# KNC-SRV-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*
  - *º Configure Parameters*
  - *º I/O Signal Monitoring*
  - *º Speed and Position Curves*
  - *º Gain Adjustments*
- *4 Inputs, 3 Outputs*
- *CE Certified*


## DESCRIPTION

The KNC-SRV- FD122 Series Servo Drive is a great fit for applications requiring position, speed and/or torque control methods. The uniqueness of this servo drive has the flexiblity of using a single servo drive that can accomodate motors with power ratings ranging from 50-200W. Also, it is designed to switch dynamically among different control methods for more flexible operation. The KNC-SRV-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 Sofware. Please consult our Application Engineers for more information.

## SPECIFICATIONS

| Catagory | 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 | | 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 | ENCCF-LL-FC0 | 500rpm/2Nm/6A |

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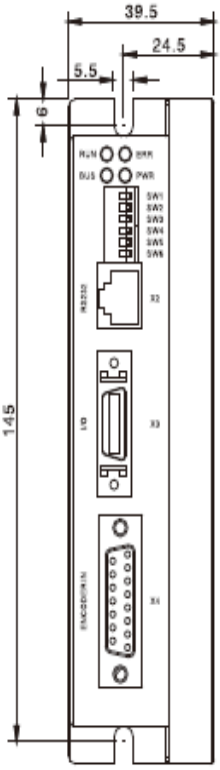
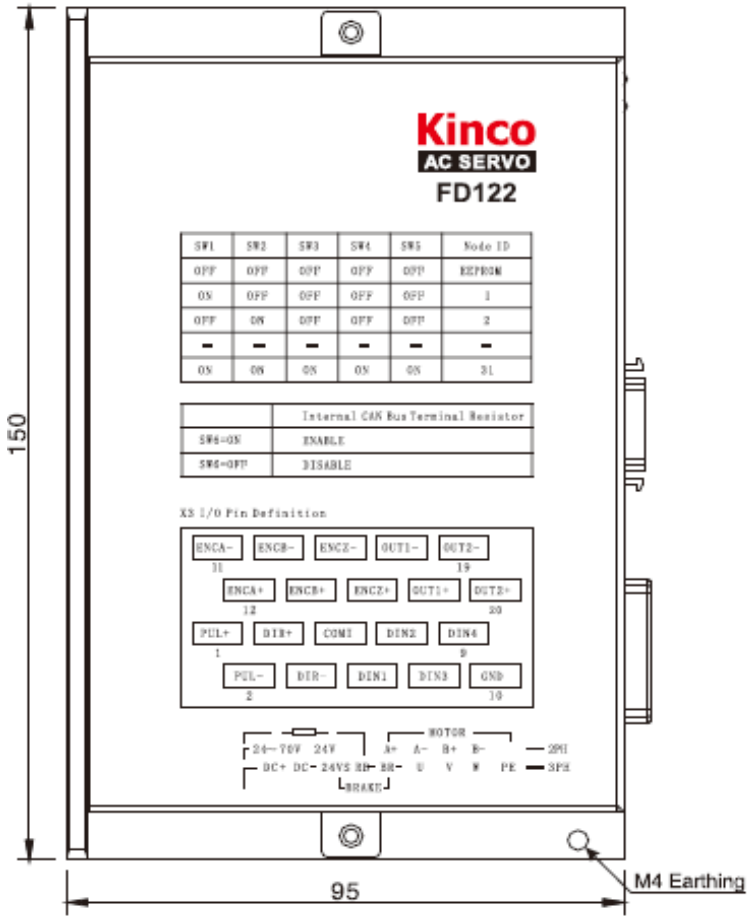
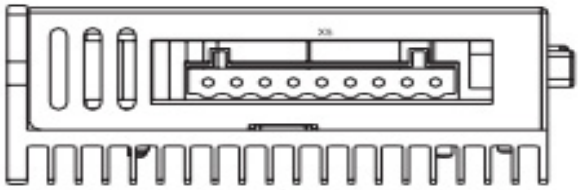
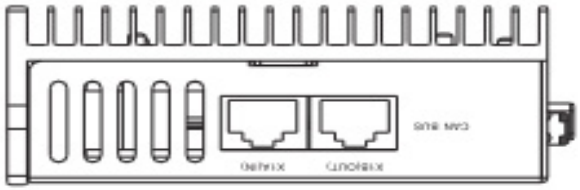
4985 E. Landon Dr. Anaheim, CA 92807 **Tel. (714) 992-6990** Fax. (714) 992-0471 **www.anaheimautomation.com**

DIMENSIONS





*Note: All Dimensions in (mm)*

# KNC-SRV-FD122 Series Servo Driver

ANAHEIM AUTOMATION

TECHNICAL SPECIFICATIONS

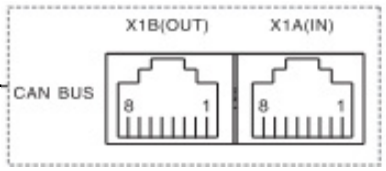
| Model Parameter | | KNC-SRV-FD122 Series |
|---|---|---|
| Power | Main Supply Voltage | 24VDC-70VDC |
| | Control Circuit Voltage | DC24V 1A (Optional) |
| Current | Rated Current (RMS) | 6A |
| | Peak Current (PEAK) | 15A |
| Feedback Signal | | 2500PPR (Incremental Encoder with 5V Supply) |
| Brake 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 ($I^2T$), 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 |

INTERFACE DESCRIPTION

CAN

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

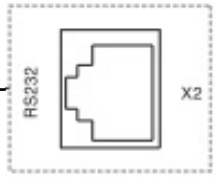
CAN Bus Communication Interface — X1




RS232

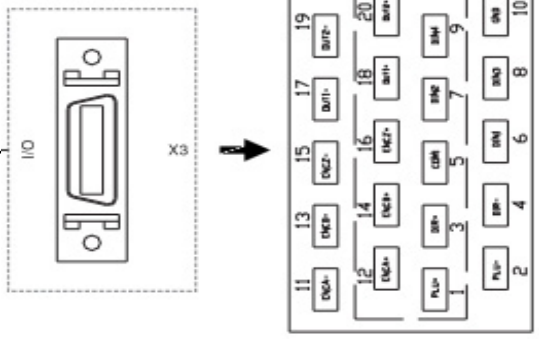
| PIN Number | Signal |
|---|---|
| 3 | TXD |
| 4 | GND |
| 6 | RXD |
| Others | NC |

RS232 Communication Interface, Can be Used for Debugging and Import/ Export Project Data Via PC — X2




Digital Input/Output Interface — X3

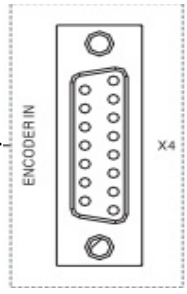
| PIN No. | Signal | PIN No. | Signal | PIN No. | Signal | PIN No. | Signal |
|---|---|---|---|---|---|---|---|
| 2 | PLU- | 1 | PLU+ | 12 | ENCA+ | 11 | ENCA- |
| 4 | DIR- | 3 | DIR+ | 14 | ENCB+ | 13 | ENCB- |
| 6 | DIN1 | 5 | COM1 | 16 | ENCZ+ | 15 | ENCZ- |
| 8 | DIN3 | 7 | DIN2 | 18 | OUT1+ | 17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