

## 高純度氣體用壓力傳送器

Ultra High Purity Pressure Transmitter

HPT03系列（可調整歸零）



HPT03專為半導體、電子、醫療、生物技術及製藥業使用的高純度氣體系統而設計。

### ■ 產品規格

檢測方法	MEMS 壓電效應感測器
精度	±0.25% F.S.
溫度範圍	-20°C ~ +80°C
壓力範圍	-15 ~ 30psig ~ -15 ~ 3,000psig
外殼保護等級	IP65
對應接頭	1/4"、3/8"、1/2" NPT、PT、PF 牙 1/4" METAL FACE SEAL FITTINGS（公、母）
接觸氣體部材質	感測器：SUS630 / Hastelloy C22 接頭：SUS316L EP
電源電壓	12 ~ 24 VDC
輸出	4 ~ 20mA
負載電阻	500Ω（24V）
反應速度（10 ~ 90%）	20ms以下

1. 產品系列

HPT03

7. 壓力範圍(psi)

011 -15 ~ 30  
 012 -15 ~ 60  
 013 -15 ~ 100  
 014 -15 ~ 160  
 015 -15 ~ 200  
 016 -15 ~ 250  
 017 -15 ~ 300  
 018 -15 ~ 350  
 019 -15 ~ 500  
 020 -15 ~ 1000  
 021 -15 ~ 2000  
 022 -15 ~ 3000  
 XXX 其他

2. 感測器材質

R SUS630  
 H Hastelloy C22

3. 接頭

※ MFS = METAL FACE SEAL FITTINGS

A 直立式MFS母頭(S Type ¼" Female MFS)  
 B 直立式MFS公頭(S Type ¼" Male MFS)  
 C T型MFS母頭(T Type ¼" Female MFS)  
 D T型MFS公頭(T Type ¼" Male MFS)  
 X 其他(Other Type)

8. 輸出訊號

C 4 - 20mA 輸出  
 X 其他

9. 選配

0 無(標準)  
 1 配件  
 2 M12接頭

4. 接頭尺寸

1 ¼" (接頭 A, B, C, D 款)  
 5 其他

5. 精度

G ± 0.25 % F.S.

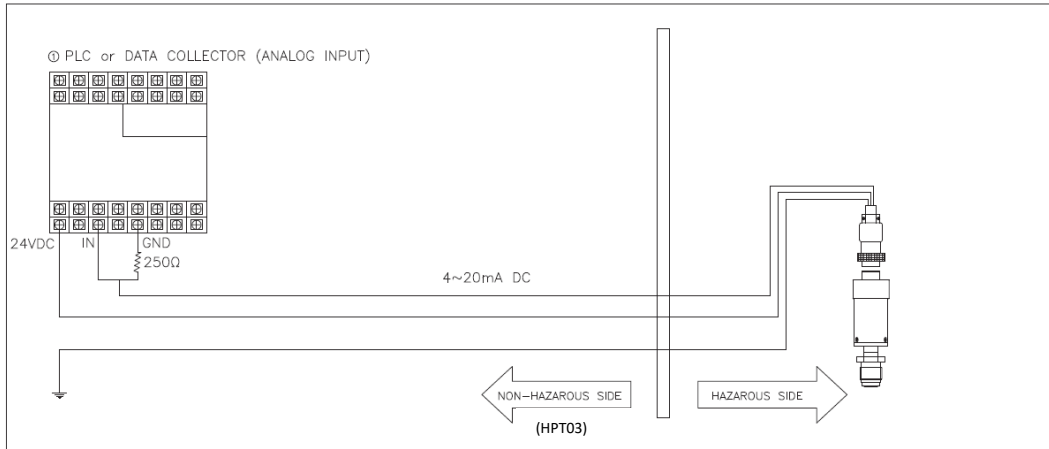
6. 單位

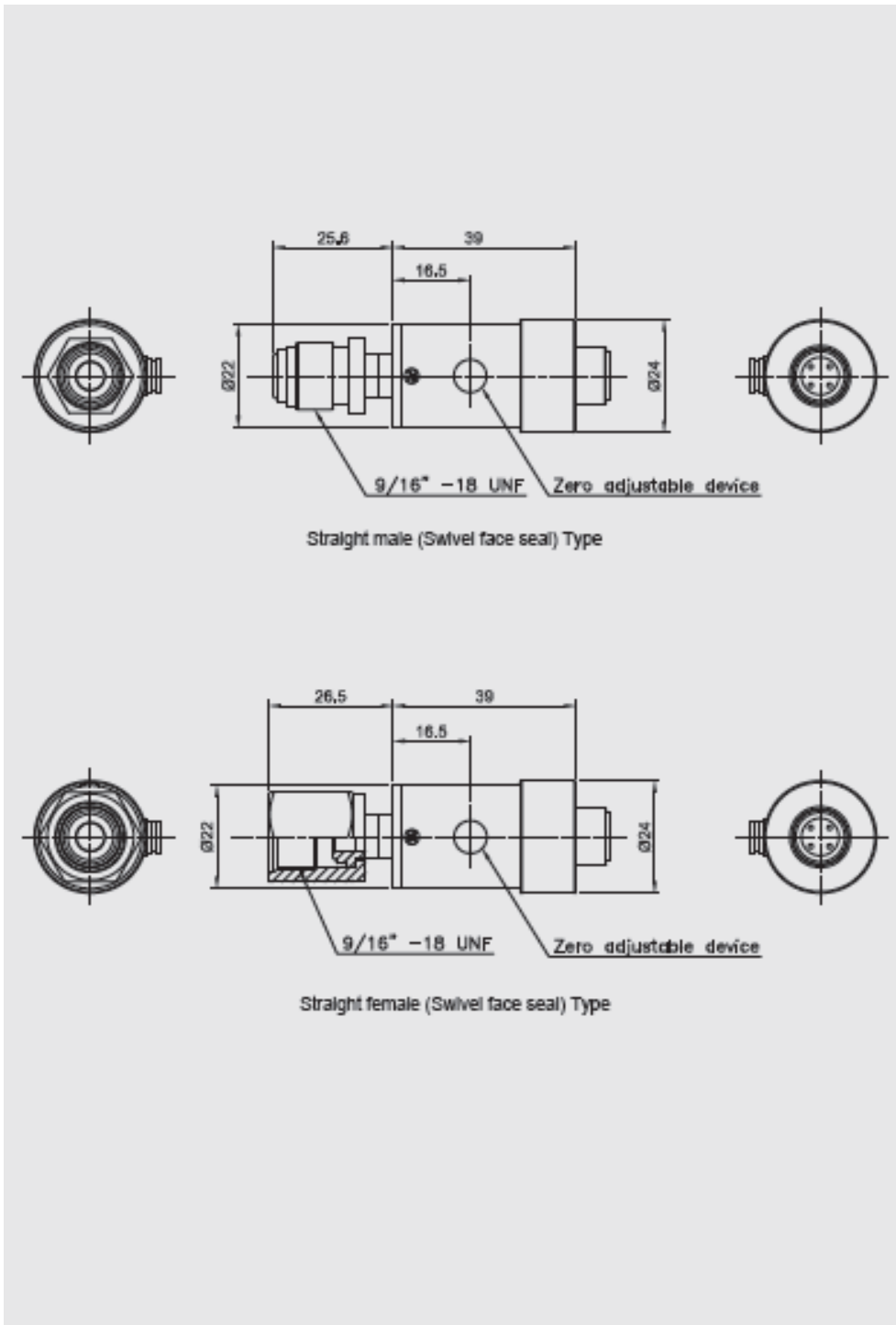
A MPa  
 B bar  
 K Kgf/cm<sup>2</sup>  
 P psi(標準)  
 Z 其他

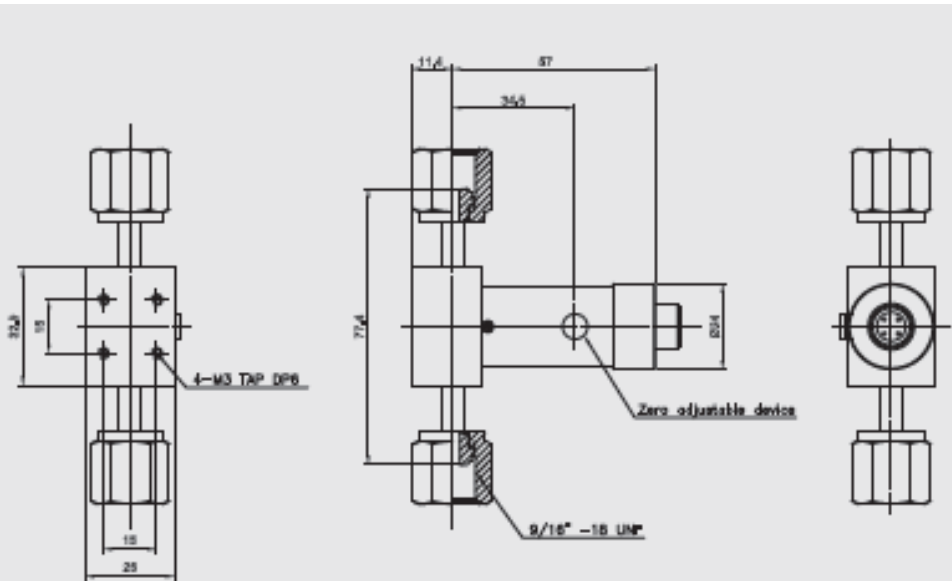
範例

1	2	3	4	5	6	7	8	9
HPT03	R	A	1	G	P	014	C	0

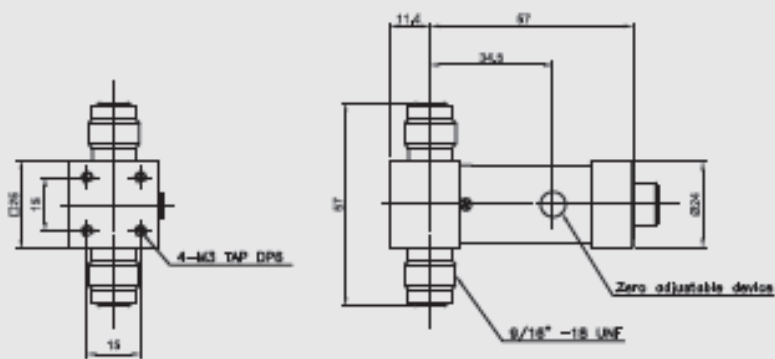
<b>Input</b>	
Technology	MEMS Piezoresistive effect sensor
Pressure ranges	-15~30 psi to -15~3000 psi gauge pressure
Pressure reference	Gauge pressure
Overload	2 x full scale without damage (1.5 x full scale / 3000 psi)
<b>Output</b>	
Output signal	4~20 mA DC 2-wire loop powered technique
Full scale output signal	20 mA $\pm$ 0.25 %
Zero measured output	4 mA $\pm$ 0.25 %
<b>Electrical Specifications</b>	
Excitation voltage	12~40 V DC
Power consumption	0.48 W at DC 24 Volt, 20 mA
Load resistance max@24 V	500 $\Omega$ at 24 V
Influence of excitation	0.01 % FSO / V
Power ripple	$\leq$ 500 mV P-P
Protection	Against reverse polarity and overvoltage
Shock resistance	150 m/s <sup>2</sup> half sign wave/18 times
Vibration	10~500 Hz, 0.14 mm, 39.2 m/s <sup>2</sup>
<b>Performance Specifications</b>	
Accuracy	$\pm$ 0.25 % FSO typical
Non-linearity	$\pm$ 0.2 % FSO typical
Repeatability	$\pm$ 0.1 % FSO typical
Pressure hysteresis	$\pm$ 0.3 % FSO typical
Long term stability	$\leq$ $\pm$ 0.1 % FSO over 1 year
Reference temperature	25 °C
Operating temperature	-20 ~ 80 °C
Compensated temperature	-20 ~ 60 °C
<b>Physical Specifications</b>	
Demension	Refer to " Type of Mounting" in Specification sheet.
Process connection	Swivel male or female face seal fitting
	Flow through
Materials wetted by process	Sensor : Stainless steel 630, Hastelloy C22
	Connection : Stainless steel 316L
Enclosure rating	IP65 , depending on the electrical wiring
Influence of mounting position	Not critical







Flow Through Female (Swivel face seal) type



Flow Through Male (Fixed face seal) Type