

Aotoro®

EV670series
EV45series 微槽形
Small groove type

INSTRUCTION MANUAL 使用说明书

PHOTOELECTRIC SWITCH
光电开关



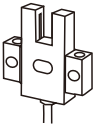
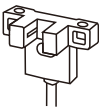
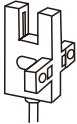
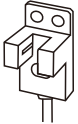
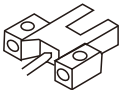
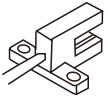
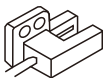
A2302-25

Method of type designation型号编法

EV-K670P

	NPN output
P	PNP output
670系列 Series	670,671,672, 674
45系列 Series	K45,L45,T45, Y45,F45,R45
K	“K” type
L	“L” type
T	“T” type
Y	“Y” type
F	“F” type
R	“R” type
EV	微槽形光电开关 Small groove type

Ordering information 订购信息

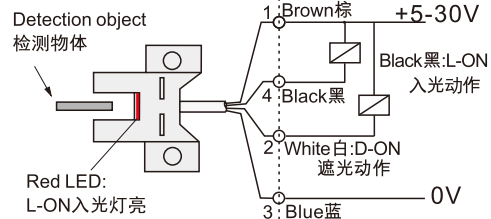
Appearance 外形	Type 种类	Detecting type 检测方式	Detecting distance 检测距离	Model 型号	Output 输出	Appearance 外形	Type 种类	Detecting type 检测方式	Detecting distance 检测距离	Model 型号	Output 输出
EV 670 Series											
	K型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-K670	NPN 4线输出 L/ON+D/ON		L型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-L671	NPN 4线输出 L/ON+D/ON
				EV-K670P	PNP 4线输出 L/ON+D/ON					EV-L671P	PNP 4线输出 L/ON+D/ON
	T型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-T672	NPN 4线输出 L/ON+D/ON		Y型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-Y674	NPN 4线输出 L/ON+D/ON
				EV-T672P	PNP 4线输出 L/ON+D/ON					EV-Y674P	PNP 4线输出 L/ON+D/ON
EV 45 Series											
	K型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-K45	NPN 4线输出 L/ON+D/ON		L型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-L45	NPN 4线输出 L/ON+D/ON
				EV-K45P	PNP 4线输出 L/ON+D/ON					EV-K45P	PNP 4线输出 L/ON+D/ON
	T型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-T45	NPN 4线输出 L/ON+D/ON		Y型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-Y45	NPN 4线输出 L/ON+D/ON
				EV-T45P	PNP 4线输出 L/ON+D/ON					EV-Y45P	PNP 4线输出 L/ON+D/ON
	F型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-F45	NPN 4线输出 L/ON+D/ON		R型	Groove -shape Through -beam 对射型 凹槽型	5mm	EV-R45	NPN 4线输出 L/ON+D/ON
				EV-F45P	PNP 4线输出 L/ON+D/ON					EV-R45P	PNP 4线输出 L/ON+D/ON

Technical specification技术参数

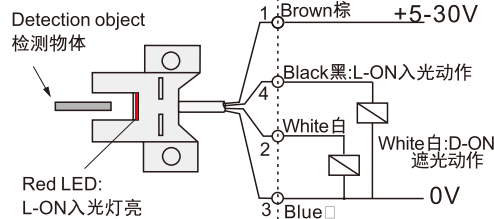
Illuminant 光源	Non-pulsating Infrared light红外线直流光	Response time 响应时间	Max.200us
Minimum detection object 最小检测物体	1x1. 2mm Opaque materials不透明体	Insulation resistance 绝缘电阻	Min.20MΩ(500VDC)
Power supply 电源电压	DC5-30V	Dielectric strength 耐电压	1500VAC 50/60HZ for 1minute
Current consumption 静态电流	Max.10mA	Ambient illumination 使用环境照度	Sunlight 太阳光: Max. 10000lx, Incandescent lamp日光灯: Max.3000lx
Control output 控制输出	Open collector output: Max.80mA 集电极开路输出, 最大80mA Double Output: L-ON and D-ON. 双动作: 入光动作和遮光动作 black wire L-ON output, white wire D-ON output, 4-wire 黑色线入光动作时输出, 白色线遮光动作时输出, 共4线	Operating temperature 使用环境温度	-20 to 60 C(non-freezing condition 不结冰)
Circuit protection 电路保护	Short-circuit protection, Reverse polarity protection, Surge protection短路保护, 电源反连接保护, 浪涌保护	Ambient humidity 使用环境湿度	35 to 85%RH
Residual voltage 残余电压	Max.1.5V (Load current less than 10-100mA) 负载电流10mA-100mA时	Protection 保护结构	IP 64
		Material材质	Case: ABS, Lens: PC 壳体: ABS,镜头: PC

Connections 连接图

NPN Output 4-wire

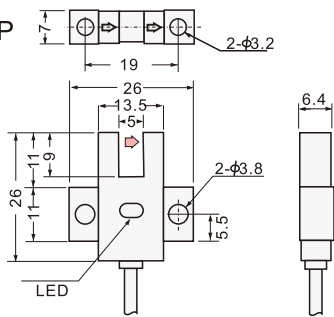


PNP Output 4-wire

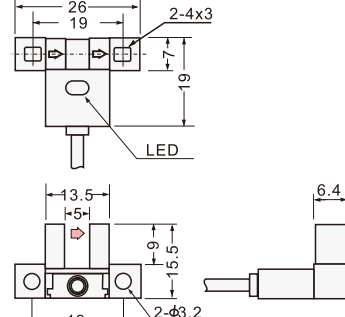


Dimensions 尺寸(unit:mm)

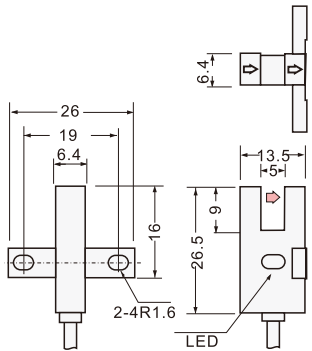
EV-K670 EV-K670P



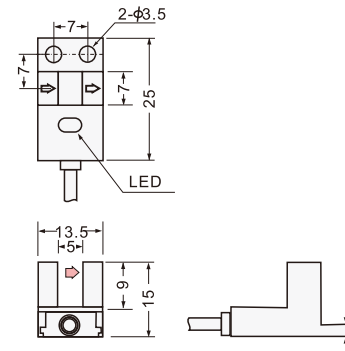
EV-L671 EV-L671P



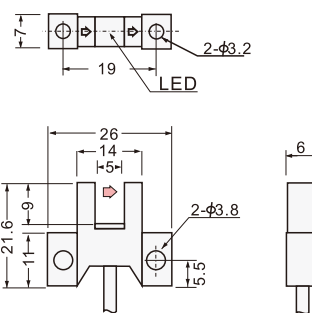
EV-T672 EV-T672P



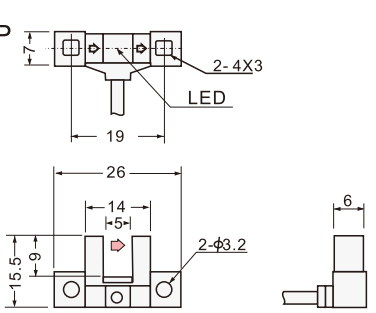
EV-Y674 EV-Y674P



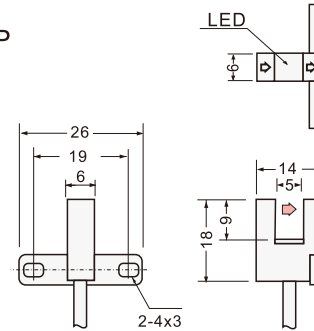
EV-K45 EV-K45P



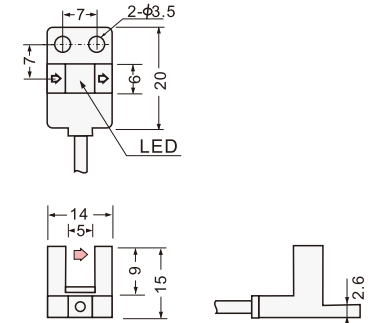
EV-L45 EV-L45P



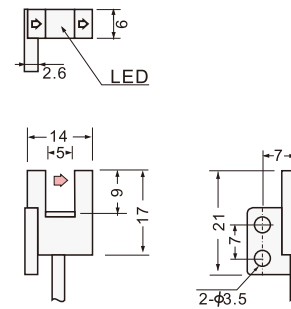
EV-T45 EV-T45P



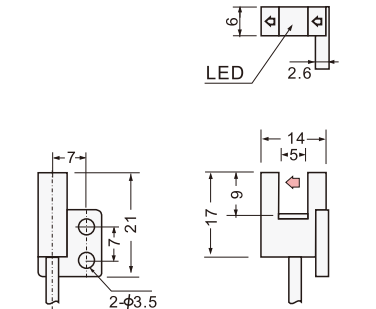
EV-Y45 EV-Y45P



EV-F45 EV-F45P



EV-R45 EV-R45P



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 high tension 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,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0.3mm²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耐水保护性能。

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出的时间是100ms后再使用。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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