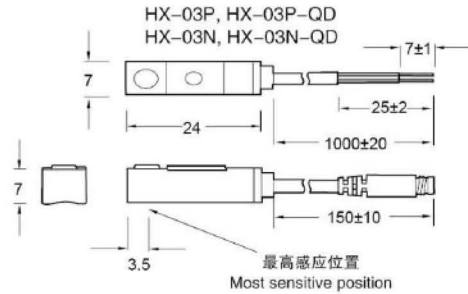
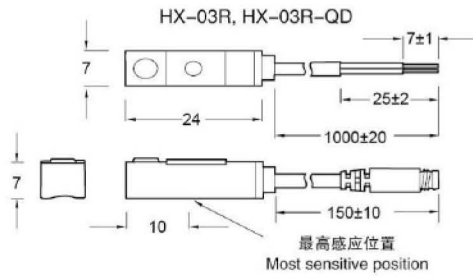


## HX-03 系列产品特点与应用 HX-03 Series Features and Applications

- ① 开关结构紧凑 ② 采用LSU型LED发光指示灯 ③ 抗震设计, 能用于震动大的场合 ④ 安装简便 ⑤ 多使用BK系列钢带绑扎 ⑥ 适用气缸广泛
- ① Compact design ② LSU type LED light ③ Anti-vibration application ④ Simple installation ⑤ BK series metal band together ⑥ Suitable for many kinds of air cylinder.



## 尺寸Dimensions



## 规格表 Specification

型号 Type	HX-03R	HX-03N	HX-03P
接线图 Connect Diagram			
规格参数 Parameter			
配线方式 Wiring method	二线式 2-Wire Type	三线式 3-Wire Type	
开关逻辑 Switching logic	SPST常开型 Normally Open	电子式无接点常开型 Solid State Output, Normally Open	
输出接点形式 Sensor type	有接点 干簧管型(Reed switch)	无接点NPN型(电流流入) Input	无接点PNP型(电流流出) Output
使用电压范围 Operating voltage	5~240V DC/AC	5~30V DC	
最大开关电流 Max. switching current	100mA max.	200mA max.	
触点容量 Contact rating	10W max.	6W max.	
消耗电流 Current consumption	无 None	20mA max@ 24V (Switch Active)	
内部电压降 Voltage drop	3.0V max.	0.5V max @ 200mA	
泄露电流 Leakage current	无 None	0.01mA max.	
指示灯颜色 Indicator	红色(Red) LED	红色(Red) LED	绿色(Green) LED
最大切换频率 Max. exchange frequency	200Hz	1000Hz	
使用温度范围 Temperature range		-10~70℃	
耐冲击 Shock	30G	50G	
耐震动 Vibration		9G	
保护构造等级 Enclosure classification		IEC 529 IP67 (NEMA 6)	
保护电路 Protection circuit	无 None	电源反接, 突波吸收保护 With protection	
电线 Cable	2.8Φ, 2C, 灰色耐油PVC Gray color, oil resistance PVC	2.8Φ, 3C, 黑色耐油PVC Black color, oil resistance PVC	

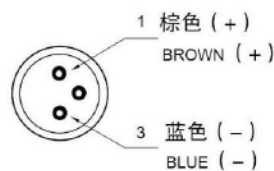
HX-03系列使用PBK固定钢带  
PBK metal band for HX-03 series



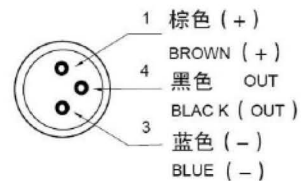
适用于Φ6-Φ63圆形气缸  
For round cylinder Φ6-Φ63

QD接头接线图\*QD Pinout

二线式快速接头  
2 wire QD wiring



三线式快速接头  
3 wire QD wiring

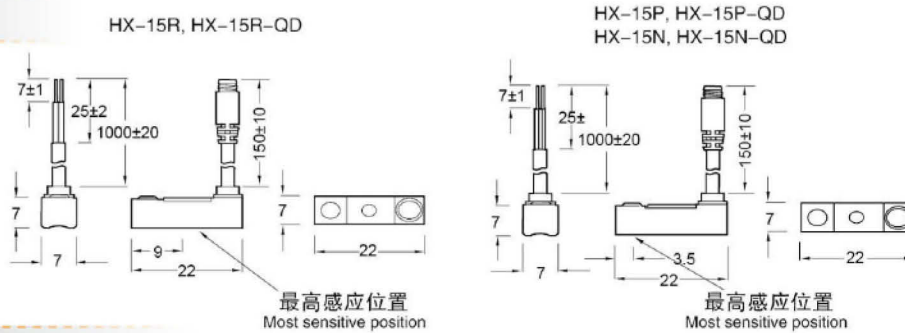




◎ HX-15系列产品特点与应用  
HX-15 Series Features and Applications

- ① 开关结构紧凑 ② 采用LSU型LED发光指示灯 ③ 抗震设计, 能用于震动大的场合 ④ 安装简便 ⑤ 多使用BK系列钢带绑扎 ⑥ 适用气缸广泛
- ① Compact design ② LSU type LED light ③ Anti-vibration application ④ Simple installation ⑤ BK series metal band together ⑥ Suitable for many kinds of air cylinder.

◎ 尺寸Dimensions



◎ 规格表 Specification

型号 Type	HX-15R	HX-15N	HX-15P
接线图 Connect Diagram			
规格参数 Parameter			
配线方式 Wiring method	二线式 2-Wire Type	三线式 3-Wire Type	
开关逻辑 Switching logic	SPST常开型 Normally Open	电子式无接点常开型 Solid State Output, Normally Open	
输出接点形式 Sensor type	有接点 干簧管型(Reed switch)	无接点NPN型(电流流入) Input	无接点PNP型(电流流出) Output
使用电压范围 Operating voltage	5~240V DC/AC	5~30V DC	
最大开关电流 Max. switching current	100mA max.	200mA max.	
触点容量 Contact rating	10W max.	6W max.	
消耗电流 Current consumption	无 None	20mA max @ 24V (Switch Active)	
内部电压降 Voltage drop	3.0V max.	0.5V max @ 200mA	
泄露电流 Leakage current	无 None	0.01mA max.	
指示灯颜色 Indicator	红色(Red) LED	红色(Red) LED	绿色(Green) LED
最大切换频率 Max. exchange frequency	200Hz	1000Hz	
使用温度范围 Temperature range		-10~70℃	
耐冲击 Shock	30G	50G	
耐震动 Vibration		9G	
保护构造等级 Enclosure classification		IEC 529 IP67 (NEMA 6)	
保护电路 Protection circuit	无 None	电源反接, 突波吸收保护 With protection	
电线 Cable	2.8Φ, 2C, 灰色耐油PVC Gray color, oil resistance PVC	2.8Φ, 3C, 黑色耐油PVC Black color, oil resistance PVC	

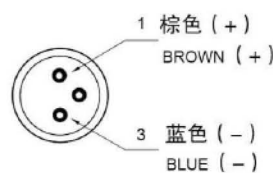
HX-15系列使用PBK固定钢带  
PBK metal band for HX-15 series



适用于Φ6-Φ63圆形气缸  
For round cylinder Φ6-Φ63

QD接头接线图\*QD Pinout

二线式快速接头  
2 wire QD wiring



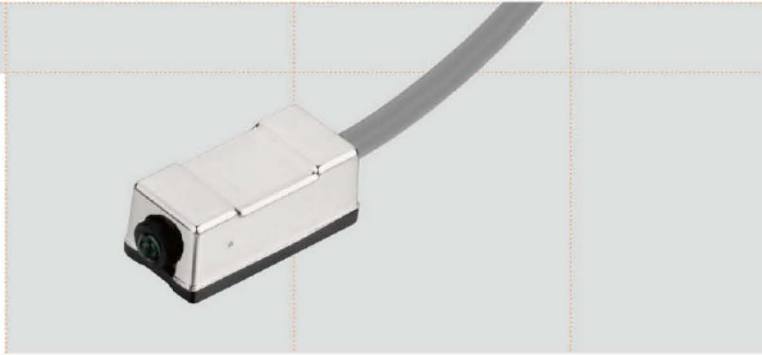
三线式快速接头  
3 wire QD wiring



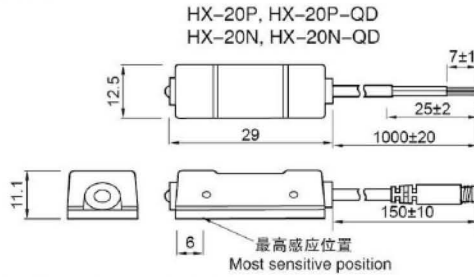
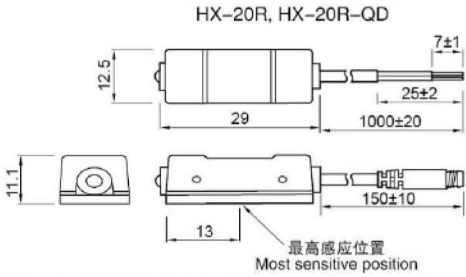
### HX-20系列产品特点与应用

#### HX-20 Series Features and Applications

- ① 开关结构紧凑 ② 采用高亮度LED发光指示灯 ③ 底部圆弧表贴抗震设计 ④ 备有PI和PM两种系列支架 ⑤ 安装简便 ⑥ 适用于所有标准系列拉杆和米字型气缸
- ① Compact design ② LED light ③ Anti-vibration application
- ④ PI, PM series clamp together ⑤ Simple installation ⑥ Suitable for all kinds of standard tie-rod and micky-mouse barrel cylinder.



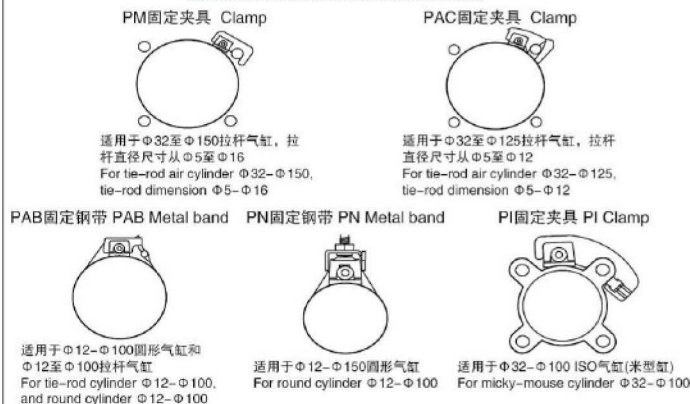
### 尺寸Dimensions



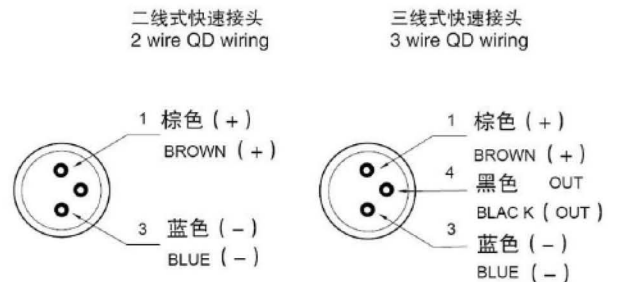
### 规格表 Specification

型号 Type	HX-20R	HX-20N	HX-20P
接线图 Connect Diagram			
规格参数 Parameter			
配线方式 Wiring method	二线式 2-Wire Type	三线式 3-Wire Type	
开关逻辑 Switching logic	SPST常开型 Normally Open	电子式无触点 常开型 Solid State Output, Normally Open	
输出接点形式 Sensor type	有接点 干簧管型 Reed switch	无接点NPN型 (电流流入) Input	无接点PNP型 (电流流出) Output
使用电压范围 Operating voltage	5-240V DC/AC	5-30V DC	
最大开关电流 Max. switching current	100mA max.	200mA max.	
触点容量 Contact rating	10W max.	6W max.	
消耗电流 Current consumption	无 None	20mA max@ 24V (Switch Active)	
内部电压降 Voltage drop	3.5V max.	0.5V max	
泄露电流 Leakage current	无 None	0.01mA max.	
指示灯颜色 Indicator	红色(Red) LED	红色(Red) LED	绿色(Green) LED
最大切换频率 Max. exchange frequency	200Hz	1000Hz	1000Hz
使用温度范围 Temperature range		10~70℃	
耐冲击 Shock	30G		50G
耐震动 Vibration		9G	
保护构造等级 Enclosure classification		IEC 529 IP67 (NEMA 6)	
保护电路 Protection circuit	无 None	电源反接, 突波吸收保护 With protection	
电线 Cable	4.0Φ, 2C, 灰色耐油PVC Gray color, oil resistance PVC	4.0Φ, 3C, 黑色耐油PVC Black color, oil resistance PVC	

#### HX-20系列安装方式\* Installation of HX-20



#### QD接头接线图\*QD Pinout

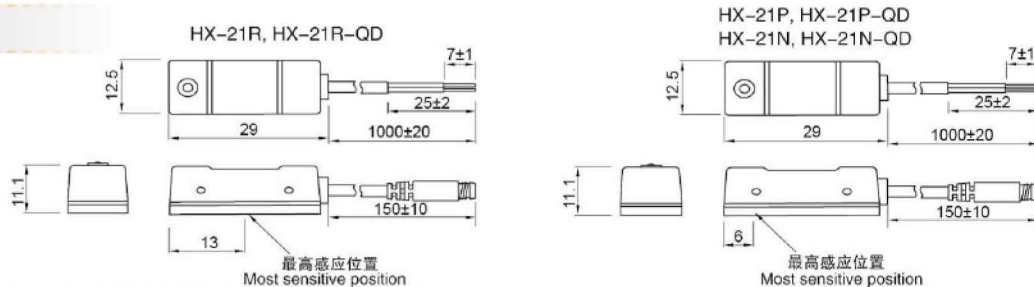




## HX-21系列产品特点与应用 HX-21 Series Features and Applications

- ① 开关结构紧凑 ② 采用高亮度LED发光指示灯 ③ 底部圆弧表贴抗震设计 ④ 备有PI和PM两种系列支架 ⑤ 安装简便 ⑥ 适用于所有标准系列拉杆和米字型气缸
- ① Compact design ② LED light ③ Anti-vibration application ④ PI, PM series clamp together ⑤ Simple installation ⑥ Suitable for all kinds of standard tie-rod and micky-mouse barrel cylinder.

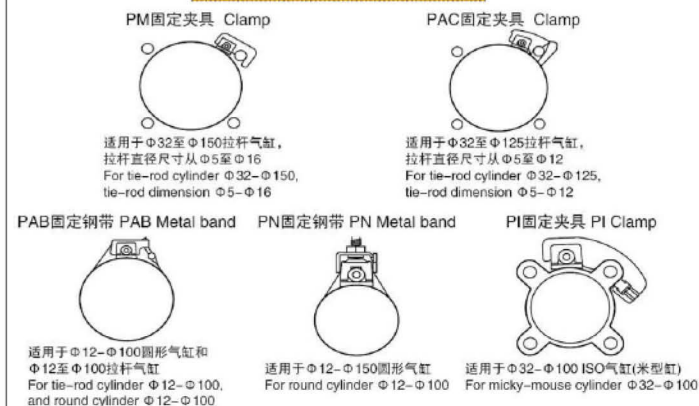
## 尺寸Dimensions



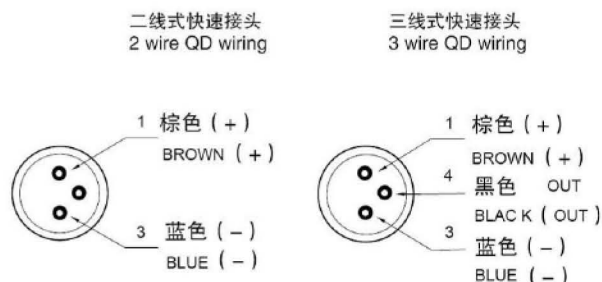
## 规格表 Specification

型号 Type	HX-20R	HX-20N	HX-20P
接线图 Connect Diagram			
规格参数 Parameter			
配线方式 Wiring method	二线式 2-Wire Type	三线式 3-Wire Type	
开关逻辑 Switching logic	SPST常开型 Normally Open	电子式无接点 常开型 Solid State Output, Normally Open	
输出接点形式 Sensor type	有接点 干簧管型 Reed switch	无接点NPN型 (电流流入) Input	无接点PNP型 (电流流出) Output
使用电压范围 Operating voltage	5~240V DC/AC	5~30V DC	
最大开关电流 Max. switching current	100mA max.	200mA max.	
触点容量 Contact rating	10W max.	6W max.	
消耗电流 Current consumption	无 None	20mA max@ 24V (Switch Active)	
内部电压降 Voltage drop	3.5V max.	0.5V max	
泄露电流 Leakage current	无 None	0.01mA max.	
指示灯颜色 Indicator	红色(Red) LED	红色(Red) LED	绿色(Green) LED
最大切换频率 Max. exchange frequency	200Hz	1000Hz	
使用温度范围 Temperature range		10~70°C	
耐冲击 Shock	30G	50G	
耐震动 Vibration		9G	
保护构造等级 Enclosure classification		IEC 529 IP67 (NEMA 6)	
保护电路 Protection circuit	无 None	电源反接, 突波吸收保护 With protection	
电线 Cable	4.0Φ, 2C, 灰色耐油PVC Gray color, oil resistance PVC	4.0Φ, 3C, 黑色耐油PVC Black color, oil resistance PVC	

### HX-20系列安装方式\* Installation of HX-20



### QD接头接线图\*QD Pinout

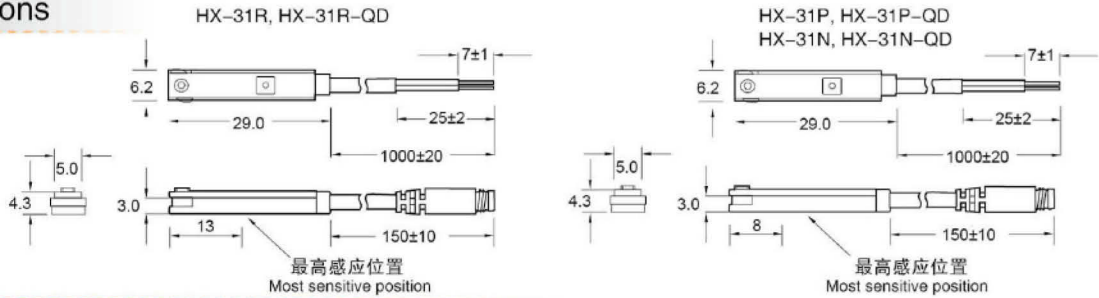


## HX-31系列产品特点与应用 HX-31 Series Features and Applications

- ① 开关结构紧凑 ② 采用了高亮度LED发光指示灯 ③ 抗震设计，能用于震动大的场合 ④ 可以采用沟槽式和绑扎两种安装形式 ⑤ 安装简便、美观 ⑥ 适用于沟槽式和迷你式的多种气缸
- ① Compact design ② LED light ③ Anti-vibration application ④ For groove and bandage fixing type ⑤ Simple installation ⑥ Suitable for all kinds of groove type and mini type cylinder.



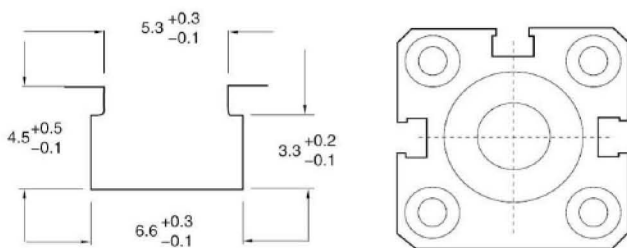
## 尺寸Dimensions



## 规格表 Specification

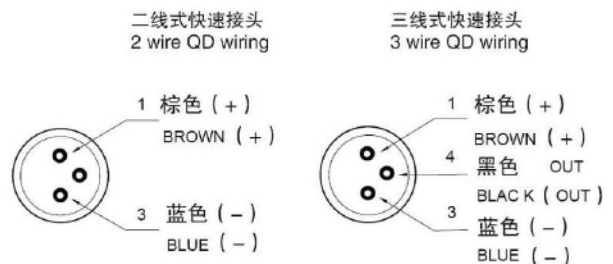
型号 Type	HX-31R	HX-31N	HX31-P
接线图 Connect Diagram			
规格参数 Parameter			
配线方式 Wiring method	二线式 2-Wire Type	三线式 3-Wire Type	
开关逻辑 Switching logic	SPST常开型 Normally Open	电子式无接点常开型 Solid State Output, Normally Open	
输出接点形式 Sensor type	有接点 干簧管型 Reed switch	无接点NPN型(电流流入)Input	无接点PNP型(电流流出)Output
使用电压范围 Operating voltage	5~240V DC/AC	5~30V DC	
最大开关电流 Max. switching current	100mA max.	100mA max.	
触点容量 Contact rating	10W max.	3W max.	
消耗电流 Current consumption	无 None	17mA max@ 24V (Switch Active)	14mA max@ 24V (Switch Active)
内部电压降 Voltage drop	2.5V max.	1.5V max@100mA	
泄露电流 Leakage current	无 None	0.01mA max.	
指示灯颜色 Indicator	红色(Red) LED	绿色(Green) LED	黄色(Yellow) LED
最大切换频率 Max. exchange frequency	200Hz	1000Hz	
使用温度范围 Temperature range		10~70°C	
耐冲击 Shock	30G	50G	
耐震动 Vibration		9G	
保护构造等级 Enclosure classification		IEC 529 IP67 (NEMA 6)	
保护电路 Protection circuit	无 None	电源反接，输出短路保护 With protection	
电线 Cable	3.0Φ, 2C, 灰色耐油PVC Gray color, oil resistance PVC	3.0Φ, 3C, 黑色耐油PVC Black color, oil resistance PVC	

HX-31系列沟槽尺寸图\*  
Groove dimension of HX-31 series



适用于FVBC气缸  
For FVBC cylinder

QD接头接线图\*QD Pinout



### ◎ BK系列固定钢带 BK Series Clamp

专用于固定HX-03&HX-15系列磁性开关于Φ6以上的圆形气缸 Clamp is designed for mounting HX-03&HX-15 series sensor on Φ6 bore round cylinder

图形 Photo	尺寸 Dimension	安装方式 Mounting			
		步骤1 Step 1	步骤2 Step 2	步骤3 Step 3	步骤4 Step 4
		1. 先将夹头上的螺丝向上松开; 2. 使螺丝不伸出夹头的内丝。 1. Release the screw up 2. Make the screw within the collect	1. 将钢带一端套入夹头的挂钩上; 2. 安放开关拉紧钢带; 3. 另一边钢带挂钩挂入孔上并做记号。 1. Put one end of the band to the hanger. 2. Install the switch and strain the metal band. 3. Another end of the band to the hanger and make mark.	1. 如下图在记号孔后面的位置剪断钢带。 1. Cut the metal band at the opposite face of the marked position.	1. 将剪好的钢带一端套入夹头的挂钩上 2. 安放感应开关, 锁紧螺丝, 使夹头顶起来 3. 锁紧螺帽即可 1. Put the metal band on the marked position. 2. Install the switch, lock the screw. 3. Finally lock the screw nut.
BK-81: 适用于Φ6-Φ63圆形气缸和拉杆气缸 For round cylinder and tie-rod cylinder Φ6-Φ63. BK-82: 适用于Φ6-Φ125圆形气缸和拉杆气缸 (大于Φ125缸径的可订做)。 For round cylinder and tie-rod cylinder Φ6-Φ125(Special design for ≥ Φ125).					

### ◎ PBN 系列固定钢带 PBN Series Clamp

专用于固定HX-20&HX-21系列磁性开关于Φ12以上的圆形气缸 Clamp is designed for mounting HX-20&HX-21 series sensor on Φ12 bore round cylinder.

图形 Photo	尺寸 Dimension	安装方式 Mounting			
		步骤1 Step 1	步骤2 Step 2	步骤3 Step 3	步骤4 Step 4
		1. 先将夹头上的螺丝向上松开; 2. 使螺丝不伸出夹头的内丝。 1. Release the screw up 2. Make the screw within the collect	1. 将钢带一端套入夹头的挂钩上; 2. 安放开关拉紧钢带; 3. 另一边钢带挂钩挂入孔上并做记号。 1. Put one end of the band to the hanger. 2. Install the switch and strain the metal band. 3. Another end of the band to the hanger and make mark.	1. 如下图在记号孔后面的位置剪断钢带。 1. Cut the metal band at the opposite face of the marked position.	1. 将剪好的钢带一端套入夹头的挂钩上 2. 安放感应开关, 锁紧螺丝, 使夹头顶起来 3. 锁紧螺帽即可 1. Put the metal band on the marked position. 2. Install the switch, lock the screw. 3. Finally lock the screw nut.
BK-81: 适用于Φ6-Φ63圆形气缸和拉杆气缸 For round cylinder and tie-rod cylinder Φ6-Φ63. BK-82: 适用于Φ6-Φ125圆形气缸和拉杆气缸 (大于Φ125缸径的可订做)。 For round cylinder and tie-rod cylinder Φ6-Φ125(Speed design for ≥ Φ125).					

### ◎ PN 系列固定钢带 PN Series Clamp

专用于固定HX-20&HX-21系列磁性开关于Φ12以上的圆形气缸 Clamp is designed for mounting HX-20&HX-21 series sensor on Φ12 bore round cylinder.

图形 Photo	尺寸 Dimension	安装方式 Mounting			
		步骤1 Step 1	步骤2 Step 2	步骤3 Step 3	步骤4 Step 4
		1. 先将夹头上的螺丝向上松开; 2. 使螺丝不伸出夹头的内丝。 1. Release the screw up 2. Make the screw within the collect	1. 将钢带一端套入夹头的挂钩上; 2. 安放开关拉紧钢带; 3. 另一边钢带挂钩挂入孔上并做记号。 1. Put one end of the band to the hanger. 2. Install the switch and strain the metal band. 3. Another end of the band to the hanger and make mark.	1. 如下图在记号孔后面的位置剪断钢带。 1. Cut the metal band at the opposite face of the marked position.	1. 将剪好的钢带一端套入夹头的挂钩上 2. 安放感应开关, 锁紧螺丝, 使夹头顶起来 3. 锁紧螺帽即可 1. Put the metal band on the marked position. 2. Install the switch, lock the screw. 3. Finally lock the screw nut.
PN - S 20 S: 圆形气缸为不锈钢材质 Stainless steel round cylinder A: 圆形气缸为铝合金材质 Aluminum round cylinder 12: 圆形气缸为Φ12 Round cylinder Φ12 16: 圆形气缸为Φ16 Round cylinder Φ16 150: 圆形气缸为Φ150 Round cylinder Φ150					

### ◎ PAC系列固定夹具 Dimension of PAC Series Bracket

专用于固定HX-20&HX-21系列磁性开关固定于拉杆气缸、油压气缸  
Bracket is designed for mounting HX-20&HX-21 series sensor on tie-rod cylinder, hydraulic cylinder

图形 Photo	尺寸及安装方式 Dimension & installation
材质: 锌合金及不锈钢螺丝 Material: Zinc alloy and stainless steel screw 适用于: 缸径为Φ32-Φ125的拉杆式气压、油压缸(拉杆直径Φ4-Φ10) Using for tie-rod cylinder Φ32-Φ125, hydraulic cylinder (tie-rod bore Φ4-Φ10)	

### ◎ PM系列固定夹具 Dimension of PM Series Bracket

专用于固定HX-20&HX-21系列磁性开关固定于拉杆气缸、油压气缸  
Bracket is designed for mounting HX-20&HX-21 series sensor on tie-rod cylinder, hydraulic cylinder

图形 Photo	尺寸及安装方式 Dimension & installation																																			
	<table border="1"> <thead> <tr> <th>Dimension 型号 Model</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>PM-6</td> <td>19</td> <td>31.0</td> <td>6.5</td> <td>12</td> </tr> <tr> <td>PM-8</td> <td>20</td> <td>34.5</td> <td>8.0</td> <td>12</td> </tr> <tr> <td>PM-10</td> <td>18</td> <td>33.0</td> <td>9.5</td> <td>12</td> </tr> <tr> <td>PM-12</td> <td>20</td> <td>35.5</td> <td>11.5</td> <td>12</td> </tr> <tr> <td>PM-14</td> <td>24</td> <td>38.0</td> <td>13.5</td> <td>12</td> </tr> <tr> <td>PM-16</td> <td>24</td> <td>40.0</td> <td>15.5</td> <td>12</td> </tr> </tbody> </table>	Dimension 型号 Model	A	B	C	D	PM-6	19	31.0	6.5	12	PM-8	20	34.5	8.0	12	PM-10	18	33.0	9.5	12	PM-12	20	35.5	11.5	12	PM-14	24	38.0	13.5	12	PM-16	24	40.0	15.5	12
Dimension 型号 Model	A	B	C	D																																
PM-6	19	31.0	6.5	12																																
PM-8	20	34.5	8.0	12																																
PM-10	18	33.0	9.5	12																																
PM-12	20	35.5	11.5	12																																
PM-14	24	38.0	13.5	12																																
PM-16	24	40.0	15.5	12																																
材质: 锌合金 Material: Zinc alloy 适用于: 缸径为Φ32-Φ150的拉杆式气压、油压缸(拉杆直径Φ5-Φ16) Using for tie-rod cylinder Φ32-Φ150, hydraulic cylinder (tie-rod bore Φ5-Φ16)																																				

### ◎ PI系列固定夹具 Dimension of PI Series Bracket

专用于固定HX-20&HX-21系列磁性开关固定于ISO气缸(米型缸)  
Bracket is designed for mounting HX-20&HX-21 series sensor on ISO profile cylinder.(Micky mouse type)

图形 Photo	尺寸 Dimension	安装方式 Installation
	<p>PI-1</p>	<p>PI-2</p>
	<p>PI-3</p>	<p>PI-4</p>
	材质: 铝合金 Material: Aluminum alloy 适用于: 缸径为Φ32-Φ100的ISO气缸(米型缸) Using for ISO cylinder Φ32-Φ100(Micky mouse type)	
	PI-1: 适用于Φ32-Φ40的气缸 Using for cylinder Φ32-Φ40 PI-2: 适用于Φ50-Φ63的气缸 Using for cylinder Φ50-Φ63 PI-3: 适用于Φ80的气缸 Using for cylinder Φ80 PI-4: 适用于Φ100的气缸 Using for cylinder Φ100	