

# MUJIE 慕杰®

YOUR AUTOMATION, YOUR MUJIE!

抗震性稳定，高分辨率，可保护手指、手掌、人体，安装方式灵活，多样，光轴对准容易，抗光、抗电磁干扰强，二级保护

It has stable earthquake resistance, high resolution, can protect fingers, palms and human bodies, flexible and diverse installation methods, easy optical axis alignment, strong resistance to light and electromagnetic interference, and secondary protection

## 区域传感器MLS系列

Area sensor MLS series



### 型号说明 Model Explanation

ML	S	-40	T4	-NKK	-□	-Z	-□
基本型号 Model M: 常规圆柱形 Cylindrical proximity sensor M□: 特殊型号定义 Special definition L: 区域传感器 Area Sensor	S: 光栅系列 Raster series	光轴间距 Optical axis spacing:  20: 20mm 40: 40mm	光轴数 Number of beams: 4: 4个 6: 6个 8: 8个 10: 10个 12: 12个等	输出方式 Output configuration: NKK: NPN输出 NPN NO+NO PKK: PNP输出 PNP NO+NO NKB: NPN输出 NPN NO+NC PKB: PNP输出 PNP NO+NC NBB: NPN输出 NPN NC+NC PBB: PNP输出 PNP NC+NC	线缆长度 Cable length (标配2米 Standard Cable length is 2m) 5: 5m	产品等级 Product grade:	客户定制 Customized informat

### 产品种类 Product Category

型号 Model	形状 Appearance	检测距离 Sensing distance	输出方式 Output configuration	连接方式 Connection mode
MLS-40T4		3m 10m	NKK: NPN输出 NPN NO+NO PKK: PNP输出 PNP NO+NO NKB: NPN输出 NPN NO+NC PKB: PNP输出 PNP NO+NC NBB: NPN输出 NPN NC+NC PBB: PNP输出 PNP NC+NC	导线引出/航插 Cable line/Plug

### 技术规格 Specification

型号 Type	
电源电压 Voltage	直流DC: 12-24VDC
检测距离 Sensing distance	3m
负载电流 Load current	<200mA
压降 Drop	<0.5V
消耗电流 Consumption of current	<100mA
重复精度 Repetition precision/load	<5%
光源 Light source	红外 LED(880nm)
输出 Output	NPN/PNP/
响应时间 Response time	15ms max.
输出/电源指示 Output/Power indication	红色LED Red LED / 绿色 Green LED
极性保护 Polarity protection	Yes
抗光干扰 Resist light interference	太阳光Sunlight: 10000Lux
环境温度 Ambient temperature	动作时 Operating: -10~+40°C, 保存时 Storage: -25~+55°C (不结冰 with no icing)
环境湿度 Ambient humidity	工作时/保存时 Operating/Storage: 35~85%RH/35~95%RH (不结露 with no condensation)
振动(耐久) Vibration resistance	10~55Hz 复振幅 1.5mmX, Y, Z各方向 2h double amplitude for 2 hours each in X, Y and Z directions
冲击(耐久) Shock resistance	500m/s² X, Y, Z各方向 10次 500m/s² 10 times each X, Y and Z directions
防护等级 Degree of protection	IEC IP64
外壳 Case	铝合金 Aluminium alloy
工作电源 Working power supply	DC24V±20%

### 电路输出方式(示例) Example for output circuit

晶体管双路输出NPN/PNP接线图 (线同步)  
Transistor dual output npn/pnp wiring diagram (line synchronization)

1. 发射端和接收端棕色线VCC相连, 再接电源正极+24VDC.  
1. The transmitting end and the receiving end are connected with the brown line VCC, and then connected with the positive electrode of the power supply + 24VDC
2. 发射端和接收端蓝色线GND相连, 再接电源负极0V.  
2. Connect the blue line GND at the transmitting end and the receiving end, and then connect the negative electrode 0V of the power supply.
3. 发射端和接收端白色同步线相连。  
3. The transmitting end and the receiving end are connected with a white synchronization line.
4. 接收端黑色线常闭0SSD1输出信号为0V, 接继电器负极或直接接PLC端口。  
4. The black line at the receiving end is normally closed and the output signal of 0ssd 1 is 0V, which is connected to the relay negative pole or directly connected to the PLC port
5. 接收端灰色线常闭0SSD2输出信号为12-24V, 接继电器负极或直接接PLC端口。  
5. The gray line at the receiving end is normally closed 0ssd2, and the output signal is 12-24V, which is connected to the relay negative pole or directly connected to the PLC port
6. 发射端与接收端黄色屏蔽线(PE)相连, 再接电源负极0V。  
6. The transmitting end is connected to the Yellow shielded wire (PE) at the receiving end, and then connected to the negative electrode 0V of the power supply
7. 请选择NPN/PNP输出方式: (常开或常闭) A, 选择NPN时即为黑色常闭-灰色常闭; 选择PNP时即为黑色常闭-灰色常闭。  
7. Please select NPN / PNP output mode: (normally open or normally closed) A, when NPN is selected, it is black normally closed - gray normally closed; B, when PNP is selected, it is black normally closed - gray normally closed

编码器/磁栅尺  
Encoder/Magnetic Scale

位移/倾角/计数器  
Displacement /Inclination /Counter

接近/加速度/温度  
Proximity/Acceleration/Temperature

光电/超声波/区域  
Photoelectric/Ultrasonic/Area

压力/称重  
Pressure / load cell

联轴器/附件  
Couplings/Accessories

## ► 光栅选型，保护高度，总高度 Grating selection, protection height, total height

光轴间距(20mm)												
规格型号 Specification and model	0440	0640	0840	1040	1240	1440	1640	1840	2040	2240	2440	2640
光栅高度 Grating height (mm)	142.6	182.6	222.6	262.6	302.6	342.6	382.6	422.6	462.6	502.6	542.6	582.6
保护高度 Protection height (mm)	60	100	140	180	220	260	300	340	380	420	460	500
光束数量 Number of beams (n)	4	6	8	10	12	14	16	18	20	22	24	26

光轴间距(20mm)												
规格型号 Specification and model	2840	3040	3240	3440	3640	3840	4040	4240	4440	4640	4840	
光栅高度 Grating height (mm)	622.6	662.6	702.6	742.6	782.6	822.6	862.6	902.6	942.6	982.6	1022.6	
保护高度 Protection height (mm)	540	580	620	660	700	740	780	820	860	900	940	
光束数量 Number of beams (n)	28	30	32	34	36	38	40	42	44	46	48	

光轴间距(40mm)												
规格型号 Specification and model	0440	0640	0840	1040	1240	1440	1640	1840	2040	2240	2440	2640
光栅高度 Grating height (mm)	202.6	282.6	362.6	442.6	522.6	602.6	682.6	762.6	842.6	922.6	1002.6	1082.6
保护高度 Protection height (mm)	120	200	280	360	440	520	600	680	760	840	920	1000
光束数量 Number of beams (n)	4	6	8	10	12	14	16	18	20	22	24	26

光轴间距(40mm)												
规格型号 Specification and model	2840	3040	3240	3440	3640	3840	4040	4240	4440	4640	4840	
光栅高度 Grating height (mm)	1162.6	1242.6	1322.6	1402.6	1482.6	1562.6	1642.6	1722.6	1802.6	1882.6	1962.6	
保护高度 Protection height (mm)	1080	1160	1240	1320	1400	1480	1560	1640	1720	1800	1880	
光束数量 Number of beams (n)	28	30	32	34	36	38	40	42	44	46	48	

## ► 安全警告 Safety warning

### 安全警告 : Safety warning:

安全光幕光栅接电，必须要有专业操作人员持证上岗，非专业人员请勿操作。本安全光幕光栅使用电流为直流12-30VDC，不能在交流电使用。

When the safety light curtain grating is powered on, professional operators must work with certificates, and non professionals are not allowed to operate. The current of the safety light curtain grating is DC 12-30vdc, which cannot be used in AC.

### 警告1 : Warning 1:

在感应器及危险区域间，必须保持安全距离300MM。

A safe distance of 300mm must be kept between the sensor and the dangerous area.

### 警告2 : Warning 2:

不可使用于无立即停止电子控制式的机器。

It cannot be used in machines without immediate stop electronic control.

### 警告3 : Warning 3:

安装时，考虑是否有其它会导致机能故障的反射物。

When installing, consider whether there are other reflectors that may cause functional failure.

## ► 技术参数 technical parameter

型号 Model	光点数 Light number	H=光轴间距 Beam pitch mm	C=保护高度 Protection height mm	A=上端盖高度 Height of upper end cap mm	B=盲区 Blind area mm	D=盲区 Blind area mm	E=下端盖高度 Height of lower end cover mm	F=航空插头高度 Aviation plug height mm	G=光栅总高度 Total height of grating mm
MLS-40T4-NKK	4	40	120	15	10	35	15	7.6	202.6
MLS-20T4-NKK	4	20	60	15	10	35	15	7.6	142.6

## ► 安装尺寸图 Mounting Dimensions(单位Unit:mm)

