

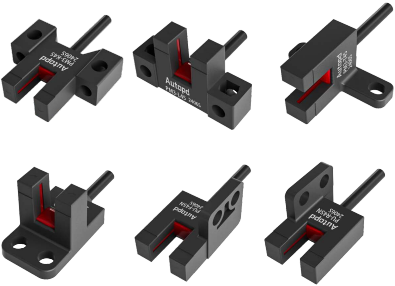
PM3-45 系列[小型·电缆型]

放大器内置・U 型微型光电传感器

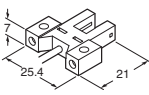
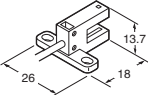
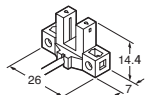
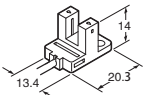
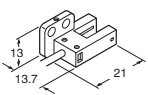
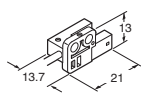


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- 6 种形状，安装灵活。
- DC5-24V 的宽电压。
- 常开、常闭两路输出。
- 标配 3 个保护电路，减少配线错误导致的故障。
- 大而清晰多角度动作指示灯，便于观察状态。
- 根据投光、受光标记，可轻松调整安装位置



■ 额定规格

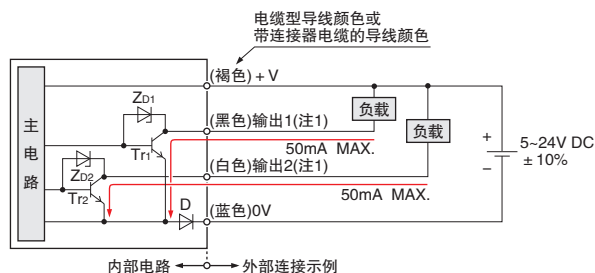
外形 (尺寸)							
型号	NPN 输出	PM3-K45	PM3-T45	PM3-L45	PM3-Y45	PM3-F45	PM3-R45
	PNP 输出	PM3-K45P	PM3-T45P	PM3-L45P	PM3-Y45P	PM3-F45P	PM3-R45P
符合标准及认证		CE 标志(EMC 指令、RoHS 指令)					
检测距离		5mm(固定)					
最小检测物体		0.8mm×1.2mm 不透明体					
应差 (迟滞)		0.05mm 以下					
重复精度		0.01mm 以下					
电源电压		5V DC ~ 24V DC±10% 脉动 P-P10%以下					
消耗电流		15mA 以下					
输出		NPN/PNP 开路集电极晶体管					
		・ 负载电压: 30V DC 以下(输出和 0V 间)					
		・ 负载电流: 50mA 以下					
		・ 剩余电压: 2V 以下(负载电流 50mA 时)、1V 以下(负载电流 16mA 时)					
输出动作		入光时 ON / 遮光时 ON 装备 2 种输出					
短路保护		装备					
反应时间		入光时: 20μs 以下、遮光时: 80μs 以下(最大反应频率为 3kHz)(注 1)					
工作状态指示灯		红色 LED (入光时亮灯)					
耐环境性	保护构造	IP40(IEC)					
	环境温度	-25℃ ~ +55℃(注意不可结露、结冰)、存储时: -30℃ ~ +80℃					
	环境湿度	5%RH ~ 85%RH、存储时: 5%RH ~ 95%RH					
	环境照明度	荧光灯光: 受光面照明度 1,000 lx 以下					
	耐电压	AC1,000V 1 分钟 所有电源连接端子与外壳之间					
	绝缘电阻	所有电源连接端子与外壳之间, 20MΩ以上, 基于 DC250V 的高阻表					
	耐振动	频率 10Hz ~ 55Hz, 振幅 1mm, X、Y、Z 各方向 30 分钟					
耐冲击		加速度 300m/s ² (约 30G), X、Y、Z 各方向 6 次					
投光元件		红外线 LED(投光波峰波长: 940nm、非调制式)					
材质		外壳: PBT、显示罩: PC(聚碳酸酯)					
电缆		0.09mm ² 4 芯 附带橡胶绝缘电缆 PVC 1m					
质量		本体重量: 约 10g、包装重量: 约 15g					

(注 1): 反应频率是指使下图中的圆盘旋转时的数值。

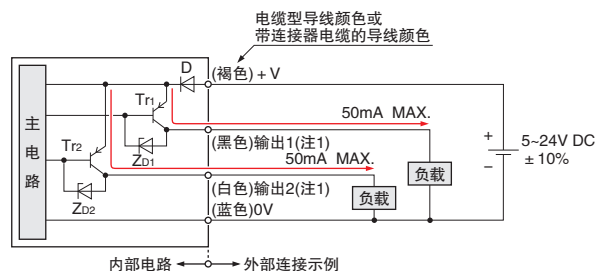


■ 输出回路

● NPN 输出



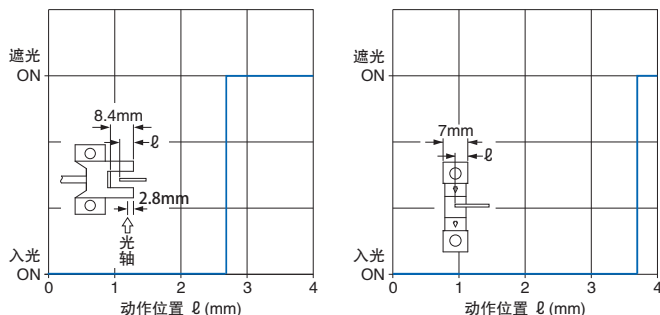
● PNP 输出



输出 1 (黑色): 入光时 ON; 输出 2 (白色): 遮光时 ON; 不使用的线请务必绝缘处理。

■ 检测位置特性

● PM3-45 列



■ 使用说明



请勿将本产品用于直接检测人体。如果使用，有死亡或重伤的风险。

1. 安装: 用螺丝固定主体时, 紧固扭矩请控制在 $0.5\text{N} \cdot \text{m}$ 以下; 使用环境温度在 $+50^\circ\text{C}$ 以上时, 请务必安装到金属体上。
2. 关于延长电缆: 延长电缆会造成电压降低, 因此, 请确保传感器的供给电压处于额定范围内。
3. 其他

- 本产品是以在工业环境中使用为目的而开发/制造。
- 由于是设备内置型, 因此, 在抗干扰光束方面并未采取特别的措施。请注意不要使光束直射受光部。
- 使用时请避开通电时的过渡状态 (50ms)
- 在灰尘较多的作业现场使用时, 请定期使用干燥、柔软的布等将投光、受光部位擦拭干净。
- 传感器附近有马达、电磁线圈以及电磁阀等会产生较大电涌的装置时, 请在该装置上安装电涌吸收器。此外, 请避免与动力线并行配线, 与此同时, 在传感器的 + V 和 0V 之间连接电容器, 确认电涌已完全消失后再使用。

■ 外形尺寸 (单位: mm)

外形尺寸图的 CAD 数据可从网站下载。

● PM3-K45 Technical drawing of the PM3-K45 sensor. The front view shows a total width of 19mm, with a central sensor area of 14.4mm and a 5mm gap. The height is 21.4mm, with a 9.3mm section at the top and a 11.2mm section below. The mounting holes are 2x Ø4. The side view shows a total height of 6mm, with a 5.6mm section. The top view shows a total width of 25.4mm, with a 19mm section and a 7mm gap. The mounting holes are 2x Ø3.2. A red indicator light is shown in the top view.	● PM3-T45 Technical drawing of the PM3-T45 sensor. The front view shows a total width of 14.6mm, with a central sensor area of 5mm and a 2.8mm gap. The height is 17.2mm, with a 9.3mm section at the top and a 12.4mm section below. The mounting holes are Ø3. The side view shows a total height of 26mm, with a 20mm section and a 6.4mm gap. The mounting holes are 2x Ø4.2. The top view shows a total width of 18.2mm, with a 12.4mm section and a 5.8mm gap. A red indicator light is shown in the top view.
● PM3-L45 Technical drawing of the PM3-L45 sensor. The front view shows a total width of 26.4mm, with a central sensor area of 19mm and a 14.5mm gap. The height is 14.7mm, with an 8.8mm section at the top and a 5.9mm section below. The mounting holes are 2x Ø3.2. The side view shows a total height of 6.4mm, with a 6mm section and a 0.4mm gap. The mounting holes are 2x Ø3.2. The top view shows a total width of 26.4mm, with a 19mm section and a 7.5mm gap. The mounting holes are 2x Ø3.2. A red indicator light is shown in the top view.	● PM3-Y45 Technical drawing of the PM3-Y45 sensor. The front view shows a total width of 14.5mm, with a central sensor area of 7mm and a 3.5mm gap. The height is 21mm, with a 7.8mm section at the top and a 3.2mm section below. The mounting holes are 2x Ø3.5. The side view shows a total height of 2.5mm, with a 5.8mm section and a 0.3mm gap. The mounting holes are 2x Ø3.5. The top view shows a total width of 14.8mm, with a 12mm section and a 2.8mm gap. The mounting holes are 2x Ø3.5. A red indicator light is shown in the top view.
● PM3-F45 Technical drawing of the PM3-F45 sensor. The front view shows a total width of 14.6mm, with a central sensor area of 14.4mm and a 5mm gap. The height is 21.4mm, with a 9.3mm section at the top and a 14.6mm section below. The mounting holes are 2x Ø3.5. The side view shows a total height of 13.2mm, with a 6.5mm section and a 6.3mm gap. The mounting holes are 2x Ø3.5. The top view shows a total width of 17.4mm, with a 14.6mm section and a 2.8mm gap. The mounting holes are 2x Ø3.5. A red indicator light is shown in the top view.	● PM3-R45 Technical drawing of the PM3-R45 sensor. The front view shows a total width of 14.6mm, with a central sensor area of 14.4mm and a 5mm gap. The height is 17.4mm, with a 14.6mm section at the top and a 2.8mm section below. The mounting holes are 2x Ø3.5. The side view shows a total height of 13.2mm, with a 6.5mm section and a 6.3mm gap. The mounting holes are 2x Ø3.5. The top view shows a total width of 21.4mm, with a 14.6mm section and a 2.8mm gap. The mounting holes are 2x Ø3.5. A red indicator light is shown in the top view.