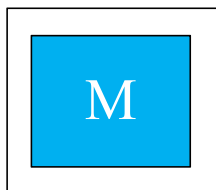
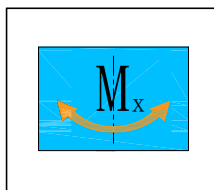


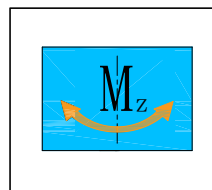
Sizes  
 6...300



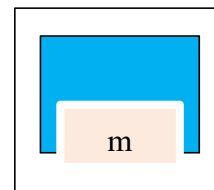
Weight  
 0.3...20Kg



Moment Load XY  
 29.4... 5390Nm

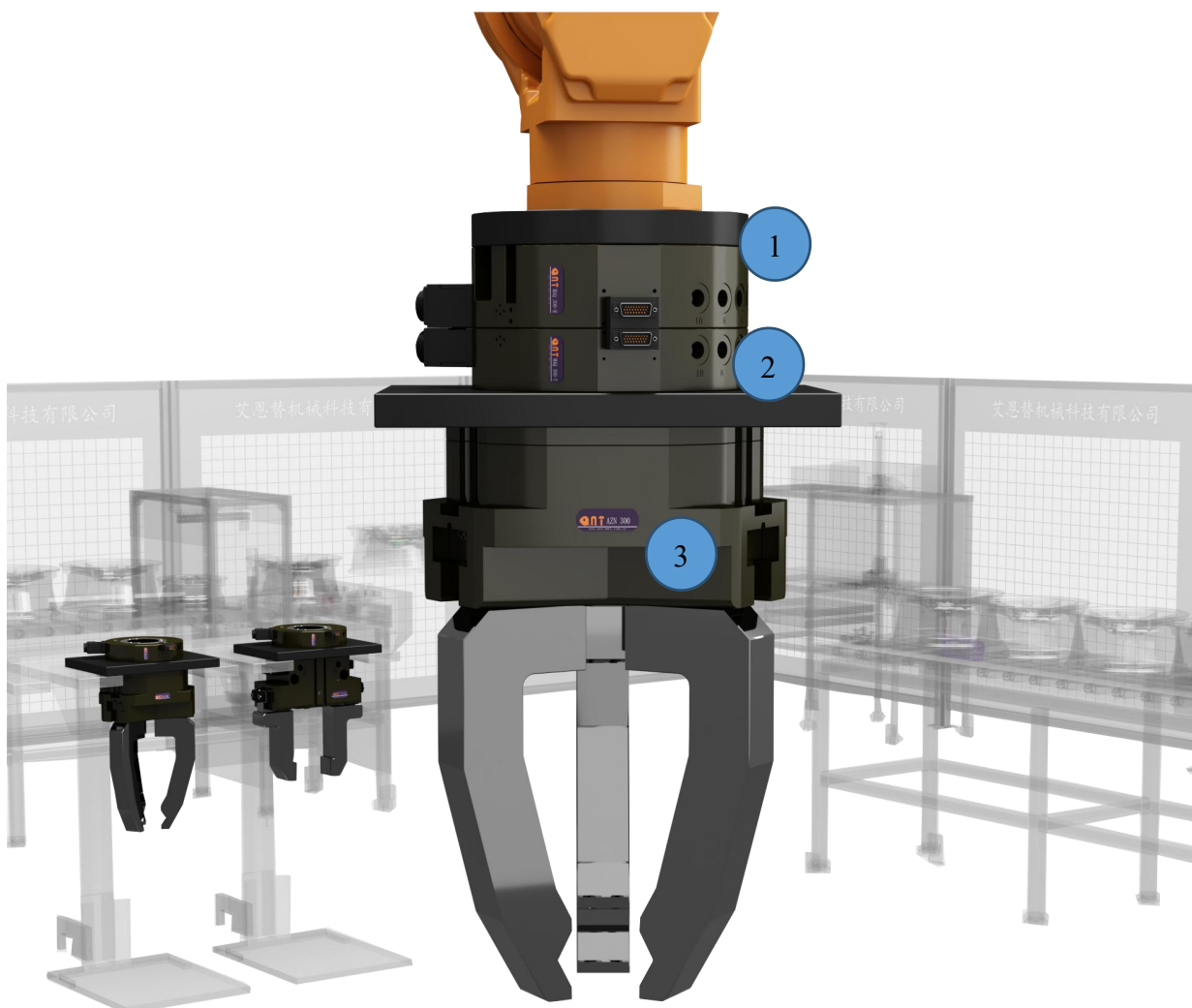


Moment Load Z  
 41.2... 4802Nm



Workpiece weight  
 6...300Kg

应用案例 / Application example



① MAQ 300-R 机器人侧快换模块

MAQ300-R Robot side Quick-change Unit

② MAQ 300-T 工具侧快换模块

MAQ300-T Tool side Quick-change Unit

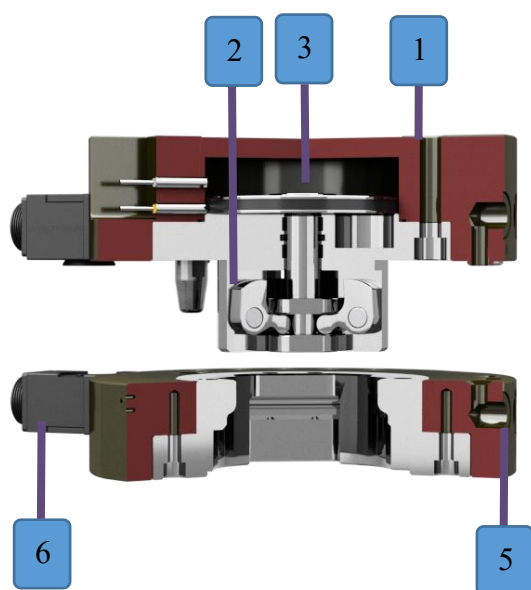
③ AZN 300 3指定心手爪

AZN 300 3-Finger Concentric Gripper

## 快换模块/ Quick-change Unit

快换模块通过使自动更换不同的末端执行器或外围设备，使工业自动化的应用更具柔性。快换模块有两部分组成，分别是机器人侧和工具侧：机器人侧安装在机器人手臂上，工具侧安装在末端执行器上。机器人侧和工具侧自动锁紧连接的同时可以连通不同的介质如气体、电信号、液体等。

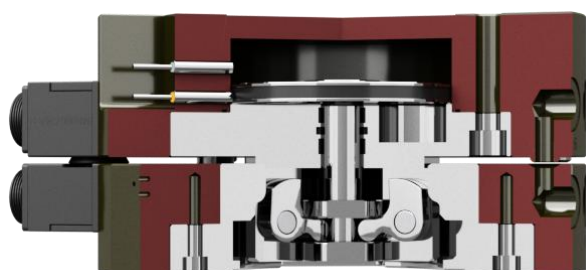
## 剖视图 / Sectional diagram



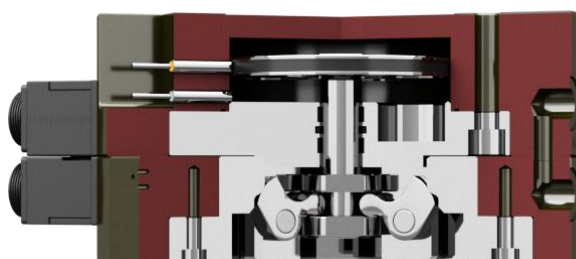
- 1 **本体 Housing**  
涂层处理的高强度铝合金  
High-strength aluminum alloy, anodized
- 2 **传动方式 Transmission Model**  
连杆原理  
Rod element design principle
- 3 **驱动部分 Energy supply**  
圆形活塞，提供更大的夹持力  
Large Circular piston: can have greater force
- 4 **空气连接/Air fluid-through**  
内置气路  
Integrated hoseless pneumatic feed-through
- 6 **电信号模块/Electric feed-through module (选购/Order)**  
可外接电气信号模块内置气路  
Integrated hoseless pneumatic feed-through

## 工作原理

### 解锁状态



### 锁紧状态

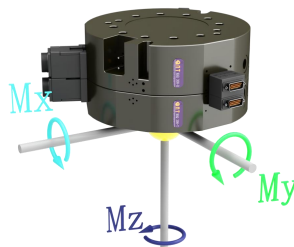


- 1、气口 U 通气，机器人侧快换侧解锁状态下插入到工具侧快换模块孔内；
- 2、气孔 U 断气、气口 L 通气，机器人侧模块气缸动作锁紧工具侧模块；

## MAQ 6



最大动态允许力矩/Max. Dynamic allowable moment



- $M_x$  max. 29.4Nm
- $M_y$  max. 29.4Nm
- $M_z$  max. 41.2Nm

### 技术资料 Technical data

名称	单位	MAQ 6-R	MAQ 6-T
		Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	6	6
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	700	
重量/Weight	[Kg]	0.35	0.165
空气/NO. Of fluid-through		5	5
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±1	±1
最大允许角度偏差/Max. permissible angular offset	[°]	±2	±2
最大/最小使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

◇重复精度：连续动作 100 次后检测值 \*Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

### 配件 (Order) :

电气信号模块/Electric signal module

Master



Adapter



No.Pins	Master	Adapter
3A(50V)×9	DMK-A-A009R	DMK-A-A009T

在位检测开关/Position detection switch



型号(NO.)

NPN WPS-4GM25N

PNP WPS-4GM25P

信号检测开关/Position detection switch

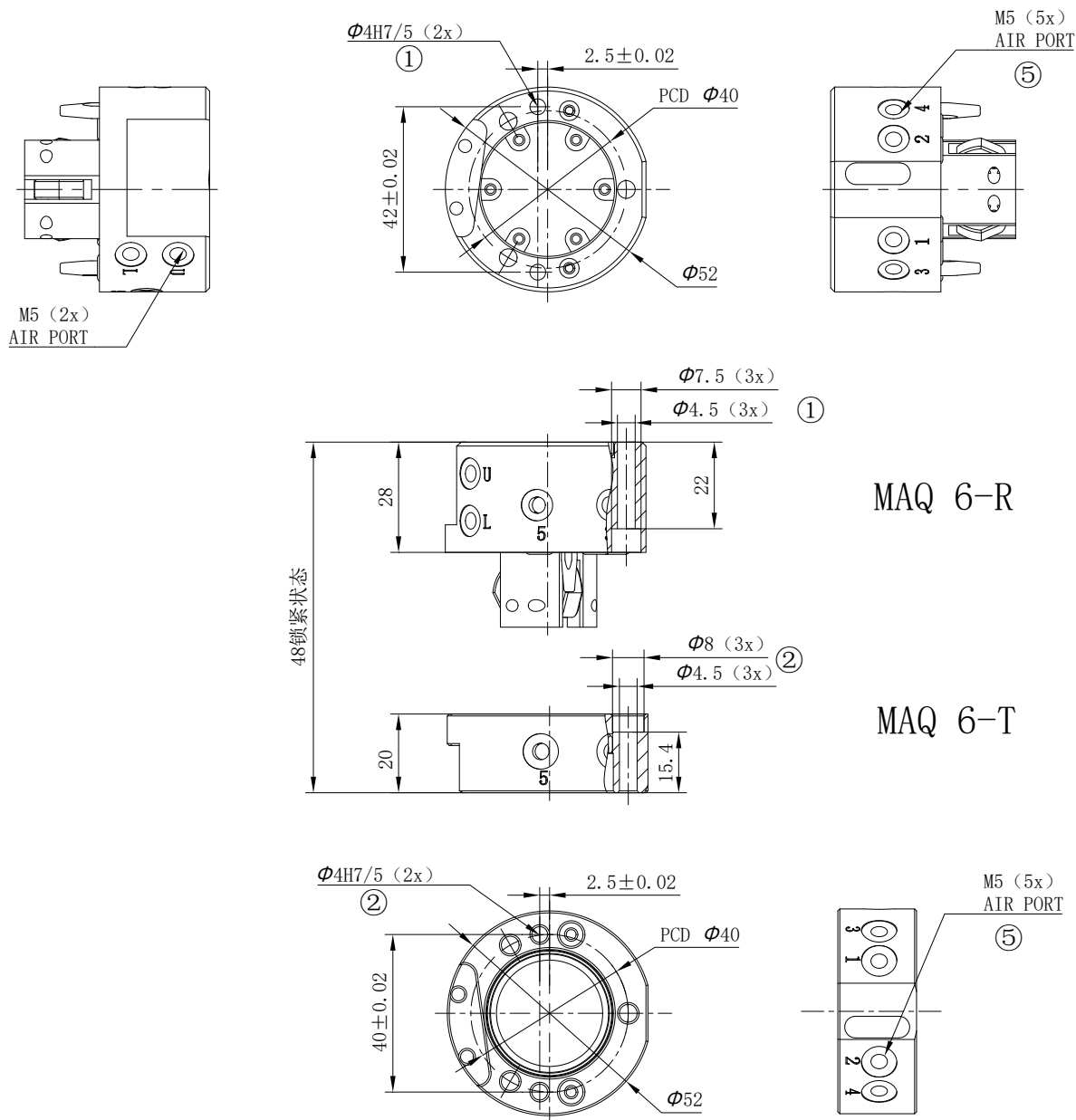


型号(NO.)

NPN PD-S1-NPN

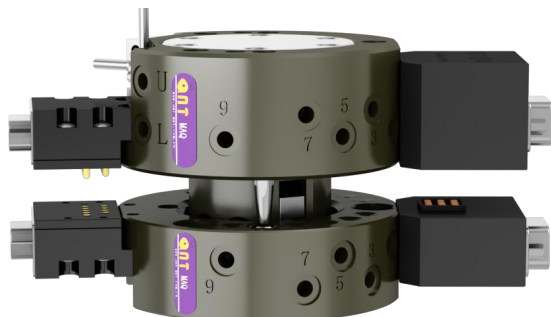
PNP PD-S1-PNP

尺寸图/Dimensions



- L 锁紧空气接口 Lock air connection  
 U 解锁空气接口 Unlocked air connection  
 ① 连接机器人 Robot side connection  
 ② 连接附件 Attachment connection  
 ⑤ 内部气路连接接口 Pneumatic feed-through

## MAQ 20



最大动态允许力矩/Max. Dynamic allowable moment

- $M_x$  max. 118Nm
- $M_y$  max. 118Nm
- $M_z$  max. 162Nm

### 技术资料 Technical data

名称	单位	MAQ 20-R	MAQ 20-T
		Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	20	20
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	2150	
重量/Weight	[Kg]	0.39	0.18
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±1.5	±1.5
最大允许角度偏差/Max. permissible angular offset	[°]	±2	±2
最大/最小使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

↪重复精度：连续动作 100 次后检测值 \*Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

### 配件 (Order) :

#### 电气信号模块/Electric signal module

Master



Adapter



No.Pins	Master	Adapter
3A(50V)×9	DMK-A-A009R	DMK-A-A009T

#### 在位检测开关/Position detection switch



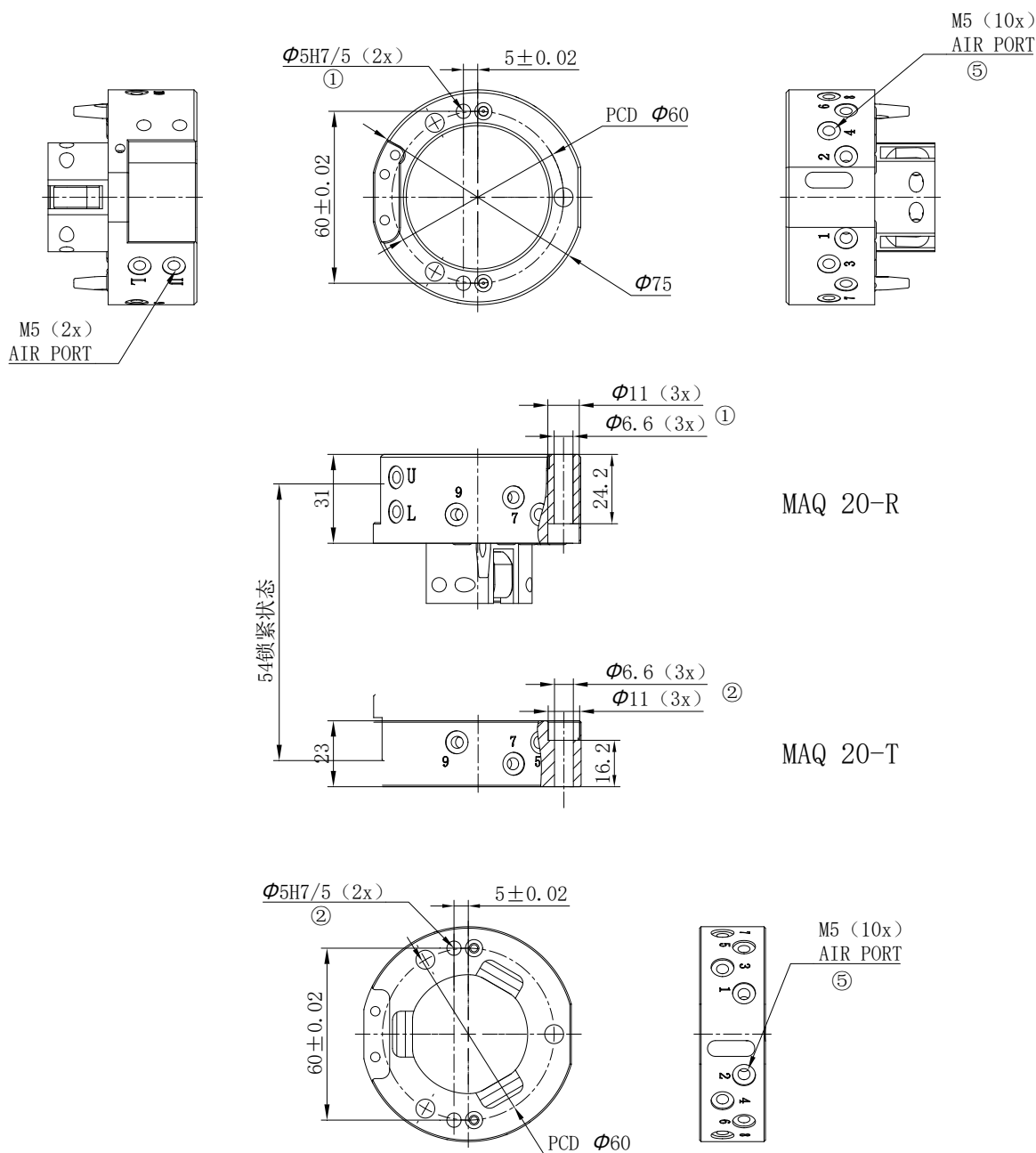
		型号(NO.)
NPN		WPS-4GM25N
PNP		WPS-4GM25P

#### 信号检测开关/Position detection switch



		型号(NO.)
NPN		PD-S1-NPN
PNP		PD-S1-PNP

尺寸图/Dimensions



- L 锁紧空气接口 Lock air connection
- U 解锁空气接口 Unlocked air connection
- ① 连接机器人 Robot side connection
- ② 连接附件 Attachment connection
- ⑤ 内部气路连接接口 Pneumatic feed-through

## MAQ 50



最大动态允许力矩/Max. Dynamic allowable moment

- $M_x$  max. 353Nm
- $M_y$  max. 353Nm
- $M_z$  max. 510Nm

### 技术资料 Technical data

名称	单位	MAQ 50-R	MAQ 50-T
		Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	50	50
锁紧力(气压 4.9bar 时)/ Locking force (pressure at 4.9bar)	[N]	5292	
重量/Weight	[Kg]	2.1	1.36
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最大/最小使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

◇ 重复精度: 连续动作 100 次后检测值 \*Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

#### 配件 (Order) :

##### 电气信号模块/Electric signal module

Master



Adapter



No.Pins	Master	Adapter
3A(50V)×9	DMK-A-A009R	DMK-A-A009T

##### 伺服模块/Servo module

Master



Adapter



No.Pins	Master	Adapter
20A(50V)×4 3A(50V)×5	SFMK-A-04×5R	SFMK-A-04×5T

##### 检测开关/Position detection switch



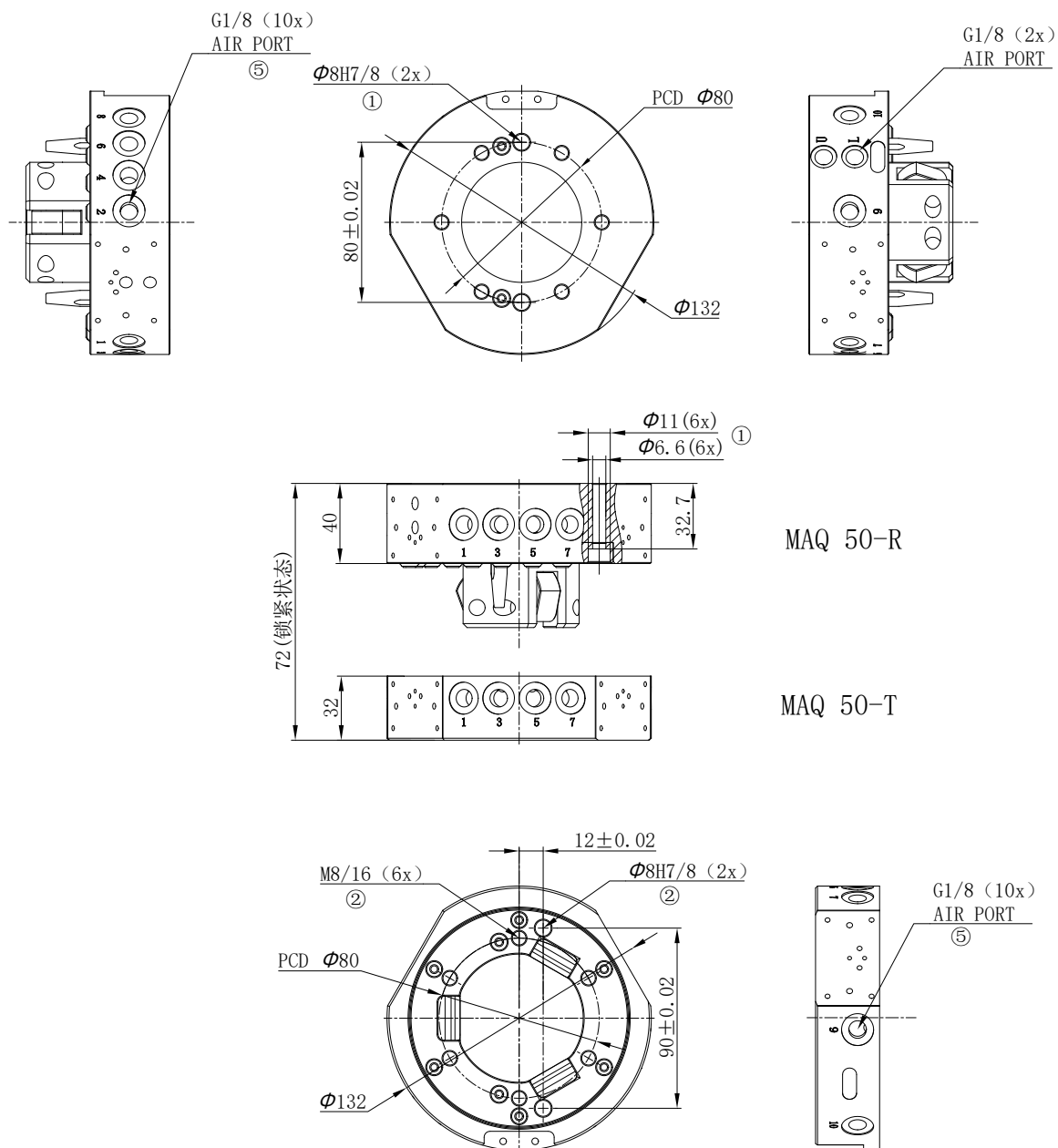
型号(NO.)	
NPN	PD-S2-NPN
PNP	PD-S2-PNP

##### 检测开关/Position detection switch



型号(NO.)	
NPN	WPS-4GM25N
PNP	WPS-4GM25P

尺寸图/Dimensions



- L 锁紧空气接口 Lock air connection
- U 解锁空气接口 Unlocked air connection
- ① 连接机器人 Robot side connection
- ② 连接附件 Attachment connection
- ⑤ 内部气路连接接口 Pneumatic feed-through



## MAQ 100



最大动态允许力矩/Max. Dynamic allowable moment

- $M_x$  max. 1610Nm
- $M_y$  max. 1610Nm
- $M_z$  max. 1610Nm

### 技术资料 Technical data

名称	单位	MAQ 100-R	MAQ 100-T
		Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	100	100
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	11000	
重量/Weight	[Kg]	3.25	2.9
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最大/最小使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

◇ 重复精度: 连续动作 100 次后检测值 \*Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

#### 配件 (Order) :

##### 电气信号模块/Electric signal module

Master



Adapter



No.Pins	Master	Adapter
3A(50V)×9	DMK-A-A019R	DMK-A-A019T

##### 伺服模块/Servo module

Master



Adapter



No.Pins	Master	Adapter
3A(50V) × 6	SFMK-A-04×5R	SFMK-A-04×5T

##### 检测开关/Position detection switch



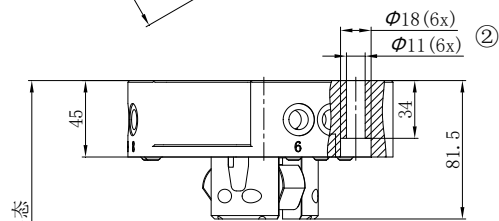
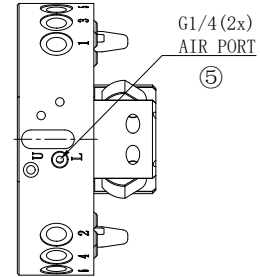
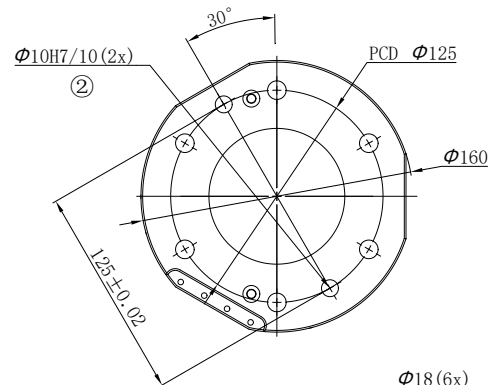
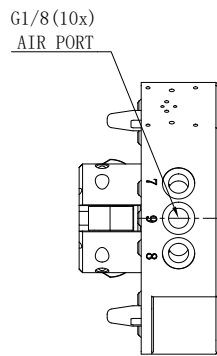
型号(NO.)	
NPN	PD-S2-NPN
PNP	PD-S2-PNP

##### 检测开关/Position detection switch

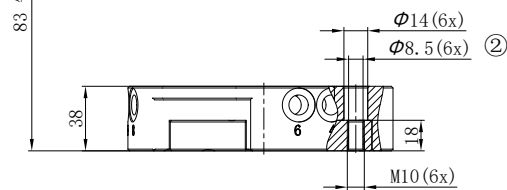


型号(NO.)	
NPN	WPS-8GM35N
PNP	WPS-8GM35P

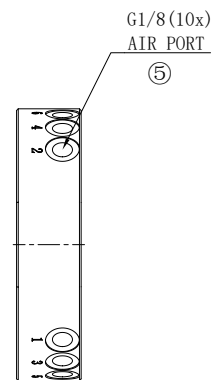
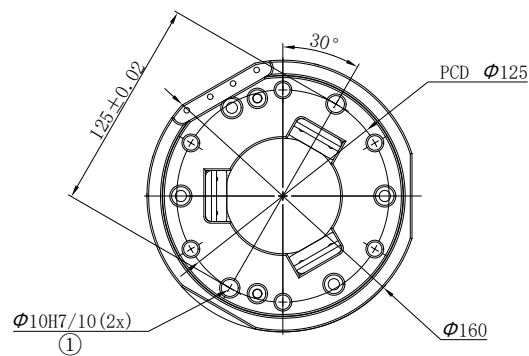
尺寸图/Dimensions



MAQ 100-R

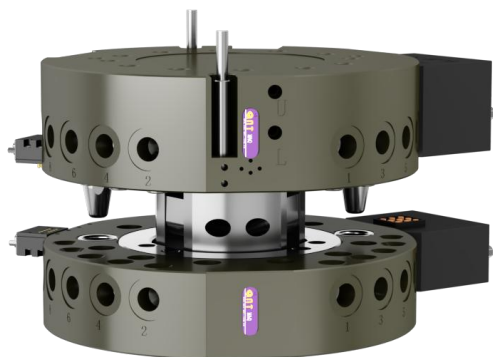


MAQ 100-T



- L 锁紧空气接口 Lock air connection
- U 解锁空气接口 Unlocked air connection
- ① 连接机器人 Robot side connection
- ② 连接附件 Attachment connection
- ⑤ 内部气路连接接口 Pneumatic feed-through

## MAQ 150



最大动态允许力矩/Max. Dynamic allowable moment

- $M_x$  max. 2058Nm
- $M_y$  max. 2058Nm
- $M_z$  max. 2058Nm

### 技术资料 Technical data

名称	单位	MAQ 150-R	MAQ 150-T
		Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	150	150
锁紧力(气压 4.9bar 时)/ Locking force (pressure at 4.9bar)	[N]	14700	
重量/Weight	[Kg]	6.4	5.2
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最大/最小使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

◇ 重复精度: 连续动作 100 次后检测值 \*Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

### 配件 (Order) :

#### 电气信号模块/Electric signal module

Master



Adapter



No.Pins	Master	Adapter
3A(50V)×9	DMK-A-A009R	DMK-A-A009T

#### 检测开关/Position detection switch



型号(NO.)	
NPN	PD-S2-NPN
PNP	PD-S2-PNP

#### 伺服模块/Servo module

Master



Adapter



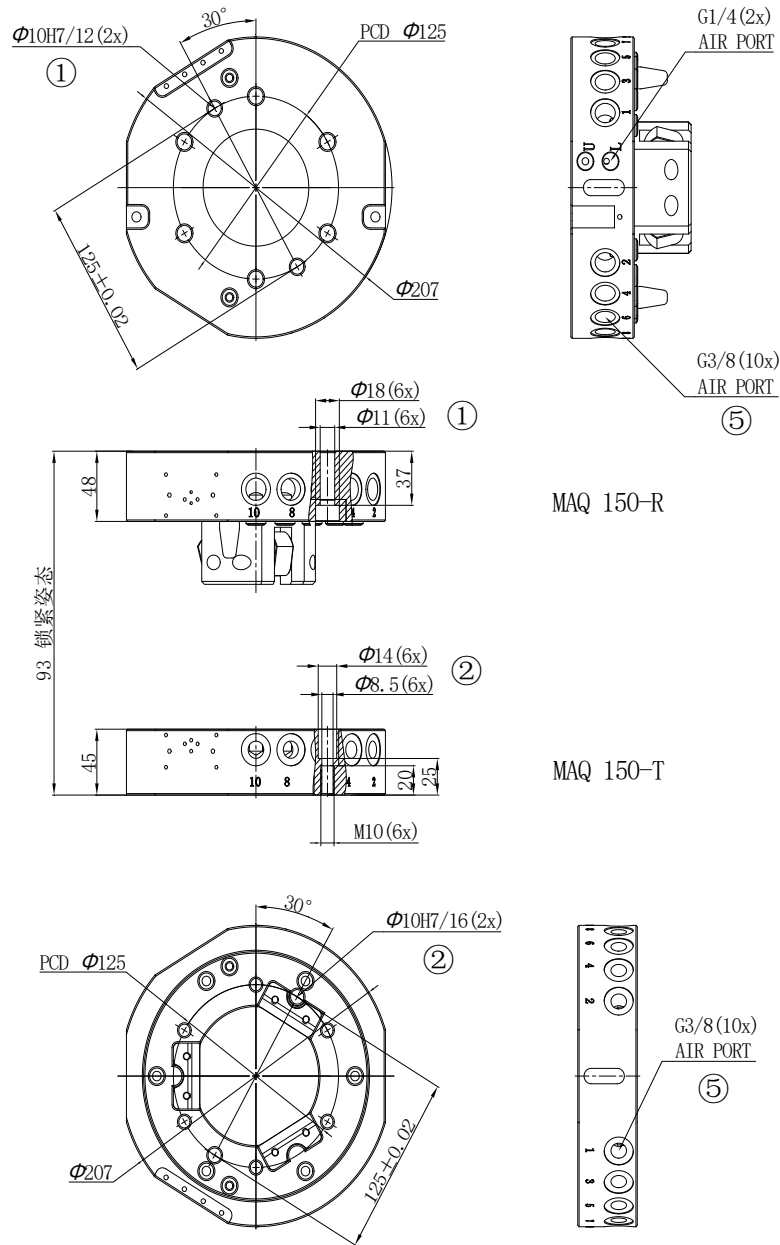
No.Pins	Master	Adapter
20A(50V)×4 3A(50V)×5	SFMK-A-04×5R	SFMK-A-04×5T

#### 检测开关/Position detection switch



型号(NO.)	
NPN	WPS-8GM35N
PNP	WPS-8GM35P

尺寸图/Dimensions



- L 锁紧空气接口 Lock air connection
- U 解锁空气接口 Unlocked air connection
- ① 连接机器人 Robot side connection
- ② 连接附件 Attachment connection
- ⑤ 内部气路连接接口 Pneumatic feed-through

# MAQ 210



**最大动态允许力矩/Max. Dynamic allowable moment**



- $M_x$  max. 3140Nm
- $M_y$  max. 3140Nm
- $M_z$  max. 3140Nm



## 技术资料 Technical data

名称	单位	MAQ 210-R	MAQ 210-T
		Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	150	150
锁紧力(气压 4.9bar 时)/ Locking force (pressure at 4.9bar)	[N]	22500	
重量/Weight	[Kg]	9.6	7.5
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最大/最小使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%


◇ 重复精度: 连续动作 100 次后检测值 \*Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

### 配件 (Order) :



#### 电气信号模块/Electric signal module

	Master	Adapter
		
No.Pins	Master	Adapter
3A(50V)×9	DMK-A-A009R	DMK-A-A009T


#### 检测开关/Position detection switch

	型号(NO.)	
	NPN	PD-S2-NPN
	PNP	PD-S2-PNP

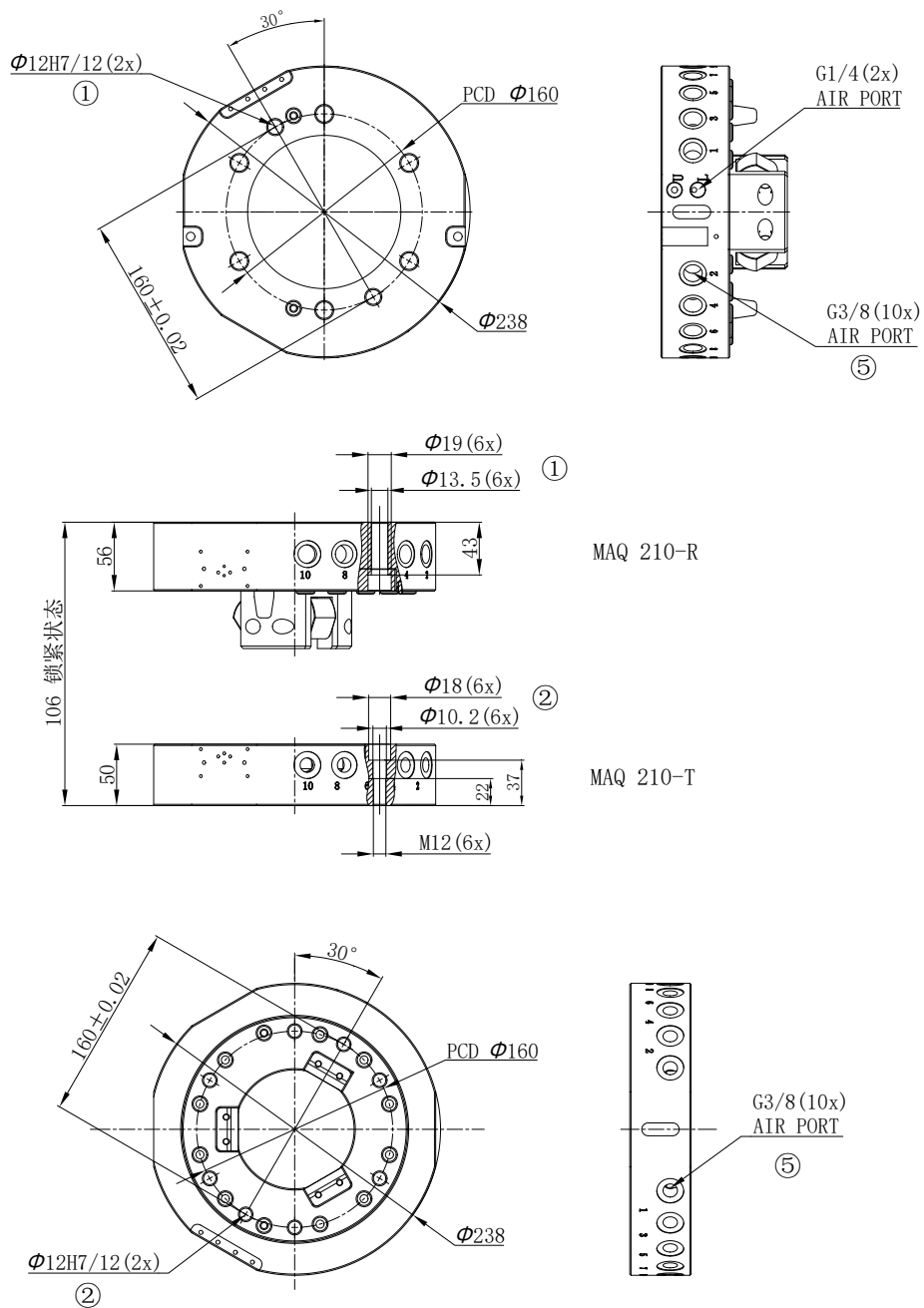
#### 伺服模块/Servo module

	Master	Adapter
		
No.Pins	Master	Adapter
20A(50V)×4 3A(50V)×5	SFMK-A-04×5R	SFMK-A-04×5T

#### 检测开关/Position detection switch

	型号(NO.)	
	NPN	WPS-8GM35N
	PNP	WPS-8GM35P

尺寸图/Dimensions



- L 锁紧空气接口 Lock air connection
- U 解锁空气接口 Unlocked air connection
- ① 连接机器人 Robot side connection
- ② 连接附件 Attachment connection
- ⑤ 内部气路连接接口 Pneumatic feed-through

## MAQ 300



最大动态允许力矩/Max. Dynamic allowable moment

- $M_x$  max. 5390Nm
- $M_y$  max. 5390Nm
- $M_z$  max. 4802Nm

### 技术资料 Technical data

名称	单位	MAQ 300-R	MAQ 300-T
		Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	300	300
锁紧力(气压 4.9bar 时)/ Locking force (pressure at 4.9bar)	[N]	31400	
重量/Weight	[Kg]	13.5	9.8
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最大/最小使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

◇ 重复精度: 连续动作 100 次后检测值 \*Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

### 配件 (Order) :

#### 电气信号模块/Electric signal module

Master



Adapter



No.Pins	Master	Adapter
3A(50V)×9	DMK-A-0019R	DMK-A-0019T

#### 检测开关/Position detection switch



	型号(NO.)	
NPN	PD-S2-NPN	
PNP	PD-S2-PNP	

#### 伺服模块/Servo module

Master



Adapter



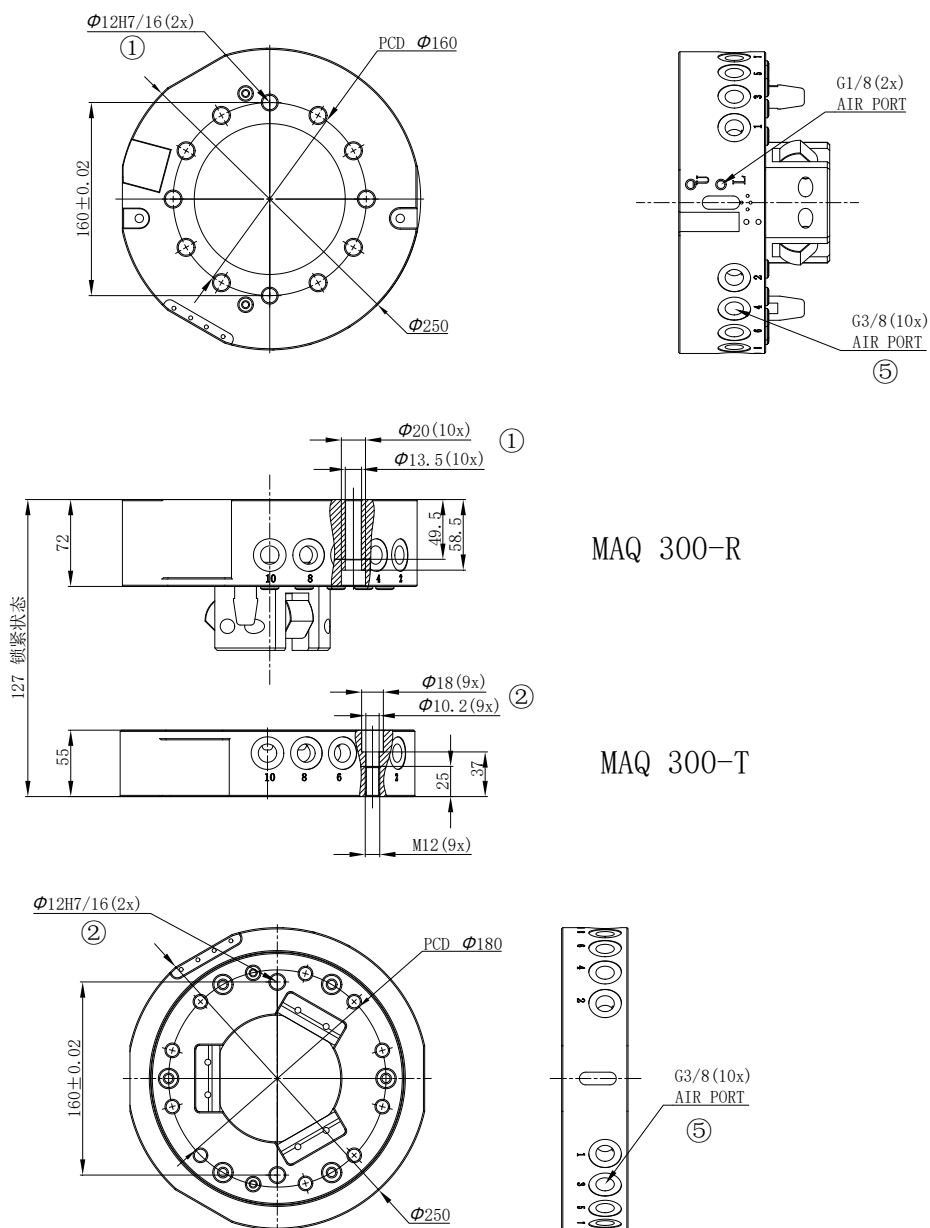
No.Pins	Master	Adapter
20A(50V)×4	SFMK-A-04×5R	SFMK-A-04×5T
3A(50V)×5		

#### 检测开关/Position detection switch



	型号(NO.)	
NPN	WPS-8GM35N	
PNP	WPS-8GM35P	

尺寸图/Dimensions



MAQ 300-R

MAQ 300-T

- L 锁紧空气接口 Lock air connection
- U 解锁空气接口 Unlocked air connection
- ① 连接机器人 Robot side connection
- ② 连接附件 Attachment connection
- ⑤ 内部气路连接接口 Pneumatic feed-through