

传通世界 感知未来
Sensing the dream



传感器概览

PRODUCT SUMMARY



上海兰宝传感科技股份有限公司
Shanghai Lanbao Sensing Technology Co., Ltd.



上海兰宝传感科技股份有限公司

上海兰宝传感科技股份有限公司创立于1998年，是国内领先的工业自动化产品供应商。我们为客户提供逾4000种规格的产品，涵盖电感式传感器、电容式传感器、光电式传感器、霍尔传感器、磁感应传感器、光幕/光栅、继电器及工业自动化综合解决方案。兰宝严格遵守国际标准，产品通过ISO9001：2015质量认证、CCC认证、CE认证和UL认证，且实施欧盟RoHS环保指令。

我们的产品可实现限位保护、定位检测、信号传送、自动计数、测速等功能，广泛应用于纺织、烟草、包装、电梯、电子、机床、物流、工程机械等行业。丰富的产品选择，快速灵活的交货周期，独特的定制化方案，专业的团队和一流的服务，兰宝致力于为客户提供安全、可靠、更具竞争力的工业测控解决方案。

Shanghai Lanbao Sensing Technology Co., Ltd.

Shanghai Lanbao Sensing Technology Co., Ltd., established in 1998, is a leading supplier of industrial automation products. We provide more than 4000 kinds of products to our customers, including inductive sensors, capacitive sensors, photoelectric sensors, hall sensors, magnetic sensors, light curtains, relays and industrial automation solutions. Lanbao complies with international standards strictly and implement the EU RoHS environmental directives, whose products have passed ISO 9001: 2008 quality certification, CCC certification, CE certification and UL certification.

Our products can achieve limit protection, positioning detection, signal transmission, automatic counting, speed measurement, etc., which can be widely used in textile, tobacco, packaging, elevators, electronics, machine tools, logistics, construction machinery and so on. With rich products, fast and flexible lead time, unique customized solutions, professional team and first-class service, Lanbao is committed to providing customers with safe, reliable and competitive industrial measurement and control solutions.



LANBAO SENSOR



兰宝汇集国际业内顶尖精英，掌握核心技术，专注于工业自动化产品领域。在导入全球领先的管理理念和制度的同时，集合设计、开发、研制、生产等配套流程，打造一体化经营格局，最终成为国际工业自动化产品制造领域的翘楚。兰宝拥有一批国际领先的自动化制造设备，保证产品具有国际技术水平和可靠质量。兰宝以严谨的品质管理与控制流程，确保每一件产品“零缺陷”。

With excellent talents, core technology, Lanbao always concentrates on industrial automation field. By introducing global leading management philosophy and systems, congregating design, development, research and production, it is aim of Lanbao that finally to be a leading manufacturer in global industrial automation field. Our series international leading automation manufacturing equipments ensure international technical level and reliable quality, our strict quality management and control process guarantee “zero defect” products.

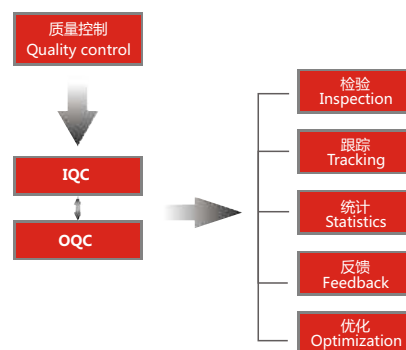
全面质量管理

Total Quality Management



完整IQC和OQC检验流程

Complete IQC, OQC testing process



04 电感式传感器 Inductive sensors

06	标准功能系列	Standard function
13	频率增强系列	Frequency enhanced
14	增强远距离系列	Extended sensing distance
16	模拟量输出系列	Analog output
17	温度扩展系列	Extended temperature
18	耐高压系列	High pressure resistant
19	全金属封装系列	Full metal housing
19	转速监控系列	Rotation speed monitor
20	齿轮测速系列	Gear speed monitoring
21	强磁免疫系列	Welding-immune
21	自诊断系列	Self-diagnosis
22	无衰减系列	Factor one
23	宽电压系列	Wide voltage
25	特殊功能系列	Special function

26 电容式传感器 Capacitive sensors

28	标准功能系列	Standard function
30	增强远距离系列	Extended sensing distance
30	延时功能系列	Time delay function
31	管道液位系列	Pipe liquid level detecting
31	耐高温料位系列	High temperature resistant material level detecting

32 光电式传感器 Photoelectric sensors

34	漫反射系列	Diffuse reflection
36	回归反射系列	Retro reflection
38	偏振反射系列	Polarized reflection
39	背景抑制系列	Background suppression
41	对射系列	Through beam
45	区域光电	Area photoelectric

46	颜色检测传感器	Color sensors
47	色标传感器	Color mark sensors
47	光纤传感器	Optical fiber sensors
49	测距传感器	Distance measuring sensors
53	位移传感器	Displacement sensors

56 光幕传感器

Light curtains

58	区域光幕传感器	Area light curtains
60	交叉光幕传感器	Optic cross light curtains
61	四级安全光幕传感器	Type 4 safety light curtains
62	测量光幕传感器	Measuring light curtains
64	红外电梯光幕传感器	Elevator door protection infrared curtains

67 编码器

Encoder

69	绝对值旋转编码器	Absolute rotary encoder
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70 张力传感器

Tension sensor

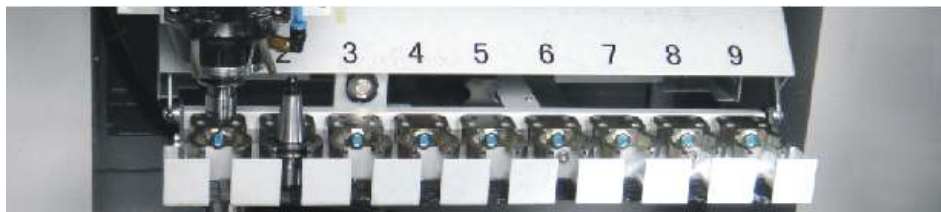
72 传感器附件

Sensor accessories

82 接线图

Wiring diagram

电感式传感器 Inductive sensors



- 非接触式位置检测、无磨损、高可靠性
- 清晰可见的指示灯设计，更易判断开关的工作状态
- 直径规格从 $\Phi 4$ 至M30，长度规格从超短形、短形到长形、加长形
- 电缆连接与连接器连接可选
- 采用专用IC制作，性能更加稳定
- 具有短路保护及逆极性保护功能
- 能进行各种限位、计数控制,适用范围广
- Contactless, no abrasion, high reliability.
- LED indicator.
- Diameter from $\Phi 4$ to M30, multi lengths available.
- Cable and connector connection optional.
- Stable performance with professional IC design.
- Short-circuit protection, reverse polarity protection.
- Widely applied in position controlling and counting function.

产品命名方式 Naming rules

L R 08 □ □ □ **F 15 D N O** □ - □ □ □ □ □ □ □ □
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

1. 分类 Type code

L:电感式 Inductive

2. 外形 Shape code

R:圆柱形 Cylindrical

E:方形 Rectangular

3. 尺寸 Size code

数字:外壳尺寸 Number: Housing diameter

如: 08:M8 e.g: 08:M8

4. 外壳形状 Shape code

Q:光滑圆柱形 Smooth cylindrical

V:角柱形 Angle column

Z:组合形 Combination

H:环形 Ring-shaped

U:槽型 U-shaped

X:改进外形及特殊功能产品

Appearance improved/function enhanced products

5. 外壳材料 Housing material

无:金属铜壳 N/A: Copper

S:塑料 Plastic

G:不锈钢 Stainless steel

V:铝质 Aluminium

6. 外形尺寸 Housing length

A:短型 Short

B:标准型 Standard

C:长型 Long

7. 安装形式 Mounting

N:非埋 Non-flush(nf)

F:埋入 Flush(f)

8. 检测距离 Sensing distance

例: 02:2mm

04:4mm

10:10mm

9. 工作电压 Supply voltage

A:20...250VAC

B:90...250VAC

C:380VAC

D:10...30VDC

E:10...60VDC

F:8.2VDC

G:5...60VDC

L:15...30VDC

H:20...30VDC

I:10...40VDC

J:5VDC

S:20...250VAC/DC

T:12...24VDC

10. 输出方式 Output way

B:AC/DC二线 AC/DC 2 wires

L:DC二线 DC 2 wires

T:AC二线 AC 2 wires

P:PNP

N:NPN

E:NPN/PNP

F:NPN+PNP

K:继电器 Relay

11. 输出状态 Output status

A:常开/常闭可逆 NO/NC Reversible

B:常开/常闭可选 NO/NC Optional

分为电缆线可选、电位器可选

Cable optional; Potentiometer optional

O:常开 NO

C:常闭 NC

R:常开+常闭 NO+NC

IU:电压型+电流型 Voltage+current

(0...10V,0...20mA)

U:电压型(0...10V) Voltage(0...10V)

I:电流型(0...20mA) Current(0...20mA)

I4:电流型(4...20mA) Current(4...20mA)

12. 开关功能 By sensor function

无:标准功能型 N/A: Standard function

M:模拟量 Analog

N:NAMUR

W:耐高温(-25°C...120°C)

High temperature resistant(-25°C...120°C)

W1:耐低温(-40°C...70°C)

Low temperature resistant(-40°C...70°C)

W2:耐高温(-25°C...100°C)

High temperature resistant(-25°C...100°C)

B:耐高压 High pressure resistant

T:速度型 Speed

Z:自诊断 Self-diagnosis

Y:增强远距离型 Extended sensing distance

G:频率增强型 Frequency enhanced

Q:全金属封装型 Full metal housing

A:强磁免疫型 Welding-immune

K:抗电源干扰 EMI

F:检测铁 Detect ferrum object

NF:检测非铁 Detect non-ferrum object

J:监速型 Rotation speed monitoring

13. 引线长度 Cable length

例: 无:2m e.g: N/A:2m

3M:3m

14. 连接形式 Connection

无:2M引线式 N/A:2M cable

E1:M8三芯插件 M8 connector (3 pins)

E2:M12四芯插件 M12 connector (4 pins)

E3:M8四芯插件 M8 connector (4 pins)

E4:M12四芯梯形插件

M12 trapezoid connector (4 pins)

E5:M12五芯插件 M12 connector (5 pins)

D:内端子接线 Terminal

15. 特殊要求 Special requirement

用四位数字表示 In 4 digits

标准功能系列 Standard function



外壳代号 Shell code	LR04Q	LR05	LR6.5Q	LR08	LR12X	
尺寸规格 (mm) Specifications(mm)	Φ4*30, Φ4*54	M5*0.5*30, M5*0.5*40	Φ6.5*40, Φ6.5*43 Φ6.5*49, Φ6.5*52	M8*1*40, M8*1*43 M8*1*49, M8*1*52 M8*1*65, M8*1*68	M12*1*51, M12*1*55	
安装方式 Mounting	● 埋入 ● Flush	● 埋入 ● Flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	
检测距离 Sensing distance	0.8mm	0.8mm	1.5mm, 2mm	1.5mm, 2mm	2mm, 4mm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	/	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	/	/	NO NC	NO NC	NO NC
	AC 2线 AC 2 Wires	/	/	/	/	NO NC
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC 20...250 VAC	
开关频率 Frequency	2000Hz	2000Hz	2000Hz, 1500Hz	2000Hz, 1500Hz	DC3/4: 1500Hz, 1000Hz DC2: 800Hz, 500Hz AC2: 20Hz	
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67	
外壳材料 Housing material	不锈钢 Stainless steel	不锈钢 Stainless steel	不锈钢 Stainless steel	不锈钢, 镍铜合金 Stainless steel Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	
连接方式 Connection	成型电缆, M8 连接器 Cable, M8 Connector	成型电缆, M8 连接器 Cable, M8 Connector	成型电缆, M8 连接器 Cable, M8 Connector	成型电缆 M8/M12 连接器 Cable M8/M12 Connector	成型电缆 Cable	
产品认证 Certification	CE	CE	CE	CE	CE U	

标准功能系列 Standard function



外壳代号 Shell code	LR18X	LR30X	LR12X	LR18X	LR30X
尺寸规格 (mm) Specifications(mm)	M18*1*51.5 M18*1*59.5	M30*1.5*52 M30*1.5*64	M12*1*63 M12*1*67	M18*1*63 M18*1*71	M30*1.5*63 M30*1.5*75
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	5mm, 8mm	10mm, 15mm	2mm, 4mm	5mm, 8mm	10mm, 15mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	NO NC	NO NC	NO NC	NO NC
	AC 2线 AC 2 Wires	NO NC	NO NC	/	NO NC
	AC/DC 2线 AC/DC 2 Wires	NO NC	NO NC	/	NO NC
电源电压 Supply voltage	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC VDC 20...250 VAC 20...250 VAC/DC
开关频率 Frequency	DC3/4: 1000Hz, 800Hz DC2: 500Hz, 300Hz AC2: 20Hz	DC3/4: 500Hz, 300Hz DC2: 200Hz AC2: 20Hz	DC3/4: 1500Hz, 1000Hz DC2: 800Hz, 500Hz AC2: 20Hz	DC3/4: 1000Hz, 800Hz DC2: 500Hz, 300Hz AC2: 20Hz	DC3/4: 500Hz, 300Hz DC2: 200Hz AC2: 20Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy
连接方式 Connection	成型电缆 Cable	成型电缆 Cable	M12 连接器 M12 Connector	M12 连接器 M12 Connector	M12 连接器 M12 Connector
产品认证 Certification	CE UL	CE UL	CE UL	CE UL	CE UL

标准功能系列 Standard function



外壳代号 Shell code	LE08	LE09	LE11	LE10	LE17	
尺寸规格 (mm) Specifications(mm)	7.5*8*23	7.5*8*23	12*7*27	18*10*30	17*17*28	
安装方式 Mounting	⦿ 非埋 ⦿ Non-flush	⦿ 非埋 ⦿ Non-flush	⦿ 非埋 ⦿ Non-flush	● 埋入, ⦿ 非埋 ● Flush, ⦿ Non-flush	● 埋入, ⦿ 非埋 ● Flush, ⦿ Non-flush	
检测距离 Sensing distance	2.5mm	2.5mm	3mm	5mm, 8mm	5mm, 8mm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	/	/
	DC 2线 DC 2 Wires	/	/	/	/	NO NC
	AC 2线 AC 2 Wires	/	/	/	/	NO NC
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC 90...250 VAC	
开关频率 Frequency	1000Hz	1000Hz	1000Hz	1000Hz, 800Hz	DC3/4: 700Hz, 500Hz DC2: 700Hz, 500Hz AC2: 20Hz	
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67	
外壳材料 Housing material	PC	PC	PC	PBT	PBT	
连接方式 Connection	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	
产品认证 Certification	CE	CE	CE	CE	CE	

标准功能系列 Standard function



外壳代号 Shell code	LE18	LE20	LE25	LE30	LE40
尺寸规格 (mm) Specifications(mm)	18*18*35	20*20*38	25*25*39	30*30*53	40*40*53
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	5mm, 8mm	5mm, 8mm	7mm, 10mm	10mm, 15mm	15mm, 20mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	NO NC	NO NC	NO NC	NO NC
	AC 2线 AC 2 Wires	NO NC	NO NC	NO NC	NO NC
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC 20...250 VAC/DC
开关频率 Frequency	DC3/4: 700Hz, 500Hz DC2: 700Hz, 500Hz AC2: 20Hz	DC3/4: 700Hz, 500Hz DC2: 700Hz, 500Hz AC2: 20Hz	DC3/4: 700Hz, 500Hz DC2: 700Hz, 500Hz AC2: 20Hz	DC3/4: 700Hz, 500Hz DC2: 700Hz, 500Hz AC2: 20Hz	DC3/4: 400Hz, 200Hz DC2: 400Hz, 200Hz AC2: 20Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	PBT	PBT	PBT	PBT	PBT
连接方式 Connection	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable
产品认证 Certification	CE	CE	CE	CE	CE

标准功能系列 Standard function



外壳代号 Shell code	LE50	LE68	LE40SZ	LE40XZ	LE80XZ
尺寸规格 (mm) Specifications(mm)	25*10*50	40*20*68	40*40*66	40*40*120	80*80*40
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	5mm, 8mm	15mm, 25mm	15mm, 20mm	15mm, 20mm	40mm, 50mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	/	NO NC	NO NC	NO NC
	AC 2线 AC 2 Wires	/	NO NC	NO NC	NO NC
	AC/DC 2线 AC/DC 2 Wires	/	NO NC	NO NC	NO NC
电源电压 Supply voltage	10...30 VDC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC 20...250 VAC/DC
开关频率 Frequency	500Hz, 700Hz	DC3/4: 300Hz, 500Hz DC2: 300Hz, 500Hz AC2: 20Hz	DC3/4: 300Hz, 500Hz DC2: 300Hz, 500Hz AC2: 20Hz	DC3/4: 300Hz, 500Hz DC2: 300Hz, 500Hz AC2: 20Hz	DC3/4: 50Hz, 100Hz DC2: 50Hz, 100Hz AC2: 10Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	PBT	PBT	PBT	PBT	PBT
连接方式 Connection	成型电缆 Cable	成型电缆, M12 连接器 Cable, M12 Connector	M12 连接器 M12 Connector	M12 连接器, 端子连接 M12 Connector Terminal connect	M12 连接器, 端子连接 M12 Connector Terminal connect
产品认证 Certification	CE	CE	CE	CE	CE

标准功能系列 Standard function



外壳代号 Shell code		LE81	LE82	LE05		
尺寸规格 (mm) Specifications(mm)		8*8*40, 8*8*50	8*8*40, 8*8*50	5*5*25		
安装方式 Mounting		● 埋入 ● Flush	● 埋入 ● Flush	● 埋入 ● Flush		
检测距离 Sensing distance		1.5mm	1.5mm	0.8mm		
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC		
	DC 4线 DC 4 Wires	/	/	/		
	DC 2线 DC 2 Wires	/	/	NO NC		
	AC 2线 AC 2 Wires	/	/	/		
	AC/DC 2线 AC/DC 2 Wires	/	/	/		
电源电压 Supply voltage		10...30 VDC	10...30 VDC	10...30 VDC		
开关频率 Frequency		2000Hz	2000Hz	1800Hz		
环境温度 Ambient temperature		-25°C~70°C	-25°C~70°C	-25°C~70°C		
防护等级 Protection degree		IP67	IP67	IP67		
外壳材料 Housing material		铝合金 Aluminum alloy	铝合金 Aluminum alloy	铝合金 Aluminum alloy		
连接方式 Connection		成型电缆, M8 连接器 Cable, M8 Connector	成型电缆, M8 连接器 Cable, M8 Connector	成型电缆 Cable		
产品认证 Certification		CE	CE	CE		

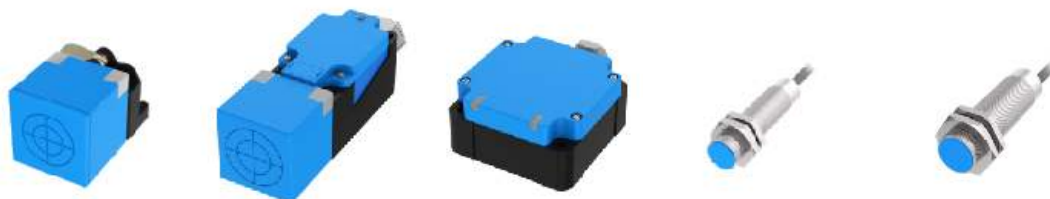
标准功能系列 Standard function



外壳代号 Shell code	LR05	LR08	LR12X	LR18X	LR30X
尺寸规格 (mm) Specifications(mm)	M5*0.5*30	M8*1*22, M8*1*25	M12*1*31, M12*1*35	M18*1*31.5 M18*1*39.5	M30*1.5*32 M30*1.5*44
安装方式 Mounting	● 埋入 ● Flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	0.8mm	1.5mm, 2mm	2mm, 4mm	5mm, 8mm	10mm, 15mm
输出方式 Output	NAMUR	NC	NC	NC	NC
	DC 3线 DC 3 Wires	/	/	/	/
	DC 4线 DC 4 Wires	/	/	/	/
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
电源电压 Supply voltage	7.7...9 VDC	7.7...9 VDC	7.7...9 VDC	7.7...9 VDC	7.7...9 VDC
开关频率 Frequency	3000Hz	2500Hz, 2000Hz	2000Hz, 1500Hz	1500Hz, 1000Hz	1000Hz, 800Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	不锈钢 Stainless steel	不锈钢 Stainless steel	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy
连接方式 Connection	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable
产品认证 Certification	CE	CE	CE U	CE U	CE U

标准功能系列 Standard function

频率增强系列 Frequency enhanced



外壳代号 Shell code	LE40SZ	LE40XZ	LE80XZ	LR12X	LR18X
尺寸规格 (mm) Specifications(mm)	40*40*66	40*40*120	80*80*40	M12*1*61, M12*1*73	M18*1*62, M18*1*73
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	15mm, 20mm	15mm, 20mm	40mm, 50mm	2mm, 4mm	5mm, 8mm
输出方式 Output	NAMUR	NC	NC	/	/
	DC 3线 DC 3 Wires	/	/	/	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	/
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
电源电压 Supply voltage	7.7...9 VDC	7.7...9 VDC	7.7...9 VDC	10...30 VDC	10...30 VDC
开关频率 Frequency	400Hz, 250Hz	400Hz, 250Hz	100Hz	4000Hz, 3000Hz	2000Hz, 1500Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	PBT	PBT	PBT	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy
连接方式 Connection	M12 连接器 M12 Connector	M12 连接器, 端子连接 M12 Connector Terminal connect	M12 连接器, 端子连接 M12 Connector Terminal connect	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector
产品认证 Certification	CE	CE	CE	CE U	CE U

增强远距离系列 Extended sensing distance



外壳代号 Shell code	LR04Q	LR05	LR6.5Q	LR08	LR12X	
尺寸规格 (mm) Specifications(mm)	Φ4*30, Φ4*54	M5*0.5*30, M5*0.5*40	Φ6.5*40, Φ6.5*43 Φ6.5*49, Φ6.5*52	M8*1*40, M8*1*54 M8*1*65	M12*1*51, M12*1*55 M12*1*63, M12*1*67 M12*1*61, M12*1*65 M12*1*73, M12*1*77	
安装方式 Mounting	● 准埋入 ● Quasi-flush	● 准埋入 ● Quasi-flush	● 准埋入, ○ 非埋 ● Quasi-flush ○ Non-flush	● 准埋入, ○ 非埋 ● Quasi-flush ○ Non-flush	● 准埋入, ○ 非埋 ● Quasi-flush ○ Non-flush	
检测距离 Sensing distance	1.5mm	1.5mm	2mm, 4mm	2mm, 4mm	4mm, 6mm, 8mm 10mm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	/	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	/	/	NO NC	NO NC	NO NC
	AC 2线 AC 2 Wires	/	/	/	/	NO NC
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC 20...250 VAC	
开关频率 Frequency	1200Hz	1200Hz	DC3/4: 1500Hz, 1000Hz DC2: 1500Hz, 1000Hz	DC3/4: 1500Hz, 1000Hz DC2: 1500Hz, 1000Hz	DC3/4: 800Hz, 500Hz 600Hz, 400Hz DC2: 800Hz, 500Hz AC2: 20Hz	
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67	
外壳材料 Housing material	不锈钢 Stainless steel	不锈钢 Stainless steel	不锈钢 Stainless steel	不锈钢 Stainless steel	镍铜合金 Nickel-copper Alloy	
连接方式 Connection	成型电缆, M8 连接器 Cable, M8 Connector	成型电缆, M8 连接器 Cable, M8 Connector	成型电缆 M8/M12 连接器 Cable M8/M12 Connector	成型电缆 M8/M12 连接器 Cable M8/M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	
产品认证 Certification	CE	CE	CE	CE	CE U	

增强远距离系列 Extended sensing distance



外壳代号 Shell code	LR18X	LR30X	LE40SZ	LE40XZ	LE80XZ	
尺寸规格 (mm) Specifications(mm)	M18*1*51.5, M18*1*59.5 M18*1*63, M18*1*71 M18*1*61.5, M18*1*69.5 M18*1*73, M18*1*81	M30*1.5*52, M30*1.5*64 M30*1.5*63, M30*1.5*75 M30*1.5*62, M30*1.5*74 M30*1.5*73, M30*1.5*85	40*40*66	40*40*120, 40*40*129	40*80*98, 40*80*104	
安装方式 Mounting	● 准埋入, ○ 非埋 ● Quasi-flush ○ Non-flush	● 准埋入, ○ 非埋 ● Quasi-flush ○ Non-flush	● 准埋入, ○ 非埋 ● Quasi-flush ○ Non-flush	● 准埋入, ○ 非埋 ● Quasi-flush ○ Non-flush	● 准埋入, ○ 非埋 ● Quasi-flush ○ Non-flush	
检测距离 Sensing distance	8mm, 12mm, 20mm	15mm, 22mm, 40mm	25mm, 40mm	25mm, 40mm	50mm, 70mm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	NO NC	NO NC	NO NC	NO NC	NO NC
	AC 2线 AC 2 Wires	NO NC	NO NC	NO NC	NO NC	NO NC
	AC/DC 2线 AC/DC 2 Wires	NO NC	NO NC	NO NC	NO NC	NO NC
电源电压 Supply voltage	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC 20...250 VAC/DC	
开关频率 Frequency	DC3/4: 400Hz, 200Hz 200Hz, 100Hz DC2: 400Hz, 200Hz AC2: 20Hz	DC3/4: 300Hz, 150Hz 100Hz, 50Hz DC2: 300Hz, 150Hz AC2: 20Hz	DC3/4: 200Hz, 100Hz DC2: 200Hz, 100Hz AC2: 20Hz	DC3/4: 200Hz, 100Hz DC2: 200Hz, 100Hz AC2: 20Hz	DC3/4: 50Hz, 30Hz DC2: 50Hz, 30Hz AC2: 20Hz	
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67	
外壳材料 Housing material	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	PBT	PBT	PBT	
连接方式 Connection	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	M12 连接器 M12 Connector	M12 连接器, 端子连接 M12 Connector Terminal connect	M12 连接器, 端子连接 M12 Connector Terminal connect	
产品认证 Certification	CE U	CE U	CE	CE	CE	

模拟量输出系列 Analog output



外壳代号 Shell code	LR12X	LR18X	LR30X	LE40SZ	LE40XZ
尺寸规格 (mm) Specifications(mm)	M12*1*61, M12*1*65 M12*1*73, M12*1*77	M18*1*61.5, M18*1*69.5 M18*1*73, M18*1*81	M30*1.5*62, M30*1.5*74 M30*1.5*73, M30*1.5*85	40*40*66	40*40*120, 40*40*129
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	0.4...2mm 0.8...4mm	1...5mm 1.6...8mm	2...10mm 3...15mm	2...10mm 3...15mm	2...10mm 3...15mm
输出方式 Output	电压型输出 Voltage output	0...10V	0...10V	0...10V	0...10V
	电流型输出 Current output	0...20mA/4...20mA	0...20mA/4...20mA	0...20mA/4...20mA	0...20mA/4...20mA
	电压+电流输出 Voltage+Current output	0...10V+0...20mA	0...10V+0...20mA	0...10V+0...20mA	0...10V+0...20mA
电源电压 Supply voltage	15...30 VDC	15...30 VDC	15...30 VDC	15...30 VDC	15...30 VDC
开关频率 Frequency	200Hz, 100Hz	200Hz, 100Hz	200Hz, 100Hz	100Hz, 50Hz	100Hz, 50Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	PBT	PBT
连接方式 Connection	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	M12 连接器 M12 Connector	M12 连接器, 端子连接 M12 Connector Terminal connect
产品认证 Certification	CE UL	CE UL	CE UL	CE	CE

温度扩展系列 Extended temperature



外壳代号 Shell code	LR12X	LR18X	LR30X	LE40SZ	LE40XZ
尺寸规格 (mm) Specifications(mm)	M12*1*51,M12*1*55 M12*1*63,M12*1*67	M18*1*51.5,M18*1*59.5 M18*1*63,M18*1*71	M30*1.5*52,M30*1.5*64 M30*1.5*63,M30*1.5*75	40*40*66	40*40*120, 40*40*129
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	2mm, 4mm	5mm, 8mm	10mm, 15mm	15mm, 20mm	15mm, 20mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	/
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
开关频率 Frequency	1500Hz, 1000Hz, 500Hz	1000Hz, 800Hz, 400Hz	5000Hz, 300Hz, 200Hz	300Hz, 200Hz	300Hz, 200Hz
环境温度 Ambient temperature	-40°C~70°C,-25°C~120°C	-40°C~70°C,-25°C~120°C	-40°C~70°C,-25°C~120°C	-40°C~70°C,-25°C~100°C	-40°C~70°C,-25°C~100°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	镍铜合金 Nick-copper Alloy	镍铜合金 Nick-copper Alloy	镍铜合金 Nick-copper Alloy	PBT	PBT
连接方式 Connection	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	M12 连接器 M12 Connector	M12 连接器, 端子连接 M12 Connector Terminal connect
产品认证 Certification	CE UL	CE UL	CE UL	CE	CE

耐高压系列 High pressure resistant



外壳代号 Shell code	LR12X	LR14X	LR16X	LR18X	
尺寸规格 (mm) Specifications(mm)	M12*1*62, M12*1*77	M14*1*54, M14*1*64	M16*1*63, M16*1*73	M18*1*58, M18*1*74	
安装方式 Mounting	● 埋入 ● Flush	● 埋入 ● Flush	● 埋入 ● Flush	● 埋入 ● Flush	
检测距离 Sensing distance	1.5mm	1.5mm, 3mm	2mm	2mm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	/
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	
开关频率 Frequency	600Hz	600Hz	600Hz	200Hz	
环境温度 Ambient temperature	-25°C~80°C	-25°C~80°C	-25°C~80°C	-25°C~80°C	
防护等级 Protection degree	IP68	IP68	IP68	IP68	
外壳材料 Housing material	不锈钢 Stainless steel	不锈钢 Stainless steel	不锈钢 Stainless steel	不锈钢 Stainless steel	
连接方式 Connection	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	
产品认证 Certification	CE UL	CE	CE UL	CE UL	

全金属封装系列 Full metal housing

转速监控系列 Rotation speed monitor



外壳代号 Shell code	LR12X	LR18X	LR30X	LR18X	LR30X
尺寸规格 (mm) Specifications(mm)	M12*1*51,M12*1*55 M12*1*63,M12*1*67	M18*1*51.5,M18*1*59.5 M18*1*63,M18*1*71	M30*1.5*52,M30*1.5*64 M30*1.5*63,M30*1.5*75	M18*1*61.5 M18*1*69.5	M30*1.5*62 M30*1.5*74
安装方式 Mounting	● 埋入 ● Flush	● 埋入 ● Flush	● 埋入 ● Flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	2mm	5mm	10mm	5mm, 8mm	10mm, 15mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NC PNP NC
	DC 4线 DC 4 Wires	/	/	/	/
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	NC
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC
开关频率 Frequency	300Hz	200Hz	100Hz	DC: 3...3000 次/分钟 AC: 3...1200 次/分钟 DC: 3...3000 times/min AC: 3...1200 times/min	DC: 3...3000 次/分钟 AC: 3...1200 次/分钟 DC: 3...3000 times/min AC: 3...1200 times/min
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	不锈钢 Stainless steel	不锈钢 Stainless steel	不锈钢 Stainless steel	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy
连接方式 Connection	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆 Cable	成型电缆 Cable
产品认证 Certification	CE U	CE U	CE U	CE	CE

齿轮测速系列 Gear speed monitoring



外壳代号 Shell code		FY12		FY18	
尺寸规格 (mm) Specifications(mm)		M12*1*61	M12*1*73	M18*1*61.5	M18*1*73
安装方式 Mounting		● 埋入 ● Flush	● 埋入 ● Flush	● 埋入 ● Flush	● 埋入 ● Flush
检测距离 Sensing distance		2mm	2mm	2mm	2mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	/
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage		10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
开关频率 Frequency		25000Hz	25000Hz	25000Hz	25000Hz
环境温度 Ambient temperature		-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree		IP67	IP67	IP67	IP67
外壳材料 Housing material		镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy
连接方式 Connection		成型电缆 Cable	M12 连接器 M12 Connector	成型电缆 Cable	M12 连接器 M12 Connector
产品认证 Certification		/	/	/	/

强磁免疫系列 Welding-immune



自诊断系列 Self-diagnosis



外壳代号 Shell code	LR12X	LR18X	LR30X	LR12X	LR12X
尺寸规格 (mm) Specifications(mm)	M12*1*51, M12*1*55 M12*1*63, M12*1*67	M18*1*51.5, M18*1*59.5 M18*1*63, M18*1*71	M30*1.5*52, M30*1.5*64 M30*1.5*63, M30*1.5*75	M12*1*70	M12*1*69, M12*1*89
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	○ 非埋 ○ Non-flush	○ 非埋 ○ Non-flush
检测距离 Sensing distance	2mm, 4mm	5mm, 8mm	10mm, 15mm	3.7mm	3.7mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	/	/	/
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	20...30 VDC	20...30 VDC
开关频率 Frequency	3000Hz, 2000Hz	1500Hz, 1000Hz	800Hz, 500Hz	300Hz	300Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25...+70°C	-25...+70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	黄铜+PTFE 涂层 Brass+PTFE	黄铜+PTFE 涂层 Brass+PTFE	黄铜+PTFE 涂层 Brass+PTFE	镍铜合金 Nick-copper Alloy	镍铜合金 Nick-copper Alloy
连接方式 Connection	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆 Cable	M12 连接器 M12 Connector
产品认证 Certification	CE	CE	CE	CE U	CE U

无衰减系列 Factor one



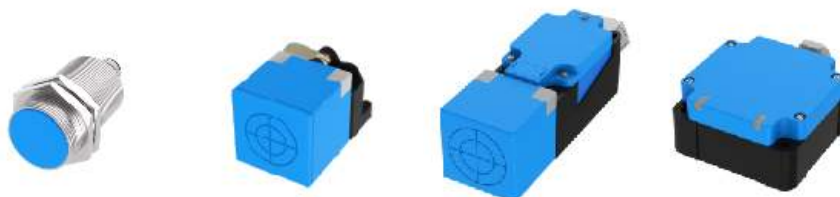
外壳代号 Shell code	LR12X	LR18X	LR30X	LE40SZ	LE40XZ
尺寸规格 (mm) Specifications(mm)	M12*1*51,M12*1*55 M12*1*63,M12*1*67	M18*1*51.5,M18*1*59.5 M18*1*63,M18*1*71	M30*1.5*52,M30*1.5*64 M30*1.5*63,M30*1.5*75	40*40*66	40*40*120,40*40*129
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	2mm,4mm	5mm,8mm	10mm,15mm	15mm, 20mm	15mm, 20mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
开关频率 Frequency	800Hz, 500Hz	400Hz, 200Hz	300Hz, 150Hz	200Hz, 100Hz	200Hz, 100Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	PBT	PBT
连接方式 Connection	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	M12 连接器 M12 Connector	M12 连接器, 端子连接 M12 Connector Terminal connect
产品认证 Certification	CE	CE	CE	CE	CE

宽电压系列 Wide voltage



外壳代号 Shell code	LR12X	LR18X	LR30X	LR12X	LR18X
尺寸规格 (mm) Specifications(mm)	M12*1*51,M12*1*55	M18*1*51.5,M18*1*59.5	M30*1.5*52,M30*1.5*64	M12*1*63,M12*1*67	M18*1*63,M18*1*71
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush
检测距离 Sensing distance	2mm, 4mm	5mm, 8mm	10mm, 15mm	2mm, 4mm	5mm, 8mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	NO NC	NO NC	NO NC	NO NC
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...60 VDC	10...60 VDC	10...60 VDC	10...60 VDC	10...60 VDC
开关频率 Frequency	DC3/4: 1000Hz, 1500Hz DC2: 500Hz, 800Hz	DC3/4: 800Hz, 1000Hz DC2: 300Hz, 500Hz	DC3/4: 300Hz, 500Hz DC2: 200Hz	DC3/4: 1000Hz, 1500Hz DC2: 500Hz, 800Hz	DC3/4: 800Hz, 1000Hz DC2: 300Hz, 500Hz
环境温度 Ambient temperature	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy	镍铜合金 Nickel-copper Alloy
连接方式 Connection	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	M12 连接器 M12 Connector	M12 连接器 M12 Connector
产品认证 Certification	CE	CE	CE	CE	CE

宽电压系列 Wide voltage



外壳代号 Shell code	LR30X	LE40SZ	LE40XZ	LE80XZ	
尺寸规格 (mm) Specifications(mm)	M30*1.5*63,M30*1.5*75	40*40*66	40*40*120,40*40*129	40*80*98,40*80*104	
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	
检测距离 Sensing distance	10mm, 15mm	15mm,20mm	15mm,20mm	40mm, 50mm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	NO NC	NO NC	NO NC	NO NC
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...60 VDC	10...60 VDC	10...60 VDC	10...60 VDC	
开关频率 Frequency	DC3/4: 500Hz, 300Hz DC2: 300Hz, 200Hz	DC3/4: 500Hz, 300Hz DC2: 500Hz, 300Hz	DC3/4: 500Hz, 300Hz DC2: 500Hz, 300Hz	DC3/4: 100Hz, 50Hz DC2: 100Hz, 50Hz	
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	
防护等级 Protection degree	IP67	IP67	IP67	IP67	
外壳材料 Housing material	镍铜合金 Nickel-copper Alloy	PBT	PBT	PBT	
连接方式 Connection	M12 连接器 M12 Connector	M12 连接器 M12 Connector	M12 连接器, 端子连接 M12 Connector Terminal connect	M12 连接器, 端子连接 M12 Connector Terminal connect	
产品认证 Certification	CE	CE	CE	CE	

特殊功能系列 Special function



外壳代号 Shell code	LT18	FYG12	FYG12T		
尺寸规格 (mm) Specifications(mm)	47*18*28.5mm	M12*77mm	M12*77.5mm		
安装方式 Mounting	○ 非埋 ○ Non-flush	● 埋入 ● Flush	● 埋入 ● Flush		
检测距离 Sensing distance	2mm	4mm	2mm		
输出方式 Output	DC 3线 DC 3 Wires	/	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	/	/	
	DC 2线 DC 2 Wires	/	/	/	
	AC 2线 AC 2 Wires	/	/	/	
	AC/DC 2线 AC/DC 2 Wires	/	/	/	
电源电压 Supply voltage	10...30 VDC	7...30 VDC	10...30 VDC		
开关频率 Frequency	1000Hz	5000Hz	20000Hz		
环境温度 Ambient temperature	-25°C~70°C	-30°C~110°C	-40°C~80°C		
防护等级 Protection degree	IP67	IP68	IP68		
外壳材料 Housing material	PA66	不锈钢 Stainless steel	不锈钢 Stainless steel		
连接方式 Connection	M12 连接器 M12 Connector	M12 连接器 M12 Connector	M12 连接器 M12 Connector		
产品认证 Certification	CE	CE	CE		

电容式传感器 Capacitive sensors



- 可以检测金属,塑料,液体等不同物质,应用更广泛
- 可通过非金属管壁检测容器内的不同物质
- 具有电位器进行灵敏度调节功能
- Wide range of detecting targets: metal, plastic and fluid etc.
- Be able to detect different objects in container through nonmetallic container wall.
- Sensibility could be adjusted by potentiometer.

产品命名方式 Naming rules

C **R** **12** **□** **B** **F** **02** **D** **N** **O** **□** - **□** **□** **□□□□**
1 **2** **3** **4** **5** **6** **7** **8** **9** **10** **11** **12** **13** **15**

1. 分类代号 Type code

C:电容式 Capacitive

2. 外形代号 Shape code

R:螺纹圆柱形 Threaded cylindrical

Q:光滑圆柱形 Smooth cylindrical

E:方形 Rectangular

3. 尺寸代号 Size code

数字:外壳尺寸

Number: Housing diameter

如: 08:M8 e.g: 08:M8

4. 外壳材料 Housing material

无:金属铜壳 N/A: Copper

S:塑料 Plastic

G:不锈钢 Stainless steel

5. 外形尺寸 Housing length

A:短型 Short

B:标准型 Standard

C:长型 Long

6. 安装形式 Mounting

N:非埋 Non-flush(nf)

F:埋入 Flush(f)

7. 检测距离 Sensing distance

例: 02:2mm

04:4mm

10:10mm

8. 工作电压 Supply voltage

A:20...250VAC

D:10...30VDC

E:10...60VDC

M:18...36VDC

S:20...250VAC/DC

9. 输出方式 Output way

B:AC/DC二线 AC/DC 2 wires

T:AC二线 AC 2 wires

P:PNP

N:NPN

E:NPN/PNP

F:NPN+PNP

K:继电器 Relay

10. 输出状态 Output status

A:常开/常闭可逆

NO/NC reversible

B:常开/常闭可选

NO/NC optional

分为电缆线可选、电位器可选

Cable optional; Potentiometer optional

O:常开 NO

C:常闭 NC

R:常开+常闭 R:NO+NC

注:继电器输出可以不选

Note:Relay output is optional

11. 开关功能 By sensor function

无:标准功能型

N/A:Standard function

Y:增强远距离型

Extended sensing distance

T1:带前延时功能

On-delay function

T160:60s

T1600:600s

T2:带后延时功能

Off-delay function

T260:60s

T2600:600s

12. 引线长度 Cable length

例: 无:2m

e.g: N/A:2m

3M:3m

13. 连接形式 Connection

无:2M引线式 N/A:2M cable

E1:M8三芯插件 M8 connector (3 pins)

E2:M12四芯插件 M12 connector (4 pins)

E3:M8四芯插件 M8 connector (4 pins)

E4:M12四芯梯形插件

M12 trapezoid connector (4 pins)

E5:M12五芯插件 M12 connector (5 pins)

D:内端子接线 Terminal

14. 特殊要求 Special requirement

用四位数字表示 In 4 Digits

标准功能系列 Standard function



外壳代号 Shell code	CR12	CR18	CR30	CQ20	CQ32	
尺寸规格 (mm) Specifications(mm)	M12*1*52, M12*1*65	M18*1*70, M18*1*83.5	M30*1.5*62 M30*1.5*79	Φ20*80	Φ32*80	
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	
检测距离 Sensing distance	2mm, 4mm	5mm, 8mm	10mm, 15mm	10mm, 15mm	15mm, 20mm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	
	DC 4线 DC 4 Wires	/	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	
	DC 2线 DC 2 Wires	/	/	/	/	
	AC 2线 AC 2 Wires	/	NO NC	NO NC	/	NO NC
	AC/DC 2线 AC/DC 2 Wires	/	/	NO NC	/	NO NC
电源电压 Supply voltage	10...30 VDC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC 20...250 VAC/DC	
开关频率 Frequency	50Hz	50Hz, 15Hz	50Hz, 15Hz	50Hz, 15Hz	50Hz, 15Hz	
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67	
外壳材料 Housing material	镍铜合金, PA66 Nickel-copper Alloy, PA66	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	
连接方式 Connection	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆 Cable	成型电缆 Cable	
产品认证 Certification	CE	CE U	CE U	CE U	CE U	

标准功能系列 Standard function



外壳代号 Shell code	CQ34S	CE07	CE34	CE35	CE05
尺寸规格 (mm) Specifications(mm)	Φ34*80	30*7*50	50*7*20	35*15*50	50*20*5
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	○ 非埋 ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	○ 非埋 ○ Non-flush
检测距离 Sensing distance	15mm, 20mm	5mm, 8mm	10mm	10mm, 15mm	5mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	/	/	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	NO NC	/	/	/
	AC/DC 2线 AC/DC 2 Wires	NO NC	/	/	/
电源电压 Supply voltage	10...30 VDC 20...250 VAC 20...250 VAC/DC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
开关频率 Frequency	50Hz, 15Hz	60Hz	30Hz	50Hz	30Hz
环境温度 Ambient temperature	-25°C~70°C	-10°C~70°C	-10°C~70°C	-10°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	PBT	PBT	PBT	PBT	PBT
连接方式 Connection	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable
产品认证 Certification	CE	CE	CE	CE	CE

增强远距离系列 Extended sensing distance

延时功能型 Time delay function



外壳代号 Shell code	CR12S	CR18S	CR30S	CR30S	CQ32S
尺寸规格 (mm) Specifications(mm)	M12*1*52, M12*1*65	M18*1*70, M18*1*83.5	M30*1.5*62 M30*1.5*79	M30*1.5*62	Φ32*80
安装方式 Mounting	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	● 埋入, ○ 非埋 ● Flush, ○ Non-flush	○ 非埋 ○ Non-flush	● 埋入 ● Flush
检测距离 Sensing distance	4mm, 8mm	8mm, 12mm	15mm, 22mm	22mm	15mm
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	/
	DC 4线 DC 4 Wires	/	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	/
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	NO NC
	AC 5线 AC 5 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	20...250 VAC	20...250 VAC
开关频率 Frequency	50Hz	50Hz	50Hz	10Hz	1Hz
环境温度 Ambient temperature	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C	-25°C~70°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	PA66	PBT	PBT	PBT	PBT
连接方式 Connection	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆, M12 连接器 Cable, M12 Connector	成型电缆 Cable	成型电缆 Cable
产品认证 Certification	CE	CE	CE	CE	CE

管道液位系列 Pipe liquid level detecting



耐高温料位系列

High temperature resistant material level detecting



外壳代号 Shell code		CE10	CE15	CE53		
尺寸规格 (mm) Specifications(mm)		43*24*20	34*33*20	55*22*96		
安装方式 Mounting		● 非埋 ● Non-flush	● 非埋 ● Non-flush	● 非埋 ● Non-flush		
检测距离 Sensing distance		13mm	26mm	8mm		
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC		
	DC 4线 DC 4 Wires	/	/	/		
	DC 2线 DC 2 Wires	/	/	/		
	AC 2线 AC 2 Wires	/	/	/		
	AC/DC 2线 AC/DC 2 Wires	/	/	/		
电源电压 Supply voltage		10...30 VDC	10...30 VDC	18...36 VDC		
开关频率 Frequency		60Hz	60Hz	60Hz		
环境温度 Ambient temperature		-10°C~55°C	-10°C~55°C	感应头 : 250°C 控制盒 : 0°C~60°C Sensor: 250°C Control box : 0°C~60°C		
防护等级 Protection degree		IP67	IP67	IP54		
外壳材料 Housing material		PBT	PBT	不锈钢 Stainless steel		
连接方式 Connection		成型电缆 Cable	成型电缆 Cable	成型电缆 Cable		
产品认证 Certification		CE	CE	CE		



- 可调节距离，易于设置
- 具有短路保护及逆极性保护功能
- 电缆连接与连接器连接可选
- 金属外壳坚固耐用，塑料外壳经济且安装简单
- 具有入光ON/遮光ON转换功能
- 内置电源可选择AC、DC或AC/DC通用电源
- 继电器输出，容量高达250VAC*3A

- Easy to set up and adjust distance.
- Short-circuit protection, reverse polarity protection.
- Cable and connector connection optional.
- Stainless steel housing, strong and durable. Plastic housing, economical and easy to install.
- Light ON/dark ON conversion function.
- Built-in power supply, AC, DC or AC/DC universal power supply.
- Relay output, capacity up to 250VAC*3A.

产品命名方式 Naming rules

P **R** **12** **□** **□** - **B** **C15** **D** **N** **O** **□** - **□□** **□□** **□□□□**
1 **2** **3** **4** **5** **6** **7** **8** **9** **10** **11** **12** **13** **15**

1. 分类代号 Type code

P:光电式 Photoelectric

2. 外形代号 Shape code

R:螺纹圆柱形 Threaded cylindrical

U:槽形 U-Shaped

Q:光滑圆柱外壳
Smooth cylindrical

2位字母:方形外壳
2 letters:Rectangular housing code

3. 尺寸代号 Size Code

数字:外壳尺寸 Number:Housing diameter
如: 08:M8 e.g: 08:M8

4. 外壳材料 Housing material

无:金属铜壳 N/A:Copper

S:塑料 S:Plastic

5. 外形尺寸 Housing length

无:标准型 N/A:Standard

短型:S Short:S

长型:L Long:L

6. 安装形式 Mounting

B:漫反射式 Diffuse reflection

D:回归反射式 Retro reflection

P:偏振反射式 Polarized reflection

S:限定反射式 Focus reflection

T:对射式 Through beam reflection

M:色标检测式 Color mark detect

Y:背景抑制式 Background suppression

7. 检测距离 Sensing distance

例: C10:10cm

C40:40cm

M5:5m

M10:10m

8. 工作电压 Supply voltage

A:20...250VAC

A1:110VAC

A2:220VAC

B:90...250VAC

C:380VAC

D:10...30VDC

E:10...60VDC

I:10...40VDC

J:5VDC

S:12...240VDC/24...240VAC

T:12...24VDC

9. 输出方式 Output way

T:AC二线 AC 2 wires

P:PNP

N:NPN

E:NPN/PNP

F:NPN+PNP

K:继电器 Relay

10. 输出状态 Output status

O:常开 NO

C:常闭 NC

R:常开+常闭 NO+NC

A:常开/常闭可逆
NO/NC Reversible

B:常开/常闭可选
NO/NC Optional

分为电缆线可选、电位器可选
Cable optional; Potentiometer optional

注:继电器输出可以不选
Note:Relay output is optional

11. 延时状态 Time delay status

无:不带延时功能

N/A:Without time delay function

T1:带前延时功能

On-delay function

T2:带后延时功能

Off-delay function

T3:带前后延时功能

On-delay/Off-delay function

12. 引线长度 Cable length

例: 无:2m e.g: N/A:2m

3M:3m

13. 连接形式 Connection

无:2M引线式 N/A:2M cable

E1:M8三芯插件

M8 connector (3 pins)

E2:M12四芯插件

M12 connector (4 pins)

E3:M8四芯插件

M8 connector (4 pins)

E4:M12四芯梯形插件

M12 trapezoid connector (4 pins)

E5:M12五芯插件

M12 connector (5 pins)

D:内端子接线 Terminal

14. 特殊要求 Special requirement

用四位数字表示 In 4 Digits

漫反射系列 Diffuse reflection



外壳代号 Shell code	PR12	PR18	PR18G	PR30	
检测距离 Sensing distance	15cm	10cm, 40cm	10cm, 40cm	50cm, 100cm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	NO NC	NO NC	NO NC
	AC/DC 5线 AC/DC 5Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC	
响应时间 Response time	DC: <8.2ms	DC: <8.2ms AC: <50 ms	DC: <8.2ms AC: <50 ms	DC: <8.2ms AC: <50 ms	
环境温度 Ambient temperature	-15°C~55°C	-15°C~55°C	-15°C~55°C	-15°C~55°C	
防护等级 Protection degree	IP67	IP67	IP65	IP67	
外壳材料 Housing material	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	
连接方式 Connection	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	
产品认证 Certification	CE UL	CE UL	CE UL	CE UL	

漫反射系列 Diffuse reflection



外壳代号 Shell code	PBA	PSF	PSC	PSG	PSE	
检测距离 Sensing distance	2m	30cm, 80cm	30cm, 1m	30cm, 80cm	10cm, 30cm, 100cm	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO/NC PNP NO/NC	NPN NO/NC PNP NO/NC	/	NPN NO/NC PNP NO/NC
	DC 4线 DC 4 Wires	/	/	/	推挽输出 NO/NC Push-pull NO/NC	/
	DC 2线 DC 2 Wires	/	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/	/
	AC/DC 5线 AC/DC 5 Wires	/	/	/	/	/
电源电压 Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC	10...30 VDC	
响应时间 Response time	DC: <3ms	DC: <1ms	DC: <2ms	DC: <2ms	DC: <0.5ms	
环境温度 Ambient temperature	-15°C~55°C	-15°C~55°C	-15°C~55°C	-15°C~55°C	-25°C~55°C	
防护等级 Protection degree	IP54	IP67	IP67	IP67	IP67	
外壳材料 Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS	PC/ABS	
连接方式 Connection	成型电缆 Cable	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector	
产品认证 Certification	CE	CE	CE	CE	CE	

漫反射系列 Diffuse reflection

回归反射系列
Retro reflection



外壳代号 Shell code	PTF	PTE	PTL	PSR	PR18	
检测距离 Sensing distance	50cm, 100cm	30cm, 200cm	80cm, 2m, 4m	30cm	3m	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	/	NPN NO; NPN NC PNP NO; PNP NC	/	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	NPN+PNP NO/NC	NPN NO+NC PNP NO+NC	NPN NO/NC PNP NO/NC	NPN NO+NC PNP NO+NC
	AC 2线 AC 2 Wires	/	/	/	/	NO NC
	AC/DC 5线 AC/DC 5 Wires	继电器 NO+NC Relay output NO+NC	继电器 NO+NC Relay output NO+NC	继电器 NO+NC Relay output NO+NC	/	/
电源电压 Supply voltage	10...30 VDC 24...240 VAC/ 12...240 VDC	10...30 VDC 24...240 VAC/DC	10...30 VDC 24...240 VAC/ 12...240 VDC	10...30 VDC	10...30 VDC 20...250 VAC	
响应时间 Response time	DC: < 8.2ms AC: < 30 ms	DC: < 2 ms AC/DC: < 10 ms	DC: < 8.2ms AC: < 30 ms	DC: < 1ms	DC: < 8.2ms AC: < 50 ms	
环境温度 Ambient temperature	-15°C~55°C	-25°C~55°C	-15°C~55°C	-15°C~60°C	-15°C~55°C	
防护等级 Protection degree	IP64	IP67	IP67	IP67	IP67	
外壳材料 Housing material	PC/ABS	PC/ABS	PC/ABS	ABS	镍铜合金, PBT Nickel-copper Alloy, PBT	
连接方式 Connection	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	端子连接 Terminal	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	
产品认证 Certification	CE	CE	CE	CE	CE U	

回归反射系列 Retro reflection



外壳代号 Shell code	PR18G	PR30	PSF	PTF	PTL	
检测距离 Sensing distance	3m	5m	2m	3m, 5m	5m	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO/NC PNP NO/NC	NPN NO; NPN NC PNP NO; PNP NC	/
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	/	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	/	/	/	/	/
	AC 2线 AC 2 Wires	NO NC	NO NC	/	/	/
	AC/DC 5线 AC/DC 5 Wires	/	/	/	继电器 NO+NC Relay output NO+NC	继电器 NO+NC Relay output NO+NC
电源电压 Supply voltage	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC	12...24 VDC	10...30 VDC 24...240 VAC/ 12...240 VDC	10...30 VDC 24...240 VAC/ 12...240 VDC	
响应时间 Response time	DC: < 8.2ms AC: < 50 ms	DC: < 8.2ms AC: < 50 ms	DC: < 1ms	DC: < 8.2ms AC: < 30 ms	DC: < 8.2ms AC: < 30 ms	
环境温度 Ambient temperature	-15°C~55°C	-15°C~55°C	-15°C~55°C	-15°C~55°C	-15°C~55°C	
防护等级 Protection degree	IP65	IP67	IP67	IP64	IP67	
外壳材料 Housing material	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	PC/ABS	PC/ABS	PC/ABS	
连接方式 Connection	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M12 连接器 Cable M12 Connector	端子连接 Terminal	
产品认证 Certification	CE U	CE U	CE	CE	CE	

偏振反射系列 Polarized reflection



外壳代号 Shell code	PSF	PSC	PSG	PTE	PTL
检测距离 Sensing distance	2m	4m	4m	5m	12m
DC 3线 DC 3 Wires	NPN NO/NC PNP NO/NC	NPN NO/NC PNP NO/NC	/	/	NPN NO; NPN NC PNP NO; PNP NC
DC 4线 DC 4 Wires	/	/	推挽输出 NO/NC Push-pull NO/NC	NPN+PNP NO/NC	NPN NO+NC PNP NO+NC
输出方式 Output					
DC 2线 DC 2 Wires	/	/	/	/	/
AC 2线 AC 2 Wires	/	/	/	/	/
AC/DC 5线 AC/DC 5 Wires	/	/	/	继电器 NO+NC Relay output NO+NC	继电器 NO+NC Relay output NO+NC
电源电压 Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	10...30 VDC 24...240 VAC/DC	10...30 VDC 24...240 VAC/ 12...240 VDC
响应时间 Response time	DC: < 1ms	DC: < 2ms	DC: < 2ms	DC: < 2ms AC: < 10ms	DC: < 8.2ms AC: < 30 ms
环境温度 Ambient temperature	-15°C~55°C	-25°C~55°C	-15°C~55°C	-25°C~55°C	-15°C~55°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS	PC/ABS
连接方式 Connection	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M12 连接器 Cable M12 Connector	端子连接 Terminal
产品认证 Certification	CE	CE	CE	CE	CE

偏振反射系列 Polarized reflection

背景抑制系列 Background suppression



外壳代号 Shell code	PSR	PSE	PR18	PSE	PSC
检测距离 Sensing distance	3m	3m	10cm	20cm	35cm
DC 3线 DC 3 Wires	/	NPN NO/NC PNP NO/NC	/	NPN NO/NC PNP NO/NC	NPN NO/NC PNP NO/NC
DC 4线 DC 4 Wires	NPN NO/NC PNP NO/NC	/	NPN NO+NC PNP NO+NC	/	/
输出方式 Output					
DC 2线 DC 2 Wires	/	/	/	/	/
AC 2线 AC 2 Wires	/	/	/	/	/
AC/DC 5线 AC/DC 5 Wires	/	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	12...24 VDC
响应时间 Response time	DC: <1ms	DC: <0.5ms	DC: <2ms	DC: <1ms	DC: <2ms
环境温度 Ambient temperature	-15°C~60°C	-25°C~55°C	-15°C~55°C	-25°C~55°C	-25°C~55°C
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
外壳材料 Housing material	ABS	PC/ABS	镍铜合金 Nickel-copper Alloy	PC/ABS	PC/ABS
连接方式 Connection	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector
产品认证 Certification	CE	CE	CE	CE	CE

背景抑制系列 Background suppression



外壳代号 Shell code	PTB	PSR			
检测距离 Sensing distance	200cm	10cm			
DC 3线 DC 3 Wires	/	/			
DC 4线 DC 4 Wires	NPN+PNP NO/NC	NPN NO/NC PNP NO/NC			
输出方式 Output					
DC 2线 DC 2 Wires	/	/			
AC 2线 AC 2 Wires	/	/			
AC/DC 5线 AC/DC 5 Wires	/	/			
电源电压 Supply voltage	10...30 VDC	10...30 VDC			
响应时间 Response time	DC: < 2ms	DC: < 0.5ms			
环境温度 Ambient temperature	-15°C~55°C	-15°C~60°C			
防护等级 Protection degree	IP67	IP67			
外壳材料 Housing material	ABS	ABS			
连接方式 Connection	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector			
产品认证 Certification	CE	CE			

对射系列 Through beam



外壳代号 Shell code	PR12	PR18	PR18G	PR30	PR30L
检测距离 Sensing distance	5m, 10m	10m, 20m	10m, 20m	20m, 40m	100m, 150m
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC
	DC 4线 DC 4 Wires	/	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC	NPN NO+NC PNP NO+NC
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	NO NC	NO NC	NO NC
	AC/DC 5线 AC/DC 5 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC	10...30 VDC 20...250 VAC	10...30 VDC
响应时间 Response time	DC: <8.2ms	DC: <8.2ms AC: <50 ms	DC: <8.2ms AC: <50 ms	DC: <8.2ms AC: <50 ms	DC: <8.2ms
环境温度 Ambient temperature	-15°C~55°C	-15°C~55°C	-15°C~55°C	-15°C~55°C	-15°C~55°C
防护等级 Protection degree	IP67	IP67	IP65	IP67	IP67
外壳材料 Housing material	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT	镍铜合金, PBT Nickel-copper Alloy, PBT
连接方式 Connection	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 Cable
产品认证 Certification	CE UL	CE UL	CE UL	CE UL	CE UL

对射系列 Through beam



外壳代号 Shell code	PSJ	PSF	PSC	PSG	PSE	
检测距离 Sensing distance	1.5m	5m, 10m	5m, 15m, 30m	15m, 30m	10m, 20m	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	NPN NO/NC PNP NO/NC	NPN NO/NC PNP NO/NC	/	NPN NO/NC PNP NO/NC
	DC 4线 DC 4 Wires	/	/	/	推挽输出 NO/NC Push-pull NO/NC	/
	DC 2线 DC 2 Wires	/	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/	/
	AC/DC 5线 AC/DC 5 Wires	/	/	/	/	/
电源电压 Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC	10...30 VDC	
响应时间 Response time	DC: < 1ms	DC: < 1ms	DC: < 2ms	DC: < 2ms, 4ms	DC: < 1ms	
环境温度 Ambient temperature	-20°C~55°C	-15°C~55°C	-25°C~55°C	-15°C~55°C	-25°C~55°C	
防护等级 Protection degree	IP40	IP67	IP67	IP67	IP67	
外壳材料 Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS	PC/ABS	
连接方式 Connection	成型电缆 Cable	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector	成型电缆 M8 连接器 Cable M8 Connector	
产品认证 Certification	CE	CE	CE	CE	CE	

对射系列 Through beam



外壳代号 Shell code	PTF	PTE	PTL	PSR	
检测距离 Sensing distance	10m, 20m	60m	20m, 30m, 40m	20m	
输出方式 Output	DC 3线 DC 3 Wires	NPN NO; NPN NC PNP NO; PNP NC	/	/	/
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	NPN+PNP NO/NC	NPN NO+NC PNP NO+NC	NPN NO/NC PNP NO/NC
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 5线 AC/DC 5 Wires	继电器 NO+NC Relay output NO+NC	继电器 NO+NC Relay output NO+NC	继电器 NO+NC Relay output NO+NC	/
电源电压 Supply voltage	10...30 VDC 24...240 VAC/ 12...240 VDC	10...30 VDC 24...240 VAC/DC	10...30 VDC 24...240 VAC/ 12...240 VDC	10...30 VDC	
响应时间 Response time	DC: < 8.2ms AC: < 30 ms	DC: < 2ms AC/DC: <10ms	DC: < 8.2ms AC: < 30 ms	DC: < 1ms	
环境温度 Ambient temperature	-15°C~55°C	-25°C~55°C	-15°C~55°C	-15°C~60°C	
防护等级 Protection degree	IP64	IP67	IP67	IP67	
外壳材料 Housing material	PC/ABS	PC/ABS	PC/ABS	ABS	
连接方式 Connection	成型电缆 M12 连接器 Cable M12 Connector	成型电缆 M12 连接器 Cable M12 Connector	端子连接 Terminal	成型电缆 M12 连接器 Cable M12 Connector	
产品认证 Certification	CE	CE	CE	CE	

对射系列 Through beam



外壳代号 Shell code	PU5-21	PU5-31	PU07	PU15	PU30
检测距离 Sensing distance	5mm	5mm	7mm	15mm	30mm
DC 3线 DC 3 Wires	/	/	NPN NO; NPN NC PNP NO; PNP NC	NPN NO; NPN NC PNP NO; PNP NC	NPN NO/NC PNP NO/NC
DC 4线 DC 4 Wires	NPN NO/NC PNP NO/NC	NPN NO/NC PNP NO/NC	/	/	/
输出方式 Output					
DC 2线 DC 2 Wires	/	/	/	/	/
AC 2线 AC 2 Wires	/	/	/	/	/
AC/DC 5线 AC/DC 5 Wires	/	/	/	/	/
电源电压 Supply voltage	5...24 VDC	5...24 VDC	10...30 VDC	10...30 VDC	10...30 VDC
响应时间 Response time	DC: <0.33ms	DC: <0.33ms	DC: <1ms	DC: <1ms	DC: <1ms
环境温度 Ambient temperature	-25°C~55°C	-25°C~55°C	-15°C~55°C	-15°C~55°C	-15°C~55°C
防护等级 Protection degree	IP50	IP50	IP64	IP64	IP60, IP67
外壳材料 Housing material	PA66+20%GF	PA66+20%GF	PBT	PBT	铝合金+PC Aluminum alloy+PC
连接方式 Connection	接插件型 Connector type	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable	成型电缆 Cable
产品认证 Certification	CE	CE	CE	CE	CE

对射系列 Through beam

区域光电
Area photoelectric



外壳代号 Shell code	PU30	PU30S	PU100	PTC	
检测距离 Sensing distance	30mm		100mm	1500mm	
输出方式 Output	DC 3线 DC 3 Wires	/	NPN NO/NC PNP NO/NC	/	/
	DC 4线 DC 4 Wires	NPN NO+NC PNP NO+NC	/	NPN/PNP NO+NO	PNP NC NPN NC
	DC 2线 DC 2 Wires	/	/	/	/
	AC 2线 AC 2 Wires	/	/	/	/
	AC/DC 2线 AC/DC 2 Wires	/	/	/	/
电源电压 Supply voltage	10...30 VDC	10...30 VDC	24 VDC	18...30 VDC	
响应时间 Response time	DC: <1ms	DC: <1ms	DC: <30ms	DC: <4ms	
环境温度 Ambient temperature	-25°C~55°C	-25°C~55°C	-10°C~55°C	-15°C~55°C	
防护等级 Protection degree	IP67	IP67	IP50	IP65	
外壳材料 Housing material	PBT	PBT	铝合金 Aluminum alloy	PC/ABS	
连接方式 Connection	成型电缆 Cable	成型电缆 Cable	M12连接器 M12 connector	M12连接器 M12 connector	
产品认证 Certification	CE	CE	CE	CE	

颜色检测传感器 Color sensors



外壳代号 Shell code	CPES-B	CPES-F	PU03
检测距离 Sensing distance	28±3mm	28±3mm, 20...350mm	3mm
响应时间 Response time	25uS	150uS	40uS
输出方式 Output	推挽输出+模拟量 (0-5V) 输出 Push-pull output+Analog output(0-5V)	推挽输出+模拟量 (0-5V) 输出 Push-pull output+Analog output(0-5V)	推挽输出 Push-pull output
电源电压 Supply voltage	12-24 VDC	12-24 VDC	10-30 VDC
光源 Light source	白光 White light	荧光 Luminescence light	红外光 Infrared light
光斑直径 Spot diameter	1mm@28mm, 3mm@28mm	3mm@28mm	/
调节方式 Adjustment method	MARK键 和 BKGD键 MARK Key and BKGD Key	MARK键 和 BKGD键 MARK Key and BKGD Key	示教按键 Teach-in key
耐电压 Withstanding voltage	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s
环境温度 Ambient temperature	-10°C~55°C	-10°C~55°C	-20°C~55°C
防护等级 Protection degree	IP65	IP65	IP65
外壳材料 Housing material	PBT	PBT	PBT
连接方式 Connection	M12连接器, 成型电缆 M12 Connector, Cable	M12连接器 M12 Connector	M8连接器 M8 Connector

色标传感器 Color mark sensors



光纤传感器 Optical fiber sensors



外壳代号 Shell code	SPM
检测距离 Sensing distance	10±2mm
响应时间 Response time	1ms
输出方式 Output	NPN NO+NC PNP NO+NC
电源电压 Supply voltage	12-24 VDC
光源 Light source	红光/绿光, 白光/蓝光 Red light/green light, White light/blue light
耐电压 Withstanding voltage	1000V/AC 50/60Hz 60s
绝缘阻抗 Insulation resistance	≥50MΩ(500VDC)
耐振动 Anti-vibration	复振幅1.5mm 10...50Hz (X,Y,Z方向各2小时) 10-50Hz, repeat-amplitude 1.5mm (2 hours each for x, y, z direction)
环境温度 Ambient temperature	25...55°C
防护等级 Protection degree	IP65
外壳材料 Housing material	PBT
连接方式 Connection	成型电缆 Cable

外壳代号 Shell code	FD1	FD2
检测距离 Sensing distance	取决于光纤类型 Depend on fiber type	取决于光纤类型 Depend on fiber type
响应时间 Response time	< 1ms	< 1ms
输出方式 Output	NPN+PNP NO/NC	NPN NO/NC PNP NO/NC
电源电压 Supply voltage	10-30 VDC	12-24 VDC
照明度 Illumination intensity	白炽灯: 受光面照明度3000lux Incandescent lamp: intensity of illumination 3,000lux	
耐电压 Withstanding voltage	AC1,000V 1分钟 50/60Hz AC1,000V 1 minute 50/60Hz	
绝缘电阻 Insulation resistance	> 50MΩ, 基于DC500V的高阻表 > 50MΩ, base on DC500V megger	> 20MΩ, 基于DC500V的高阻表 > 20MΩ, base on DC500V megger
耐振动 Anti-vibration	10 ~ 55Hz, 振幅: 1mm, X, Y和Z各方向2小时 10-55Hz, amplitude: 1mm, 2 hours each for x, y, z direction	10 ~ 50Hz, 振幅: 1.5mm, X, Y和Z各方向2小时 10-50Hz, amplitude: 1.5mm, 2 hours each for x, y, z direction
耐冲击 Anti-concussion	加速度: 500m/s ² (约30G), X, Y和Z各方向3次 Acceleration: 500m/s ² (approx: 50G), 3 times each for x, y and z direction	加速度: 500m/s ² (约50G), X, Y和Z各方向3次 Acceleration: 500m/s ² (approx: 50G), 3 times each for x, y and z direction
环境温度 Ambient temperature	0~50°C (不可结露、结冰) 0~50°C (dewed or iced forbidden)	-10°C~50°C (不可结露、结冰) -10°C~50°C (dewed or iced forbidden)
环境湿度 Ambient humidity	35~85%RH	
防护等级 Protection degree	IP54	
外壳材料 Housing material	PC+ABS	
连接方式 Connection	成型电缆 Cable	

光纤头 Fiber head



外壳代号 Shell code	PFR-610	PFCR-610	PFRD-410	PFCR-410	PFRD-310	PFCR-310
尺寸规格 Boundary dimension	M6	M6	M4	M4	M3	M3
最小弯曲半径 Boundary dimension	R25	R25	R15	R15	R15	R15
检测距离 Sensing distance	FD1	100	90	60	40	40
	FD2	FINE:110 TURBO:190 SUPER:290	FINE:80 TURBO:170 SUPER:280	FINE:40 TURBO:90 SUPER:240	FINE:40 TURBO:70 SUPER:160	FINE:40 TURBO:70 SUPER:120
最小检出物 Boundary dimension	φ 0.2	φ 0.1	φ 0.1	φ 0.1	φ 0.1	φ 0.05



外壳代号 Shell code	PFT-610	PFT-410	PFT-310
尺寸规格 Boundary dimension	M6	M4	M3
最小弯曲半径 Boundary dimension	R25	R25	R25
检测距离 Sensing distance	FD1	280	200
	FD2	FINE:300 TURBO:500 SUPER:800	FINE:300 TURBO:500 SUPER:800
最小检出物 Boundary dimension	φ 0.5	φ 0.5	φ 0.5

测距传感器 Distance measuring sensors



外壳代号 Shell Code	PTK		
种类 Category	RS485		双开关量 2port output
型号 Part number	PTK-CM12DR55-2M	PTK-CM12DR04-2M	PTK-CM12DG55-2M
重复精度① Repeated accuracy①	5%	10%	— —
检测精度① Detection precision①	5%	10%	— —
响应时间 Response time	40ms	20ms	100ms
发散角 Divergence angle	±1.8°		±1.8°
回差范围 Hysteresis error	— —		3~20%
消耗电流 Current consumption	≤120mA		≤70mA
负载电流 Load current	— —		200mA
电源电压 Supply voltage	10~30VDC		
光源类型 Light source	红外LED (850nm) Infrared LED (850nm)		
色敏度② Color sensitivity②	≤10%		
环境温度 Ambient temperature	-15°C~65°C		
防护等级 Protection degree	IP67		
外壳材料 Housing material	ABS		
极性保护 Polarity protection	有 (电源正负极之间) Yes (The negative pole of the power supply)		
冲击耐压 Impulse withstand voltage	1000V/AC 50/60Hz 60s		
环境光 Ambient light	100,000lx		
电磁兼容 Electromagnetic compatibility	EN 60947-5-2		
尺寸规格 Boundary dimension	52.3*21*23.7mm		
重量 Weight	≤65g (含2m PVC扁平电缆线) ≤65g (Including 2m PVC flat cables)		
检测距离 Sensing distance	0.15~12m		通道1(白线):0.3~12m(可调) Channel1(white line):0.3~12m(Adjustable) 通道2(黑线):0.3~12m(可调) Channel2(black line):0.3~12m(Adjustable)
输出方式 Output mode	RS485 output		PUSH-PULL (NO/NC相对于PNP) PUSH-PULL (NO/NC for PNP) 距离设定/自学习方式设定可选 Manual/Teach setting

备注 ① 测试距离为0.8Sn (Sn为最大检测距离), 目标物为90%反射率的白卡

Notes Detection distance is 0.8Sn (Sn is max detection distance), target is white card with 90% reflectivity;

② 测试距离为0.8Sn (Sn为最大检测距离), 黑卡与白卡的测试距离差

Detection distance is 0.8Sn (Sn is max detection distance), distance difference between black and white card.

测距传感器 Distance measuring sensors



外壳代号 Shell Code		PTK			
型号 Part number	UART-TTL输出 UART-TTL Output	PTK-CM12JL55-0M5	PTK-CM12JL04-0M5	PTK-CM12JL55-0M5A	PTK-CM12JL04-0M5A
	IIC输出 IIC Output	PTK-CM12JI55-0M5	PTK-CM12JI04-0M5	PTK-CM12JI55-0M5A	PTK-CM12JI04-0M5A
重复精度① Repeated accuracy①		5%	10%	5%	10%
检测精度① Detection precision①		5%	10%	5%	10%
响应时间 Response time		40ms	20ms	40ms	20ms
发散角 Divergence angle		±1.8°		±4°	
电源电压 Supply voltage		5V			
消耗电流 Current consumption		≤120mA			
分辨率 Resolution		1mm			
检测距离 Sensing distance		0.15~12m			
光源类型 Light source		红外LED (850nm) Infrared LED (850nm)			
防护等级 Protection degree		IP67			
环境温度 Ambient temperature		-15°C~65°C			
色敏度② Color sensitivity②		≤10%			
外壳材料 Housing Material		ABS			
极性保护 Polarity protection		有 (电源正负极之间) Yes (The negative pole of the power supply)			
冲击耐压 Impulse withstand voltage		1000V/AC 50/60Hz 60s			
环境光 Ambient light		100,000lx			
电磁兼容 Electromagnetic compatibility		EN 60947-5-2			
尺寸规格 Boundary dimension		52.3*21*23.7mm			
重量 Weight		≤30g (0.5m PVC扁平电缆线) ≤30g (Including 0.5m PVC flat cables)			

备注 ① 测试距离为0.8Sn (Sn为最大检测距离)，目标物为90%反射率的白卡
Notes Detection distance is 0.8Sn (Sn is max detection distance), target is white card with 90% reflectivity;

② 测试距离为0.8Sn (Sn为最大检测距离)，黑卡与白卡的测试距离差
Detection distance is 0.8Sn (Sn is max detection distance), distance difference between black and white card.

测距传感器 Distance measuring sensors



外壳代号 Shell Code	PSK	
型号 Item code	PSK-CM10JL55-C1	PSK-CM10JL04-C1
响应时间 Response time	40ms	20ms
重复精度① Repeated accuracy①	5%	10%
检测精度① Detection precision①	5%	10%
消耗电流 Current consumption	≤120mA	≤70mA
电源电压 Supply voltage	5VDC	
光源 Light source	红外LED (850nm) Infrared LED (850nm)	
环境光 Ambient light	100,000lx	
发散角 Divergence angle	±1.8°	
输出接口 Output interface	UART-TTL	
检测范围 Detection range	0.15~10m	
分辨率 Resolution	1mm	
色敏度② Color sensitivity②	≤10%	
环境温度 Ambient temperature	0...+55°C	
防护等级 Protection degree	IP50	
外壳材质 Housing material	ABS	
连接方式 Connection	6芯, 0.5mm间距FPC连接器 0.5mm 6pin FPC connector	
重量 Weight	≤10g	

- 备注 ① 测试距离为0.8Sn (Sn为最大检测距离) , 目标物为90%反射率的白卡
Notes Detection distance is 0.8Sn (Sn is max detection distance), target is white card with 90% reflectivity;
- ② 测试距离为0.8Sn (Sn为最大检测距离) , 黑卡与白卡的测试距离差
Detection distance is 0.8Sn (Sn is max detection distance), distance difference between black and white card.

测距传感器 Distance measuring sensors



外壳代号 Shell Code	PSK-A	PSK-B
型号 Item code	PSK-CM10JL04-AC3	PSK-CM10JL55-BC4
响应时间 Response time	20ms	40ms
重复精度① Repeated accuracy①	10%	5%
检测精度① Detection precision①	10%	5%
消耗电流 Current consumption	≤70mA	≤85mA
电源电压 Supply voltage	5VDC	5VDC
光源 Light source	红外LED (850nm) Infrared LED (850nm)	红外LED (850nm) Infrared LED (850nm)
环境光 Ambient light	100,000lx	100,000lx
发散角 Divergence angle	±1.8°	±2.5°
输出接口 Output interface	UART-TTL	UART-TTL
检测范围 Detection range	0.15-10m	0.15-10m
分辨率 Resolution	1mm	1mm
色敏度② Color sensitivity②	≤10%	≤10%
环境温度 Ambient temperature	0...+55°C	-15...+55°C
防护等级 Protection degree	透镜部分IP65	IP50 (透镜部分IP65)
外壳材质 Housing material	ABS	ABS
连接方式 Connection	5芯, 1.25mm间距插座 1.25mm 5pin connector	4芯, 1.25mm间距插座 1.25mm 4pin connector
重量 Weight	≤14g	≤10g

备注 ① 测试距离为0.8Sn (Sn为最大检测距离), 目标物为90%反射率的白卡
Detection distance is 0.8Sn (Sn is max detection distance), target is white card with 90% reflectivity;

② 测试距离为0.8Sn (Sn为最大检测距离), 黑卡与白卡的测试距离差
Detection distance is 0.8Sn (Sn is max detection distance), distance difference between black and white card.

激光位移传感器 Laser displacement sensors



外壳代号 Shell Code		PTM				
型号 Part number	RS485 UART-TTL Output	PTM-CR10VN10	PTM-CR20VN10	PTM-CR50VN10	PTM-CR100VN10	PTM-CR200VN10
	4-20mA IIC Output	PTM-CR10VI10	PTM-CR20VI10	PTM-CR50VI10	PTM-CR100VI10	PTM-CR200VI10
	0-10V IIC Output	PTM-CR10VV10	PTM-CR20VV10	PTM-CR50VV10	PTM-CR100VV10	PTM-CR200VV10
测量起点 Starting point for measuring	27mm	42mm	62mm	82mm	95mm	
量程 Range	10mm	20mm	50mm	100mm	200mm	
分辨率 Resolution	0.5μm	1μm	2.5μm	5μm	10μm	
重复精度 Repeated accuracy	±5μm	±4μm	±10μm	±20μm	±40μm	
线性度 Linearity	±0.1%F.S.					
采样频率 Sampling frequency	Max. 2kHz					
温漂 Temperature drift	±0.05%F.S./°C					
光源类型 Light source	650nm半导体红光, 2mW 650nm semiconductor red light, 2mW					
电源电压 Supply power	18-28VDC/500mA					
环境温度 Ambient Temperature	-10°C~40°C (无结露, 不结冰) -10°C~40°C (dewed or iced forbidden)					
连接线 Connection	模拟量输出 (电流/电压) /RS485 Analog output (current/voltage)/RS485					
防护等级 Protection degree	IP67					
尺寸规格 Volume	75mm*60mm*25mm					
重量 Weight	200g					

备注 1、上述精度指标是在标准测试条件下得到 (标准被测表面、标准测试环境、采样频率2KHz,取64次平均值);
Notes The above accuracy indexes are based on standard test conditions (standard surface and test environment, sampling frequency 2KHz, and get the average value of 64 times);

2、测量范围从2mm-2000mm, 10mm-200mm量程为常用型号, 其他量程产品不在本文描述。
Measuring range is from 2mm-2000mm, and 10mm-200mm is for common models, and other range products are not described here.

激光位移传感器 Laser displacement sensors



外壳代号 Shell Code		PTM		
型号 Item code	RS485 RS485 Output	PTM-CR10VN5	PTM-CR20VN5	PTM-CR50VN5
测量起点 Starting point for measuring		27mm	42mm	62mm
量程 Range		10mm	20mm	50mm
分辨率 Resolution		0.1μm	1μm	2.5μm
重复精度 Repeated accuracy		±0.5μm	±4μm	±10μm
线性度 Linearity		±0.05%F.S.		
采样频率 Sampling frequency		Max. 2kHz		
温漂 Temperature drift		±0.05%F.S./°C		
光源类型 Light source		650nm半导体红光, 2mW 650nm semiconductor red light, 2mW		
电源电压 Supply power		18-28VDC		
防护等级 Protection degree		IP67		
尺寸规格 Volume		75mm*60mm*25mm		
重量 Weight		200g		

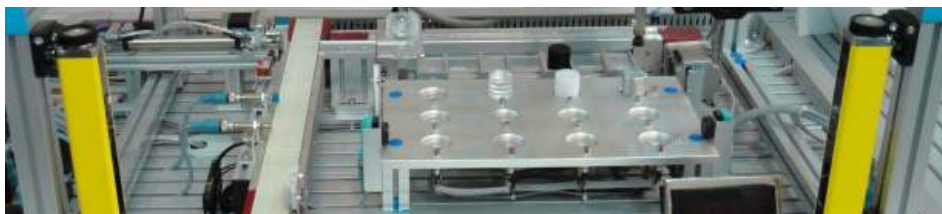
备注 上述精度指标是在标准测试条件下得到（标准被测表面、标准测试环境、采样频率2KHz,取64次平均值）；
Notes The above accuracy indexes are based on standard test conditions (standard surface and test environment, sampling frequency 2KHz, and get the average value of 64 times);

激光位移传感器 Laser displacement sensors



外壳代号 Shell Code		PTM		
型号 Item code	RS485 RS485 Output	PTM-CR2VN20-01	PTM-CR5VN20-01	PTM-CR10VN20-01
测量起点 Starting point for measuring		15mm	23.5mm	42mm
量程 Range		2mm	5mm	10mm
分辨率 Resolution		0.1μm	0.5μm	1μm
重复精度 Repeated accuracy		±0.2μm	±2μm	±4μm
线性度 Linearity		±0.2%F.S.		
采样频率 Sampling frequency		Max. 2kHz		
温漂 Temperature drift		±0.05%F.S./°C		
光源类型 Light source		650nm半导体红光, 2mW 650nm semiconductor red light, 2mW		
电源电压 Supply power		18-28VDC		
防护等级 Protection degree		IP67		
尺寸规格 Volume		80*75*28mm	75*60*25mm	
重量 Weight		215g	200g	

备注 上述精度指标是在标准测试条件下得到（标准被测表面、标准测试环境、采样频率2KHz,取64次平均值）；
Notes The above accuracy indexes are based on standard test conditions (standard surface and test environment, sampling frequency 2KHz, and get the average value of 64 times);



- 采用同步扫描方式，安全可靠
- 备有多种保护高度选择
- 具有14mm,20mm,25mm,30mm,40mm等多种分辨率
- 用于折剪机，切纸机，冲压机床等各种危险区域的人体部位保护
- Synchronous scanning ensures safety and reliability.
- Various protection heights optional.
- Multi resolution optional: 14mm, 20mm, 25mm, 30mm, 40mm.
- Protecting human body from being hurt by dangerous machines, such as folding shear machine, paper cutter and punching machine etc.

产品命名方式 Naming rules

光幕 Light curtains

L **G** **20** **□-T** **08** **05** **T** **NA-F2** **□□□□**
1 **2** **3** **4 5** **6** **7** **8** **9 10** **11**

1. 分类 Type code

L : 区域光幕传感器
Area light curtains
S : 安全光幕传感器
Safety light curtains
M : 测量光幕传感器
Measuring light curtains

2. 外形 Shape

C : 外形代号 38×38mm Shape code
G : 外形代号 26×26mm Shape code

3. 光轴间距 Optic axis distance

例 : 20表示间距为20mm
E.g. 20:20mm

4. 光种类 Beam type

无 N/A : 平行光幕
Light curtain with parallel beams
X : 交叉光幕
Light curtain with cross beams

5. 检测方法 Detect mode

D : 回归反射 Retro reflection
T : 对射 Through beam reflection

6. 光轴数 Optic axis number

04 : 4轴 4 Axes 08 : 8轴 8 Axes
24 : 24轴 24 Axes

7. 检测距离 Sensing distance

02 : 2m ; 03 : 3m

8. 工作电压 Supply voltage

T : 12-24VDC D : 10-30VDC
L : 15-30VDC

9. 输出方式及状态 Output status

无 : 发射器 N/A: Emitter
U : 电压型(0...10V) Voltage output(0...10V)
U1 : 电压型(0...5V) Voltage output(0...5V)
I : 电流型(0...20mA) Current output(0...20mA)
IU : 电压型+电流型(0...10V,0...20mA)
Voltage+current output(0...10V,0...20mA)
NO : 接收器 NPN NO输出
Receiver NPN NO output
NC : 接收器 NPN NC输出
Receiver NPN NC output
PO : 接收器 PNP NO输出
Receiver PNP NO output
PC : 接收器 PNP NC输出
Receiver PNP NC output

AO : 接收器 NPN+PNP NO输出
Receiver NPN+PNP NO output

AC : 接收器 NPN+PNP NC输出
Receiver NPN+PNP NC output

BO : 接收器 PNP+PNP NO输出
Receiver PNP+PNP NO output

BC : 接收器 PNP+PNP NC输出
Receiver PNP+PNP NC output

10. 连接方式 Connection

无 N/A : 引线式2m Cable: 2m
3M : 引线式3m Cable: 3m
E2 : M12四芯插件 M12 Plug 4pin
E3 : M8四芯插件 M8 Plug 4pin
E5 : M12五芯插件 M12 Plug 4pin
E8 : M12八芯插件 M12 Plug 8pin
F2 : M12四芯插件+引线
M12 Plug 4pin with cable
F3 : M8四芯插件+引线
M8 Plug 4pin with cable

11. 特殊要求 Special requirement

用四位数字表示 In 4 digits

电梯光幕传感器 Elevator light curtains

DT **01** **— X** **128** **S** **—** **□□□□**
1 **2** **3** **4** **5** **6**

1. 分类 Type code

DT : 电梯光幕传感器
Elevator light curtain

2. 外形 Shape code

01 : 35mmx15.4mmx L
02 : 26.5mmx9.1mmx L

3. 光束 Beams type

P : 平行光 Parallel beams
X : 交叉光 Cross beams

4. 光轴数 Optic axis number

08 : 8轴 8Axes
16 : 16轴 16Axes
18 : 18轴 18Axes
24 : 24轴 24Axes

5. 功能 Function

L : 发射器 Emitter
S : 接收器 Receiver

6. 特殊要求 Special requirement

用四位数字表示 In 4 digits

区域光幕传感器 LG20系列 Area light curtains LG20



- 超长检测距离
- 系列化，多规格产品。检测高度从140到1880mm
- 具备自检功能，可自动检测产品内部异常，同步异常
- 高亮度动作指示灯，使得产品工作状态容易识别
- 高规格防护等级，适应各种环境（IP65）
- Ultra long detection range.
- Various series and specifications optional, detection range from 140 to 1880mm.
- Products with self-check function, be able to detect internal exceptions.
- Strong intensity LED indicates operation status.
- IP65 protection degree.

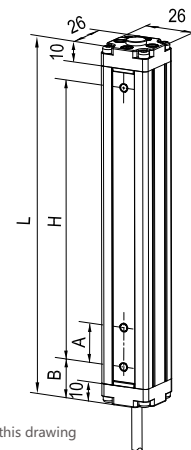
光轴数 Axes quantity	8轴 8Axes	12轴 12Axes	16轴 16Axes	20轴 20Axes	24轴 24Axes	28轴 28Axes	32轴 32Axes
发射器 Emitter	LG20-T0805T-F2	LG20-T1205T-F2	LG20-T1605T-F2	LG20-T2005T-F2	LG20-T2405T-F2	LG20-T2805T-F2	LG20-T3205T-F2
NPN NC	LG20-T0805TNA-F2	LG20-T1205TNA-F2	LG20-T1605TNA-F2	LG20-T2005TNA-F2	LG20-T2405TNA-F2	LG20-T2805TNA-F2	LG20-T3205TNA-F2
PNP NC	LG20-T0805TPA-F2	LG20-T1205TPA-F2	LG20-T1605TPA-F2	LG20-T2005TPA-F2	LG20-T2405TPA-F2	LG20-T2805TPA-F2	LG20-T3205TPA-F2
保护高度 Protection height	140mm	220mm	300mm	380mm	460mm	540mm	620mm
光轴数 Axes quantity	36轴 36Axes	40轴 40Axes	44轴 44Axes	48轴 48Axes			
发射器 Emitter	LG20-T3605T-F2	LG20-T4005T-F2	LG20-T4405T-F2	LG20-T4805T-F2			
NPN NC	LG20-T3605TNA-F2	LG20-T4005TNA-F2	LG20-T4405TNA-F2	LG20-T4805TNA-F2			
PNP NC	LG20-T3605TPA-F2	LG20-T4005TPA-F2	LG20-T4405TPA-F2	LG20-T4805TPA-F2			
保护高度 Protection height	700mm	780mm	860mm	940mm			
检测距离 Detection width	0.1 ~ 5m						
光轴间距 Axis distance	20mm						
检测物体 Sensing object	φ 30mm以上的不透明体 > φ 30mm opaque object						
电源电压 Power voltage	12 ~ 24V DC ± 10%						
消耗电流 Current consumption	发射器：<60mA(消耗电流与轴数无关)；接收器：<45mA(8轴，每增加8轴消耗电流增加5mA) Emitter: <60mA (Current consumption has nothing to do with the number of axes) Receiver: <45mA (8 axes, current consumption will increase 5mA when 8 axes increased)						
响应时间 Response time	<10ms	<15ms	<20ms	<25ms	<30ms	<35ms	<40ms
	<45ms	<50ms	<55ms	<60ms			
光源 Light sources	850nm 红外光 (调制式)			850nm Infrared (modulate)			
保护电路 Circuit protection	逆极性，过载，短路			Reverse polarity, short-circuit protection, overload protection			
周围温度 Ambient temperature	-10 ~ +55°C(注意不可结露、结冰)，存储：-10 ~ +60°C			-10 ~ +55°C(dewed or iced forbidden), storage: -10 ~ +60°C			
周围湿度 Ambient humidity	35 ~ 85%RH, 存储：35 ~ 85%RH			35 ~ 85%RH, storage: 35 ~ +85%RH			
周围照强度 Intensity of illumination	白炽灯：受光面照强度 4,000lux			Incandescent lamp: intensity of illumination 4,000lux			
耐振动 Anti-vibration	10 ~ 55Hz, 双振幅：1.2mm, X, Y和Z各方向2小时			10 ~ 150Hz, amplitude: 1.2mm, 2 hours each for x, y, z direction			
耐冲击 Anti-shocking	加速度：500m/s²(约50G), X, Y和Z各方向3次			Acceleration: 500m/s²(approx:50G), 3 times each for x, y and z direction			
防护等级 Protection degree	IP65						
材质 Housing material	外壳：铝合金，透光罩：PC，端盖：增强尼龙			Housing: AL; Light cover: PC; End cover: enhanced nylon			
接线方式 Connection	引线18cm配M12连接器			18cm cable with M12 connector			
配件 Accessory	引线5m母座线(QE12-N4F5, QE12-N3F5)			5m Connection cable(QE12-N4F5, QE12-N3F5)			

规格 Datasheets

规格 Item code	A	B	H	L
LG20-T0805T/TxA-F2	20	20	140	180
LG20-T1205T/TxA-F2	20	20	220	260
LG20-T1605T/TxA-F2	20	20	300	340
LG20-T2005T/TxA-F2	20	20	380	420
LG20-T2405T/TxA-F2	20	20	460	500
LG20-T2805T/TxA-F2	20	20	540	580
LG20-T3205T/TxA-F2	20	20	620	660
LG20-T3605T/TxA-F2	20	20	700	740
LG20-T4005T/TxA-F2	20	20	780	820
LG20-T4405T/TxA-F2	20	20	860	900
LG20-T4805T/TxA-F2	20	20	940	980

H:保护高度, H=A* (N-1) L:光幕总长度L=H+40mm A:光轴间距, 20mm N:为光轴数
H: Protection height, H=A* (N-1) L: Total height: L=H+40mm
A: Axis distance, 20mm N: Optic axis quantity

尺寸图 Dimensions



注：LG20、LG40尺寸图均可参照此图
Note: Dimension of LG20, LG40 also refers to this drawing

区域光幕传感器 LG40系列 Area light curtains LG40

光轴数 Axes quantity	4轴 4Axes	6轴 6Axes	8轴 8Axes	10轴 10Axes	12轴 12Axes	14轴 14Axes	16轴 16Axes
发射器 Emitter	LG40-T0405T-F2	LG40-T0605T-F2	LG40-T0805T-F2	LG40-T1005T-F2	LG40-T1205T-F2	LG40-T1405T-F2	LG40-T1605T-F2
NPN NC	LG40-T0405TNA-F2	LG40-T0605TNA-F2	LG40-T0805TNA-F2	LG40-T1005TNA-F2	LG40-T1205TNA-F2	LG40-T1405TNA-F2	LG40-T1605TNA-F2
PNP NC	LG40-T0405TPA-F2	LG40-T0605TPA-F2	LG40-T0805TPA-F2	LG40-T1005TPA-F2	LG40-T1205TPA-F2	LG40-T1405TPA-F2	LG40-T1605TPA-F2
保护高度 Protection height	120mm	200mm	280mm	360mm	440mm	520mm	600mm
光轴数 Axes quantity	18轴 18Axes	20轴 20Axes	22轴 22Axes	24轴 24Axes	26轴 26Axes	28轴 28Axes	30轴 30Axes
发射器 Emitter	LG40-T1805T-F2	LG40-T2005T-F2	LG40-T2205T-F2	LG40-T2405T-F2	LG40-T2605T-F2	LG40-T2805T-F2	LG40-T3005T-F2
NPN NC	LG40-T1805TNA-F2	LG40-T2005TNA-F2	LG40-T2205TNA-F2	LG40-T2405TNA-F2	LG40-T2605TNA-F2	LG40-T2805TNA-F2	LG40-T3005TNA-F2
PNP NC	LG40-T1805TPA-F2	LG40-T2005TPA-F2	LG40-T2205TPA-F2	LG40-T2405TPA-F2	LG40-T2605TPA-F2	LG40-T2805TPA-F2	LG40-T3005TPA-F2
保护高度 Protection height	680mm	760mm	840mm	920mm	1000mm	1080mm	1160mm
光轴数 Axes quantity	32轴 32Axes	34轴 34Axes	36轴 36Axes	38轴 38Axes	40轴 40Axes	42轴 42Axes	44轴 44Axes
发射器 Emitter	LG40-T3205T-F2	LG40-T3405T-F2	LG40-T3605T-F2	LG40-T3805T-F2	LG40-T4005T-F2	LG40-T4205T-F2	LG40-T4405T-F2
NPN NC	LG40-T3205TNA-F2	LG40-T3405TNA-F2	LG40-T3605TNA-F2	LG40-T3805TNA-F2	LG40-T4005TNA-F2	LG40-T4205TNA-F2	LG40-T4405TNA-F2
PNP NC	LG40-T3205TPA-F2	LG40-T3405TPA-F2	LG40-T3605TPA-F2	LG40-T3805TPA-F2	LG40-T4005TPA-F2	LG40-T4205TPA-F2	LG40-T4405TPA-F2
保护高度 Protection height	1240mm	1320mm	1400mm	1480mm	1560mm	1640mm	1720mm
检测距离 Detection width	0.1 ~ 5m						
光轴间距 Axis distance	40mm						
检测物体 Sensing object	φ 60mm以上的不透明体 >φ 60mm Opaque object						
电源电压 Power voltage	12 ~ 24V DC±10%						
消耗电流 Current consumption	发射器: <60mA(消耗电流与轴数无关); 接收器: <45mA(8轴, 每增加8轴消耗电流增加5mA) Emitter: <60mA (Current consumption has nothing to do with the number of axes) Receiver: <45mA (8 axes, current consumption will increase 5mA when 8 axes increased)						
响应时间 Response time	<5ms	<10ms	<15ms	<20ms	<25ms	<30ms	<35ms
	<40ms	<45ms	<50ms	<55ms	<60ms	<65ms	<70ms
	<75ms	<80ms	<85ms	<90ms	<95ms	<100ms	<105ms
光源 Light sources	850nm 红外光 (调制式)			850nm Infrared (modulate)			
保护电路 Circuit protection	逆极性, 过载, 短路			Reverse polarity, short-circuit protection, overload protection			
周围温度 Ambient temperature	-10 ~ +55°C(注意不可结露、结冰), 存储: -10 ~ +60°C			-10 ~ +55°C(dewed or iced forbidden), storage: -10 ~ +60°C			
周围湿度 Ambient humidity	35 ~ 85%RH, 存储: 35 ~ 85%RH			35 ~ 85%RH, storage: 35 ~ 85%RH			
周围照度 Intensity of illumination	白炽灯: 受光面照度 4,000lux			Incandescent lamp: intensity of illumination 4,000lux			
耐振动 Anti-vibration	10 ~ 55Hz, 双振幅: 1.2mm, X, Y和Z各方向2小时			10 ~ 150Hz, amplitude: 1.2mm, 2 hours each for x, y, z direction			
耐冲击 Anti-shocking	加速度: 500m/s ² (约50G), X, Y和Z各方向3次			Acceleration: 500m/s ² (approx:50G), 3 times each for x, y and z direction			
防护等级 Protection degree	IP65						
材质 Housing material	外壳: 铝合金; 透光罩: PC; 端盖: 增强尼龙			Housing: AL; Light cover: PC; End cover: strengthen nylon			
接线方式 Connection	引线18cm配M12连接器			18cm cable with M12 connector			
配件 Accessory	引线5m母座线 (QE12-N4F5, QE12-N3F5)			5m Connection cable(QE12-N4F5, QE12-N3F5)			

规格 Datasheets

规格 Item code	A	B	H	L	规格 Item code	A	B	H	L
LG40-T0405T/TxA-F2	40	20	120	160	LG40-T2805T/TxA-F2	40	20	1080	1120
LG40-T0605T/TxA-F2	40	20	200	240	LG40-T3005T/TxA-F2	40	20	1160	1200
LG40-T0805T/TxA-F2	40	20	280	320	LG40-T3205T/TxA-F2	40	20	1240	1280
LG40-T1005T/TxA-F2	40	20	360	400	LG40-T3405T/TxA-F2	40	20	1320	1360
LG40-T1205T/TxA-F2	40	20	440	480	LG40-T3605T/TxA-F2	40	20	1400	1440
LG40-T1405T/TxA-F2	40	20	520	560	LG40-T3805T/TxA-F2	40	20	1480	1520
LG40-T1605T/TxA-F2	40	20	600	640	LG40-T4005T/TxA-F2	40	20	1560	1600
LG40-T1805T/TxA-F2	40	20	680	720	LG40-T4205T/TxA-F2	40	20	1640	1680
LG40-T2005T/TxA-F2	40	20	760	800	LG40-T4405T/TxA-F2	40	20	1720	1760
LG40-T2205T/TxA-F2	40	20	840	880	LG40-T4605T/TxA-F2	40	20	1800	1840
LG40-T2405T/TxA-F2	40	20	920	960	LG40-T4805T/TxA-F2	40	20	1880	1920
LG40-T2605T/TxA-F2	40	20	1000	1040					

H:保护高度, H=A* (N-1) L:光幕总长度L=H+40mm A:光轴间距 40mm N:为光轴数
H: Protection height, H=A* (N-1) L: Total length: L=H+40mm A: Axis distance 40mm N: Optic axis quantity



交叉光幕传感器 Optic cross light curtains

- 采用同步扫描技术，具有较强的抗干扰能力
- 形成交叉扫描的光形图，更有利于检测小型目标物
- 检测精度高，盲区小，较平行探测光幕有明显优势
- 光轴间距：10mm
- Synchronous scanning technology, strong anti interference function.
- Cross-scan light, easy to detect smaller object.
- High precision, small blind area, better detecting function than parallel optic beam type.
- Optic axis distance: 10mm.

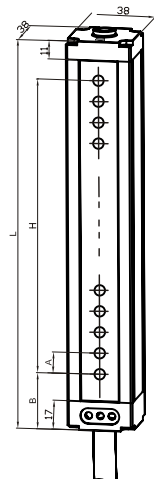
光轴数 Axes quantity	8轴 8Axes	16轴 16Axes	24轴 24Axes	32轴 32Axes
发射器 Emitter	LC10X-T0803T-E2 LC10X-T0803T-F2	LC10X-T1603T-E2 LC10X-T1603T-F2	LC10X-T2403T-E2 LC10X-T2403T-F2	LC10X-T3203T-E2 LC10X-T3203T-F2
NPN NC	LC10X-T0803TNC-E2 LC10X-T0803TNC-F2	LC10X-T1603TNC-E2 LC10X-T1603TNC-F2	LC10X-T2403TNC-E2 LC10X-T2403TNC-F2	LC10X-T3203TNC-E2 LC10X-T3203TNC-F2
检测区域 Detection height	70mm	150mm	230mm	310mm
检测距离 Detection width	0.1 ~ 3m			
光轴间距 Axis distance	10mm			
检测物体 Sensing object	φ 10mm以上的不透明体 >φ 10mm opaque object			
电源电压 Supply voltage	12 ~ 24V DC±10%			
消耗电流 Current consumption	≤75mA	≤85mA	≤110mA	≤120mA
响应时间 Response time	<30ms	<50ms	<70ms	<90ms
光源 Light source	红外线LED (调制式) Infrared LED (modulate)			
保护电路 Circuit protection	逆极性, 过载, 短路 Reverse polarity, short-circuit protection, overload protection			
指示灯 Led indicator	电源: 绿色LED; 输出: 黄色LED Power: green LED; Output: yellow LED			
周围温度 Ambient temperature	-10 ~ +55°C(注意不可结露、结冰), 存储: -30 ~ +60°C -10 ~ +55°C(dewed or iced forbidden), storage: -30 ~ +60°C			
周围湿度 Ambient humidity	35 ~ 85%RH, 存储: 35 ~ 85%RH 35 ~ 85%RH, storage: 35 ~ 85%RH			
周围照度 Intensity of illumination	白炽灯: 受光面照度 3,000lux Incandescent lamp: intensity of illumination 3,000lux			
耐振动 Anti-vibration	10 ~ 55Hz, 双振幅: 1.5mm, X, Y和Z各方向2小时 10 ~ 55Hz, amplitude: 1.5mm, 2 hours each for x, y, z direction			
耐冲击 Anti-shocking	加速度: 500m/s ² (约50G), X, Y和Z各方向3次 Acceleration: 500m/s ² (approx:50G), 3 times each for x, y and z direction			
防护等级 Protection degree	IP50			
材质 Housing materials	外壳: 铝合金; 透光罩: 聚酯; 端盖: 增强尼龙 Housing: AL; Light cover: polyester; End cover: enhanced nylon			
接线方式 Connection	引线0.2m配M12连接器/M12连接器 0.2m cable with M12 connector/ M12 connector only			
配件 Accessory	引线5m母座线 (QE12-N4F5) (可根据客户需求定制) 5m Connection cable(QE12-N4F5) (Customized available)			

规格 Datasheets

规格 Item code	A	B	H	L
LC10X-T0803TNC-E2/-F2	10	47	70	133
LC10X-T1603TNC-E2/-F2	10	47	150	213
LC10X-T2403TNC-E2/-F2	10	47	230	293
LC10X-T3203TNC-E2/-F2	10	47	310	373

H: 保护高度, H=20* (N-1) mm L: 光幕总长度L=H+63mm N: 光轴数
 H: Protection height, H=20* (N-1) mm L: Total length: L=H+63mm
 N: Optic axis quantity

尺寸图 Dimensions



四级安全光幕传感器 Type 4 safety light curtains



- 采用光同步扫描技术，具有较强的抗干扰能力
- 光轴间距20mm，有效保护工作区域
- 内置多级保护电路，确保各种条件下光幕正常工作
- 电气性能安全可靠，具有自诊断功能，完全符合四级安全等级要求
- Synchronous scanning technology, strong anti interference performance.
- Optic axis distance 20mm, effective protection.
- Build-in protection circuit ensures normal working under different conditions.
- Stable electric performance, self-diagnosis function, type 4.

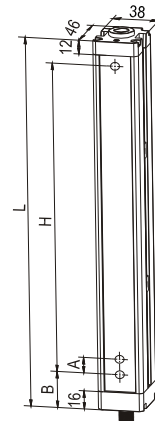
光轴数 Axes quantity	8轴 8Axes	16轴 16Axes	24轴 24Axes	32轴 32Axes
发射器 Emitter	SF20-T0810T-E5	SF20-T1610T-E5	SF20-T2410T-E5	SF20-T3210T-E5
PNP NC	SF20-T0810TPC-E8	SF20-T1610TPC-E8	SF20-T2410TPC-E8	SF20-T3210TPC-E8
检测区域 Detection height	140mm	300mm	460mm	620mm
光轴数 Axes quantity	40轴 40Axes	48轴 48Axes		
发射器 Emitter	SF20-T4010T-E5	SF20-T4810T-E5		
PNP NC	SF20-T4010TPC-E8	SF20-T4810TPC-E8		
检测区域 Detection height	780mm	940mm		
检测距离 Detection width	>10m			
光轴间距 Axis distance	20mm			
检测物体 Sensing object	φ 30mm以上的不透明体 > φ 30mm opaque object			
电源电压 Supply voltage	24V DC±20%			
消耗电流 Current consumption	发射: <50mA / 接收: <100mA		Emitter: <50mA / Receiver: <100mA	
响应时间 Response time	<6ms	<8ms	<10ms	<12ms
	<14ms	<16ms		
光源 Light source	850nm 红外线 (调制式)		850nm Infrared (modulate)	
保护电路 Circuit protection	逆极性, 过载, 短路		Reverse polarity, short-circuit protection, overload protection	
指示灯 LED indicator	LED状态指示, 数码管, 信息指示		LED provides system status, nixie tube display information	
周围温度 Ambient temperature	0~+55°C(注意不可结露、结冰), 存储: -10~+60°C		0~+55°C(dewed or iced forbidden), storage: -10~+60°C	
周围湿度 Ambient humidity	35~85%RH, 存储: 35~85%RH		35~85%RH, storage: 35~85%RH	
周围照度 Intensity of illumination	白炽灯: 受光面照度 3,000lux; 太阳光: 50000lux		Incandescent lamp: intensity of illumination 3,000lux; sunlight: 50000lux	
耐振动 Anti-vibration	10~55Hz, 双振幅: 1.5mm, X, Y和Z各方向各20次		10~55Hz, amplitude: 1.5mm, 20 times each for x, y, z direction	
耐冲击 Anti-shocking	加速度: 100m/s ² (约10G), X, Y和Z各方向各1000次		Acceleration: 100m/s ² (approx10G), 1000 times each for x, y and z direction	
防护等级 Protection degree	IP65			
材质 Housing materials	外壳: 铝合金; 透光罩: PMMA; 端盖: 铝合金		Housing: AL; Light cover: PMMA; End cover: AL	
接线方式 Connection	发射端M12的5芯插件; 接收端M12的8芯插件		Emitter with M12 5 pins connector, receiver with M12 8 pins connector	
配件 Accessory	引线3m母座线 (E12-N4F3, E12-N8F3) (可根据客户需求定制)		3m Connection cable(E12-N4F3, E12-N8F3) (Customized available)	

规格 Datasheets

规格 Item code	A	B	H	L
SF20-T0810TPC-E5/-E8	20	71	140	234.5
SF20-T1610TPC-E5/-E8	20	71	300	394.5
SF20-T2410TPC-E5/-E8	20	71	460	554.5
SF20-T3210TPC-E5/-E8	20	71	620	714.5
SF20-T4010TPC-E5/-E8	20	71	780	874.5
SF20-T4810TPC-E5/-E8	20	71	940	1034.5

H: 保护高度, H=20*(N-1) mm L: 光幕总长度L=H+94.5mm N: 光轴数
H: Protection height, H=20*(N-1) mm L: Total length: L=H+94.5mm
N: Optic axis quantity

尺寸图 Dimensions



测量光幕传感器 Measuring light curtains



- 采用RS485同步扫描技术，具有较强的抗干扰能力
 - 光幕备有多种保护高度选择，从300mm至2220mm
 - 光轴间距为20mm，有效保护工作区域
 - 具有两路开关量和RS485输出的双开关控制功能
 - 具有故障报警并自我判断故障类型的自诊断功能
- RS485 synchronous scanning technology, strong anti interference function.
 - Various detection height, from 300mm to 2220mm.
 - Optic axis distance:20mm.
 - Dual switch control with two-way switch value and RS485 output.
 - Faul+alarm and fault diagnosis function.

光轴数 Axes quantity	16轴 16Axes	32轴 32Axes	48轴 48Axes	64轴 64Axes
发射器 Emitter	MH20-T1605L-F2	MH20-T3205L-F2	MH20-T4805L-F2	MH20-T6405L-F2
接收器 Receiver	MH20-T1605LS1DA-F8	MH20-T3205LS1DA-F8	MH20-T4805LS1DA-F8	MH20-T6405LS1DA-F8
保护高度 Protection height	300mm	620mm	940mm	1260mm
响应时间 Response time	5ms	10ms	15ms	18ms
光轴数 Axes quantity	80轴 80Axes	96轴 96Axes	112轴 112Axes	
发射器 Emitter	MH20-T8005L-F2	MH20-T9605L-F2	MH20-T11205L-F2	
接收器 Receiver	MH20-T8005LS1DA-F8	MH20-T9605LS1DA-F8	MH20-T11205LS1DA-F8	
保护高度 Protection height	1580mm	1900mm	2220mm	
响应时间 Response time	19ms	20ms	24ms	
检测距离 Detection width	0~5m			
光轴间距 Axis distance	20mm			
检测物体 Sensing object	>30mm的不透明物体		> 30mm opaque object	
输出方式 Output	两路输出NPN/PNP、NC/NO可设置+RS485		Two output NPN/PNP、NC/NO+RS485	
电源电压 Supply voltage	DC 15~30V			
消耗电流 Current consumption	< 130mA@16轴@30VDC		< 130mA@16axes@30VDC	
光源 Light source	红外光(调制式)		Infrared LED(modulate)	
保护电路 Circuit protection	短路保护、齐纳保护、浪涌保护、反接保护		Short circuit/Zener/Surge protection/ Reverse polarity protection	
周围温度 Ambient temperature	-25°C...+55°C, 存储: -30°C ~ +75°C(无凝露)		-25°C...+55°C, storage:-30°C ~ +75°C(dewed or iced forbidden)	
周围湿度 Ambient humidity	35% ~ 95%RH			
周围照度 Intensity of illumination	白炽灯: 受光面照度 > 50000lx		Incandescent lamp: intensity of illumination > 50000lx	
耐振动 Anti-vibration	10 ~ 55Hz, 双振幅; 0.5mm, X, Y和Z各方向2小时		10 ~ 55Hz, amplitude: 0.5mm, 2 hours each for x,y,z direction	
耐冲击 Anti-shocking	加速度: 300m/s ² (约30G), X, Y和Z各方向3次		Acceleraton: 300m/s ² (approx.: 30G), 3 times each for x,y,z direction	
防护等级 Protection	IP67			
材质 Housing material	外壳: 铝合金, 透光罩: PC, 端盖: 铝合金		Housing: AL, Light cover: PC, end cover: AL	
接线方式 Connection	发射器: M12插件(4芯), 接收器: M12插件(8芯) Emitter: M12 connector 4 pin, receiver: M12 connector 8 pin			
配件 Accessory	屏蔽线(8芯)1根(长度标配3m), 屏蔽线(4芯)1根(长度标配15m) Shielding wire(8 pin) 1 pc (standard length 3m), Shielding wire(4 pin) 1 pc (standard length 15m)			

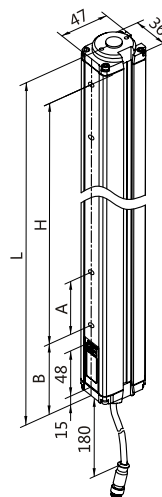
规格 Datasheets

规格 Item code	A	B	H	L
MH20-T1605LS1DA-F8	20	70.2	300	363
MH20-T3205LS1DA-F8	20	70.2	620	683
MH20-T4805LS1DA-F8	20	70.2	940	1003
MH20-T6405LS1DA-F8	20	70.2	1260	1323
MH20-T8005LS1DA-F8	20	70.2	1580	1643
MH20-T9605LS1DA-F8	20	70.2	1900	1963
MH20-T11205LS1DA-F8	20	70.2	2220	2283

H: 保护高度, H=20*(N-1)mm L: 光幕总长度L=H+63mm
N: 光轴数

H: Protection height, H=20*(N-1)mm L: Total length: L=H+63mm
N: Optic axis quantity

尺寸图 Dimensions



测量光幕传感器 Measuring light curtains



- 采用RS485同步扫描技术，具有较强的抗干扰能力
 - 光幕备有多种保护高度选择，从280mm至2200mm
 - 光轴间距为40mm，有效保护工作区域
 - 具有两路开关量和RS485输出的双开关控制功能
 - 具有故障报警并自我判断故障类型的自诊断功能
- RS485 synchronous scanning technology, strong anti interference function.
 - Various detection height, from 300mm to 2220mm.
 - Optic axis distance:20mm.
 - Dual switch control with two-way switch value and RS485 output.
 - Faul+alarm and fault diagnosis function.

光轴数 Axes quantity	8轴 8Axes	16轴 16Axes	24轴 24Axes	32轴 32Axes
发射器 Emitter	MH40-T0805L-F2	MH40-T1605L-F2	MH40-T2405L-F2	MH40-T3205L-F2
接收器 Receiver	MH40-T0805LS1DA-F8	MH40-T1605LS1DA-F8	MH40-T2405LS1DA-F8	MH40-T3205LS1DA-F8
保护高度 Protection height	280mm	600mm	920mm	1260mm
响应时间 Response time	5ms	10ms	15ms	18ms
光轴数 Axes quantity	40轴 40Axes	48轴 48Axes	56轴 56Axes	
发射器 Emitter	MH40-T4005L-F2	MH40-T4805L-F2	MH40-T5605L-F2	
接收器 Receiver	MH40-T4005LS1DA-F8	MH40-T4805LS1DA-F8	MH40-T5605LS1DA-F8	
保护高度 Protection height	1560mm	1880mm	2200mm	
响应时间 Response time	19ms	20ms	24ms	
检测距离 Detection width	0~5m			
光轴间距 Axis distance	40mm			
检测物体 Sensing object	> 60mm的不透明物体		> 30mm opaque object	
输出方式 Output	两路输出NPN/PNP、NC/NO可设置+RS485		Two output NPN/PNP、NC/NO+RS485	
电源电压 Supply voltage	DC 15~30V			
消耗电流 Current consumption	< 130mA@16轴@30VDC		< 130mA@16axes@30VDC	
光源 Light source	红外光(调制式)		Infrared LED(modulate)	
保护电路 Circuit protection	短路保护、齐纳保护、浪涌保护、反接保护		Short circuit/Zener/Surge protection/ Reverse polarity protection	
周围温度 Ambient temperature	-25°C...+55°C, 存储: -30°C ~ +75°C(无凝露)		-25°C...+55°C, storage: -30°C ~ +75°C(dewed or iced forbidden)	
周围湿度 Ambient humidity	35% ~ 95%RH			
周围照明度 Intensity of illumination	白炽灯: 受光面照明度 >50000lx		Incandescent lamp: intensity of illumination > 50000lx	
耐振动 Anti-vibration	10 ~ 55Hz, 双振幅; 0.5mm, X, Y和Z各方向2小时		10 ~ 55Hz, amplitude: 0.5mm, 2 hours each for x,y,z direction	
耐冲击 Anti-shocking	加速度: 300m/s ² (约30G), X, Y和Z各方向3次		Acceleraton: 300m/s ² (approx.: 30G), 3 times each for x,y,z direction	
防护等级 Protection	IP67			
材质 Housing material	外壳: 铝合金, 透光罩: PC, 端盖: 铝合金		Housing: AL, Light cover: PC, end cover: AL	
接线方式 Connection	发射器: M12插件(4芯), 接收器: M12插件(8芯) Emitter: M12 connector 4 pin, receiver: M12 connector 8 pin			
配件 Accessory	屏蔽线(8芯) 1根(长度标配3m), 屏蔽线(4芯) 1根(长度标配15m) Shielding wire(8 pin) 1 pc (standard length 3m), Shielding wire(4 pin) 1 pc (standard length 15m)			

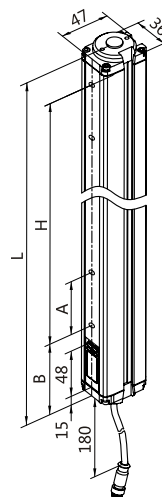
规格 Datasheets

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MH40-T2405LS1DA-F8	40	70.2	920	1003
MH40-T3205LS1DA-F8	40	70.2	1240	1323
MH40-T4005LS1DA-F8	40	70.2	1560	1643
MH40-T4805LS1DA-F8	40	70.2	1880	1963
MH40-T5605LS1DA-F8	40	70.2	2200	2283

H: 保护高度, H=40*(N-1)mm L: 光幕总长度L=H+83mm
N: 光轴数

H: Protection height, H=20*(N-1)mm L: Total length: L=H+83mm
N: Optic axis quantity

尺寸图 Dimensions





红外电梯光幕传感器

Infrared curtain for elevator door protection

- 互换式PCB便于检测、维修
- 采用双红外发射管提高可靠性
- 调制发射的红外线具有特性频率
- 电子线路设计合理，提高光幕密度、排除电子干扰
- 红外发射强度自动补偿，系统灵敏度进一步提高
- Easy to detect and maintain due to exchangeable PCB.
- More reliable due to double infrared emitter tubes design.
- Modulated light from infrared emitter is with special frequency.
- Special electronic circuit design increases curtain density and decreases electronic interference.
- Auto compensation of infrared intensity enhances system sensitivity.

型号 Item code	DT01
光束数 Beams quantity	194束(交叉光) 194beams (cross light)
输出方式 Output	继电器 NO+NC Relay output NO+NC
检测物体 Sensing object	Φ20mm 以上不透明物体 >Φ20mm opaque object
光管间距 Tube interval	46mm
保护高度 Protection height	1782mm
探测距离 Detection width	0~3m
上下/前后安装允差 Installation tolerance	±10mm/±4mm
工作电压 Operation voltage	5VDC
消耗电流 Current consumption	<200mA
保护电路 Circuit protection	反极性，浪涌吸收 Reverse polarity, surge absorb
响应时间 Response time	<200ms
扫描形式 Scan form	交叉扫描 Cross scan
抗光干扰 Light immunity	50.000lux
工作温度 Operation temperature	-10°C~+65°C
指示灯 Indicator	红色LED；有检测物通过 Red LED: with target
外壳材料 Housing material	铝合金 Aluminum
耐震动 Vibration resistance	频率范围:10~50Hz: 最大位移振幅1.5mm (满载) Frequency range:10~55Hz: Max displacement amplitude 1.5mm(full)
防护等级 Protection degree	IP54
接线方式 Connection	引线0.3m配插件 0.3m cable with connector
配套控制器 Matching controller	PGA
配件 Accessory	引线3.5m母座线 (E13-Q5F3.5) (可根据客户需求定制) 3.5m connection cable(E13-Q5F3.5)(customized available)

红外电梯光幕传感器

Infrared curtain for elevator door protection



- 抗干扰性强, 适用不同工作环境
- 响应及时, 灵敏度高, 优异的保护性
- 通用电缆接口, 良好的适应性使用寿命长
- 专业电路设计, 电气性能稳定, 安装维护简便
- Excellent anti magnetic interference ability, widely applied in different environments.
- Fast response time, high sensitivity, perfect protection function.
- Universal connector, compatible and durable.
- Professional circuit design, stable electrical performance, easy installation and maintenance.

型号 Item code	DT02-X35	DT02-X40	DT02-X128
光束数 Beams quantity	35束 35 beams	40束 40 beams	128束 128 beams
输出方式 Output	NPN NC	NPN NC	NPN NC
检测物体 Sensing object	Φ30mm 以上不透明检测体 >Φ30mm opaque object	Φ150mm 以上不透明检测体 >Φ150mm opaque object	Φ30mm 以上不透明检测体 >Φ30mm opaque object
光管间距 Tube interval	96mm	265mm	60mm
保护高度 Protection height	1632mm	1770mm	1825mm
探测距离 Detection width	0.4~1.5m	0.4~3m	0.4~2.5m
最小安装距离 Min install distance	40cm	40cm	0cm
上下/前后安装允差 Installation tolerance	±10mm/±4mm	±10mm/±4mm	±10mm/±4mm
工作电压 Operation voltage	24VDC	24VDC	12VDC
残留电压 Residual voltage	< 2.5V	< 2.5V	< 2.5V
消耗电流 Current consumption	< 100mA	< 100mA	< 120mA
保护电路 Circuit protection	反极性, 浪涌吸收 Reverse polarity, surge absorb	反极性, 浪涌吸收 Reverse polarity, surge absorb	反极性, 浪涌吸收 Reverse polarity, surge absorb
响应时间 Responses time	48~96ms	< 60ms	< 65ms
扫描形式 Scan form	交叉扫描 Cross scan	交叉扫描 Cross scan	交叉扫描 Cross scan
抗光干扰 Light immunity	50.000lux	50.000lux	100.000lux
工作温度 Operation temperature	-10°C~+65°C		
指示灯 Indicator	红色LED; 有检测物通过 Red LED; with target		
外壳材料 Housing material	铝合金 Aluminum		
耐振动 Vibration resistance	频率范围:5~60Hz; 最大位移振幅1.5mm (满载) Frequency range:5~60Hz; Max displacement amplitude 1.5mm(full)		
防护等级 Protection degree	IP54		
接线方式 Connection	引线0.3m配插件 0.3m cable with connector		
配套控制器 Matching controller	PGB		
配件 Accessory	引线3.5m母座线 (E13-Q5F3.5) 3.5m connection cable(E13-Q5F3.5)		

PGA控制器 Controller



型号 Item code	PGA-194
额定电压 Rated voltage	110VAC, 220VAC, 11-25VDC
系统功耗 System power consumption	5W
输出方式 Output	继电器NO+NC Relay output NO+NC
响应时间 Response time	<200ms(194)
工作温度 Operation temperature	-10°C~+65 °C
外壳材料 Housing material	铝合金 Aluminum
耐振动 Vibration resistance	频率范围:5~60Hz; 最大位移振幅1.5mm(满载) Frequency range: 5~60hz; Max displacement amplitude 1.5mm(full)
防护等级 Protection degree	IP54
配套光幕 Light curtain	DT01

PGB控制器 Controller



型号 Item code	PGB-A220K12	PGB-A220K24
额定电压 Rated voltage	220VAC, 50Hz	
系统功耗 System power consumption	3W	
输出方式 Output	继电器 1A 120VAC, 1A 24VDC Relay output 1A 120VAC, 1A 24VDC	
线圈电压 Coil voltage	12VDC	24VDC
响应时间 Response time	65ms	
指示灯 Indicator	电源: 绿色 LED; 系统故障/光束被遮挡: 红色 LED Power: Green LED; System fault/ beam blocked: Red LED	
报警 Alarm	系统故障/光束被遮挡 System fault/ beam blocked	
工作温度 Operation temperature	0°C~60°C	
外壳材料 Housing material	铝合金 Aluminum	
耐振动 Vibration resistance	频率范围:5~60Hz; 最大位移振幅1.5mm(满载) Frequency range: 5~60hz; Max displacement amplitude 1.5mm(full)	
防护等级 Protection degree	IP54	
配套光幕 Light curtain	DT02-X128	DT02-X35/X40



- 高负荷牢固性，适合重工业
 - 齐全的接口：SSI，CANopen，DeviceNet，Profibus-DP
 - 轴径：实心轴 $\phi 6$ ， $\phi 10\text{mm}$ ，空心轴 $\phi 15\text{mm}$
 - 单圈分辨率：最大16位；输出码制：二进制/格雷码
 - 不受温度影响的红外接受器阵列，每个发光阵列仅一个接收光电二极管，隔离型总线
 - 反极性保护
 - 可广泛应用于冶金设备及流水线、港口起重运输机械、水利、灌溉机械、重型机械、造纸、纺织机械、精密测量和数控设备、机床等
-
- Firmness with high load, suitable for heavy industries.
 - SSI, CANopen, DeviceNet, Profibus-DP bus interface.
 - Diameter of axle: Solid axle $\phi 6, \phi 10\text{ mm}$, Hollow axle $\phi 15\text{mm}$.
 - Single-turn resolution: Maximum 16 digits. Output code system: Binary system/Gray code.
 - Infrared receiver array which won't be affected by temperature, each LED array has only one receiving photodiode, isolated bus.
 - Reversed-polarity protection.
 - Widely used in Metallurgical equipment and assembly line, Lifting and transportation machinery at the port, Water conservancy and irrigation machinery, Heavy machinery, Papermaking and textile machinery, Precision measurement and CNC equipment, Machine tool.

产品命名方式 Naming rules

绝对值旋转编码器 Absolute rotary encoder

ENA - **60** □□□ **D** **CA** **16** □□ □□ - □□□□
1 **2** **3** **4** **5** **6** **7** **8** **9** **10**

1. 绝对值编码器 Absolute encoder

2. 主体尺寸 Body size
φ60mm

3. 法兰/轴类型 Flange/axis type
AA=夹紧型法兰,主轴φ10*20mm
Clamp flange, Principle axis φ10*20mm
AB=同步型法兰,主轴φ6*10mm
Synchronized flange, Principle axis φ6*10mm

4. 信号输出类型 Signal output type
B = 二进制码(CANopen, DeviceNet, Profibus-DP, SSI)
Binary code
G = 格雷码(CANopen, SSI)
Gray code

5. 电源电压 Power supply
10~30VDC

6. 通信接口 Interface
CA: CANopen
DP: Profibus-DP
DN: DeviceNet
SI: SSI

7. 单圈分辨率 Single-turn resolution
13=8192 (13 bits)
(Profibus-DP 标准 Standard, SSI 可选 Optional)
16=65536 (16 bits)
(CANopen可调 Adjustable, DeviceNet可调 Adjustable, SSI可选 Optional)

8. 圈数位数 Turn number digits
00=单圈 Single-turn
12=4096 (12 bits)

9. 连接方式 Connection
A1=包含总线模盒,接线端子(Profibus-Dp, DeviceNet)
Including bus mould box, Terminal
C1=电缆1m,轴向(CANopen, SSI)
1m Cable, Axial direction
D1=电缆1m,径向(CANopen,SSI)
1m Cable, Radial direction

10. 特殊功能代码 Special function code

绝对值旋转编码器 Absolute rotary encoder



外壳代号 Shell code	SSI	CANopen	DeviceNet	Profibus-DP
供电电压 Supply voltage	10-30VDC	10-30VDC	10-30VDC	10-30VDC
总线连接 Bus connection	基于RS422/RS485通讯接口 Based on RS422/RS485 communication interface	符合ISO11898的CAN收发器, 光隔离 Conforming to CAN transceiver of ISO11898, optical isolation	符合ISO11898的CAN收发器, 光隔离 Conforming to CAN transceiver of ISO11898, optical isolation	基于RS485通讯接口 Based on RS485 communication interface
传输速率 Transmission rate	100k...1.5Mbit/s 100k...1.5Mbit/s	20k...1Mbit/s(可编程) 20k...1Mbit/s(Programmable)	125k...500kbit/s (通过旋转开关设置) 125k...500kbit/s (Set through rotary switch)	Max 6Mbit/s
最大单圈分辨率 Maximum single-cycle resolution	65536 (16位) 65536 (16 Bits)	65536 (16位) 65536 (16 Bits)	65536 (16位) 65536 (16 Bits)	8192 (13位) 8192 (13 Bits)
最大计圈数 Maximum number of cycles	4096 (12位) 4096 (12 Bits)			
精度 Precision	±180°			
工作温度 Operating temperature	-40°C~85°C			
壳体 Housing material	铝合金 Aluminum alloy			
机械最大转速 Machinery maximum speed	6000转 6000 circles			
主轴负载 Load of principal axis	轴向40N, 径向110N Axial direction 40N, radial direction 110N			
安装法兰 Mounting flange	同步 / 夹紧 Synchronous / Clamp			
主轴直径 Diameter of principal axis	6mm / 10mm			
主轴长度 Length of principal axis	10mm / 20mm			
防护等级 Protection Level	壳体部分IP67, 主轴部分IP64 (根据用户需要, 可提供IP66) Shell: IP67, Principal axis: IP64 (According to customers' needs, IP66 is available)			

产品命名方式 Naming rules

张力传感器 Tension sensor

TW **D** - **T** **402** **B** **A** **E** - □□□□
1 **2** **3** **4** **5** **6** **7** **8**

1. 分类 Type code

TW : 张力传感器 Tension sensor

2. 外形规格 Shape code

A : 外壳1 Housing 1

B : 外壳2 Housing 2

C : 外壳3 Housing 3

C1 : 外壳3 (用钩状导丝器)

Housing 3 (With hooked yarn guide)

D : 外壳4 (T字1型) Housing 4 (Type T)

E : 外壳5 Housing 5

F : 电梯称重传感器外壳

Housing of Elevator Weighing Sensor

G : 外壳6 Housing 6

.....

3. 敏感头 Sensitive probe

T : 陶瓷传感头 Ceramic sensing probe

Y : 应变片传感头 Strain gauge sensing probe

H : 霍尔传感头 Hall sensing probe

4. 测量范围 Measurement range

101 : 0-100cN (T/Y)

301 : 0-300cN (T/Y)

402 : 0-4000cN (T/Y)

202 : 0-2000Gs (H)

.....

5. 电源电压 Detect mode

B : 19-29VDC

D : 10-30VDC

F : 10-18VDC

T : 12-24VDC

M : 24VDC

.....

6. 输出范围 Output

A : 0.1-2.5VDC

B : 0.1-5VDC

C : 0.5-6VDC

D : 0.5-4.5VDC

E : 0.1-4VDC

F : 2-6VDC

N : NPN

P : PNP

.....

7. 连接形式 Connection

无 : 2M电缆线 2m Cable

A : 0.25m 三芯屏蔽电缆

0.25m Shielded cable with 3 pins

B : M12三芯插件 M12 3 pins connector

C : M12四芯插件 M12 4 pins connector

D : M12五芯插件 M12 5 pins connector

E : 三芯带线插头 3 pins connector

F : 五芯2.54插座 2.54 socket with 5 pins

G : 三芯插座 Socket with 3 pins

H : 三芯带线插头(2.0) 3 pins plug with cable(2.0)

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8. 特殊要求 Special requirement

用四位数字表示 In 4 digits

张力传感器 Tension sensor

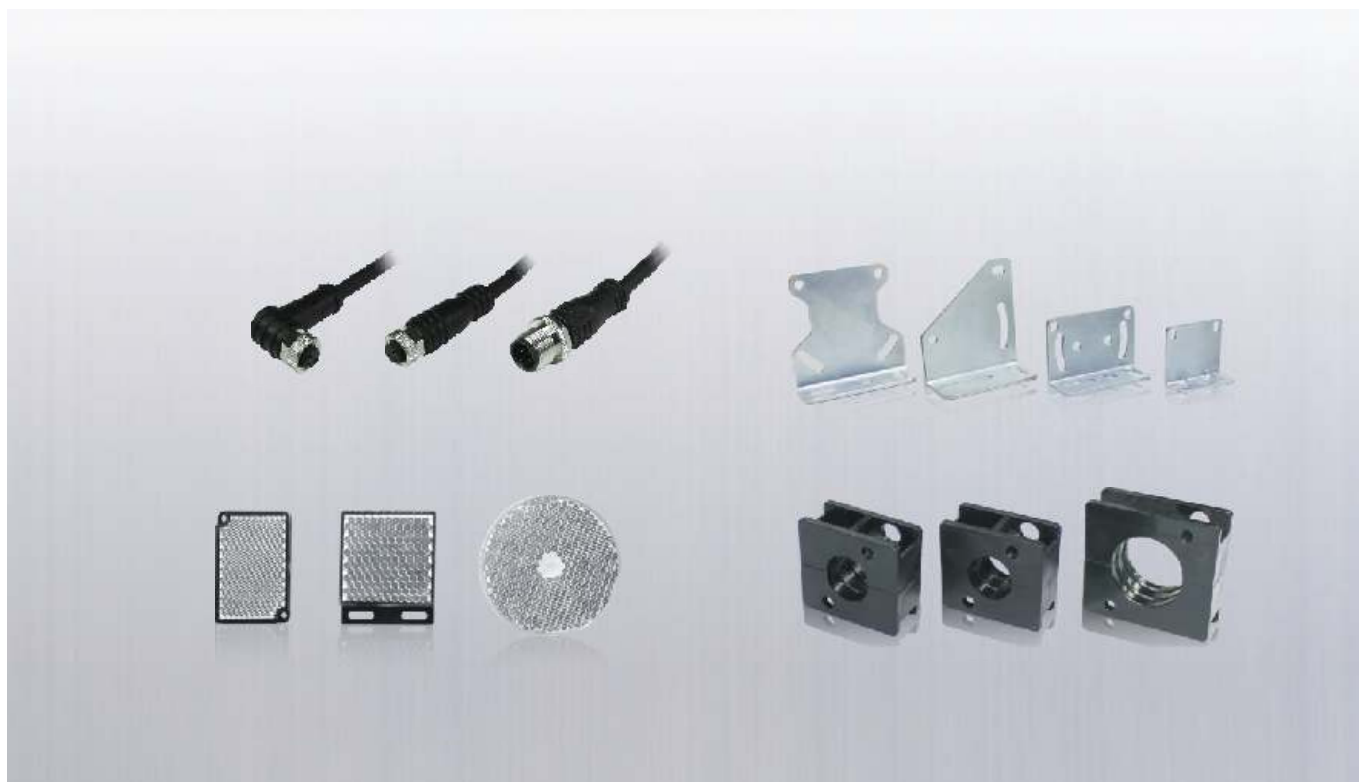
张力传感器广泛用于纺织与化纤行业，检测使用过程中的纱线张力。将作用在纱线上的张力转换成微弱电压信号，再经过滤波电路、放大电路、线性补偿电路、起始点调整电路、将弱信号放大补偿后，送到末级放大电路放大输出我们需要的与张力成线性关系的电压信号。

Tension sensors are widely used to detect tension of yarn during operation in textile and chemical fiber industry. During spinning, the tension of yarn will be changed to weak voltage signal and will be amplified by filter circuit, amplifying circuit, linear compensation circuit and adjusting circuit. The amplified voltage signal will be linearly outputted with tension.

- 响应速度快,灵敏度高
- 检测张力范围宽
- 线性度好、温度特性好
- 对材料损伤小
- 主要应用于轻纺行业
- Fast response, high sensitivity.
- Wide measuring tension range.
- Fine linearity and temperature feature.
- Less damage to material.
- Mainly used in textile industry.



外壳代号 Shell code	TWC	TWK
电源电压 Supply voltage	10-30VDC	10...30VDC
消耗电流 Current consumption	<15mA	< 22mA
非线性度 Non-linearity	<1%FS	< 2%FS
张力范围 Tension range	0~300cN, 0~100cN	0~100cN, 0~300cN
感应器 Sensor	陶瓷应变式 Ceramic strain gauge type	霍尔式 Hall sensor
输出方式 Output	电压型输出: 0.5~6VDC Voltage output: 0.5~6VDC	电压型输出: 0.3~2.3VDC Voltage output: 0.3~2.3VDC
连接形式 Connection	端子连接 Terminal	接插件 Plug-in unit
保护电路 Circuit protection	逆极性保护 Reverse polarity protection	极性保护、冲击保护 Reverse polarity protection
环境温度 Ambient temperature	0 ~ 50°C(注意不可结露、结冰) 0 ~ 50°C (No dew condensation or freeze)	0 ~ 50°C(注意不可结露、结冰) 0 ~ 50°C (No dew condensation or freeze)
材质 Housing material	外壳：锌铝合金; 传动机构：陶瓷 Housing: zinc alloy; Transmission: ceramics	外壳：锌合金; 传动结构：陶瓷 Housing: Zinc alloy; Transmission: Ceramic



传感器附件 Sensor accessories



连接线缆及分线盒
Connection cables & Distribution Box

安装支架
Mounting brackets

反光板
Reflectors

安装夹具
Mounting clamps

连接线缆 Connection cable

产品命名方式 Naming rules

QE12 - **N3** **G** **5** - **P** - **U** - □□□□
1 **2** **3** **4** **5** **6** **7**

1. 连接器规格 Connector type

QE8 : M8连接器 M8 Connector
 QE12 : M12连接器 M12 Connector

2. 芯线连接 Core wire

N3 : 3芯内螺纹连接 3 pins female screw
 N4 : 4芯内螺纹连接 4 pins female screw
 W3 : 3芯外螺纹连接 3 pins male screw
 W4 : 4芯外螺纹连接 4 pins male screw

3. 出线方向 Cable lead-out

F : 180°直头 180°
 G : 90°弯头 90°

4. 线缆长度 Cable length

2 : 2米电缆线 2m Cable
 5 : 5米电缆线 5m Cable
 10 : 10米电缆线 10m Cable

5. 输出方式 Output

无表示 : 无LED, NPN/PNP共用
 N/A: No LED, suitable for both NPN/PNP
 P : 带LED PNP接口
 With LED for PNP
 N : 带LED NPN接口
 With LED for NPN

6. 线缆材质 Cable material

无表示 : PVC N/A: PVC
 U : PUR

7. 特殊代码 Special code

四位数字代号 In 4 digits

分线盒型号代码 Model & Code

DB **12** **08** **04** - **x** - **Mxx** **P**
1 **2** **3** **4** **5** **6** **7**

1. 产品系列 Product series

DB : 分线盒 Distribution box

2. 接口类型 Core wire

08 : M8连接器 M8 Connector
 12 : M12连接器 M12 Connector

3. I/O 通道数 I/O channel number

04 : 4
 06 : 6
 08 : 8
 10 : 10

4. I/O 孔数 I/O port

03 : 3
 04 : 4
 05 : 5

5. 线缆材质 Cable material

0 : 无线缆 No cable
 1 : PVC
 2 : PUR

6. 出线规格 Cable type

D : D-SUB端子 D-SUB
 M : M23端子 Plug connector M23
 无表示 : 直接出线 None: pre-wired cable
 03 : 3米电缆线 3m Cable
 05 : 5米电缆线 5m Cable
 07 : 7米电缆线 7m Cable

7. LED指示 LED indication

P : PNP
 N : NPN

连接线缆 Connection cable



外壳代号 Shell code	QE8-N3Fx	QE8-N3Gx	QE8-W3Fx	QE8-W3Gx	QE12-N4Fx
尺寸规格 Specifications	M8*35.5	M8*21	M8*40.5	M8*21	M12*40
工作电压 Operating voltage	60 VAC/DC	60 VAC/DC	60 VAC/DC	60 VAC/DC	250V AC/DC
额定电流 Nominal current	4A	4A	4A	4A	4A
绝缘电阻 Insulation resistance	100MΩ	100MΩ	100MΩ	100MΩ	100MΩ
温度范围 Temperature range	-30...+90°C	-30...+90°C	-30...+90°C	-30...+90°C	-30...+90°C
外被 Outer covering	PVC	PVC	PVC	PVC	PVC
承载材质 Bearing material	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
连接线缆材质 Material	PVC/PU	PVC/PU	PVC/PU	PVC/PU	PVC/PU
连接线缆线径 Diameter	Φ4.4	Φ4.4	Φ4.4	Φ4.4	Φ5.2
连接线缆芯线 Core wire	3*0.25mm ² (0.1*32)	3*0.25mm ² (0.1*32)	3*0.25mm ² (0.1*32)	3*0.25mm ² (0.1*32)	3*0.34mm ² (0.2*11)
连接线缆长度 Length	2m/5m	2m/5m	2m/5m	2m/5m	2m/5m
产品认证 Certification	/	/	/	/	/

连接线缆 Connection cable



连接线缆 (带灯) Connection cable (LED)



外壳代号 Shell code	QE12-N4Gx	QE12-W4Fx	QE12-W4Gx	QE12-N4F-x	QE12-N4G-x
尺寸规格 Specifications	M12*42	M12*42	M12*42	M12*40	M12*42
工作电压 Operating voltage	250 VAC/DC	250 VAC/DC	250 VAC/DC	30VDC Max	30VDC Max
额定电流 Nominal current	4A	4A	4A	4A	4A
绝缘电阻 Insulation resistance	100MΩ	100MΩ	100MΩ	100MΩ	100MΩ
温度范围 Temperature range	-30...+90°C	-30...+90°C	-30...+90°C	-30...+90°C	-30...+90°C
外被 Outer covering	PVC	PVC	PVC	PU	PU
承载材质 Bearing material	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
连接线缆材质 Material	PVC/PU	PVC/PU	PVC/PU	PVC/PU	PVC/PU
连接线缆线径 Diameter	Φ5.2	Φ5.2	Φ5.2	Φ5.2	Φ5.2
连接线缆芯线 Core wire	4*0.34mm ² (0.2*11)	4*0.34mm ² (0.2*11)	4*0.34mm ² (0.2*11)	4*0.34mm ² (0.2*11)	4*0.34mm ² (0.2*11)
连接线缆长度 Length	2m/5m	2m/5m	2m/5m	2m/5m	2m/5m
产品认证 Certification	/	/	/	/	/

连接器 Connection cable



外壳代号 Shell code	QE8-N3F	QE8-W3F	QE12-N4F	QE12-W4G	QE12-W4F
尺寸规格 Specifications	M8*40	M8*46.5	M12*48	M12*37.6	M12*56.7
工作电压 Operating voltage	60 VAC/DC	60 VAC/DC	250 VAC/DC	250 VAC/DC	250V AC/DC
额定电流 Nominal current	4A	4A	4A	4A	4A
绝缘电阻 Insulation resistance	100MΩ	100MΩ	100MΩ	100MΩ	100MΩ
温度范围 Temperature range	-40...+85°C	-40...+85°C	-40...+85°C	-40...+85°C	-40...+85°C
外被 Outer covering	PVC	PVC	PVC	PVC	PVC
承载材质 Bearing material	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy	镍铜合金 Nickel-copper alloy
防护等级 Protection degree	IP67	IP67	IP67	IP67	IP67
连接线缆材质 Material	/	/	/	/	/
连接线缆线径 Diameter	4...5mm	4...5mm	4...6mm	4...6mm	4...6mm
连接线缆芯线 Core wire	/	/	/	/	/
连接线缆长度 Length	/	/	/	/	/
产品认证 Certification	/	/	/	/	/

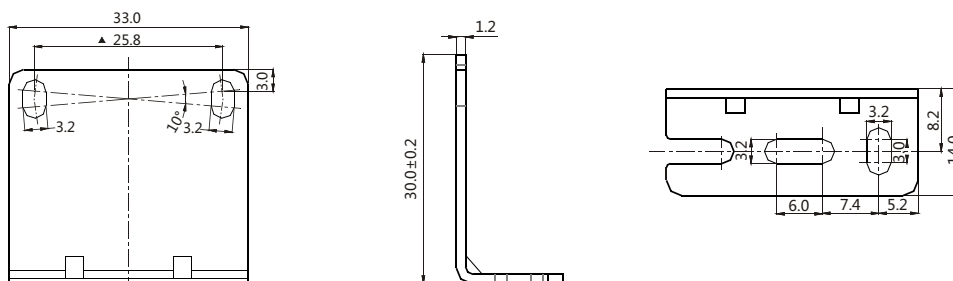
分线盒 Distribution Box



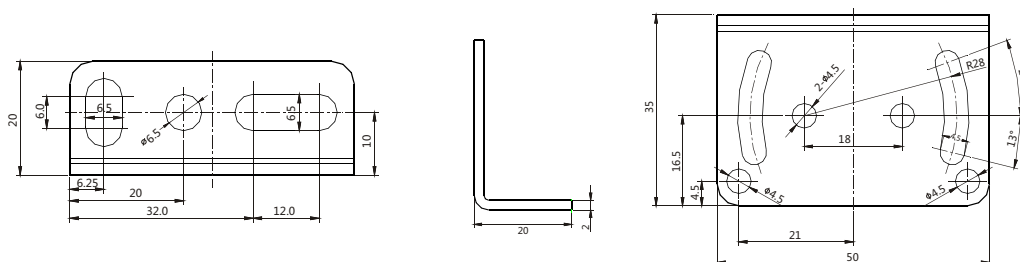
外壳代号 Shell code	DB080803-0-Dx	DB080803-1-03N	DB120804-0-MP	DB120804-1-03P
尺寸规格 Specifications	90*45	98*45	152*54	152*54
工作电压 Operating voltage	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC
额定电流 Nominal current	2A/Port, 8A/Total	2A/Port, 8A/Total	4A/Port, 10A/Total	4A/Port, 10A/Total
接触阻抗 Insulation resistance	8mΩ MAX	8mΩ MAX	8mΩ MAX	8mΩ MAX
温度范围 Temperature range	-20...+80°C	-20...+80°C	-20...+80°C	-20...+80°C
输出功能 Output status	NPN/PNP	NPN/PNP	NPN/PNP	NPN/PNP
输出类型 Output way	常开 NO	常开 NO	常开 NO	常开 NO
输出指示 Output indicate	黄色LED Yellow LED	黄色LED Yellow LED	黄色LED Yellow LED	黄色LED Yellow LED
连接规格 Connection specification	M8孔端 3芯 M8 port 3-core	M8孔端 3芯 M8 port 3-core	M12孔端 4芯 M12 port 4-core	M12孔端 4芯 M12 port 4-core
连接线缆材质 Material	/	PVC	/	PVC
接口材质 Socket material	磷青铜 镀金 Carobronze/Gold plated	磷青铜 镀金 Carobronze/Gold plated	磷青铜 镀金 Carobronze/Gold plated	磷青铜 镀金 Carobronze/Gold plated
连接线缆长度 Length	/	3m	/	5m
产品认证 Certification	/	/	/	/

光电式传感器安装支架 Photoelectric sensors mounting rack

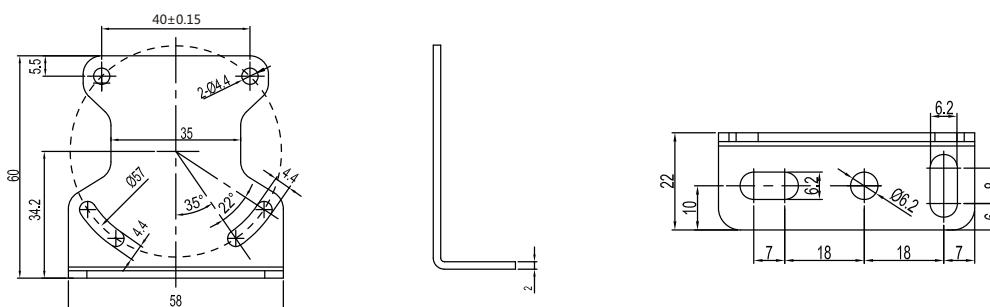
ZJP-1 (PSF/PSC Mounting rack)



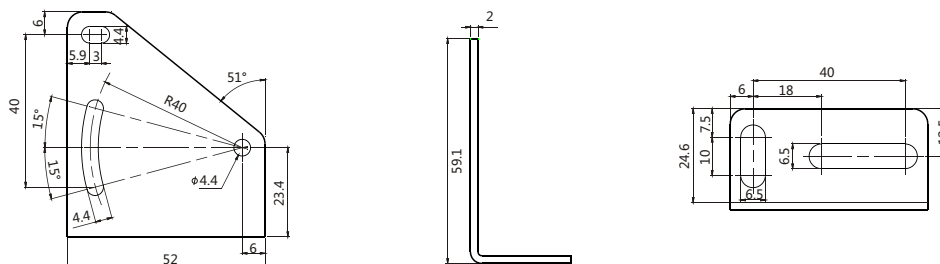
ZJP-4 (PTF Mounting rack)



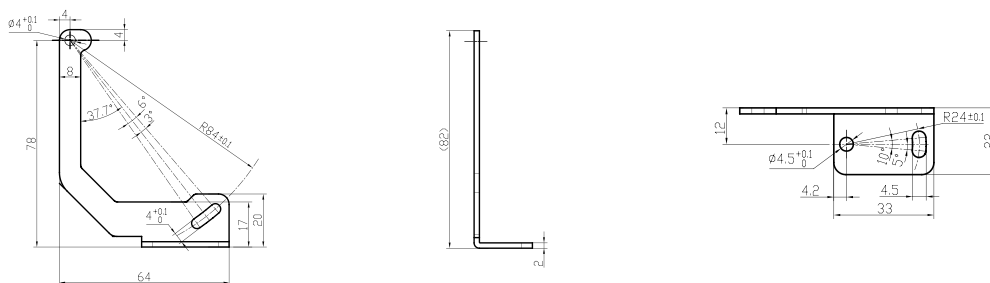
ZJP-5 (PTF/PTA/PTE Mounting rack)



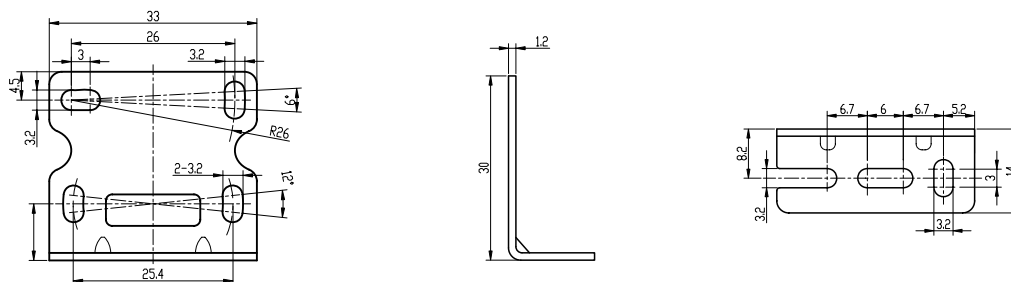
ZJP-6 (PTL Mounting rack)



ZJP-7 (PTB Mounting rack)



ZJP-8 (PSG Mounting rack)



反光板 Reflector

产品型号 Item Code	STD-06	TD-04	TD-05
机械图 Dimensions			
产品型号 Item Code	TD-09	TD-02	TD-08
机械图 Dimensions			
产品型号 Item Code	TD-01	TD-03	TD-01-3
机械图 Dimensions			
产品型号 Item Code	TD-09A	TD-10	
机械图 Dimensions			

电感式/电容式传感器接线图 Inductive/Capacitive sensors wiring diagram

DC 2线 DC 2 Wires

	引线式 Cable type	M8 连接器 M8 Connector	M12 连接器 M12 Connector	端子连接 Terminal connect
NO				
NC				

DC 3线 DC 3 Wires

	引线式 Cable type	M8 连接器 M8 Connector	M12 连接器 M12 Connector	端子连接 Terminal connect
NPN NO				
NPN NC				
PNP NO				
PNP NC				

DC 4线 DC 4 Wires

	引线式 Cable type	M12 连接器 M12 Connector	端子连接 Terminal connect
NPN NO+NC			
PNP NO+NC			

AC 2线 AC 2 Wires

	引线式 Cable type	M12 连接器 M12 Connector	端子连接 Terminal connect
SCR NO			
SCR NC			

AC/DC 2线 AC/DC 2 Wires

	引线式 Cable type	M12 连接器 M12 Connector	端子连接 Terminal connect
NO			
NC			
NO/NC			

本质安全型 NAMUR

	引线式 Cable type	M8 连接器 M8 Connector	M12 连接器 M12 Connector	端子连接 Terminal connect

模拟量输出型 Analog output

	引线式 Cable type	M12 连接器 M12 Connector	端子连接 Terminal connect
3线式电压输出 3 Wires Voltage output			
3线式电流输出 3 Wires Current output			
4线式电压/电流输出 4 Wires Voltage/current output			

连接器 Connector

M8(E1)连接器 M8 Connector	M12(E2)连接器 M12 Connector	M8(E3)连接器 M8 Connector

光电式传感器接线图 Photoelectric sensors wiring diagram

发射器 Emitter

	引线式 Cable type	M8连接器 M8 Connector	M12 连接器 M12 Connector	端子连接 Terminal connect
DC				
AC/DC				

DC 3线 DC 3 Wires

	引线式 Cable type	M8连接器 M8 Connector	M12 连接器 M12 Connector	端子连接 Terminal connect
NPN NO				
NPN NC				
PNP NO				
PNP NC				

DC 4线 DC 4 Wires

	引线式 Cable type	M12 连接器 M12 Connector	端子连接 Terminal connect
NPN NO+NC			
PNP NO+NC			
RS485			
Push-pull			
UART/IIC			

AC 2线 AC 2 Wires

	引线式 Cable type	M12 连接器 M12 Connector	端子连接 Terminal connect
SCR NO			
SCR NC			

AC/DC 5线 AC/DC 5 Wires

	引线式 Cable type	端子连接 Terminal connect
继电器 Relay		

NPN

	引线式 Cable type	M12 连接器 M12 Connector
NO/NC 可选 NO/NC Optional		

PNP

	引线式 Cable type	M12 连接器 M12 Connector

NPN + PNP

	引线式 Cable type	M12 连接器 M12 Connector

连接器 Connector

	M8(E1)连接器 M8 Connector	M12(E2)连接器 M12 Connector	M8(E3)连接器 M8 Connector	M12(E5)连接器 M12 Connector
	M12(E7)连接器 M12 Connector	M12(E8)连接器 M12 Connector		
	4芯 1.25mm间距插座 1.25mm 4pin connector	5芯 1.25mm间距插座 1.25mm 5pin connector	6芯 0.5mm间距FPC连接器 0.5mm 6pin connector	
UART				



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TECHNOLOGY
QUALITY

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