

Product Description

- Laser displacement sensor ,680nm laser source,FULL Metal JACKET,durable,better protective performance,small light spot,high precision,LED display and key setting.Suitable for dispensing machine,packing,automobile AGV and other industries.



Product features:

- Support switch output,NPN/PNP can be set.
- Support analog output,current output/voltage output can be set.
- Four white digital tubes,clear and bright
- Strong ambient light resistance and compact size
- Support multiple detection modes,multi-scene applications.

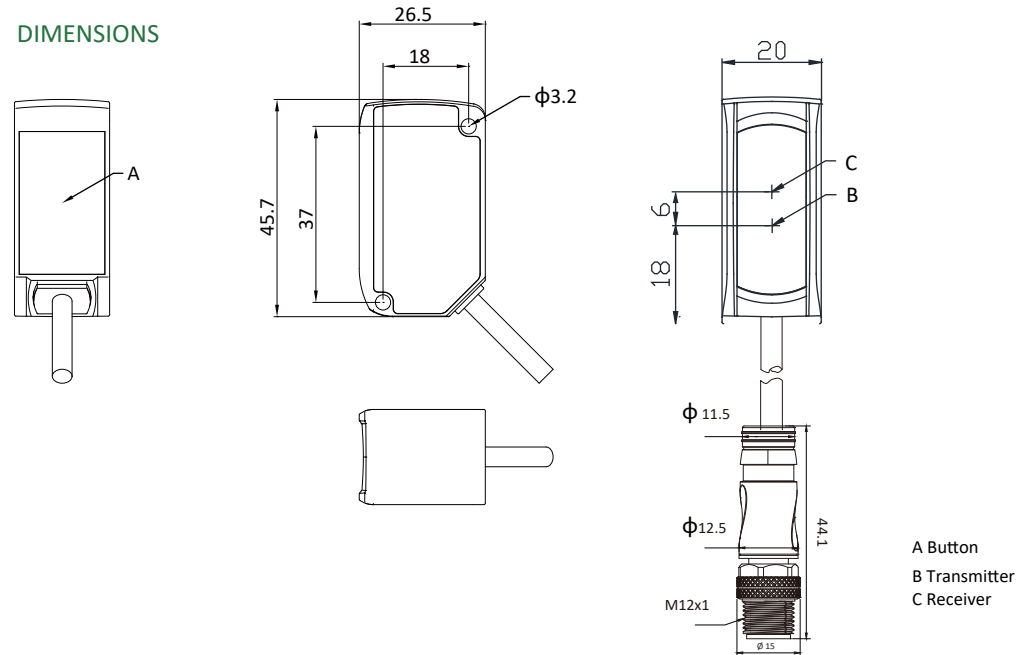
Type	Measurement range	Beam diameter	Repeatability	Absolute accuracy	Resolution
OSM41-KL10CBLIU6	100...9999mm	0.4 divergence angle (10mm@2M 20mm@4M 50mm@10M)	tabula rasa	tabula rasa	1mm
OSM41-KL10CBLIU6-0.3-Q12			10mm(dis<5m,90% reflection) 30mm(dis<10m,90% reflection) blackboard	10mm(dis<5m,90% reflection) 30mm(dis<10m,90% reflection) blackboard	
			30mm(dis<5m,6% reflection) 50mm(dis<10m,6% reflection)	30mm(dis<5m,6% reflection) 50mm(dis<10m,6% reflection)	

Note 1: This product is a laser product, which can be used after 10 minutes of preheating after power-on.
 Note 2: For breakout products, *M represents the cable length; if not specified, the default is 2 meters.
 For pigtail products, * represents the cable length in meters. If there is no Wei connector product

TECHNICAL SPECIFICATION

OPERATING VOLTAGE	10...30VDC	WORKING TEMPERATURE	-10°C ... +50°C
POWER SUPPLY	<1W	ANTI-AMBIENT LIGHT ABILITY	>8000lux
LIGHT SOURCE TYPE	680nm red laser, class1 grade	PROTECTION DEGREE	IP67
CONTROL OUTPUT	NPN/PNP can be set	HOUSING MATERIAL	Die-cast zinc
ANALOG OUTPUT	Current : 4~20mA (beyond,0mA) Voltage : 0~5V (beyond,5.2V) 0~10V (beyond,10.2V)	WINDOWS MATERIAL	Glass
RESPONSE TIME	10Hz/25Hz 50Hz/100Hz	CONNECTIONS	Cable/Pigtail Cable

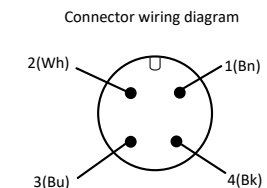
DIMENSIONS



INTERFACE DEFINITION AND WIRING DIAGRAM

	Function	Cabel product core color
1	Positive power supply	Brown
2	Analog output	Gray
3	Power negative	Blue
4	NPN/PNP	Black

	Function	Pigtail cable product core color
1	Positive power supply	Brown
2	Analog output	Gray
3	Power negative	Blue
4	NPN/PNP	Black



产品说明:

- 激光位移传感器, 680nm激光光源, 全金属外壳, 坚固耐用, 防护性能更好, 体积小, 光斑小, 精度高, LED显示和按键设置。适用点胶机、包装、汽车、AGV等行业应用。



产品特点:

- 支持开关量输出, NPN/PNP可设定
- 支持模拟量输出, 电流输出/电压输出可设定
- 四位白色数码管, 明亮清晰
- 抗环境光能力强, 紧凑尺寸
- 支持多种检测模式, 多场景应用

型号	检测距离	光束直径	重复精度	绝对精度	分辨率
OSM41-KL10CBLIU6-*M	100...9999mm	0.4°发散角 (10mm@2M 20mm@4M 50mm@10M)	白板 10mm(dis<5m,90%反射)	白板 10mm(dis<5m,90%反射)	1mm
OSM41-KL10CBLIU6-*Q12			30mm(dis<10m,90%反射)	30mm(dis<10m,90%反射)	
			黑板 30mm(dis<5m,6%反射)	黑板 30mm(dis<5m,6%反射)	
			50mm(dis<10m,6%反射)	50mm(dis<10m,6%反射)	

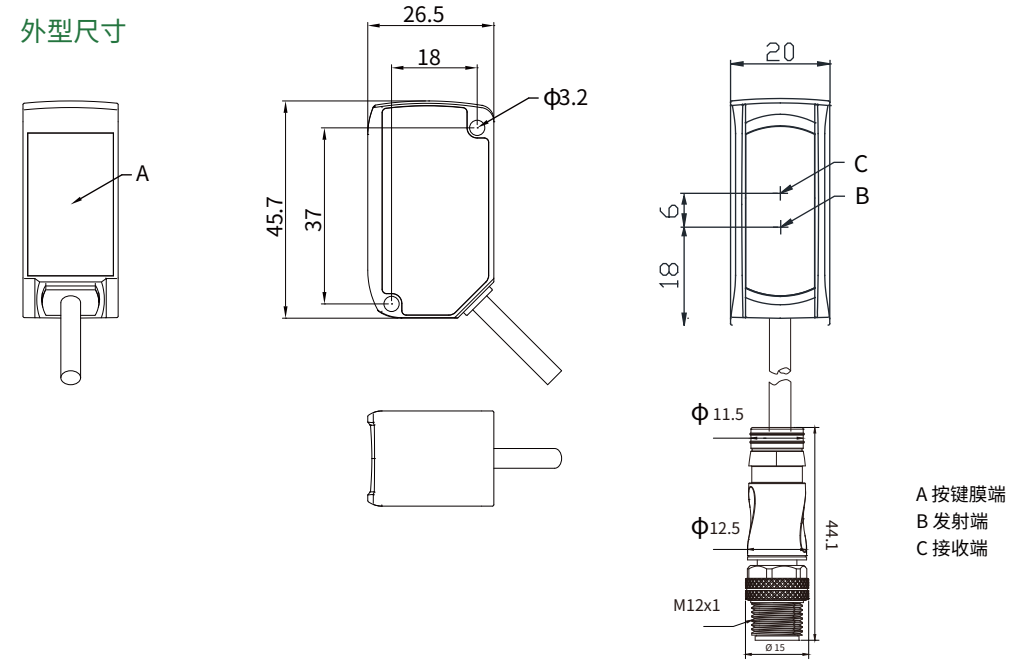
注1: 本产品为激光类产品, 上电预热十分钟后使用。

注2: 出线产品*M代表线长, 如无为默认2M长度。pigtail产品*代表线长, 单位为米, 若无为接插件产品。

技术参数

工作电压	10...30VDC	工作温度	-10°C...+50°C
功率	<1W	抗环境光能力	>8000lux
光源	680nm红激光, class1等级	防护等级	IP67
控制输出	NPN/PNP可选	外壳	压铸铝
模拟量输出	电流: 4~20mA(超出时, 0mA) 电压: 0-5V(超出时, 5.2V) 0-10V(超出时, 10.2V)	窗口	玻璃
检测频率	10Hz/25Hz/ 50Hz/100Hz	连接形式	线缆式/pigtail线缆

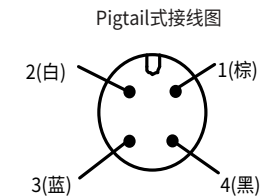
外型尺寸



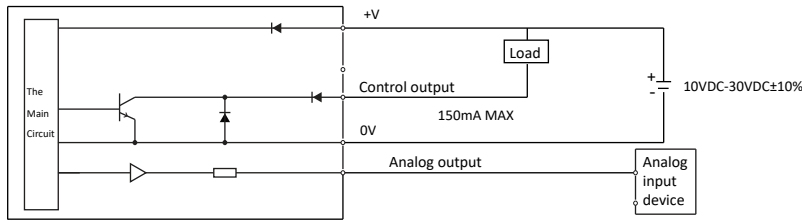
接口定义和接线图

	功能	出线式 线芯颜色
1	电源正	棕
2	模拟量输出	灰
3	电源负	蓝
4	NPN/PNP	黑

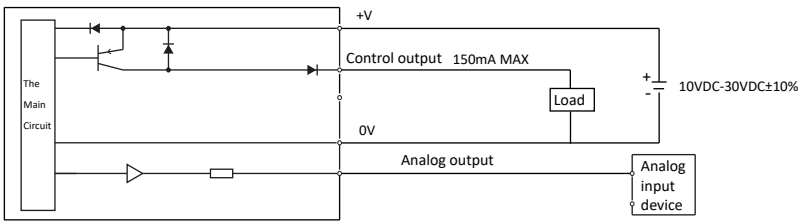
	功能	Pigtail式 线芯颜色
1	电源正	棕
2	模拟量输出	白
3	电源负	蓝
4	NPN/PNP	黑



Wiring diagram (NPN)



Wiring diagram (PNP)



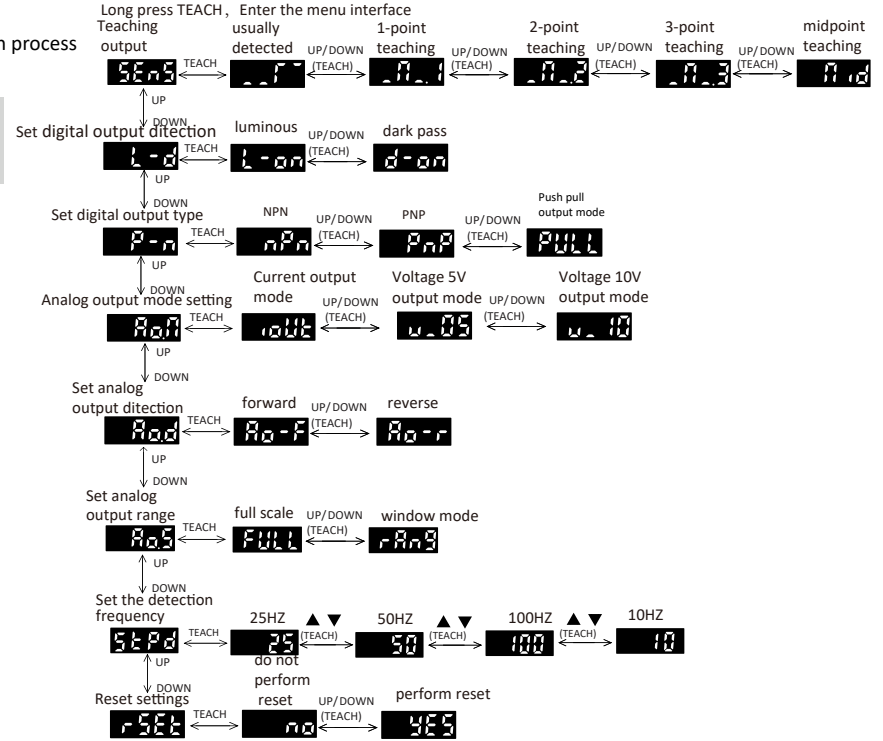
TEACHING MODE DESCRIPTION

Teach	
<p>Detection mode setting description: It is necessary to set the "Detection Mode Setting" in the menu to the corresponding function mode in advance.</p>	
<p>1. Normal detection mode In the menu, select the "L-□" mode, automatically enter the detection interface; Select the target object (*) within the effective detection distance and press the TEACH key, and prompt "GOOD" to complete the setting. The location of the target object is the judgement distance.</p>	
<p>2. 2-point teaching window comparison mode In the menu, select the "N_2" mode, automatically enter the measurement interface. Select the target object 1 (*) within the effective detection distance and press the TEACH key, and prompt "LP1" to complete p-1 setting. Select the target object 2 (*) within the effective detection distance and press TEACH key, prompt "GOOD" to complete the p-2 setting. Use the distance between the location of target object 1 and target object 2 as the window to determine the window mode.</p>	
<p>3. midpoint teaching mode In the menu, select the "Nid" mode, automatically enter the measurement interface. Select the target object 1 (*) within the effective detection distance and press the TEACH key, and prompt "LP1" to complete p-1 setting. Select the target object 2 (*) within the effective detection distance and press TEACH key, prompt "GOOD" to complete the p-2 setting. Take the middle distance between p-1 and p-2 as the judgement distance.</p>	

*Represents fine adjustment: After selecting the target object, you can fine-tune the distance of the target object with the UP/DOWN key, and then press the TEACH key to confirm.

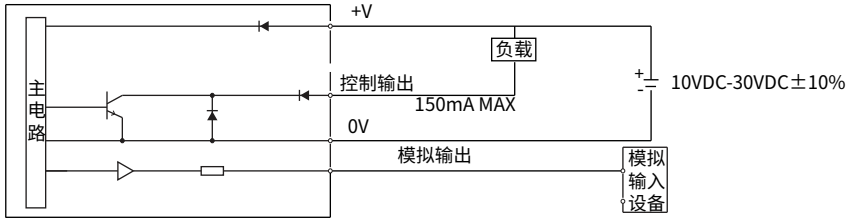
INSTRUCTION

1. Menu operation process

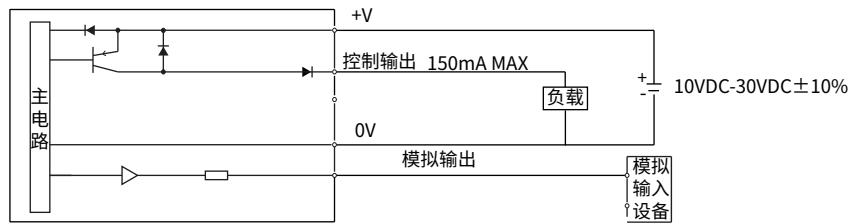


2. Ranging display
- 3.1 Measurement interface: Show actual measurement distance, when the distance is out of detected distance, it displays "----".
- 3.2 Menu and key operation
 - 3.1 Enter the menu: Long press TEACH above 3s when it is in the measurement interface, enter the menu interface;
 - Exit menu: Long press TEACH above 3s when it is in the menu interface, or no key operation for 20s, return to measurement interface.
 - Enter the menu interface, display the main menu, switch the menu options by pressing the up/down key.
 - On the main menu interface, enter the submenu options by short pressing TEACH key. Under the submenu, short press up/down to select the parameter. Short press the TEACH key to confirm and return to the previous main menu.
- 1) Teaching output
 - The main menu shows "SEnS", press TEACH to enter the submenu;
 - Submenu items: "L-□" usually detected mode (default); "N_2" 2-point teaching window comparison mode; "nid" midpoint teaching mode. The above teaching modes are detailed in Teaching mode description.
- 2) Set digital output detection
 - The main menu shows "L-d", press TEACH to enter the submenu; Submenu items: "L-on" luminous (default); "d-on" dark pass;
- 3) Set digital output type
 - The main menu shows "P-n", press TEACH to enter the submenu;
 - Submenu items: "nPn" NPN output mode (default); "PnP" PNP output mode; "PULL" push pull output mode.
- 4) Analog output mode setting
 - The main menu shows "Ao.N", press TEACH to enter the submenu;
 - Submenu items: "ioU" current output mode (default); "v_5v" voltage 5v output mode; "v_10v" voltage 10v output mode.
- 5) Set analog output detection
 - The main menu shows "Ao.d", press TEACH to enter the submenu;
 - Submenu items: "Ao-F" forward; "Ao-r" reverse (default). Forward direction: short distance corresponds to small current/voltage, long distance corresponds to large current/voltage. The reverse is the opposite.
- 6) Set analog output range
 - The main menu shows "Ao.S", press TEACH to enter the submenu; Submenu items: "FULL" full scale mode (default); "rAng" window mode.
 - When set to window mode, the analog output range can be set through the two-point teaching mode.
- 7) Set the detection frequency
 - The main menu shows "StPd", press TEACH to enter the submenu; Submenu items: "25" detection frequency is 25 Hz (default); "50" detection frequency is 50 Hz; "100" detection frequency is 100 Hz; "10" detection frequency is 10 Hz;
- 8) Reset settings
 - The main menu shows "rSet", press TEACH to enter the submenu;
 - Submenu items: "no" do not perform reset; "yES" perform reset, restore default settings.
- 2.3 Key lock function
 - Turn on key lock: In the measurement interface, press the TEACH and UP keys at the same time for more than 3s, the interface displays "Lc.on", and the menu function is invalid at this time.
 - Turn off the key lock: After the key lock is turned on, press the TEACH and UP keys at the same time for more than 3s, the interface displays "Lc.FA", press the TEACH and UP keys at the same time for more than 3s again, the interface displays "Lc.oF" and the key function are restored.

接线图 (NPN)



接线图 (PNP)



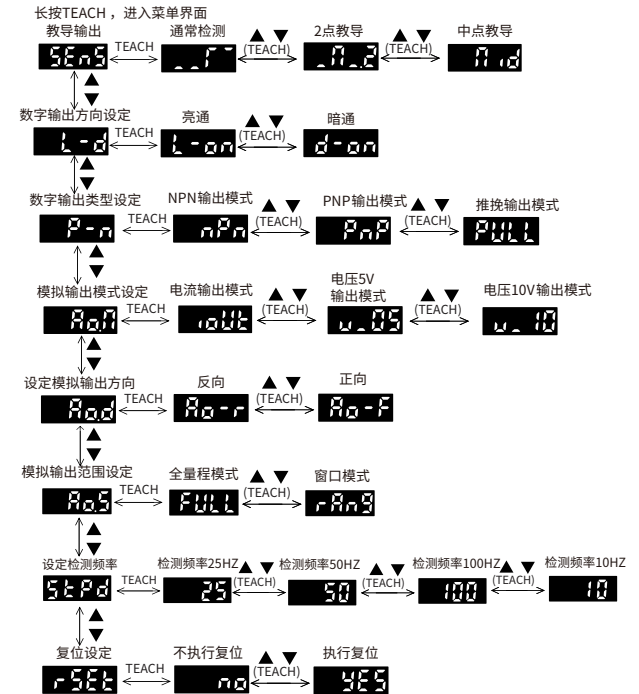
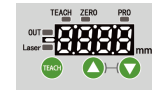
教导模式说明

<p>教导</p> <p>检测模式设定说明： 需先在Menu中将“检测模式设定”设为对应功能模式。</p>	
<p>1. 通常检测模式</p> <p>在菜单中，选定“□”模式，自动进入测量界面； 在有效测量距离内，选定目标物体(*)，按TEACH键，提示“GOOD”，完成设置；目标物体所在位置即为判定距离。</p>	
<p>2. 2点教导模式</p> <p>在菜单中，选定“N_2”模式，自动进入测量界面； 在有效测量距离内，选定目标物体1(*)，按TEACH键，提示“LP1”，完成p-1设定； 在有效测量距离内，选定目标物体2(*)，按TEACH键，提示“GOOD”，完成p-2设定； 以目标物体1和目标物体2所在位置之间的距离为窗口，进行窗口模式判定；</p>	
<p>3. 中点教导模式</p> <p>在菜单中，选定“Nid”模式，自动进入测量界面； 在有效测量距离内，选定目标物体(*)，按TEACH键，提示“LP1”，完成p-1设定； 在有效测量距离内，选定目标物体2(*)，按TEACH键，提示“GOOD”，完成p-2设定； 以p-1和p-2的中间距离为判定距离；</p>	

*代表微调：在选定目标物体后，可通过UP/DOWN键微调目标物体距离，之后再按TEACH键确定。

操作指南

1. 菜单操作流程



2. 测距显示

测量界面：显示实际测量距离，超出检测范围时显示“----”。

3. 菜单及按键操作

3.1 进入菜单：测量界面下长按TEACH键3秒以上，进入菜单界面；退出菜单：菜单界面下长按TEACH键3秒以上，或20秒无按键操作，返回测量界面。

3.2 菜单操作

进入菜单界面，显示主菜单；通过短按UP/DOWN键切换菜单选项；主菜单界面，通过短按TEACH键进入相应的子菜单选项，子菜单下，短按UP/DOWN键进行参数选择，在对应选项下短按TEACH键确认并返回上级主菜单；

1) 教导输出

主菜单显示“SEnS”，按TEACH进入子菜单。子菜单项：“□”通常检测模式（默认）；“N_2”2点教导窗口比较模式；“Nid”中点教导模式”。以上教导模式详见教导模式说明；

2) 数字输出方向设定

主菜单显示“L-d”，按TEACH进入子菜单；子菜单项：“L-on”亮通（默认）；“d-on”暗通；

3) 数字输出类型设定

主菜单显示“P-n”，按TEACH进入子菜单。子菜单项：“nPn”NPN输出模式（默认）；“PnP”PNP输出模式；“PULL”推挽输出模式。

4) 模拟输出模式设定

主菜单显示“Ao.N”，按TEACH进入子菜单。子菜单项：“ioUt”电流输出模式（默认）；“v_05”电压5V输出模式；“v_10”电压10V输出模式。

5) 设定模拟输出方向

菜单显示“Ao.d”，按TEACH进入子菜单。子菜单项：“Ao-F”正向；“Ao-r”反向（默认）。正向：近距离对应小电流/电压，远距离对应大电流/电压。反向相反。

6) 设定模拟输出范围

菜单显示“Ao.S”，按TEACH进入子菜单。子菜单项：“FULL”全量程模式（默认）；“rAng”窗口模式；设置为窗口模式时，可通过两点教导模式设定模拟输出范围。

7) 设定检测频率

菜单显示“StPd”，按TEACH进入子菜单。子菜单项：“25”检测频率25Hz（默认）；“50”检测频率50Hz；“100”检测频率100Hz；“10”检测频率10Hz。

8) 菜单显示“rSET”，按TEACH进入子菜单。

子菜单项：“no”不执行复位；“yES”执行复位，恢复默认设置。

2.3 按键锁定功能

开启按键锁定：测量界面下，同时按下TEACH和UP键3秒以上，界面显示“Lc.on”，此时菜单功能失效；

关闭按键锁定：按键锁定开启后，同时按下TEACH和UP键3秒以上，界面显示“Lc.oF”，再次同时按下TEACH和UP键3秒以上，界面显示“Lc.oF”，按键功能恢复。