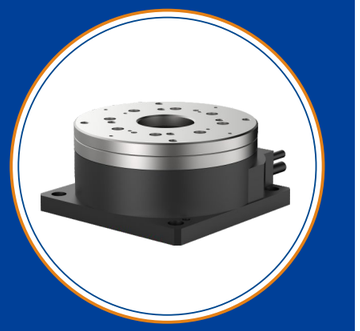
FMSR-D系列
高性能直驱旋转台

FMSR-D High Performance Direct Drive Rotary Stage

FMSR40D FMSR60D FMSR80D FMSR120D
FMSR160D FMSR200D FMSR280D
FMSR400D



- **台面直径涵盖范围广**
  从40mm-400mm，更大尺寸台面可定制
- **进口直驱电机封装**
- **高精度轴承封装**
- **超静音旋转台**
  适用于实验室环境与高性能要求的工业场所
- **免费标准版SDK**
  Window、Linux环境下支持多种开发语言：C/C++、C#、Matlab、LabVIEW等
- **高性能控制器**
  实现圆弧插补，直线插补，位置记忆任意图形导入
- **可选配EtherCAT总线控制**

产品应用 APPLICATION FIELDS

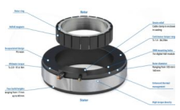
- 光路切换 Optical Path Switching
- 工业CT Industrial CT
- 半导体检测 Semiconductor Inspection
- 机器视觉 Machine Vision
- 医疗医美 Medical Beauty

产品简介 OVERVIEW

随着直驱技术不断进步，直驱电机凭借高转速，高精度，高承载等特点逐渐取代了科研和工业上大量应用的“电机+蜗轮蜗杆”结构的旋转台。菲克科技推出的FMSR-D系列直驱旋转台，涵盖了有铁芯电机、无铁芯电机、绝对式光栅尺、增量式光栅尺等技术，以其高一个数量级的精度、速度以及更美观的外形设计取代了传统蜗轮蜗杆结构旋转台。

With the progress of direct drive technology, direct drive motor with high speed, high precision, heavy load and other characteristics gradually replaced the "motor + worm gear" ROTARY STAGES used in scientific research and industrial fields. The FMSR-D series of direct drive ROTARY STAGES developed by Feinixs covers iron-core motor, iron-core motor, absolute grating ruler, incremental grating ruler and other technologies. It replaces the traditional worm gear ROTARY STAGES with its higher precision, speed and more beautiful appearance design.

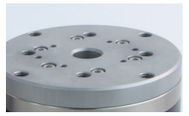
设计细节 FEATURES



电机直接驱动负载
0传动机构误差

进口交叉滚子轴承
高精度，大承载

高品质进口圆光栅
确保高定位准确性



不锈钢研磨安装面
0.002mm平行度

组合搭配 TYPICAL ASSEMBLY

It can be flexibly combined into multi-axis motion system,Contact for more information

产品参数 SPECIFICATIONS

Model	FMSR40D	FMSR60D	FMSR80D	FMSR120D
行程 Travel(°)	360	360	360	360
负载 Load Capacity(Kg)[1]	2	4	15	25
负载(倒装/侧装) Load Capacity(Inverted / Wall Mounting)(Kg)[1]	0.5	1	5	8
分辨率 Resolution(°)	0.0005	0.0005	0.0005	0.0005
最小步进量 Min.Incremental Motion(°)[2]	0.001	0.001	0.001	0.001
单向重复定位精度/保证值 Undirection Repeatability[3]/Guaranteed(°)[4]	±0.002 or 0.004	±0.002 or 0.004	±0.002 or 0.004	±0.002 or 0.004
单向重复定位精度/典型值 Undirection Repeatability/Typical(°)	±0.001 or 0.002	±0.001 or 0.002	±0.001 or 0.002	±0.001 or 0.002
双向重复定位精度/保证值 Bi-Directional Repeatability/Guaranteed(°)	±0.003 or 0.006	±0.003 or 0.006	±0.003 or 0.006	±0.003 or 0.006
双向重复定位精度/典型值 Bi-Directional Repeatability/Typical(°)	±0.002 or 0.004	±0.002 or 0.004	±0.002 or 0.004	±0.002 or 0.004
定位精度/保证值 Accuracy[3]/Guaranteed(°)	±0.005 or 0.01	±0.005 or 0.01	±0.005 or 0.01	±0.005 or 0.01
定位精度/典型值 Accuracy/Typical(°)	±0.003 or 0.006	±0.003 or 0.006	±0.003 or 0.006	±0.003 or 0.006
最大速度 Max.Speed(°/s)[5]	3600	3600	3600	3600
端跳/保证值 Face Runout/Guaranteed(μm)	25	25	10	10
径跳/保证值 Radial Runout/Guaranteed(μm)	25	25	10	10
重量 Weight(Kg)	0.4	0.9	1.6	2.9

※ 备注
[1]：水平放置下的中心垂直负载。侧装负载：重心必须在转台内部，不能有侧向力矩。
[2]：最小运动增量不等同于分辨率，最小运动增量是指运动系统在连续、稳定情况下能够移动的最小量。一般来说，系统分辨率远小于最小运动增量。考虑传动结构和编码器对系统误差的影响，直线电机位移台与步进电机位移台相比，其最小运动增量更加接近于分辨率。
[3]：精度测量数据是平台在水平放置的情况下使用激光干涉仪测量的数据，测量标准参照GB/T17421-2000。
[4]：典型值和保证值的区别见技术指南。
[5]：最大速度为典型值，根据负载和控制器的不同会有区别。

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FMSR-D High Performance Direct Drive Rotary Stage

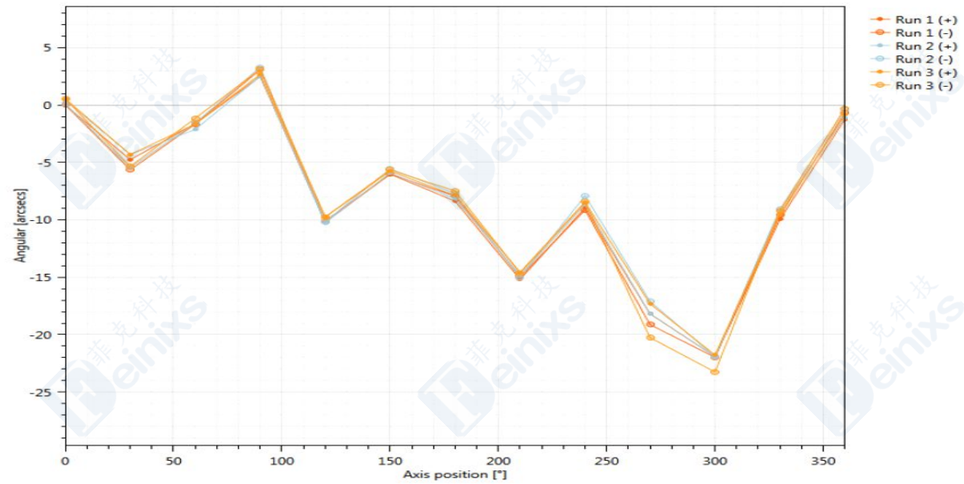
FMSR40D FMSR60D FMSR80D FMSR120D FMSR160D FMSR200D FMSR280D FMSR400D

产品参数 SPECIFICATIONS

Model	FMSR160D	FMSR200D	FMSR280D	FMSR400D
行程 Travel(°)	360	360	360	360
负载 Load Capacity(Kg)[1]	35	55	120	180
负载(倒装/侧装) Load Capacity(Inverted / Wall Mounting)(Kg)[1]	11.5	18	25	40
分辨率 Resolution(°)	0.0005	0.0005	0.0005	0.0005
最小步进量 Min.Incremental Motion(°)[2]	0.001	0.001	0.001	0.001
单向重复定位精度/保证值 Undirection Repeatability[3]/Guaranteed(°)[4]	±0.002 or 0.004	±0.002 or 0.004	±0.002 or 0.004	±0.002 or 0.004
单向重复定位精度/典型值 Undirection Repeatability/Typical(°)	±0.001 or 0.002	±0.001 or 0.002	±0.001 or 0.002	±0.001 or 0.002
双向重复定位精度/保证值 Bi-Directional Repeatability/Guaranteed(°)	±0.003 or 0.006	±0.003 or 0.006	±0.003 or 0.006	±0.003 or 0.006
双向重复定位精度/典型值 Bi-Directional Repeatability/Typical(°)	±0.002 or 0.004	±0.002 or 0.004	±0.002 or 0.004	±0.002 or 0.004
定位精度/保证值 Accuracy[3]/Guaranteed(°)	±0.005 or 0.01	±0.005 or 0.01	±0.005 or 0.01	±0.005 or 0.01
定位精度/典型值 Accuracy/Typical(°)	±0.003 or 0.006	±0.003 or 0.006	±0.003 or 0.006	±0.003 or 0.006
最大速度 Max.Speed(°/s)[5]	1800	1080	360	240
端跳/保证值 Face Runout/Guaranteed(μm)	10	10	15	20
径跳/保证值 Radial Runout/Guaranteed(μm)	10	10	15	20
重量 Weight(Kg)	6.5	12	30	91

※ 备注
[1]:水平放置下的中心垂直负载。侧装负载:重心必须在转台内部,不能有侧向力矩。
[2]:最小运动增量不等同于分辨率,最小运动增量是指运动系统在连续、稳定情况下能够移动的最小量。一般来说,系统分辨率远小于最小运动增量。考虑传动结构和编码器对系统误差的影响,直线电机位移台与步进电机位移台相比,其最小运动增量更加接近于分辨率。
[3]:精度测量数据是平台在水平放置的情况下使用激光干涉仪测量的数据,测量标准参照GB/T17421-2000。
[4]:典型值和保证值的区别见技术指南。
[5]:最大速度为典型值,根据负载和控制器的不同会有区别。

性能实测 ERROR CURVE



Each Stage is Tested with a Laser Interferometer. Product Identification and Traceability.

相关产品 RELATED PRODUCTS

FMC04-H

FMC04-Mini

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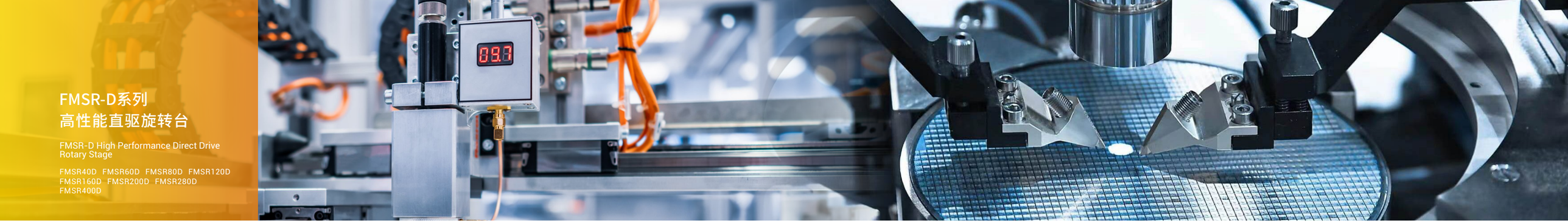

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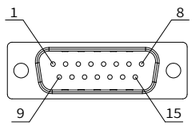
接线定义 HARDWARE CONNECTION

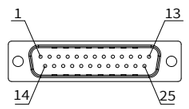
电机接口 Motor wiring diagram



DB15公头(跳线)

针脚	定义
1	U
2	/
3	V
4	/
5	W
6	/
7	PE
8	/
9-15	/

反馈接口 Encoder wiring diagram

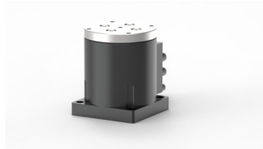


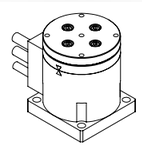
DB25公头(跳线)

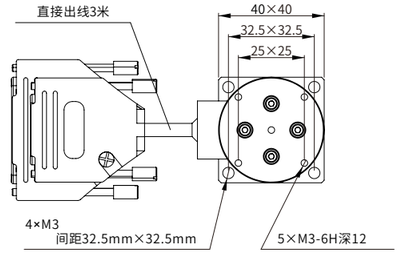
针脚	定义	针脚	定义
1	5V+	14	5V+
2	0V	15	0V
3	SD+/PS+	16	SIN+
4	SD-/PS-	17	SIN-
5	/	18	COS+
6	/	19	COS-
7	/	20	REF+
8	/	21	REF-
9	/	22	24V+
10	/	23	/
11	HA	24	/
12	HB	25	24V-
13	HC		

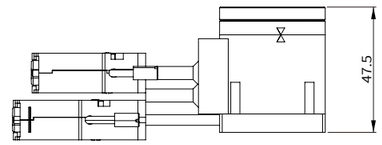
产品图纸 DIMENSIONS

FMSR40D

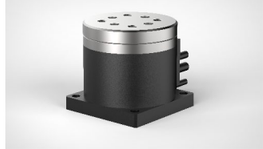


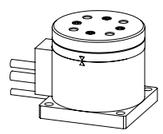


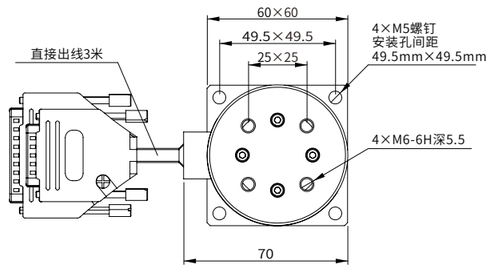


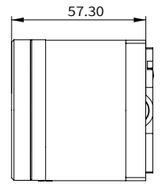


FMSR60D

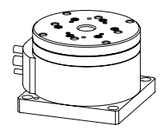


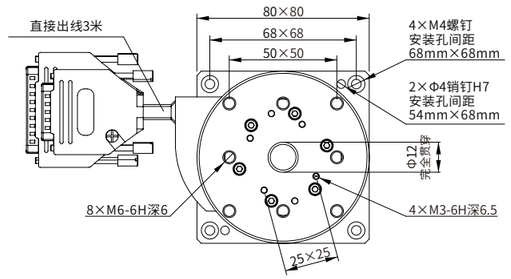


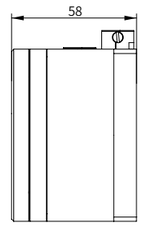




FMSR80D







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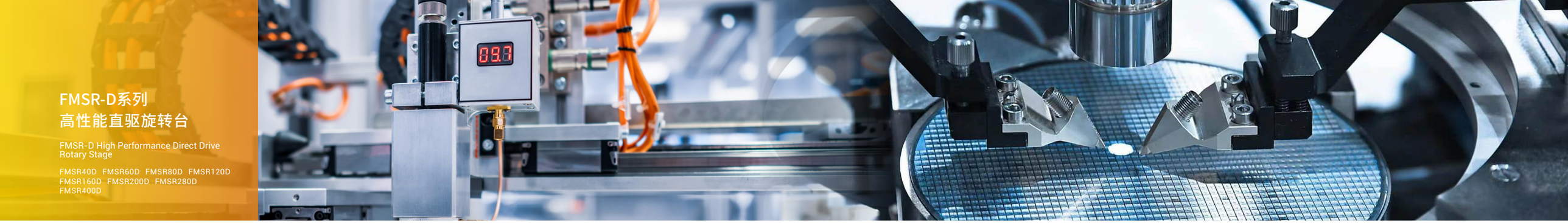

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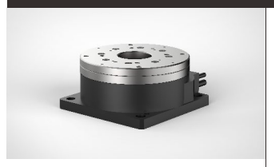
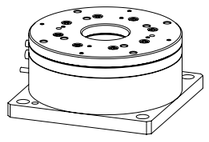
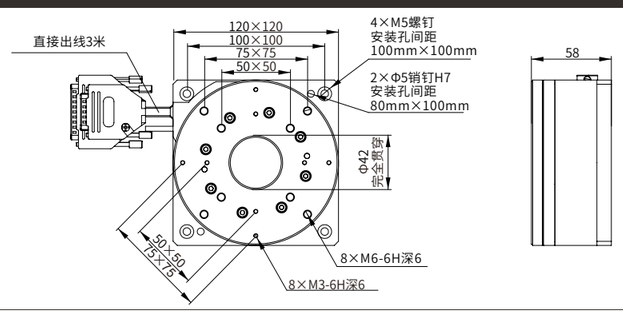
FMSR400D

产品图纸 DIMENSIONS

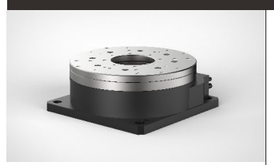
FMSR120D

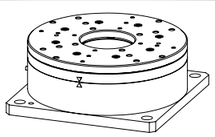


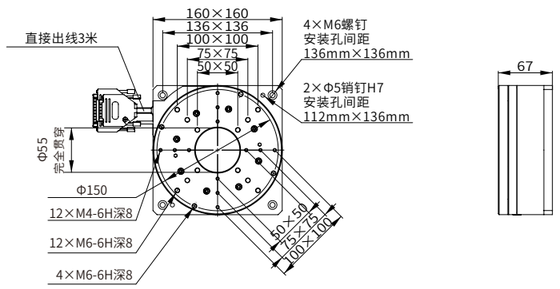




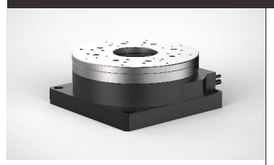
FMSR160D

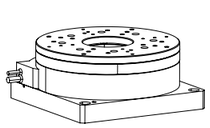


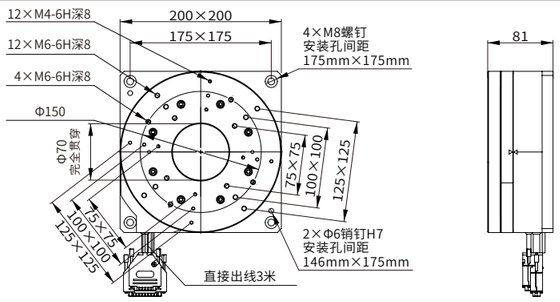




FMSR200D

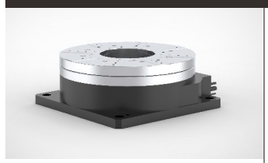


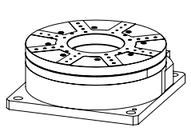


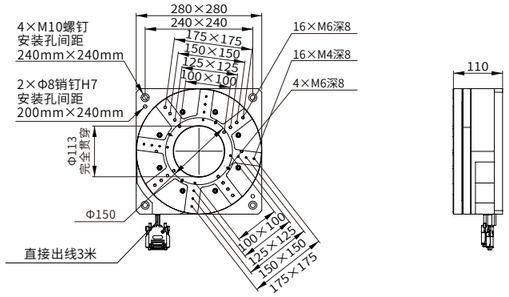


产品图纸 DIMENSIONS

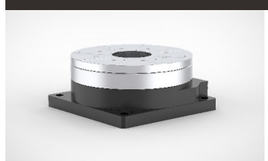
FMSR280D

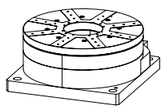


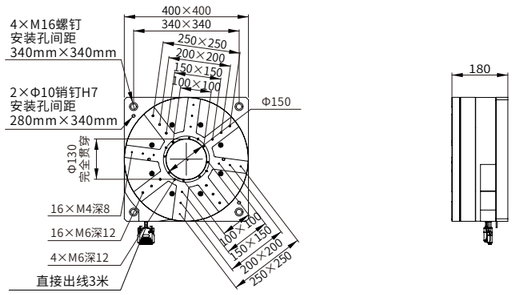




FMSR400D







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