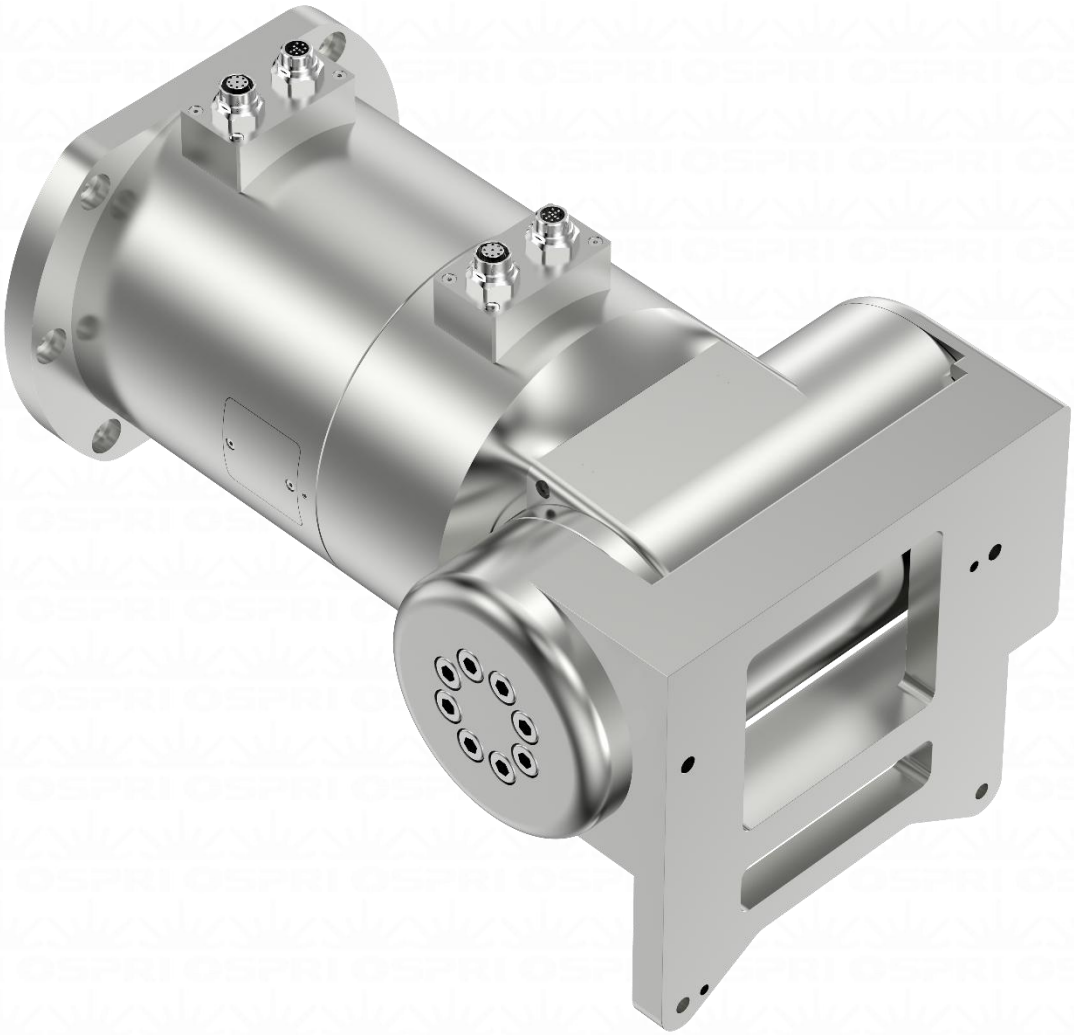
Planar double pendulum shaft User Manual (AB02-PC-H01)



Shenzhen Ospri Intelligent Technology Co., LTD

Foreword

Dear Users:

Welcome to use the Planar double pendulum shaft manufactured by Shenzhen Ospri Intelligent Technology Co., Ltd. It is our great honor to gain your trust in our products.

In order to make you have an overall view of the product, convenient for your use, we specifically provide the user manual for you, including product characteristics, structural feature, technical feature, direction for use, maintenance, etc. It's an essential guide when you use this product.

Please read the user manual carefully before use. I'm sure it will be helpful for you to use this product. In addition, if you have any questions during use, please contact us, and we will serve you wholeheartedly.

Declaration:

In order to ensure your safety and the product works normally, please read the guide book carefully before using.

Contents

Chapter 1 Overview

1.1 Product Parameter

① Product parameters, as shown in Table 1.0.

Name	Planar double pendulum shaft
Model	AB02-PC-H01
Suitable for cutting head	LCH/LCK series
Rated power of A shaft and B shaft	400W
A shaft action range	±45°
B shaft action range	±90°
Rated speed of A shaft and B shaft	30r/min
Angular acceleration of A shaft and B shaft	240rad/s²
Positioning accuracy of A shaft and B shaft	1arcmin
Weight	16Kg

Table 1.0

1.2 Cautions

① Please wear specialized laser safety goggles when Planar double pendulum shaft is used in conjunction with the cutting head to ensure personal safety.

② Please avoid touch and collision when Planar double pendulum shaft is running to prevent mechanical injury in order to ensure personal safety.

③ Please wear personal protective equipment when processing products using laser to prevent personal injury caused by laser beam.

Chapter 2 Structural Features

2.1 Brief Description of Product Structure

Brief description of product structure, as shown in Figure 2.0.

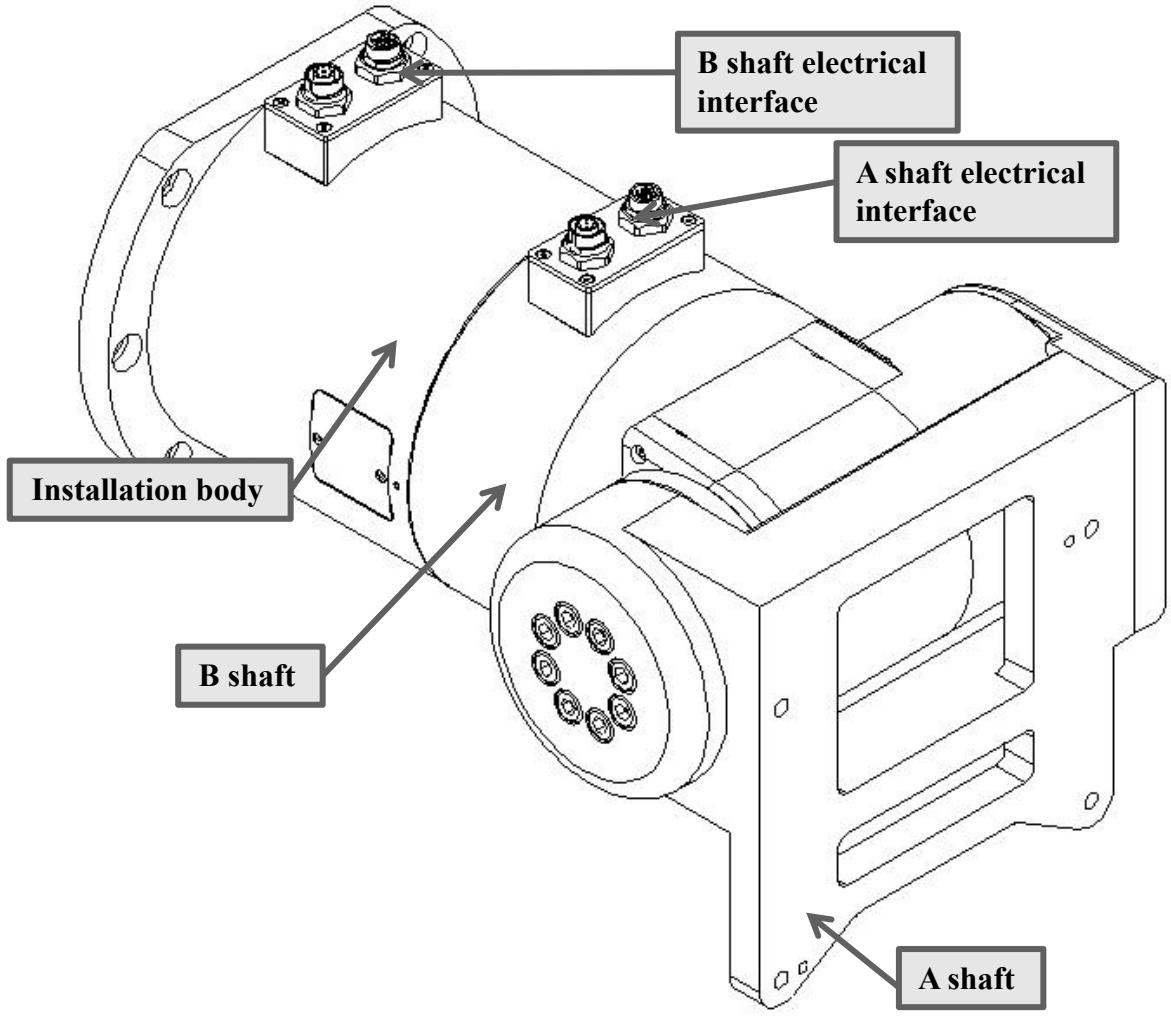


Figure 2.0

Brief description of product structure, as shown in Figure 2.1.

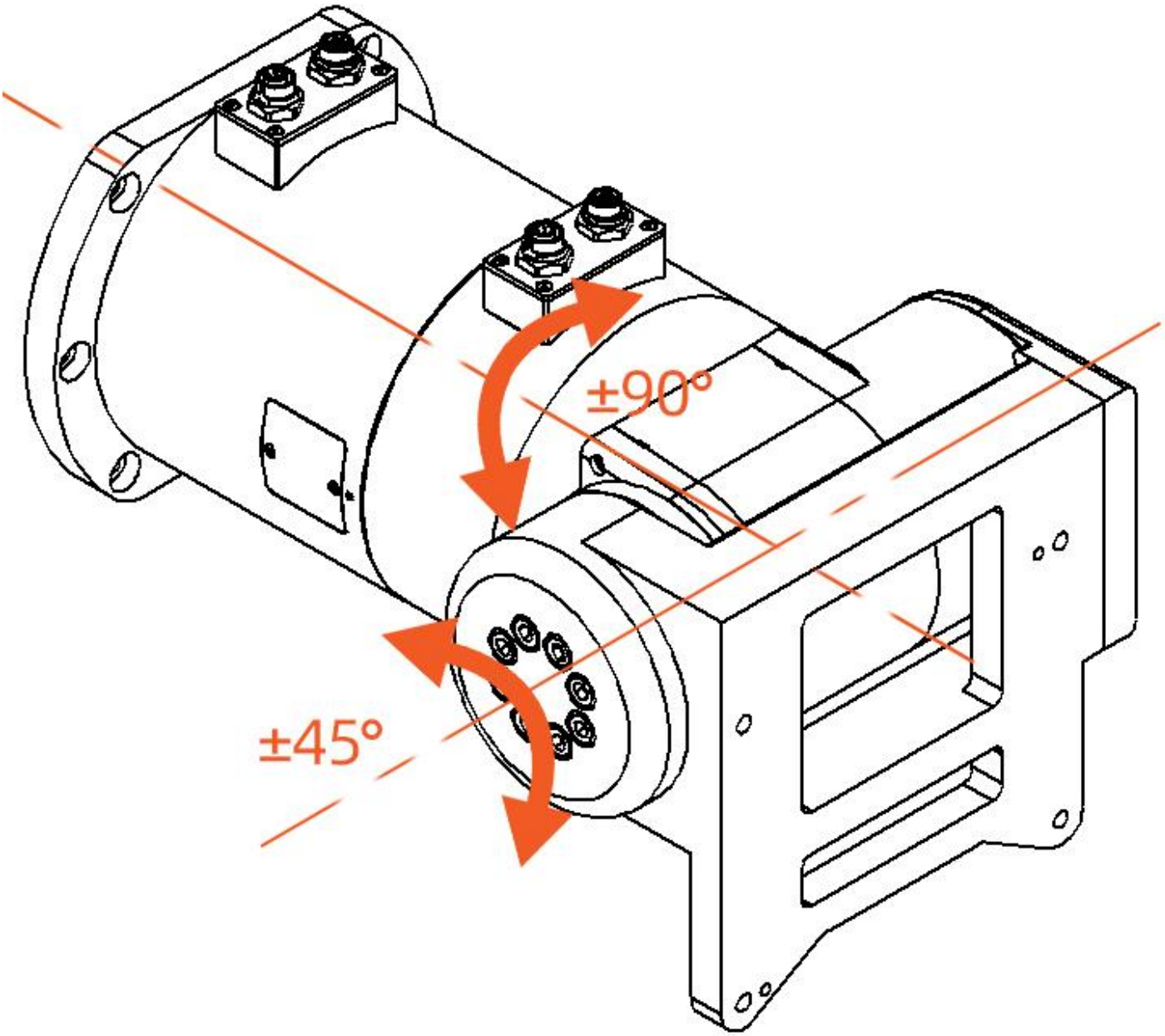


Figure 2.1

2.3 Parameters of Product Parts

Rotating part	Reducer model	Reduction ratio	Rated torque at input of 2000r/min	Maximum allowable speed during start and stop	Allowable maximum value of average load torque	Instantaneous maximum allowable torque	Maximum allowable input speed	Allowable average input speed	Backlash	Weight	Design life
			Nm	Nm	Nm	Nm	r/min	r/min	Arc sec	Kg	Hour
A shaft	25	100	84	194	133	351	5500	3500	≤20	1.48	15000
B shaft	32	100	169	411	267	800	4500	3500	≤20	3.2	15000

Figure 2.2

Chapter 3 Product Installation

3.1 Installation of Planar double pendulum shaft

Planar double pendulum shaft dimension diagram

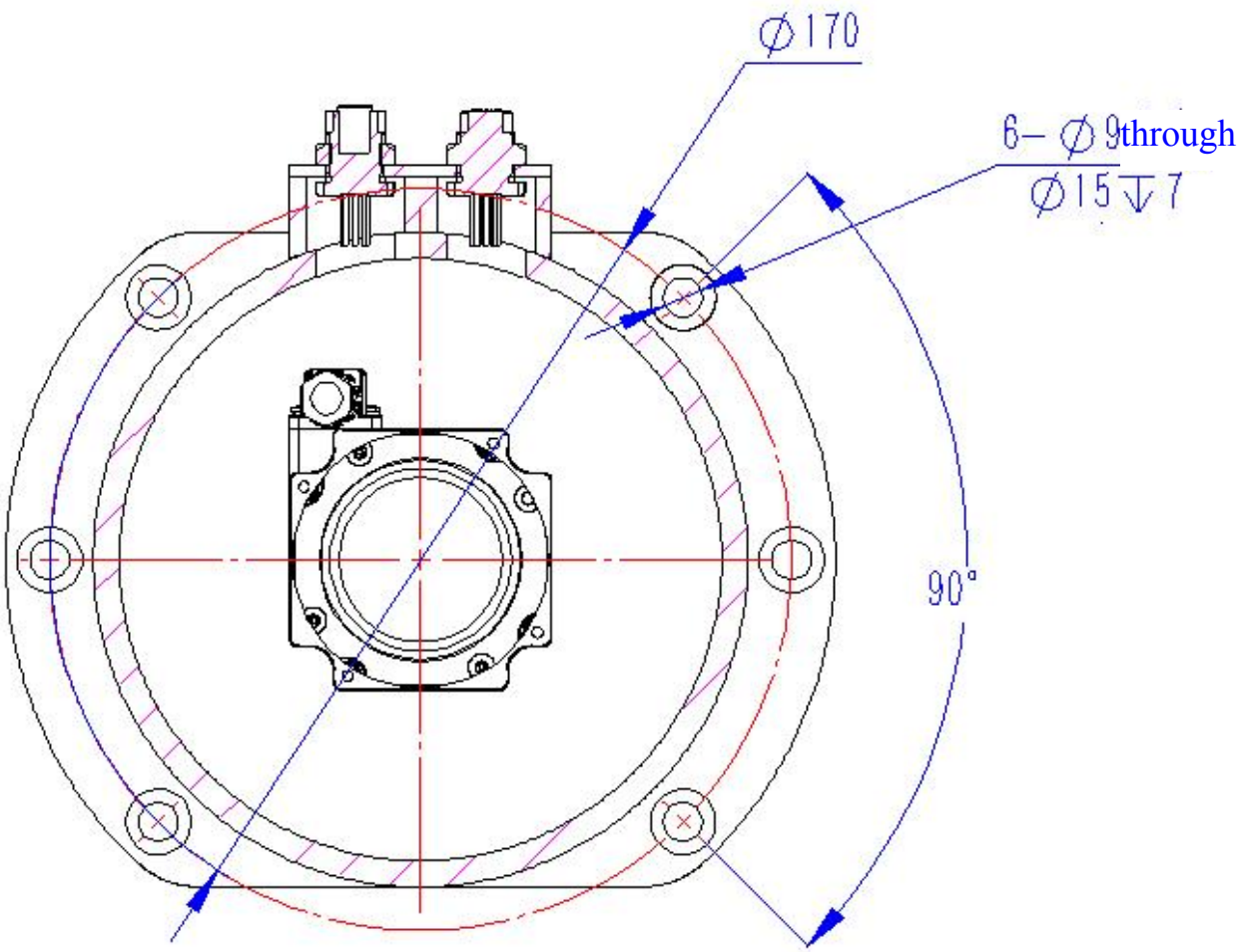


Figure 3.1

Installation dimension
diagram of cutting head

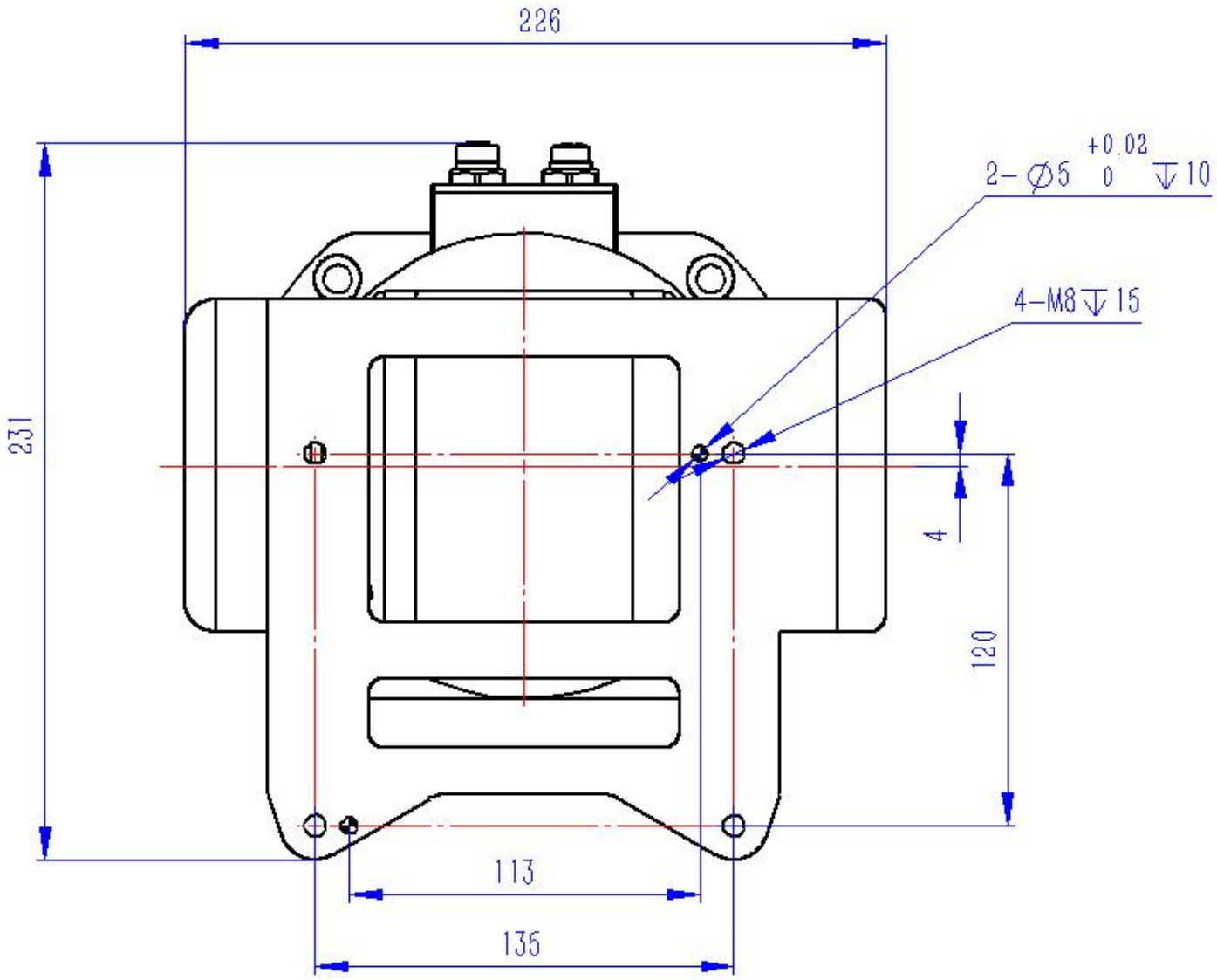


Figure 3.2

3.2 Dimension Diagrams

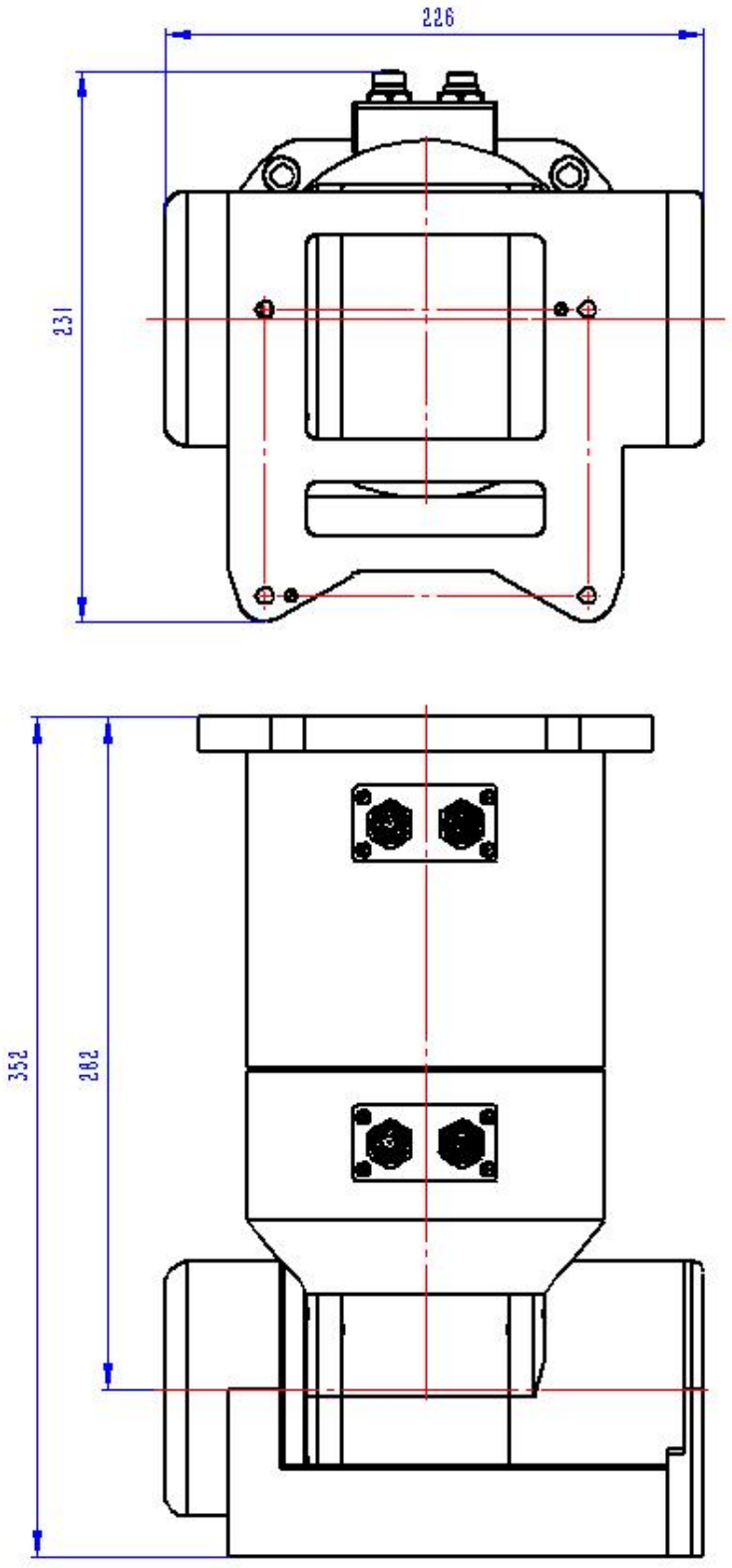


Figure 3.3

3.2 Definition of Planar double pendulum shaft Wiring

① Overview of Planar double pendulum shaft wiring.

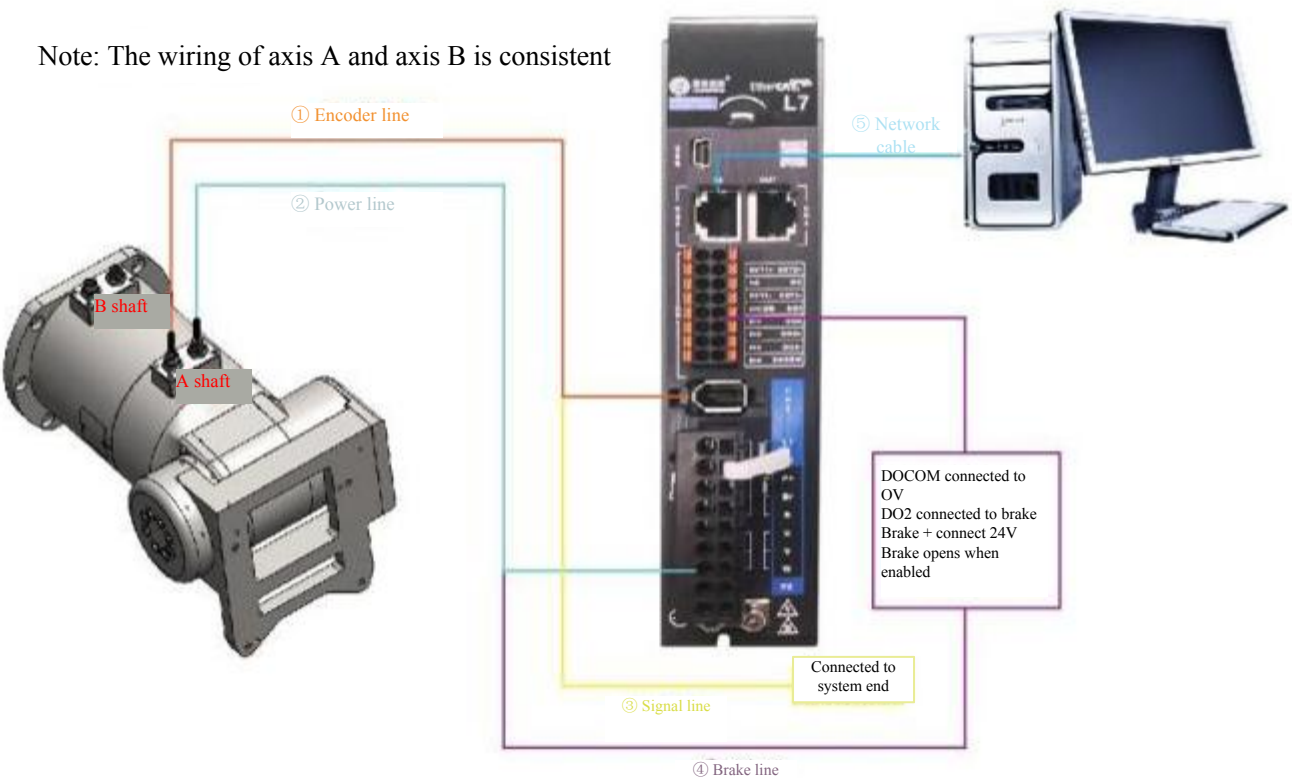


Figure 3.4

② Planar double pendulum shaft servo driver power supply wiring single-phase 220V connection method.

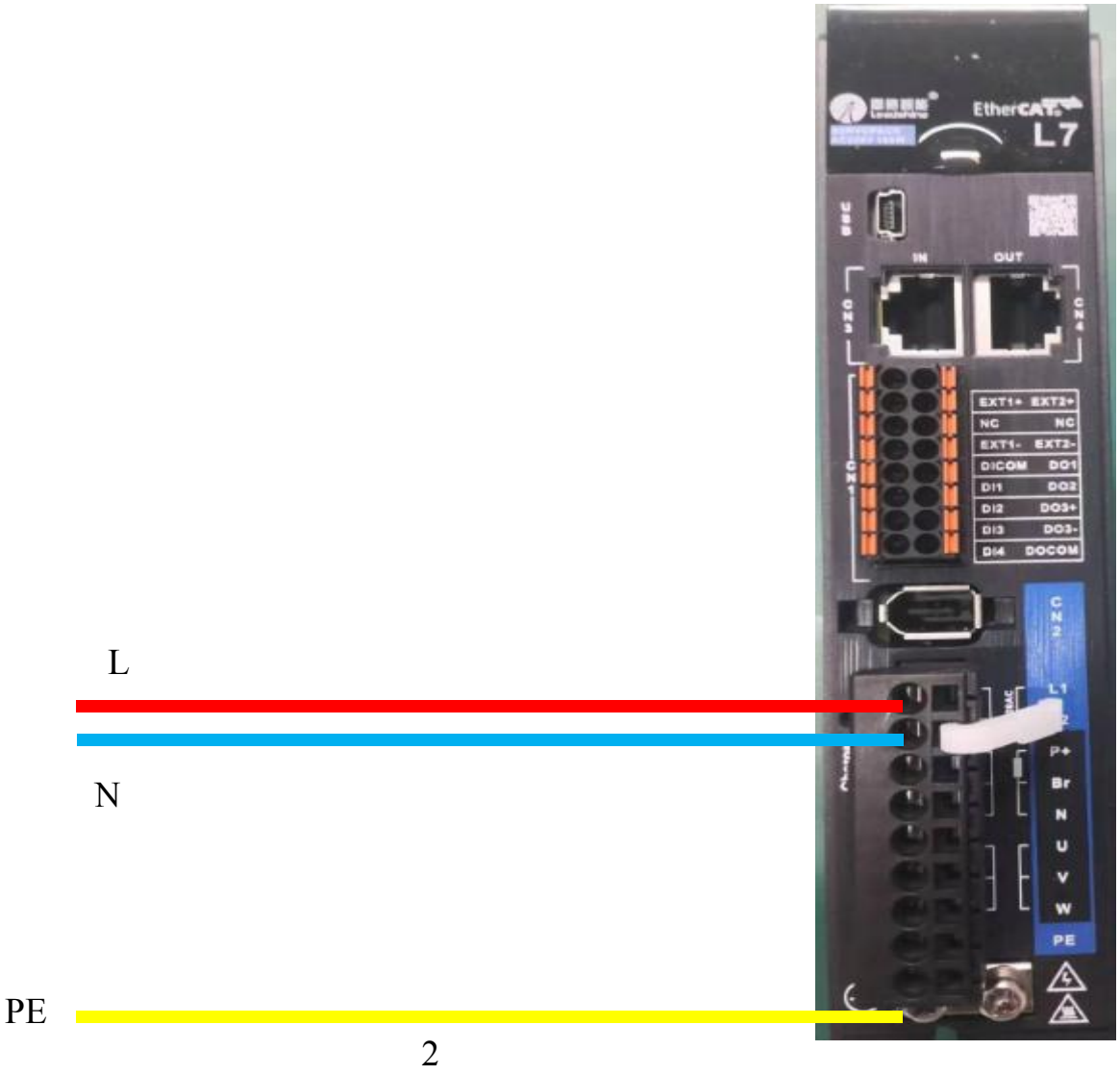


Figure 3.5

③ Planar double pendulum shaft signal wire wiring.

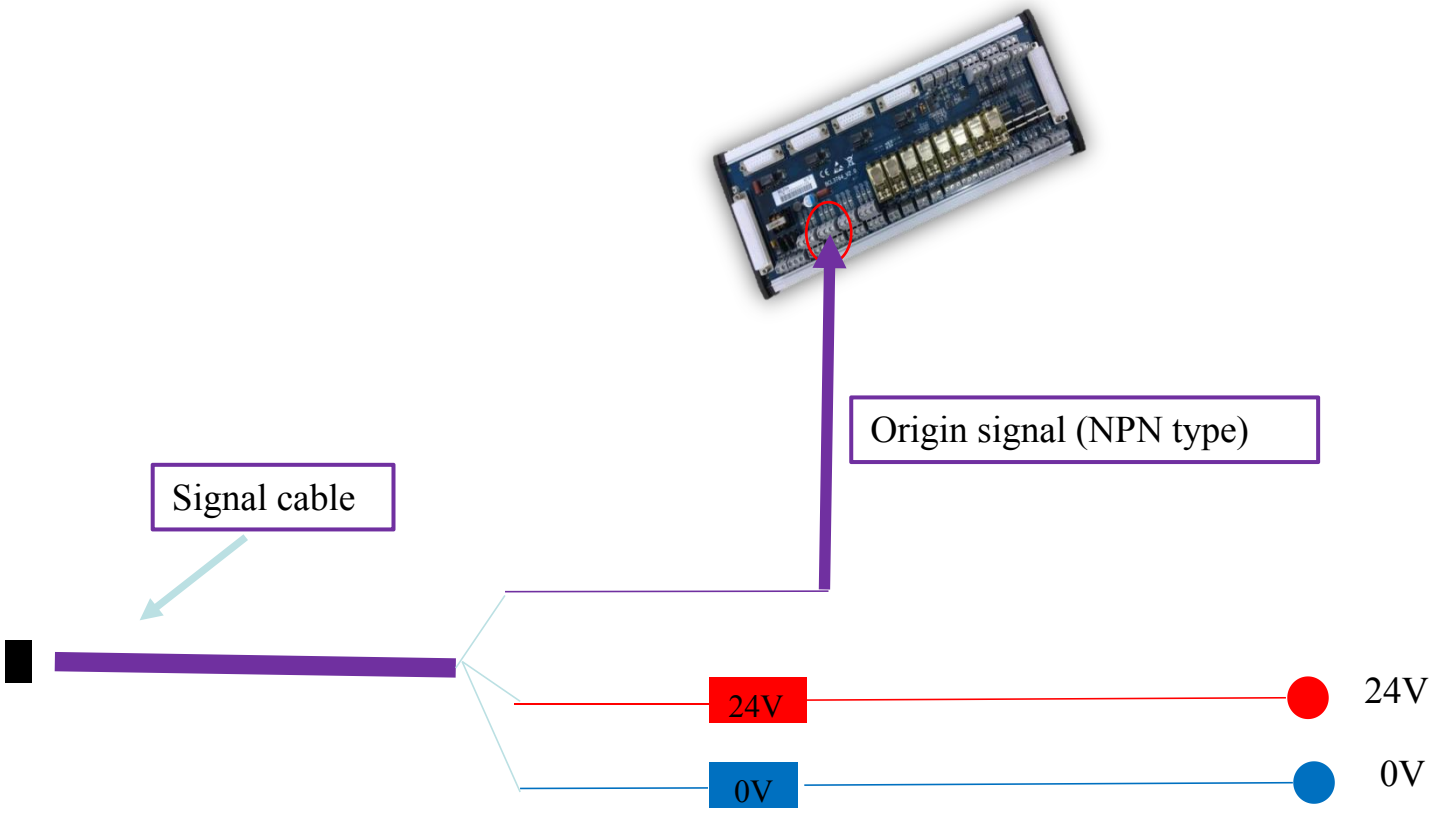


Figure 3.6

3.4 Planar double pendulum shaft Bus Driver Parameters

① Bus driver parameters

S/N	Value	Content
PA001	9	Control mode
PA003	18	Rigidity class
PA004	150	Inertia ratio
PA006	1	Motor rotation direction
PA008	10000	Number of pulses required per circle of motor rotation
PA011	2500	Number of output pulses per circle of motor rotation
PA023	5	Slave station
PA024	1	Slave station source

Table 3.1

Note: 1. If the master computer electronic gear ratio needs to be used, the numerator, the denominator and the reduction ratio should be set to 8388608, 10000, and 100, respectively.

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