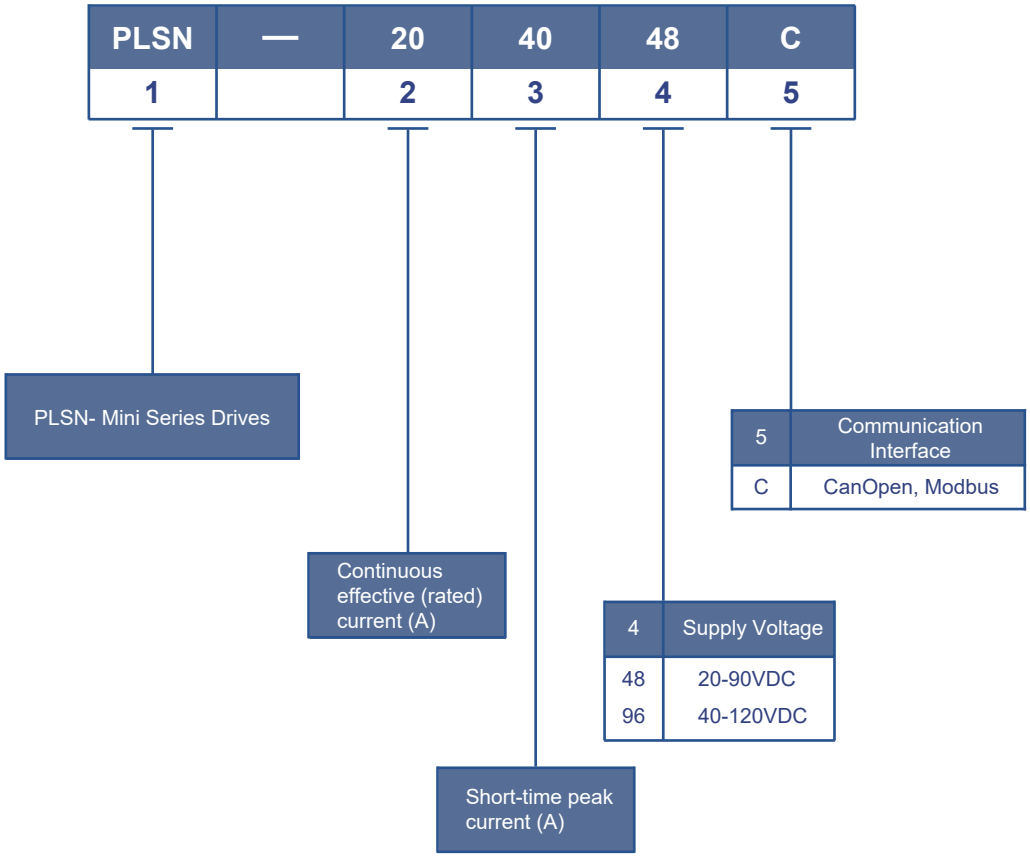
PLSN Series Mini DC Servo Drives

- **Can be used to drive low-voltage permanent magnet synchronous motors, DC brushless motors, DC brushed motors**
- **Support Modbus/CanOpen**
- **Supports incremental encoders, SSI/BISSB/BISSC absolute encoders, NRZ Tamagawa absolute encoders, Hall-signaled positions, and other encoders.**
- **Peak Current 60A**

PLSN Series DC Servo Drives Model Definition



Electrical Characteristics of IxLS Series Low Voltage Servo Drives

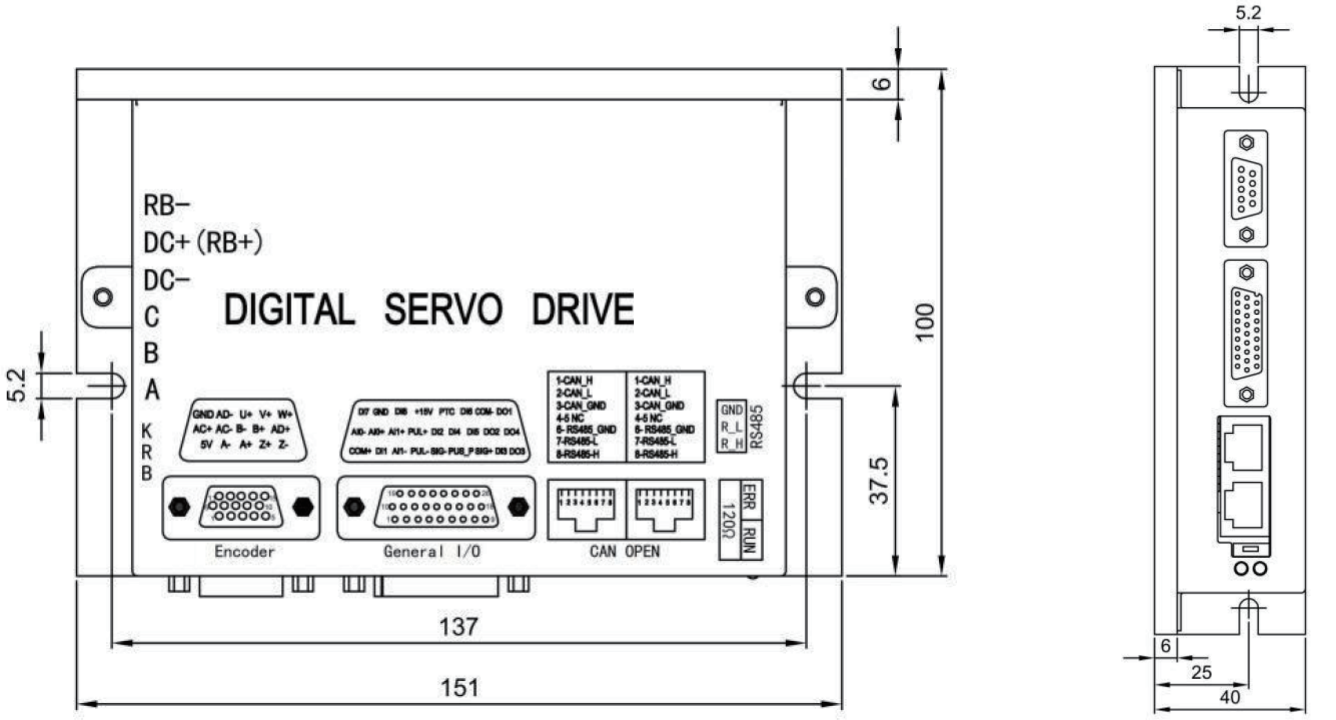
Model Number		PLSN-153048-C	PLSN-306048-C
Input Voltage Range		20-90VDC	
Maximum continuous output current (A)		15	30
Maximum output current (A)		30	60
PWM Frequency		10KHz	
Supported Motors		Permanent magnet synchronous motor (PMSM), brushless DC motor (BLDC), brush DC motor (PMDC)	
Input and output	Analog Input	2 analog inputs, -10V-+10V	
	Digital Input	8 digital inputs, 12-30VDC	
	Digital Output	4 digital outputs, open collector outputs	
Bus Function	Modbus	RS485 interface, standard Modbus protocol	
	CanOpen	Standard CanOpen protocol, CiA301/402	
	EtherCAT	Not have	
Encoder Interface		Incremental Encoder, SSI/BISSB/BISSC Absolute Encoder, NRZ Tamagawa Absolute Encoder, Hall Signal Position Feedback	
Control Characteristics	Control Method	Speed control (PV), torque control (PT), position control (PP), IP, CSP, CSV, CST	
	SBC&STO	Not have	
Matrix	Location	Indoors, out of direct sunlight, free of dust, corrosive gases, flammable gases, oil mist, water vapor, etc.	
	Ambient Temperature	-20°C to 50°C, derated for 40°C above	
	Altitude	The altitude of the place of use is less than 1000m, and above 1000m, it is used at a reduced level.	
	Humidity Level	Below 95% RH, no water condensation	
	Vibratory	Less than 0.5G (4.9m/s2), less than 10Hz	
	Storage Temperature	-40℃-70℃	
	Cooling method	Natural cooling	
Weight (kg)		0.6	2.75

PLSN Series Low Voltage Drives Selection Chart (CANOpen)

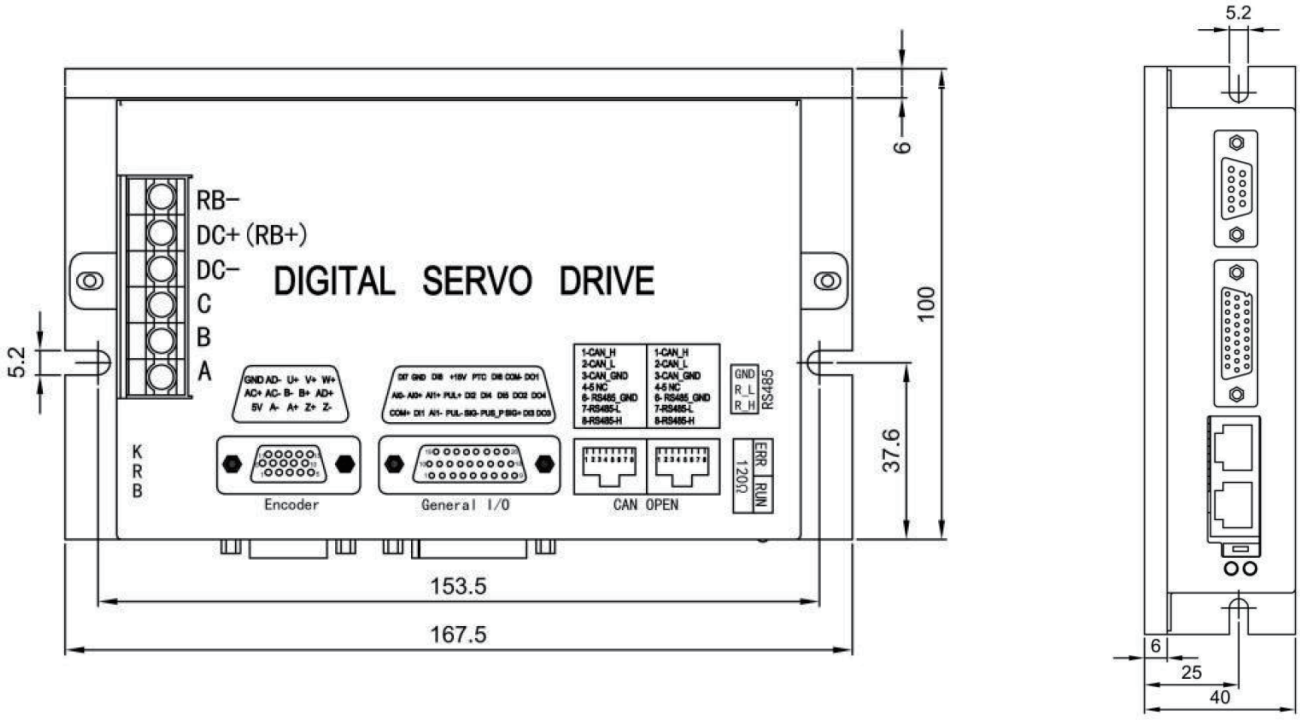
Drive Ordering Number	Input Voltage	Rated Current (A)	Peak Current (A)	Encoder Support	Control Mode	Safety Function (SBC&STO)	Operating Temperature
PLSN-153048-CS	20-90VDC	15	30	Incremental Encoder Single Hall Signal SSI/SSB/BISSC protocol absolute value NRZ Tamagawa Protocol Absolute	Analog Pulse Modbus CanOpen	Not have	-40°-50°
PLSN-306048-CS	20-90VDC	30	60				

Drive Dimension and Terminals

- PLSD2040 & PLSS2040 Size

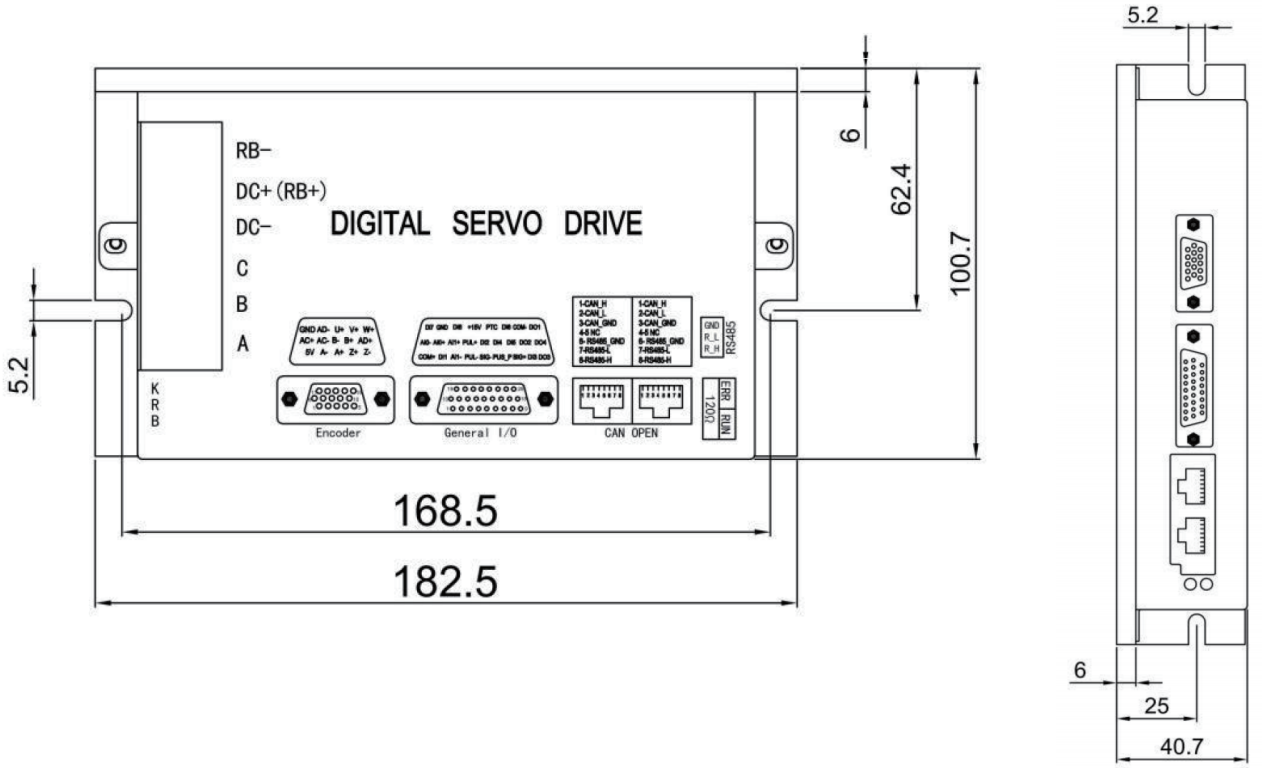


- PLSD3060(PLSD2550) & PLSS3060(PLSS2550) Size

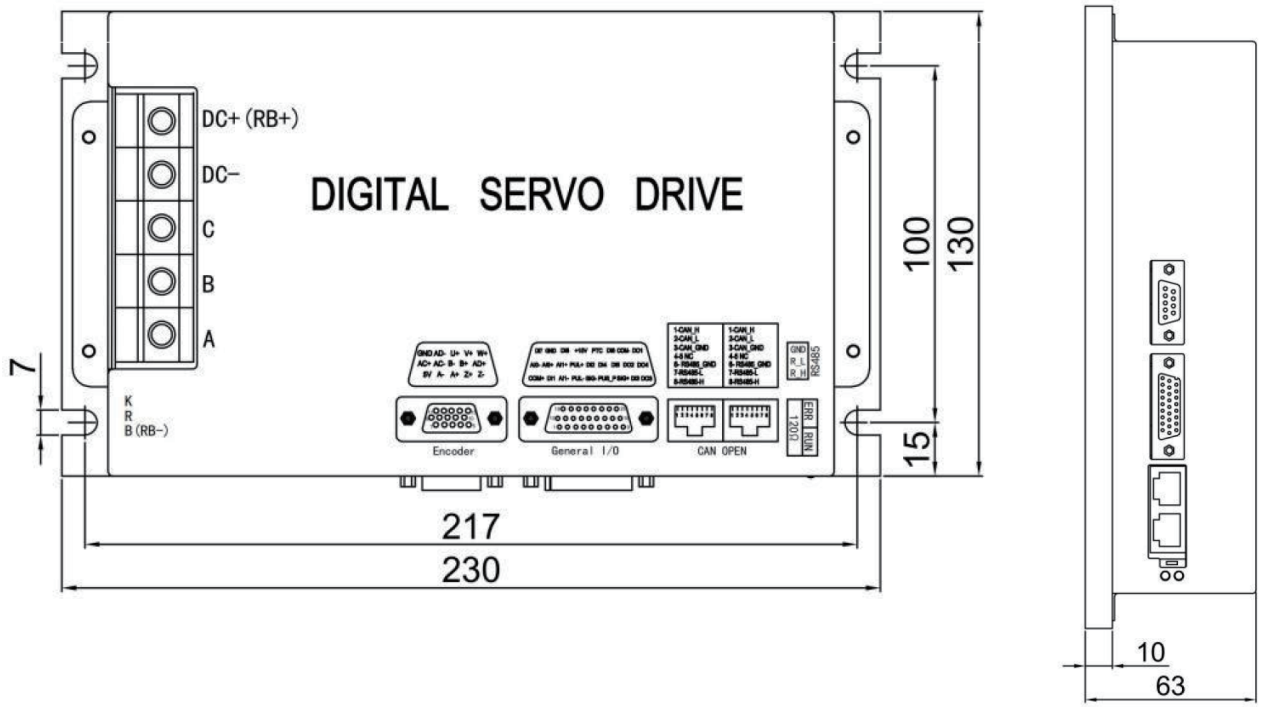


Drive Dimension and Terminals

● PLSD4080(PLSD3570) & PLSS4080(PLSS3570) Size

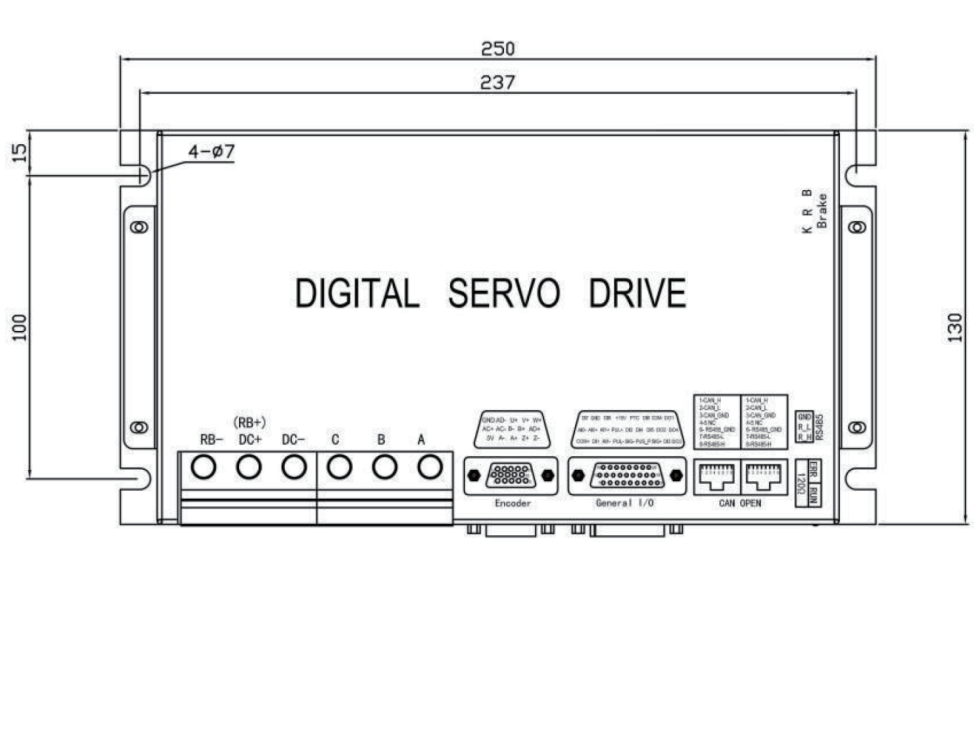


● PLSD80160(PLSD50100) & PLSS80160(PLSS50100) Size

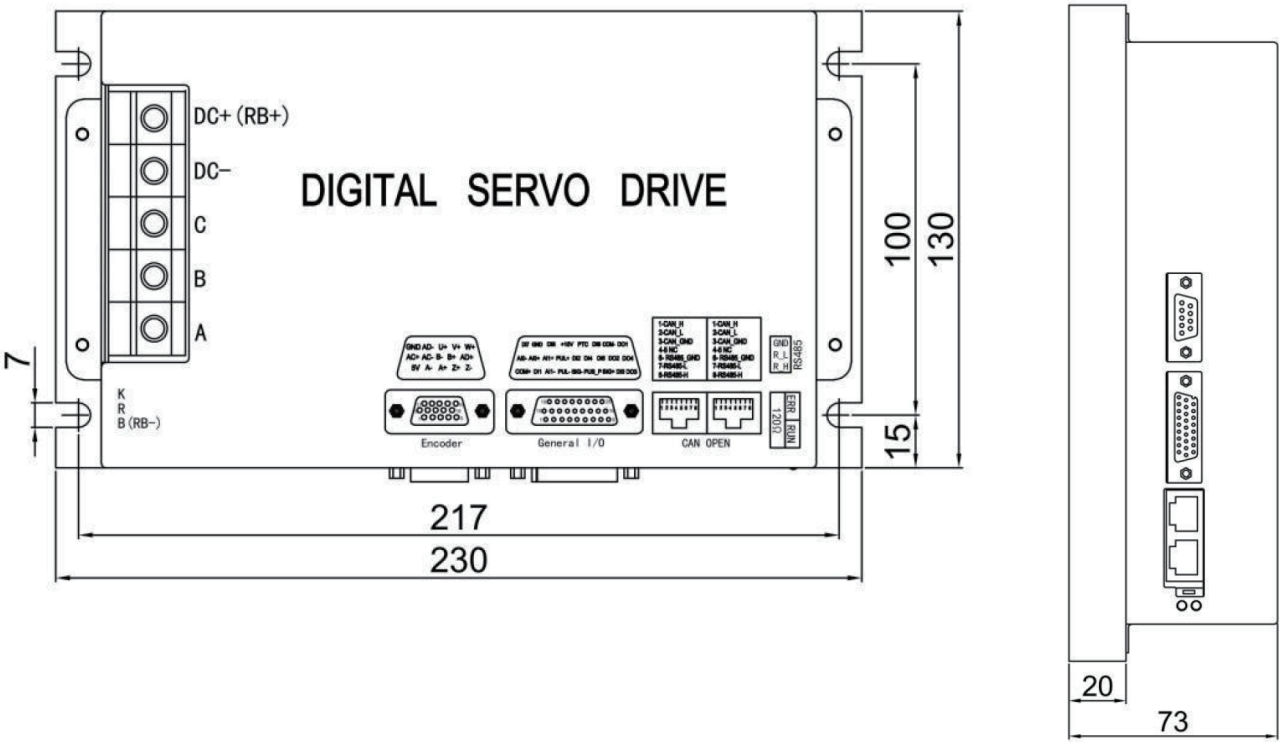


Drive Dimension and Terminals

- PLSD95200(PLSD70140) & PLSS95200(PLSS70140) Size

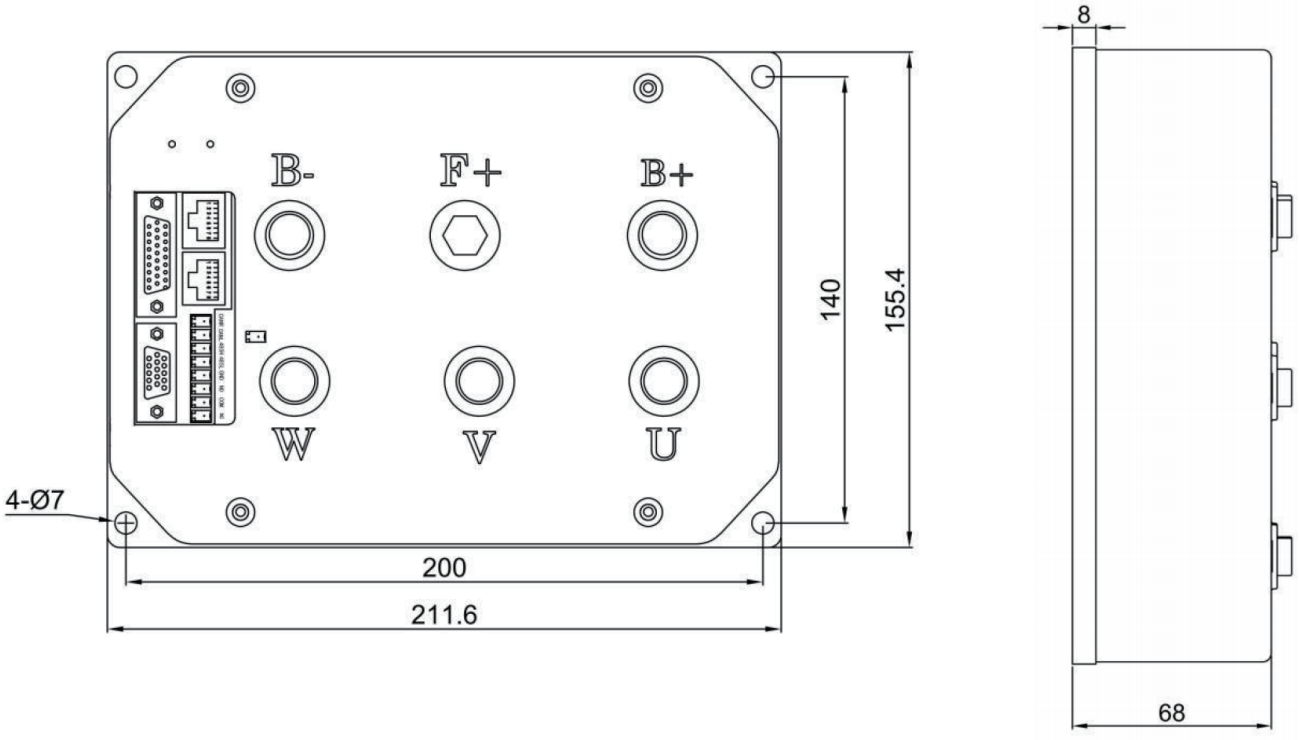


- PLSD100200 & PLSS100200 Size

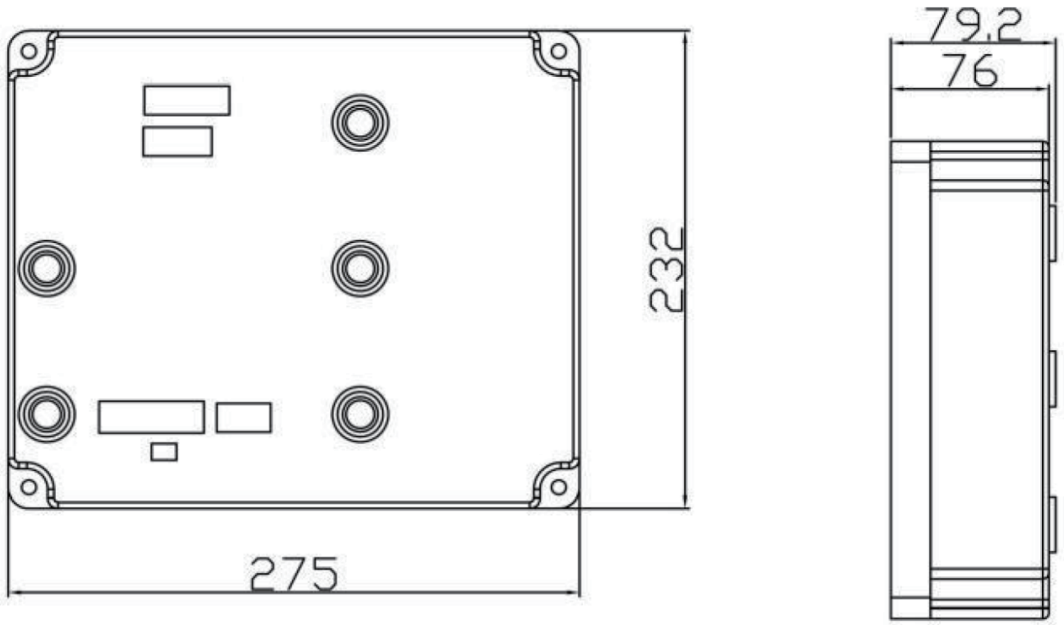


Drive Dimension and Terminals

● PLSD150300 & PLSS150300 Size

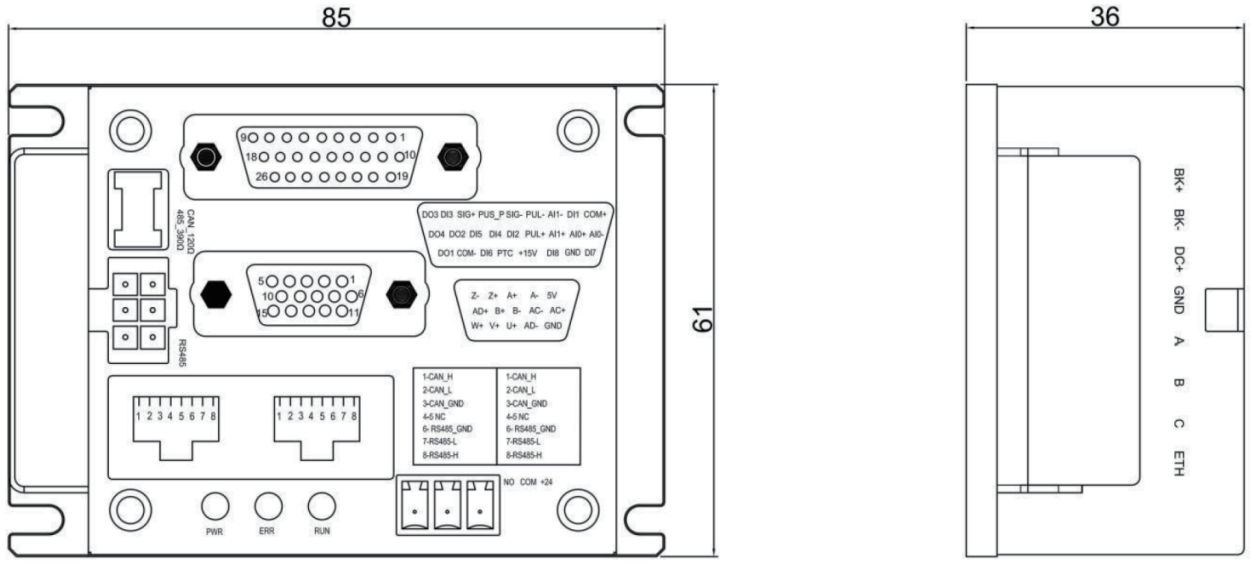


● PLSD250500 & PLSS250500 Size

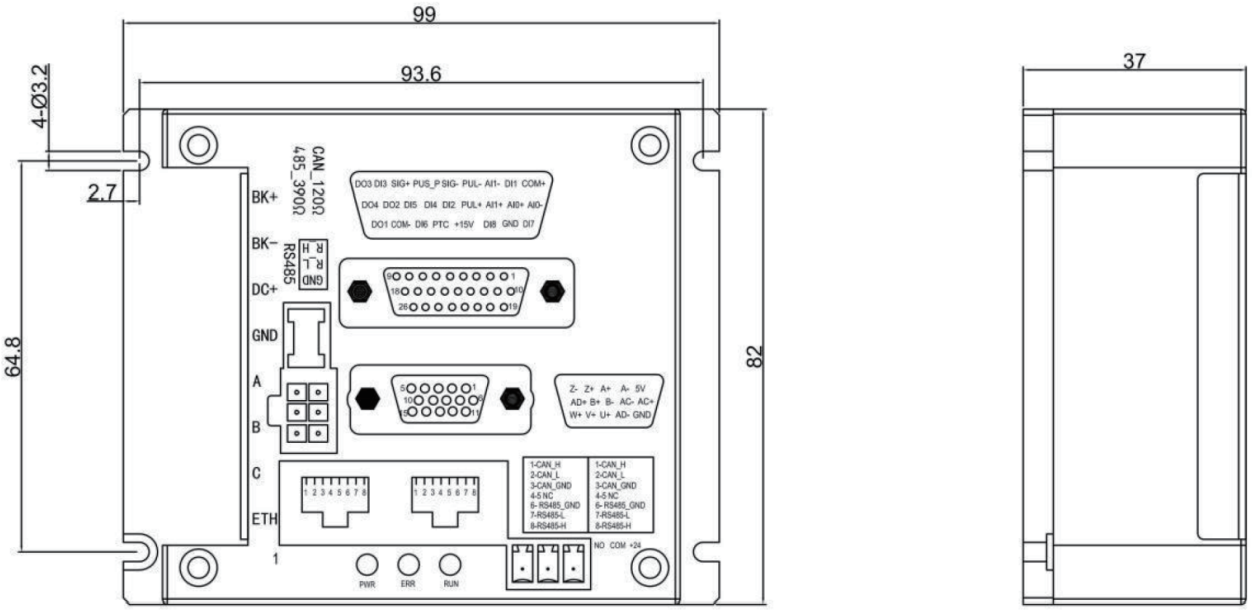


Drive Dimension and Terminals

● PLSN1530 Size



● PLSN3060 Size



Installation Precautions

(1)The servo drive is base-mounted. Improper installation may lead to malfunction. Please install correctly according to the following precautions.

(2)Please install it in a well-ventilated place. To facilitate the heat dissipation of the drive, vertical installation is generally adopted;

(3)The allowable ambient temperature for operation of the drive is 0℃~50℃, but if the ambient temperature is higher than 40℃, the maximum continuous output current should be reduced by 20% for every increase of 10℃, and ventilation and heat dissipation should be strengthened;

(4)The humidity requirement of the installation place is lower than 95%, with no condensation;

(5)It is not allowed to install the drive where there is a lot of dust and metal powder;

(6)It is not allowed to install the drive where there are corrosive and explosive gases;

(7)Install the drive where the vibration is less than 0.5G (4.9 m/s2), and the vibration frequency is lower than 10Hz;

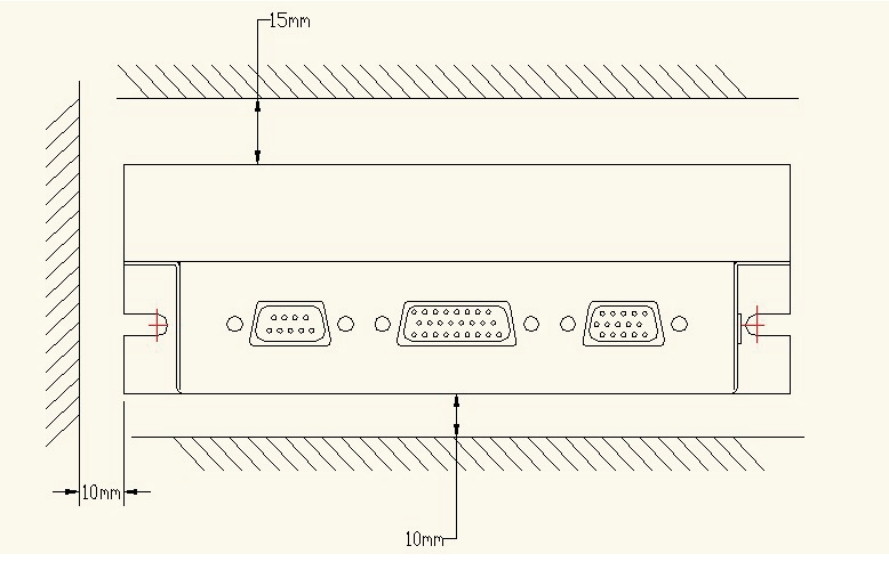
(8)Install the drive where there is no direct sunlight;

(9)The altitude is preferably lower than 1,000m . If it is higher than 1,000m , the maximum continuous output current of the drive shall be reduced by 3% for each increase of 100m.

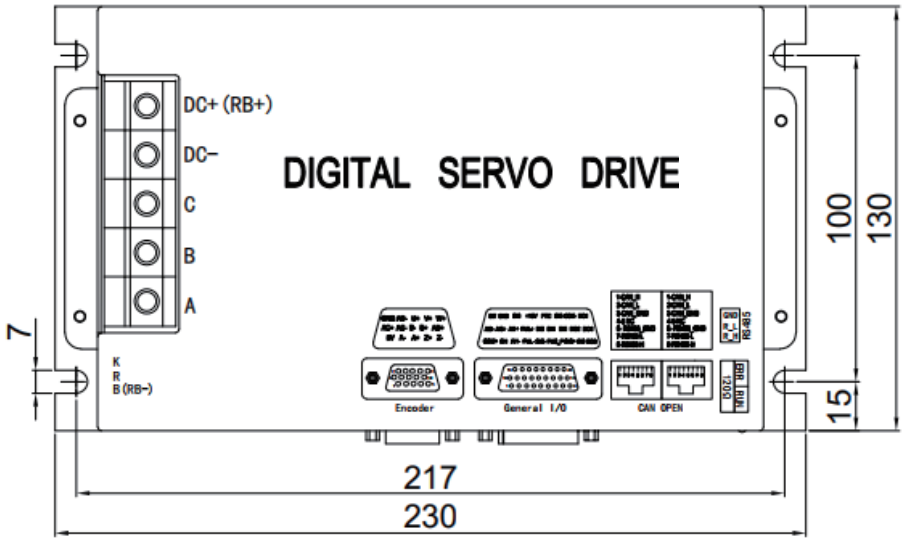
(10)If the continuous running current of SIZE1/SIZE2 drives exceeds 15A, the continuous current of SIZE3 drives exceeds 30A, and that of SIZE4 drives exceeds 50A, it is necessary to provide an external radiator or install the drives on metal shells, and apply heat-radiating silica gel or cooling pads between the drives and the shells.

5.Installation of the Driver

SIZE:PLSD2040/PLSD3060(PLSS2550)/PLSD4080(PLSD3570) drive are shown in the following figure:



SIZE:PLSD&PLSS80160(PLSD50100) drive are shown in the following figure:

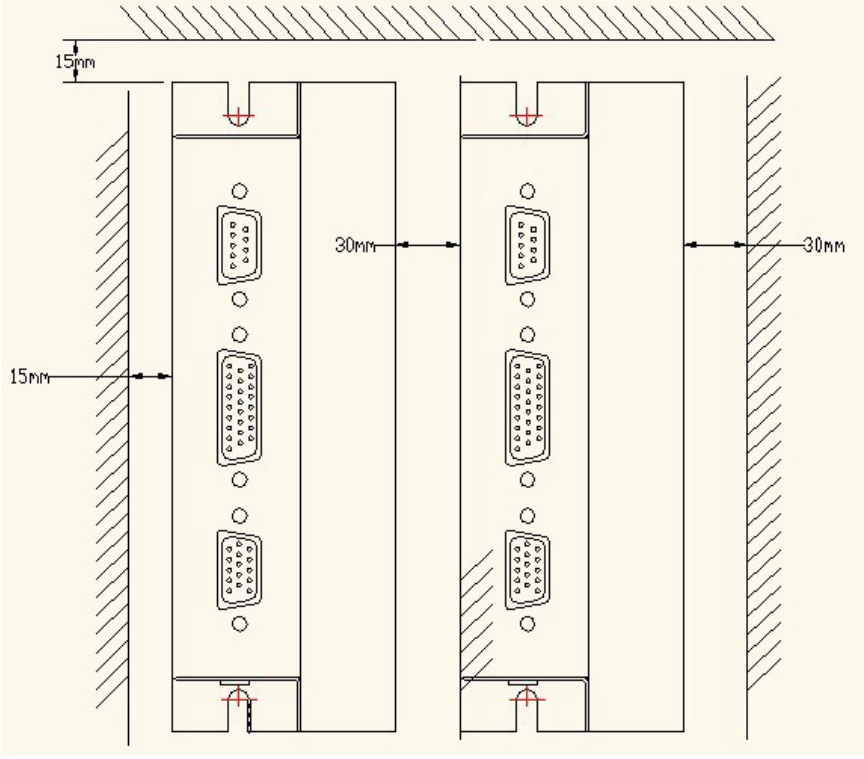


Note:

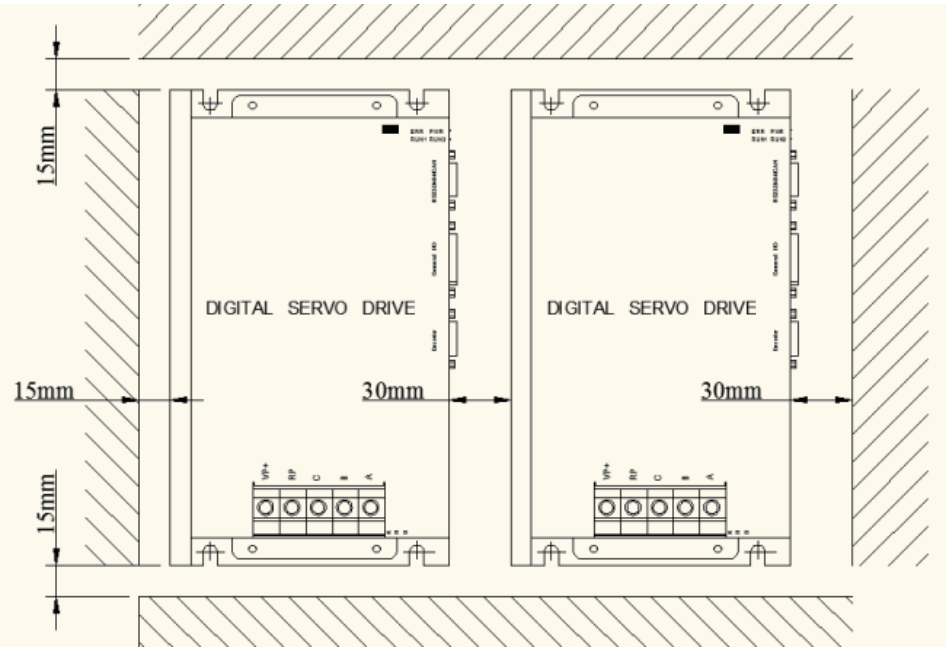
SIZE:PLSD80160(PLSD50100, PLSS50100)/PLSD150300, PLSS150300 drives need to use an external radiator or external casing for heat dissipation due to their large current. Pay attention to installing an external radiator during the installation of the drive, and apply heat-radiating silica gel or cooling pads between the drive and the external radiator.

If there are multiple controllers installed in the mechanism, they should be installed side by side, and equipped with air inlets, air outlets and special cooling fans.

SIZE:PLSD2040,PLSS2040/PLSD3060,PLSS3060(PLSS2550) drives are shown in the following figure:



SIZE:PLSD&PLSS80160(PLSD&PLSS50100)/PLSD&PLSS150300 drives are shown in the following figure:



Note:

SIZE:80160(50100)/150300 drives need to use an external radiator or external casing for heat dissipation due to their large current. Pay attention to installing an external radiator during the installation of the drive, and apply heat-radiating silica gel or cooling pads between the drive and the external radiator.