

直线位移传感器

Linear Position Sensor

莱茵 LinecSKI®

深圳市米朗科技有限公司

Shenzhen Miran Technology Co., Ltd

中国位移传感器专家与领导者

China's displacement sensor expert and leader

中国工业强基重点产品

中国工信部传感器一条龙应用计划示范企业

中国工信部高精度传感器一条龙应用计划示范项目

Important products in China's industrial

one-stop application plan demonstration enterprise in China's Ministry of Industry and Information Technology's

Demonstration project of one-stop application plan for high-precision sensors of the Ministry of Industry and Information Technology of China

产品目录 Product catalog

LS2拉杆式
LS2 draw-bar series



LS拉杆式
LS draw-bar series



LM微型拉杆式
LM miniature rod type



LF滑块式
LF slider



配件
Accessories



LR自复位式
LR with spring



专利产品 仿冒必究
Patented products
Counterfeit will investigate



- 使用寿命长
Long service life
- 超高精度
Ultra-high precision
- 线性度好
Good linearity

- 安装方式多样
Various installation methods
- 防护等级高
High protection
- 抗震性能优异
Excellent seismic performance

质量第一 用户至上 诚信为本
Quality first, customer first, integrity-based

直线位移传感器领域的先驱和市场领导品牌
Pioneer and market leader in the field of linear displacement sensors

公司介绍 Company introduction

深圳市米朗科技有限公司是经深圳市政府认定的高新技术企业。米朗公司自2003年成立以来，长期致力于位移传感器的设计开发、生产和销售，至今已有20年的丰富经验，现今已成为一个世界领先的传感器专家，米朗公司的产品已经广泛应用于世界各类自动化控制领域，现每年大约有60万只左右的电子尺销往世界各地。我们的发展方向是：以技术创新为核心，以客户的需求为导向，将会一直致力于在位移、物位、角度等测控领域为客户提供一站式解决方案的产品和服务。

公司主要生产经营：电位计/电阻式原理位移传感器（电子尺）、磁阻式位移传感器、拉绳/线式位移传感器（拉绳/线式电子尺）、磁致伸缩原理位移传感器（无接触磁感应电子尺）、磁致伸缩原理液位传感器（液位计测控系统）、角度传感器（角度尺）以及配套使用的V/A 转换模块、LVDT差动变压位移传感器、电涡流位移传感器、超声波位移传感器、倾角位移传感器、磁栅尺、显示控制器及相关应用型产品、集中润滑系统产品（润滑油泵）及油路配件等产品。所有产品的核心材料均来自国外进口。产品设计理念，取国外品牌众家之长，2013年后推出的产品更是结合本公司20余年的生产制造工艺经验和客户长期使用效果的反馈，反复改进后而诞生，产品各项性能指标在各个方面均已全面超越国外进口品牌，并且已荣获国家多项实用新型专利证书。

公司总部设立在深圳市光明高新科技园区的核心位置，设有工程部、研发中心、制造部、检测中心、售后服务部、营销部以及遍布全国的直销办事处、代理商和经销商，为广大客户提供周到、及时的服务。公司在湖北省襄阳市有300多亩的现代化工业园区，拥有50000多平米的无尘洁净车间，引进现代化制造与检测设备3000余台。公司所有产品均取得CE、3C认证，并获得ISO9001:2015国际质量体系认证，严格按照国际质量认证标准组织设计、生产和销售，确保产品质量、用户满意。

我们的优势：

一、强大的研发力量，国内首家在电子尺基板中采用高精度电脑激光修刻技术，并反复多次改进相关工艺，精度远高于同行业水平，从而打造精雕细琢的线性精度和重复性精度。公司继掌握了基于电位计原理“位移传感器”核心技术后，先后又自主开发出了基于磁致伸缩原理的非接触式位移传感器，拉绳式位移传感器和角度传感器等产品。所有产品均有自主知识产权，并且获得相关技术行业专利，技术水平处于行业领导地位。

二、苛刻的各项检测环境要求，每一批产品出厂之前都要经过震动试验、高低温试验、电磁干扰测试、寿命检测、防爆测试等等，以确保产品质量可靠、性能卓越。

三、强大的生产力量，公司在深圳光明新区和湖北襄阳都设立有生产基地，供货及时，现货充足，可以满足大批量订货的需求。

四、完善的销售和售后服务体系。公司立足深圳，在全球各地主要工业聚集地设立多个直属办事机构，并广泛发展代理商和经销商，所有出厂产品均可获得专业的终身维护。

公司秉承“质量第一、用户至上、诚信为本”的宗旨，为客户提供优质的产品和服务。欢迎广大客户来电、来函、来信，咨询、洽谈、合作或者莅临指导。并欢迎广大客户结合自身需求，沟通我司定制相关产品。

Shenzhen Miran Technology Co., Ltd. is a high-tech enterprise recognized by the Shenzhen Municipal Government. Since its establishment in 2003, Miran has long been committed to the design, development, production and sales of displacement sensors. It has 20 years of rich experience and has become a world-leading sensor expert. Miran's products have been widely used in various fields of automation and control in the world, about 600,000 electronic rulers are sold all over the world every year. Our development direction is: taking technological innovation as the core and customer needs as the guide, we will always be committed to providing customers with one-stop solution products and services in the field of displacement, level, angle and other measurement and control.

The company's main production and operation: potentiometer/resistance principle displacement sensor (electronic ruler), magnetoresistive displacement sensor, pull rope/line displacement sensor (pull rope/wire type electronic ruler), magnetostrictive displacement sensor (no contact) Magnetic induction electronic ruler), magnetostrictive principle liquid level sensor (level gauge measurement and control system), angle sensor (angle ruler) and supporting V/A conversion module, LVDT differential transformer displacement sensor, eddy current displacement sensor, ultrasonic Displacement sensors, inclination displacement sensors, magnetic scales, display controllers and related application products, centralized lubrication system products (lubricating oil pumps), oil circuit accessories and other products. The core materials of all products are imported from abroad. The product design concept is based on the strengths of foreign brands. The products launched after 2013 are combined with the company's more than 20 years of manufacturing process experience and feedback from customers' long-term use effects. They are born after repeated improvements. The product performance indicators are in All aspects have fully surpassed foreign imported brands, and have won many national utility model patent certificates.

The company's headquarters is located in the core position of Shenzhen Guangming High-tech Park, with engineering department, R&D center, manufacturing department, testing center, after-sales service department, marketing department and direct sales offices, agents and distributors all over the country. Customers provide thoughtful and timely service. The company has more than 300 acres of modern industrial parks in Xiangyang City, Hubei Province, with more than 50,000 square meters of dust-free clean workshops, introducing more than 3,000 modern manufacturing and testing equipment. All products of the company have obtained CE, 3C certification, and obtained ISO9001:2015 international quality system certification, strictly in accordance with international quality certification standards to organize design, production and sales, to ensure product quality and user satisfaction.

Our advantage:

1. Strong research and development force, the first domestic company to adopt high-precision computer laser engraving technology in the electronic ruler substrate, and repeatedly improve the related process many times, the accuracy is much higher than the level of the same industry, so as to create finely crafted linear accuracy and Repeatability accuracy. After grasping the core technology of "displacement sensor" based on the principle of potentiometer, the company has independently developed non-contact displacement sensors based on the principle of magnetostriction, cable-type displacement sensors and angle sensors. All products have independent intellectual property rights, and have obtained patents in related technology industries, and the technical level is in the industry leading position.

2. Harsh requirements for various testing environments, each batch of products must undergo vibration test, high and low temperature test, electromagnetic interference test, life test, explosion-proof test, etc. before leaving the factory to ensure reliable product quality and excellent performance.

3. Strong production force. The company has established production bases in Guangming New District, Shenzhen and Xiangyang, Hubei. The supply is timely and the stock is sufficient to meet the needs of large-volume orders.

4. Perfect sales and after-sales service system. Based in Shenzhen, the company has established a number of directly-managed offices in major industrial gathering places around the world, and has extensively developed agents and distributors. All factory-made products can be professionally maintained for life.

Companies adhering to the "quality first, customer first, integrity-based" purpose, to provide customers with quality products and services. Customers are welcome to call, letter, letter, consultation, negotiation, cooperation or guidance. And welcome customers to combine their needs and communicate with our company to customize related products.

目录 Directory

LS2系列 ————— 4-7
LS2 series

LS系列 ————— 8
LS series

LF系列 ————— 9
LF series

LM系列 ————— 10
LM series

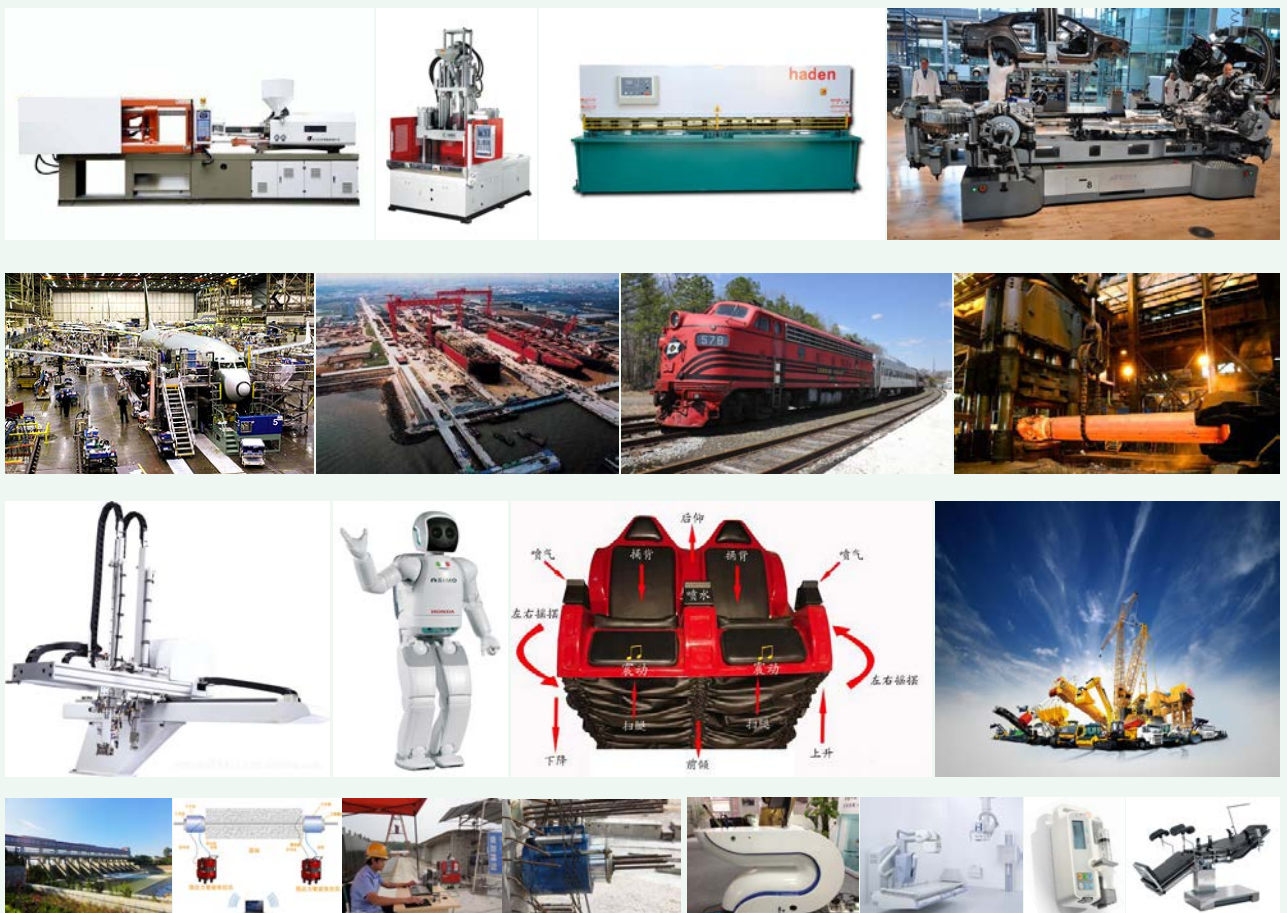
LR系列 ————— 11
LR series

公司部分证书 ————— 12
Industry application area

行业应用案例 Industry application cases

广泛应用于机械/机器设备，机床设备，液、气压传动设备，工程机械，医疗设备，建造设备，机器人，自动化加工设备等，进行工程控制、自动调节、反馈控制系统等。

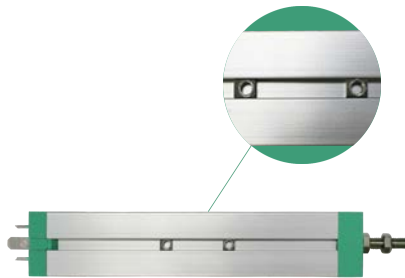
Widely used in machinery/machinery equipment, machine tool equipment, hydraulic and pneumatic transmission equipment, engineering machinery, medical equipment, construction equipment, robots, automated processing equipment, etc., for engineering control, automatic adjustment, feedback control systems, etc.



LS2系列:新款LS LS2 series: Improved LS

LS2通用拉杆式直线位移传感器, 工作量程: 0—1250mm (其他行程可订制)

LS2 universal rod type linear displacement sensor, working range: 0-1250mm (other stroke can be customized)



(可选底面安装, 如上图)
(Optional bottom installation, as shown above)

赫斯曼插头(标配)
Hersman plug (standard)



大赫斯曼插头(可选)
Big Hersman plug (optional)



万向节(标配)
Universal joint (standard)



加长万向节(可选)
Extended universal joint (optional)



鱼眼万向节(可选)
Fish-eye universal joint (optional)



专利产品 仿冒必究

Patented products

Counterfeit will investigate

产品简介:

LS2系列是本公司结合十几年的生产制造经验和客户使用反馈意见, 经工程部和研发部共同优化升级改良而成, 产品外观、内部结构、材质、生产工艺、技术参数以及密封等级等参数都进行了大幅度升级, 原材料均采用原装进口, 生产制造完全采用目前国际同行业最先进技术及工艺, 产品经过一亿次的往复寿命试验后, 各项性能指标和技术参数仍然符合行业最高标准。其信号输出端与线板链接装置获国家实用新型专利, 产品外观获得国家外观设计专利。

Product introduction:

The LS2 series is the company's combination of more than ten years of manufacturing experience and customer feedback, optimized and upgraded by the engineering department and the research and development department, and the product appearance, internal structure, material, production process, technical parameters and sealing level and other parameters All have been greatly upgraded, the raw materials are imported, and the manufacturing is completely using the most advanced technologies and processes in the same industry. After 100 million reciprocating life tests, the performance indicators and technical parameters still meet the highest standards in the industry. The signal output terminal and the wire board linking device have obtained the national utility model patent, and the product appearance has obtained the national design patent.



应用范围: LS2是一般通用型, 适合各类型设备的位置检测, 如: 注塑机、压铸机、橡胶机、鞋机、EVA注塑机、中空吹瓶机、木工机械、液压机等。

Scope of application: LS2 is a general-purpose type, suitable for position detection of various types of equipment, such as: injection molding machine, die casting machine, rubber machine, shoe machine, EVA injection molding machine, hollow bottle blowing machine, woodworking machinery, hydraulic machine, etc.

LS2系列:新款LS

LS2 series: Improved LS

LS2通用拉杆式直线位移传感器，工作量程：0—1250mm（其他行程可订制）

LS2 universal rod type linear displacement sensor, working range: 0-1250mm (other stroke can be customized)

选型说明

LS2 - 200mm - - - -

其他要求：

空白：标准品，产品没有“MT”代码中的特殊要求

MT：1、有改装要求，如：尾部直出线，并且尾部有螺杆或者有鱼眼等改装要求；

2、其他特殊要求的非标产品，如：加强密封型（或压铸机专用）、阻值非标、安装方式非标、尺寸非标、标签非标（中性包装或者打客户要求的型号标示名称）等。

凡是有特殊要求带“MT”的，要在产品外包装上写明具体非标修改情况，便于后续验货查看。

是否配有万向节或者万向节种类：

空白：标配标准万向节

W1：加长万向节

YW：鱼眼万向节

是否配有电缆线，配多长的电缆线：

空白：赫斯曼插头的产品标配不自带电缆线

1：只代表赫斯曼插头产品带1米电缆线。注意：其他非赫斯曼插头的产品默认自带1米线，不用选该数字代码“1”

2~2000：代表需要加长到多少米的电缆线，单位是m/米。2代表加长到2米电缆线，5代表加长到5米电缆线，……

是否配有赫斯曼插头或者赫斯曼插头种类：

空白：该系列产品标配H1赫斯曼插头

H2：配H2赫斯曼插头，该插头具体介绍请见我司赫斯曼插头资料页面

H3：配H3赫斯曼插头，该插头具体介绍请见我司赫斯曼插头资料页面

H4：配H4赫斯曼插头，该插头具体介绍请见我司赫斯曼插头资料页面

信号输出类型：

空白：默认标配，没有内置信号变送模块，电阻输出型：5KΩ、10KΩ（0~100%给定输入工作电压，随位移变化而变化），即电位计原理输出，供电电压0~24V皆可（默认标配）

即：如供电电压为5V，那么输出信号为0~5V；如供电电压为10V，那么输出信号为0~10V；如供电电压为24V，那么输出信号为0~24V。

可加外置或插头式信号变送模块将电位计信号转换为其他信号输出，如供电电压为24V或15~24V的时候，此时若需要0~5V、0~10V、-10~10V、4~20mA、RS485等信号输出方式的，可另加选我司外置信号变送模块（注：供电电压12~24V的时候，0~5V、0~10V输出的信号变送模块也可工作），具体型号请见外置或插头式信号变送模块选型资料。

V1：内置信号变送模块，电压0~5V输出，供电电压8~24V

V2：内置信号变送模块，电压0~10V输出，供电电压12~24V

V3：内置信号变送模块，电压5~5V输出，供电电压12~24V

V4：内置信号变送模块，电压-10~10V输出，供电电压12~24V

A1：内置信号变送模块，电流4~20mA输出，三线制，供电电压15~24V

A2：内置信号变送模块，电流4~20mA输出，二线制，供电电压15~24V

A4：内置信号变送模块，电流4~20mA输出，四线制，供电电压9~30V（内含隔离模块，适合干扰较大的数字跳动场合使用）

RS：内置信号变送模块，RS485数字信号输出，供电电压15~24V

注意：模块内置时，电子尺主体长度会略微加长20mm-50mm左右，具体尺寸请咨询我们。

有效行程(mm)：

0~1250（1250mm有效行程以内均可选择，详情请参照量程选型参考）

产品款型：

LS2：位移通用拉杆式，LS2为LS的升级版

注意：1、请按照以上选型代码顺序进行选型，该型号标配的参数代码为“空白”。2、如无特别说明：LS2/LS的出线方式默认标配为赫斯曼插头，不自带电缆线，如需要带线，请按以上选型表填写线的长度。3、不是标配赫斯曼插头的产品，有常规出线、防水接头出线、航空插头出线等方式，都默认自带1米屏蔽电缆线，如需要加长线缆，请在选型代码中表示出来。

标准发货配件包括：1个赫斯曼插头、1个密封垫片、1个万向节、2个安装支架、4个M4平垫片、4个M4弹垫、4个M4*20螺钉



滑入式安装支架



说明

外壳	硬质阳极氧化铝
安装	滑入式可调节固定夹钳
拉杆	不锈钢,可旋转,M6外螺纹
轴承	柔性回转缓冲滑动轴承
电阻元件	导电塑料
滑刷组件	贵金属多触脚滑刷，带弹性阻尼
电气连接	标准4极镀银赫斯曼插座
	航空插头式 4 极
	防水接头式 4 极

特点：

- 不同应用条件下,使用寿命 100×10^6 次
- 线性优异，最高可以达到 $\pm 0.04\%$
- 分辨率高于0.01mm
- 高运行速度
- 防护等级IP 65

出线方式：

- 标准赫斯曼插头和插座
- 防水接头式
- 航空插头式

该系列传感器用于测量和控制系统中，对位移和长度进行直接和绝对测量。

工作量程最大达1250mm以及高分辨率(0.01mm)可提供精确的线性位移测量。传感器的结构设计上考虑方便安装及拆卸。

传感器内外结构表面经过特殊处理，可在高速低磨损状态下工作。传感器前端的柔性缓冲轴承可以克服传动杆的一些微小侧向应力，保证传感器正常工作。传感器导电材料固定和结构设计等工艺保证即使在最恶劣的条件下传感器也能可靠工作。

应用范围：LS2是一般通用型，适合各类型设备的位置检测，如：注塑机、压铸机、橡胶机、鞋机、EVA注塑机、中空吹瓶机、木工机械、液压机等。

LS2 series: Improved LS

LS2 universal rod type linear displacement sensor, working range: 0-1250mm (other stroke can be customized)

选型说明

LS 2 - 200mm - - - - -

Other requirements:

Blank: Standard products, and others do not have special requirements in the "MT" code

MT: 1. There are modification requirements, such as: tail straight line, and there are screws or fish eyes at the tail and other modification requirements;

2. Other non-standard products with special requirements, such as: enhanced sealing type (or special for die casting machine), non-standard resistance value, non-standard installation method, non-standard size, The label is not standard (neutral packaging or the type designation name required by the customer).

Anyone with special requirements with "MT" shall indicate the specific non-standard modification on the outer packaging of the product, which is convenient for subsequent inspection.

Whether it is equipped with a universal joint or a universal joint type:

Blank: No universal joint or standard universal joint

W1: Lengthened universal joint

YW: Fisheye Universal Joint

Is it equipped with a cable and how long the cable is:

Blank: The product representing the Hessman plug does not come with a cable by default, or the product representing a non-Hessman plug comes with a 1 meter cable by default.

1: Only represents the Hessman plug product with a 1 meter cable. Note: Other non-Hussman plug products come with 1 meter line by

2~2000: Represents the cable that needs to be lengthened to a length of m/m, 2 means lengthened to 2m cable, 5 means lengthened to

Whether equipped with a Hessman plug or a Hessman plug type: Blank:

Blank: No Hessman plug or H1 Hessman plug

H2: With H2 Hessman plug, please refer to our Hessman plug data page for details.

H3: With H3 Hessman plug, please refer to our Hessman plug data page for details.

H4: With H4 Hessman plug, please refer to our Hessman plug data page for details.

Signal output type:

Blank: Default standard, no built-in signal transmission module, resistance output type (0-100% given input working voltage, change with displacement),

that is, potentiometer principle output, power supply voltage 0-24V can be (default standard), that is: if the supply voltage is 5V, then the output signal is 0-5V; if the supply voltage is 10V, then the output signal is 0-10V; if the supply voltage is 24V, then the output signal is 0-24V.

An external or plug-type signal transmission module can be used to convert the potentiometer signal to other signal output. For example, when the powersupply voltage is 24V or 15-24V, if it needs 0-5V, 0-10V, -10-10V, 4-20mA, RS485 and other signal output modes, can also choose our external signal transmission module (Note: when the power supply voltage is 12-24V, 0-5V, 0-10V the delivery module can also work). For the specific model, please refer to the external or plug signal transmission module selection data.

V1: Built-in signal transmission module, voltage 0-5V output, supply voltage 8-24V

V2: Built-in signal transmission module, voltage 0-10V output, power supply voltage 12-24V

V3: Built-in signal transmission module, voltage -5-5V output, power supply voltage 12-24V

V4: Built-in signal transmission module, voltage -10-10V output, power supply voltage 12-24V

A1: Built-in signal transmission module, current 4-20mA output, three-wire system, power supply voltage 15-24V

A2: Built-in signal transmission module, current 4-20mA output, two-wire system, power supply voltage 15-24V

A4: Built-in signal transmission module, current 4-20mA output, four-wire system, power supply voltage 9-30V (isolation module inside, suitable for digital interference occasions with large interference)

RS: Built-in signal transmission module, RS485 digital signal output, power supply voltage 15-24V

Note: When the module is built in, the length of the position sensor will be slightly longer by 20mm-50mm, Please consult us for the specified size.

Effective stroke(mm):

0-1250 (different models can be selected in different lengths, please refer to the range selection of the product page)

Product type:

LS2 series: Improved LS

Note:

1. Please select according to the above selection code sequence. If the selected parameter code is "blank", skip the code and fill in the next parameter code.

2. Unless otherwise specified: LS2 series: Improved LS is defaulted to be a Hessman plug. It does not come with a cable. If you need a cable, please fill in the length of the cable according to the above selection table.

3. If not standard products with Hessman plug products, there are regular outlines, waterproof connectors, air plugs, etc, all come with a 1 meter shielded cable. If you need to lengthen the cable, please indicate it in the selection code.

Standard accessories : 1 Hessman plug, 1 sealing washer, 1 universal joint, 2 mounting brackets, 4 M4 flat washers, 4 M4 spring washers, 4 M4*20 screws



Slide-in mounting bracket

Explanation

shell	Hard anodized aluminum
installation	Slide-in adjustable fixed clamp
Tie rod	Stainless steel, rotatable, M6 external thread
Bearing	Flexible rotary buffer sliding bearing
Resistance element	Conductive plastic
Sliding brush assembly	Precious metal multi-touch foot sliding brush with elastic damping
Electrical connections	Standard 4-pole silver plated Hessman socket
	Aviation plug type 4 pole
	Waterproof connector type 4 pole

Features:

- Under different application conditions, the service life is 100×10^6 times
- Excellent linearity, up to $\pm 0.04\%$
- Resolution higher than 0.01mm
- High running speed
- Protection grade IP65

Outgoing way:

- Standard Hessman plugs and sockets
- Waterproof connector
- Aviation plug

This series of sensors is used in measurement and control systems for direct and absolute measurement of displacement and length.

The working range is up to 1250mm and the high resolution (0.01mm) can provide accurate linear displacement measurement. The structural design of the sensor is considered to be convenient for installation and disassembly.

The internal and external structural surfaces of the sensor have been specially treated to work under high-speed and low-wear conditions. The flexible buffer bearing at the front of the sensor can overcome some minor lateral stress of the transmission rod to ensure the normal operation of the sensor. Processes such as sensor conductive material fixing and structural design ensure that the sensor can work reliably even under the harshest conditions.

Scope of application: LS2 is a general-purpose type, suitable for position detection of various types of equipment, such as: injection molding machine, die casting machine, rubber machine, shoe machine, EVA injection molding machine, hollow bottle blowing machine, woodworking machinery, hydraulic machine, etc.

LS2通用拉杆式直线位移传感器，工作量程：0-1250mm（其他行程可订制）

标准技术参数 Standard technical parameters:

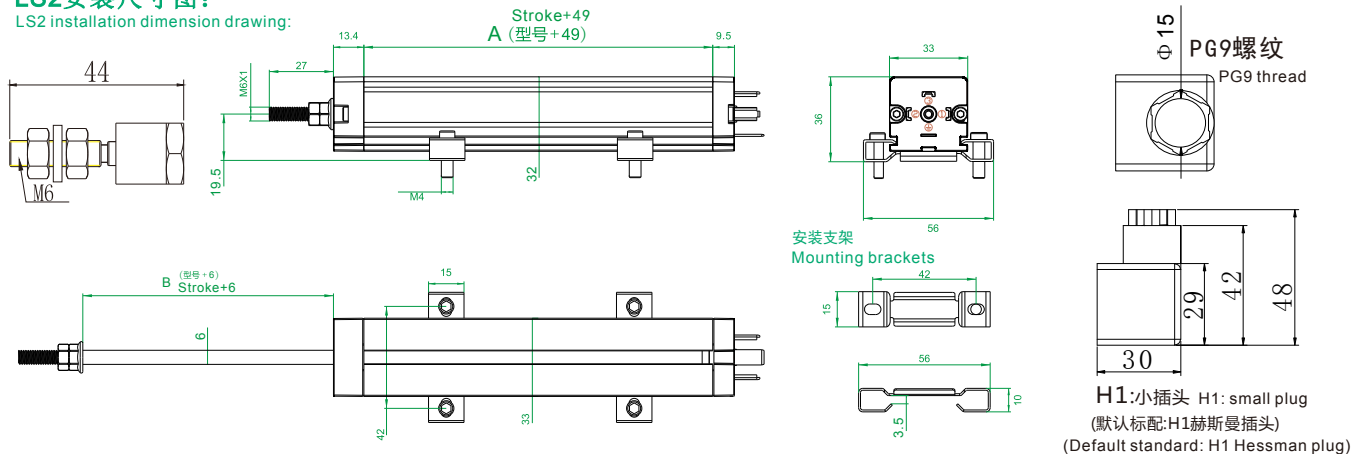
注意事项：在下列数据表中所列的线性度、使用寿命等数值是传感器工作在以运算放大器作为电压输出器输出电压给滑刷，且滑刷上不带负载（ $I_e \leq 10 \mu A$ ）的条件得出的。

Note: The linearity, service life and other values listed in the following data are the values of the sensor operating on the operational amplifier as the voltage output voltage to the slider, and No load on the brush ($I_e \leq 10$ A).

	LS2通用拉杆系列 LS2 Draw-bar Series	50~110mm	125~175mm	200~550mm	600~1250mm	量程选型参考: Measure Range Selection Reference 单位 Units: mm
电气参数 Electric Parameter	独立线性度 (±%) Independent linearity	0.1	0.07	0.05	0.04	50 75 100
	阻值公差±10% Resistance tolerance	5.0KΩ			10.0KΩ	110 125 130
	电气行程 Electrical stroke			量程+3mm Effective stroke+3mm		150 175 200
	解析度/分辨率 Resolution			无断解析 Infinite		225 250 275
	可重复性 Repeatability			0.01mm		300 325 350
	滑刷正常工作电流 Normal working current of the brush			≤10 μ A		360 375 400
	致故障时滑刷的最大电流 The maximum current that causes the brush to problem			10mA		425 450 475
	最大允许工作电压 Max. Working Voltage			42V		500 550 600
	输出电压与输入电压的有效温度系数比 Output voltage and input voltage Of the effective temperature coefficient ratio			通常5ppm/K Normal 5ppm/K		650 700 750
	绝缘阻抗 (500VDC) Insulation Resistance			≥10MΩ		800 850 900
机械参数 Mechanica Parameter	绝缘强度 (500VAC,50Hz) Insulation Intensity			≤100 μ A		950 1000
	铝管外壳长度 (A) Aluminum tube shell length (A)			量程+49mm Effective stroke+49mm		1150 1250
	机械行程 (B) Mechanical Stroke (B)			量程+8mm Effective stroke+8mm		
	拉杆最大承载力 Max. load pulling force of Draw-bar			50KG		
	工作受力 Working Force			水平方向<10N Horizontal Direction		
				竖直方向≤10N Vertical Direction		
	抗振动标准 Anti-vibration Standard			5~2000Hz,A _{max} =0.8mm,a _{max} =20g		
抗冲击标准 Shock Resistance Standard			50g, 11ms			
环境参数 Environmental Parameter	工作温度范围 Woking Temperature Range			-60℃~-+150℃		
	寿命 Lifetime			>100x10 ⁶		
	最大运行速度 Max. Speed			10m/S,最大运行加速度200 (20g) m/s ² Maximum running acceleration		
	防护等级 Level of Protection			最高IP67(DIN40500/IEC529) The highest IP67 (DIN40500/IEC529)		

LS2安装尺寸图:

LS2 installation dimension drawing:



应用范围：LS2是一般通用型，适合各类型设备的位置检测，如：注塑机、压铸机、橡胶机、鞋机、EVA注塑机、中空吹瓶机、木工机械、液压机等。

Scope of application: LS2 is a general-purpose type, suitable for position detection of various types of equipment, such as: injection molding machine, die casting machine, rubber machine, shoe machine, EVA injection molding machine, hollow bottle blowing machine, woodworking machinery, hydraulic machine, etc.

LS系列 LS2 series

LS通用拉杆式直线位移传感器，工作量程：0—1250mm（其他行程可订制）
LS universal rod type linear displacement sensor, working range: 0-1250mm (other stroke can be customized)



标准发货配件包括：1个赫斯曼插头、1个密封垫片、1个万向节、2个安装支架、4个M4平垫片、4个M4弹垫、4个M4*20螺钉
Standard accessories: 1 Hessman plug, 1 sealing washer, 1 universal joint, 2 mounting brackets, 4 M4 flat washers, 4 M4 spring washers, 4 M4*20 screws



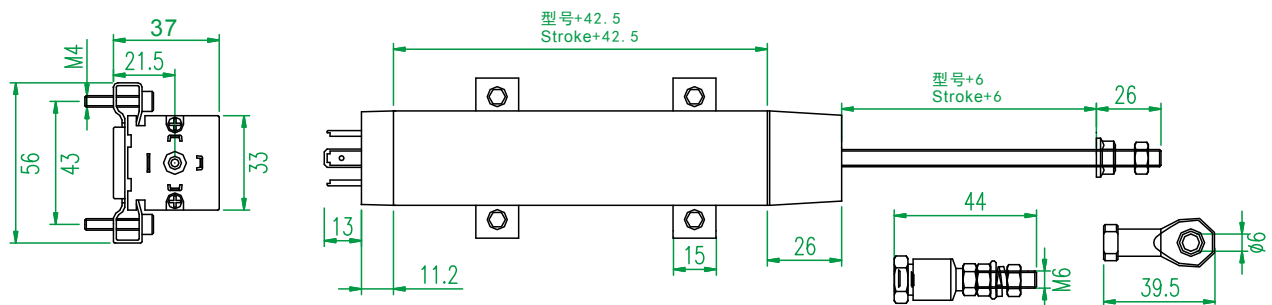
滑入式安装支架 Slide-in mounting bracket

标准技术参数 Standard technical parameters:

LS通用拉杆系列 LS draw-bar series	75~110mm	125~175mm	200~550mm	600~1000mm	1150~2000mm	量程选型参考: Measure Range Selection Reference 单位 Units: mm
独立线性度 (±%) Independent linearity	±0.1%	±0.1%	±0.05%	±0.04%	±0.04%	75 100 110
阻值公差±10% Resistance tolerance	5.0KΩ			10.0KΩ	20.0KΩ	125 130 150
机械行程 Mechanical Stroke	行程+6mm Range+6mm					175 200 225
解析度/分辨率 Resolution	无限解析 Infinite					250 275 300
可重复性 Repeatability	0.01mm					325 350 360
最大工作速度 Max working speed	10m/S					375 400 425
建议使用电流 Recommended current	≤1mA					450 475 500
使用温度范围 Operating temperature range	-60℃ ~ +150℃					550 600 650
输出类型 Output type	0~100%给定输入工作电压（随位移变化而变化） 0~100% given input working voltage (varies with displacement)					700 750 800
灵敏度 Sensitivity	1					850 900 950
温漂 Temperature drift	无限小 Infinitely small					1000 1150
尺寸 Dimension	如下图(单位:mm) As shown below (unit: mm)					1250

LS安装尺寸图:

LS installation dimension drawing:



应用范围：LS是一般通用型，适合各类型设备的位置检测，如：注塑机、压铸机、橡胶机、鞋机、EVA注塑机、中空吹瓶机、木工机械、液压机等。
Scope of application: LS is a general-purpose type, suitable for position detection of various types of equipment, such as: injection molding machine, die casting machine, rubber machine, shoe machine, EVA injection molding machine, hollow bottle blowing machine, woodworking machinery, hydraulic machine, etc.

LF系列 LF series

LF通用滑块式直线位移传感器，工作量程：0—5000mm（其他行程可订制）

LF universal slider linear displacement sensor, working range: 0-5000mm (other strokes can be customized)

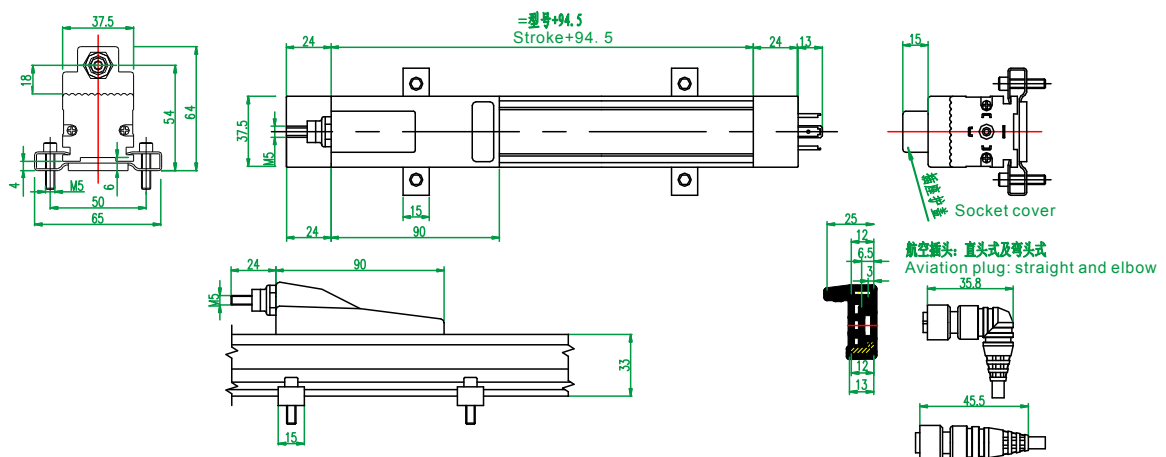


标准技术参数 Standard technical parameters :

LF通用滑块系列 LF slider	75~110mm	125~175mm	200~550mm	600~1000mm	1150~2000mm	2000mm以上	量程选型参考: Measure Range Selection Reference 单位 Units: mm 75 100 110 125 130 150 175 200 225 250 275 300 325 350 360 375 400 425 450 475 500 550 600 650 700 750 800 850 900 950 1000 1150 1250 1350 1450 1500 1600 1800 2000 2250 2500 2800 3000
独立线性度 (±%) Independent linearity	±0.1%		±0.05%	±0.05%	±0.04%		
阻值公差±10% Resistance tolerance	5KΩ			10KΩ	20KΩ		
机械行程 Mechanical Stroke		行程+6mm Range+6mm					
解析度/分辨率 Resolution		无断解析 Infinite					
可重复性 Repeatability		0.01mm					
最大工作速度 Max working speed		10m/S					
建议使用电流 Recommended current		≤1mA					
使用温度范围 Operating temperature range		-60℃ ~ +150℃					
输出类型 Output type		0~100%给定输入工作电压（随位移变化而变化） 0~100% given input working voltage (varies with displacement)					
灵敏度 Sensitivity		1					
温漂 Temperature drift		无限小 Infinitely small					
尺寸 Dimension		如下图(单位:mm) As shown below (unit: mm)					

LF安装尺寸图:

LF installation dimension drawing:



应用范围：LF是通用型安装的小型化，特别适应减少机械长度方向的安装尺寸，适合于较大行程式的应用。如：大型注塑机合模行程、橡胶机合模行程、木工机械、液压机械。

Scope of application: LF is the miniaturization of general-purpose installation. It is particularly suitable for reducing the installation size in the length direction of the machine, and is suitable for large-stroke applications. Such as: large injection molding machine clamping stroke, rubber machine clamping stroke, woodworking machinery, hydraulic machinery.

LM系列 LM series

LM微型拉杆式直线位移传感器，工作量程：0-300mm（其他行程可订制）
LM miniature rod type linear displacement sensor, working range: 0-300mm (other strokes can be customized)

标配：万向节

Standard Accessory: Universal joint

选配：鱼眼万向节

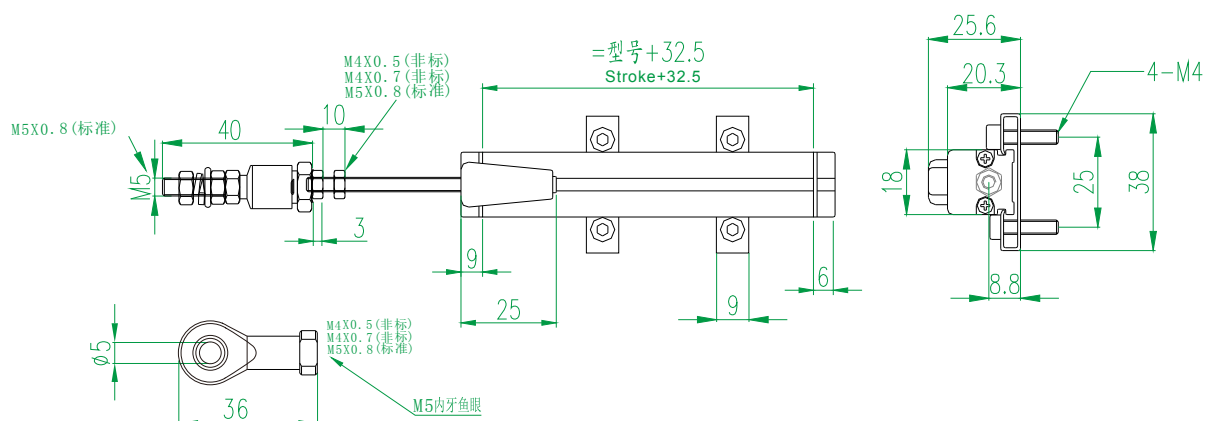
Optional Accessory: Joint with ball end

标准技术参数 Standard technical parameters :

LM微型拉杆系列 LM Rod Sensor	10mm	15mm	25mm	30mm	40mm	50~75mm	100~300mm	量程选型参考: Measure Range Selection Reference 单位 Units: mm
独立线性度 (±%) Independent linearity	±0.1%						±0.05%	10 15 25 30 40 50 75 100 125 150 175 200 225 250 300
阻值公差±10% Resistance tolerance	1KΩ						5KΩ	
机械行程 Mechanical Stroke	行程+3mm Range+3mm							支架: TTTT 标配四个M4x16螺丝 Standard four M4x16 screws
解析度/分辨率 Resolution	无断解析 Infinite							标配两个五金支架 Standard two hardware brackets
可重复性 Repeatability	0.01mm							
最大工作速度 Max working speed	10m/S							
建议使用电流 Recommended current	≤1mA							
使用温度范围 Operating temperature range	-60℃ ~ +150℃							
输出类型 Output type	0~100%给定输入工作电压（随位移变化而变化） 0~100% given input working voltage (varies with displacement)							
灵敏度 Sensitivity	1							
温漂 Temperature drift	无限小 Infinitely small							
尺寸 Dimension	如下图(单位: mm) As shown below (unit: mm)							可以选配两个铝合金支架 Can be equipped with two aluminum alloy brackets

LM安装尺寸图:

LM installation dimension drawing:



应用范围：LM是微型拉杆系列，特别适合空间狭小的场合。如：飞机操舵，船舶操舵。制鞋机械（前帮机，后帮机）、注塑机的顶针控制、印刷机械、纸品包装机械。

Scope of application: LM is a miniature rod series, especially suitable for occasions with small space. Such as: aircraft steering, ship steering. Shoemaking machinery (front helper, rear helper), thimble control of injection molding machine, printing machinery, paper packaging machinery.

公司部分证书 Partial certificate of the Company



The copyright belongs to Shenzhen Miran Technology Co., Ltd.

Any copying, photocopying, or filming for commercial promotion is an infringement
Produced in July 2020

版权归深圳市米朗科技有限公司所有
任何拷贝、复印、摄制作为商业推广用途均属于侵权
2020年7月出品