

## FD122 Series Servo Driver

### FEATURES

- **Input Voltage Range From DC24VDC to 70VDC**
- **Rated Current is (RMS) 6A**
- **50-200 Watt Power Range**
- **Position, Speed, and Torque Control**
- **RS232 and CAN BUS Port**
- **Natural Air Cooling**
- **MODBUS and CANopen Standard**
- **Requires 2500PPR Encoder Input**
- **Communication Software**
  - **Configure Parameters**
  - **I/O Signal Monitoring**
  - **Speed and Position Curves**
  - **Gain Adjustments**
- **Programmable Inputs and Outputs**
  - **4 Inputs**
  - **2 Outputs**
- **CE Certified**



### DESCRIPTION

The FD122 Series Servo Drive is a great fit for applications requiring position, speed and/or torque control methods. The uniqueness of this servo drive is the flexibility of using a single servo drive that can accommodate motors with power ratings ranging from 50-200W. Also, it is designed to switch dynamically among different control methods for more flexible operation. The FD122 Series Servo Drive operates with 24-70VDC input. These drives come standard with an RS232 which can be operated using MODBUS Protocol, a CAN BUS port to be operated using CANopen Protocol, or can be operated using our Free, Easy-to-Use Software. Please consult our Application Engineers for more information.

### SPECIFICATIONS

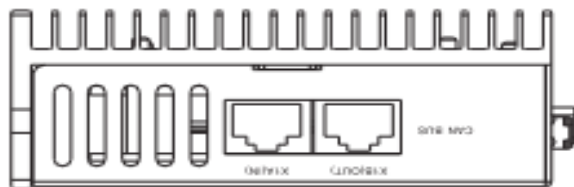
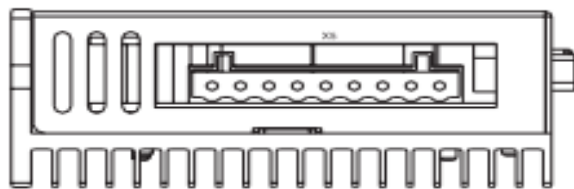
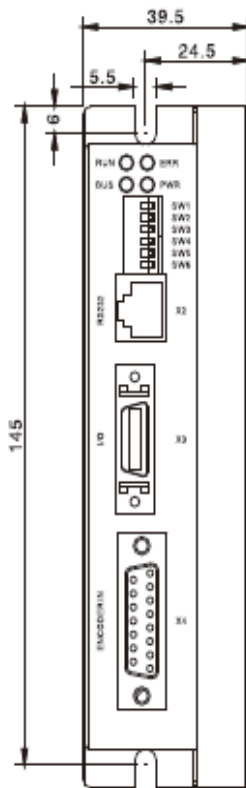
Category	Servo Driver	Servo Motor	Description	Power/Brake Cable	Encoder Cable	Rated Speed/ Rated Torque/Rated Current
Small Inertia DC60V	FD122-AA-000 FD122-CA-000	SMH40S-0005-30AAK-4DKH	Cable Connector	MOT-005-LL-KL-D	ENCCA-LL-KH	3000rpm/0.16Nm/ 1.2A
		SMH40S-0005-30ABK-4DKH	Cable Connector and Brake	MOT-005-LL-KL- D/BRA-LL-KL		
		SMH40S-0010-30AAK-4DKH	Cable Connector	MOT-005-LL-KL-D		3000rpm/0.32Nm/ 2.5A
		SMH40S-0010-30ABK-4DKH	Cable Connector and Brake	MOT-005-LL-KL- D/BRA-LL-KL		
		SME-60S-0020-30AAK-3DKH	Cable Connector	MOT-005-LL-KL-D	ENCCF-LL-FH	3000rpm/0.64Nm/ 4.6A
		57S-0010-10AAK-FDFH	Cable Connector	MOT-005-LL-KL-D	ENCCF-LL-FC0	1000rpm/1Nm/6.5A
		57S-0015-08AAK-FDFH	Cable Connector	MOT-005-LL-KL-D		800rpm/1.5Nm/5.8A
		85S-0020-05AAK-FLFN	HFO Standard Connector	MOT-005-LL-KC0		500rpm/2Nm/6A

L011387

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DIMENSIONS



Note: All Dimensions in (mm)

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TECHNICAL SPECIFICATIONS

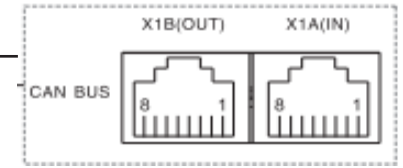
Model Parameter		FD122 Series
Power	Main Supply Voltage	24VDC-70VDC
	Control Circuit Voltage	DC24V 1A (Optional)
Current	Rated Current (RMS)	6A
	Peak Current (PEAK)	15A
Feedback Signal		2500PPR (Incremental Encoder with 5V Supply)
Brake Chopper		Use an External Braking Resistor According to Application, Mainly in High Speed Start and Stop Application.
Brake Chopper Threshold		DC79V ± 2V
Over-Voltage Alarming Threshold		DC86V ± 2V
Under-Voltage Alarming Threshold		18V ± 2V
Cooling Method		Natural Air Cooling
Weight		0.565 Kg
Digital Input	Input Specification	4 Digital Inputs, with COM1 Terminal for PNP (High Level Valid 12.5-30V) or NPN (Low Level Valid) connection.
	Input Function	Define Freely According to Requirement, Supporting Following Functions: Driver Enable, Driver Fault Reset, Driver Mode Control, Proportional Control, Positive Limit, Negative Limit, Homing Signal, Reverse Command, Internal Speed Section Control, Internal Positive Section Control, Quick Stop, Start Homing, Active Command, Switch Electronic Gear Ratio, Switch Gain.
Digital Output	Output Specification	3 Digital Outputs, OUT1-OUT2 Current is 100mA, BR+/BR- (Brake Control Output) Current is 500mA, Can Drive Brake Device Directly)
	Output Function	Define Freely According to Requirement, Supporting Following Functions: Driver Ready, Driver Fault, Positon Reached, Motor at Zero Speed, Motor Brake, Motor Speed Reached, N Signal, Maximum Speed Obtained in Torque Mode, Motor Brake, Position Limiting, Reference Found, Multi-Position Reached
	Encoder Signal Output	Output the Encoder Signal of Motor, Used in Multiple Axis Synchronous Control, Supports 2M at Most.
	RS232	RS232, Connections with PC (2-2, 3-3, 5-5) or Controller
	Protection Functions	Over-Voltage Protection, Under-Voltage Protection, Motor Over-Heat Protection (I <sup>2</sup> T), Short-Circuit Protection, Drive Over-Heat Protection, Etc.
CAN BUS		Supports 1M Baud Rate, Communicates with Controller via CANopen Protocol
Operation Environment	Operating Temperature	0 ~ 40°C
	Storage Temperature	-10° C~70°C
	Humidity (Non-Condensing)	Below 90%RH
	Protection Class	IP20
	Installation Environment	Installed in a Dust-Free, Dry and Lockable Environment (Such as in a Electrical Cabinet)
	Installation Mode	Vertical Installation
	Altitude	No Power Limitation Below 1000m
	Atmospheric Pressure	86kpa-106kpa

CAN Bus  
Communication  
Interface

CAN

PIN Number	Signal
1	CAN H
2	CAN L
3	GND
Others	NC

X1

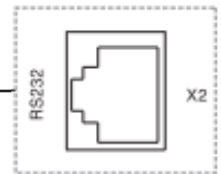


RS232

PIN Number	Signal
3	TXD
4	GND
6	RXD
Others	NC

RS232 Communication  
Interface, Can be Used for  
Debugging and Import/  
Export Project Data Via PC

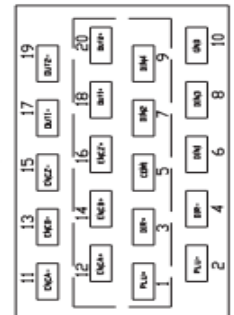
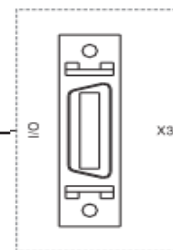
X2



Digital Input/Output  
Interface

X3

PIN No.	Signal	PIN No.	Signal	PIN No.	Signal	PIN No.	Signal
2	PLU-	1	PLU+	12	ENCA+	11	ENCA-
4	DIR-	3	DIR+	14	ENCB+	13	ENCB-
6	DIN1	5	COM1	16	ENCZ+	15	ENCZ-
8	DIN3	7	DIN2	18	OUT1+	17	OUT1-
10	GND	9	DIN4	20	OUT2+	19	OUT2-

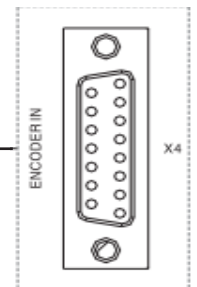


ENCODER IN

PIN No.	Signal	PIN No.	Signal
1	+5V	9	GND
2	A	10	/A
3	B	11	/B
4	Z	12	/Z
5	U	13	/U
6	V	14	/V
7	W	15	/W
8	PTC_IN		

Motor Encoder Input  
Interface

X4



Motor/Power Supply

PIN Name	PIN Function
DC+	Positive terminal of DC power supply and braking resistor
DC-	Negative terminal of DC power supply and 24VDC power supply
24VS	Positive terminal of 24VDC power supply and braking
RB-	Negative terminal of braking resistor
BR-	Negative terminal of braking, A- phase of motor output
U	U phase of motor output, A- phase of motor output
V	V phase of motor output, B+ phase of motor output
W	W phase of motor output, B- phase of motor output
PE	Motor earthing

