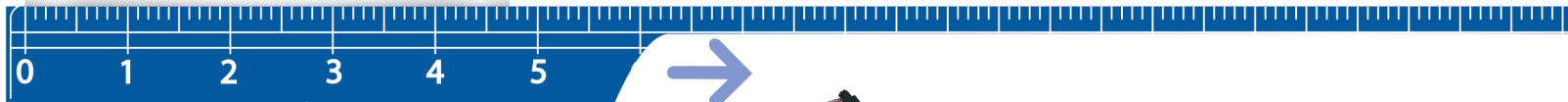
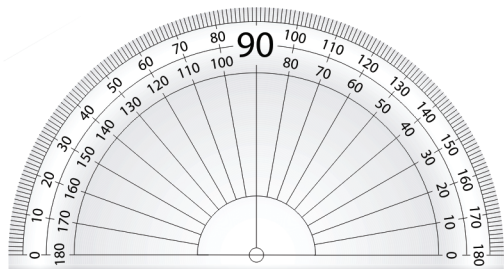


LINEAR POSITION SENSOR PRECISION MOTION AND DISPLACEMENT TRANSDUCERS

MADE IN CHINA



深圳市米朗科技有限公司
Shenzhen Miran Technology Co., Ltd
www.miransensor.com



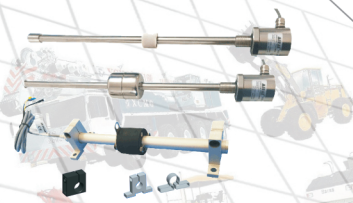
位移传感器 / 电子尺
Displacement Transducer



磁致伸缩位移传感器
Magnetostrictive Displacement Sensor



磁致伸缩位移 / 液位传感器
Magnetostrictive Displacement/
Liquid Level Sensor



磁阻式位移传感器
Magnetic Resistance Displacement Sensor



拉绳 / 线位移传感器
Wire Rope Potentiometer



控制器仪表
Instrument



角度传感器
Angle Sensor



润滑油泵
Lubricating Oil Pump



General technical data

Very long life $>100 \times 10^6$ cycles

$>25 \times 10^6$ m

Outstanding linearity : 0.03%FS~0.1%FS

Excellent repeatability <0.01 mm

Max operating speed 10m/s

Apply voltage allowed DC 5V-36V

Temperature stability <1.5 ppm/ $^{\circ}$ C

All sensors cool-proof & heat-proof -60° C - $+150^{\circ}$ C

The highest IP protection IP57 for slider type and IP67 for rod type

Introduction

Shenzhen Miran Technology Co., Ltd. is the largest Linear Position Sensor manufacturer in China.

Since 2003 we have been developed and produced Linear Position Sensor (brand: MIRAN, LinecSKI)

Wire Rope Potentiometer, Magnetostrictive Liquid Level Sensor, Angle Sensor, Lubricating Pump (Oil/Grease/Butter), LVDT, Eddy Current Sensor, and many other motion control products to support many different industries.

Our Products have been widely used in injection molding machines, die casting machines, rubber machines, footwear machines, EVA injection machines, bottle blowing machines, woodworker machines, hydraulic machinery, level control, suspension stroke control, construction machinery, seaport machinery, industrial robots, etc.

As a leading manufacturer in China, our factory is approved by ISO9001:2008, and all our products have CE, CCC, RoHS certificates.

Our Principles: Quality First, Credit First, Customer First.

Our Advantages

1. Strong capability in Research & Design. We spend million dollars every year for developing new tech and new products.
2. Promise high quality after strict tests. Every product will go through vibration test, low and high temperature test, electromagnetic interference regulatory test, endurance test, and explosion proof test.
3. Strong production capacity. We have factories both in Shenzhen and Hubei Province, and also a lot of in-stock products in warehouses.

We can meet large demands from our customers, and always deliver the orders on time.

4. Excellent sales & after-sales service. We are headquartered in Shenzhen, and have branches all over China. We guarantee life-long for all products.

TECHNICAL SPECIFICATION 技术规格				
MODEL 型号	KTC1	KTM	KTR	KTF
MEASUREMENT STROKE 测量行程	50mm-1250mm	10mm-300mm	10mm-250mm	75mm-5000mm
LINEARITY (±%FS) 线性度	±0.1%-±0.04%	±0.1%-±0.05%	±0.1%	±0.1-±0.04%
RESISTANCE (±10%) 电阻	5kΩ-10kΩ	1kΩ-10kΩ	1kΩ-10kΩ	5kΩ-20kΩ
RESOLUTION 分辨率	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析
REPEATABILITY PRECISION 可重复性	0.01mm	0.01mm	0.01mm	0.01mm
TEMPERATURE 温度范围	-60°C - +150°C	-60°C - +150°C	-60°C - +150°C	-60°C - +150°C
VERY LONG LIFE 寿命	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles
POWER SUPPLY 工作电压	3V-36V	3V-36V	3V-36V	3V-36V
MAX SPEED 最大速度	10m/S	5m/S	5m/S	5m/S
OUTPUT SIGNAL 输出信号	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485
CASE DIMENSION 外观尺寸	33x33mm	20x20mm	20x20mm	33x38mm

● Linear Position Sensor

Unlimited Mechanical Life, High Resolution, Strong&Durable

TECHNICAL SPECIFICATION 技术规格				
MODEL 型号	TLH	KFM	KPC	KPM
MEASUREMENT STROKE 测量行程	50mm-1250mm	10mm-300mm	75mm-50mm	10mm-300mm
LINEARITY (±%FS) 线性度	±0.1%-±0.04%	±0.1%-±0.05%	±0.1-±0.05%	±0.1-±0.05%
RESISTANCE (±10%) 电阻	5kΩ-10kΩ	1kΩ-5kΩ	5kΩ-10kΩ	1kΩ-5kΩ
RESOLUTION 分辨率	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析
REPEATABILITY PRECISION 可重复性	0.01mm	0.01mm	0.01mm	0.01mm
TEMPERATURE 温度范围	-60℃ - +150℃	-60℃ - +150℃	-60℃ - +150℃	-60℃ - +150℃
VERY LONG LIFE 寿命	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles
POWER SUPPLY 工作电压	3V-36V	3V-36V	3V-36V	3V-36V
MAX SPEED 最大速度	10m/S	5m/S	5m/S	5m/S
OUTPUT SIGNAL 输出信号	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485
CASE DIMENSION 外观尺寸	33x38mm	19x19mm	Φ36mm	Φ23mm

● Linear Position Sensor

Unlimited Mechanical Life, High Resolution, Strong&Durable

TECHNICAL SPECIFICATION 技术规格					
MODEL 型号	KPF	WY-01	PME12	MTR	PMI
MEASUREMENT STROKE 测量行程	10mm-300mm	10mm-300mm	50mm-1150mm	50mm-1000mm	50mm-1150mm
LINEARITY (±%FS) 线性度	±0.1%-±0.05%	±0.1%-±0.05%	±0.1%-±0.05%	±0.1%-±0.05%	±0.1%-±0.05%
RESISTANCE (±10%) 电阻	1kΩ-5kΩ	1kΩ-5kΩ	1kΩ-5kΩ	1kΩ-5kΩ	1kΩ-5kΩ
RESOLUTION 分辨率	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析
REPEATABILITY PRECISION 可重复性	0.01mm	0.01mm	0.01mm	0.01mm	0.01mm
TEMPERATURE 温度范围	-60°C - +150°C	-60°C - +150°C	-60°C - +150°C	-60°C - +150°C	-60°C - +150°C
VERY LONG LIFE 寿命	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles
POWER SUPPLY 工作电压	3V-36V	3V-36V	3V-36V	3V-36V	3V-36V
MAX SPEED 最大速度	5m/S	5m/S	5m/S	5m/S	5m/S
OUTPUT SIGNAL 输出信号	Standard one: Resistance A1: 4-20mA with 3 wires A2: 4-20mA with 2 wires V1: 0-5V V2: 0-10V R: RS485	Standard one: Resistance A1: 4-20mA with 3 wires A2: 4-20mA with 2 wires V1: 0-5V V2: 0-10V R: RS485	Standard one: Resistance A1: 4-20mA with 3 wires A2: 4-20mA with 2 wires V1: 0-5V V2: 0-10V R: RS485	Standard one: Resistance A1: 4-20mA with 3 wires A2: 4-20mA with 2 wires V1: 0-5V V2: 0-10V R: RS485	Standard one: Resistance A1: 4-20mA with 3 wires A2: 4-20mA with 2 wires V1: 0-5V V2: 0-10V R: RS485
CASE DIMENSION 外观尺寸	Φ22mm	Φ23mm	Φ12mm	Φ43mm	Φ43mm

● Linear Position Sensor

Unlimited Mechanical Life, High Resolution, Strong&Durable

TECHNICAL SPECIFICATION 技术规格				
MODEL 型号	LS	LF	LM	LR
MEASUREMENT STROKE 测量行程	50mm-1250mm	50mm-2500mm	10mm-300mm	10mm-250mm
LINEARITY (±%FS) 线性度	±0.1%-±0.04%	±0.1%-±0.04%	±0.1%-±0.04%	±0.1%-±0.04%
RESISTANCE (±10%) 电阻	5kΩ-20kΩ	5kΩ-20kΩ	1kΩ-5kΩ	1kΩ-5kΩ
RESOLUTION 分辨率	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析	Infinite 无断解析
REPEATABILITY PRECISION 可重复性	0.01mm	0.01mm	0.01mm	0.01mm
TEMPERATURE 温度范围	-60°C - +150°C	-60°C - +150°C	-60°C - +150°C	-60°C - +150°C
VERY LONG LIFE 寿命	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles	100X10 ⁶ Cycles
POWER SUPPLY 工作电压	3V-42V	3V-42V	3V-42V	3V-42V
MAX SPEED 最大速度	10m/S	5m/S	5m/S	5m/S
OUTPUT SIGNAL 输出信号	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485	Standard one:Resistance A1:4-20mA with 3 wires A2:4-20mA with 2 wires V1:0-5V V2:0-10V R:RS485
CASE DIMENSION 外观尺寸	33x33mm	33x38mm	20x20mm	20x20mm

● Magnetic Displacement Sensor

Unlimited Mechanical Life, High Resolution, Strong&Durable

TECHNICAL SPECIFICATION 技术规格				
MODEL 型号	MTC	MTM	MTL3	MTL4
MEASUREMENT STROKE 测量行程	80mm-3000mm	80mm-3000mm	80mm-3000mm	80mm-3000mm
LINEARITY (±%FS) 线性度	≤0.05%	≤0.05%	≤0.05%	≤0.05%
RESOLUTION 分辨率	0.001mm	0.001mm	0.001mm	0.001mm
REPEATABILITY PRECISION 可重复性	≤0.001mm	≤0.001mm	≤0.001mm	≤0.001mm
TEMPERATURE 温度范围	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C
PROTECTION DEGREE 防护等级	IP66	IP66	IP66	IP66
POWER SUPPLY 工作电压	24VDC	24VDC	24VDC	24VDC
MAX SPEED 最大速度	≤10m/S	≤10m/S	≤10m/S	≤10m/S
OUTPUT SIGNAL 输出信号	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop

● Magnetic Displacement Sensor

Unlimited Mechanical Life, High Resolution, Strong&Durable

TECHNICAL SPECIFICATION 技术规格				
MODEL 型号	MTF	MR	MTL2	MFT
MEASUREMENT STROKE 测量行程	80mm-3000mm	3000mm-20000mm	80mm-3000mm	80mm-3000mm
LINEARITY (±%FS) 线性度	≤0.05%	≤0.05%	≤0.05%	≤0.05%
RESOLUTION 分辨率	0.001mm	0.001mm	0.001mm	0.001mm
REPEATABILITY PRECISION 可重复性	≤0.001mm	≤0.001mm	≤0.001mm	≤0.001mm
TEMPERATURE 温度范围	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C
PROTECTION DEGREE 防护等级	IP66	IP66	IP66	IP66
POWER SUPPLY 工作电压	24VDC	24VDC	24VDC	24VDC
MAX SPEED 最大速度	≤10m/S	≤10m/S	≤10m/S	≤10m/S
OUTPUT SIGNAL 输出信号	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop

Magnetic Temperature Liquid Level Sensor

Unlimited Mechanical Life, High Resolution, Strong&Durable

TECHNICAL SPECIFICATION 技术规格				
MODEL 型号	MBT	MPM	MTS	MF
MEASUREMENT STROKE 测量行程	30mm-5000mm	80mm-450mm	80mm-600mm	80mm-3000mm
LINEARITY (±%FS) 线性度	≤0.05%	≤0.05%	≤0.05%	≤0.05%
RESOLUTION 分辨率	0.001mm	0.001mm	0.001mm	0.001mm
REPEATABILITY PRECISION 可重复性	≤0.001mm	≤0.001mm	≤0.001mm	≤0.001mm
TEMPERATURE 温度范围	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C
PROTECTION DEGREE 防护等级	IP66	IP66	IP66	IP66
POWER SUPPLY 工作电压	24VDC	24VDC	24VDC	24VDC
MAX SPEED 最大速度	≤10m/S	≤10m/S	≤10m/S	≤10m/S
OUTPUT SIGNAL 输出信号	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop	0-5VDC 0-10VDC 0-20mA 4-20mA RS485 Start-stop

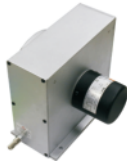
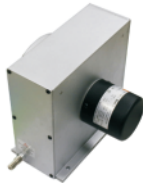
● Draw Wire Potentiometer

Unlimited Mechanical Life, High Resolution, Strong&Durable

TECHNICAL SPECIFICATION 技术规格			
MODEL 型号	MPS-XXXS	MPS-XXS	MPS-XS
MEASUREMENT STROKE 测量行程	100mm -200mm	100mm-800mm	100mm-1000mm
LINEARITY (±%FS) 线性度	0.1%	0.1%	0.1%
VIBRATION	10Hz to 2000Hz	10Hz to 2000Hz	10Hz to 2000Hz
OUTPUT SIGNAL 输出信号模式	R:Resistance (Potentiometer) V:0-5VDC or 0-10VDC A:4-20mA (3 wires) (2 wires) P: incremental pulse phase output AB phase or ABZ phase	R:Resistance (Potentiometer) V:0-5VDC or 0-10VDC A:4-20mA (3 wires) (2 wires) P: incremental pulse phase output AB phase or ABZ phase	R:Resistance (Potentiometer) V:0-5VDC or 0-10VDC A:4-20mA (3 wires) (2 wires) P: incremental pulse phase output AB phase or ABZ phase
TEMPERATURE 温度范围	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C
STARTING FORCE 拉力	Max. 600g	Max. 1000g	Max. 1000g
POWER SUPPLY 工作电压	5V-36V	5V-36V	5V-36V
MAX SPEED 最大速度	1000mm/s	1000mm/s	1000mm/s
REPEATABILITY 重复性	± 0.05%FS	± 0.05%FS	± 0.05%FS
PROTECTION DEGREE 保护等级	IP65	IP65	IP65

● Draw Wire Potentiometer

Unlimited Mechanical Life, High Resolution, Strong&Durable

TECHNICAL SPECIFICATION 技术规格				
MODEL 型号	MPS-S	MPS-M	MPS-L	MPS-XL
MEASUREMENT STROKE 测量行程	100mm -1000mm	1250mm-4000mm	4500mm-8000mm	50mm-20000mm
LINEARITY (±%FS) 线性度	0.1%	0.1%	0.1%	0.1%
VIBRATION	10Hz to 2000Hz	10Hz to 2000Hz	10Hz to 2000Hz	10Hz to 2000Hz
OUTPUT SIGNAL 输出信号模式	R:Resistance (Potentiometer) V:0-5VDC or 0-10VDC A:4-20mA (3 wires) (2 wires) P: incremental pulse phase output AB phase or ABZ phase	R:Resistance (Potentiometer) V:0-5VDC or 0-10VDC A:4-20mA (3 wires) (2 wires) P: incremental pulse phase output AB phase or ABZ phase	R:Resistance (Potentiometer) V:0-5VDC or 0-10VDC A:4-20mA (3 wires) (2 wires) P: incremental pulse phase output AB phase or ABZ phase	R:Resistance (Potentiometer) V:0-5VDC or 0-10VDC A:4-20mA (3 wires) (2 wires) P: incremental pulse phase output AB phase or ABZ phase
TEMPERATURE 温度范围	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C	-50° C- +125° C
STARTING FORCE 拉力	Max. 600g	Max. 1000g	Max. 2200g	Max. 3000g
POWER SUPPLY 工作电压	5V-36V	5V-36V	5V-36V	5V-36V
MAX SPEED 最大速度	1000mm/s	1000mm/s	1000mm/s	1000mm/s
REPEATABILITY 重复性	± 0.05%FS	± 0.05%FS	± 0.05%FS	± 0.05%FS
PROTECTION DEGREE 保护等级	IP65	IP65	IP65	IP65

TECHNICAL SPECIFICATION 技术规格						
MODEL 型号	P2500	P4500	P6500	WDA-D22-A	WDA-D22-B	WDA-D40-P
MEASUREMENT STROKE 测量行程	0-355°	0-355°	0-355°	0-300°	0-300°	0-300°
Resistance (Ω) 电阻值	5000 Ω	5000 Ω	5000 Ω	3000Ω	0-3000Ω	0-5000Ω
Housing size	Φ27mm	Φ36.5mm	Φ50.8mm	Φ22mm	Φ23mm	Φ41mm
Output shaft 输出轴	Φ3mm	Φ6mm	Φ6mm	Φ6mm	Φ6mm	Φ6mm
Linearity 线性精度	±0.1%	±0.1%	±0.1%	±0.3%	±0.3%	±0.3%
Output signal 输出信号	Voltage divider	Voltage divider	Voltage divider	Voltage divider	Voltage divider	Voltage divider
Repeatability 重复精度	0.01°	0.007°	0.007°	0.007°	0.007°	0.007°
Temperature coefficient 温度漂移	9ppm/°C	9ppm/°C	9ppm/°C	9ppm/°C	9ppm/°C	9ppm/°C
Operating temperature 工作温度	-40°C ~+100°C	-40°C ~+100°C	-40~+100°C	-60°C ~+125°C	-60°C ~+125°C	-60°C ~+125°C
Operating speed 工作速度	10 000rpm	10 000rpm	10 000rpm	10 000rpm	10 000rpm	10 000rpm
Protection degree 防护等级	IP57	IP57	IP57	IP65	IP65	IP65
Long Life 使用寿命 (次)	100 x 10 ⁶	100 x 10 ⁶	100 x 10 ⁶	100 x 10 ⁶	100 x 10 ⁶	100 x 10 ⁶

- Memo

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

