

# AOTORO®

## EU55, EU72

Groove shape type 槽型

### INSTRUCTION MANUAL

### 使用说明书

PHOTOELECTRIC SENSOR  
光电开关



A2302-11

### Ordering information 订购信息

#### EU72-DS30C4

Output 输出状态	1	Light ON 入光ON
	2	Dark ON 遮光ON
	4	Selectable Light ON or Dark ON by control wire (可通过控制线选择入光ON或遮光ON)
Output 输出构成	C	DC NPN output
	B	DC PNP output
	M	Free power relay output 自由电源触点输出型
	D	DC power relay output 直流电源触点输出型
	A	AC power relay output 交流电源触点输出型
	Z	AC 2-wire 交流电源二线控制型
Detecting distance 检测距离	30	30cm
	2	2m
	5	5m
Detecting type 传感方法	DS	Diffuse reflective 直接反射
	R	Retroreflective 反射板反射
		Through-beam 对射
Serial number 设计序号	72	Side length of head 探测头边长
Photoelectric switch 光电开关	EK	Relay contact output 触点输出型
	ER	Cylindrical type 圆柱型
	ED	DC univesal type 通用型
	EU	Groove shape type 槽型

### Model selectable 型号选择

Appearance 外型	Operation mode 操作模式	Output	Model 型号
槽宽 7mm	Dark-ON	NPN output	EU55-DS7C
		PNP output	EU55-DS7B

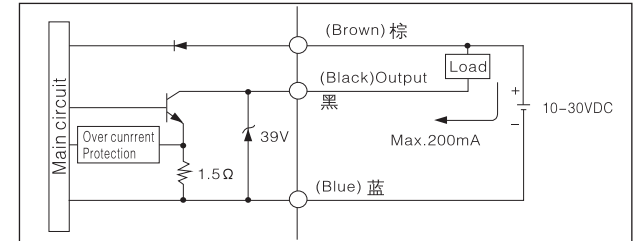
Appearance 外型	Operation mode 操作模式	Output	Model 型号
槽宽 30mm	Light-ON /Dark-ON	NPN output	EU72-DS30C4
		PNP output	EU72-DS30B4

### Specification 规格

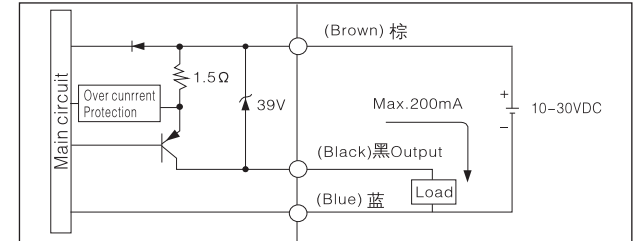
Model 型号	EU55-DS7C EU55-DS7B	EU72-DS30C4 EU72-DS30B4
Detecting distance 探测距离	7mm	30mm
Detecting target 探测物体	Opaque materials of Min. $\phi$ 2mm 直径2mm以上不透明体	
Power supply 电源电压	12-24VDC(10-30VDC)	
Current consumption 静态电流	Max. 15mA	
Response time 响应时间	Max. 0.2ms	Max. 1ms
Control output 控制输出	NPN(PNP) open collector output: Max. 200mA 集电极开路输出	
Residual voltage 残留电压	Max. 1.5V	
Circuit protection 电路保护	Reverse polarity protection 逆接保护	Short-circuit protection, Reverse polarity protection 短路保护, 电源逆接保护
Operation mode 操作模式	Dark ON	Selectable Light On or Dark ON by control wire 可用控制线选择
Insulation resistance 绝缘	Min. 20M $\Omega$ (500VDC)	
Dielectric strength 耐电压	1500VAC 50/60HZ for 1 minute	
Ambient illumination 使用环境照度	Sunlight 太阳光: Max. 10000lx Incandescent lamp 日光灯: Max. 3000lx	
Operating temperature 使用环境温度	-20 to 60°C (non-freezing condition 不结冰)	
Ambient humidity 使用环境湿度	35 to 85% RH	
Protection 保护结构	IP64	
Material 材质	Case: PC	Case: Aluminium 外壳铝 Lens: PC,

### Control output diagram 控制输出图

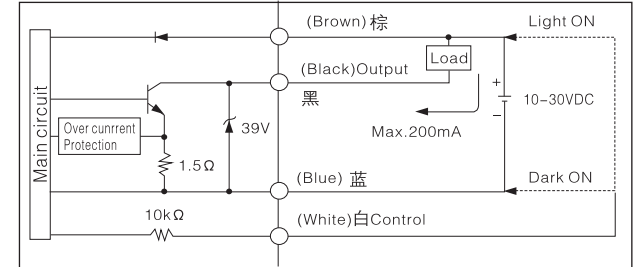
#### ● EU55-DS7C



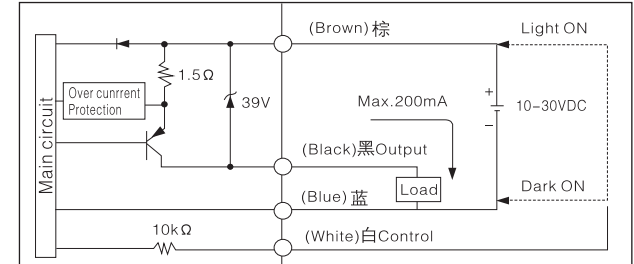
#### ● EU55-DS7B



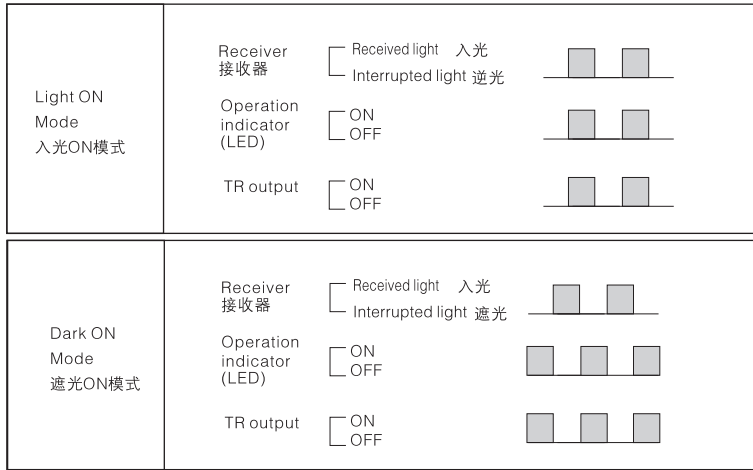
#### ● EU72-DS30C4



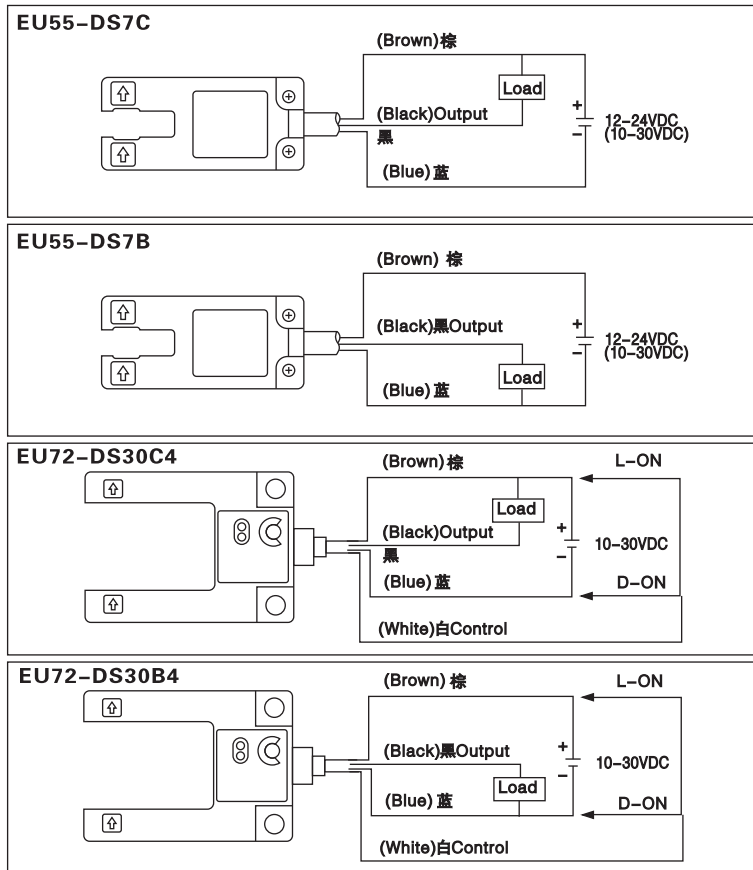
#### ● EU72-DS30B4



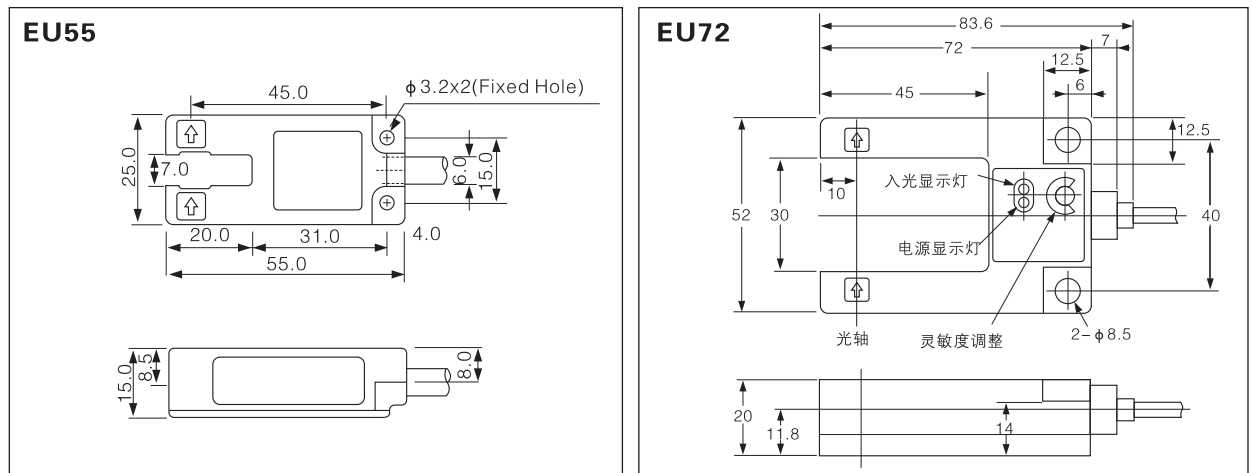
## Operation mode操作图解



## Connections 连接图

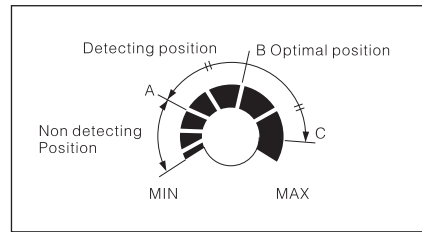


## Dimensions 尺寸(unit:mm)



## Installation and sensitivity adjustment 安装及感光度调节

Please supply the power to the sensor after installing the emitter and the receiver face to face, and then adjust an optical axis and the sensitivity as follow;  
面对面安装好发射器及接收器后, 请给传感器供给电源, 然后按以下方法调节光轴和感光度。



※Set the target at a position to be detected by the beam, then turn the adjuster until position A where the indicator turns on.

在光通过位置安放一检测物, 调节旋钮直到指示灯变亮。此时旋钮位置A,

※Take the target out of the sensing area, then turn the adjuster until point C where the indicator turns on.

If the indicator does not turn on, max. position is point "MAX".

从感应区域拿开检测物, 调节到指示灯亮时, 此时的旋钮位置为C, 如果指示灯一直不亮, 那么旋钮的最大位置就是"MAX"的位置。

※See the adjuster at the center of two switching A, C.

最佳位置在旋钮A, C的正中间。

※Since the case of EU72 series is a metal part, it should be grounded not to occur electric static and noise.

由于EU72系列的外包装是金属材料, 应尽量避免电子干扰及噪音。

## Precautions in using the product 使用注意事项

### NOTE 注意

Be sure to follow the safety precautions below for adder safety

以下项目在安全确保方面非常重要, 请务必遵守。

1. Do not use the sensor under the explosive or flammable gas environment.

请不要在具有可燃性、爆炸性气体的环境下使用。

2. Never disassemble, repair or tamper the product.

请勿拆卸、修理、改造本产品。

3. Keep the supply voltage within the specified area.

电源电压必须在额定值内。

4. use the load under the specified area. 请使用额定值以下的负荷。

### Caution for using 正确使用方法

1. Do not use the product under the following conditions. 请不要在以下的环境中使用。

(1) In the place of the direct sunlight. 日光直射场所。

(2) In the place where humidity is high and condensation may occur.

湿度高或易结露场所。

(3) In the place of the corrosive gas exists. 含腐蚀性气体场所。

(4) In the place where vibration or shock is directly transmitted to the product.

振动或冲击能直接传送到传感器场所。

2. Connection and Mounting 连接和安装

(1) Be sure that before giving the power, the supply voltage is less than the maximum rated supply voltage. 通电前请确认供电电源电压小于最大允许电源电压。

(2) There are some cases where the photoelectric switch cable is unavoidably laid in a tube or duct together with a hightension or power line. This causes an induction, possibly resulting in malfunction or damage. In principal, the cable should be separately laid or shielded. 传感器导线和动力线或电力线装在同一配管中使用时, 会受到干扰, 有误动作甚至被损坏。原则上传感器导线必须单独放置或者被屏蔽。

(3) For extending wires, whose cross section is greater than 0.3sqmm and the length less than 100m. 延长导线必须使用截面积0.3mm<sup>2</sup>以上, 长度100m以下导线。

(4) Do not pull wire strongly. 导线请勿用力拉扯。

(5) Excessive force (hitting by hammer, etc.) Should not be put on the sensors because it may damage its water-resistance. 安装传感器时, 请勿使传感器受剧烈外力 (如用锤击打等), 这样就有可能破坏传感器防水保护性能。

3. Power supply 电源

When using a commercially available switching regulator, be sure to ground the FG(Frame Ground) terminals. 使用市场上销售的开关整流器时, 请将FG (Frame Ground)端子接地。

4. Power supply reset time 电源重新调整时间

The photoelectric switch will begin sensing no later than 100ms after the power is turned on. If the load and the photoelectric switch connected to different power supply, the photoelectric switch must be always turned on first. 从接通电源到传感器可正常进行检测的时间是100ms后, 负载和传感器接不同电源时, 一定要先接通传感器的电源

5. Turning off the power supply 电源关闭

When turning off the power, output pulse may be generated. We recommend turning off the power supply of the load or load line first. 电源关闭时, 可能会出现输出脉冲, 所以我们建议先关闭负载或负载线的电源

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