

# iK3 Series Servo Drives

EtherCAT  CANopen 



## Product Features

### ■ High Response

- Current loop frequency response > 2.5 kHz: 16-bit current sampling accuracy; dual sampling and dual update algorithms
- Speed loop frequency response > 1.6 kHz: 23-bit absolute encoder; Kalman observation algorithm

### ■ High Accuracy

- Bus synchronization accuracy < 0.1us: Multi-axis synchronization algorithm at current ring level

### ■ High Speed Running Motor

- Weak magnetic observation and control function for the servo motor to reach the maximum speed in an instant

### ■ Great Adaptability

- Standard EtherCAT communication protocol, which can be adapted to any EtherCAT bus controller
- With detailed functions such as active resonance suppression, end jitter suppression, friction compensation, groove torque compensation, etc., the servo performance can be perfected under various mechanical structures
- Thickened three-proof paint process for better environmental (moisture, corrosion, etc.) adaptation

## Recommended Pairings

- S Series Servo Motors (Details are at P24)

## Specifications

Models	
iK3AS04□□ iK3AS08□□ iK3AS15□□ iK3AS22□□ iK3AS30□□ iK3AS50□□ iK3BS15□□ iK3BS25□□ iK3BS35□□ iK3BS55□□ iK3BS75□□	0.4kW 0.75kW 1.5kW 2.2kW 3kW 5kW 1.8kW 3kW 3.8kW 5.5kW 7.5kW
<b>Input power</b>	
Control mode	Three-phase PWM converter sine wave drive
Main power	220V: Single-phase/three phase 220V AC (-15~+10%, 50~60Hz) 380V: Three-phase 380V AC (-15~+10%, 50~60Hz)
Control power	220V: Single-phase 220V AC (-15~+10%, 50~60Hz)
Rated current	220V: 0.4kW/2.8A, 0.75kW/5.5A, 1.5kW/10A, 2.2kW/12A, 3kW/16A, 5kW/25A 380V: 1.8kW/5A, 3kW/8A, 3.8kW/12A, 5.5kW/16A, 7.5kW/20A
Encoder feedback	ABZ incremen encoder / absolute encoder
<b>Environment</b>	
Working temperature	0 ~ 45°C
Storage temperature	-20 ~ 65°C
Working humidity	20 ~ 85%RH or less (non condensing)
Storage humidity	20 ~ 85%RH or less (non condensing)
Working and storage air	Indoor (no direct sunlight), non-corrosive gases, flammable gases, oil mist, dust
Altitude	Below 1000m
Vibration	5.8m/s <sup>2</sup> (0.6G) below 10 ~ 60Hz (Cannot be used continuously at resonant frequency)
Insulation and pressure resistance	Primary- between F and G, 1 minute under AC1500V
<b>Control signals</b>	
Input	6-channel inputs (DC24V optocoupler isolation) Input function can be selected according to parameters
Output	4-channel optocoupler isolated output; output function can be selected according to parameters
Communications	EtherCAT, CANopen
Regenerative esistance	400W: without; over 750W: with
<b>Position control modes</b>	
Control input	Servo on, positive rotation prohibited, negtive rotation prohibited, forward current limit, reverse current limit, forward limit switch, negative limit switch, zero return proximity switch, bus IO input, probe 1, probe 2, fault reset
Control Output	Servo return to zero completion, servo operation preparation completion, servo fault, position tracking over limit, target position arrival, STO enable flag, bus IO output, brake output
<b>Pulse output</b>	
Output pulse patterns	Phase A, phase B, phase Z: differential output
Frequency dividing ratio	Arbitrary frequency division

## Applications

Precision engraving machine, terminal machine, printing machine, CNC grinding machine and other CNC, electrical and advertising industry equipment

