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地 址：上海延安西路 1329 弄 5 号 2103 室 (利星国际广场)  
Address: 1329 Lane 5th, West Yanan Road, Shanghai  
(room 2103, Li Xing International Plaza)  
电话 Tel: 86-21-6658-1687 86-21-5308-1687

手机 Mobile: 86-139 1682 4787  
传真 Fax: 86-21-5308-2129  
E-mail: qwifm@qwifm.com  
<http://www.qwifm.com>





# EN33 Series

## 光电传感器

### Photoelectric Sensor

- 能在阳光下使用的光电传感器
- 最适用于物流装置的通用光电传感器
- 全球范围 (EN 规格产品) ( 备有 NPN,PNP ) 适用
- 检测距离是同类产品 1 倍的远距离光电传感器
- A photoelectric sensor that can be used in the sun
- General purpose photoelectric sensor suitable for logistics device
- Suitable for EN product(with PNP and NPN)in the world
- Twice working distance than normal products



反射型 ( Reflective type ) : 150cm

偏光镜片反射型 ( Polarizing lens reflective type ) : 400cm

对射型 ( Opposite type ) : 1000cm



### 高亮度可视红光发射光源

可视效果佳，高亮度设计，便于安装和调试

#### High brightness visible red light source

Good visual effect, high brightness design, easy to install and debug



### 清晰的双色 LED 功能指示

电源状态，开关状态可视效果佳，后 270° 可视角设计，更符合客户现场应用情况

#### Clear dual LED function indication

Power status, switch status visual effect is good, after 270° Viewable design, more in line with customer site applications



### 相互安装无干扰

漫反射、反射板型相互安装无干扰

#### Parallel installation without interference

Diffuse reflection and reflection plate type are installed without interference



### 安装孔内置 M3 螺纹金属紧固件

抗振动、安装更牢固

#### M3 threaded metal fasteners in the mounting holes

Anti-vibration, more secure installation

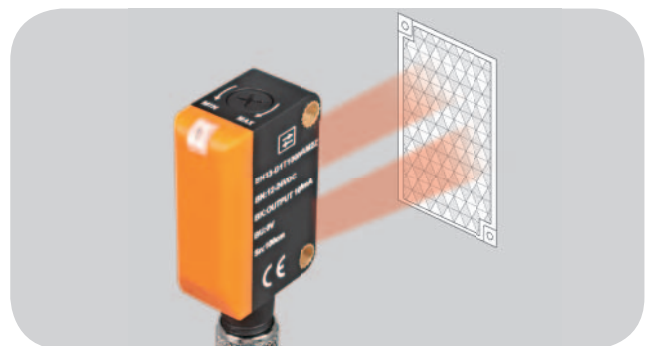


### 可用环境温度

最低可达 -25°C

#### Available ambient temperature

Minimum -25 ° C



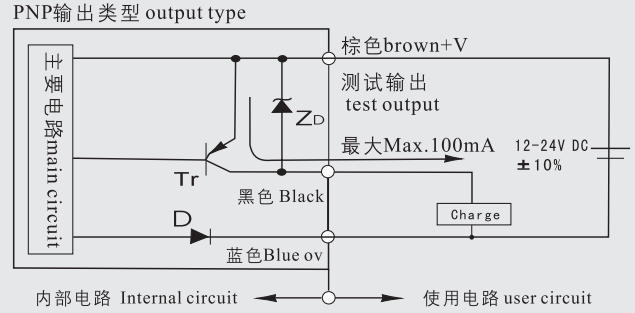
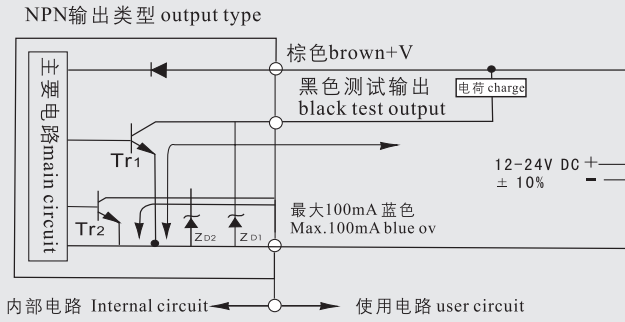
### 可检测超小直径的物体

镜面反射尺寸 24×17mm，在 1.5m 距离内可检测直径 0.5mm 的细小物体

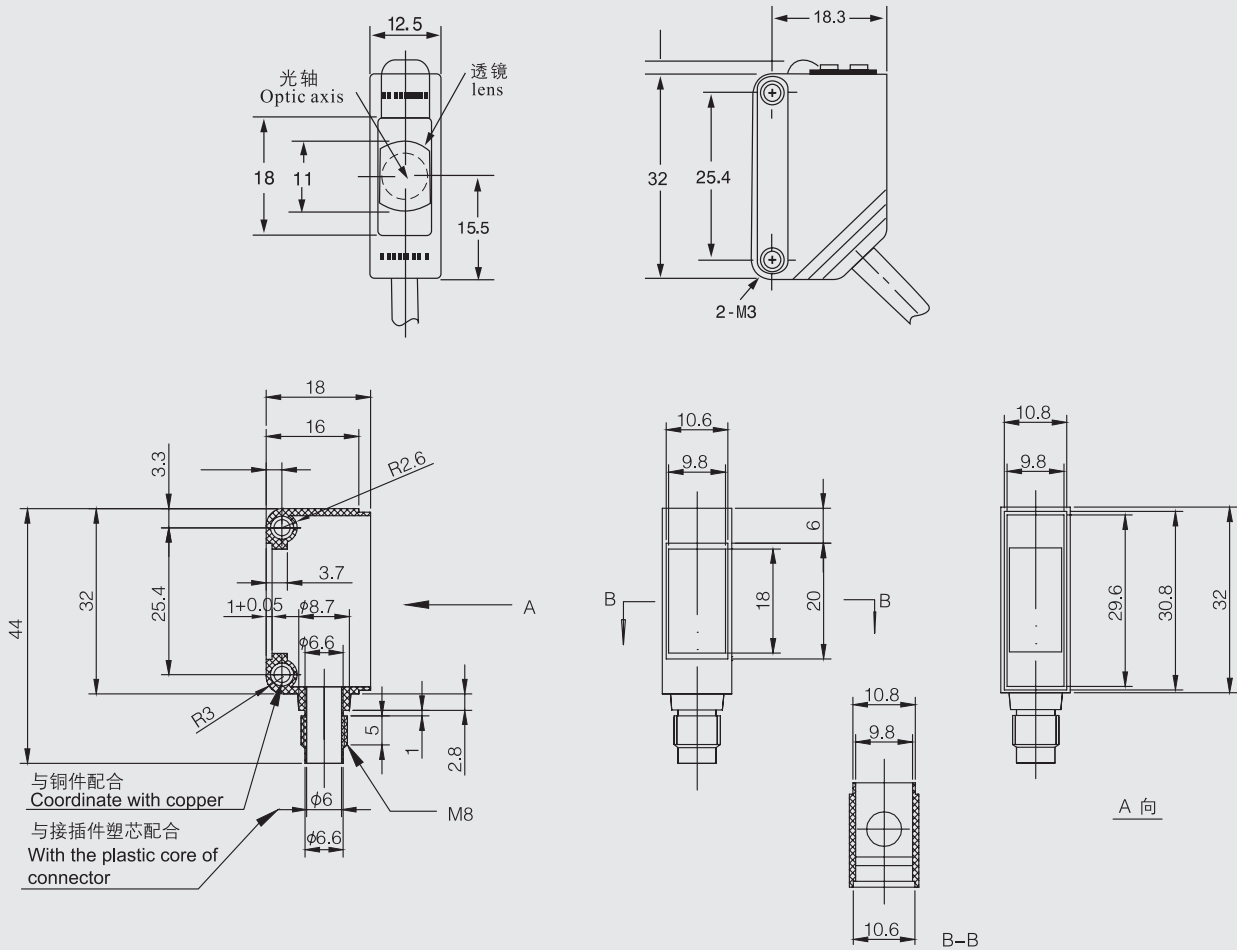
#### Detects objects of very small diameter

24×17mm reflector, Could detect the objects less than 0.5mm within 1.5m

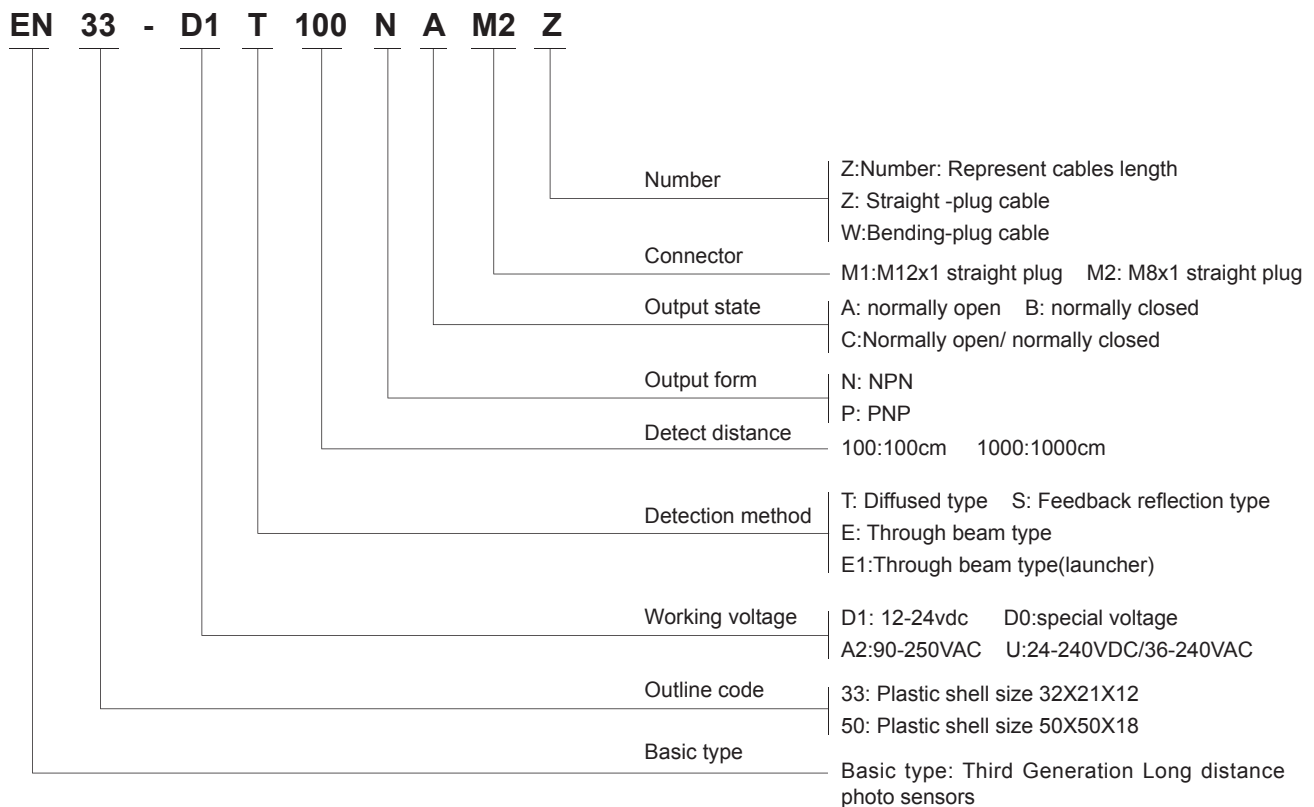
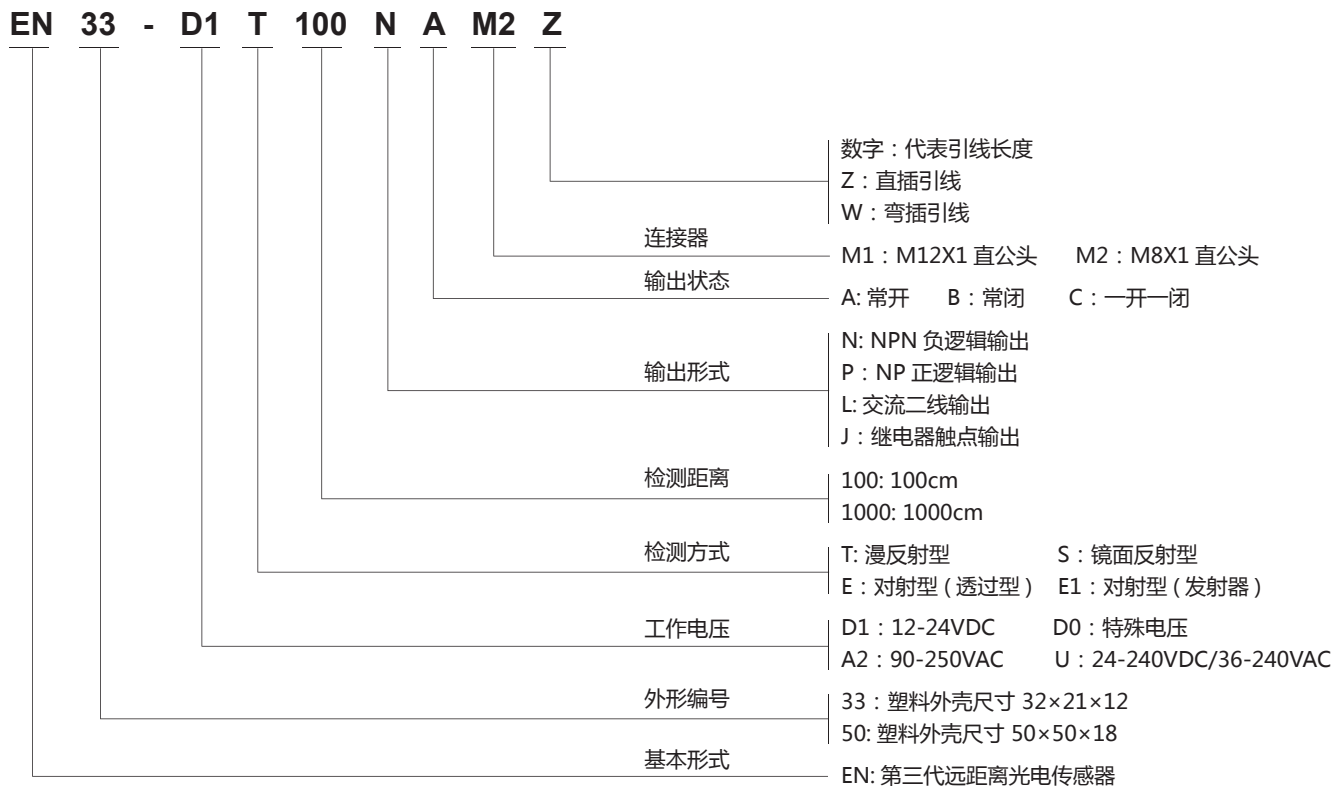
产品接线图 Product wiring diagram



产品尺寸图 Product size diagram



# 型号及其含义 Selection Guide





## EN33 漫反射型长距离引线式光电传感器

### 技术参数

- 能在阳光下使用的光电传感器
- 长距离检测 反射型：150cm
- 最适用于物流包装装置的通电光电传感器
- 全球范围 (EN 规格产品) (备有 NPN,PNP) 适用
- 红光 / 红外光可选

产品型号			漫反射		
型号	负逻辑	常开	EN33-D1T50NA	EN33-D1T100NA	EN33-D1T150NA
		常闭	EN33-D1T50NB	EN33-D1T100NB	EN33-D1T150NB
	正逻辑	常开	EN33-D1T50PA	EN33-D1T100PA	EN33-D1T150PA
		常闭	EN33-D1T50PB	EN33-D1T100PB	EN33-D1T150PB
电源电压	12-24VDC±10%的波动				
消耗电流	< 30mA		< 30mA		< 30mA
检测距离	50cm		100cm		150cm
标准检测物	无光泽白板纸 20cm×20cm				
光源	红外光 LED660nm / 红外线 880nm				
响应时间	移动和复位小于 1ms				
受光面照度	白炽灯：小于 3000Lus 阳光：小于 11000Lus				
使用温度范围	-25°C ~ +55°C没有结冰和结露				
使用湿度范围	30-85%RH				
绝缘电阻	> 20MΩ				
耐电压	AC1000V 50/60Hz 1分钟				
材质	外壳：增强 ABS 镜片：聚碳				
产品标准	GB/T14048.10-2016				
保护等级	IP64(IEC)				
电路保护	防止错误输出时，电源供应器储备连接的保护，通过 / 截止 (约 100ms)				

## EN33 long distance diffused cable type photoelectric sensor

### Technical parameters

- A photoelectric sensor that can be used in the sun
- Long-distance detection Diffused type: 150cm
- General purpose photoelectric sensor suitable for logistics device
- Suitable for EN product(with PNP and NPN)in the world
- Red light / infrared light optional

Product model			Diffused type		
Model	NPN	NO	EN33-D1T50NA	EN33-D1T100NA	EN33-D1T150NA
		NC	EN33-D1T50NB	EN33-D1T100NB	EN33-D1T150NB
	PNP	NO	EN33-D1T50PA	EN33-D1T100PA	EN33-D1T150PA
		NC	EN33-D1T50PB	EN33-D1T100PB	EN33-D1T150PB
Power supply	12-24VDC±10% fluctuation				
Consumption current	< 30mA		< 30mA		< 30mA
Effective detection range	50cm		100cm		150cm
Standard sensing object	Matte Whiteboard Paper 20cm×20cm				
Light	Infrared LED 660nm, Infrared 880nm				
Response time	Move and reset less than 1ms				
Ambient illumination	Lamp: Less than 3000Lus sunlight: Less than 11000Lus				
Ambient Temperature	-25°C ~ +55°C without icing and condensation				
Ambient Humidity	30-85%RH				
Insulated resistance	> 20MΩ				
Voltage resistance	AC1000V 50/60Hz 1 minute				
Material	Housing: reinforced ABS lens: polycarbon				
Product Standards	GB/T14048.10-2016				
Protection level	IP64(IEC)				
Circuit protection	Protection against error output, power supply reserve connection, pass/cut off (100ms)				



## EN33 镜面反射型长距离引线式光电传感器

### 技术参数

- 能在阳光下使用的光电传感器
- 最适用于物流装置的通电光电传感器
- 标准偏光的镜片反射型
- 长距离检测 偏光镜片反射型：400cm
- 全球范围 (EN 规格产品) (备有 NPN,PNP) 适用

产品型号			镜面反射型		
型号	负逻辑	常开	EN33-D1S200NA	EN33-D1S300NA	EN33-D1S400NA
		常闭	EN33-D1S200NB	EN33-D1S300NB	EN33-D1S400NB
	正逻辑	常开	EN33-D1S200PA	EN33-D1S300PA	EN33-D1S400PA
		常闭	EN33-D1S200PB	EN33-D1S300PB	EN33-D1S400PB
电源电压			12-24VDC±10%的波动		
消耗电流			< 30mA	< 30mA	< 30mA
检测距离			200cm	300cm	400cm
标准检测物			Φ60mm (反射型) 不透明物体		
光源			红外光 LED 660nm / 红外线 880nm		
响应时间			移动和复位小于 1ms		
受光面照度			白炽灯：小于 3000Lus 阳光：小于 11000Lus		
使用温度范围			-25°C ~ +55°C 没有结冰和结露		
使用湿度范围			30-85%RH		
绝缘电阻			> 20MΩ		
耐电压			AC1000V 50/60Hz 1分钟		
材质			外壳：增强 ABS 镜片：聚碳		
产品标准			GB/T14048.10-2016		
保护等级			IP64(IEC)		
电路保护			防止错误输出时，电源供应器储备连接的保护，通过 / 截止 (约 100ms)		

## EN33 long distance feedback reflective cable type photoelectric sensor

### Technical parameters

- A photoelectric sensor that can be used in the sun
- General purpose photoelectric sensor suitable for logistics device
- Standard polarized lens reflective type
- Long-distance detection Polarizing lens reflective type: 400cm
- Suitable for EN product(with PNP and NPN)in the world

Product model			Feedback reflective type		
Model	NPN	NO	EN33-D1S200NA	EN33-D1S300NA	EN33-D1S400NA
		NC	EN33-D1S200NB	EN33-D1S300NB	EN33-D1S400NB
	PNP	NO	EN33-D1S200PA	EN33-D1S300PA	EN33-D1S400PA
		NC	EN33-D1S200PB	EN33-D1S300PB	EN33-D1S400PB
Power supply			12-24VDC±10% fluctuation		
Consumption current			< 30mA	< 30mA	< 30mA
Effective detection range			200cm	300cm	400cm
Standard sensing object			Φ60mm (reflective) opaque object		
Light			Infrared LED 660nm, Infrared 880nm		
Response time			Move and reset less than 1ms		
Ambient illumination			Lamp: Less than 3000Lus sunlight: Less than 11000Lus		
Response time			-25°C ~ +55°C without icing and condensation		
Ambient Humidity			30-85%RH		
Insulated resistance			> 20MΩ		
Voltage resistance			AC1000V 50/60Hz 1 minute		
Material			Housing: reinforced ABS lens: polycarbon		
Product Standards			GB/T14048.10-2016		
Protection level			IP64(IEC)		
Circuit protection			Protection against error output, power supply reserve connection, pass/cut off (100ms)		



## EN33 对射型长距离引线式光电传感器

### 技术参数

- 能在阳光下使用的光电传感器
- 最适用于物流装置的通用光电传感器
- 相互安装无干扰
- 长距离检测 透过型：1000cm
- 全球范围 (EN 规格产品) ( 备有 NPN,PNP) 适用

产品型号			对射型	
型号	负逻辑	常开	EN33-D1E1000NA	EN33-D1E500NA
		常闭	EN33-D1E1000NB	EN33-D1E500NB
	正逻辑	常开	EN33-D1E1000PA	EN33-D1E500PA
		常闭	EN33-D1E1000PB	EN33-D1E500PB
电源电压	12-24VDC±10%的波动			
消耗电流	< 30mA		< 30mA	
检测距离	1000cm		500cm	
标准检测物	Φ5mm 不透明物体			
光源	红外光 LED 880nm			
响应时间	移动和复位小于 1ms			
受光面照度	白炽灯：小于 3000Lus 阳光：小于 11000Lus			
使用温度范围	-25°C ~ +55°C 没有结冰和结露			
使用湿度范围	30-85%RH			
绝缘电阻	> 20MΩ			
耐电压	AC1000V 50/60Hz 1分钟			
材质	外壳：增强 ABS 镜片：聚碳			
产品标准	GB/T14048.10-2016			
保护等级	IP64(IEC)			
电路保护	防止错误输出时，电源供应器储备连接的保护，通过 / 截止 (约 100ms)			

## EN33 series long distance through beam cable type photoelectric sensor

### Technical parameters

- A photoelectric sensor that can be used in the sun
- General purpose photoelectric sensor suitable for logistics device
- Inter-installation without interference
- Long-distance detection through beam type: 1000cm
- Suitable for EN product(with PNP and NPN)in the world

Product model			Opposite type (Through beam type)	
Model	NPN	NO	EN33-D1E1000NA	EN33-D1E500NA
		NC	EN33-D1E1000NB	EN33-D1E500NB
	PNP	NO	EN33-D1E1000PA	EN33-D1E500PA
		NC	EN33-D1E1000PB	EN33-D1E500PB
Power supply	12-24VDC±10% fluctuation			
Consumption current	< 30mA		< 30mA	
Effective detection range	1000cm		500cm	
Standard sensing object	Φ5mm Opaque objects			
Light	Infrared LED 880nm			
Response time	Move and reset less than 1ms			
Ambient illumination	Lamp: Less than 3000Lus sunlight: Less than 11000Lus			
Ambient Temperature	-25~+55°C without icing and condensation			
Ambient Humidity	30-85%RH			
Insulated resistance	> 20MΩ			
Voltage resistance	AC1000V 50/60Hz 1 minute			
Material	Housing: reinforced ABS lens: polycarbon			
Product Standards	GB/T14048.10-2016			
Protection level	IP64(IEC)			
Circuit protection	Protection against error output, power supply reserve connection, pass/cut off (100ms)			





## EN33 漫反射型长距离接插件式光电传感器

### 技术参数

- 能在阳光下使用的光电传感器
- 长距离检测 反射型 : 150cm
- 最适用于物流包装装置的通光电传感器
- 全球范围 (EN 规格产品) ( 备有 NPN,PNP) 适用
- 红光 / 红外光可选

产品型号		漫反射型			
型号	负逻辑	常开	EN33-D1T50NAM2Z	EN33-D1T100NAM2Z	EN33-D1T150NAM2Z
		常闭	EN33-D1T50NBM2Z	EN33-D1T100NBM2Z	EN33-D1T150NBM2Z
	正逻辑	常开	EN33-D1T50PAM2Z	EN33-D1T100PAM2Z	EN33-D1T150PAM2Z
		常闭	EN33-D1T50PBM2Z	EN33-D1T100PBM2Z	EN33-D1T150PBM2Z
电源电压	12-24VDC±10%的波动				
消耗电流	< 30mA		< 30mA		< 30mA
检测距离	50cm		100cm		150cm
标准检测物	无光泽白板纸 20cm×20cm				
光源	红外光 LED 660nm, 红外线 880nm				
响应时间	移动和复位小于 1ms				
受光面照度	白炽灯 : 小于 3000Lus 阳光 : 小于 11000Lus				
使用温度范围	-25°C ~ +55°C没有结冰和结露				
使用湿度范围	30-85%RH				
绝缘电阻	> 20MΩ				
耐电压	AC1000V 50/60Hz 1 分钟				
材质	外壳 : 增强 ABS 镜片 : 聚碳				
产品标准	GB/T14048.10-2016				
保护等级	IP64(IEC)				
电路保护	防止错误输出时, 电源供应器储备连接的保护, 通过 / 截止 (约 100ms)				

## EN33 long distance Diffuse reflection type photoelectric sensor with connector

### Technical parameters

- A photoelectric sensor that can be used in the sun
- Long-distance detection Diffused type: 150cm
- General purpose photoelectric sensor suitable for logistics device
- Suitable for EN product(with PNP and NPN)in the world
- Red light / infrared light optional

Product model		Diffused type			
Model	NPN	NO	EN33-D1T50NA	EN33-D1T100NA	EN33-D1T150NA
		NC	EN33-D1T50NB	EN33-D1T100NB	EN33-D1T150NB
	PNP	NO	EN33-D1T50PA	EN33-D1T100PA	EN33-D1T150PA
		NC	EN33-D1T50PB	EN33-D1T100PB	EN33-D1T150PB
Power supply	12-24VDC±10% fluctuation				
Consumption current	< 30mA		< 30mA		< 30mA
Effective detection range	50cm		100cm		150cm
Standard sensing object	Matte Whiteboard Paper 20cm×20cm				
Light	Infrared LED 660nm, Infrared 880nm				
Response time	Move and reset less than 1ms				
Ambient illumination	Lamp: Less than 3000Lus sunlight: Less than 11000Lus				
Ambient Temperature	-25~+55°C without icing and condensation				
Ambient Humidity	30-85%RH				
Insulated resistance	> 20MΩ				
Voltage resistance	AC1000V 50/60Hz 1 minute				
Material	Housing: reinforced ABS lens: polycarbon				
Product Standards	GB/T14048.10-2016				
Protection level	IP64(IEC)				
Circuit protection	Protection against error output, power supply reserve connection, pass/cut off (100ms)				



## EN33 系列镜面反射型长距离接插件式光电传感器

### 技术参数

- 能在阳光下使用的光电传感器
- 最适用于物流装置的通用光电传感器
- 标准偏光的镜片反射型
- 长距离检测 偏光镜片反射型：400cm
- 全球范围 (EN 规格产品) (备有 NPN,PNP) 适用

产品型号			镜面反射型		
型号	负逻辑	常开	EN33-D1S200NAM2Z	EN33-D1S400NAM2Z	EN33-D1S400NAM2Z
		常闭	EN33-D1S200NBM2Z	EN33-D1S400NBM2Z	EN33-D1S400NBM2Z
	正逻辑	常开	EN33-D1S200PAM2Z	EN33-D1S400PAM2Z	EN33-D1S400PAM2Z
		常闭	EN33-D1S200PBM2Z	EN33-D1S400PBM2Z	EN33-D1S400PBM2Z
电源电压			12-24VDC±10%的波动		
消耗电流			< 30mA	< 30mA	< 30mA
检测距离			200cm	300cm	400cm
标准检测物			Φ60mm (反射型) 不透明物体		
光源			红外光 LED 660nm, 红外线 880nm		
响应时间			移动和复位小于 1ms		
受光面照度			白炽灯：小于 3000Lus 阳光：小于 11000Lus		
使用温度范围			-25°C ~ +55°C 没有结冰和结露		
使用湿度范围			30-85%RH		
绝缘电阻			> 20MΩ		
耐电压			AC1000V 50/60Hz 1分钟		
材质			外壳：增强 ABS 镜片：聚碳		
产品标准			GB/T14048.10-2016		
保护等级			IP64(IEC)		
电路保护			防止错误输出时，电源供应器储备连接的保护，通过 / 截止 (约 100ms)		

## EN33 series long distance feedback reflective type photoelectric sensor with connector

### Technical parameters

- A photoelectric sensor that can be used in the sun
- General purpose photoelectric sensor suitable for logistics device
- Standard polarized lens reflective type
- Long-distance detection Polarizing lens reflective type: 400cm
- Suitable for EN product(with PNP and NPN)in the world

Product model			Specular reflection type		
Model	NPN	NO	EN33-D1S200NAM2Z	EN33-D1S300NAM2Z	EN33-D1S400NAM2Z
		NC	EN33-D1S200NBM2Z	EN33-D1S300NBM2Z	EN33-D1S400NBM2Z
	PNP	NO	EN33-D1S200PAM2Z	EN33-D1S300PAM2Z	EN33-D1S400PAM2Z
		NC	EN33-D1S200PBM2Z	EN33-D1S300PBM2Z	EN33-D1S400PBM2Z
Power supply			12-24VDC±10% fluctuation		
Consumption current			< 30mA	< 30mA	< 30mA
Effective detection range			200cm	300cm	400cm
Standard sensing object			Φ60mm (reflective) opaque object		
Light			Infrared LED 660nm, Infrared 880nm		
Response time			Move and reset less than 1ms		
Ambient illumination			Lamp: Less than 3000Lus sunlight: Less than 11000Lus		
Ambient Temperature			-25°C ~ +55°C without icing and condensation		
Ambient Humidity			30-85%RH		
Insulated resistance			> 20MΩ		
Voltage resistance			AC1000V 50/60Hz 1 minute		
Material			Housing: reinforced ABS lens: polycarbon		
Product Standards			GB/T14048.10-2016		
Protection level			IP64(IEC)		
Circuit protection			Protection against error output, power supply reserve connection, pass/cut off (100ms)		



## EN33 对射型长距离接插件式光电传感器

### 技术参数

- 能在阳光下使用的光电传感器
- 长距离检测 透过型：1000cm 反射型：150cm 偏光镜片反射型：400cm
- 最适用于物流装置的通用光电传感器
- 全球范围 (EN 规格产品) (备有 NPN,PNP) 适用
- 相互安装无干扰

产品型号			对射型 (透过型)	
型号	负逻辑	常开	EN33-D1E1000NAM2Z	EN33-D1E500NAM2Z
		常闭	EN33-D1E1000NBM2Z	EN33-D1E500NBM2Z
	正逻辑	常开	EN33-D1E1000PAM2Z	EN33-D1E500PAM2Z
		常闭	EN33-D1E1000PBM2Z	EN33-D1E500PBM2Z
电源电压	12-24VDC±10%的波动			
消耗电流	< 30mA		< 30mA	
检测距离	1000cm		500cm	
标准检测物	Φ5mm 以上不透明物体			
光源	红外光 LED 880nm			
响应时间	移动和复位小于 1ms			
受光面照度	白炽灯：小于 3000Lus 阳光：小于 11000Lus			
使用温度范围	-25°C ~ +55°C 没有结冰和结露			
使用湿度范围	30-85%RH			
绝缘电阻	> 20MΩ			
耐电压	AC1000V 50/60Hz 1分钟			
材质	外壳：增强 ABS 镜片：聚碳			
产品标准	GB/T14048.10-2016			
保护等级	IP64(IEC)			
电路保护	防止错误输出时，电源供应器储备连接的保护，通过 / 截止 (约 100ms)			

## EN33 long distance through beam type photoelectric sensor with connector

### Technical parameters

- A photoelectric sensor that can be used in the sun
- Long-distance detection Through type: 1000cm
- General purpose photoelectric sensor suitable for logistics device
- Reflective type: 150cm polarizing lens reflective type: 400cm
- Inter-installation without interference
- Suitable for EN product(with PNP and NPN)in the world

Product model			Opposite type (Through beam type)	
Model	NPN	NO	EN33-D1E1000NAM2Z	EN33-D1E500NAM2Z
		NC	EN33-D1E1000NBM2Z	EN33-D1E500NBM2Z
	PNP	NO	EN33-D1E1000PAM2Z	EN33-D1E500PAM2Z
		NC	EN33-D1E1000PBM2Z	EN33-D1E500PBM2Z
Power supply	12-24V±10% fluctuation			
Consumption current	< 30mA		< 30mA	
Effective detection range	1000cm		500cm	
Standard sensing object	Φ5mm Opaque objects			
Light	Infrared LED 880nm			
Response time	Move and reset less than 1ms			
Ambient illumination	Lamp: Less than 3000Lus sunlight: Less than 11000Lus			
Ambient Temperature	-25°C ~+55°C without icing and condensation			
Ambient Humidity	30-85%RH			
Insulated resistance	> 20MΩ			
Voltage resistance	AC1000V 50/60Hz 1 minute			
Material	Housing: reinforced ABS lens: polycarbon			
Product Standards	GB/T14048.10-2016			
Protection level	IP64(IEC)			
Circuit protection	Protection against error output, power supply reserve connection, pass/cut off (100ms)			

