

# IP6000 Series Intelligent Electro-pneumatic Valve Positioner



IP6000 intelligent electro-pneumatic valve positioner is mounted on pneumatic actuators. It's used to control air intake and exhaust of the pneumatic actuators to drive the valve position to the set point by calculating both data from 4-20mA DC signal and feedback position.

Technical Data	
Material	Aluminum
Set-point signal	4-20mA DC
Stroke	Line Stroke:10-100mm Angle Stroke:30-100°
Ambient temperature	-20-70°C
Gas source requirement	ISO 8573-1 Class 3
Vibration resistance	0.15mm , 10Hz-60Hz , 20 cycle/axis 20m/s <sup>2</sup> , 60Hz-500Hz , 20 cycle/axis Recommended range for control valve ≤ 20 m/s <sup>2</sup> , no resonance peak
Basic error	±0.5%
Hysteresis error	≤0.5%
Supply pressure	0.14-0.7MPa
Flow	55L/min ( Sup=0.14MPa )
Steady state air consumption	≤ 0.4 L/min
Pneumatic connection	G1/4
Protection class	IP66
Weight	2kg
Explosion-proof class	Ex ia IIC T4/T6

# Combinations

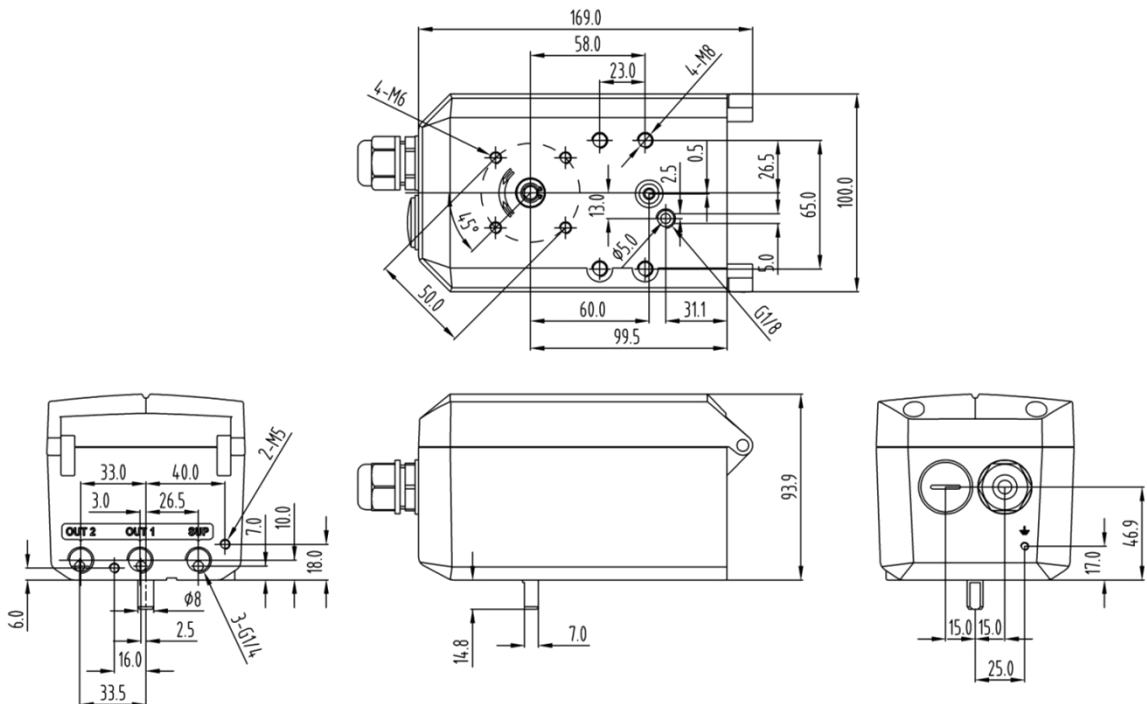


Rotary Control Valve

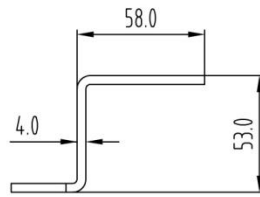
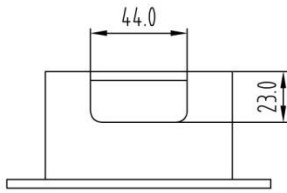
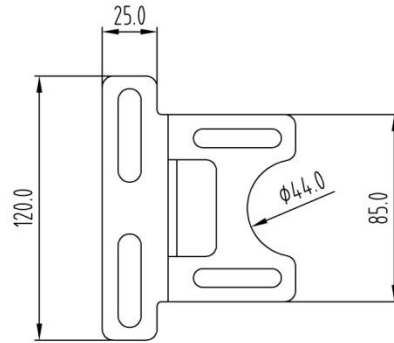


Linear Control Valve

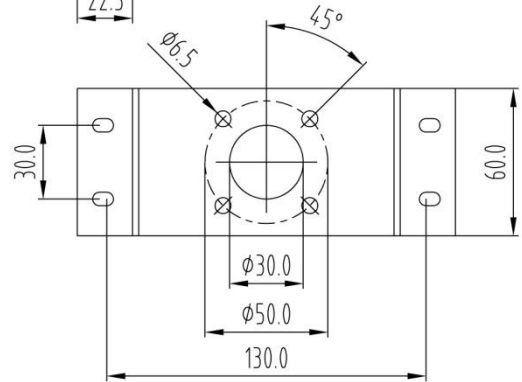
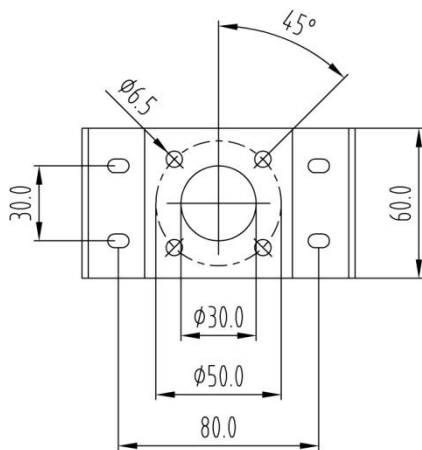
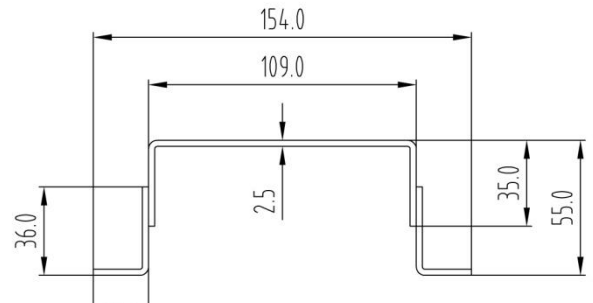
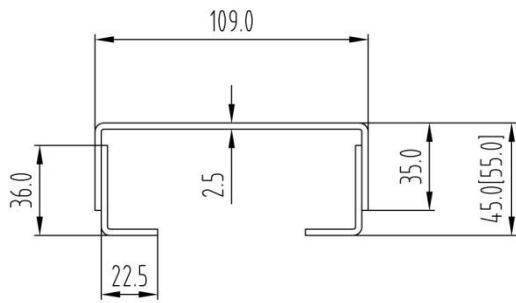
# Dimensions



# Dimensions



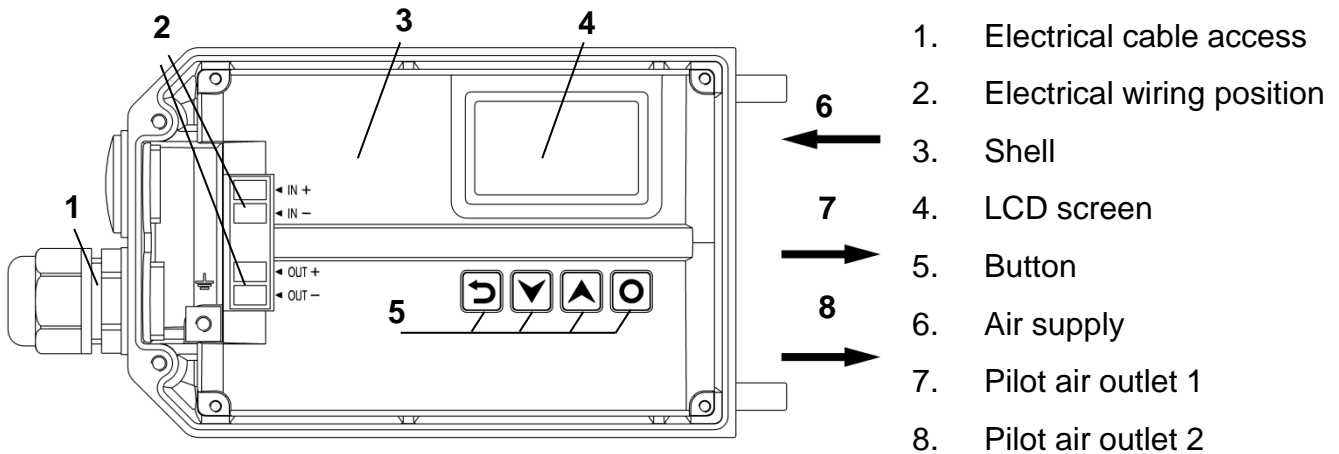
Mount to linear actuators



Mount to rotary actuators(Form 1)

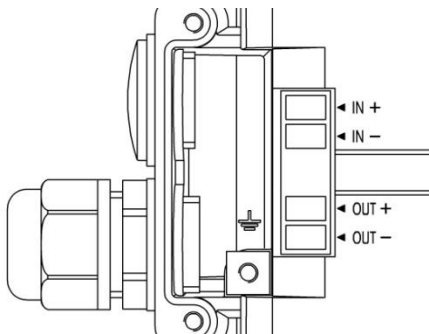
Mount to rotary actuators(Form 2)

## Structure

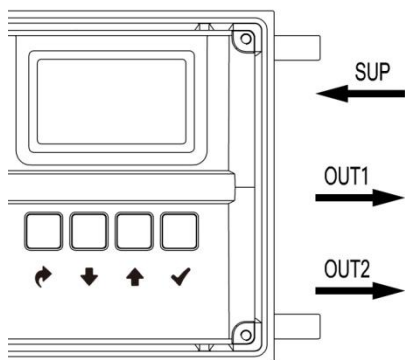


1. Electrical cable access
2. Electrical wiring position
3. Shell
4. LCD screen
5. Button
6. Air supply
7. Pilot air outlet 1
8. Pilot air outlet 2

## Electrical connections and pneumatic connections



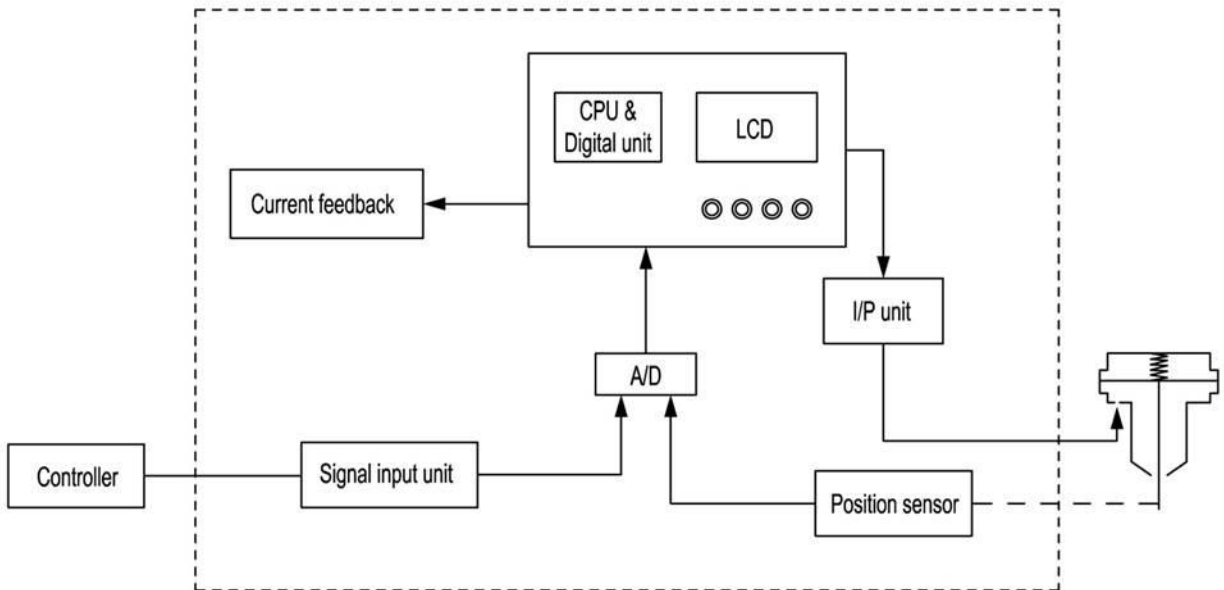
Electric	Description
IN+	4-20 mA set-point signal +
IN-	4-20 mA set-point signal -
OUT+	Feedback signal module 18-30 V DC +
OUT-	Feedback signal module 4-20 mA output



Pneumatic	Description
SUP	Air supply enter
OUT1	Pilot air outlet 1
OUT2	Pilot air outlet 2

## Principle block diagram

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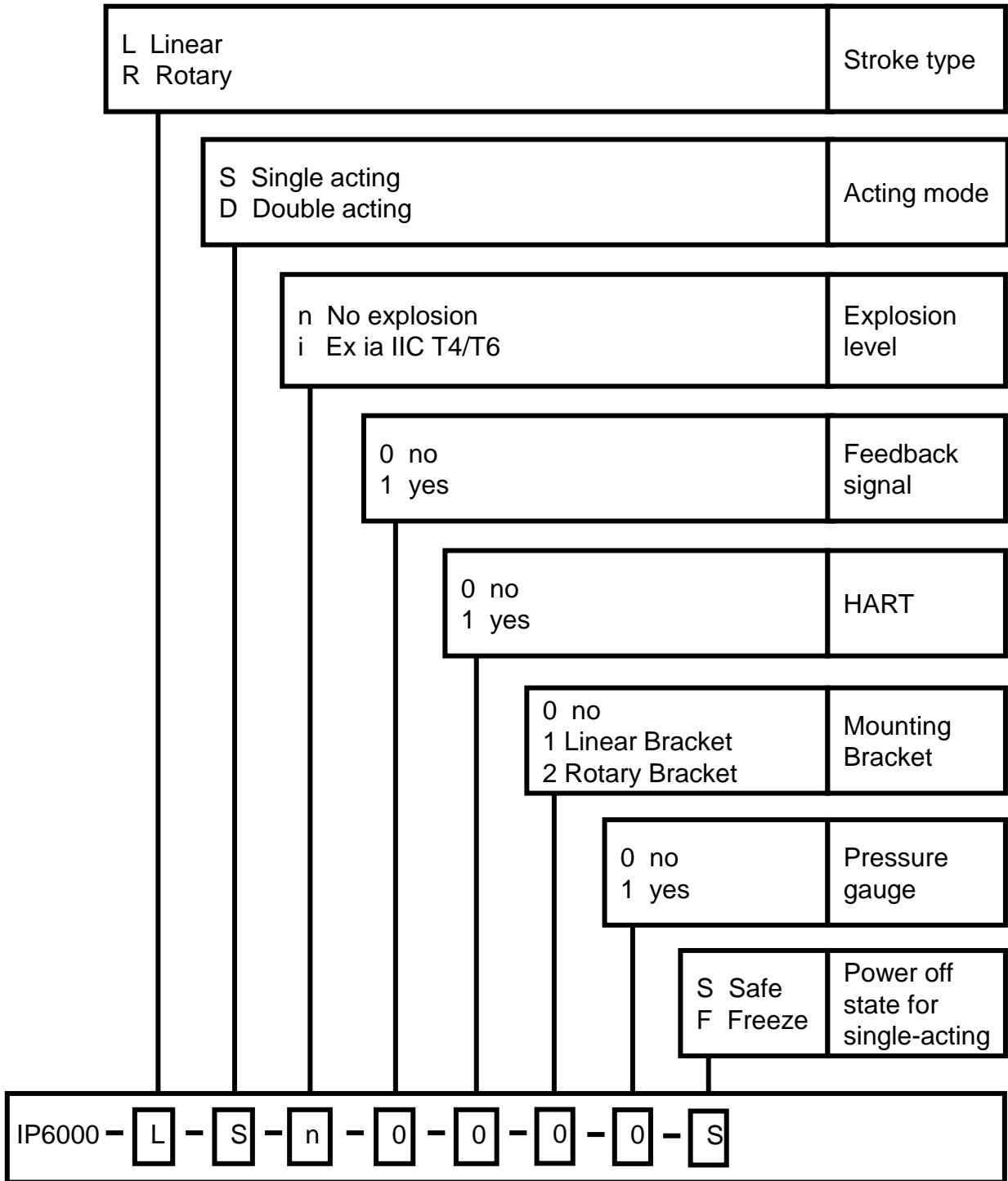


## Additional software functions

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- Calibrating the set-point signal.
- Setting for dead band zone
- Sealing function for position controller.
- Limit of the mechanical stroke range.
- Setting for signal split range.
- Selection of the transfer characteristic between set-point value and stroke.
- Selection of signal direction.
- Selection of stroke direction.
- Factory settings.

# Product model



Remark: **Power off state for single-acting** option is **Safe** by default.

# IP6000系列智能电气阀门定位器



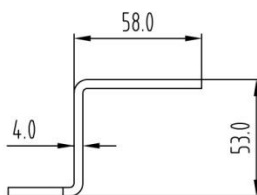
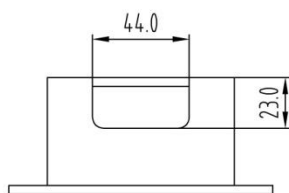
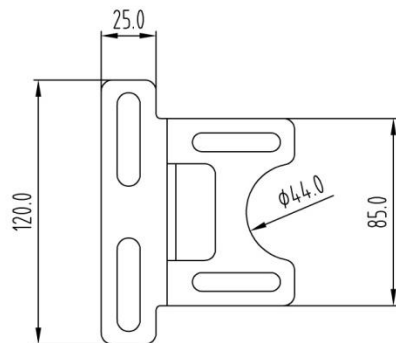
IP6000系列智能电气阀门定位器和气动执行器配套使用。通过接收来自控制系统的4-20mA DC电流信号得到阀位控制设定值，同时采集位置传感器信号得到实际的阀位值，两者通过控制软件的计算处理，从而控制气动执行机构的进气和排气，驱动阀位到达设定点。

技术参数	
外壳材质	铝合金
信号输入	4-20mA DC
阀门行程范围	直行程:10-100mm 角行程:30-100°
环境温度	-20-70°C
气源要求	符合ISO 8573-1 3级
抗振动性	0.15mm, 10Hz-60Hz, 20次循环/轴 20m/s <sup>2</sup> , 60Hz-500Hz, 20次循环/轴 整个控制阀连续运行时的推荐范围 ≤ 20 m/s <sup>2</sup> , 无谐振峰值
基本误差	±0.5%
回差	≤0.5%
气源压力	0.14-0.7MPa
流量	55L/min ( Sup=0.14MPa )
稳态耗气量	≤ 0.4 L/min
气动接口	G1/4
防护等级	IP66
重量	2kg
防爆等级	Ex ia IIC T4/T6

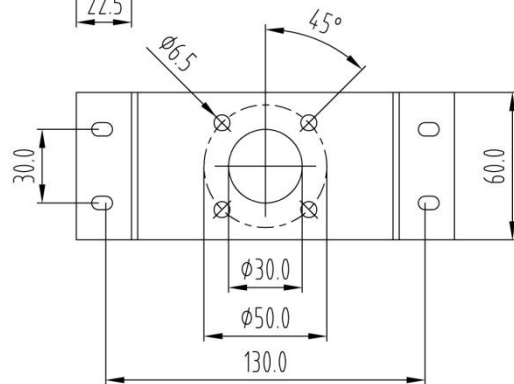
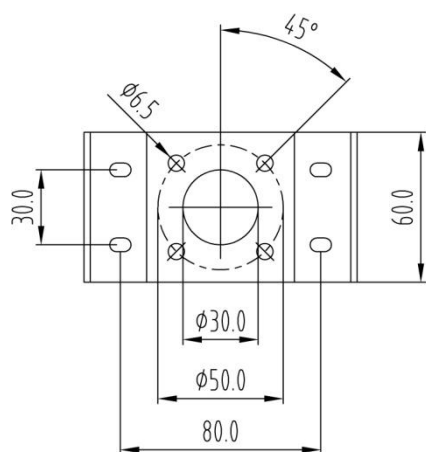
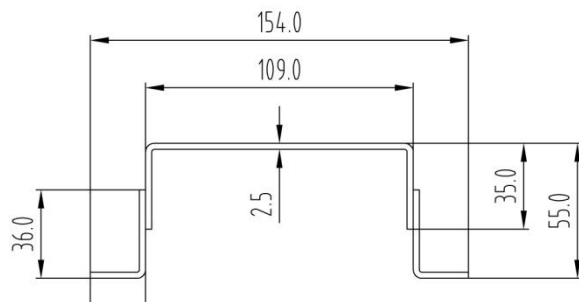
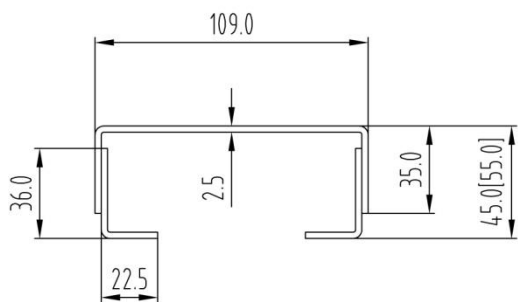




# 机械尺寸



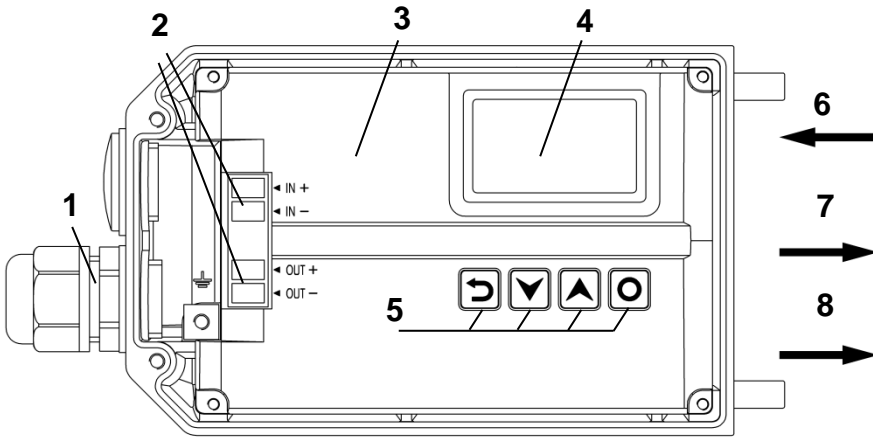
直行程安装支架



角行程安装支架组装形式1

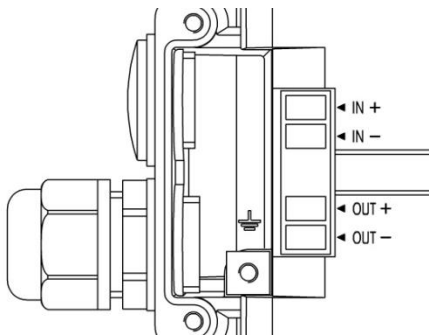
角行程安装支架组装形式2

# 产品结构

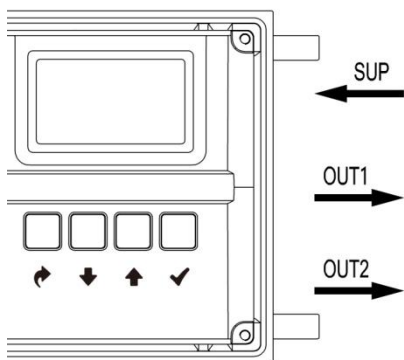


1. 电气线缆接入
2. 电气接线位置
3. 保护盖
4. 液晶显示
5. 按键
6. 气源进入
7. 先导气口1
8. 先导气口2

## 电气接口和气动接口

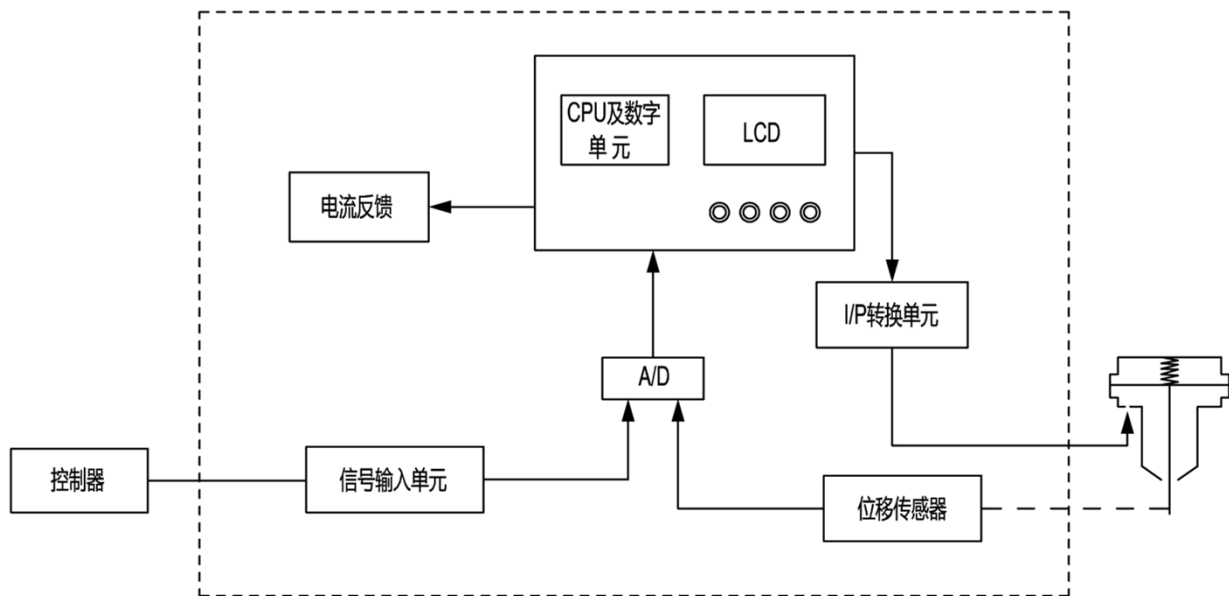


电气接口	描述
IN+	4-20 mA 设定信号 +
IN-	4-20 mA 设定信号 -
OUT+	反馈信号模块18-30 V DC+
OUT-	反馈信号模块4-20 mA输出



气动接口	描述
SUP	气源进入
OUT1	先导气口1
OUT2	先导气口2

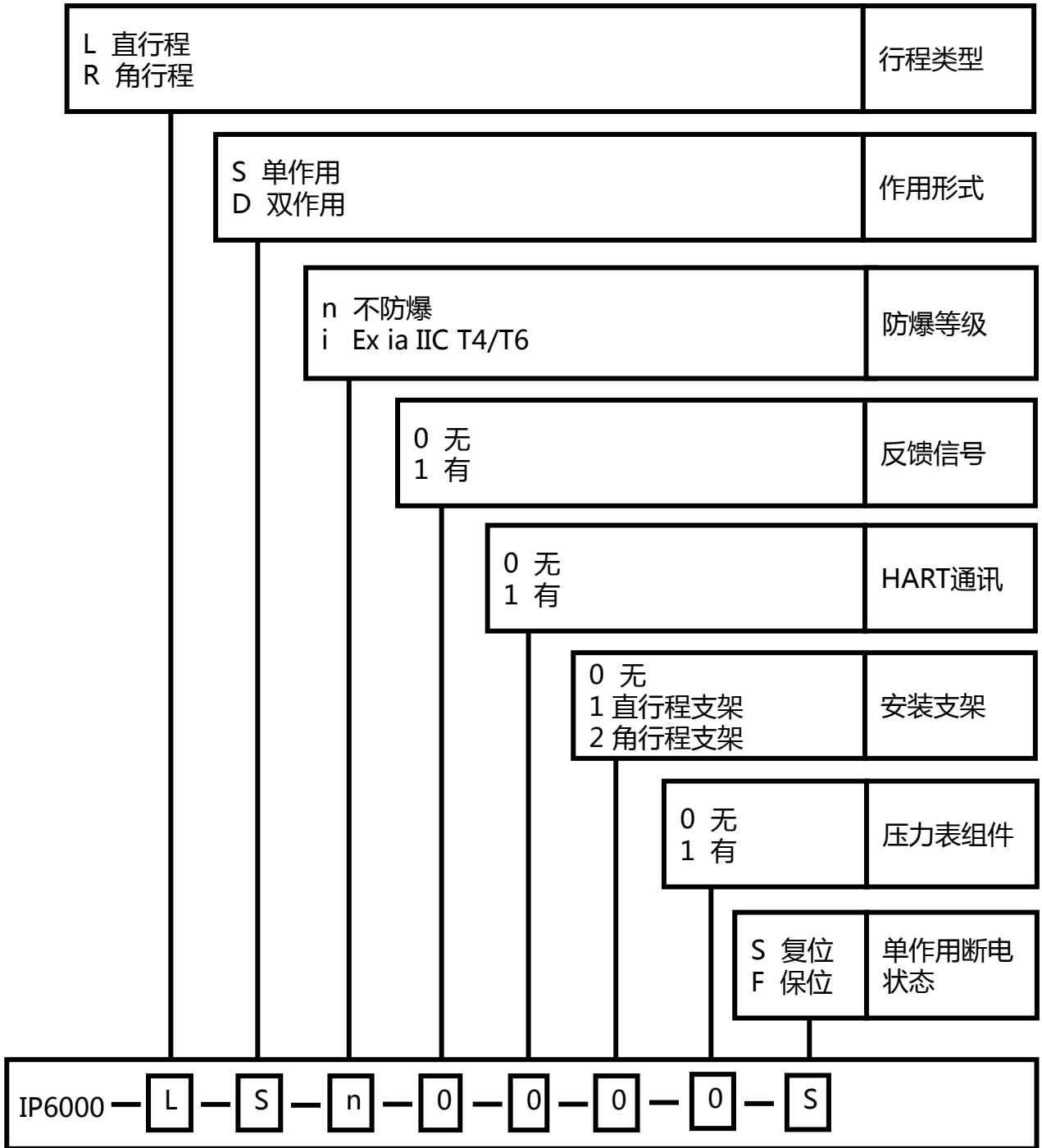
## 原理框图



## 软件附加功能

- 设定信号校正
- 死区设置
- 紧闭功能
- 行程限制
- 分程控制
- 特性曲线选择和设置
- 信号方向设置
- 行程方向设置
- 恢复出厂设置

# 产品选型



备注：单作用断电状态默认为复位。