

# 1880S Series Intelligent Valve Positioner

- **Compact Design**
- **SideShow Technology**
- **Easy to Start-up**



**1880 series intelligent valve positioner is compact designed controller for integral pneumatic control valves.**

**The product is easy to operate and has rich software functions.**

**It can easily be operated via the OLED display and keypad.**

**The positioner adjusts the valve position quickly and accurately through detecting the position sensor signal.**

Technical data	
Material	PC、PA6-GF30、SI
Power supply	24V DC $\pm$ 10%
Set-point signal	0/4-20mA
Input resistance for set-point signal	120 $\Omega$
Control medium Dust concentration Particle density Pressure condensation point Oil concentration	neutral gases, air DIN ISO 8573-1 Solid particle size and density Class 3 Dew point Class 3 Oil content Class 3
Ambient temperature	0-60° C
Pneumatic connection	Plug-in hose connector G1/4(internal $\Phi$ 6mm)
Electrical connection	M12 2-pins B-coded(cable $\varnothing$ 4-6mm) M12 4-pins D-coded(cable $\varnothing$ 4-6mm)
Supply pressure	3~7 bar, specific values depending on the actuator
Air flow rate	17 l/min(Air supply of 0.6Mpa)
Stroke control range	Linear 5-25mm
Installation	As required, Preferably with actuator in upright position, Screw
Protection class	IP67
Power consumption	<5W

## Combinations

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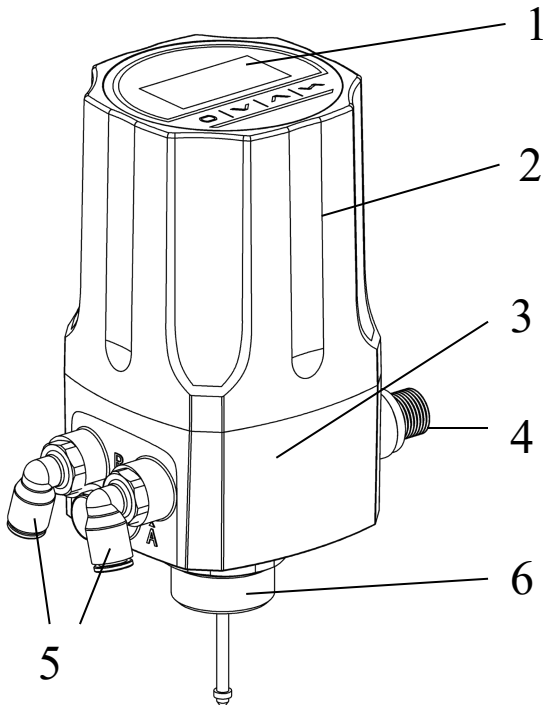
**Diaphragm control valve**



**Angle seat control valve**

## Structure

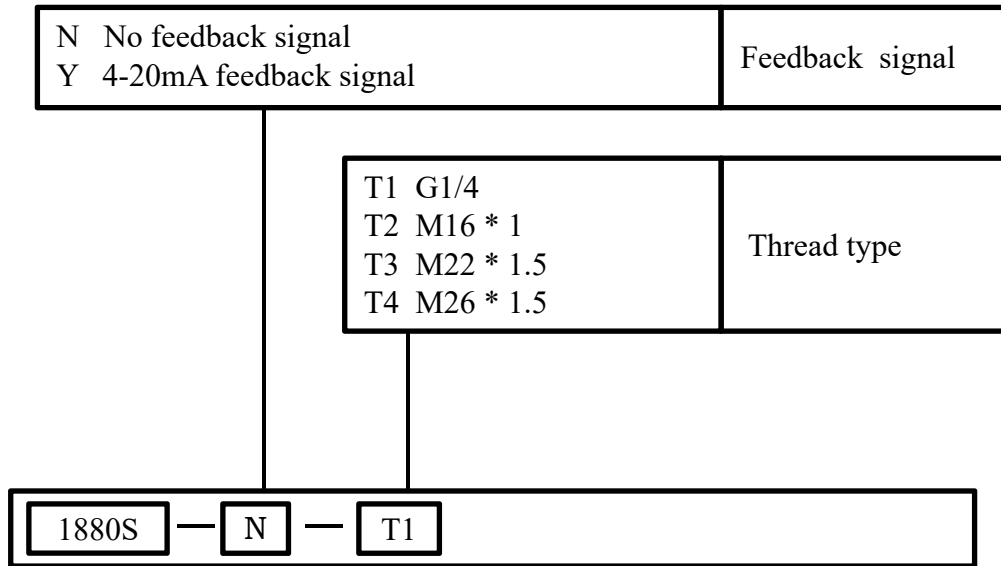
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1. **Display screen and key panel**
2. **Transparent body casing**
3. **Main body casing**
4. **Electrical connection**
5. **Pneumatic connection**
6. **Actuator connection**

## Technical specifications

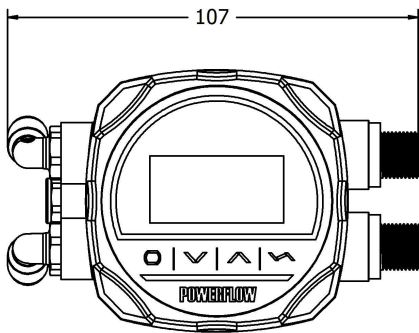
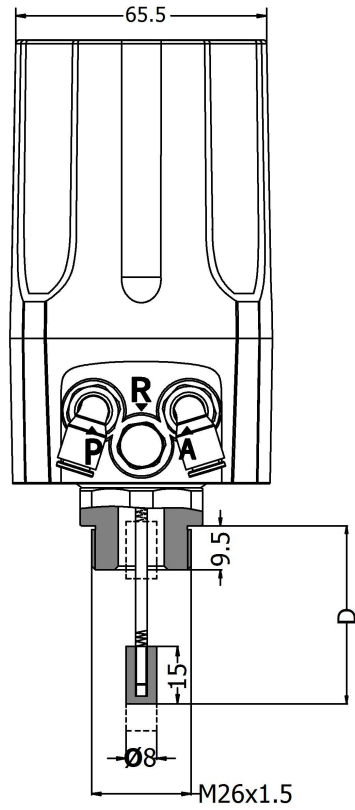
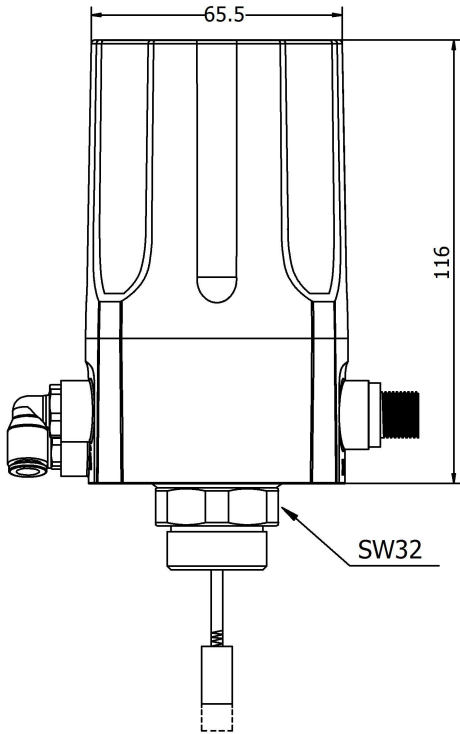
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### Remark:

The product is only used for single-acting line stroke actuator. Fail-safe when power-off.  
It is suggested to match the actuator of 40-100 mm internal gas chamber diameter.

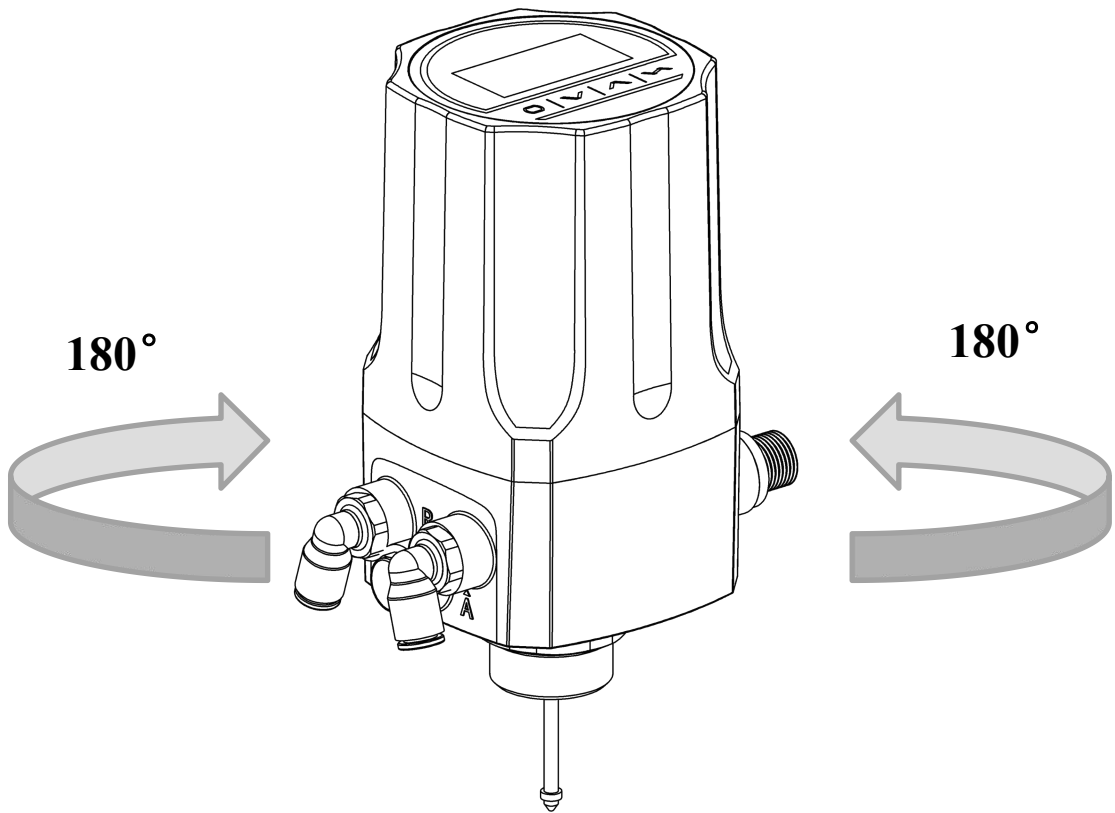
# Dimensions



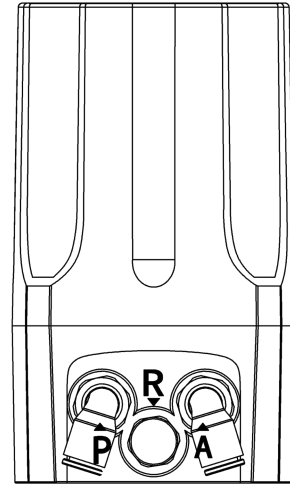
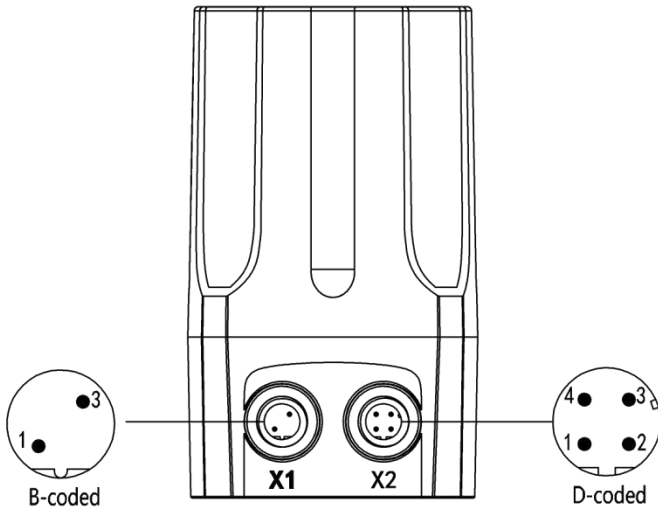
## Interface angle adjustment

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The angle can be adjusted between the positioner and the valve. If need to adjust the interface angle, rotate the main body casing clockwise or counter-clockwise in  $180^\circ$  range.



# Electrical connections and pneumatic connections



## X1

Pin	Description	Signal type
1	Analogue signal output +	0/4 – 20 mA
3	Analogue signal output GND	GND

## X2

Pin	Description	Signal type
1	Power supply +	+24 V
2	Power supply GND	GND
3	Set signal input +	0/4 – 20 mA
4	Set signal input GND	GND

<b>P</b>	Air supply enter(built-in filter, filter size 5 µm)
<b>R</b>	Air exhaust
<b>A</b>	Pilot air outlet

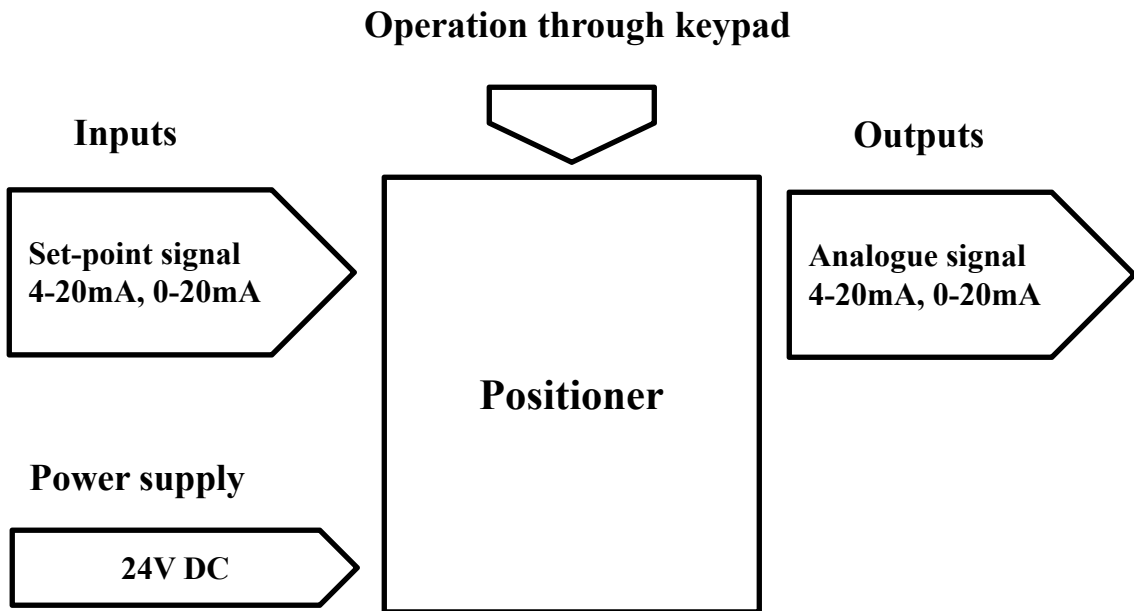
## Additional software functions

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- Selection of the transfer characteristic between set-point value and stroke.
- Sealing function for position controller.
- Effective sense of direction between input signal and set-point value.
- Limit of the mechanical stroke range.
- Setting for control parameters.
- Safety position setting for the position controller.
- Configuration of signal level fault detection.
- Configuration of the outputs.
- Calibrating the control parameters.
- Setting for manual control rate.
- Code protection.

## Schematic diagram

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## Function comparison for all types

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FUNCTION	1600	1601	1500	1880
Explosion-proof	√	√	×	√
Process control	×	√	×	×
4-20mA signal input	√	√	√	√
4-20mA signal output	○	○	○	○
Autotune	√	√	√	√
Valve position manual adjustment	√	√	√	√
Sealing function	√	√	√	√
Dead band setting	√	√	√	√
4-20mA input signal error detection	√	√	√	√
Factory setting	√	√	√	√
Characteristic curve setting	√	√	×	√
Direction of set-point value	√	×	×	√
Valve stroke range limiting	√	√	×	√
Safety position setting	√	√	×	√
Binary signal input/output	√	√	×	×
Input signal calibration	√	√	×	√
Speed setting of manual adjustment	√	√	×	√
Code protection	√	√	×	√

√	YES
×	NO
○	optional



# 1880S系列智能电气阀门定位器



- 外形小巧紧凑
- 侧面显示
- 快速简易启动

1880系列智能电气阀门定位器是专为一体式气动调节阀所设计的，特别适用于角座阀和隔膜阀产品。

该产品操作简便，软件功能丰富，可轻松通过显示屏和按键面板进行操作。

定位器可通过检测位移传感器信号，对阀位进行快速精确调节。

## 技术参数

材料	聚碳酸脂 (PC) 硅橡胶(SI) 聚酰胺(PA6-GF30)
电源	直流 24V ±10%
信号输入	0/4 - 20mA
设定信号输入阻抗	120Ω
压缩空气要求 颗粒度要求 颗粒密度要求 凝点要求 油脂浓度要求	中性气体, 符合 DIN ISO 8573-1 要求 固体颗粒大小和密度 3 级 露点 3 级 含油量 3 级
环境温度	0-60° C
气动接头	1/4英寸插入式软管接头(内径Φ 6mm)
电气快速接头	M12 二针 B标准(电缆直径ø 4-6mm) M12 四针 D标准(电缆直径ø 4-6mm)
气源压力	3-7 bar, 具体值视执行机构而定
气体输出流量	17 l/min(输入压力为0.6Mpa)
阀门行程控制范围	直行程 5-25 mm
安装方式	倾向于安装在执行器顶端, 通过螺纹和执行器连接
防护等级	IP67
功耗	<5W

## 组合方式

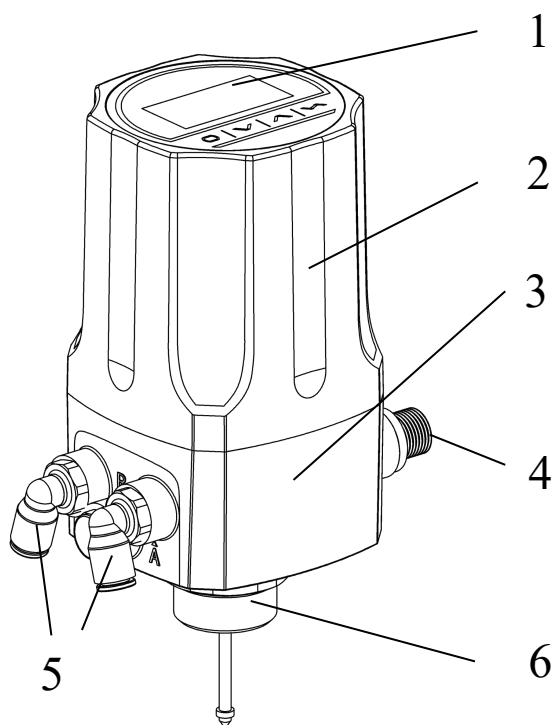


隔膜式调节阀



角座式调节阀

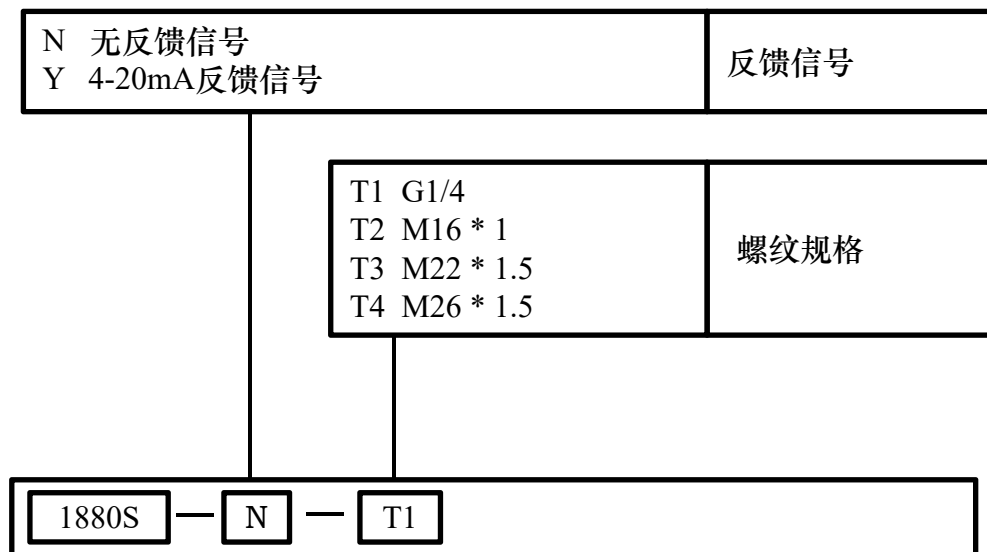
## 产品结构



1. 显示屏和按键面板
2. 透明外壳
3. 主壳体
4. 电气接口
5. 气动接口
6. 执行器连接件

## 技术规格

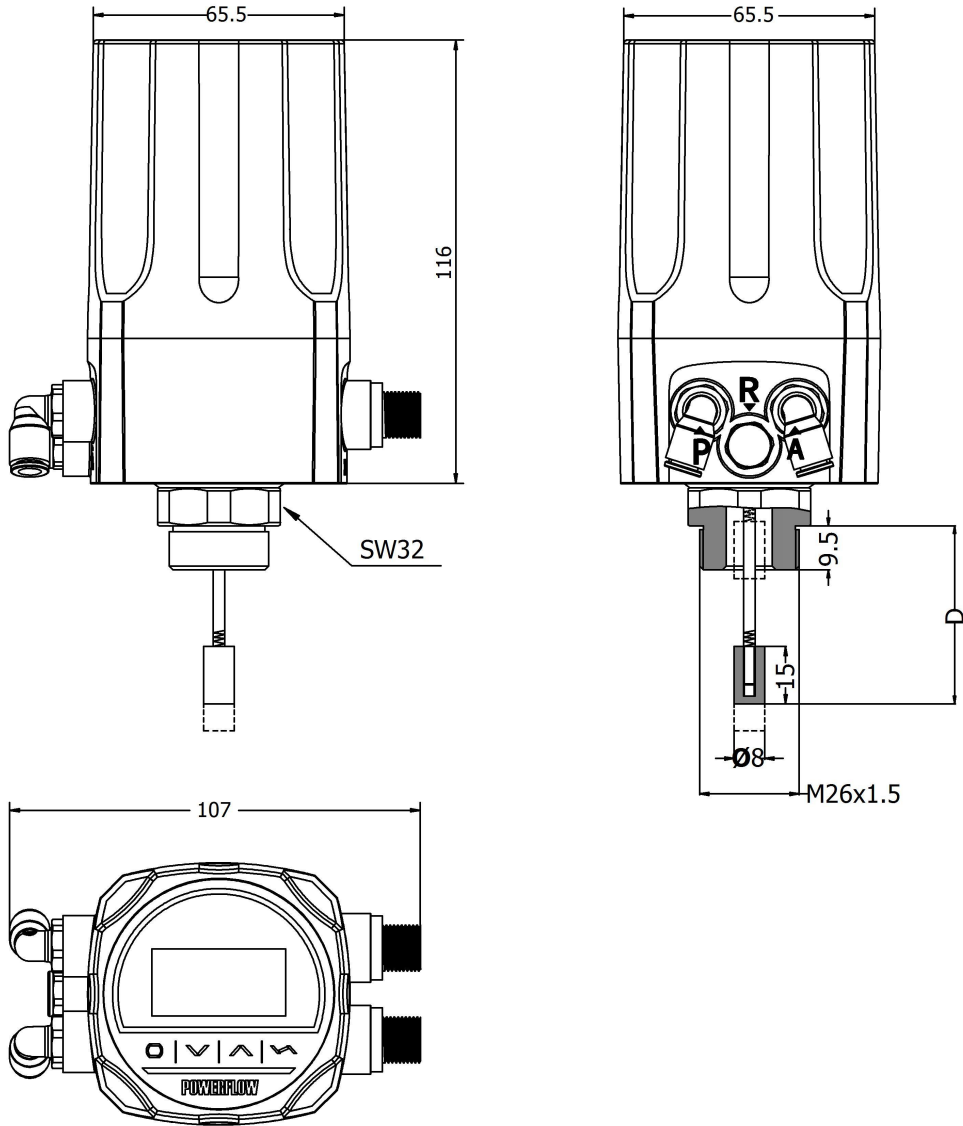
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备注:

该产品只适用于单作用直行程执行器。断电状态为复位。建议匹配气室内径40-100 mm的执行器。

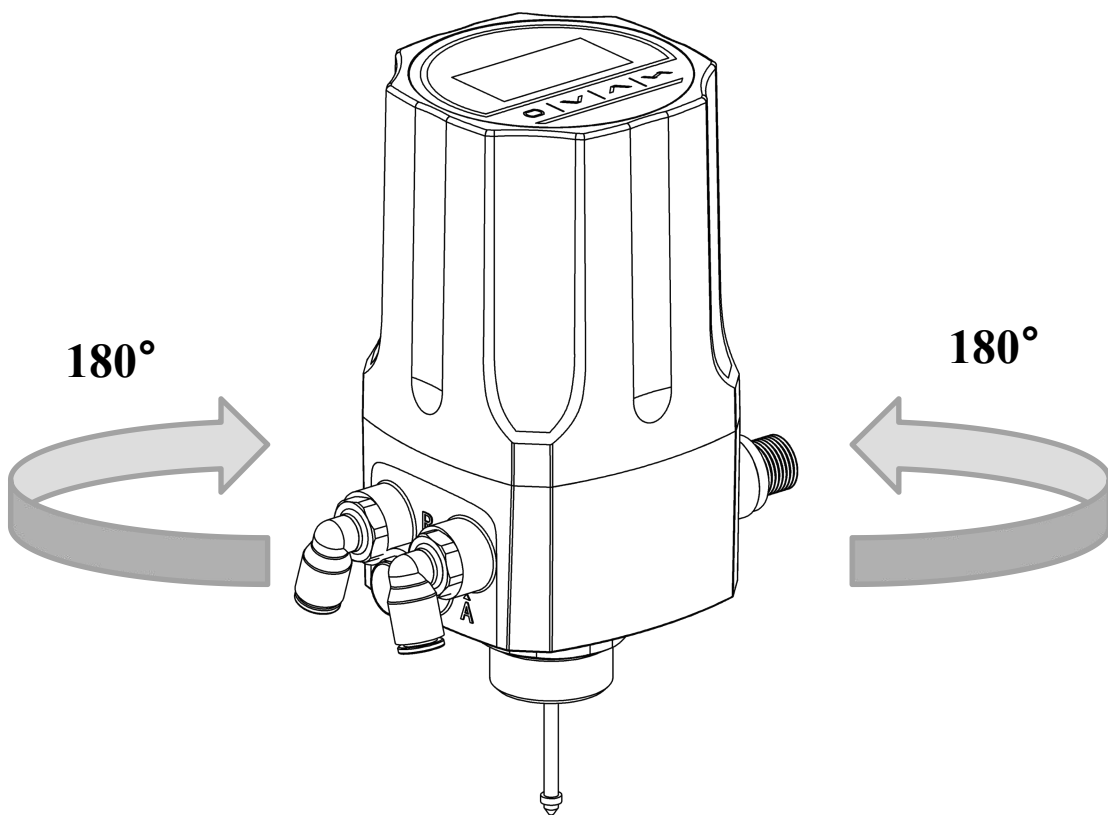
# 机械尺寸



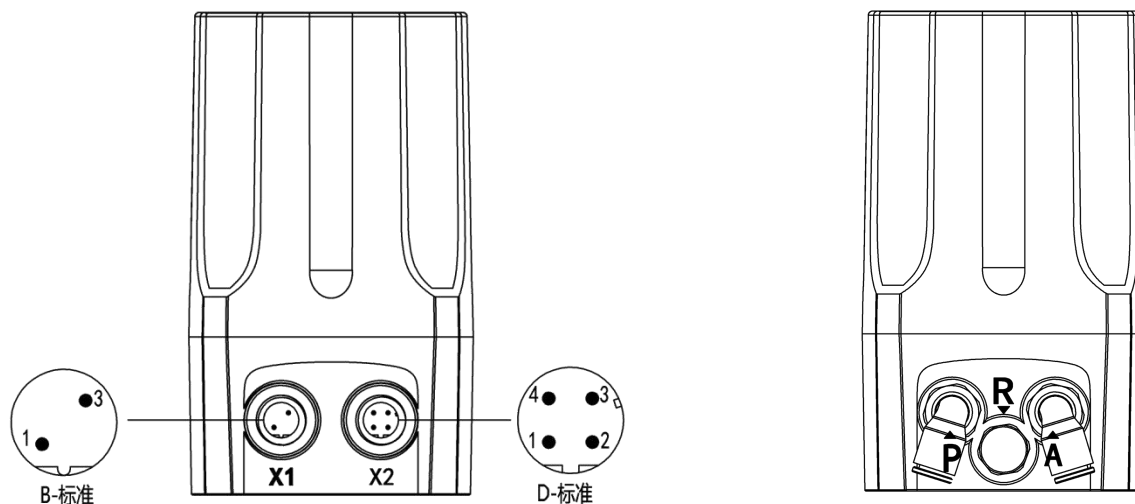
## 操作界面角度调整

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将定位器与阀门连接之后，定位器可与阀门之间做角度调整。若需要调整定位器操作界面角度，可以顺时针或逆时针180° 范围内旋转主壳体到需要的角度。



## 电气接口和气动接口



### X1

端子号	描述	信号类型
1	模拟信号输出 +	0/4 – 20 mA
3	模拟信号输出 GND	GND

### X2

端子号	描述	信号类型
1	电源 +	+24 V
2	电源GND	GND
3	设定信号输入 +	0/4–20mA
4	设定信号输入 GND	GND

P	气源进入 (内置滤网, 过滤尺寸5 $\mu$ m)
R	排气
A	先导气口

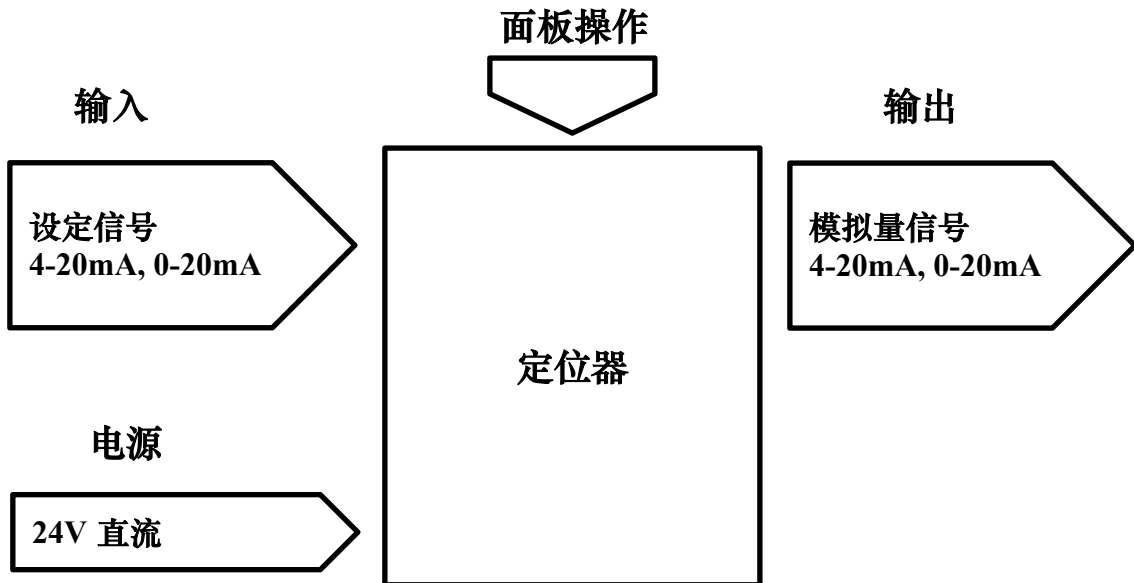
## 软件附加功能

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- 阀门传输特性设置
- 安全位置的设置
- 紧闭功能设置
- 输入信号错误检测
- 输入信号和设定值间的作用方向设置
- 输出信号功能配置
- 阀门行程限制
- 控制参数校正
- 密码保护功能
- 手动控制速度设置
- 控制参数的设置
- 密码保护

## 原理图

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## 各型号功能对比

功能	1600	1601	1500	1880
防爆	√	√	×	√
过程控制	×	√	×	×
4-20mA信号输入	√	√	√	√
4-20mA信号输出	○	○	○	○
自整定	√	√	√	√
手动调节阀位	√	√	√	√
紧闭功能	√	√	√	√
死区设置	√	√	√	√
4-20mA输入信号错误检测	√	√	√	√
恢复出厂设置	√	√	√	√
特性曲线设置	√	√	×	√
信号方向设置	√	×	×	√
行程限制	√	√	×	√
安全位置设置	√	√	×	√
开关量信号输入/输出	√	√	×	×
输入信号校正	√	√	×	√
手动调节速度设置	√	√	×	√
密码保护	√	√	×	√

√	有该功能
×	无该功能
○	可选