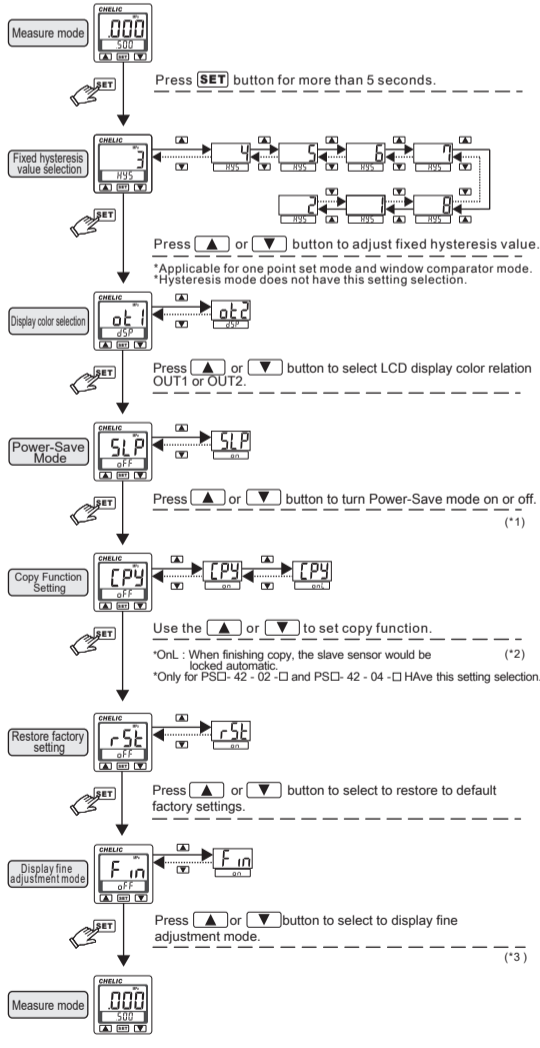


INITIAL SETTING MODE



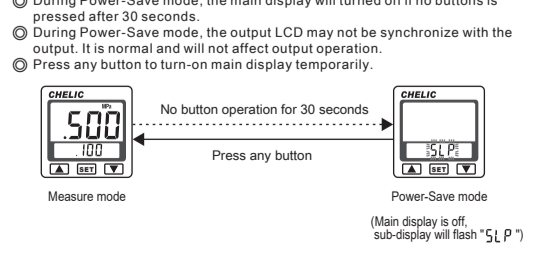
[NOTE :]
*1. This setting mode will not display when output 2 is set to off.
*2. Pressure unit is MPa with positive pressure. Pressure unit is kPa with vacuum and compound pressure.
*3. Only applicable for Vacuum/Compound.

ADVANCE SETTING MODE

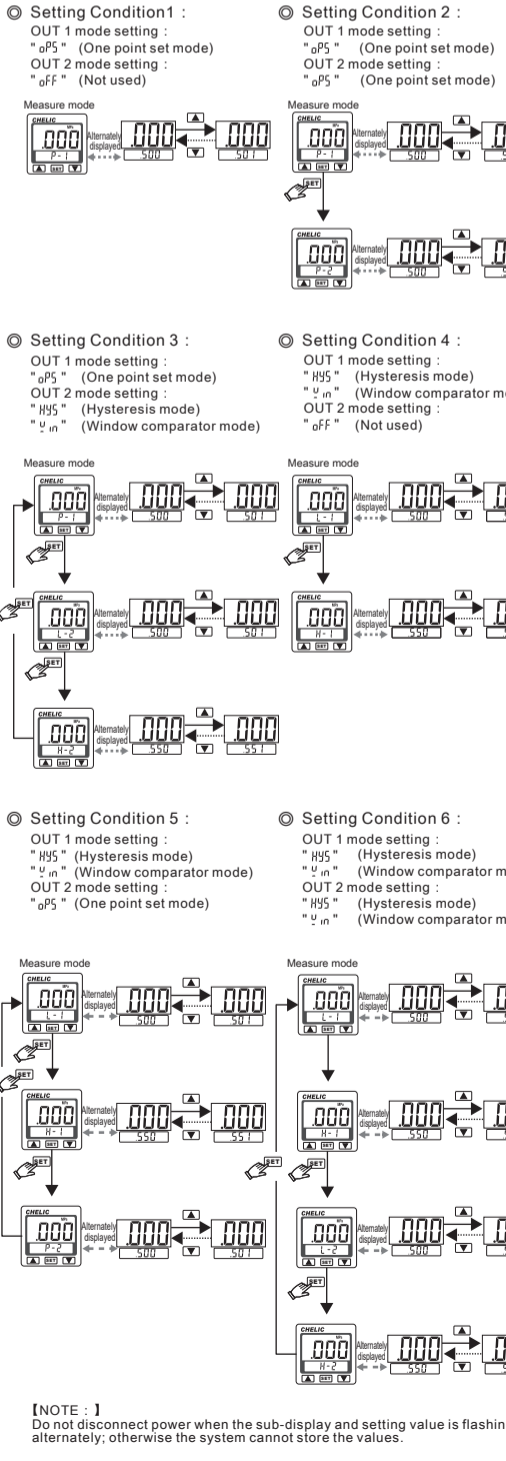


[NOTE :]
*1. When setting is "000", the power-save mode is active.
*2. When setting is "000" or "000", the display copy function mode would be active.
*3. When setting is "000", the display fine adjustment mode is active.

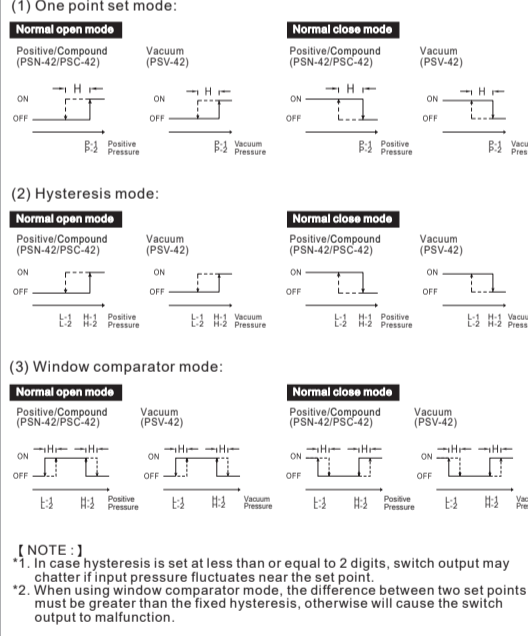
POWER-SAVE MODE



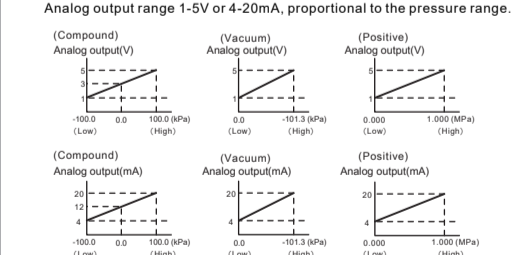
PRESSURE SETTING MODE



OUTPUT TYPE



ANALOG OUTPUT DESCRIPTION



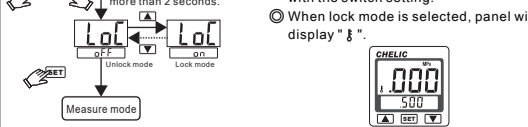
ZERO POINT SETTING



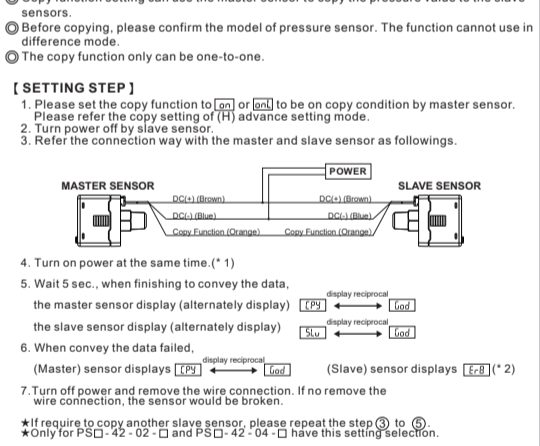
PEAK/BOTTOM HOLD FUNCTION



KEY LOCK/UNLOCK MODE

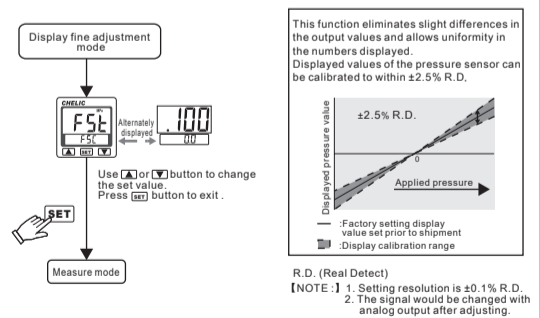


COPY FUNCTION SETTING



[NOTE]
*1. If turn on power is not synchronization, the data cannot be copied.
*2. When the data conveys failed, please check the wire connection. Then repeat the step ③ to ⑤.
*3. Only for PSC-42-02 and PSV-42-04 have this setting selection.

FINE ADJUSTMENT MODE



ERROR CODE INSTRUCTION

Error Type	Error Code	Error Condition	Troubleshooting
Excess load current error	Er1	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.
	Er2	Output 2 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	Er3	During zero reset, ambient pressure is over ±3% F.S.	Change input pressure to ambient pressure and perform zero reset again.
	Er4	Supply pressure is exceeds the upper limit of pressure setting.	Adjust the pressure within operating pressure range.
Applied pressure error	Er5	Supply pressure is exceeds the lower limit of pressure setting.	Adjust the pressure within operating pressure range.
	Er6	Internal system error	Turn power off, and then restart. If error condition remains, please return to factory for inspection.
	Er7	Internal data error	Turn power off, and then restart. If error condition remains, please return to factory for inspection.
Copy date error	Er8	Please check the model no. and wire connection. Restart to turn on power if no return to normal condition, please return to factory for inspection.	

PRESSURE UNIT CONVERSION TABLE

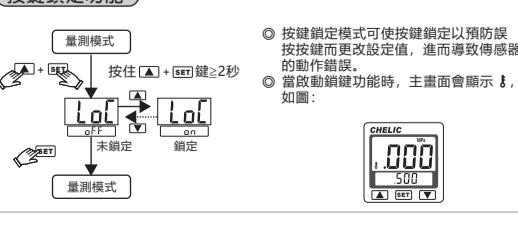
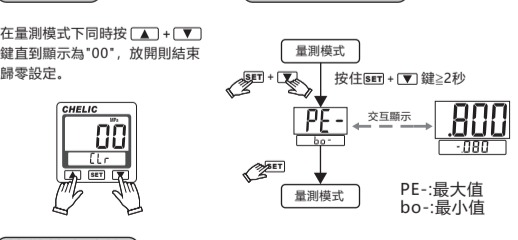
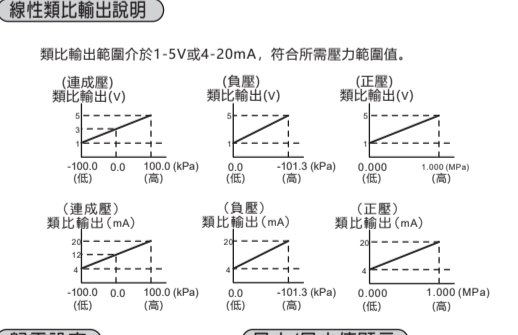
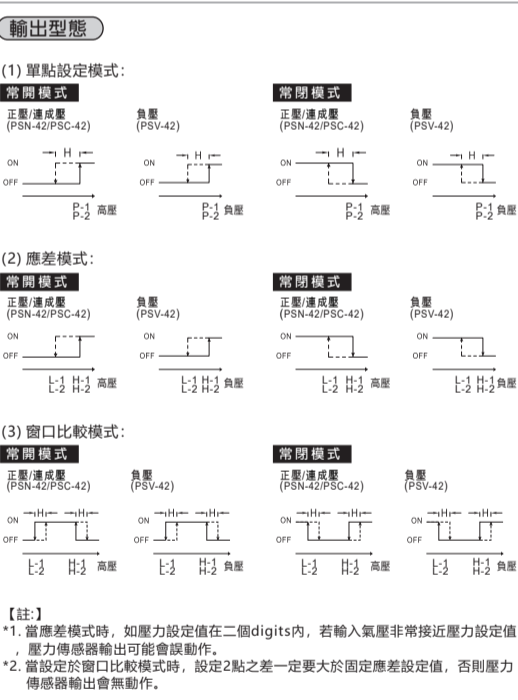
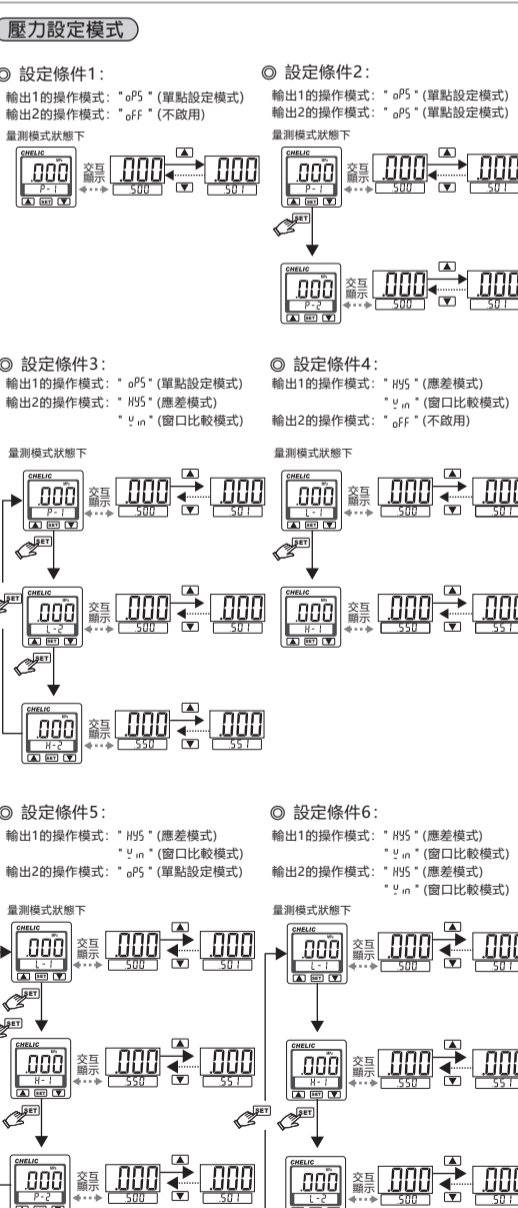
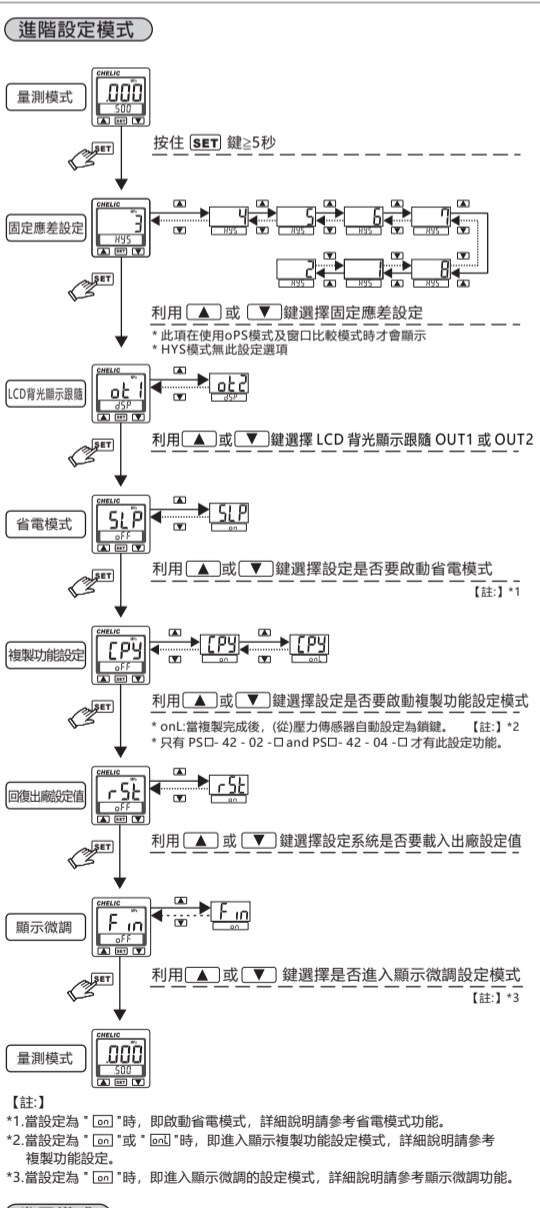
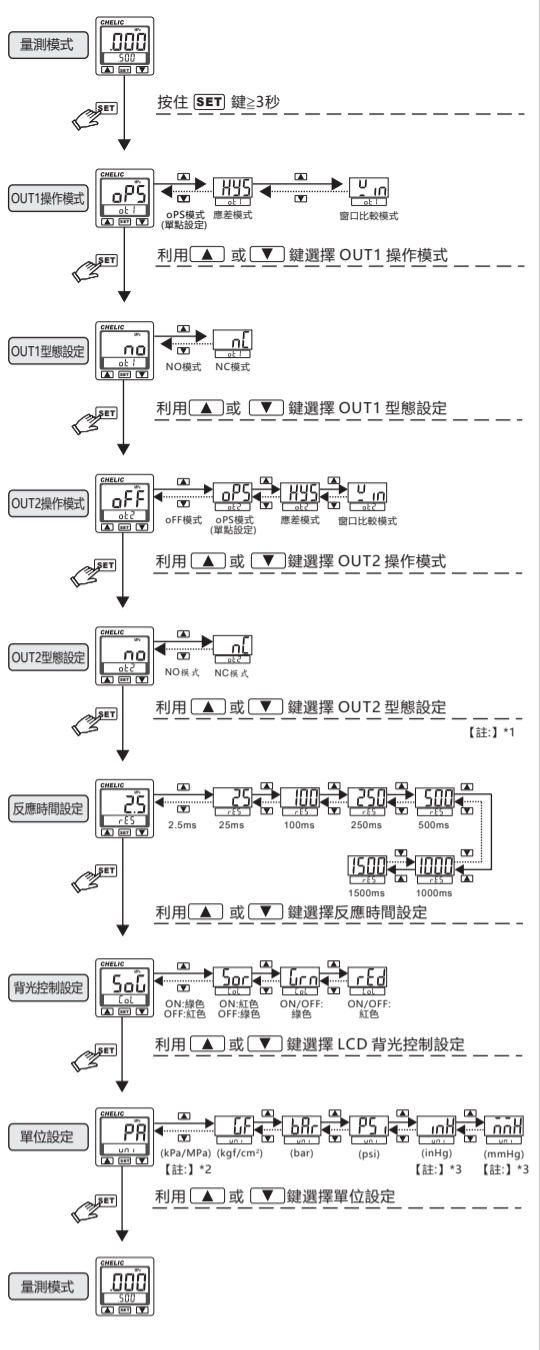
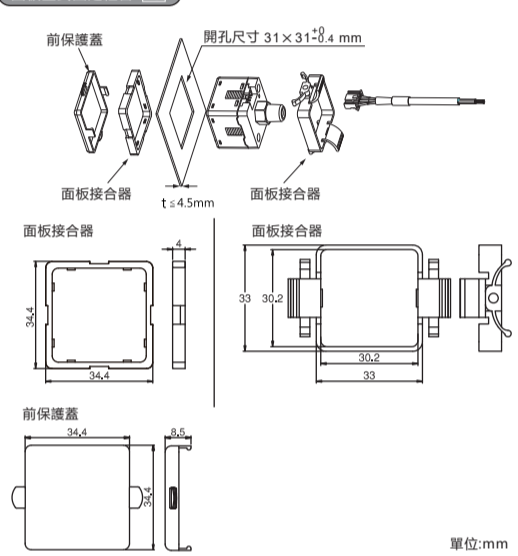
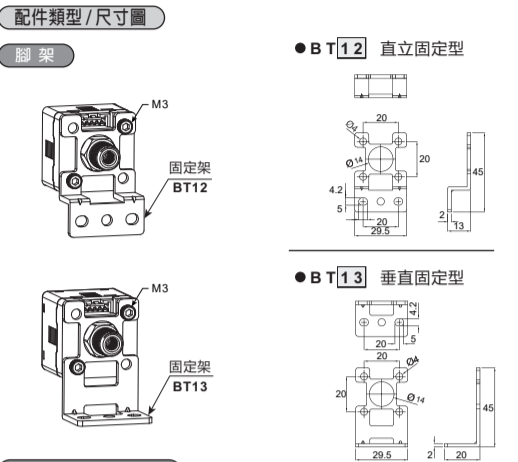
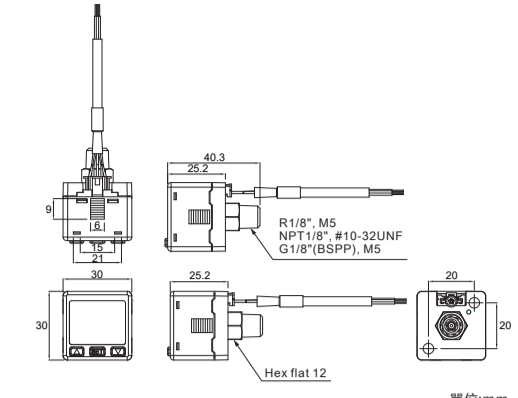
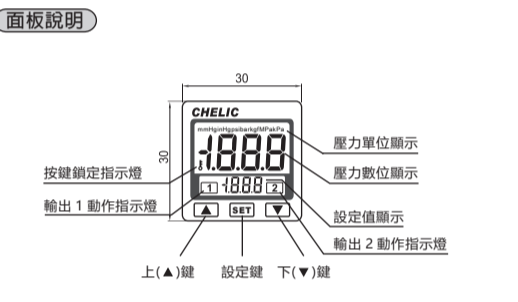
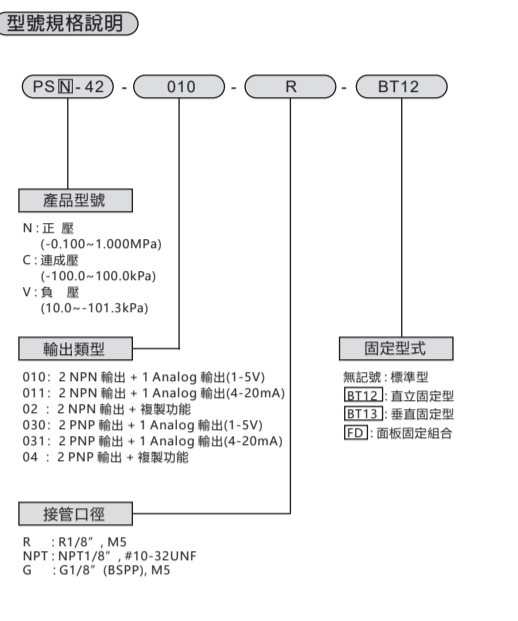
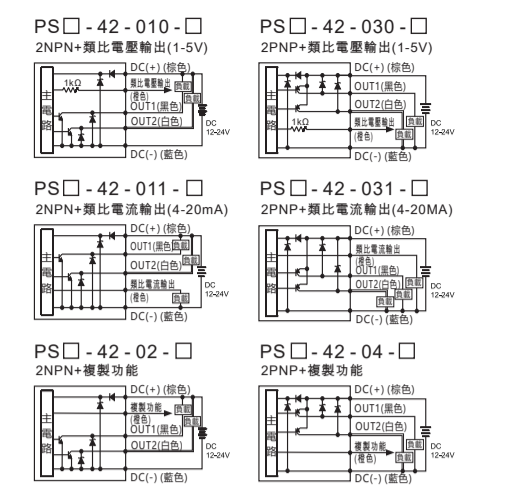
Pressure	Pa	kPa	MPa	kgf/cm ²	mmHg	psi	bar	inHg
1 Pa	1	0.001	0.000001	0.00010197	0.00750062	0.000145038	0.00001	0.000295299
1 kPa	1000.000	1	0.00100001	0.0101972	7.500616	0.145038	0.0100000	0.295299
1 MPa	1000000.0	1000	1	10.1972	75006.16	145.038	10	295.299
1 kgf/cm ²	98066.5	98.0665	0.0980665	1	735.559	14.2233	0.0980665	28.9579
1 mmHg	133.322	0.133322	0.000133322	0.0135951	1	0.0193333	0.00133322	0.0393701
1 psi	6895	6.895	0.006895	0.703091	51.7177	1	0.06895	2.03602
1 bar	100000.0	100.000	0.100000	1.01972	7500.62	14.5038	1	29.5299
1 mmHg	133.322	0.133322	0.000133322	0.0135951	1	0.0193333	0.00133322	0.0393701

使用本產品應注意事項

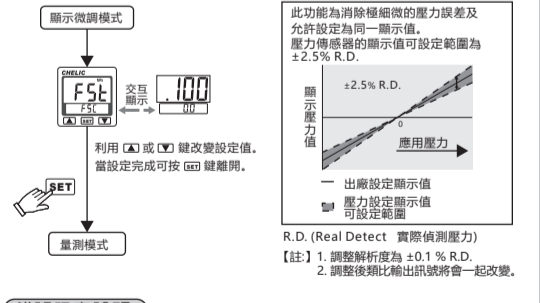
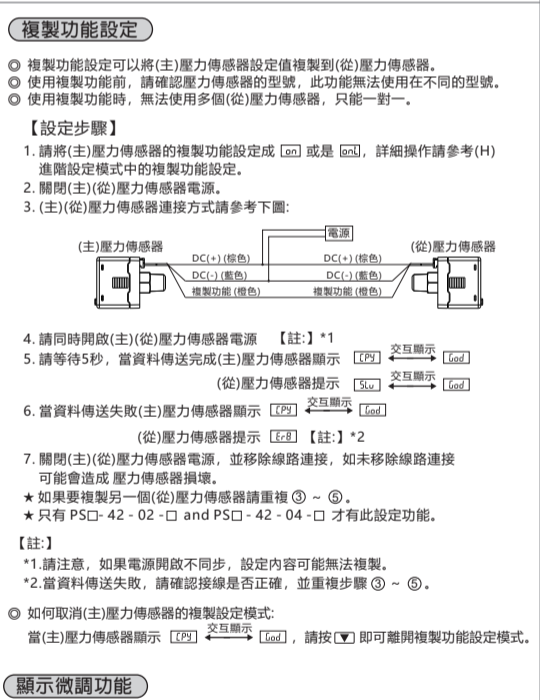
- 禁止使用於腐蝕性及易燃性的氣體或任何液體。
- 請在規格表內的額定壓力範圍內使用，若供給之壓力超過最大耐壓會使本產品損壞，導致功能異常。
- 裝設本產品時，請勿用力撞擊或從高處掉落，即使外觀未受損害也可能因內部零件損壞而導致功能異常。
- 在連接本產品於電路控制系統時，應先關掉電源，因為錯誤的接線或短路會導致本產品損壞。
- 本產品請勿使用在有水氣或油霧的環境中。
- 本系列產品並未防塵設計，請勿使用於空氣中含有爆炸性氣體或粉塵環境中。
- 不可將連接本產品的導線與電源線或其他高壓電線綁在一起，以避免雜訊的干擾，而影響到本產品的功能。

規格仕様

項目	機種	PSN-42 (正壓)	PSV-42 (負壓)	PSC-42 (連成壓)
額定壓力範圍		0.000~1.000MPa	0.0~-101.3kPa	-100.0~100.0kPa
設定壓力範圍		-0.100~1.000MPa	10.0~-101.3kPa	-101.0~101.0kPa
耐壓力		1.5MPa	300kPa	
適用氣體		空氣，非腐蝕性，不可燃性		
壓力單位 設定最小刻度	kPa	—	0.1	—
	MPa	0.001	—	—
	kgf/cm ²	0.01	0.001	—
	bar	0.01	0.001	—
	psi	0.1	0.01	—
反應時間	inHg	—	0.1	—
	mmHg	—	1	—
電源電壓		12 to 24V DC ±10%，漣波峰值 10% 以下		
消費電流		≤ 40mA 以下(無負載時)		
傳感器輸出		2 NPN 開集極輸出 最大負載電流: 125mA 最大供電電壓: 30V DC 內部降壓: 1.5V 以下		
重複精度		±0.2% F.S. ±1 digit 以下		
應差	oPS 模式	可調 *1		
	窗口比較模式	—		
反應時間		≤ 2.5ms (預防誤動作功能: 25ms, 100ms, 250ms, 500ms, 1000ms, 1500ms 可選擇)		
輸出短路保護		有		
顯示		3 ½ 位, 7 段 LCD 顯示 (紅色 / 綠色 / 橙色) (取樣率: 5 次 / 秒)		
顯示精度		±2% F.S. ±1 digit (在溫度: 25 ±3°C)		
動作指示燈		橙色指示燈 1: OUT1 & 橙色指示燈 2: OUT2		
線性類比輸出 (電壓輸出) *2		輸出電壓: 1 ~ 5V ±2.5% F.S. (額定壓力範圍下) 直線性: ±1% F.S. 輸出阻抗約 1kΩ		
線性類比輸出 (電流輸出) *3		輸出電流: 4 ~ 20mA ±2.5% F.S. (額定壓力範圍下) 直線性: ±1% F.S. 負載阻抗最大: 300Ω 在電壓為 12V, 600Ω 在電壓為 24V 負載阻抗最小: 50Ω		
防護等級		IP 40		
適用溫度		動作: 0 ~ 50°C, 保存: -10 ~ 60°C (無水露及不結冰狀況下)		
適用濕度		動作及保存: 35 ~ 85% RH (無水露)		
耐電壓		1000V AC 1分鐘 (引線及塑膠外殼間)		
絕緣阻抗		50MΩ 以上 (500V DC) (引線及塑膠外殼間)		
耐振動		複振幅 1.5mm, 每 1 分鐘 10Hz~55Hz~10Hz, X, Y, Z 每個方向各 2 小時		
耐衝擊		100m/s ² (10G) X, Y, Z 每個方向各 3 次		
溫度特性		±2.5% F.S. 比較參考溫度 25°C (0 ~ 50°C 溫度範圍內)		
接管口徑		R1/8", M5; NPT1/8", #10-32UNF; G1/8" (BSPP), M5		
電線規格		Ø4 耐油 PVC - 26AWG (0.15mm ²) - 5 芯		
重量		約 80g (包含 2 公尺的電線)		



【註】 *1 當 OUT2 操作模式為 OFF 時，就不會有此設定項。
*2 正壓單位為 MPa，負壓及連成壓為 kPa。
*3 此單位僅適用於負壓及連成壓。



錯誤訊息說明

錯誤名稱	錯誤說明	錯誤說明	解決
過流錯誤 Err1	輸出 1 負載電流超過 125mA	關閉電源，檢查負載電流過大的原因或將負載電流降至 125mA 以下	關閉電源，檢查負載電流過大的原因或將負載電流降至 125mA 以下
殘留壓力錯誤 Err2	零值設定範圍超過 ±3% F.S.	改變零值壓力之後，再重新作歸零	改變零值壓力之後，再重新作歸零
使用壓力錯誤 Err3	使用的壓力超過壓力設定值的上限	供給壓力請調整在使用壓力範圍內	供給壓力請調整在使用壓力範圍內
系統錯誤 Err4, Err5, Err6	Err4	內部系統錯誤	切斷電源並重新供電若沒回復正常狀態則需送回原廠分析
	Err5	內部系統錯誤	切斷電源並重新供電若沒回復正常狀態則需送回原廠分析
	Err6	內部資料錯誤	切斷電源並重新供電若沒回復正常狀態則需送回原廠分析
複製資料錯誤 Err7	請檢查型號及接線是否正確，並重新供電若沒回復正常狀態，則需送回原廠分析		

壓力單位轉換表

單位	TG	Pg	kPa	MPa	kgf/cm ²	mmHg	psi	bar	inHg
1 Pa	1	0.001	0.00001	0.0000001	0.000010197	0.000145038	0.0000145038	0.00001	0.0002953
1 kPa	1000	1	0.001	0.000001	0.010197	7.500616	0.145038	0.010000	0.2953
1 MPa	1000000	1000	1	0.001	10.197	7500.616	145.038	10	295.2998
1 kgf/cm ²	98066.5	98.0665	0.0980665	9.80665e-5	1	735.559	14.2233	0.0980665	29.9370
1 mmHg	133.322	0.133322	0.00133322	0.00000133322	0.00133322	1	0.0133322	0.00133322	0.0393701
1 psi	6894.76	6.89476	0.00689476	0.00000689476	0.070307	51.7152	1	0.0689476	2.03602
1 bar	100000.0	100.000	0.100000	0.000100000	1.01972	750.062	14.5038	1	29.52998
1 inHg	3386.388	3.386388	0.03386388	0.00003386388	0.0344530	25.40000	0.491141	0.03386388	1

