

比例式夹管阀 Proportional Pinch Valve

PPV Series



产业应用 Applications

- 实验室分析 Laboratory analysis
- 化学混合/配液 Chemical mixing and dispensing
- 剂量系统 Dosing system
- 临床或化学分析 Clinical and chemical analysis
- 自动贩卖机 Vending machine
- 血液处理/分析 Blood handling and analysis

夹管阀又称管夹阀，作用是透过夹压橡胶管来做开启或关闭流路，也有比例式可阶段调控等选择。夹管阀主体并不会接触到使用中的介质，可确保经过的液体或气体不受到污染，且能保持夹管阀的清洁。因此适合作为生物、食品工业、剂量系统、血液处理/分析、实验室分析、冲洗程序须无菌的生物制等设备。这是针对需要液体或气体控制且不让介质受到污染的产业所开发的产品。

比例式夹管阀系由 PM 驱动控制器搭配 PPC 夹管阀所组成的。当输入信号 0-10V、4-20mA、RS485 三种信号中，选一种输入至 PM 驱动器，进而控制 PPV 夹管阀中的马达来移动轴芯，达到夹管的管径开度由小至大的变化，不管是气体或液体的控制，流量都可以呈线性度且精准，有助于对客人的设备提升。

本产品皆符合 、、、 等认证。

Pinch valve works in a way to open or to close a fluid path in a flexible tube by squeezing or pinching the tube. With a proportional pinch valve, the shaft that pinches the tube is driven by a stepper motor, thus that the extent of pinching can be adjusted, which indirectly controls the fluid flow rate inside the tube.

The advantage of using a pinch valve is that it has no contact with the fluid, making it an ideal option for biotechnology processing, food industry, dosing system, blood process/analytical, CIP and SIP process, and biopharmaceutical equipment. Our PPV series pinch valve is driven by the PM series driver that accept either analogue (0-10V or 4-20mA) or digital RS485 modbus signal.

规格 Specifications

产品系列 Series	PPV-04/06/08	PPV-93X
硬度 Recommended Tubing Durometer	50-80 Shore A	50-80 Shore A
工作压力 Media Pressure Maximum	5.2bar	6bar
位置精度 Position Resolution	0.0127 mm/step	0.0523 mm/step
供耗 Power Consumption	1.95W(hold); 4.5-5.2W(full speed)	2.05 W (hold); 4.3-7.0W (full speed)
供应电源 Supply Voltage	24V	24V
接线 Electrical Connection	2 wire DC power 2 wire analog Input Signal	2 wire DC power 2 wire analog Input Signal
最大夹力 Max Pinch Force	Up to 30 kgF	Up to 50 kgF

比例式夹管阀 Proportional Pinch Valve

PPV Series



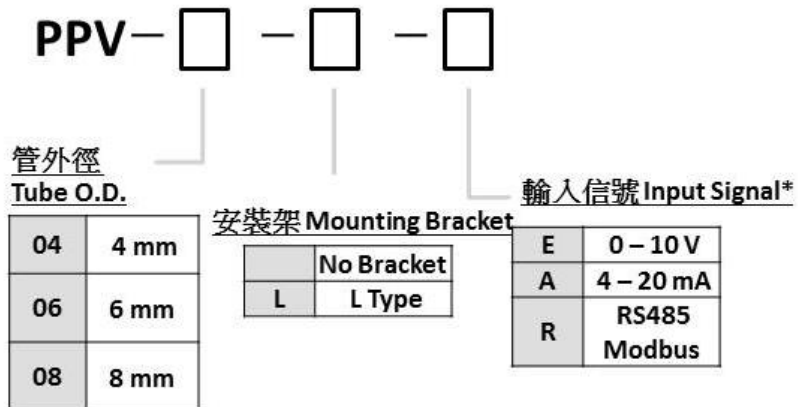
型号选择 Order Number

型号 Model	可搭配管外径 Tube O.D (mm)	反应时间 Response Time (sec) (全开到全关 fully-open to fully-closed)
PPV-930-64-L-PM-□	6.4	0.52
PPV-932-95-L-PM-□	9.5	0.78
PPV-933-127-L-PM-□	12.7	1.04
PPV-933-144-L-PM-□	14.4	1.38
PPV-934-191-L-PM-□	19.1	1.56
PPV-935-254-L-PM-□	25.4	2.08

*□-模拟讯号: A-电流控制(4-20mA), E-电压控制(0-10V)或 R-RS485 Modbus

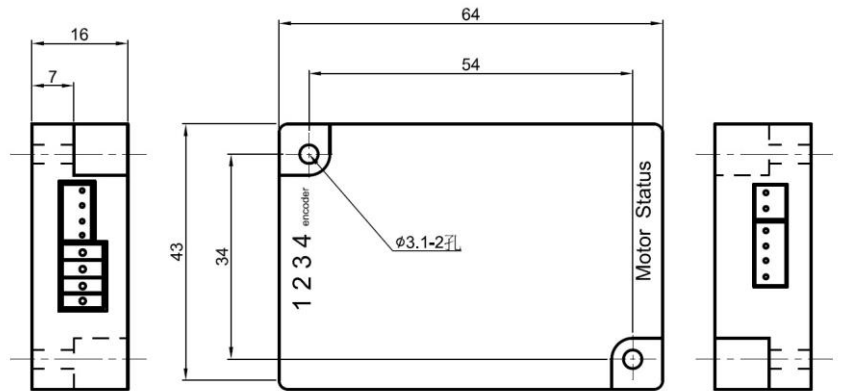
*□-Signal: A- Current control (4-20mA), V- Voltage control (0-10V) or R-RS485 Modbus

型号选择 Order Number



步进比例式控制器 Proportional Valve Controller

PM Series



PM 系列驱动器主要是提供了 PPV 系列夹管阀所需要电源和控制信号(步骤和方向), 并以模拟讯号或数字信号(0-10Vdc/4-20mA/RS485 Modbus)转换为双极步进马达之步骤控制。

Series PM provides series FC with the required power and control signal (step and direction). It controls the step of a bipolar stepper motor with an analogue or digital signal (0-10 VDC/4-20mA / RS485 Modbus).

产品特点 Features

- ◆体积小 Compact
- ◆低成本 Low Cost
- ◆灵敏度高 High Resolution
- ◆模拟/数字讯号 Analog / Digital Signal
- ◆简易控制 Easy-Control
- ◆线性全流量控制

Full scale Linearity Flow Control

接线方式 Wiring



编号 No.	功能 Function
1	DC24V +
2	DC24V -
3	Signal +/A \ RS485 +
4	Signal -/B \ RS485-

编码器接线 Encoder Wiring Description

编号 No.	颜色 Color	功能 Function
4	黄色 Yellow	B channel
3	橙色 Orange	+5V DC
2	蓝色 Blue	A channel
1	棕色 Brown	Ground

规格 Specifications

输入讯号 Input signal	VDC 0-10V / 4-20mA/ RS485
工作电源 Supply	DC24V ($\leq 12W$)
指示灯状态 Indicator LED Status (*带编码器功能 with Encoder function)	on/off 灯亮表示马达运转(LED on is motor running) on/off 灯熄表示马达停止(LED off is motor stopping) on/off 闪烁表示马达故障(LED flashing is motor error) * error/null 灯亮表示编码器有误(LED on is encoder error) * error/null 灯熄表示编码器正常(LED off is encoder normal)
编码器分辨率 Encoder Resolution	$1.587 \times 10^{-3} \text{mm}$
马达状态输出 Motor Status output	Sink 50mA
使用温度范围 Temp. Range(Operating)	0-60°C
线材长度 Cable Length	一米, 如需加长另询价 1 meter, consult for longer cable