

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 operating pressure range. Do not apply pressure beyond recommended maximum pressure, permanent damage to the pressure sensor may occur.
- ③ Do not drop, hit or allow excessive shock. Even if switch body appears undamaged, internal components may be broken and can cause malfunction.
- ④ Turn power off before connecting wiring. Wrong wiring or short circuit will damage and/or cause malfunction.
- ⑤ Do not use in environment containing steam or oil vapor.
- ⑥ This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.
- ⑦ Wiring for pressure switch should avoid power source line and high voltage line. If use in the same circuit, noise may cause malfunction.

A. SPECIFICATIONS

TYPE	PSV-15	(Vacuum)
Set pressure range	-101 ~ 0 kPa	
Withstand pressure	300 kPa	
Fluid	Filtered air, Non-corrosive/Non-flammable gas	
Power supply voltage	12 to 24V DC ±10%, Ripple (P-P) 10% or less	
Response time	5ms or less	
Repeatability	±1% F.S.	
Current consumption	1NPN or 1PNP output : 21mA max., 2 NPN output : 35mA max.	
Enclosure	IP 40	
Ambient temp. range	Operation : 0 ~ 50°C, Storage : -20 ~ 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, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z	
Shock	980m/s ² (100G), 3 times each in direction of X, Y and Z	
Temperature characteristic	±3% F.S. of detected pressure (25°C) at temp. Range of 0~50 °C	
Lead wire	Ø4 Oil-resistance cable (PVC) - 24 AWG (0.22mm ²) - 3 cores	
Weight	Approx. 50g (with 1 meter lead wire)	

B. CIRCUIT WIRING DIAGRAM

MODEL	PSV-15-01	PSV-15-02	PSV-15-03
CONNECT DIAGRAM			
CHARACTERISTICS			
Output method	NPN open collector 30V 80mA	PNP open collector 80mA	NPN open collector 30V 80mA
Hysteresis	1~10% of setting pressure	(Adjustable)	3% F.S. or less (Fixed)
Setting points	1 Point		2 Points
Operation indicating Lamp		Red LED turn on	Out 1=Red; Out 2=Green

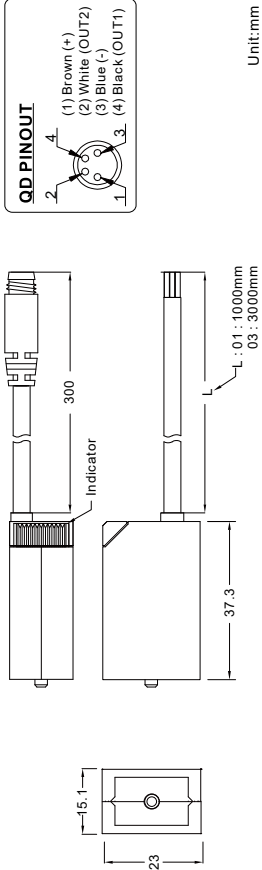
C. ORDERING INFORMATION

P S **V** - 1 5 - **0 1** - **C**

Pressure Range
V : Vacuum (-101 ~ 0 kPa)

Output Specifications
01 : NPN output
02 : PNP output
03 : 2 NPN output

Cable Length/Connector
1 : With 1 meter cable
C : With M8.4Pin male connector



E. HOW TO SET PRESSURE

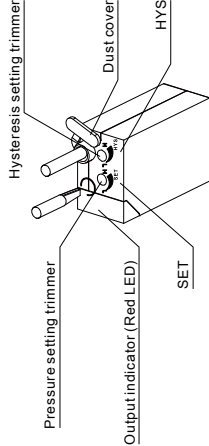
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- Remove dust cover to make any adjustments. Replace dust cover when finished to prevent foreign object from entering.
- Pressure setting trimmer (SET) is for setting the output (ON) pressure. Rotate SET trimmer counter-clockwise to increase (Pressure or vacuum) the ON point. Rotate clockwise will decrease the setting pressure.
- Hysteresis setting trimmer (HYS) is for changing the hysteresis. Rotate trimmer counter-clockwise to increase the range 1~10%.
- Use appropriate size screwdriver for the setting trimmers. Gently turn the screwdriver to make adjustments. Do not force the trimmer when it comes to a stop to prevent damage to the setting trimmer.

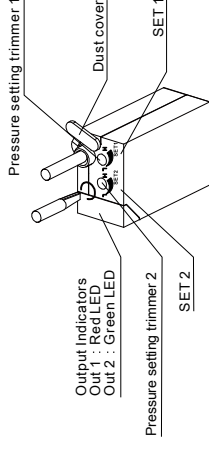
PSV-15-03

- Remove dust cover to make any adjustments. Replace dust cover when finished to prevent foreign object from entering.
- Pressure setting trimmer (SET 1, SET 2) is for setting the output (ON) pressure. Rotate SET trimmer counter-clockwise to increase (Pressure or vacuum) the ON point. Rotate clockwise will decrease the setting pressure.
- Hysteresis for models with two outputs is 3% fixed.

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使用本產品應注意事項：

- ① 禁止使用於腐蝕性及易燃性的氣體或任何液體。
- ② 請在規格表內的比率壓力範圍內使用，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。
- ③ 接設本產品時，請勿用力連擊或從高處掉落，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。
- ④ 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。
- ⑤ 本產品請勿使用在有水氣或油霧的環境中。
- ⑥ 本系列產品並未有防爆認證，請勿使用於空氣中含有爆炸性氣體或粉塵環境中。
- ⑦ 不可將連接本產品的導線與電源線或其它高壓電線纏綁在一起，以避免雜訊的干擾，而影響到本產品的功能。

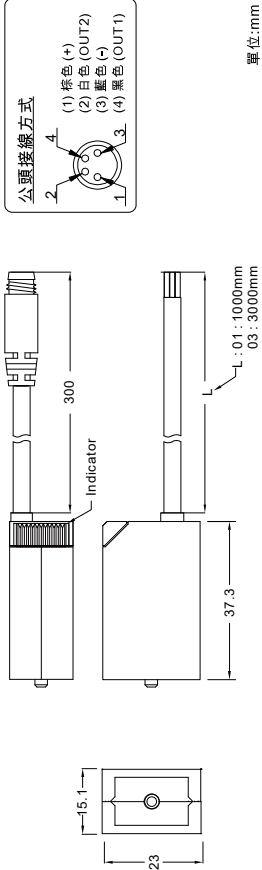
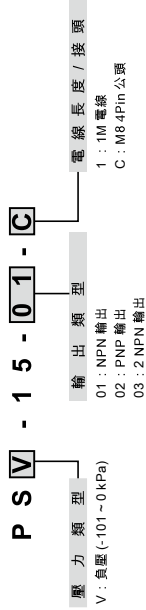
A. 規格表

型 號		PSV-15 (負壓)
設定壓力範圍		-101 ~ 0 kPa
耐壓力		300 kPa
通用氣體		空氣，非腐蝕性，不可燃性
電源電壓		12 to 24V DC $\pm$ 10%，漣波峰值 10% 以下
反應時間		5ms 以下
重複精度		$\pm$ 1% F.S.
消費電流		1NPN 或 1PNP 輸出：21mA max., 2NPN 輸出：35mA max.
耐環境	防護等級	IP 40
	周圍溫度	動作：-0 ~ 50°C，保存：-20 ~ 60°C（無水露及不結冰狀況下）
	周圍濕度	動作及保存：35 ~ 85% RH（無水露）
	耐電壓	1000V AC 1分鐘（引線及外觀間）
	絕緣阻抗	50M Ω 以上（500V DC）（引線及外觀間）
	耐振動	橫振幅 1.5mm 或 10G，每 1 分鐘 10Hz-55Hz-10Hz，X、Y、Z 每個方向各 2 小時
溫度特性	耐衝擊	980m/s ² (100G)，X、Y、Z 每個方向各 3 次
	溫度特性	$\pm$ 3% F.S. 比較參考溫度 25°C (0-50 °C 溫度範圍內)
	電線規格	Ø4 耐油 PVC-24 AWG (0.22 mm ²) - 3 芯
重量		約 50g (包含 1 公尺的電線)

B. 輸出規格表

型 號		PSV-15-01	PSV-15-02	PSV-15-03
接線圖				
特性				
輸出方式		NPN 開集極輸出 30V 80mA	PNP 開集極輸出 80mA	NPN 開集極輸出 30V 80mA
應差		使用壓力範圍的 1~10% (可調)		3% F.S. 以下 (固定)
設定出力		1 個		2 個
動作顯示燈		紅色 LED (ON 時亮燈)		OUT 1: 紅色 LED, OUT 2: 綠色 LED (ON 時亮燈)

C. 型號規格說明



E. 壓力的設定

PSV-15-01,02

- 壓力設定前請先將防塵蓋拔起，壓力設定後再將防塵蓋塞入設定旋鈕，以防止異物進入。
- 壓力設定旋鈕 (SET) 是設定壓力傳感器動作 (ON) 時之壓力，當逆時鐘旋轉時，壓力或真空壓設定值會增加，反之，順時鐘旋轉時，壓力或真空壓設定值減少。

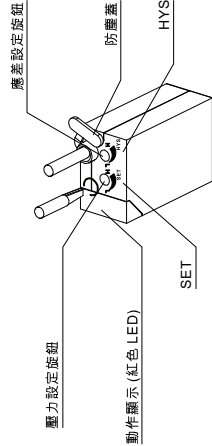
- 應差設定旋鈕 (HYS) 是設定壓力的應差值，欲加大應差值時請逆時鐘旋轉，設定範圍為使用壓力範圍的 1~10%。

- 調整設定旋鈕時，請用適合設定旋鈕溝槽之小螺絲起子，輕輕轉動旋鈕以做調整。轉到旋鈕無法轉動時，請不要再轉動，以免破壞壓力設定旋鈕導致功能失常。

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- 壓力設定前請先將防塵蓋拔起，壓力設定後再將防塵蓋塞入設定旋鈕，以防止異物進入。
- 壓力微調旋鈕 (SET1, SET2) 是設定壓力傳感器動作 (ON) 時之壓力，當逆時鐘旋轉時，壓力或真空壓設定值會增加，反之，順時鐘旋轉時，壓力或真空壓設定值減少。
- (OUT1, OUT2) 兩線出力的應差值是固定的，應差值是使用壓力範圍的 3% 以下。

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PSV-15-03

