

# KNC-SRV-FD332S Servo Driver



## FEATURES

- **88-126VAC Single Phase Input**
- **750-1000 Watt Power Range**
- **Position, Speed, and Torque Control**
- **Communication Ports: RS232 and RS485**
- **Communication Protocol: MODBUS**
- **2500PPR Incremental Encoder**
- **Communication Software**
  - **Configure Parameters**
  - **I/O Signal Monitoring**
  - **Speed and Position Curves**
  - **Gain Adjustments**
- **Programmable Inputs and Outputs**
  - **7 Inputs**
  - **4 Outputs**
- **2 Analog Inputs**
- **CE Certified**



## DESCRIPTION

The FD332S 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 750-1000W. Also it is designed to switch dynamically among different control methods for more flexible operation. The FD332S Servo Drive can operate position control mode either with pulse and direction inputs, or 8 internal position points, analog speed control or 8 internal speed points, and analog or internal torque mode. The FD332S Servo Drive operates with single-phase 88-126VAC input. These drives come standard with an RS232 and RS485 which can be operated using MODBUS Protocol, or can be operated using our Free, Easy-to Use Software. Please consult our Application Engineers for more information.

## SPECIFICATIONS

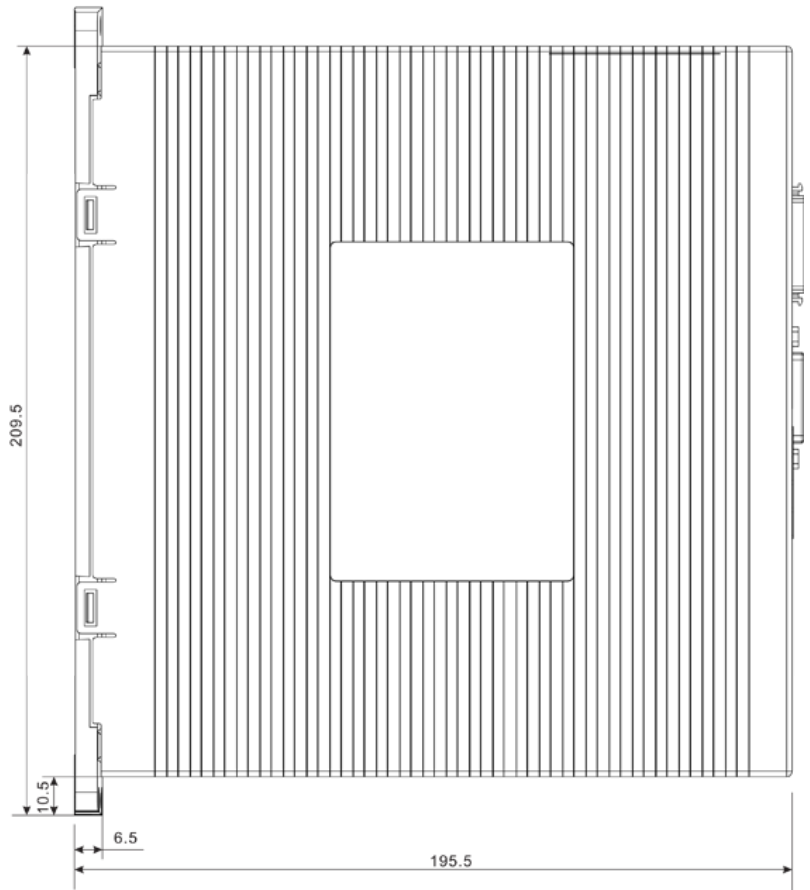
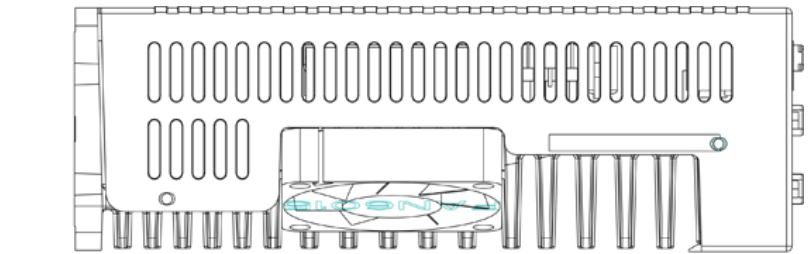
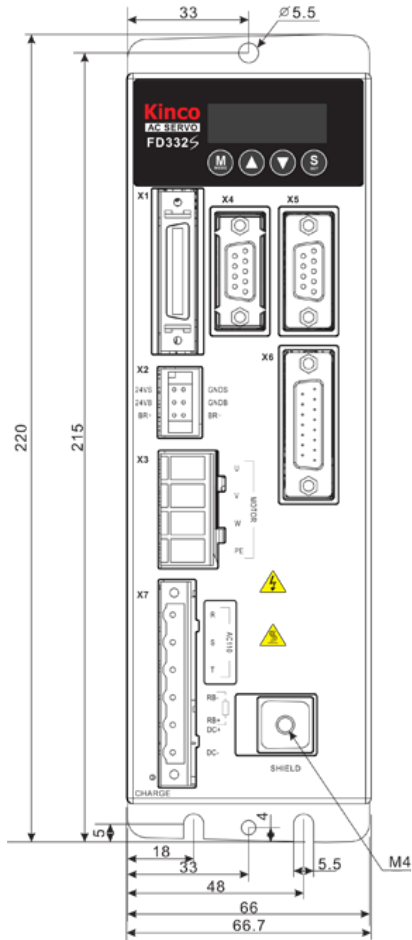
| Category           | Servo Driver  | Servo Motor            | Description             | Power/Brake Cable           | Encoder Cable | Rated Speed/<br>Rated Torque/<br>Rated Current |
|--------------------|---------------|------------------------|-------------------------|-----------------------------|---------------|--|
| Small Inertia 120V | FD332S-LA-000 | SMH80S-0075-30AAK-3AKH | Cable Connector         | MOT-005-05-KL               | ENCCA-05-KH   | 3000rpm/<br>2.39Nm/7.5A                        |
|                    |               | SMH80S-0075-30ABK-3AKH | Cable Connector & Brake | MOT-005-05-KL/<br>BRA-05-KL |               |  |
|                    |               | SMH80S-0100-30AAK-3AKH | Cable Connector         | MOT-005-05-KL               |               | 3000rpm/<br>3.18Nm/ 10A                        |
|                    |               | SMH80S-0100-30ABK-3AKH | Cable Connector & Brake | MOT-005-05-KL/<br>BRA-05-KL |               |  |

L011580

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## DIMENSIONS



Note: All Dimensions in (mm)

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TECHNICAL SPECIFICATIONS

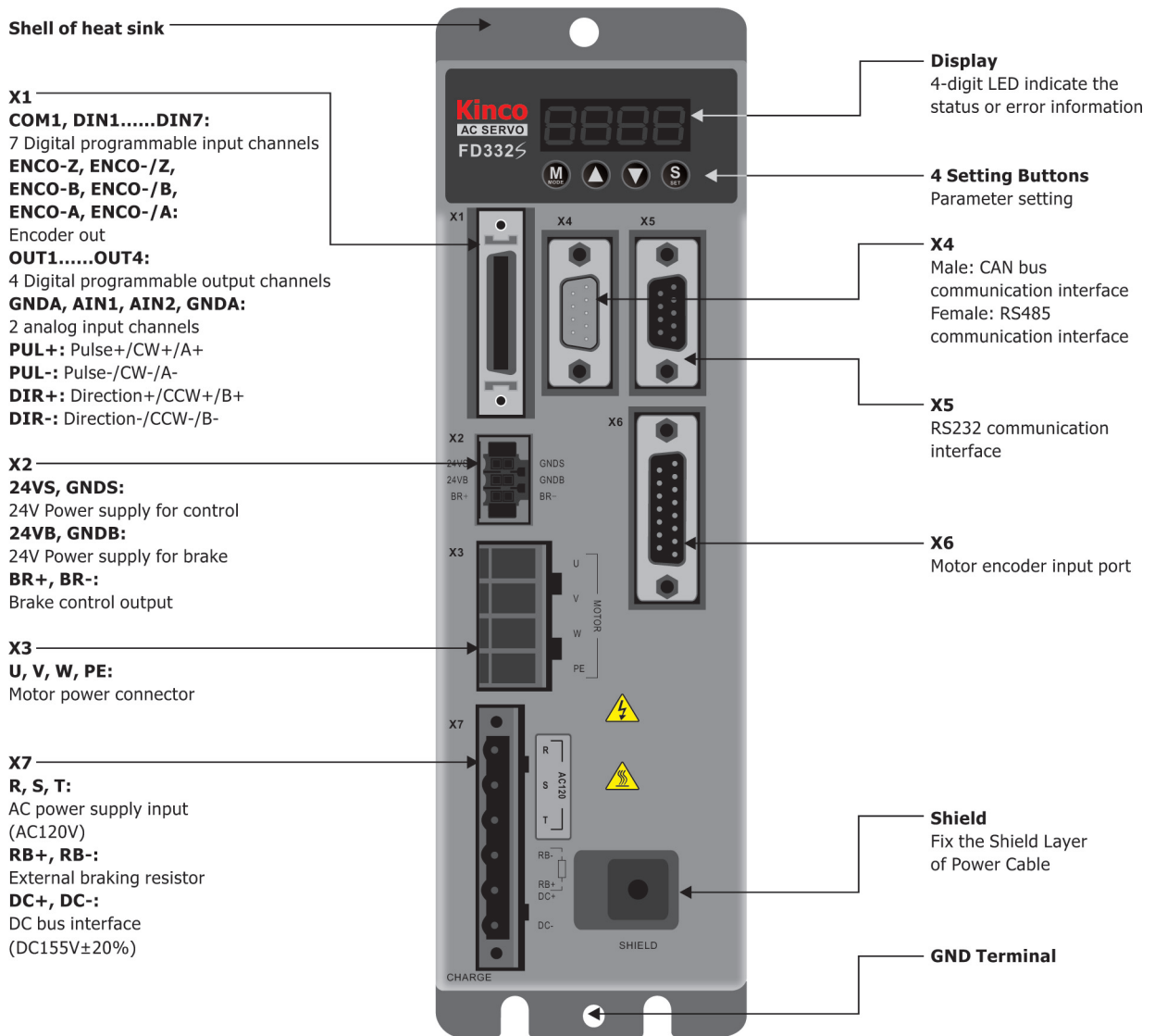
| Model Parameter                  |                         | KNC-SRV-FD332S   |
|----------------------------------|-------------------------|--|
| Power                            | Main Supply Voltage     | 88-126VAC 47~63Hz  |
|                                  | Control Circuit Voltage | 18-30VDC 1A  |
| Current                          | Rated Current (RMS)     | 11A  |
|                                  | Peak Current (PEAK)     | 27.5A  |
| Feedback Signal                  |                         | 2500PPR (Incremental Encoder with 5V Supply) 16 Bit multi-turn absolute encoder, 20 Bit single-turn absolute encoder.  |
| Brake Chopper                    |                         | Use an External Braking Resistor According to Application, Mainly in Occasion of Quick Stop.   |
| Brake Chopper Threshold          |                         | DC190V ± 5V  |
| Over-Voltage Alarming Threshold  |                         | DC200V ± 5V  |
| Under-Voltage Alarming Threshold |                         | DC100V ± 5V  |
| Cooling Method                   |                         | Natural Air Cooling  |
| Weight                           |                         | 2.4 Kg   |
| Digital Input                    | Input Specification     | 7 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    | 5 Digital outputs, OUT1~OUT4 Current is 100mA, BR+/BR- (Brake Control Output) Current is 800mA, Can Drive Brake Device Directly.   |
|                                  | Analog Input            | 2 Analog input, can be used to control speed and Torque, the input range is -10V~10V   |
|                                  | Output Function         | Define Freely According to Requirement, Supporting Following Functions: Driver Ready, Driver Fault, Position Reached, Motor at Zero Speed, Motor Brake, Motor Speed Reached, Z Signal, Maximum Speed Obtained in Torque Mode, Motor Brake, Position Limiting, Reference Found.   |
|                                  | Encoder Signal Output   | Output Encoder Signal is Optional, Used in Multiple Axis Synchronization Control, Supports 2MHz at Most  |
|                                  | RS232                   | The Max. Baudrate is 115.2KHz, Use Kinco Servo Software to Communicate with PC, or Via Free Protocol to Communicate with 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.   |
| RS485                            |                         | The Max. Baudrate is 115.2KHz, use Modbus RTU Protocol to Communicate with Controller.   |

# KNC-SRV-FD332S Servo Driver



|                       |                           |  |
|-----------------------|---------------------------|--|
| Operation Environment | Operating Temperature     | 0 ~ 40°C   |
|                       | Storage Temperature       | -10°C~70°C   |
|                       | Humidity (Non-Condensing) | 5~95%  |
|                       | 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



# KNC-SRV-FD332S Servo Driver



INTERFACE DESCRIPTION

## Digital Input/Output Port

| PIN No. | Signal | PIN No. | Signal | PIN No. | Signal  | PIN No. | Signal |
|---------|--------|---------|--------|---------|---------|---------|--------|
| 2       | COM1   | 1       | OUT1+  | 20      | NC      | 19      | AIN1   |
| 4       | DIN1   | 3       | OUT1-  | 22      | NC      | 21      | GNDA   |
| 6       | DIN2   | 5       | OUT2+  | 24      | GND     | 23      | AIN2   |
| 8       | DIN3   | 7       | OUT2-  | 26      | ENCO-Z  | 25      | GNDA   |
| 10      | DIN4   | 9       | OUT3   | 28      | ENCO-/Z | 27      | PUL+   |
| 12      | DIN5   | 11      | OUT4   | 30      | ENCO-B  | 29      | PUL-   |
| 14      | DIN6   | 13      | COM0   | 32      | ENCO-/B | 31      | DIR+   |
| 16      | DIN7   | 15      | NC     | 34      | ENCO-A  | 33      | DIR-   |
| 18      | NC     | 17      | NC     | 36      | ENCO-/A | 35      | NC     |

Female: RS485

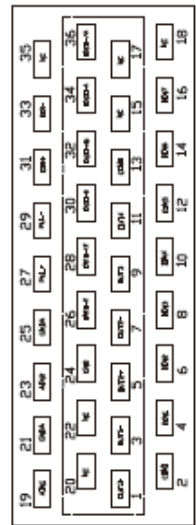
| PIN Number | Signal |
|------------|--------|
| 1          | NC     |
| 2          | RX+    |
| 3          | TX+    |
| 4          | NC     |
| 5          | GND    |
| 6          | +5V    |
| 7          | RX-    |
| 8          | TX-    |
| 9          | NC     |

Female: RS232

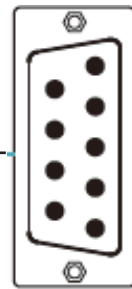
| PIN Number | Signal |
|------------|--------|
| 1          | NC     |
| 2          | TX     |
| 3          | RX     |
| 4          | NC     |
| 5          | GND    |
| 6          | NC     |
| 7          | NC     |
| 8          | NC     |
| 9          | NC     |

Female: Encoder Input

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

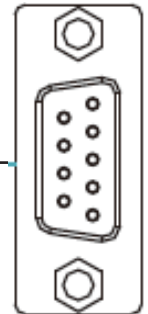


X1



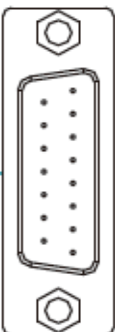
X4

9 Pin DB



X5

9 Pin DB Female



X6

Motor Encoder Input Port

15 Pin DB Female