

2相冷轧滚珠丝杠型 (2TMB) 2-phase Motor & Rolled Ball Screw type (2TMB)

MoBo

2相冷轧魔博 / 2-phase Rolled MoBo

●特点

- 是将2相步进电机直接组装到精密等级为Ct7的冷轧滚珠丝杠轴端上的产品，外形紧凑、通用性强。
- 具有将滚珠丝杠轴心作为电机旋转轴心的理想结构。
- 直连结构省去了联轴器的使用，不仅缩短长边方向尺寸，还能减少作业工时。
- 还备有推荐的2相步进电机用驱动器。
- 通过轴端的追加加工，可灵活对应多种行程。
- 采用专用支架组件，可实现支撑侧的稳定安装。
- 螺母块、电机板等附件也很齐全。



●Features

- A 2-phase Stepping Motor is mounted directly onto the shaft end of a Ct7 grade Rolled Ball Screw, which means compact and multipurpose type product.
- Ball Screw Shaft is ideally constructed to form the Motor Rotor Shaft.
- Since combining the Motor Shaft and Ball Screw Shaft, Coupling-less, saving total length, and reducing labor cost can be achieved.
- Recommended Driver for 2-phase Stepping Motor is available.
- Flexible length can be provided by the end journal turning.
- Stable mounting is secured by the exclusive Support Unit.
- Accessories are also provided as mounting kit, such as Nut block and Motor plate.

●基本规格 / Specifications

Model 型号	Shaft Nominal Dia. 丝杠轴公称外径 (mm)	Lead 导程 (mm)	Travel 行程 (mm)	Travel per pulse 1脉冲移动量 (μm)	Reference Thrust 参考推力 (N)	Mass 重量 (g)
2TMB0801	f8	1	150	5	75	350
2TMB0802	f8	2	150	10	100	400
2TMB0805	f8	5	150	25	50	400
2TMB0812	f8	12	150	60	25	400

Repeatability (reference) 重复定位精度 (参考值)	max. $\pm 0.01\text{mm}$
Lost Motion (reference) 空转 (参考值)	max. 0.01mm

※重复定位精度及空转值是安装在本公司标准滑台上时测得的值。实际值请咨询本公司。

※The reference value about Repeatability and Lost Motion represents when the MoBo built into KSS original actuator. Please make a contact to KSS for actual value.

注1) 关于详细尺寸，请参照F129页以后的规格图。

注2) 1脉冲的移动量为整步时的值。

注3) 加减速速率的参考值为50ms/kHz以上。

注4) 参考推力根据不同条件会有很大变化，请垂询本公司。

Note1) Detail specifications & dimensions are shown in drawings from page F129.

Note2) Travel per pulse represents the value for full step.

Note3) Acceleration & Deceleration Rate should be 50ms/kHz or more.

Note4) Reference Thrust may vary depending on the operating condition, please ask KSS for more detail.

●电机规格 / Motor Specifications

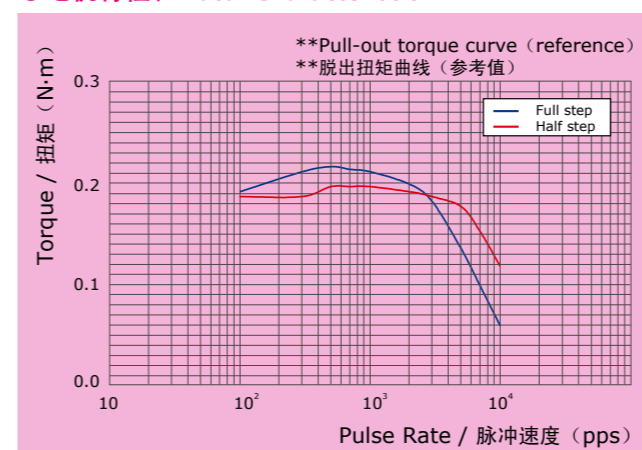
Model 型号	Motor size 电机规格 (mm)	Rated voltage 额定电压 (V)	Rated current 额定电流 (A/phase) (A/相)	Winding resistance 绕组电阻 (Ω)	Holding torque 保持扭矩 (Nm)	Rotor Inertia 转子惯量 ($\text{g} \cdot \text{cm}^2$)
2TMB0801	□42	DC 2.2	2.0	1.1	0.24	42
2TMB0802	□42	DC 2.2	2.0	1.1	0.24	42
2TMB0805	□42	DC 2.2	2.0	1.1	0.24	42
2TMB0812	□42	DC 2.2	2.0	1.1	0.24	42

Driving method 励磁方式	2-phase Bi-polar 2相双极方式
Basic step angle 基本步进角	1.8°

注) 转子惯量为包含滚珠丝杠轴的值。

Note) Rotor Inertia includes Ball Screw Shaft.

●电机特性 / Motor Characteristic

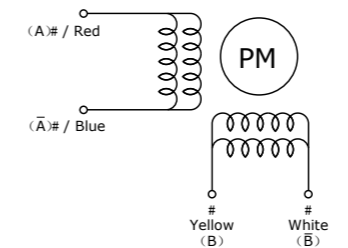


■Test condition / 测试条件

Driver / 驱动器: Maker Standard / 厂家标准机
Input Voltage / 电源电压: DC24V
Phase Current / 设定电流: 2.0A

注) 电机特性因驱动器、运行条件而异。
Note) Motor characteristic will vary depending on Driver type, operating conditions.

●接线图/Schematic



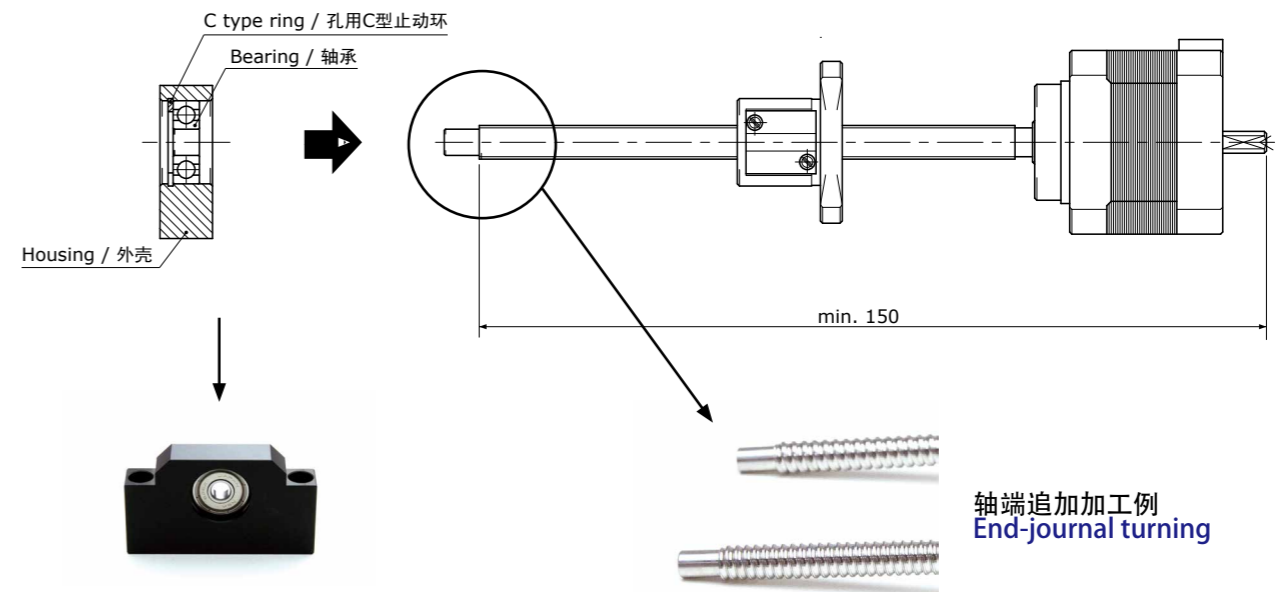
按以下励磁顺序，从输出轴侧看到的CW旋转
Switching sequence for CW rotation viewed from shaft end.

STEP	红色/Red (A)	黄色/Yellow (B)	蓝色/Blue (A)	白色/White (B)
0	+	+	-	-
1	-	+	+	-
2	-	-	+	+
3	+	-	-	+
0	+	+	-	-

●轴端的追加加工和专用支架组件 / End-journal turning & Exclusive Support Unit

KSS 2相冷轧MoBo备有标准库存品，但为了满足各种行程（全长）的需求，可对轴端进行追加加工。追加加工包括裁切及轴承支撑形状的加工。（照片）
对轴承支撑形状进行追加加工时，不加工止动环槽。此时请通过孔用止动环进行轴承支撑。
KSS备有使用了孔用止动环的专用支架组件，欢迎选购。

All of KSS 2-phase Rolled MoBo are in stock. In order to meet the request of flexible length, Shaft end journal turning is available. Please note that re-work is only for cutting and turning down. (see photo below)
KSS does not process Ring groove machining on the end of Shaft. Exclusive Support Unit with Brg. & Retaining ring for hole is provided by KSS.



可进行追加加工的长度为自轴端起150mm（追加加工部除外）。

长度短于150mm时，单侧可作为自由端使用。

需要带止动环槽的支撑形状、以及短于150mm（追加加工部除外）的支撑侧形状时，本公司提供定制服务。

Please note that minimum re-work length is 150mm (except re-work portion) as shown in figure above. Total length shorter than 150mm (except re-work portion) should be used as cantilever.

If supported journal with ring groove or total length of less than 150mm is required, it will be available as a customized order.

关于专用支架组件的形状及尺寸，请参照F156（SP-42S）页。
如需特殊的专用支架组件，请垂询本公司。

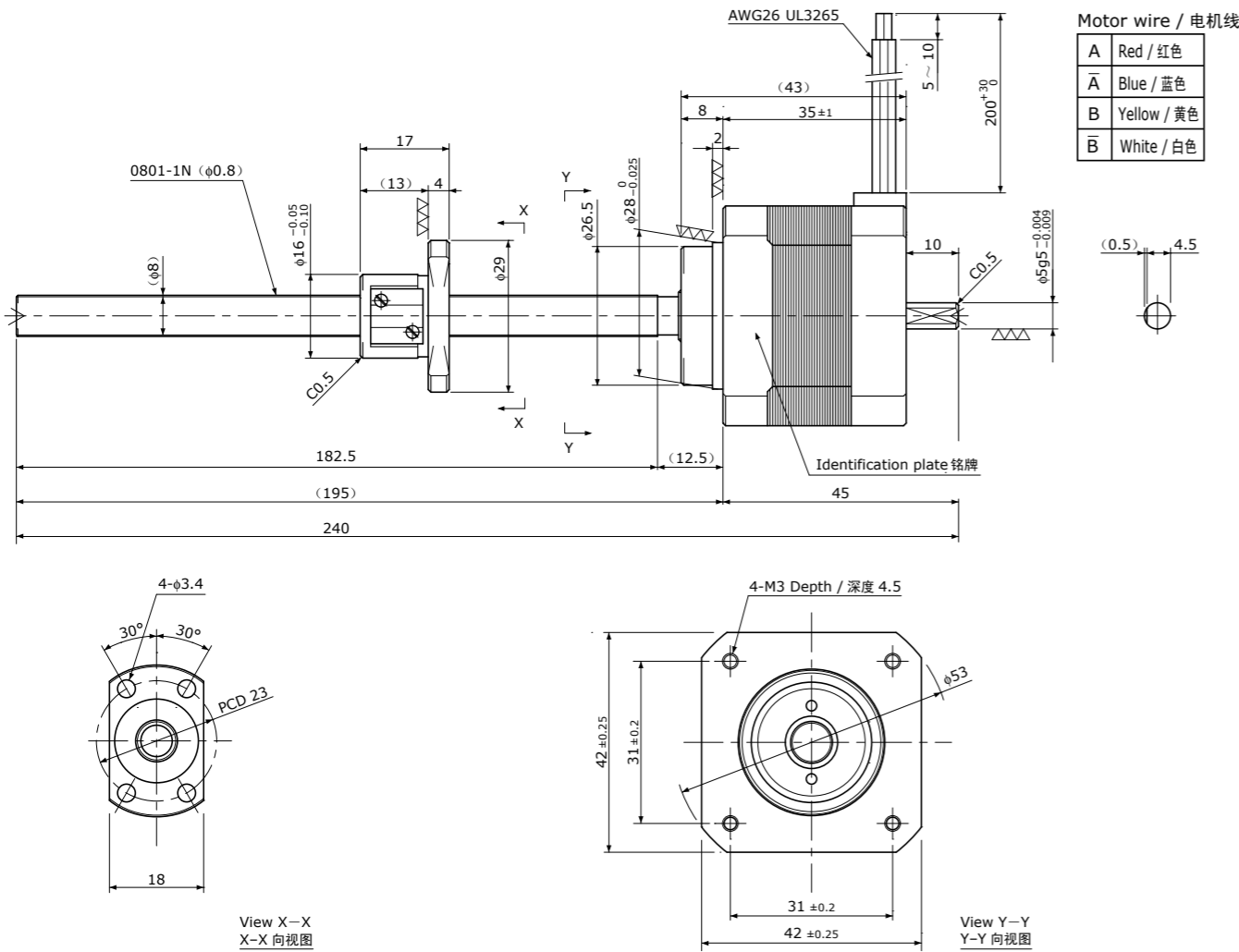
KSS Exclusive Support Unit for 2-phase Rolled MoBo, please see page F156（SP-42S）.
Special profile of Support Unit is required, please ask KSS representative.

Standard products in stock 2TMB series
标准库存品 2TMB系列

Dimensions & Specifications
规格及参数

冷轧滚珠丝杠+2相步进电机 / Rolled Ball Screw + 2-phase Stepping Motor

2TMB0801 Shaft dia. (轴径) f8 Lead (导程) 1mm
Travel (行程) 150mm



Recommended Drivers
推荐的驱动器

SD4030B2

注) 有关与推荐驱动器的接线, 请参照F160页。
Note) Refer to page F160 for connection diagram of recommended Drivers.

Recommended accessories
推荐的配件

Motor side Supporting plate / 电机侧支架板	MP-42A or MP-42B
Exclusive Support Unit / 支撑侧专用支架组件	SP-42S
Nut Block / 螺母块	NB-0801R

Ball Screw Specifications 主要技术参数	
Accuracy grade 精度等级	Equivalent to JIS Ct7 相当于Ct7
Thread direction 旋向	Right 右
Axial play 轴向间隙	0.03mm or less 0.03mm以下
Reference Thrust 参考推力	75N
Shaft material 丝杠轴材质	Stainless steel 不锈钢
Nut material 螺母材质	Chrome-molybdenum steel 铬钼钢
Surface hardness 螺纹部表面硬度	Min. HRC55 (Thread area)
Lubricant 润滑剂	KSS original grease MSG No.2 KSS原装油脂 MSG No.2

Motor Specifications 电机参数	
Basic step angle 基本步进角	1.8°
Driving method 励磁方式	2-phase Bi-polar 2相双极方式
Rated Voltage 额定电压	DC 2.2 V
Rated current 额定电流	DC 2.0 A
Rotor inertia 转子惯量	42g · cm ²
Operating temperature 使用温度范围	-20° C~50° C

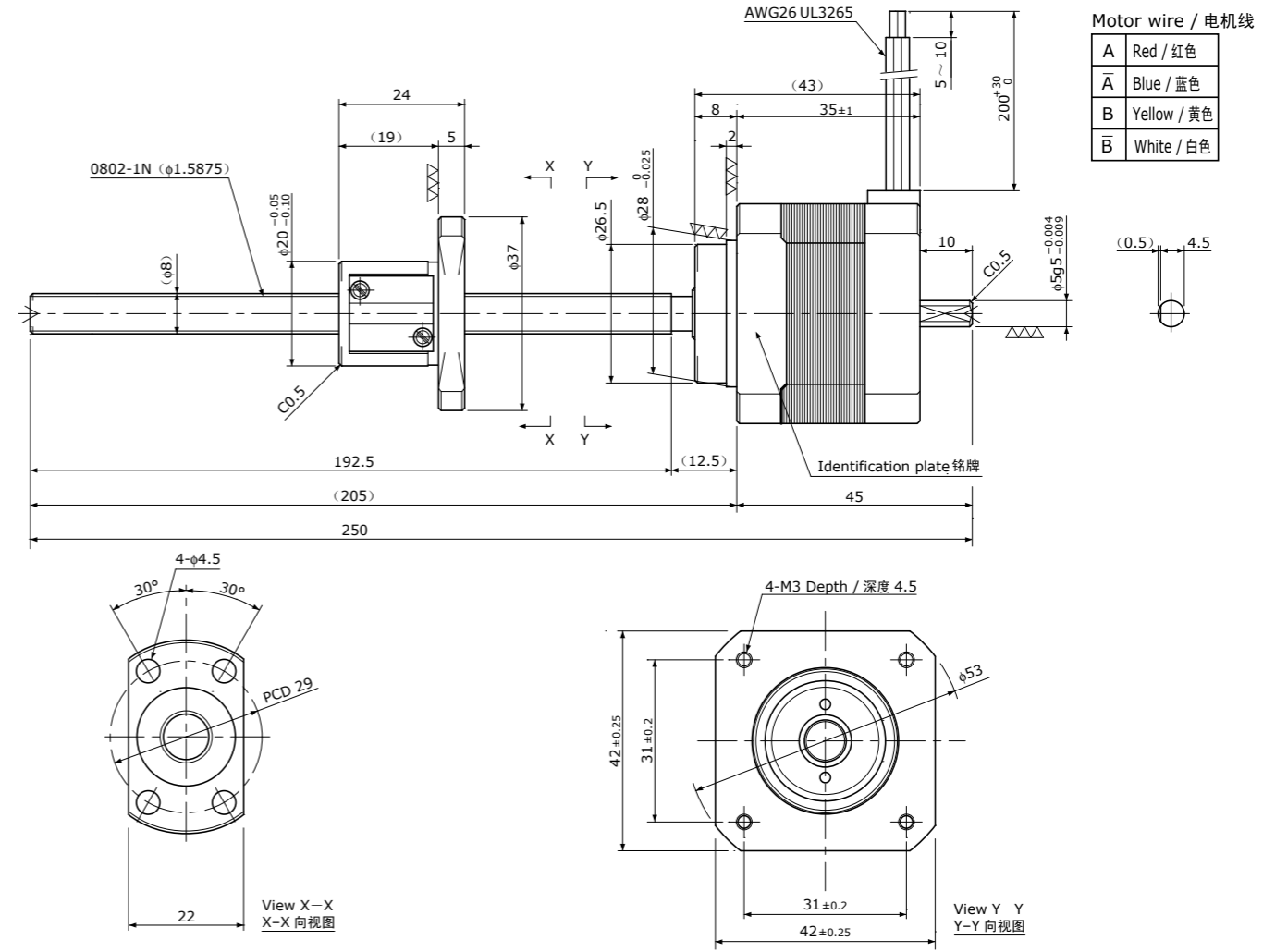
注) 关于追加加工, 请参照F128页。
Note) Please refer to page F128 about end-journal turning.

Standard products in stock 2TMB series
标准库存品 2TMB系列

Dimensions & Specifications
规格及参数

冷轧滚珠丝杠+2相步进电机 / Rolled Ball Screw + 2-phase Stepping Motor

2TMB0802 Shaft dia. (轴径) f8 Lead (导程) 2mm
Travel (行程) 150mm



Recommended Drivers
推荐的驱动器

SD4030B2

注) 有关与推荐驱动器的接线, 请参照F160页。
Note) Refer to page F160 for connection diagram of recommended Drivers.

Recommended accessories
推荐的配件

Motor side Supporting plate / 电机侧支架板	MP-42A or MP-42B
Exclusive Support Unit / 支撑侧专用支架组件	SP-42S
Nut Block / 螺母块	NB-0802R

Ball Screw Specifications 主要技术参数	
Accuracy grade 精度等级	Equivalent to JIS Ct7 相当于Ct7
Thread direction 旋向	Right 右
Axial play 轴向间隙	0.03mm or less 0.03mm以下
Reference Thrust 参考推力	100N
Shaft material 丝杠轴材质	Stainless steel 不锈钢
Nut material 螺母材质	Chrome-molybdenum steel 铬钼钢
Surface hardness 螺纹部表面硬度	Min. HRC55 (Thread area)
Lubricant 润滑剂	KSS original grease MSG No.2 KSS原装油脂 MSG No.2

Motor Specifications 电机参数	
Basic step angle 基本步进角	1.8°
Driving method 励磁方式	2-phase Bi-polar 2相双极方式
Rated Voltage 额定电压	DC 2.2 V
Rated current 额定电流	DC 2.0 A
Rotor inertia 转子惯量	42g · cm ²
Operating temperature 使用温度范围	-20° C~50° C

注) 关于追加加工, 请参照F128页。
Note) Please refer to page F128 about end-journal turning.

