RS Series Bearingless Absolute

RSH4308 RSL4308 RSH4306 RSL4306 RSH3506 RSL3506

Uses

This product is mainly used for servo-driven control system.Provide feedback information and auxiliary signals required by accurate position and speed control units for the system.

Features

- Working temperature -20 ℃ ~+105 ℃
- Current consumption < 100mA
- Battery voltage 3.6V DC
- Battery fault voltage 2.5V
- Battery warning voltage 3.1V
- Differential output
- Single 5V Supply
- Rise/Fall time around 100ns
- Insulated resistance 50MΩ

Technical Parameters

- Resolution 131072（17bit） 8388608（23 bit）
- 16 bits multi-turn resolution counter
- Absolute positioning accuracy <±50 angular seconds

  Note: The specific accuracy depends on the motor and mechanical assembly fit
- Repetition positioning accuracy <±3 angular seconds

  Note: The specific accuracy depends on the motor and mechanical assembly fit
- Battery voltage fault warning
- Interface RS485
- Communication frequency ≤16K
- Baud rate 2.5MHz
- Enter allowable deviation of shaft Dip angle:0.1°Axial endplay:＜0.1mm Radial runout:＜0.01mm
- Operation speeds of up to 6000rpm
- Shaft diameter：Straight shaft Ø8 / Ø6
- Moment of inertia 0.68kg • mm^2
- Rotor angular acceleration

  During power supply ⩽80000rad/s^2

  When battery powered ⩽4000rad/s^2
- Mechanicalshock

  Impact acceleration 980m/s^2

  11ms.Impact 3 times in each direction, totally 18 times
- Vibrate

  10 to 55Hz, keeping the amplitude of 1.5mm

  Acceleration between 55and2000Hz is 98m/s^2 XYZ 2hours per axial direction,6 hours intotal
- Working temperature -20 ℃ ~+105 ℃
- Relative humidity ≤90% (40℃/21d, based on EN 60068-2 -78) without condensation.
- Degree of protection IP40

Cable Definitions

Pin Number	1	2	3	4	5	6	7	8
Signal Definition	5V	GND	485+	485-	Battery +	Battery GND	NC	PE
Cable Color	Red	Black	Blue	Yellow	Brown	White		Shielded Mesh

Technical Parameters

R | SH | 43 | 08 | P | 23 | P | T

Serial number
R---Absolute

Structural Form
SH---Bearingless tall model
SL---Without bearing short type

Outer Diameter
47---47mm
43---43mm
35---35mm
35R---35mm with mounting holes

Diameter of hole
08-8mm
06-6mm
*Other hole diameters to be customized

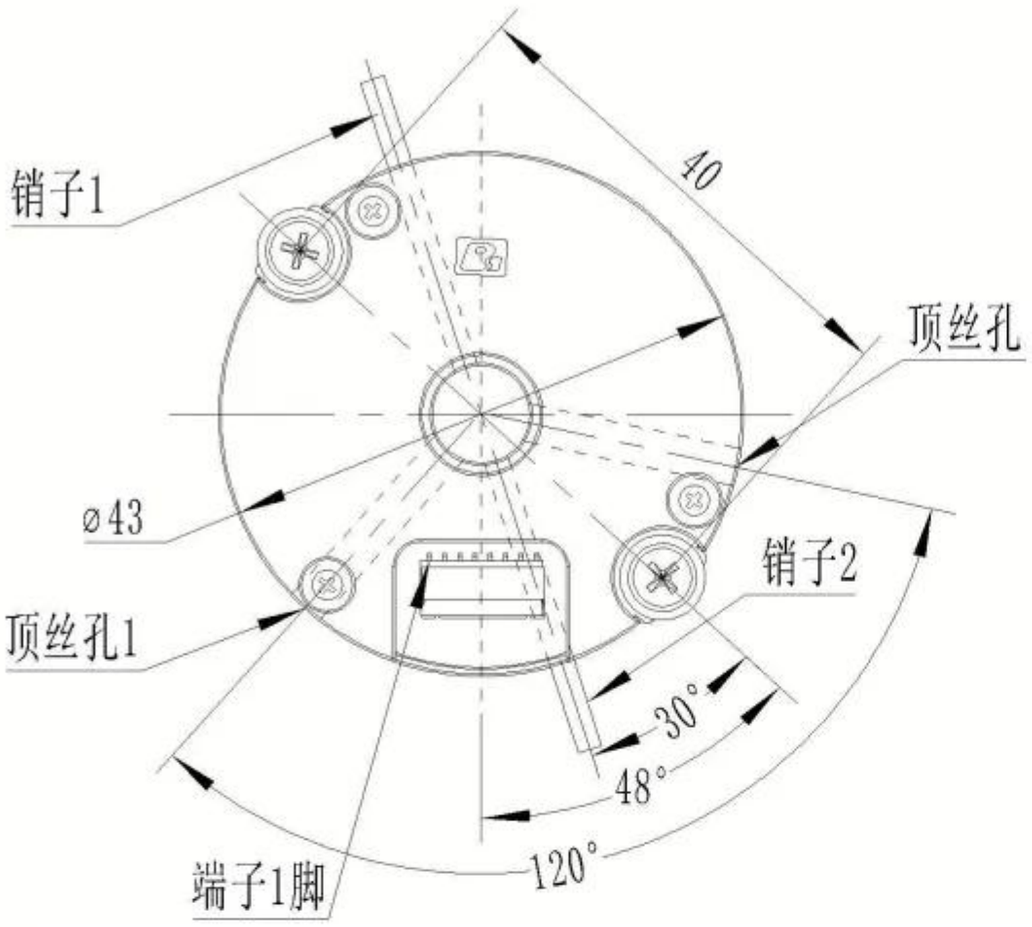
Production identification number
P---identification number
N---identification number

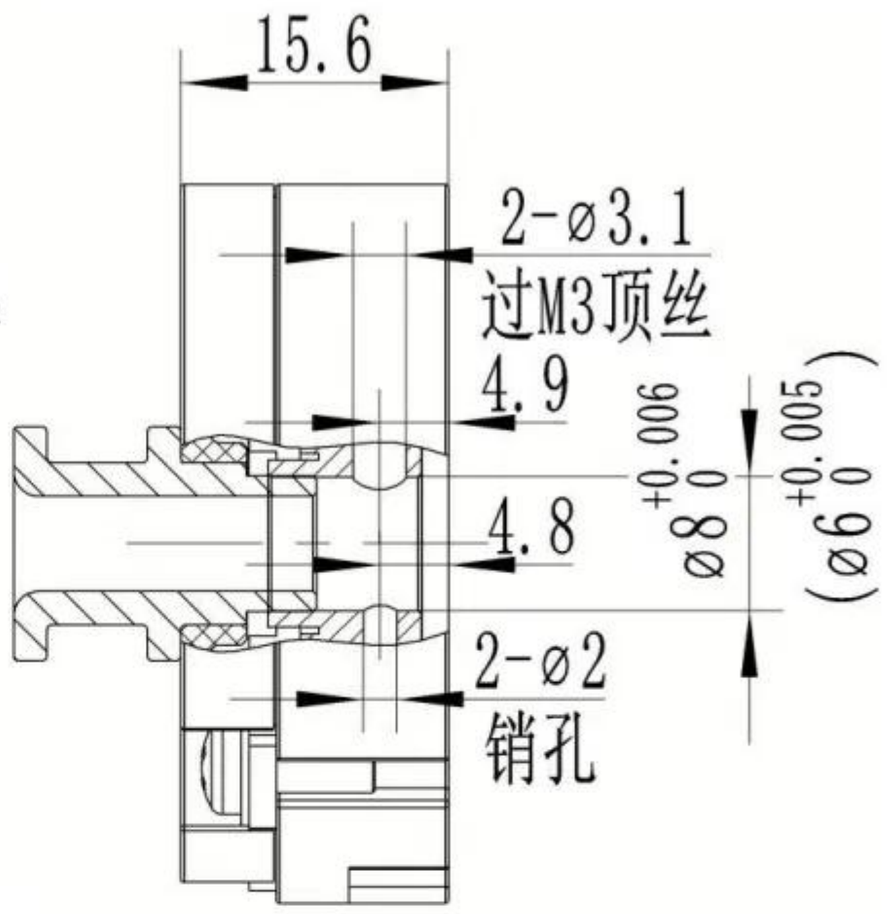
Bits
17---17bit
21---21bit
23-23bit

Single / Multi-turn
P---Single-turn
M---Multiturn 16 bit

Interface/Protocol
T---485 interface
S---SSI interface*
B---BISS interface*
Protocols can be customized*

Mechanical Dimension

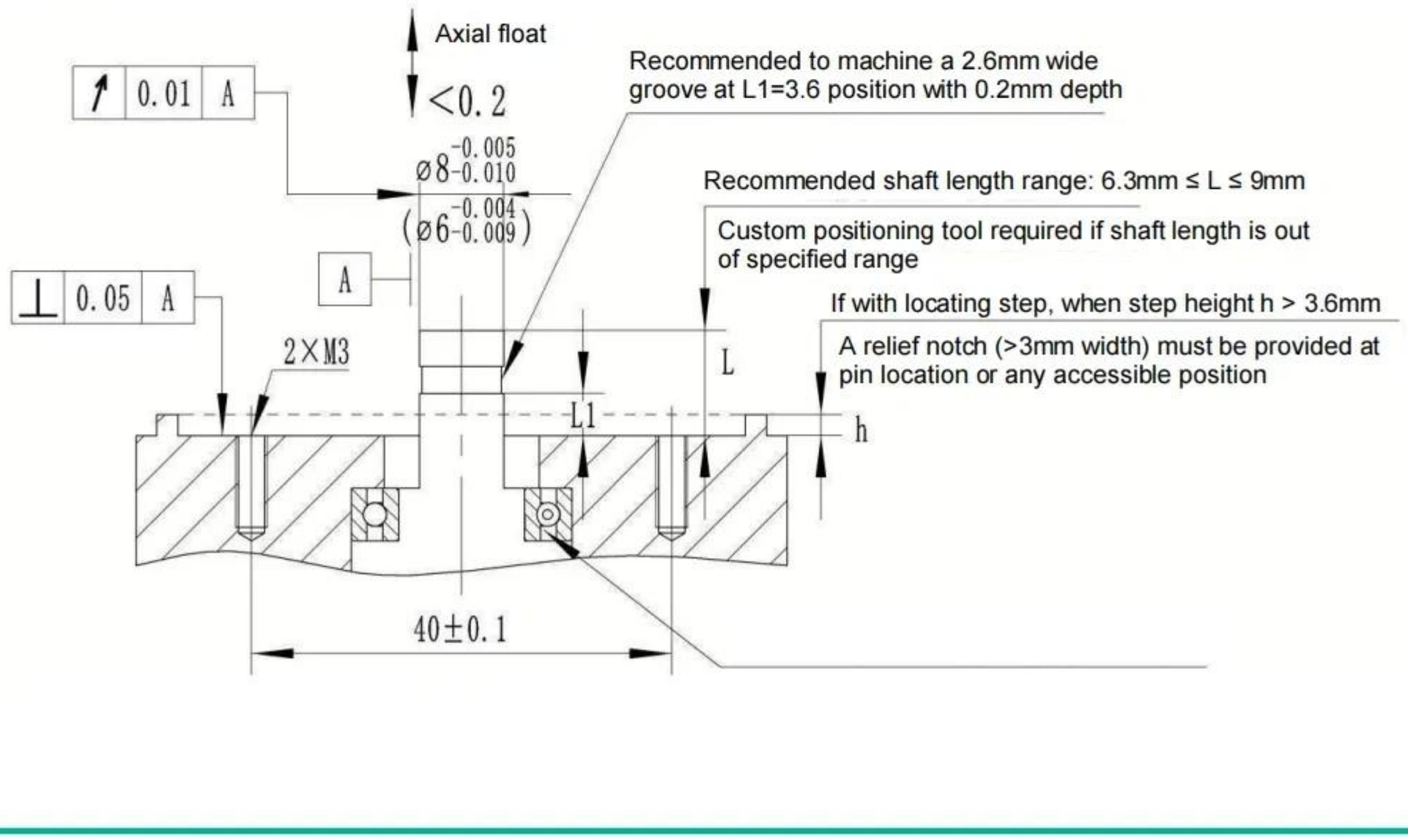




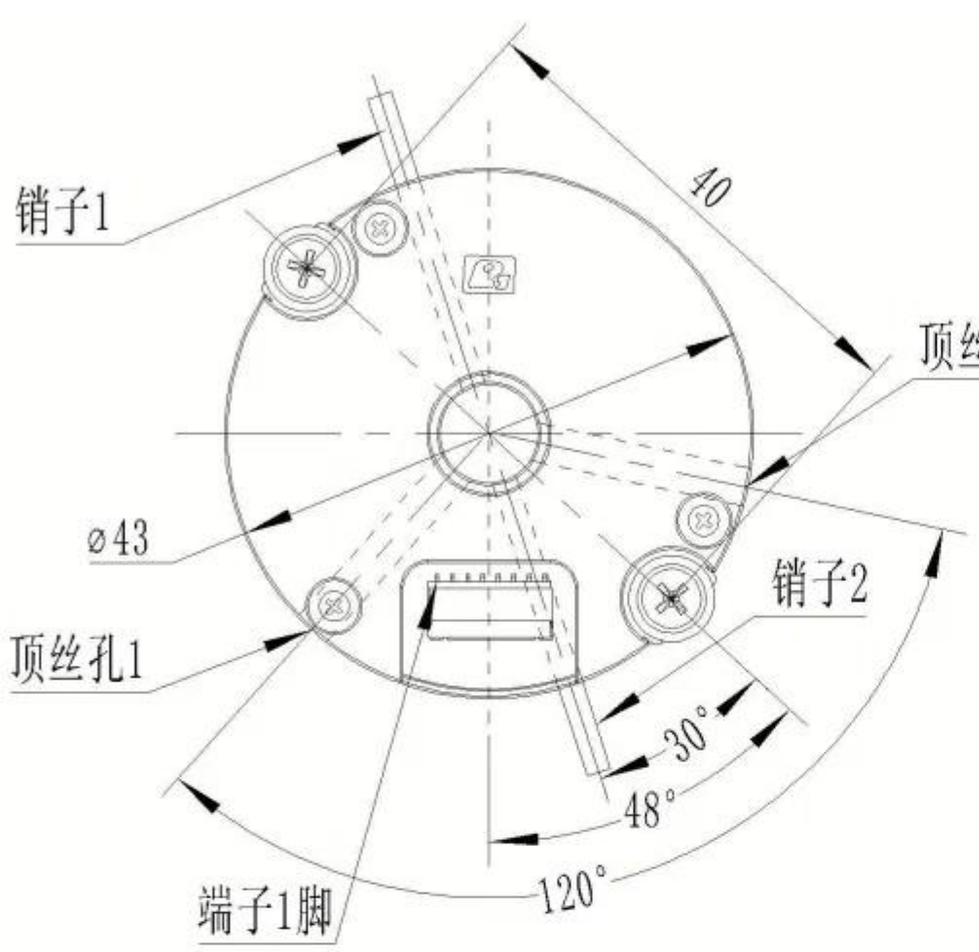
Note: Socket model SH1.0-8PWB

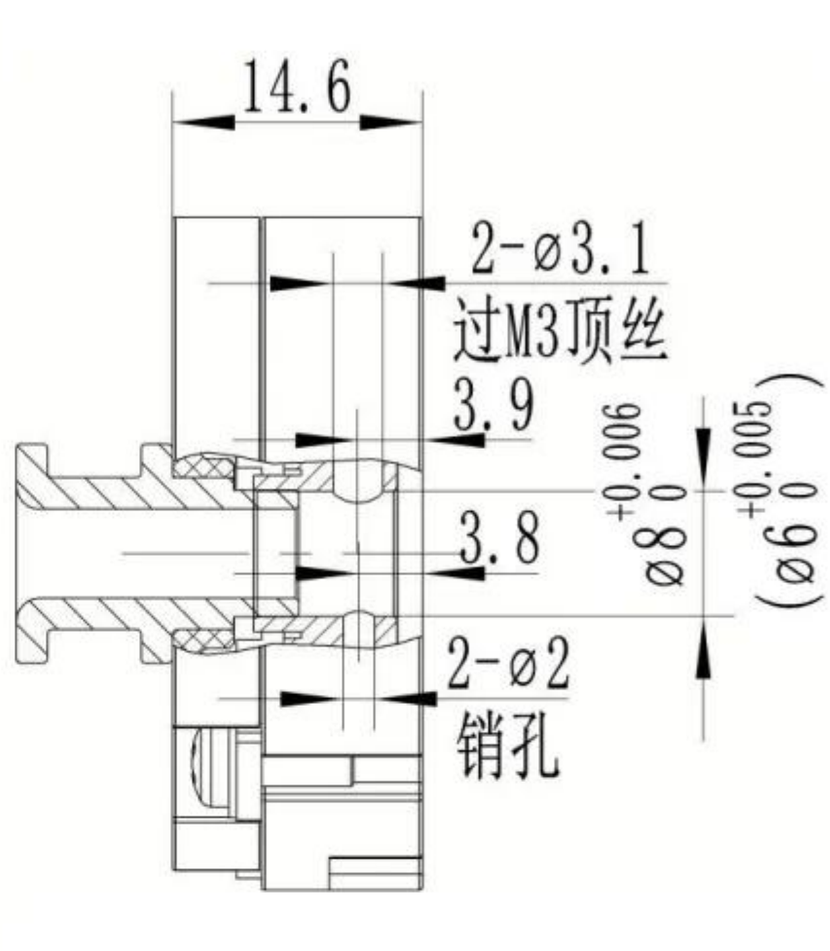
RSH4308/06 Mechanical Dimension Drawing

RSH4308/06 Recommended motor end dimensions:



Mechanical Dimension





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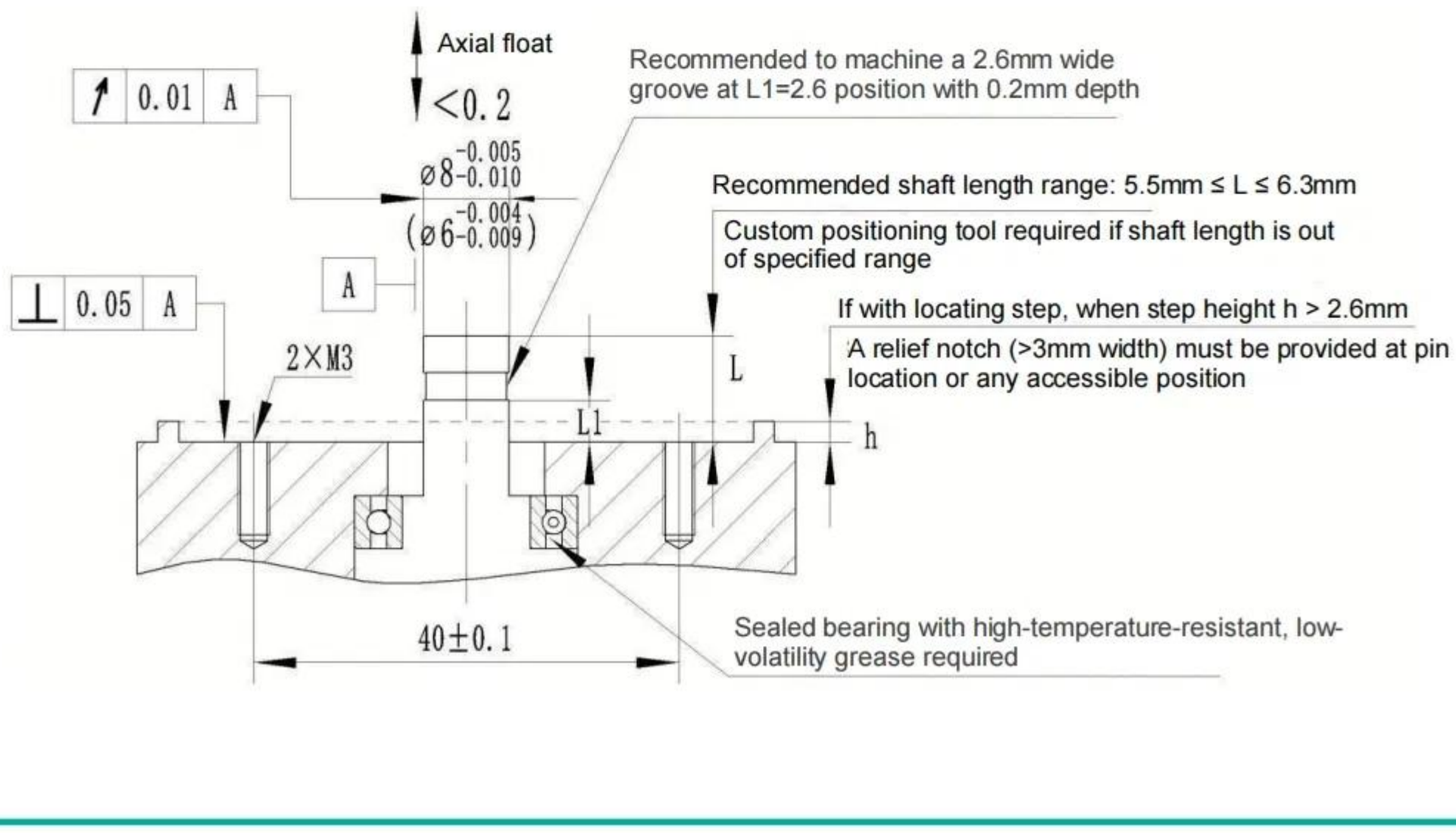
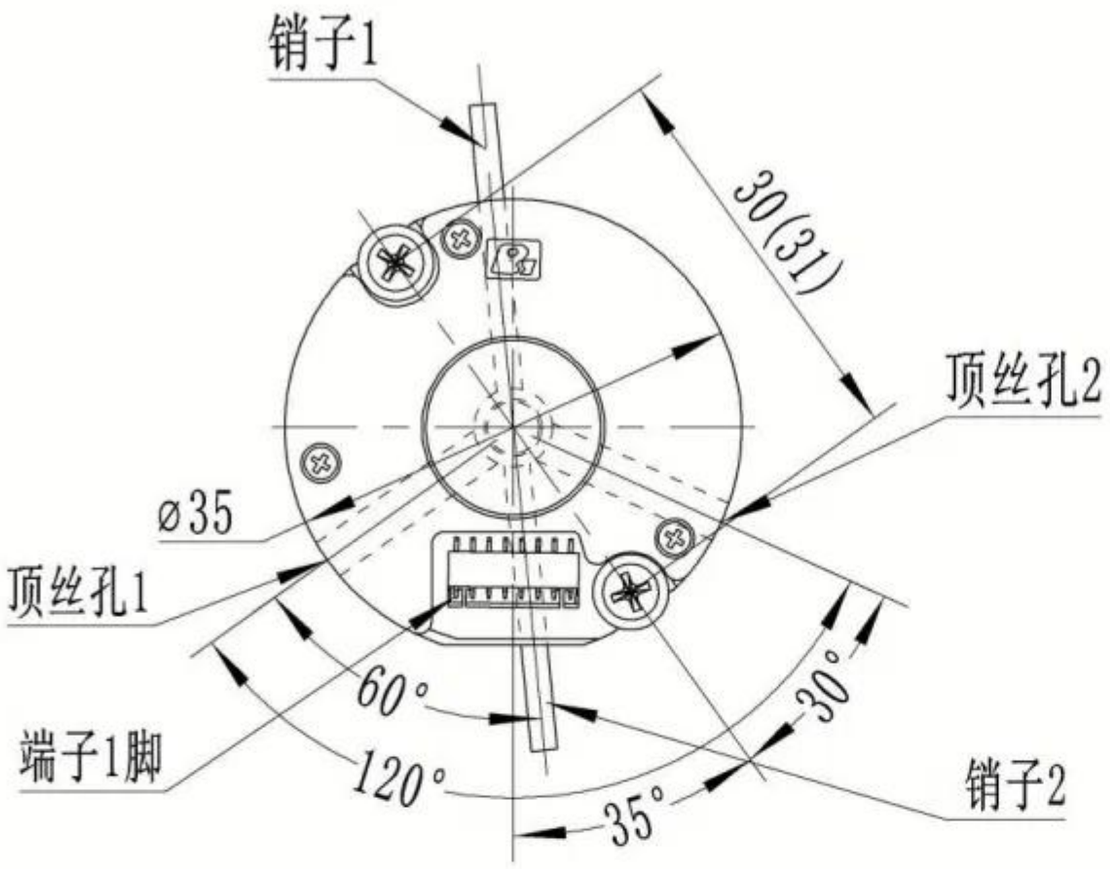
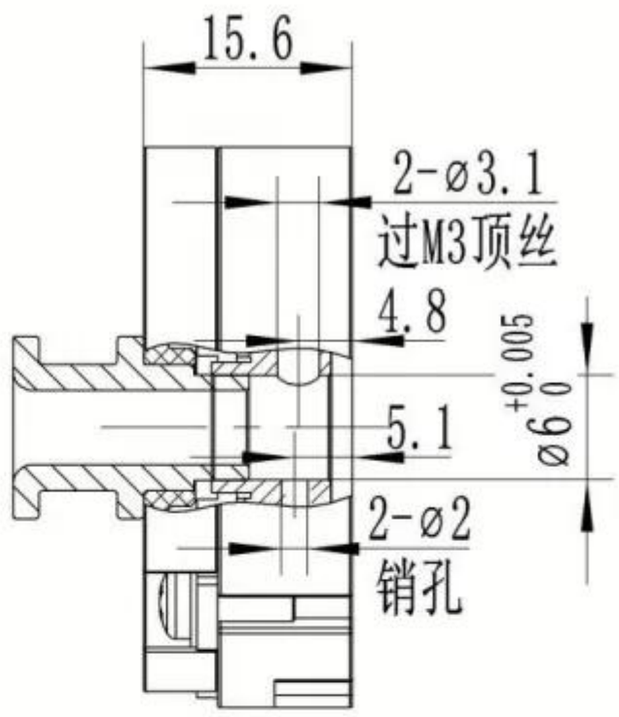
RSL4308/06 Mechanical Dimension Drawing

RSL4308/06 Recommended motor end dimensions:



Mechanical Dimension

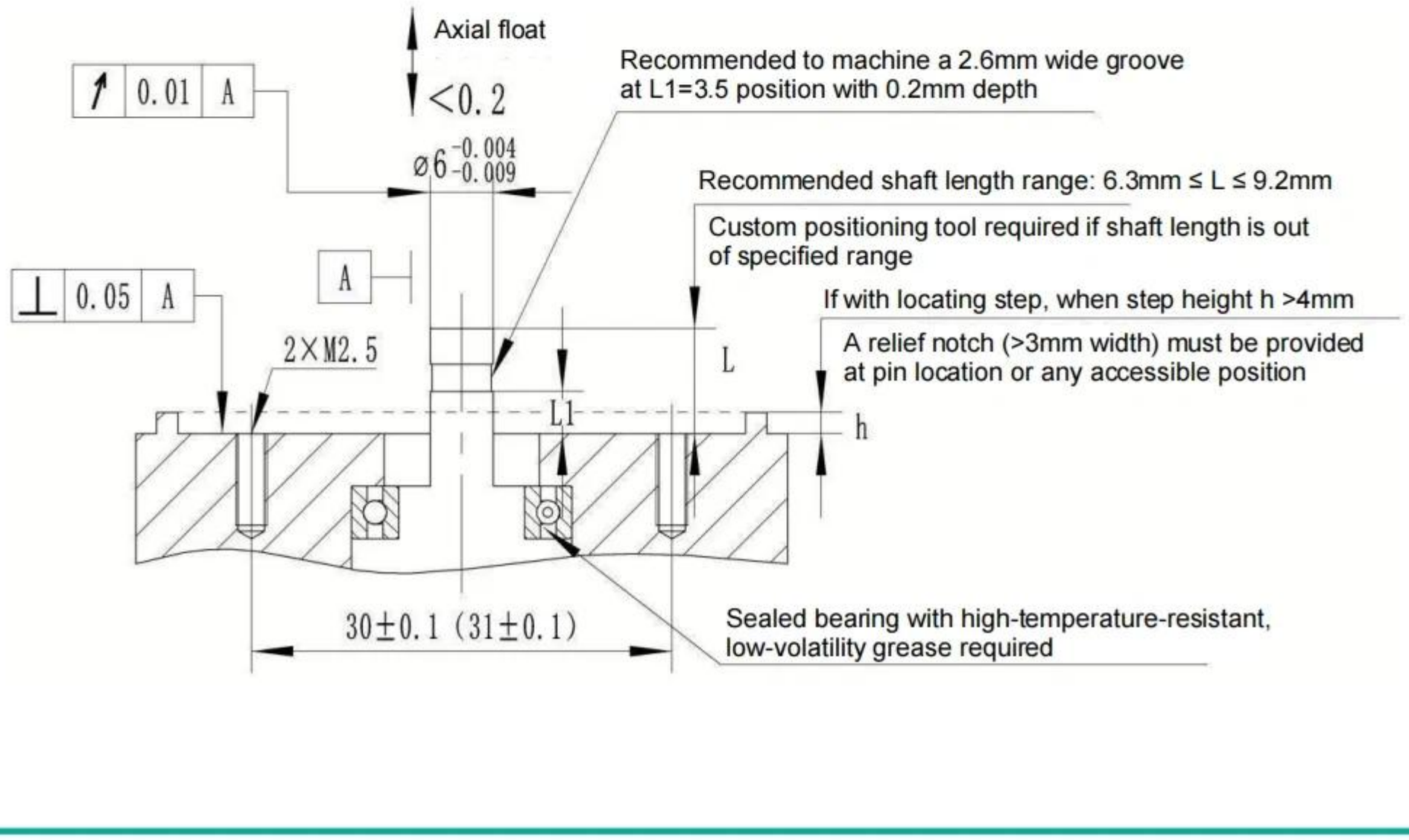




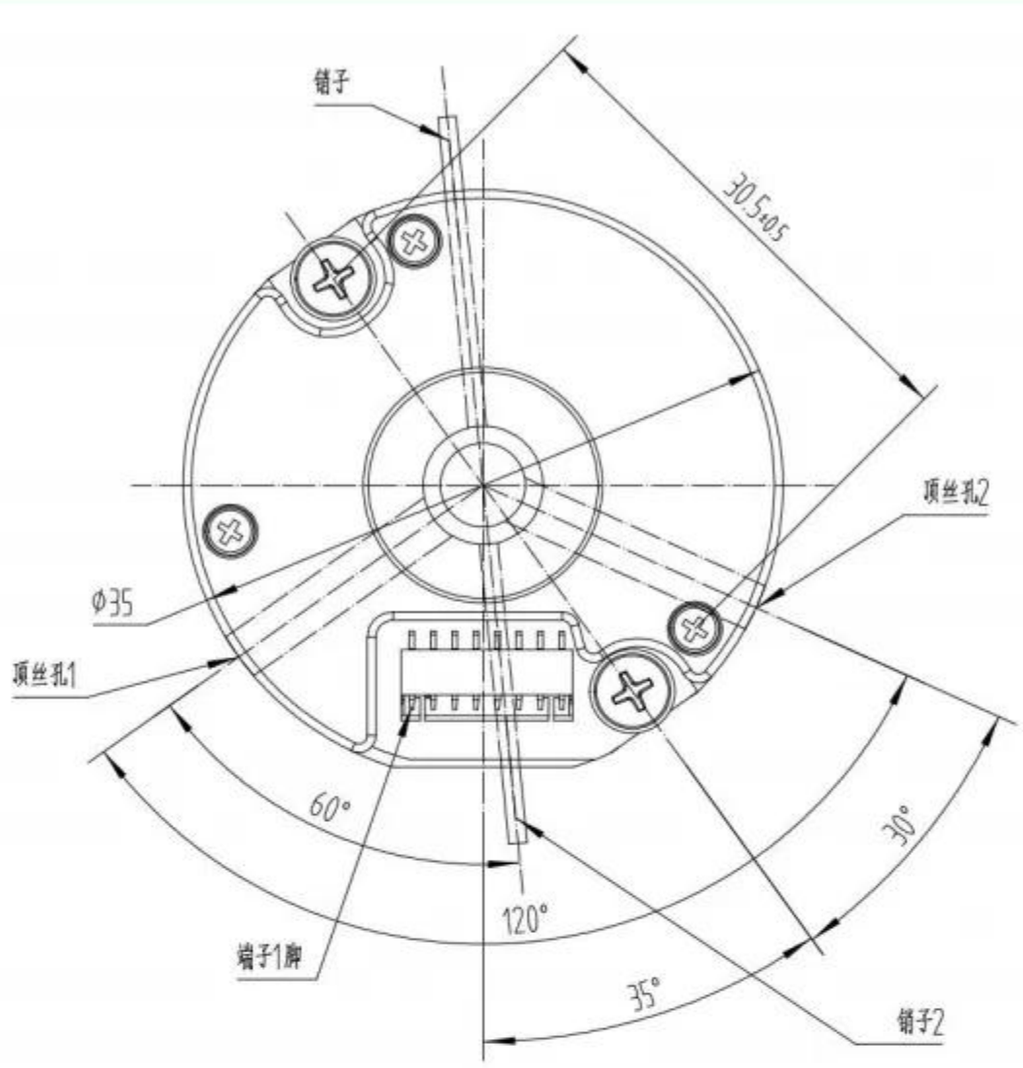
Note: Socket model SH1.0-8PWB

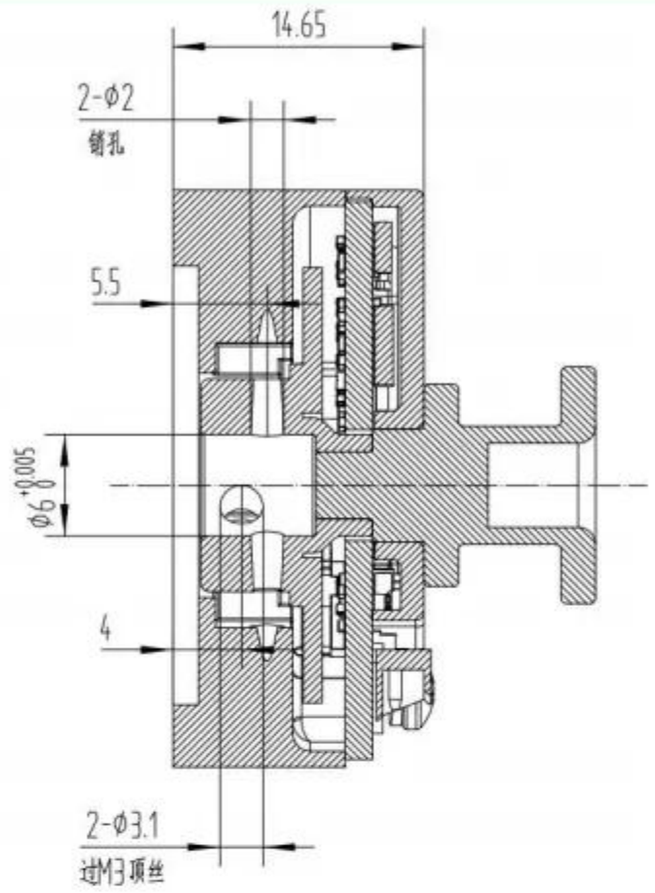
RSH3506 Mechanical Dimension Drawing

RSH3506 Recommended motor end dimensions:



Mechanical Dimension

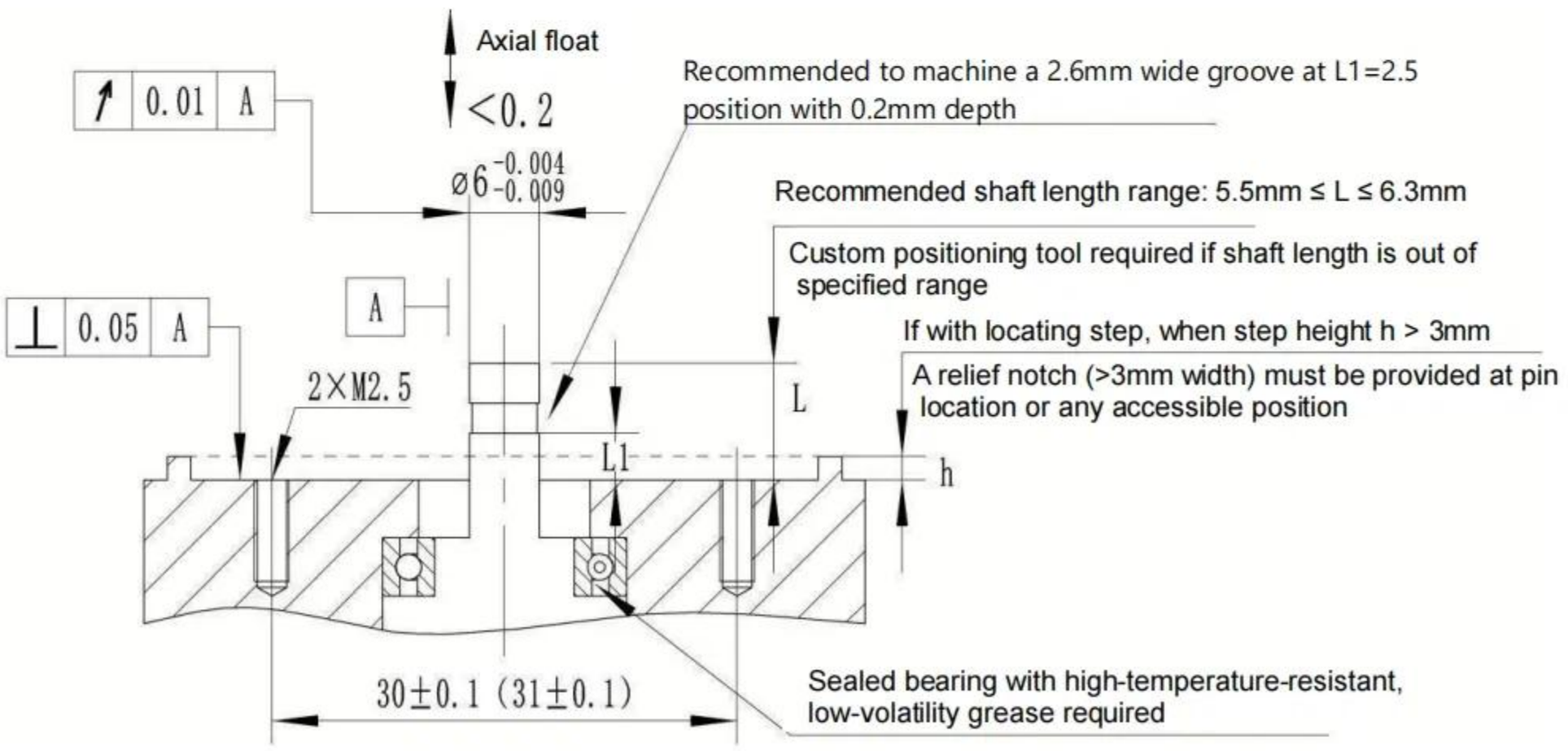




Note: Socket model SH1.0-8PWB

RSH3506 Mechanical Dimension Drawing

RSH3506 Recommended motor end dimensions:



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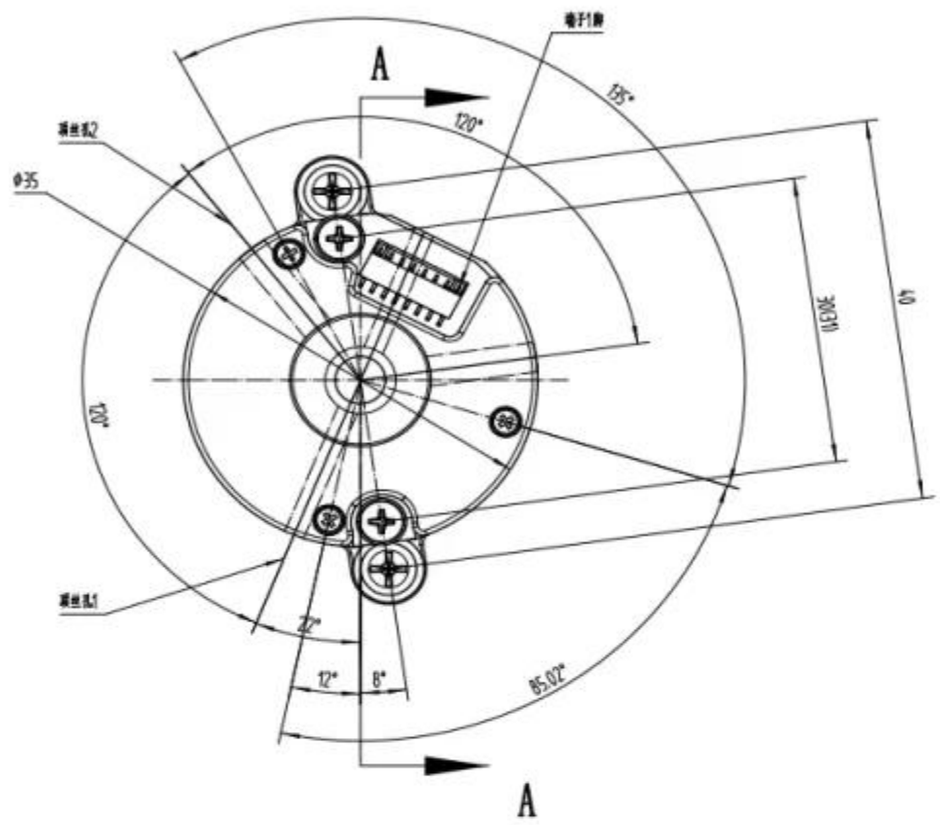

Note: Socket model SH1.0-8PWB

RSL35R06 Mechanical Dimension Drawing

RSL35R06 Recommended motor end dimensions: