

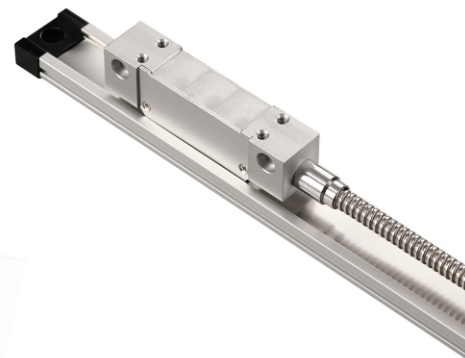
# Delos



Delos Encoder Co.,Ltd  
深圳德思科电子有限公司



# Delos



# CONTENTS

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Delos Encoder Co.,Ltd  
深圳德思科电子有限公司

Delos Encoder Co., Ltd established in 2007. It has committed to the technology development and the implementation of displacement measurement products, like digital readout, linear scale, magnetic scale, etc. By relying on abundant human resources and strong scientific research abilities, the company has succeeded in constructing the new type of high precision electrooptical technology. Besides, it has built a complete service system which contains research, production, sales and technical services. The company's research fields include displacement measurement, position control, position data feedback and position data acquisition system, etc. The company has passed the CE certification and industry standards. Delos's products have exported to Europe, Southeast Asia, Central Asia, South America, Africa and other places. We will always give priority to our customers' requirements and develop the latest and the most cost-effective products based on their needs.

深圳德思科电子有限公司成立于2007年，一直致力于位移测量产品的技术开发及实现，主要研发、生产、销售的产品有数显表、光栅尺和磁栅尺等。公司依托雄厚的人才资源和强大的科研开发实力，成功地构筑了以新型高精光电技术为核心，以研究、生产、销售和技术服务为一体的完整服务体系。公司研究领域包括：位移测量、位置控制、位置数据反馈和位置数据获取系统等。公司已通过CE欧洲安全标准认证及行业标准，产品远销欧洲、东南亚、中亚、南美及非洲等地。我们将把客户的需求放在首位，并根据他们的要求开发最新、最具性价比的产品。

CE Certification

CE认证证书



CE Certification

CE认证证书



RoHS Certification

RoHS认证证书



# DS50M LCD Metal Case DRO / DS50M液晶数显表(金属壳)

DS50M-1V, DS50M-2V, DS50M-3V, DS50M-4V, DS50M-5V



## GENERAL FUNCTION 功能概述

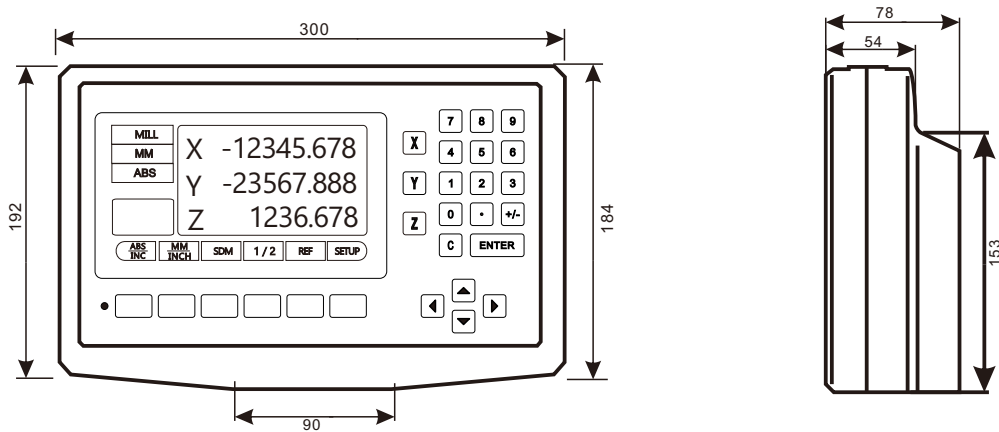
- Centering (1/2) 分中
- Metric / inches Display (mm/inch) 公制/英制显示
- Absolute / incremental (ABS / INC) 绝对坐标系/相对坐标系
- Power off Memory 掉电记忆
- 200 subdatum 200组辅助坐标系
- Reference Memory (REF) 参考零位功能
- Build in Calculator 内置计算器功能
- Pitch Circle Diameter (PCD) (Milling) 铣床圆周分孔功能
- Line Hole Positioning (LHOLE) (Milling) 铣床斜线分孔功能
- Simple "R" Function (Milling) 铣床简易圆弧加工功能
- Smooth "R" Function (Milling) 铣床平滑圆弧加工功能
- Linear Error Compensation 线性补偿功能
- EDM (EDM) 火花机
- Tool Lib for Lathe (Lathe) 200组车床刀具库功能



## Mechanical and Electrical Features 机械和电器性能

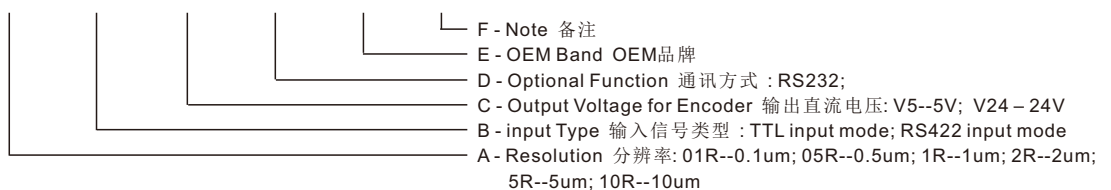
Resolutions / 分辨率	10--0.1um	<table border="1"> <thead> <tr> <th>Pin 引脚</th> <th>PP Signal信号</th> <th>EIA422 Signal信号</th> </tr> </thead> <tbody> <tr><td>1</td><td>—</td><td><math>\bar{A}</math></td></tr> <tr><td>2</td><td>OV</td><td>OV</td></tr> <tr><td>3</td><td>—</td><td><math>\bar{B}</math></td></tr> <tr><td>4</td><td>GND</td><td>GND</td></tr> <tr><td>5</td><td>—</td><td><math>\bar{R}</math></td></tr> <tr><td>6</td><td>A</td><td>A</td></tr> <tr><td>7</td><td>5V</td><td>5V</td></tr> <tr><td>8</td><td>B</td><td>B</td></tr> <tr><td>9</td><td>R</td><td>R</td></tr> </tbody> </table>	Pin 引脚	PP Signal信号	EIA422 Signal信号	1	—	$\bar{A}$	2	OV	OV	3	—	$\bar{B}$	4	GND	GND	5	—	$\bar{R}$	6	A	A	7	5V	5V	8	B	B	9	R	R
Pin 引脚	PP Signal信号		EIA422 Signal信号																													
1	—		$\bar{A}$																													
2	OV		OV																													
3	—		$\bar{B}$																													
4	GND		GND																													
5	—		$\bar{R}$																													
6	A		A																													
7	5V		5V																													
8	B		B																													
9	R	R																														
Angle Resolutions / 角度分辨率	0.001--1"																															
Power Supply / 电源电压	100VAC--230VAC																															
Axis Display / LED显示字体	7 Segment LED																															
Signal input per axis / 输入信号类型	A / B signals																															
Maximum input frequency / 最大输入信号频率	500KHz																															
Operating Temperature / 工作温度	0° - 50°																															
Storage Temperature / 储藏温度	-20° - 70°																															
Relative Humidity / 相对湿度	95% (not condensed)																															
Vibration Resistance / 抗震性	25 m/s <sup>2</sup> (55 - 2000Hz)																															
Protection Class(EN60529) / 防护等级	IP42																															
Weight / 重量	2.1 Kg																															

## DIMENSIONS 尺寸图



## ORDER INFORMATION 订货信息

DS50-3V ---- A ---- B ---- C ---- D ---- E ---- F



Sample: DS50-3V-5R-RS422-V5

# DS50P LCD Plastic Case DRO / DS50P 液晶数显表(塑壳)

DS50P-1V, DS50P-2V, DS50P-3V, DS50P-4V, DS50P-5V



## GENERAL FUNCTION 功能概述

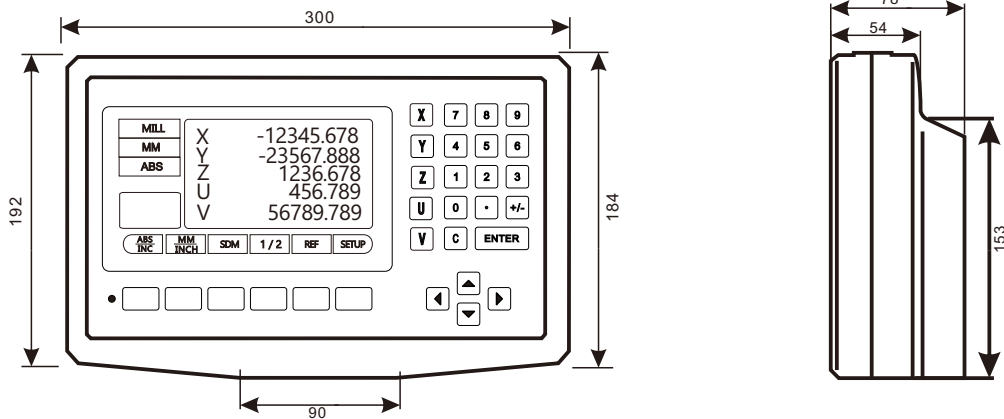
- Centering (1/2) 分中
- Metric / inches Display (mm/inch) 公制/英制显示
- Absolute / incremental (ABS / INC) 绝对坐标系/相对坐标系
- Power off Memory 掉电记忆
- 200 subdatum 200组辅助坐标系
- Reference Memory (REF) 参考零位功能
- Build in Calculator 内置计算器功能
- Pitch Circle Diameter (PCD) (Milling) 铣床圆周分孔功能
- Line Hole Positioning (LHOLE) (Milling) 铣床斜线分孔功能
- Simple "R" Function (Milling) 铣床简易圆弧加工功能
- Smooth "R" Function (Milling) 铣床平滑圆弧加工功能
- Linear Error Compensation 线性补偿功能



## Mechanical and Electrical Features 机械和电器性能

Resolutions / 分辨率	10--0.1um		<table border="1"> <thead> <tr> <th>Pin 引脚</th> <th>PP Signal信号</th> <th>EIA422 Signal信号</th> </tr> </thead> <tbody> <tr><td>1</td><td>—</td><td><math>\bar{A}</math></td></tr> <tr><td>2</td><td>OV</td><td>OV</td></tr> <tr><td>3</td><td>—</td><td><math>\bar{B}</math></td></tr> <tr><td>4</td><td>GND</td><td>GND</td></tr> <tr><td>5</td><td>—</td><td><math>\bar{R}</math></td></tr> <tr><td>6</td><td>A</td><td>A</td></tr> <tr><td>7</td><td>5V</td><td>5V</td></tr> <tr><td>8</td><td>B</td><td>B</td></tr> <tr><td>9</td><td>R</td><td>R</td></tr> </tbody> </table>	Pin 引脚	PP Signal信号	EIA422 Signal信号	1	—	$\bar{A}$	2	OV	OV	3	—	$\bar{B}$	4	GND	GND	5	—	$\bar{R}$	6	A	A	7	5V	5V	8	B	B	9	R	R
Pin 引脚	PP Signal信号			EIA422 Signal信号																													
1	—	$\bar{A}$																															
2	OV	OV																															
3	—	$\bar{B}$																															
4	GND	GND																															
5	—	$\bar{R}$																															
6	A	A																															
7	5V	5V																															
8	B	B																															
9	R	R																															
Angle Resolutions / 角度分辨率	0.001--1"																																
Power Supply / 电源电压	100VAC--230VAC																																
Axis Display / LED显示字体	7 Segment LED																																
Signal input per axis / 输入信号类型	A / B signals																																
Maximum input frequency / 最大输入信号频率	500KHz																																
Operating Temperature / 工作温度	0° - 50°																																
Storage Temperature / 储藏温度	-20° - 70°																																
Relative Humidity / 相对湿度	95% (not condensed)																																
Vibration Resistance / 抗震性	25 m/s <sup>2</sup> (55 - 2000Hz)																																
Protection Class(EN60529) / 防护等级	IP42																																
Weight / 重量	2.1 Kg																																

## DIMENSIONS 尺寸图



## ORDER INFORMATION 订货信息

DS50-5V ---- A ---- B ---- C ---- D ---- E ---- F



Sample: DS50-5V-5R-TTL-V5

# DS10 Single Axis DRO / DS10 单轴数显表

## GENERAL FUNCTION 功能概述

- Centering (1/2) 分中
- Metric / inches Display (mm/inch) 公制/英制显示
- Absolute / incremental (ABS / INC) 绝对坐标系/相对坐标系
- Power off Memory 掉电记忆
- Reference Memory (REF) 参考零位功能
- Linear Error Compensation 线性补偿功能
- Angle Display Mode 0.000, 0.00.00 角度显示方式：度和度分秒
- Non Linear Error Compensation 非线性误差补偿



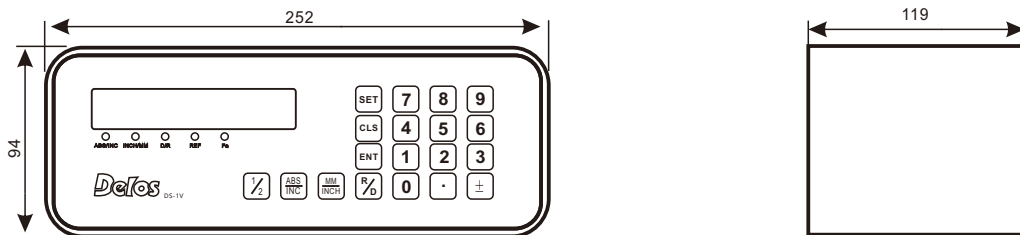
## Mechanical and Electrical Features 机械和电器性能

Resolutions / 分辨率	10--0.1um
Angle Resolutions / 角度分辨率	0.001--1"
Power Supply / 电源电压	100VAC--230VAC
Axis Display / LED显示字体	7 Segment LED
Signal input per axis / 输入信号类型	A / B signals
Maximum input frequency / 最大输入信号频率	500KHz
Operating Temperature / 工作温度	0° - 50°
Storage Temperature / 储藏温度	-20° - 70°
Relative Humidity / 相对湿度	95% (not condensed)
Vibration Resistance / 抗震性	25 m/s <sup>2</sup> (55 - 2000Hz)
Protection Class(EN60529) / 防护等级	IP42
Weight / 重量	2.1 Kg

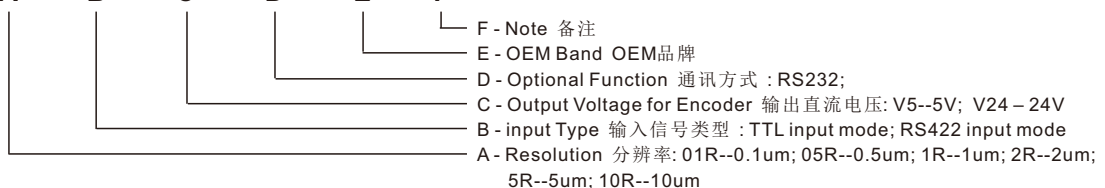
Pin 引脚	PP Signal信号	EIA422 Signal信号
1	—	$\bar{A}$
2	OV	OV
3	—	$\bar{B}$
4	GND	GND
5	—	$\bar{R}$
6	A	A
7	5V	5V
8	B	B
9	R	R

## DIMENSIONS 尺寸图



## ORDER INFORMATION 订货信息

DS10 ---- A ---- B ---- C ---- D ---- E ---- F



Sample: DS10-1V-5R-TTL-V5

# DS60 Mini Metal Case DRO / DS60 小型金属壳数显表

DS60-1V, DS60-2V, DS60-3V, DS60-4V



## GENERAL FUNCTION 功能概述

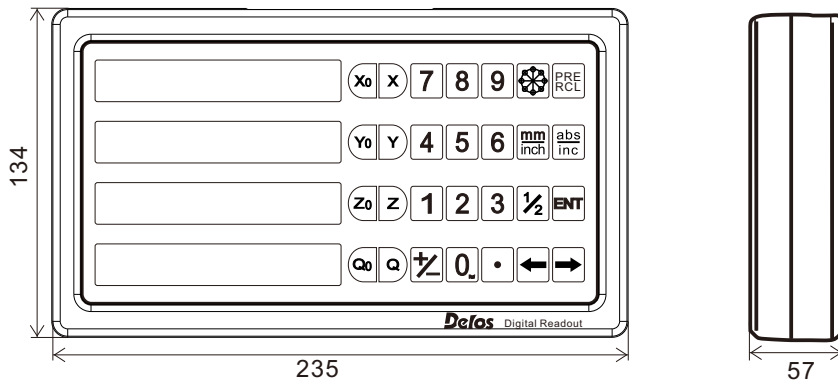
- Centering (1/2) 分中
- Metric / inches Display (mm/inch) 公制/英制显示
- Absolute / incremental (ABS / INC) 绝对坐标系/相对坐标系
- Power off Memory 掉电记忆
- 200 subdatum 200组辅助坐标系
- Reference Memory (REF) 参考零位功能
- Build in Calculator 内置计算器功能
- Pitch Circle Diameter (PCD) (Milling) 铣床圆周分孔功能
- Line Hole Positioning (LHOLE) (Milling) 铣床斜线分孔功能
- Simple "R" Function (Milling) 铣床简易圆弧加工功能
- Smooth "R" Function (Milling) 铣床平滑圆弧加工功能
- Linear Error Compensation 线性补偿功能
- EDM (EDM) 火花机
- Tool Lib for Lathe (Lathe) 200组车床刀具库功能



## Mechanical and Electrical Features 机械和电器性能

Resolutions / 分辨率	10--0.1um	<table border="1"> <thead> <tr> <th>Pin 引脚</th> <th>PP Signal信号</th> <th>EIA422 Signal信号</th> </tr> </thead> <tbody> <tr><td>1</td><td>—</td><td><math>\bar{A}</math></td></tr> <tr><td>2</td><td>OV</td><td>OV</td></tr> <tr><td>3</td><td>—</td><td><math>\bar{B}</math></td></tr> <tr><td>4</td><td>GND</td><td>GND</td></tr> <tr><td>5</td><td>—</td><td><math>\bar{R}</math></td></tr> <tr><td>6</td><td>A</td><td>A</td></tr> <tr><td>7</td><td>5V</td><td>5V</td></tr> <tr><td>8</td><td>B</td><td>B</td></tr> <tr><td>9</td><td>R</td><td>R</td></tr> </tbody> </table>	Pin 引脚	PP Signal信号	EIA422 Signal信号	1	—	$\bar{A}$	2	OV	OV	3	—	$\bar{B}$	4	GND	GND	5	—	$\bar{R}$	6	A	A	7	5V	5V	8	B	B	9	R	R
Pin 引脚	PP Signal信号		EIA422 Signal信号																													
1	—		$\bar{A}$																													
2	OV		OV																													
3	—		$\bar{B}$																													
4	GND		GND																													
5	—		$\bar{R}$																													
6	A		A																													
7	5V		5V																													
8	B		B																													
9	R	R																														
Angle Resolutions / 角度分辨率	0.001--1"																															
Power Supply / 电源电压	100VAC--230VAC																															
Axis Display / LED显示字体	7 Segment LED																															
Signal input per axis / 输入信号类型	A / B signals																															
Maximum input frequency / 最大输入信号频率	500KHz																															
Operating Temperature / 工作温度	0° - 50°																															
Storage Temperature / 储藏温度	-20° - 70°																															
Relative Humidity / 相对湿度	95% (not condensed)																															
Vibration Resistance / 抗震性	25 m/s <sup>2</sup> (55 - 2000Hz)																															
Protection Class(EN60529) / 防护等级	IP42																															
Weight / 重量	2.1 Kg																															

## DIMENSIONS 尺寸图



## ORDER INFORMATION 订货信息

DS60-3V ---- A ---- B ---- C ---- D ---- E ---- F



Sample: DS60-3V-5R-RS422-V5



# DS40 Metal Case DRO / DS40 数显表 (金属壳)

DS40-2V, DS40-3V, DS40-4V, DS40-5V, DS40-2L, DS40-2M, DS40-3M, DS40-3L



## GENERAL FUNCTION 功能概述

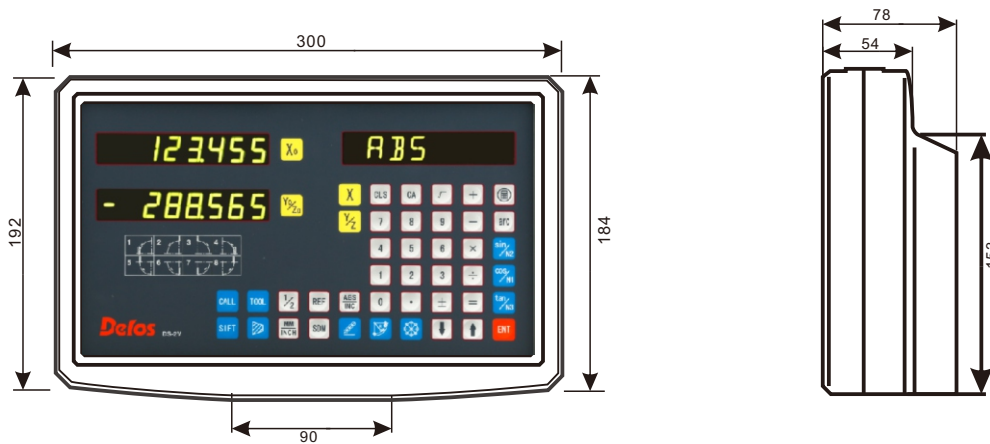
- Centering (1/2) 分中
- Metric / inches Display (mm/inch) 公制/英制显示
- Absolute / incremental (ABS / INC) 绝对坐标系/相对坐标系
- Power off Memory 掉电记忆
- 200 subdatum 200组辅助坐标系
- Reference Memory (REF) 参考零位功能
- Build in Calculator 内置计算器功能
- Pitch Circle Diameter (PCD) (Milling) 铣床圆周分孔功能
- Line Hole Positioning (LHOLE) (Milling) 铣床斜线分孔功能
- Simple "R" Function (Milling) 铣床简易圆弧加工功能
- Smooth "R" Function (Milling) 铣床平滑圆弧加工功能
- Linear Error Compensation 线性补偿功能
- EDM (EDM) 火花机
- Tool Lib for Lathe (Lathe) 200组车床刀具库功能



## Mechanical and Electrical Features 机械和电器性能

Resolutions / 分辨率	10--0.1um		Pin 引脚	PP Signal信号	EIA422 Signal信号
Angle Resolutions / 角度分辨率	0.001--1"		1	—	$\bar{A}$
Power Supply / 电源电压	100VAC--230VAC	2	OV	OV	
Axis Display / LED显示字体	7 Segment LED	3	—	$\bar{B}$	
Signal input per axis / 输入信号类型	A / B signals	4	GND	GND	
Maximum input frequency / 最大输入信号频率	500KHz	5	—	$\bar{R}$	
Operating Temperature / 工作温度	0° - 50°	6	A	A	
Storage Temperature / 储藏温度	-20° - 70°	7	5V	5V	
Relative Humidity / 相对湿度	95% (not condensed)	8	B	B	
Vibration Resistance / 抗震性	25 m/s <sup>2</sup> (55 - 2000Hz)	9	R	R	
Protection Class(EN60529) / 防护等级	IP42				
Weight / 重量	2.1 Kg				

## DIMENSIONS 尺寸图



## ORDER INFORMATION 订货信息

DS40-2V ---- A ---- B ---- C ---- D ---- E ---- F



Sample: DS40-2V-5R-RS422-V5

# DS30 Plastic Case DRO / DS30 数显表 (塑壳)

DS30-2V, DS30-3V, DS30-4V, DS30-5V, DS30-2L, DS30-2M, DS30-3M, DS30-3L



## GENERAL FUNCTION 功能概述

- Centering (1/2) 分中
- Metric / inches Display (mm/inch) 公制/英制显示
- Absolute / incremental (ABS / INC) 绝对坐标系/相对坐标系
- Power off Memory 掉电记忆
- 200 subdatum 200组辅助坐标系
- Reference Memory (REF) 参考零位功能
- Build in Calculator 内置计算器功能
- Pitch Circle Diameter (PCD) (Milling) 铣床圆周分孔功能
- Line Hole Positioning (LHOLE) (Milling) 铣床斜线分孔功能
- Simple "R" Function (Milling) 铣床简易圆弧加工功能
- Smooth "R" Function (Milling) 铣床平滑圆弧加工功能
- Linear Error Compensation 线性补偿功能
- EDM (EDM) 火花机
- Tool Lib for Lathe (Lathe) 200组车床刀具库功能



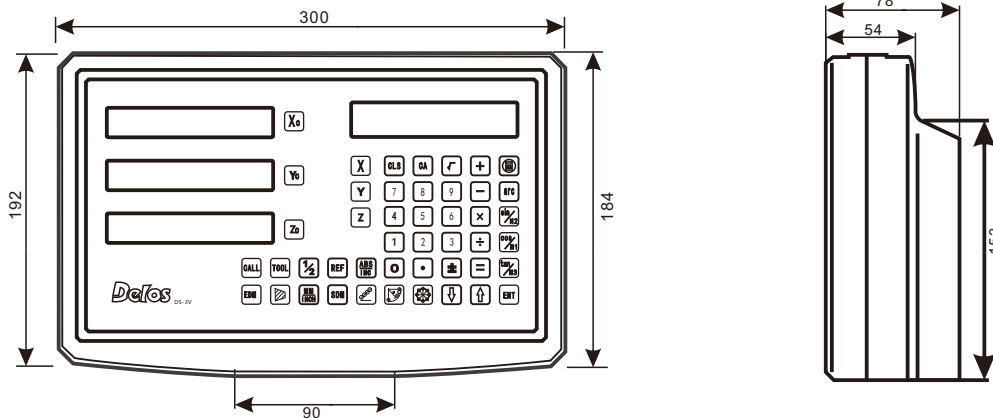
## Mechanical and Electrical Features 机械和电器性能

Resolutions / 分辨率	10--0.1um
Angle Resolutions / 角度分辨率	0.001--1"
Power Supply / 电源电压	100VAC--230VAC
Axis Display / LED显示字体	7 Segment LED
Signal input per axis / 输入信号类型	A / B signals
Maximum input frequency / 最大输入信号频率	500KHz
Operating Temperature / 工作温度	0° - 50°
Storage Temperature / 储藏温度	-20° - 70°
Relative Humidity / 相对湿度	95% (not condensed)
Vibration Resistance / 抗震性	25 m/s <sup>2</sup> (55 - 2000Hz)
Protection Class(EN60529) / 防护等级	IP42
Weight / 重量	2.1 Kg

Pin 引脚	PP	EIA422
	Signal信号	Signal信号
1	—	$\bar{A}$
2	OV	OV
3	—	$\bar{B}$
4	GND	GND
5	—	$\bar{R}$
6	A	A
7	5V	5V
8	B	B
9	R	R

## DIMENSIONS 尺寸图



## ORDER INFORMATION 订货信息

DS30-3V ---- A ---- B ---- C ---- D ---- E ---- F

- F - Note 备注
- E - OEM Band OEM品牌
- D - Optional Function 通讯方式 : RS232;
- C - Output Voltage for Encoder 输出直流电压: V5--5V; V12--12V; V24--24V
- B - input Type 输入信号类型 : Txx-TTL input mode; Rxx--RS422 input mode
- A - Resolution 分辨率: 01R--0.1um; 05R--0.5um; 1R--1um; 2R--2um; 5R--5um; 10R--10um

Sample: DS30-3V-5R-RS422-V5

# DS20 Plastic Case DRO / DS20 数显表 (塑壳)

DS20-2V, DS20-3V, DS20-2L, DS20-2M, DS20-3M, DS20-3L



## GENERAL FUNCTION 功能概述

- Centering (1/2) 分中
- Metric / inches Display (mm/inch) 公制/英制显示
- Absolute / incremental (ABS / INC) 绝对坐标系/相对坐标系
- Power off Memory 掉电记忆
- 200 subdatum 200组辅助坐标系
- Reference Memory (REF) 参考零位功能
- Build in Calculator 内置计算器功能
- Pitch Circle Diameter (PCD) (Milling) 铣床圆周分孔功能
- Line Hole Positioning (LHOLE) (Milling) 铣床斜线分孔功能
- Simple "R" Function (Milling) 铣床简易圆弧加工功能
- Smooth "R" Function (Milling) 铣床平滑圆弧加工功能
- Linear Error Compensation 线性补偿功能
- EDM (EDM) 火花机
- Tool Lib for Lathe (Lathe) 200组车床刀具库功能



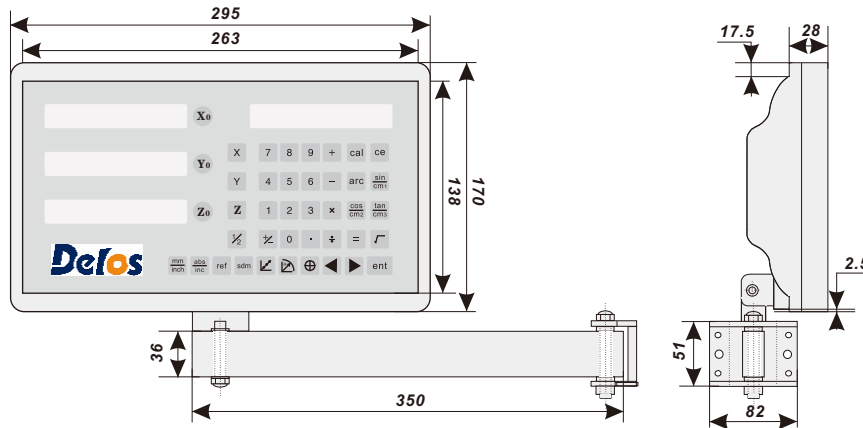
## Mechanical and Electrical Features 机械和电器性能

Resolutions / 分辨率	10--0.1um
Angle Resolutions / 角度分辨率	0.001--1"
Power Supply / 电源电压	100VAC--230VAC
Axis Display / LED显示字体	7 Segment LED
Signal input per axis / 输入信号类型	A / B signals
Maximum input frequency / 最大输入信号频率	500KHz
Operating Temperature / 工作温度	0° - 50°
Storage Temperature / 储藏温度	-20° - 70°
Relative Humidity / 相对湿度	95% (not condensed)
Vibration Resistance / 抗震性	25 m/s <sup>2</sup> (55 - 2000Hz)
Protection Class(EN60529) / 防护等级	IP42
Weight / 重量	2.1 Kg

Pin 引脚	PP	EIA422
	Signal/信号	Signal/信号
1	—	$\bar{A}$
2	OV	OV
3	—	$\bar{B}$
4	GND	GND
5	—	$\bar{R}$
6	A	A
7	5V	5V
8	B	B
9	R	R

## DIMENSIONS 尺寸图



## ORDER INFORMATION 订货信息

DS20-3V ---- A ---- B ---- C ---- D ---- E ---- F

- F - Note 备注
- E - OEM Band OEM品牌
- D - Optional Function 通讯方式 : RS232;
- C - Output Voltage for Encoder 输出直流电压: V5--5V; V12 - 12V; V24 - 24V
- B - input Type 输入信号类型 : Txx-TTL input mode; Rxx--RS422 input mode
- A - Resolution 分辨率: 01R--0.1um; 05R--0.5um; 1R--1um; 2R--2um; 5R--5um; 10R--10um

Sample: DS20-3V-5R-RS422-V5

General Characteristics 产品简介

- Resolutions up to 0.5um 最高分辨率：0.5um
- Cross Size 截面尺寸：22 x 52.8 mm<sup>2</sup>
- Max Measure Length 最大测量长度：1200mm



Mechanical and Electrical Features 机械和电器性能

Grating Pitch 光栅栅距	20um		<table border="1"> <thead> <tr> <th>Pin 引脚</th> <th>PP signal</th> <th>EIA422 信号</th> </tr> </thead> <tbody> <tr><td>1</td><td>—</td><td><math>\bar{A}</math></td></tr> <tr><td>2</td><td>OV</td><td>OV</td></tr> <tr><td>3</td><td>—</td><td><math>\bar{B}</math></td></tr> <tr><td>4</td><td>GND</td><td>GND</td></tr> <tr><td>5</td><td>—</td><td><math>\bar{R}</math></td></tr> <tr><td>6</td><td>A</td><td>A</td></tr> <tr><td>7</td><td>5V</td><td>5V</td></tr> <tr><td>8</td><td>B</td><td>B</td></tr> <tr><td>9</td><td>R</td><td>R</td></tr> </tbody> </table>	Pin 引脚	PP signal	EIA422 信号	1	—	$\bar{A}$	2	OV	OV	3	—	$\bar{B}$	4	GND	GND	5	—	$\bar{R}$	6	A	A	7	5V	5V	8	B	B	9	R	R
Pin 引脚	PP signal			EIA422 信号																													
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Thermal Expansion 热膨胀系数	$10.6 \times 10^{-6}$																																
Resolution 分辨率	0.5 - 1 - 5 um																																
Repeatability 重复精度	$\pm 1$ increment																																
Max Speed m/min 最快运行速度	60(5um); 20(1um)																																
Output type 输出信号类型	TTL / EIA422A																																
Max. Acceleration 最大加速度	20 m/S <sup>2</sup>																																
Protection 防护等级	IP54																																
Power supply 电源电压	60mA Max.																																
Phase displacement 相位偏差	$90^\circ \pm 5^\circ$ electrical																																
Operating temperature 工作温度	$0^\circ - 50^\circ$																																
Storage temperature 储藏温度	$-20^\circ - 80^\circ$																																
Humidity 湿度	100% not condensed																																

Interface Circuit and output signals 接口电路和输出信号

INTERFACE CIRCUIT 接口电路	OUTPUT SIGNALS 输出信号
<p><b>TTL</b></p> <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=68    C1=1000pF R2=100    C2=1000pF R3=10K</p>	
<p><b>EIA422A</b></p> <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=120    R2=R3=5K</p>	

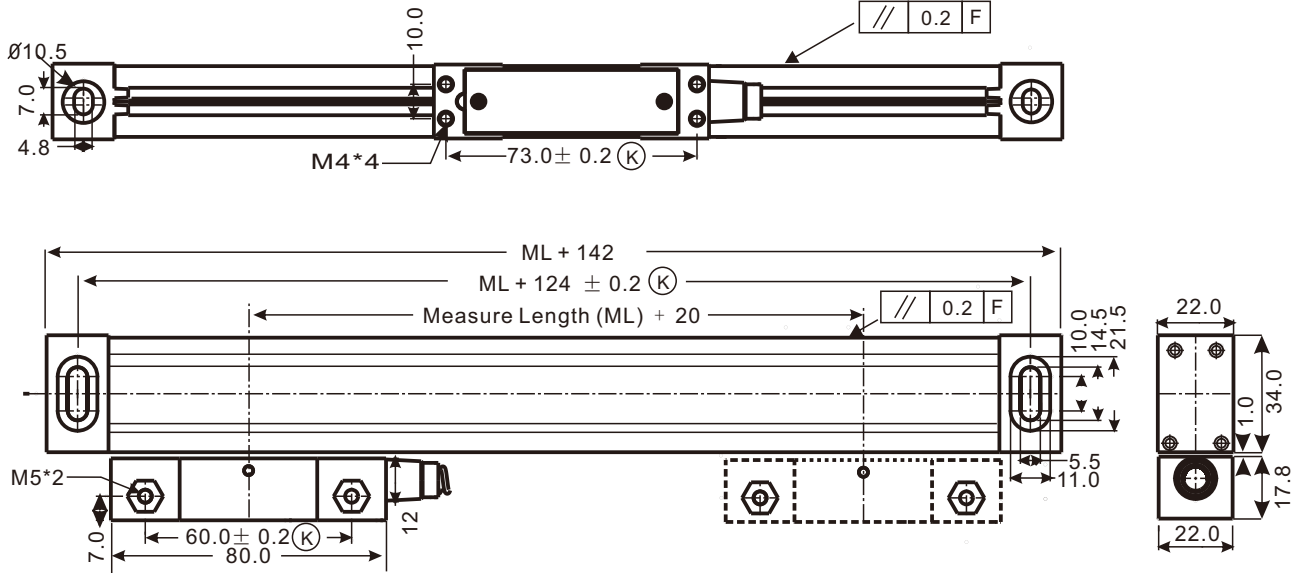
Dimensions and Mounting Tolerances 尺寸和安装公差

Unit: mm

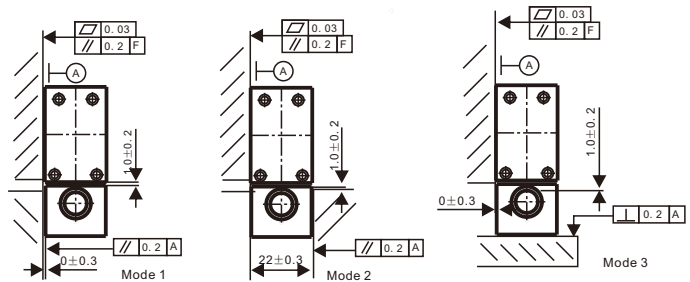
Tolerancing ISO8015  
ISO 2768 -mH  
< 6 mm ±0.2mm

Delos Linear Scale

**DLS-W**



Measure Length: (mm)  
50, 100, 120, 200, 250, 300, 350,  
400, 450, 500, 550, 600, 650, 700,  
750, 800, 850, 900, 950, 1000, 1050,  
1100, 1150, 1200 (Max ML)



Note: F = Machine guideway;  
(K) = Required mating dimensions

Ordering Code 订货编码

Type 型号	Resolution 分辨率	MeasureLength 测量长度	Cable Length 数据线长度	Voltage 工作电压	Output 信号输出	Mark Point 参考点
DLS-W	5R	xxxx	Cxx	Vxx		Mxx
DLS-W	5R = 5um 1R = 1um	1000=1meter	C35 = 3.5meter	V05 = 5V V24 = 24V	TTL EIA422	M0 = Center Point 中间零位 M1 = Left Point 左零位 M2 = Right Point 右零位 M3 = 50mm point 50MM间隔零位

**Example: DLS-W5R1200**

General Characteristics 产品简介

- Resolutions up to 0.5um 最高分辨率：0.5um
- Cross Size 截面尺寸：19 x 39 mm<sup>2</sup>
- Max Measure Length 最大测量长度：450mm



Mechanical and Electrical Features 机械和电器性能

Grating Pitch 光栅栅距	20um		<table border="1"> <thead> <tr> <th>Pin 引脚</th> <th>PP signal</th> <th>EIA422 信号</th> </tr> </thead> <tbody> <tr><td>1</td><td>—</td><td><math>\bar{A}</math></td></tr> <tr><td>2</td><td>OV</td><td>OV</td></tr> <tr><td>3</td><td>—</td><td><math>\bar{B}</math></td></tr> <tr><td>4</td><td>GND</td><td>GND</td></tr> <tr><td>5</td><td>—</td><td><math>\bar{R}</math></td></tr> <tr><td>6</td><td>A</td><td>A</td></tr> <tr><td>7</td><td>5V</td><td>5V</td></tr> <tr><td>8</td><td>B</td><td>B</td></tr> <tr><td>9</td><td>R</td><td>R</td></tr> </tbody> </table>	Pin 引脚	PP signal	EIA422 信号	1	—	$\bar{A}$	2	OV	OV	3	—	$\bar{B}$	4	GND	GND	5	—	$\bar{R}$	6	A	A	7	5V	5V	8	B	B	9	R	R
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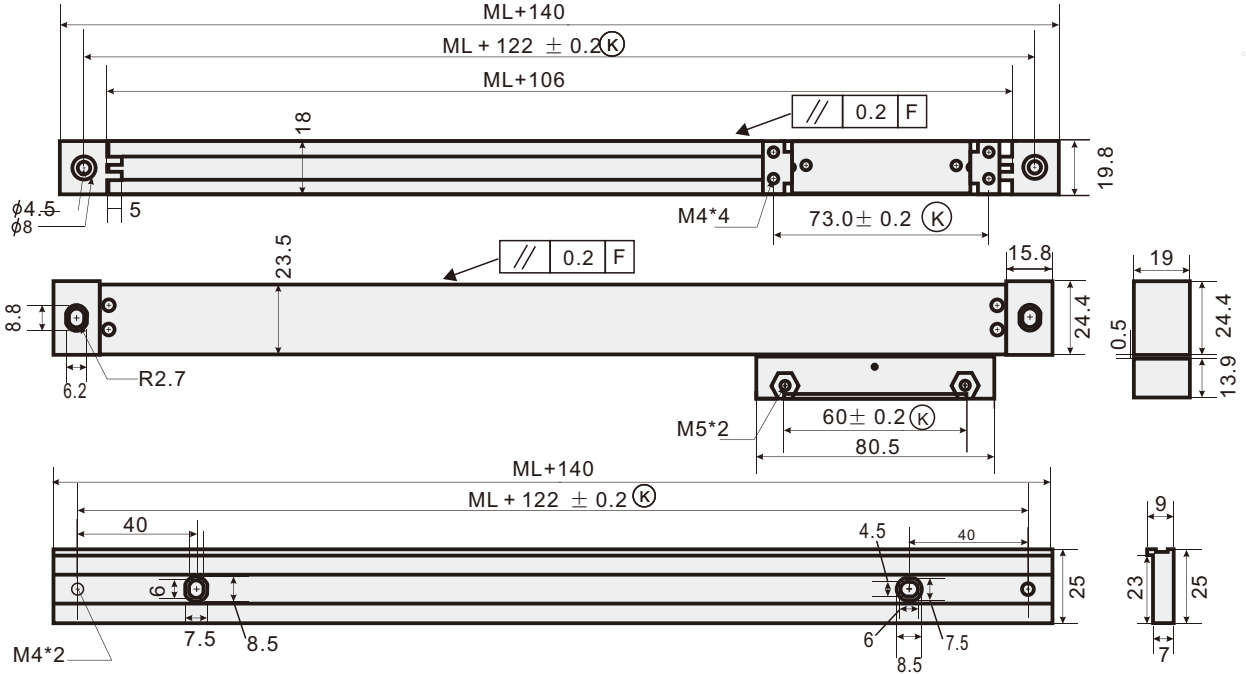
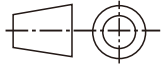
Interface Circuit and output signals 接口电路和输出信号

INTER FACE CIRCUIT 接口电路	OUTPUT SIGNALS 输出信号
<p><b>TTL</b></p> <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=68    C1=1000pF R2=100    C2=1000pF R3=10K</p>	
<p><b>EIA422A</b></p> <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=120    R2=R3=5K</p>	

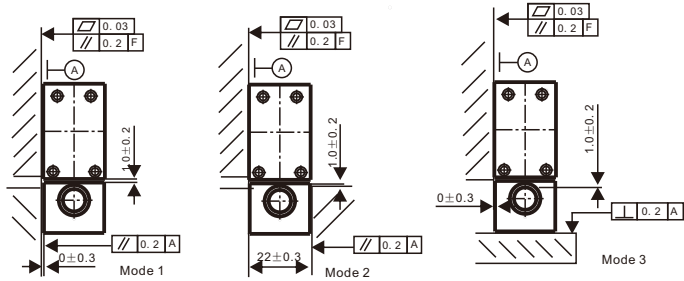
Dimensions and Mounting Tolerances 尺寸和安装公差

Delos Linear Scale  
**DLS-S**

Unit: mm Tolerancing ISO8015  
ISO 2768 -mH  
< 6 mm ±0.2mm



Measure Length: (mm)  
50, 100, 150, 200, 250, 300, 350,  
400, 450 (Max ML)



Note: F = Machine guideway;  
(K) = Required mating dimensions

Ordering Code 订货编码

Type 型号	Resolution 分辨率	MeasureLength 测量长度	Cable Length 数据线长度	Voltage 工作电压	Output 信号输出	Mark Point 参考点
DLS-S	5R	xxxx	Cxx	Vxx		Mxx
DLS-S	5R = 5um 1R = 1um	100 = 100MM	C35 = 3.5meter	V05 = 5V V24 = 24V	TTL EIA422	M0 = Center Point 中间零位 M1 = Left Point 左零位 M2 = Right Point 右零位 M3 = 50mm point 50MM间隔零位

**Example: DLS-S05R450**

General Characteristics 产品简介

Resolutions up to 0.5um 最高分辨率: 0.5um  
 Cross Size 截面尺寸 20.5 x 47.6 mm<sup>2</sup>  
 Max Measure Length 最大测量长度: 600mm



Mechanical and Electrical Features 机械和电器性能

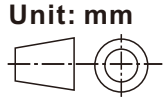
Grating Pitch 光栅栅距	20um	<table border="1"> <thead> <tr> <th>Pin 引脚</th> <th>PP signal</th> <th>EIA422 信号</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>—</td> <td><math>\bar{A}</math></td> </tr> <tr> <td>2</td> <td>OV</td> <td>OV</td> </tr> <tr> <td>3</td> <td>—</td> <td><math>\bar{B}</math></td> </tr> <tr> <td>4</td> <td>GND</td> <td>GND</td> </tr> <tr> <td>5</td> <td>—</td> <td><math>\bar{R}</math></td> </tr> <tr> <td>6</td> <td>A</td> <td>A</td> </tr> <tr> <td>7</td> <td>5V</td> <td>5V</td> </tr> <tr> <td>8</td> <td>B</td> <td>B</td> </tr> <tr> <td>9</td> <td>R</td> <td>R</td> </tr> </tbody> </table>	Pin 引脚	PP signal	EIA422 信号	1	—	$\bar{A}$	2	OV	OV	3	—	$\bar{B}$	4	GND	GND	5	—	$\bar{R}$	6	A	A	7	5V	5V	8	B	B	9	R	R
Pin 引脚	PP signal		EIA422 信号																													
1	—		$\bar{A}$																													
2	OV		OV																													
3	—		$\bar{B}$																													
4	GND		GND																													
5	—		$\bar{R}$																													
6	A		A																													
7	5V		5V																													
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Thermal Expansion 热膨胀系数	$10.6 \times 10^{-6}$																															
Resolution 分辨率	0.5 - 1 - 5 um																															
Repeatability 重复精度	$\pm 1$ increment																															
Max Speed m/min 最快运行速度	60(5um); 20(1um)																															
Output type 输出信号类型	TTL / EIA422A																															
Max. Acceleration 最大加速度	20 m/S <sup>2</sup>																															
Protection 防护等级	IP54																															
Power supply 电源电压	60mA Max.																															
Phase displacement 相位偏差	$90^\circ \pm 5^\circ$ electrical																															
Operating temperature 工作温度	0° - 50°																															
Storage temperature 储藏温度	-20° - 80°																															
Humidity 湿度	100% not condensed																															

Interface Circuit and output signals 接口电路和输出信号

INTER FACE CIRCUIT 接口电路	OUTPUT SIGNALS 输出信号
<p><b>TTL</b></p> <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=68    C1=1000pF R2=100    C2=1000pF R3=10K</p>	
<p><b>EIA422A</b></p> <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=120    R2=R3=5K</p>	

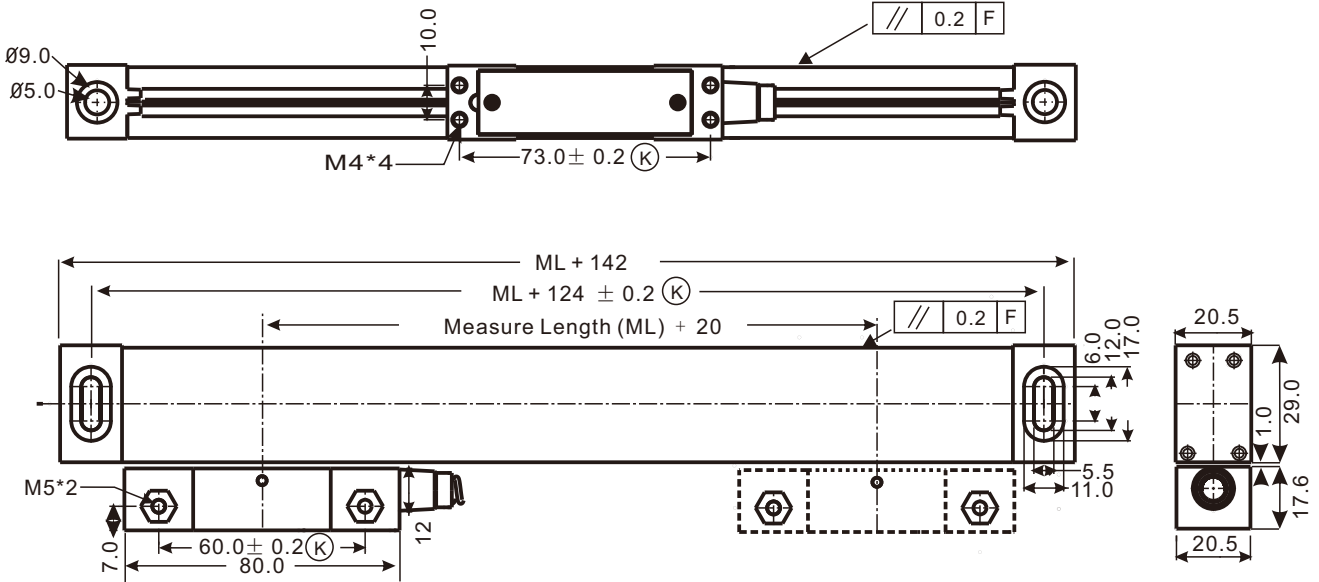


Dimensions and Mounting Tolerances 尺寸和安装公差

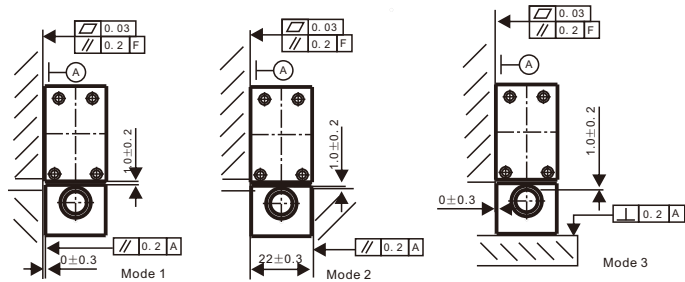


Tolerancing ISO8015  
ISO 2768 -mH  
< 6 mm ±0.2mm

Delos Linear Scale  
**DLS-M**



Measure Length: (mm)  
50, 100, 150, 200, 250, 300, 350,  
400, 450, 500, 550, 600, 650(Max ML)



Note: F = Machine guideway;  
(K) = Required mating dimensions

Ordering Code 订货编码

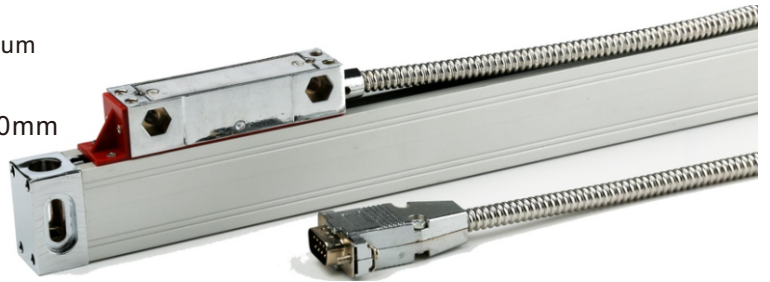
Type 型号	Resolution 分辨率	MeasureLength 测量长度	Cable Length 数据线长度	Voltage 工作电压	Output 信号输出	Mark Point 参考点
DLS-M	5R	xxxx	Cxx	Vxx		Mxx
DLS-M	5R = 5um 1R = 1um	200 = 200MM	C35 = 3.5meter	V05 = 5 V V24 = 24V	TTL EIA422	M0 = Center Point 中间零位 M1 = Left Point 左零位 M2 = Right Point 右零位 M3 = 50mm point 50MM间隔零位

**Example: DLS-M05R400**



General Characteristics 产品简介

- Resolutions up to 0.5um 最高分辨率: 0.5um
- Cross Size 截面尺寸 30 x 66.6 mm<sup>2</sup>
- Max Measure Length 最大测量长度: 3000mm



Mechanical and Electrical Features 机械和电器性能

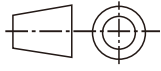
Grating Pitch 光栅栅距	20um		<table border="1"> <thead> <tr> <th>Pin 引脚</th> <th>PP signal</th> <th>EIA422 信号</th> </tr> </thead> <tbody> <tr><td>1</td><td>—</td><td><math>\bar{A}</math></td></tr> <tr><td>2</td><td>OV</td><td>OV</td></tr> <tr><td>3</td><td>—</td><td><math>\bar{B}</math></td></tr> <tr><td>4</td><td>GND</td><td>GND</td></tr> <tr><td>5</td><td>—</td><td><math>\bar{R}</math></td></tr> <tr><td>6</td><td>A</td><td>A</td></tr> <tr><td>7</td><td>5V</td><td>5V</td></tr> <tr><td>8</td><td>B</td><td>B</td></tr> <tr><td>9</td><td>R</td><td>R</td></tr> </tbody> </table>	Pin 引脚	PP signal	EIA422 信号	1	—	$\bar{A}$	2	OV	OV	3	—	$\bar{B}$	4	GND	GND	5	—	$\bar{R}$	6	A	A	7	5V	5V	8	B	B	9	R	R
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Thermal Expansion 热膨胀系数	$10.6 \times 10^{-6}$																																
Resolution 分辨率	0.5 - 1 - 5 um																																
Repeatability 重复精度	$\pm 1$ increment																																
Max Speed m/min 最快运行速度	60(5um); 20(1um)																																
Output type 输出信号类型	TTL / EIA422A																																
Max. Acceleration 最大加速度	20 m/S <sup>2</sup>																																
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Interface Circuit and output signals 接口电路和输出信号

INTER FACE CIRCUIT 接口电路	OUTPUT SIGNALS 输出信号
<p><b>TTL</b></p> <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=68    C1=1000pF R2=100    C2=1000pF R3=10K</p>	
<p><b>EIA422A</b></p> <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=120    R2=R3=5K</p>	

Dimensions and Mounting Tolerances 尺寸和安装公差

Unit: mm



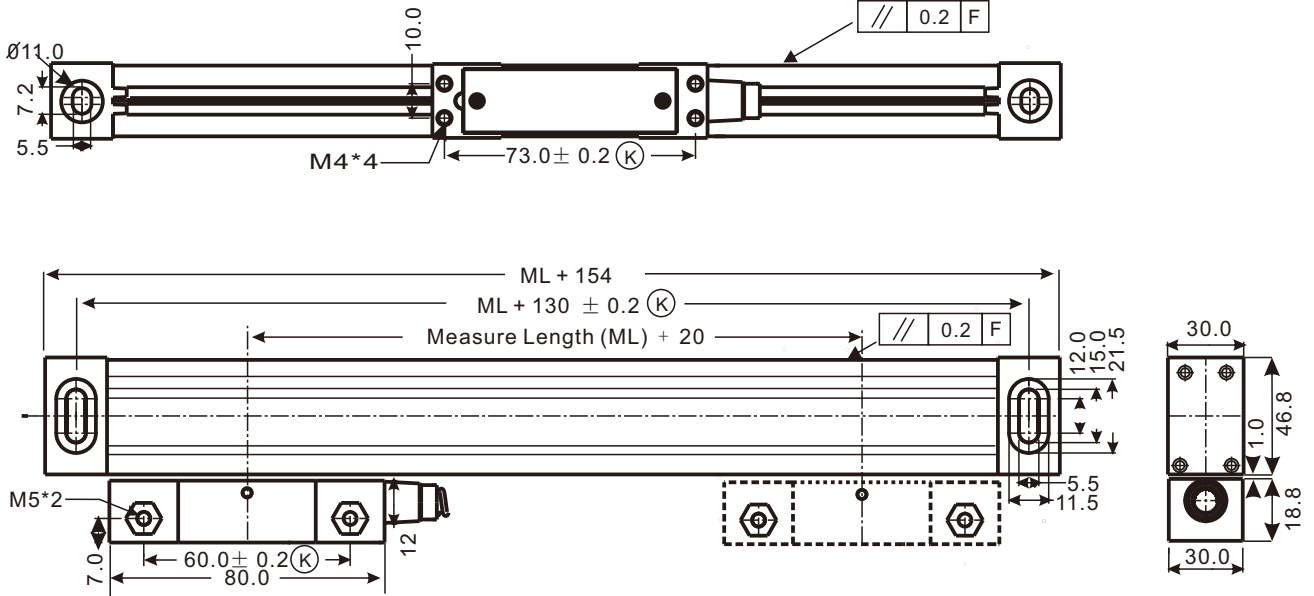
Tolerancing ISO8015

ISO 2768 -mH

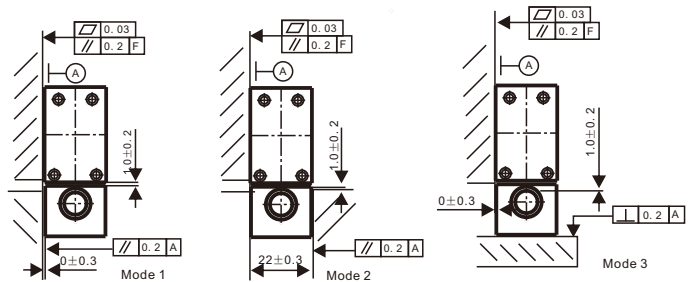
< 6 mm ±0.2mm

Delos Linear Scale

**DLS-B**



Measure Length: (mm)  
 1300, 1400, 1500, 1600, 1700,  
 1800, 1900, 2000, 2100, 2200,  
 2300, 2400, 2500, 2600, 2700,  
 2800, 2900, 3000 (Max ML)



Note: F = Machine guideway;  
 (K) = Required mating dimensions

Ordering Code 订货编码

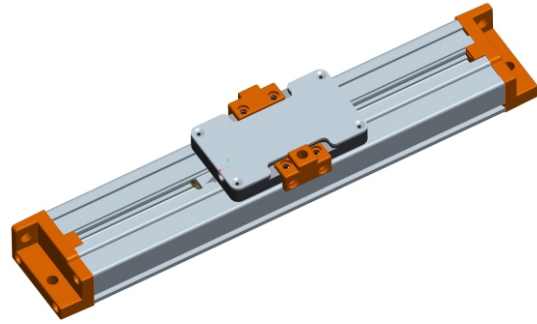
Type 型号	Resolution 分辨率	MeasureLength 测量长度	Cable Length 数据线长度	Voltage 工作电压	Output 信号输出	Mark Point 参考点
DLS-B	5R	xxxx	Cxx	Vxx		Mxx
DLS-B	5R = 5um 1R = 1um	1000 = 1 meter	C35 = 3.5meter	V05 = 5V V24 = 24V	TTL EIA422	M0 = Center Point 中间零位 M1 = Left Point 左零位 M2 = Right Point 右零位 M3 = 50mm point 50MM间隔零位

**Example: DLS-B5R1300**




General Characteristics 产品简介

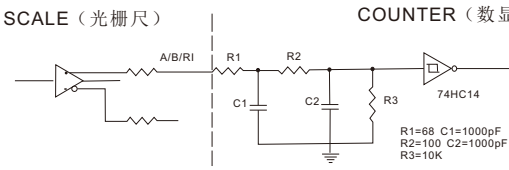
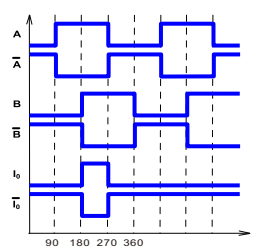
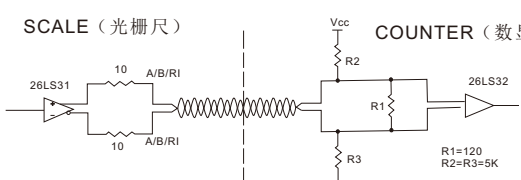
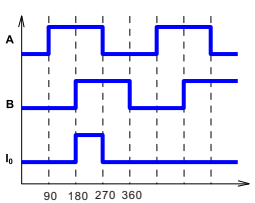
- Resolutions up to 0.5um 最高分辨率: 0.5um
- Cross Size 截面尺寸 45 x 56 mm<sup>2</sup>
- Max Measure Length 最大测量长度: 1000mm



Mechanical and Electrical Features 机械和电器性能

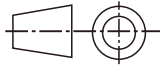
Grating Pitch 光栅栅距	20um	 <table border="1"> <thead> <tr> <th>Pin 引脚</th> <th>PP signal</th> <th>EIA422 信号</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>—</td> <td><math>\bar{A}</math></td> </tr> <tr> <td>2</td> <td>OV</td> <td>OV</td> </tr> <tr> <td>3</td> <td>—</td> <td><math>\bar{B}</math></td> </tr> <tr> <td>4</td> <td>GND</td> <td>GND</td> </tr> <tr> <td>5</td> <td>—</td> <td><math>\bar{R}</math></td> </tr> <tr> <td>6</td> <td>A</td> <td>A</td> </tr> <tr> <td>7</td> <td>5V</td> <td>5V</td> </tr> <tr> <td>8</td> <td>B</td> <td>B</td> </tr> <tr> <td>9</td> <td>R</td> <td>R</td> </tr> </tbody> </table>	Pin 引脚	PP signal	EIA422 信号	1	—	$\bar{A}$	2	OV	OV	3	—	$\bar{B}$	4	GND	GND	5	—	$\bar{R}$	6	A	A	7	5V	5V	8	B	B	9	R	R
Pin 引脚	PP signal		EIA422 信号																													
1	—		$\bar{A}$																													
2	OV		OV																													
3	—		$\bar{B}$																													
4	GND		GND																													
5	—		$\bar{R}$																													
6	A		A																													
7	5V		5V																													
8	B		B																													
9	R		R																													
Thermal Expansion 热膨胀系数	$10.6 \times 10^{-6}$																															
Resolution 分辨率	0.5 - 1 - 5 um																															
Repeatability 重复精度	$\pm 1$ increment																															
Max Speed m/min 最快运行速度	60(5um); 20(1um)																															
Output type 输出信号类型	TTL / EIA422A																															
Max. Acceleration 最大加速度	20 m/S <sup>2</sup>																															
Protection 防护等级	IP54																															
Power supply 电源电压	60mA Max.																															
Phase displacement 相位偏差	$90^\circ \pm 5^\circ$ electrical																															
Operating temperature 工作温度	$0^\circ - 50^\circ$																															
Storage temperature 储藏温度	$-20^\circ - 80^\circ$																															
Humidity 湿度	100% not condensed																															

Interface Circuit and output signals 接口电路和输出信号

INTER FACE CIRCUIT 接口电路	OUTPUT SIGNALS 输出信号
<p><b>TTL</b></p>  <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=68    C1=1000pF R2=100    C2=1000pF R3=10K</p>	
<p><b>EIA422A</b></p>  <p>SCALE (光栅尺)      COUNTER (数显表)</p> <p>R1=120    R2=R3=5K</p>	

**Dimensions and Mounting Tolerances** 尺寸和安装公差

Unit: mm



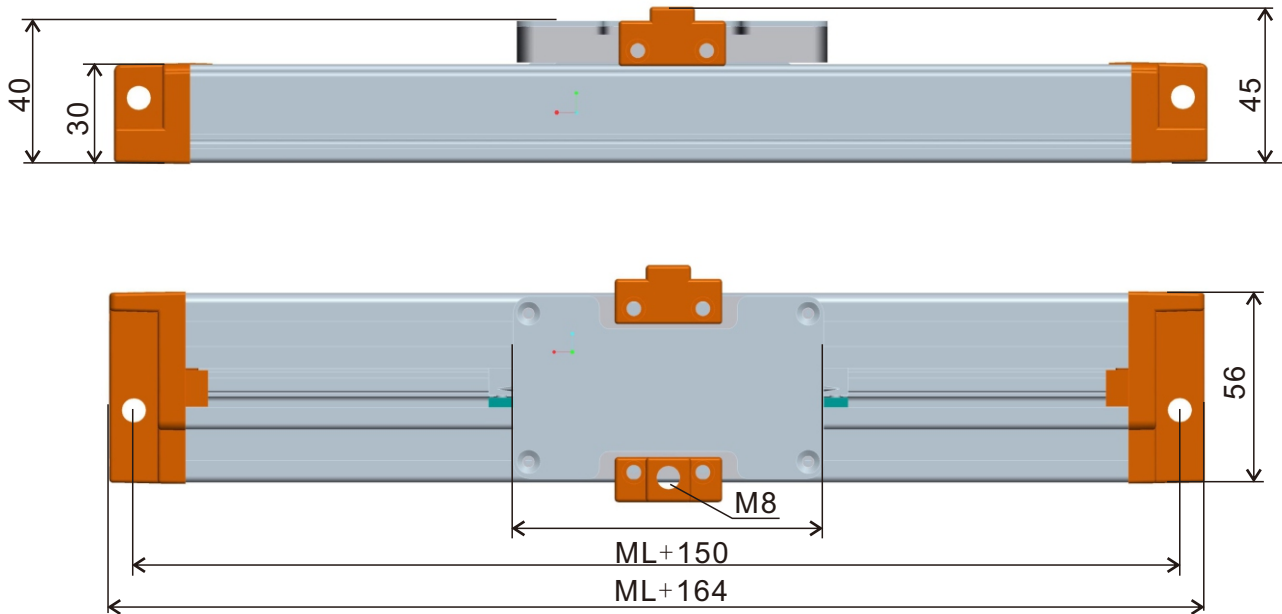
Tolerancing ISO8015

ISO 2768 -mH

< 6 mm ±0.2mm

Delos Linear Scale

**DLS-E**



**Ordering Code / 订货编码**

Type 型号	Resolution 分辨率	MeasureLength 测量长度	Cable Length 数据线长度	Voltage 工作电压	Output 信号输出	Mark Point 参考点
DLS-E	5R	xxxx	Cxx	Vxx		Mxx
DLS-E	5R = 5um 1R = 1um	600 = 600MM	C35 = 3.5meter	V05 = 5V V24 = 24V	TTL EIA422	M0 = Center Point 中间零位 M1 = Left Point 左零位 M2 = Right Point 右零位 M3 = 50mm point 50MM间隔零位

**Example: DLS-E5R400**

## General Characteristics 性能特点

- Magnetic sensor for linear and angular reading 适用于线性和角度测量
- Incremental Magnetic sensor 增量式编码器
- Contactless reading 无接触测量
- To be used with magnetic band 与相应磁带配合使用
- Die-cast Body Magnetic Sensor 锌合金壳体 IP67防护
- Small size, to allow installation in narrow spaces 方便安装
- Wide alignment tolerances 安装容差大
- AMR Magneto resistive position sensor AMR磁传感器
- Resistant to strong magnetic fields 强抗干扰性能
- Not sensitive to external homogenous magnetic fields. 外界杂散磁场无影响



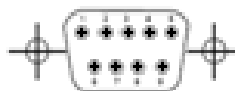
## Mechanical and Electrical Features 机械及电器性能

Reference signal / 零位参考点	Constant Pulse every 2mm
Pole Pitch / 磁间距	2 + 2 mm / 5mm + 5mm
Resolution / 分辨率	1 - 5 - 10 - 25 - 100 um
Accuracy / 精度	$\pm ( 20 + 20\mu\text{m}/L ) \mu\text{m}$
Repeatability / 重复精度	$\pm 1$ increment
Cable / 电缆芯数	8 cores
Output type / 输出方式	Line-driver / push-pull
Max. frequency / 最大输出频率	300 KHz
Sensor to Magnetic Band distance / 测量间隙	1/2 pole pitch
Power supply / 电源	5 - 30 Vdc $\pm 5\%$ 60mA Max.
Phase displacement / 相位	$90^\circ \pm 5^\circ$ electrical
Max. traversing speed / 最大速度	Max. 25m/s
Vibration resistance /	10Hz – 2KHz at 100m/s <sup>2</sup>
Shock resistance	1000m/s (11ms)
Electrical connections	See related table
Class of protection / 防护等级	Ip68 (IEC60529 : 2001)
Operating temperature / 工作温度	0° – 50°
Storage temperature / 储藏温度	-20° – 80°
Humidity / 湿度	100% not condensed
Weight of transducer / 重量	40g
Electrical protections / 电器保护	Inversion power supply polarity short circuit on output
Current consumption with load / 功耗	Max. 140mA (with 5V and Z = 120 $\Omega$ ); Max. 115mA (with 12V and Z = 1.2K $\Omega$ ); Max. 90mA (with 28V and Z = 1.2K $\Omega$ );

## Pin Connection Details DB 9 接线图



9 Pin 'D' (F)  
Connector



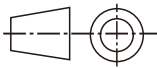
9 Pin 'D' (M)  
Connector



STATIC SENSITIVE DEVICE  
OBSERVE HANDLING  
PRECAUTIONS

	1	2	3	4	5	6	7	8	9
Signal 信号	A-	0V	B-	Shield/ Body	R-	A+	V+	B+	R+

Unit: mm



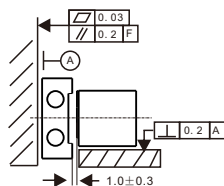
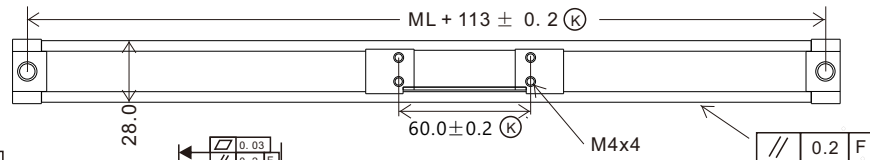
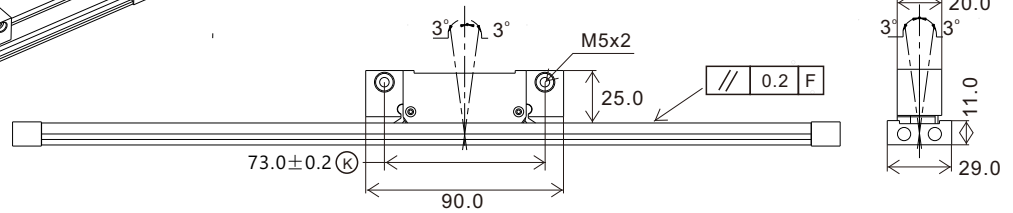
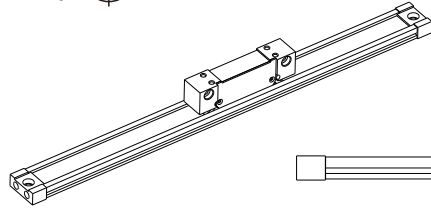
Tolerancing ISO8015  
ISO 2768 -mH  
< 6 mm ±0.2mm

Dimensions and Mounting Tolerances

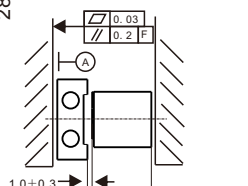
尺寸及安装公差

Delos Magnetic Scale

DMS10A



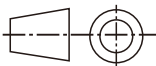
Mode 1



Mode 2

Note: F = Machine guideway;  
(K) = Required mating dimensions

Unit: mm



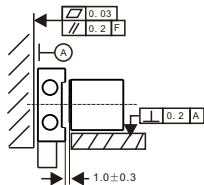
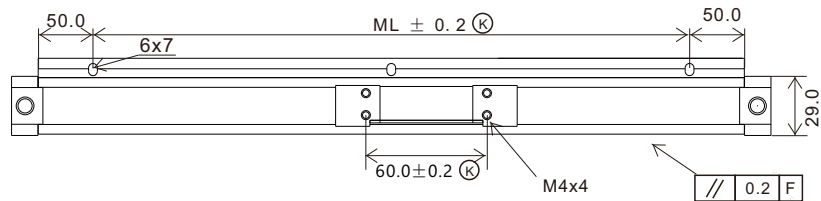
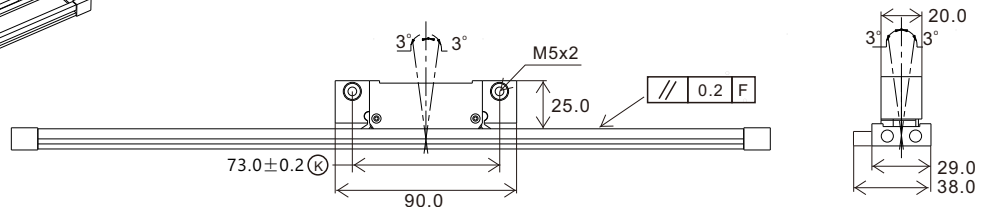
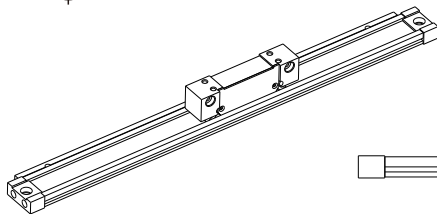
Tolerancing ISO8015  
ISO 2768 -mH  
< 6 mm ±0.2mm

Dimensions and Mounting Tolerances

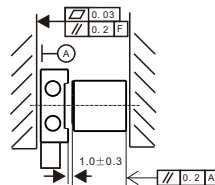
尺寸及安装公差

Delos Magnetic Scale

DMS10B



Mode 1



Mode 2

Note: F = Machine guideway;  
(K) = Required mating dimensions

Ordering Code 订货信息

MODEL 产品型号	POLE PITCH 磁间距	RESOLUTION 分辨率	MARK POINT 参考点	DC VOLTAGE 工作电压	OUTPUT 信号输出方式	CABLE LENGTH 数据线长度	CONNECTOR 接头方式
DMS10A	P2	5	C	0524	L	C02	DB9
DMS10A	P2	1 = 1um	CONSTANT MARK	5 = DC 5V	L = LINEAR DRIVE PP = PUSH-PULL	C02 = 2M CABLE	DB9 CONNECTOR
DMS10B	P5	5 = 5um		24 = DC 24V			
		10 = 10um		0524 = DC 5V--24V			

Example: DMS10A-P2-5-C-0524-L-C02 SC

## General Characteristics 性能特点

- Magnetic sensor for linear and angular reading 适用于线性和角度测量
- Incremental Magnetic sensor 增量式编码器
- Contactless reading 无接触测量
- To be used with magnetic band 与匹配的磁带配合使用
- Die-cast Body Magnetic Sensor 锌合金壳体 IP67防护
- Small size, to allow installation in narrow spaces 方便安装
- Wide alignment tolerances 安装容差大
- AMR Magneto resistive position sensor AMR磁传感器
- Resistant to strong magnetic fields 强抗干扰性能
- Not sensitive to external homogenous magnetic fields. 外界杂散磁场无影响



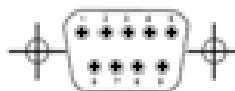
## Mechanical and Electrical Features 机械及电器性能

Reference signal / 零位参考点	Constant Pulse every 2mm
Pole Pitch / 磁间距	2 + 2 mm / 5mm + 5mm
Resolution / 分辨率	1 - 5 - 10 - 25 - 100 um
Accuracy / 精度	$\pm ( 20 + 20\mu\text{m}/L ) \mu\text{m}$
Repeatability / 重复精度	$\pm 1$ increment
Cable / 电缆芯数	8 cores
Output type / 输出方式	Line-driver / push-pull
Max. frequency / 最大输出频率	300 KHz
Sensor to Magnetic Band distance / 测量间隙	1/2 pole pitch
Power supply / 电源	5 - 30 Vdc $\pm 5\%$ 60mA Max.
Phase displacement / 相位	$90^\circ \pm 5^\circ$ electrical
Max. traversing speed / 最大速度	Max. 25m/s
Vibration resistance /	10Hz – 2KHz at 100m/s <sup>2</sup>
Shock resistance	1000m/s (11ms)
Electrical connections	See related table
Class of protection / 防护等级	Ip68 (IEC60529 : 2001)
Operating temperature / 工作温度	0° – 50°
Storage temperature / 储藏温度	-20° – 80°
Humidity / 湿度	100% not condensed
Weight of transducer / 重量	40g
Electrical protections / 电器保护	Inversion power supply polarity short circuit on output
Current consumption with load / 功耗	Max. 140mA(with 5V and Z = 120 $\Omega$ ); Max. 115mA(with 12V and Z = 1.2K $\Omega$ ); Max. 90mA(with 28V and Z = 1.2K $\Omega$ );

## Pin Connection Details DB 9 接线图



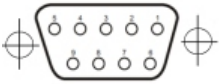
9 Pin 'D' (F)  
Connector



9 Pin 'D' (M)  
Connector



STATIC SENSITIVE DEVICE  
OBSERVE HANDLING  
PRECAUTIONS

	1	2	3	4	5	6	7	8	9
Signal 信号	A-	0V	B-	Shield/ Body	R-	A+	V+	B+	R+



## 尺寸及安装公差

### Dimensions and Mounting Tolerances

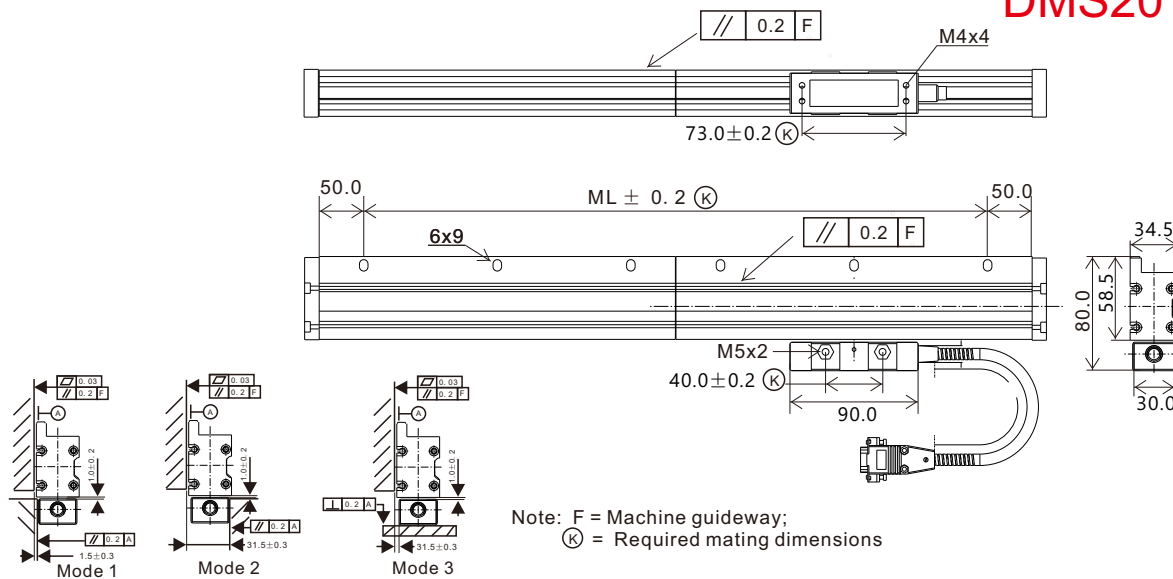
Unit: mm

Tolerancing ISO8015  
ISO 2768 -mH  
< 6 mm ±0.2mm



Delos Magnetic Scale

## DMS20



Note: F = Machine guideway;  
(K) = Required mating dimensions

## 尺寸及安装公差

### Dimensions and Mounting Tolerances

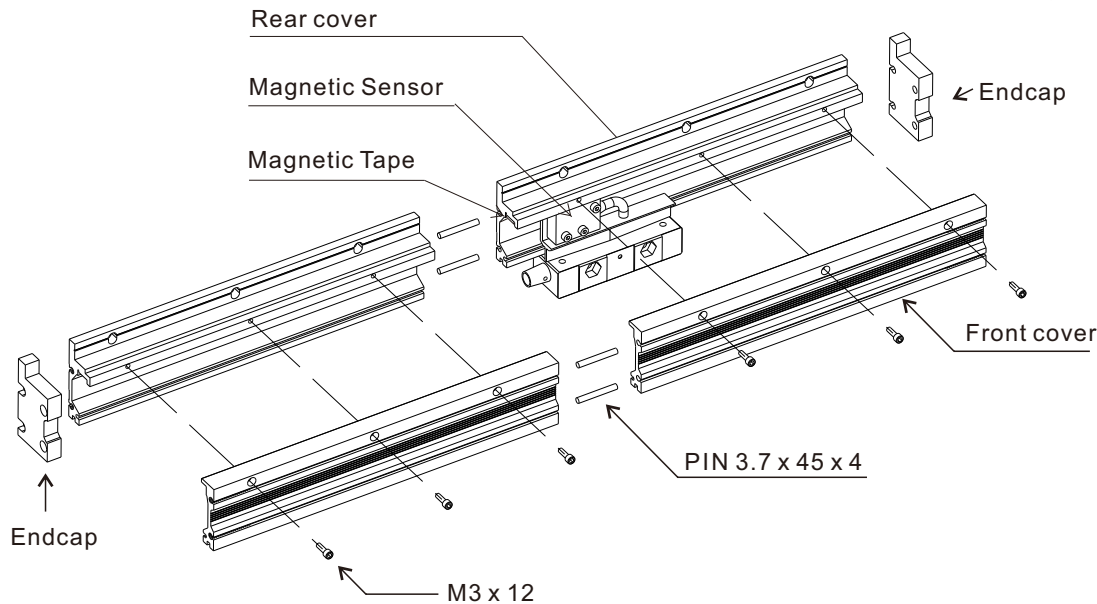
Unit: mm

Tolerancing ISO8015  
ISO 2768 -mH  
< 6 mm ±0.2mm



Delos Magnetic Scale

## DMS20



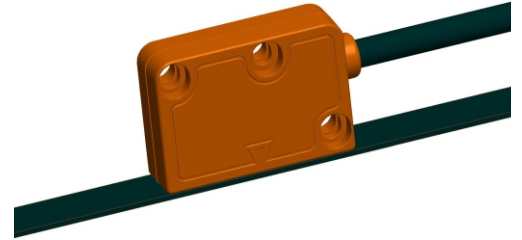
## Ordering Code 订货信息

MODEL 产品型号	POLE PITCH 磁间距	RESOLUTION 分辨率	MARK POINT 参考点	DC VOLTAGE 工作电压	OUTPUT 信号输出方式	CABLE LENGTH 数据线长度	CONNECTOR 接头方式
DMS20	P2	5	C	0524	L	C02	DB9
DMS20	P2 P5	1 = 1um 5 = 5um 10 = 10um	CONSTANT MARK	5 = DC 5V 24 = DC 24V 0524 = DC 5V--24V	L = LINEAR DRIVE PP = PUSH-PULL	C02 = 2M CABLE	DB9 CONNECTOR

Example: DMS20-P2-5-C-0524-L-C02 SC

## General Characteristics 性能特点

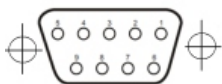
- Magnetic sensor for linear and angular reading 适用于线性和角度测量
- Incremental Magnetic sensor 增量式编码器
- Contactless reading 无接触测量
- To be used with magnetic band 与匹配的磁带配合使用
- Die-cast Body Magnetic Sensor 锌合金壳体 IP67防护
- Small size, to allow installation in narrow spaces 小尺寸方便安装
- Wide alignment tolerances 安装容差大
- AMR Magneto resistive position sensor AMR磁传感器
- Resistant to strong magnetic fields 强抗干扰性能
- Not sensitive to external homogenous magnetic fields. 外界杂散磁场无影响



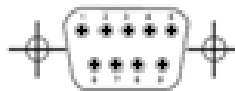
## Mechanical and Electrical Features 机械及电器性能

Reference signal / 零位参考点	Constant Pulse every pole pitch
Pole Pitch / 磁间距	2 + 2 mm / 5mm + 5mm
Resolution / 分辨率	1 - 5 - 10 - 25 - 100 um
Accuracy / 精度	± ( 20 + 20um/L ) um
Repeatability / 重复精度	± 1 increment
Cable / 电缆芯数	8 cores
Output type / 输出方式	Line-driver / push-pull
Max. frequency / 最大输出频率	300 KHz
Sensor to Magnetic Band distance / 测量间隙	1/2 pole pitch
Power supply / 电源	5 - 30 Vdc ± 5% 60mA Max.
Phase displacement / 相位	90° ± 5° electrical
Max. traversing speed / 最大速度	Max. 25m/s
Vibration resistance /	10Hz – 2KHz at 100m/s <sup>2</sup>
Shock resistance	1000m/s (11ms)
Electrical connections	See related table
Class of protection / 防护等级	Ip68 (IEC60529 : 2001)
Operating temperature / 工作温度	0° – 50°
Storage temperature / 储藏温度	-20° – 80°
Humidity / 湿度	100% not condensed
Weight of transducer / 重量	40g
Electrical protections / 电器保护	Inversion power supply polarity short circuit on output
Current consumption with load / 功耗	Max. 140mA(with 5V and Z = 120Ω); Max. 115mA(with 12V and Z = 1.2KΩ); Max. 90mA(with 28V and Z = 1.2KΩ);

## Pin Connection Details DB 9 接线图



9 Pin 'D' (F)  
Connector



9 Pin 'D' (M)  
Connector

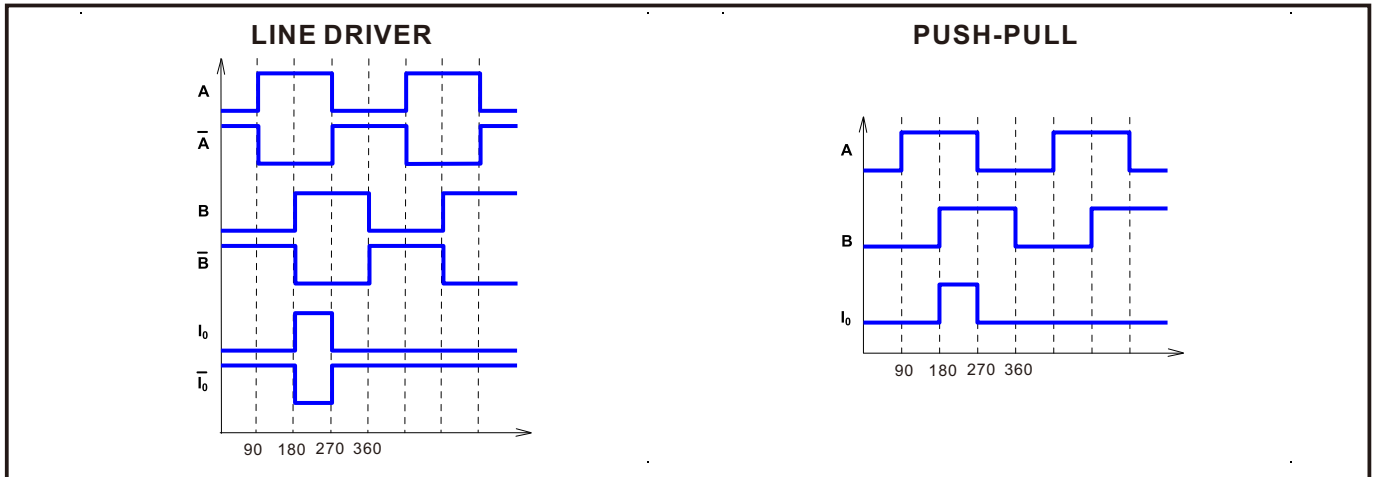


STATIC SENSITIVE DEVICE  
OBSERVE HANDLING  
PRECAUTIONS

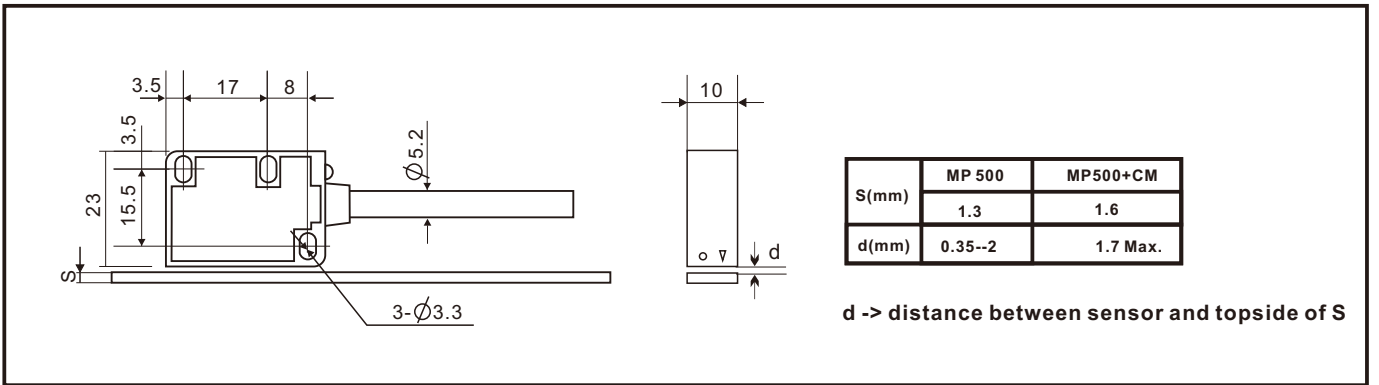
	1	2	3	4	5	6	7	8	9
Signal 信号	A-	0V	B-	Shield/ Body	R-	A+	V+	B+	R+
Non-Armoured Colour	Blue	White	Green		Pink	Yellow	Red	Brown	Gray
颜色	蓝色	白色	绿色		粉色	黄色	红色	棕色	灰色

# DMS30 / MS30 系列磁头

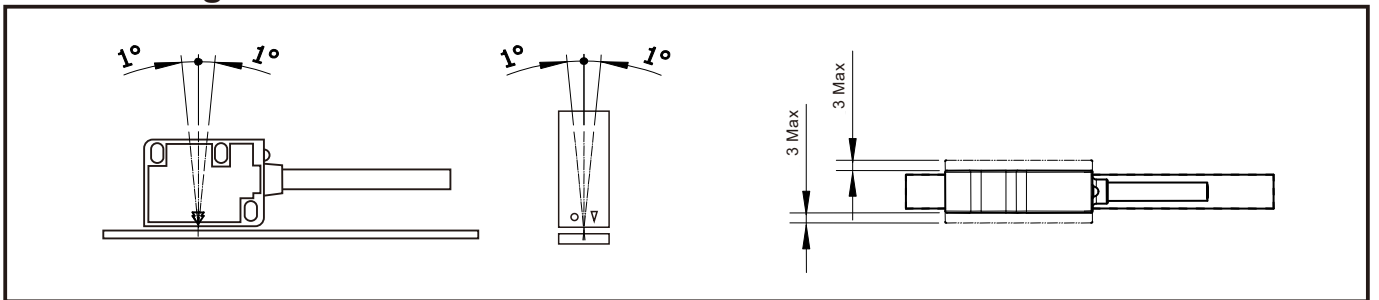
## Output Signals 输出信号



## Dimensions 尺寸



## Sensor Alignment Tolerances 传感器安装公差



## Ordering Code 订货信息

MODEL 产品型号	POLE PITCH 磁间距	RESOLUTION 分辨率	MARK POINT 参考点	DC VOLTAGE 工作电压	OUTPUT 信号输出方式	CABLE LENGTH 数据线长度	CONNECTOR 接头方式
DMS30	P2	5	C	0524	L	C02	DB9
DM320	P2 P5	1 = 1um 5 = 5um 10 = 10um	CONSTANT MARK	5 = DC 5V 24 = DC 24V 0524 = DC 5V--24V	L = LINEAR DRIVE PP = PUSH-PULL	C02 = 2M CABLE	DB9 CONNECTOR

**Example: DMS30-P2-5-C-0524-L-C02 SC**

Tel: 86-755 89769252  
电话: 0755 28436100  
Web: [www.delos-encoder.com](http://www.delos-encoder.com)  
网址: [www.szdelos.com](http://www.szdelos.com)  
E-mail: [sales@delos-encoder.com](mailto:sales@delos-encoder.com)  
邮箱: [sales@delos-encoder.com](mailto:sales@delos-encoder.com)



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Add: Area C, 3rd Floor, No.117, Zhangbei Road, Longgang District, Shenzhen, Guangdong, China  
地址: 中国广东省深圳市龙岗区嶂背大道117号3楼C区