



User Manual of Profile Steel Double Pendulum Shaft (ACU03-PC-H01)

Product Description



Foreword

Dear Users:

Welcome to use the Profile Steel Double Pendulum Shaft 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:

The contents of User Manual are protected by the Copyright Law. Without the approval of Shenzhen Ospri Intelligent Technology Co., Ltd, any organization or individual shall not copy or tamper it by any means and forms.

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 Parameters.....	01
1.2 Cautions.....	02

Chapter 2 Structural

Features

2.1 Brief Description of Product Structure	03
2.2 Brief Description of Action Range.....	04

Chapter 3 Product Installation

3.1 Installation of Profile Steel Double Pendulum Shaft (ACU03-PC-H01)	05
3.2 Wiring Definition of Profile Steel Double Pendulum Shaft (ACU03-PC-H01)	06

Chapter 1 Overview

1.1 Product Parameters

① Product parameters, as shown in Table 1.0.

Profile Steel Double Pendulum Shaft Parameters			
Suitable cutting head	LCH/LC81/LCM15B		
A-axis, C-axis rated power	400W	A-axis, C-axis positioning accuracy	1arcmin
A-axis, C-axis rated torque	100N·m	U-axis repetitive positioning accuracy	<0.01mm
A-axis, C-axis rated speed	37r/min	U-axis power	200W
A-axis, C-axis reduction ratio	81	U-axis stroke	60mm
A-axis range of action	±100°	U-axis maximum speed	250mm/s
C-axis range of action	±200°	Weight	13.5Kg

Table 1.0

1.2 Cautions

- ① Please wear specialized fiber laser safety goggles when profile steel double pendulum shaft is used in conjunction with the cutting head to ensure personal safety
- ② Please avoid touch and collision when profile steel double pendulum shaft is running to prevent mechanical injury to ensure personal safety.
- ③ Please wear personal protective equipment when processing products using laser to prevent personal injury caused by human body.

Chapter 2 Structural Features

Brief Description of Product Structure

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

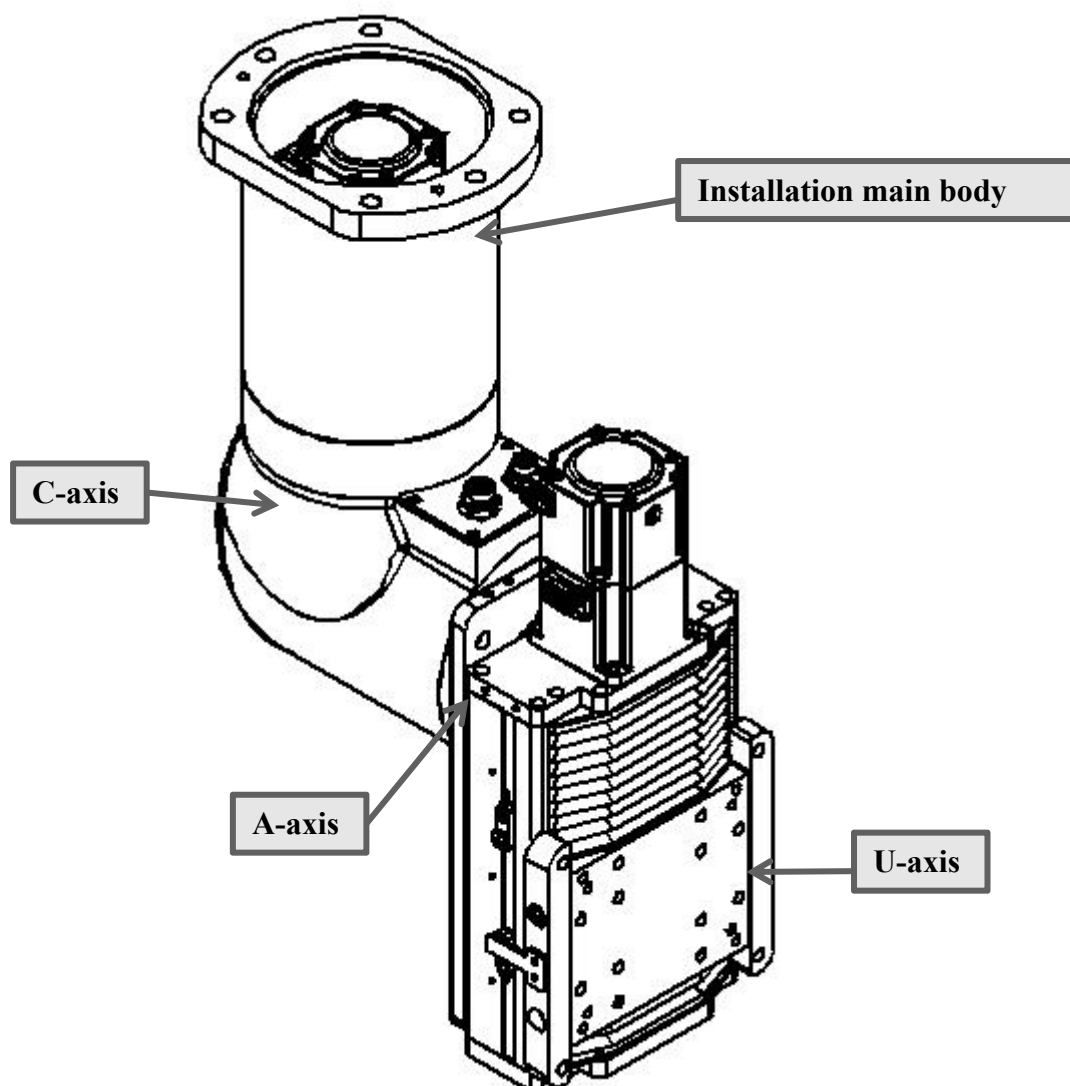


Figure 2.0

Brief description of range of motion, as shown in Figure 2.1.

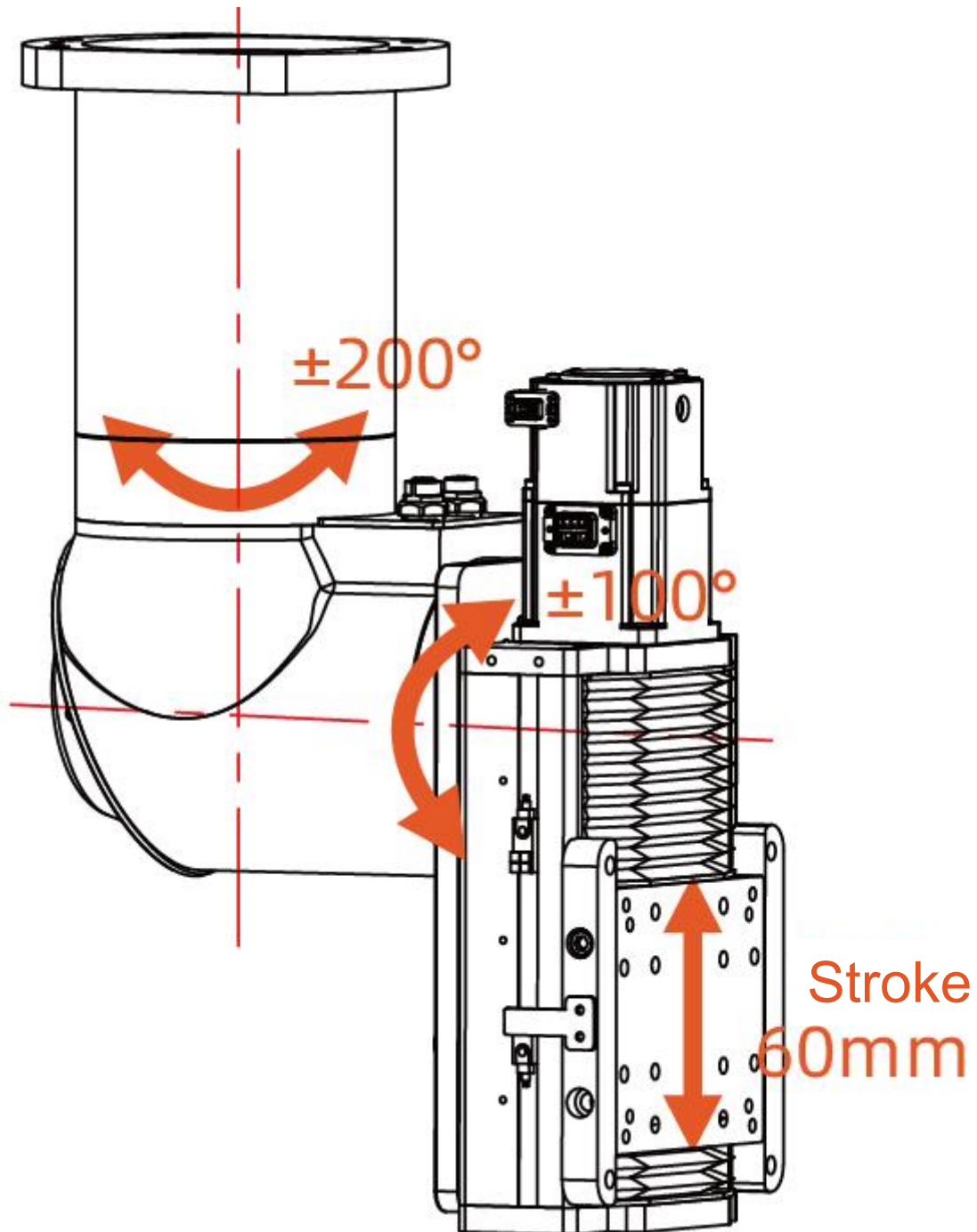


Figure 2.1

Chapter 3 Product Installation

3.1 Installation of Profile Steel Double Pendulum Shaft (ACU03-PC-H01)

ACU Axis Dimension Diagram

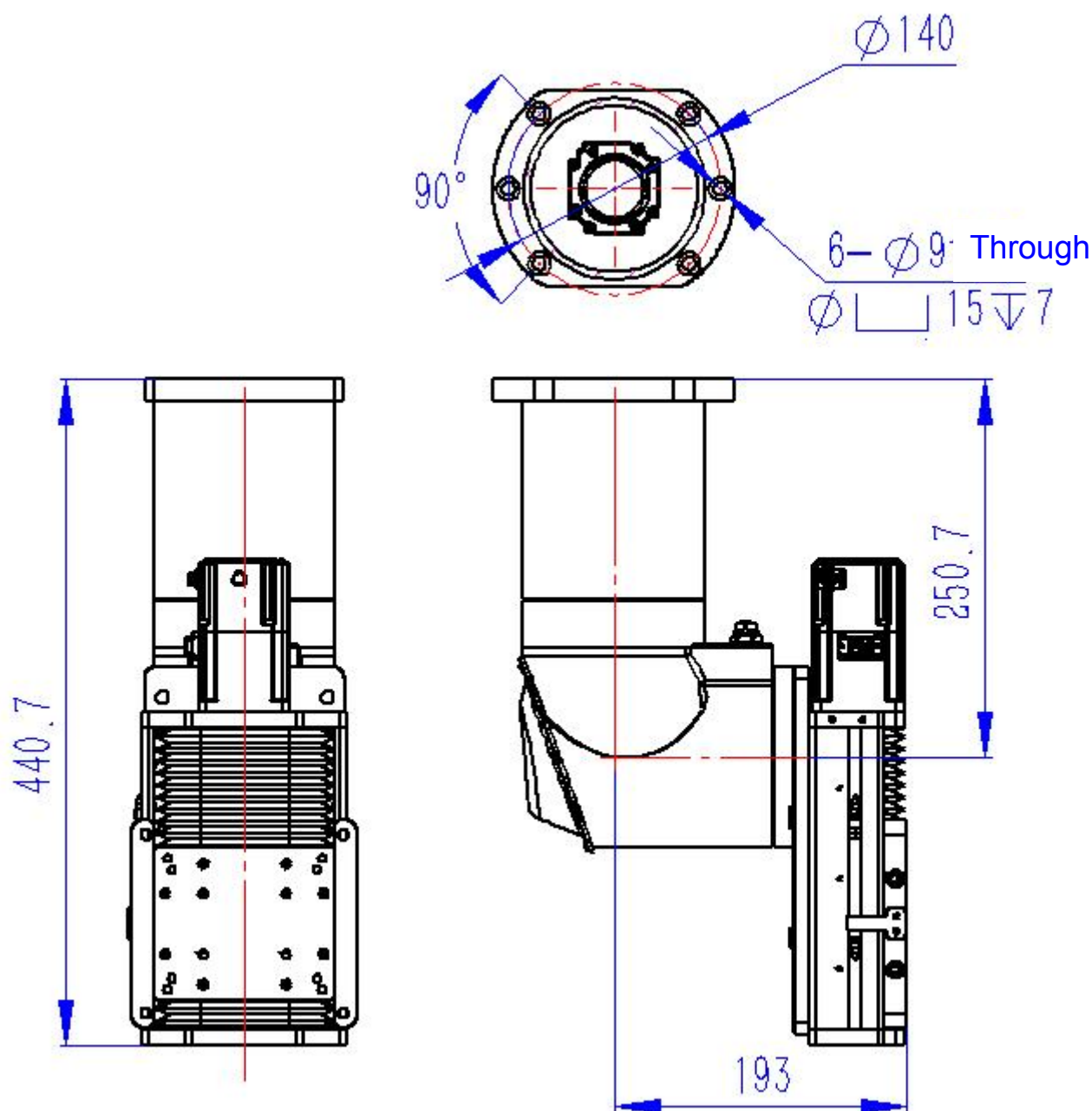
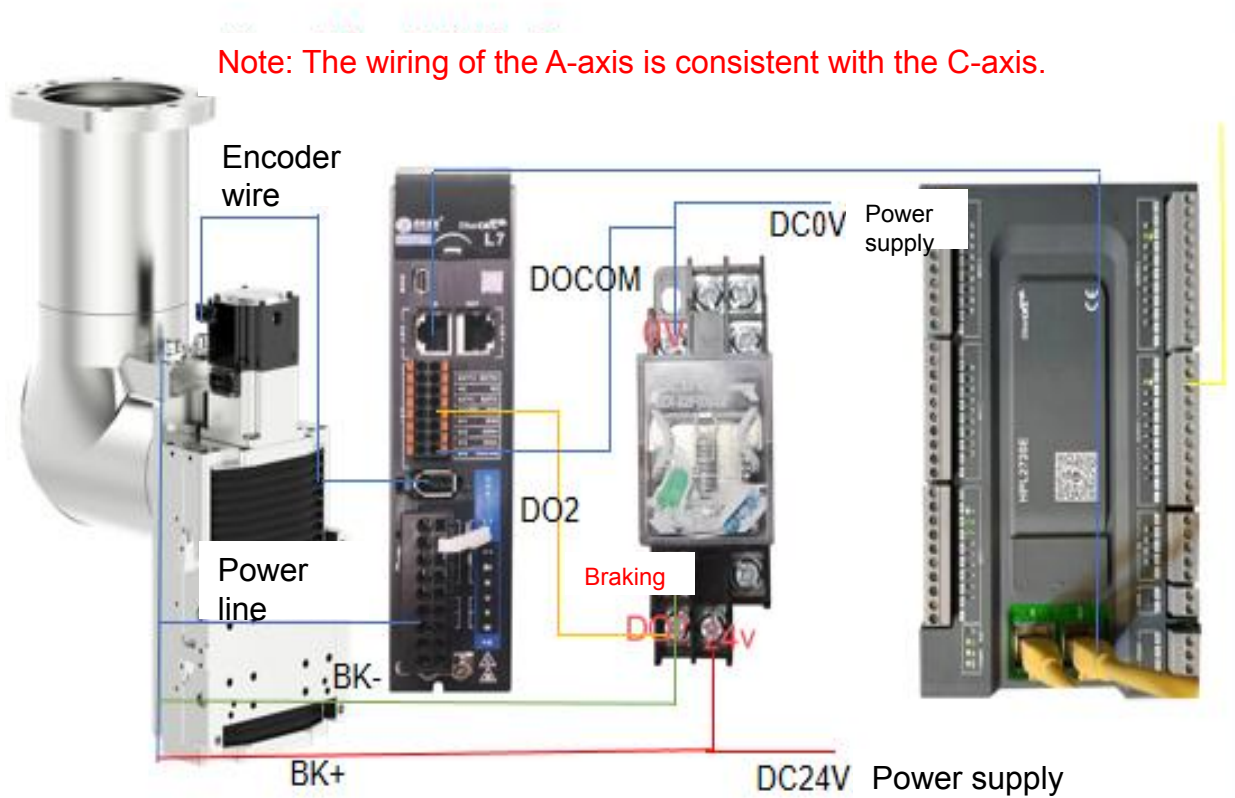


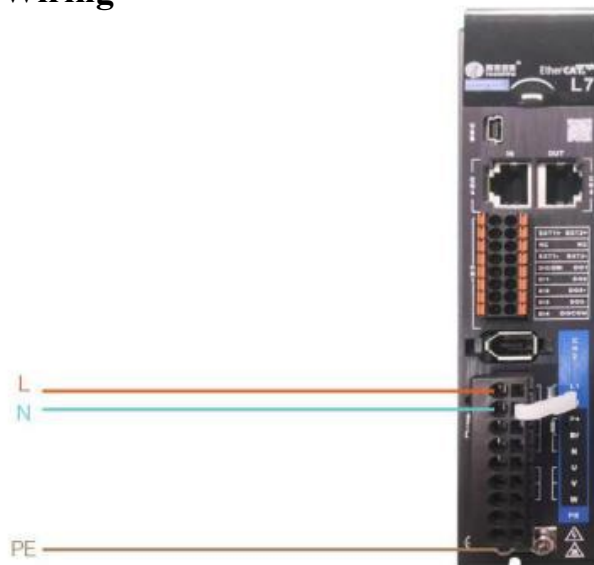
Figure 3.1

3.2 Wiring Definition of Profile Steel Double Pendulum Shaft (ACU03-PC-H01)

3.2.1 Overview of Profile Steel Double Pendulum Shaft Wiring



3.2.2 Servo Power Wiring



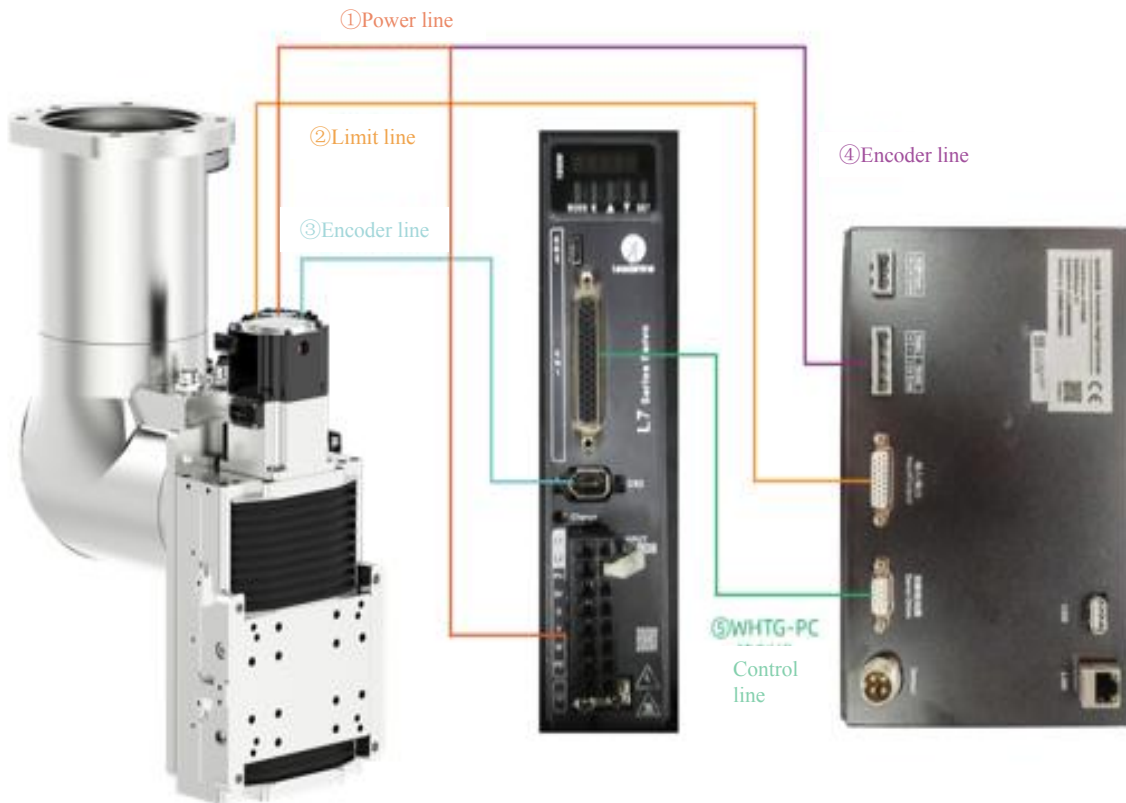
Driver power wiring (single phase 220V)

3.2.3 A/C Axis Bus Drive Parameters

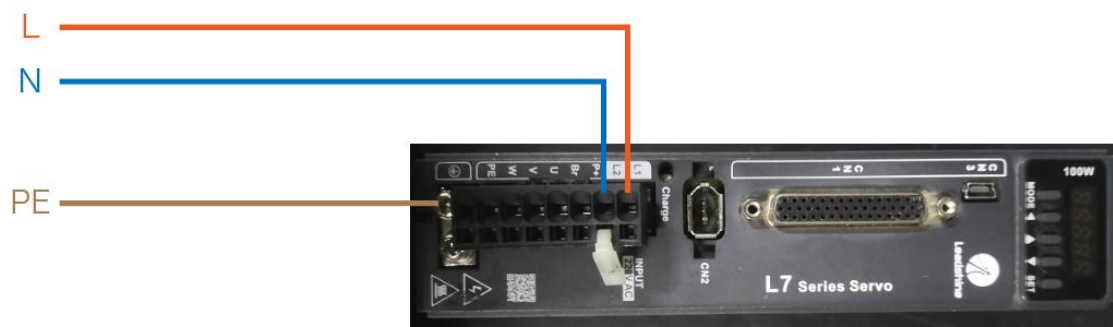
Parameter Index	Parameter Value	Parameter Content
PA001	9	Control Mode
PA003	18	Rigidity class
PA004	150	Inertia Ratio
PA006	1	Motor Rotation Direction
PA008	10000	Number of pulses required per circle of motor rotation
PA011	2500	Number of output pulses per circle of motor rotation
PA023	5	Slave
PA024	1	Slave Source

Note: The motor encoder has 23 bits, with a reduction ratio of 81; for first use, change PA015 to 1 to activate absolute mode; after restarting the driver, change PA015 to 9 to reset the multi-turn position.

3.2.4 Follow-up U-axis Wiring Overview (Analog Version)



3.2.5 U-axis Servo Power Wiring



Driver power wiring (single phase 220V)

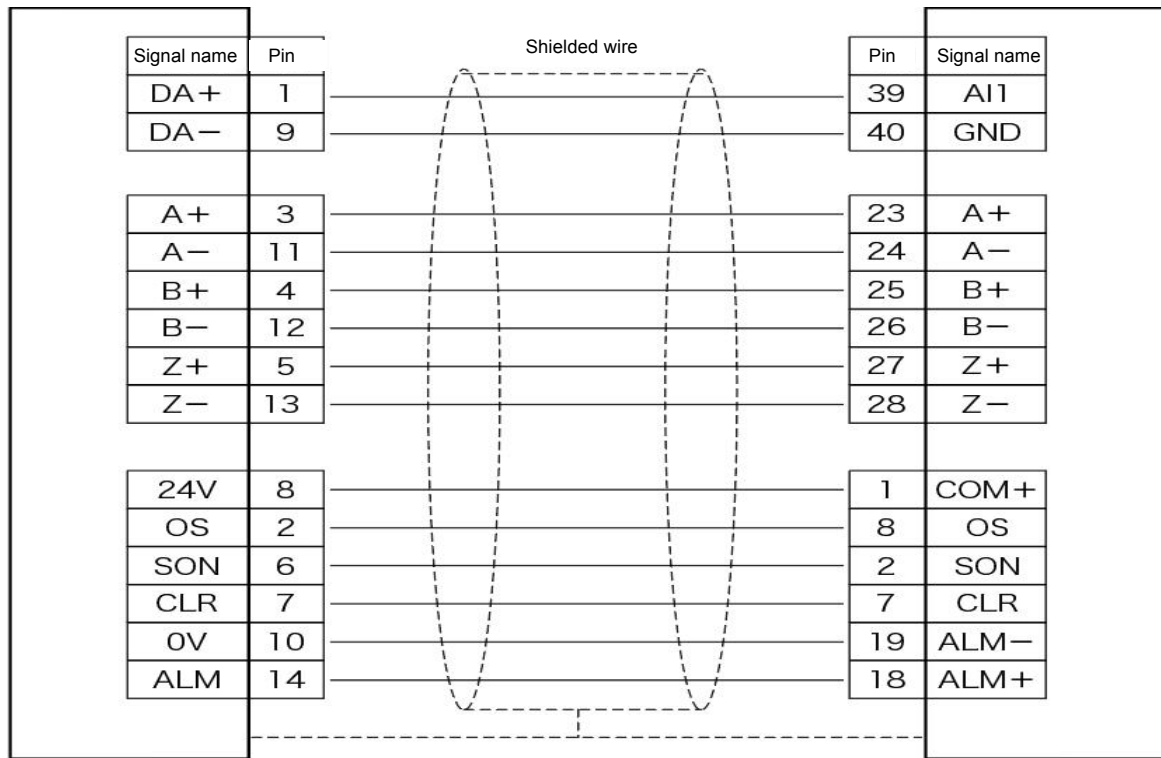
3.2.6 Motor Parameters

U-axis screw pitch is 5mm, pulses per revolution are 10,000.

3.2.6.1 WHTG-PC Wiring

WHTG servo control interface

PC control interface

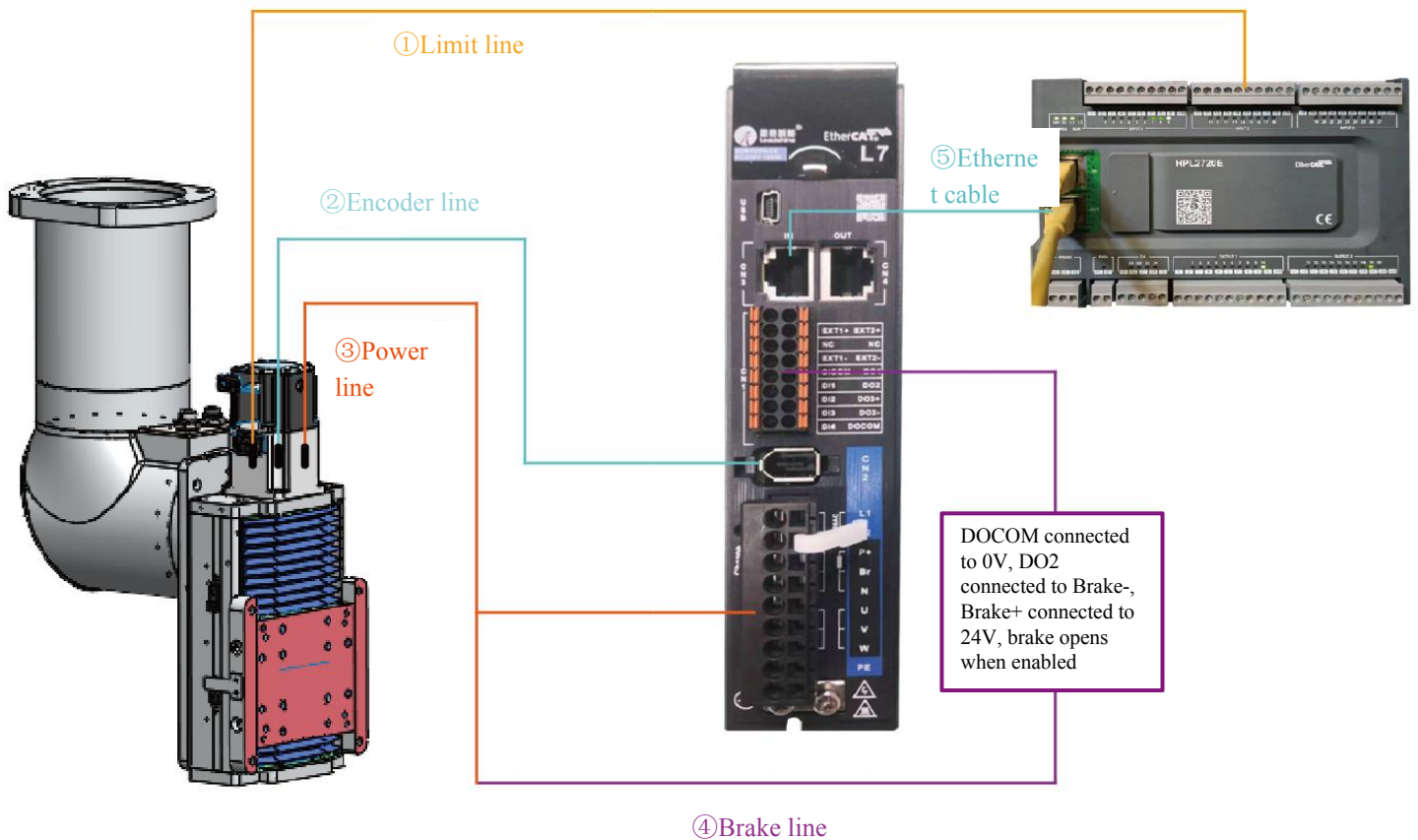


3.2.6.2 WHTG-PC Parameter Settings

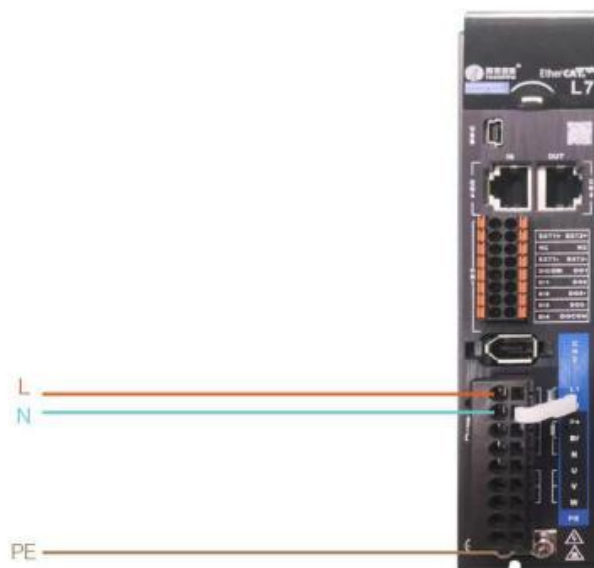
Parameter number	Parameter value	Parameter content
PA001	1	Speed mode
PA003	18	Rigidity level
PA004	150	Inertia ratio
PA008	10000	Number of pulses required per motor revolution
PA011	2500	Output pulse number per motor revolution
PA012	1	Encoder direction
PA300	0	Speed mode selection
PA303	1	Motor rotation direction
PA302	500	1V corresponding speed
PA312	0	Acceleration time
PA313	0	Deceleration time
PA315	1	Zero speed function selection
PA400	3	Servo enable
PA402	91	Zero speed clamp

During inching, if the system displays an alarm, but the drive has no alarm, change parameter value of PA402 to 11

3.2.7 Follow-up U-axis Wiring Overview (EtherCAT Bus Version)



3.2.8 Servo Power Wiring



Driver power wiring (single phase 220V)

3.2.9 Drive Parameters

Parameter Index	Parameter Value	Parameter Content
PA001	9	Control mode
PA003	18	Rigidity level
PA004	150	Inertia ratio
PA006	1	Motor rotation direction
PA008	10000	Number of pulses required per motor revolution
PA011	2500	Output pulse number per motor revolution
PA023	5	Slave
PA024	1	Slave source

Note: Motor encoder has 23 bits, screw pitch is 5mm.



Shenzhen Ospri Intelligent Technology Co.,Ltd

Tel: 0755-85225225

Fax: 4008266163-19300

e-Mail: mj.chen@sz-osprey.com

Add: Room 1001, Building A, No.4 Factory, Baolong Zhizaoyuan,
New Energy 1st Road, Baolong Community, Longgang District,
Shenzhen