

## SHENZHEN KEWO ELECTRIC TECHNOLOGY CO., LTD

### About us



KEWO is a Chinese famous manufacturer of AC drives, solar pump inverter, also focus on automation solution providing and renewable energy technologies offering. The company employ about 200 people and set up service centers in approximately 25 provinces in China.

**KEWO AC DRIVES,**

**VARIABLE FREQUENCY DRIVE,**

**FREQUENCY INVERTER**



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## Company introduction:

**KEWO ELECTRIC TECHNOLOGY CO., LTD.** ( hereinafter called KEWO ) is a professional manufacturer of kinds of AC drives, variable frequency inverter, soft start, and solar pump inverter, etc. We are not only focus on designing, manufacturing, sales and after sales service for above mentioned products, but also providing customer made automation solution and renewable energy technologies.

There are more than 150 staffs working in our factor, 60% of them are engineers. Thanks to our great R&D team hardworking and innovation, we mastered core and leading vector control technology for PMSM and IM.

We also introduced and absorbed latest servo motor control and motor control technology from abroad, that help us keep top position among Chinese manufactures. We have established 2 modernization production lines, digital quality control system, code bar tracking system and ERP management system, etc. And every piece of KEWO products have been tested with full load to ensure 100% good quality. Quality begins and ends with each person in our company.

KEWO products is comprised of high level AC drives, variable speed drive, frequency inverter, solar pump drive with DC and AC input, etc. These products are widely using in industrial automation, cement, textile, metallurgy, HVAC, oil & gas, water treatment, chemical , machine tools, hoisting, agriculture, farming, irrigation...



KEWO factory



Reception room



Production line

## KEWO Products Range: (VSD, Frequency Inverter, Servo drive, soft starter, solar pump Inverter)



AD100 (VFD)

AD350(VFD)

AD800( Vector Control Inverter)










Sealed VFD

AD850Z/T( Servo Drive)

Solar Pump Inverter

Soft Starters

## KEWO AD DRIVES BRIEF INTRODUCTION

PRODUCTS	SPECIFICATION	PICTURES	BRIEF INTRODUCTION
AD800 Series High Performance Vector Control Drive/ <b>Variable Speed Drive</b>	1Ph, 220V, 0.4kw to 2.2kw. 3Ph, 220V, 0.75kw to 75kw 3Ph, 380V/660V/1140V, 0.75 to 630kw.		Drive for PMSM and IM Accuracy speed and torque control for motor, multiple functions, good protection; Sensorless vector control, sensor vector control with PG, VF control, 180% rated starting torque, big allowance IGBT module ,
AD100 Mini Economic AC Drive	1Phase, 220V, 0.4 to 1.5kw		Adopt software platform as same as AD800, easy using and powerful function Mini and Economic type, Using IPM of iGBT
AD350 Mini Vector Control Drive	1 Ph 220V,0.4 to 2.2kw, 3 Ph,380V, 0.75 to 3.7kw		Mini drive with compact design Vector control and VF using the same software platform as AD800; IGBT module to ensure good quality, rich functions
Ad800S Frequency Inverter For PMSM (servo drive)	1Ph, 220V, 0.4kw to 2.2kw. 3Ph, 220V, 0.75kw to 75kw 3Ph, 380V/660V/1140V, 0.75 to 630kw.		Enhanced AD800 version, special for PMSM servo motor with sensorless or sensor control, Multiple protection function Rich functions, and flexible using PG card built in controller board
AS850 Z Servo Drive For PMSM Of IMM.	3 phase, 380V±15%, 5.5kw to 110kw		Driving f or permanent magnet synchronous motor (PMSM) for energy saving. High energy saving, high power factor, quick response and high accuracy control, etc.
AS850T Spindle Servo Drive For PMSM And IM	3 phase, 380V±15%, 2.2kw to 55kw		Spindle servo drive for CNC, machining center, packing, textile, etc. high accuracy speed, torque and position control through close loop servo control
SD800 Seal Frequency Inverter (IP54)	220V (single-phase power) 0.4-2.2kW 380V (three-phase power) 0.75-30kW		sealed frequency inverter is enhanced version of AD800 series frequency inverter, built in with IP54 protection grade. With excellent in anti-dust, water proof, anti-grease and anti-corrosion properties

## AS850T Spindle Servo Drive ( Spindle Frequency Inverter)

AS850T is a new tailor made spindle controlling frequency inverter (servo drive) for CNC, machining center, packing, textile, etc. It can achieve to high accuracy speed, torque and position control through close loop servo control, which based on brand new hard ware and soft ware platform.

Perfect performance and powerful function is your machine best selection.

**Production Name:** AS850T Spindle Servo Drive ( Spindle Servo Frequency Inverter)

**Output Frequency Range:** 0 To 1000Hz.

**Input Voltage:** 3 Phase 380V±15%, 2.2kw To 75kw.

**Control Mode:** Current/Flux Vector Control, Close Loop Vector Control

**Protection Function:** Over Current, Over Voltage, Power Module Overheat, Under Voltage, Over Load, Input/Output Phase Missing, Motor Short Circuit Protection.

**Cooling Way:** Force Cooling.

**Mounting Way:** Wall Mounting.

Function: Speed control, torque control, position control, synchronous pulse control.



## Function features

Rigid Tapping	C Axis Function	Accuracy Stop	0 Speed Lock
Electronic CAM	Pulse Synchron.	Index Plate	Low Torque at low speed



0-200% rated torque output,  
Strong power output



Position control  $\pm 1$  Pulse, speed  
Control  $\pm 0.1\%$

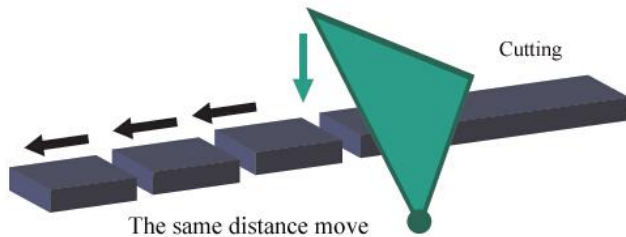
## Software function

Function	Application	Purpose	function describe
points positioning	mechanical transmission	auto process control	The servo motor will run when receiving a command, and move to setting point. When arriving the set point, it will stop and sent a signal back
reciprocating position running	mechanical transmission	auto process control	Perform reciprocating movement between two points, the speed can be set.
multiple points positioning	mechanical transmission	auto process control	Up to 256 points can be set. When corresponding input signal is valid, motor will move to that point.
synchronous driving	mechanical transmission	synchronous speed control	The motor speed will synchronize with the input pulses, the synchronize ratio can be set. Used in print and textile. Etc filed
torque control	pressing machine	output torque adjustable	The motor torque can be adjusted by analog input or communication method. Ensure every motor has the same torque
cut to length	transverse cutter,	auto to realize fixed length cutting	The drive will measure the cutting length by external encoder, and calculate the initial point, it will activate cutting when arriving the cutting length.
parallel drive	roller rail	to realize same output	To achieve the same output for every motor when multiple drives serving a load by communication mode.

## Main features of AS850 Servo Drive

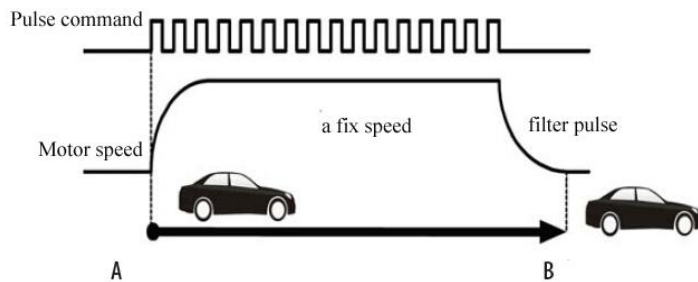
### Points positioning control

The pulse can be set by functional code, even no pulse command, the position control of fix route can set by external terminal as well.

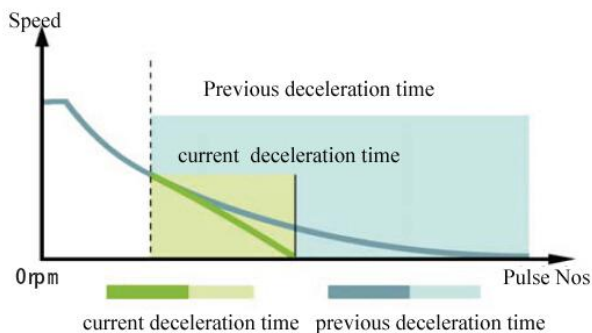


### Pulse synchronization position control

To achieve high accuracy continuous route control by pulse train, also can realized multiple motor synchronous speed control by pulse train.



Reduce the speed response effectively by variable gain control. Compare to previous products, the deceleration time reduce sharply.



### Zero speed servo control

It will automatically go to 0 speed servo control status and keep still when motor speed low to 0 value. AS850T can output 180% rated torque output with PG connection.

### Electric gear

Through gear ratio of electric gear setting, can set motor movement value that equivalent to input pulse freely. Configure 4 groups electric gear, it can be set freely by terminal configuring.



Good spray paint for all PCBA to ensure can work in hard environment.



Plug able terminals for easy wiring.



## Control mode of AS850 AC Servo Drive

### Speed Control Mode

Speed control range: 1:5000  
 Speed control precision:  $\pm 0.1\%$   
 Frequency resolution: 0.01Hz  
 Constant torque output



### Positioning control mode

Positioning control accuracy:  $\pm 1$  pulse.  
 Positioning control range: 4 Byte pulse,  
 starting, braking, stop curve can be  
 adjustable



### Torque Control

Constant torque output under basic  
 frequency  
 Torque control range 0 to 300% rated torque,  
 Torque control precision:  $\pm 5\%$   
 Torque keeping under 0 speed



### Synchronous control

Master and slave control, or control multiple  
 servo motors by external PG card to realized  
 same speed control, electronic gear,  
 following speed accuracy  $\pm 1$  pulse.

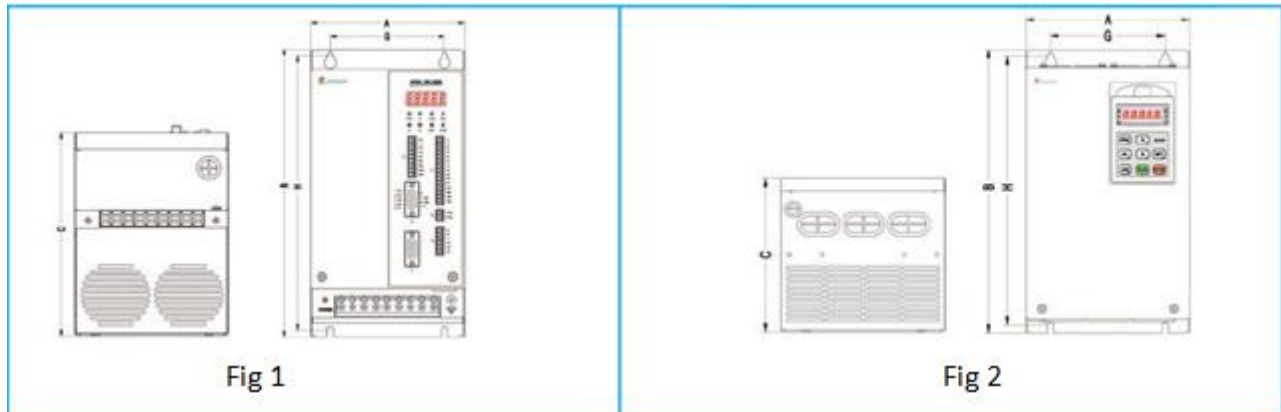


## Technical specification

Technical Specification		
Input	rate voltage	380V+ 10% -15%
	rated frequency	50/60Hz
Output	output voltage	0-380V
	output frequency range	0-1000Hz
Control feature	control mode	current/flux, close loop vector control
	starting torque	0.0Hz 180%
	torque limit	0-200% rated motor torque
	torque control accuracy	$\pm 5\%$
	speed control ratio	"1:5000

	speed control accuracy	±0.1%
	position accuracy	±pulse no.s
	accel./decel. control	0.05 to 3000Hz
	braking mode	Dynamic braking, built it braking unit
	over load capability	150% rated load for 3 min, 200% for 3s
	analog input	3 ways, -10V to 10V, 0-10V/4-20mA
	analog output	0-10V/4-20mA
	Programmable digital input	9 ways digital input, NPN/PNP acceptable
	Programmable external pulse input	pulse+ director, quadrature pulse
	protection function	over current, over voltage, overheat, under voltage, phase missing, motor short circuit.
environment	temperature	"-25°C to 45°C
	humidity	< 90% RH, Non-condensate
	Vibration	below 20Hz, 1G, 20 to 5Hz,, 0.2G
	Heat dissipation	force cooling
	protection grade	IP20,

### Dimension and selecting.

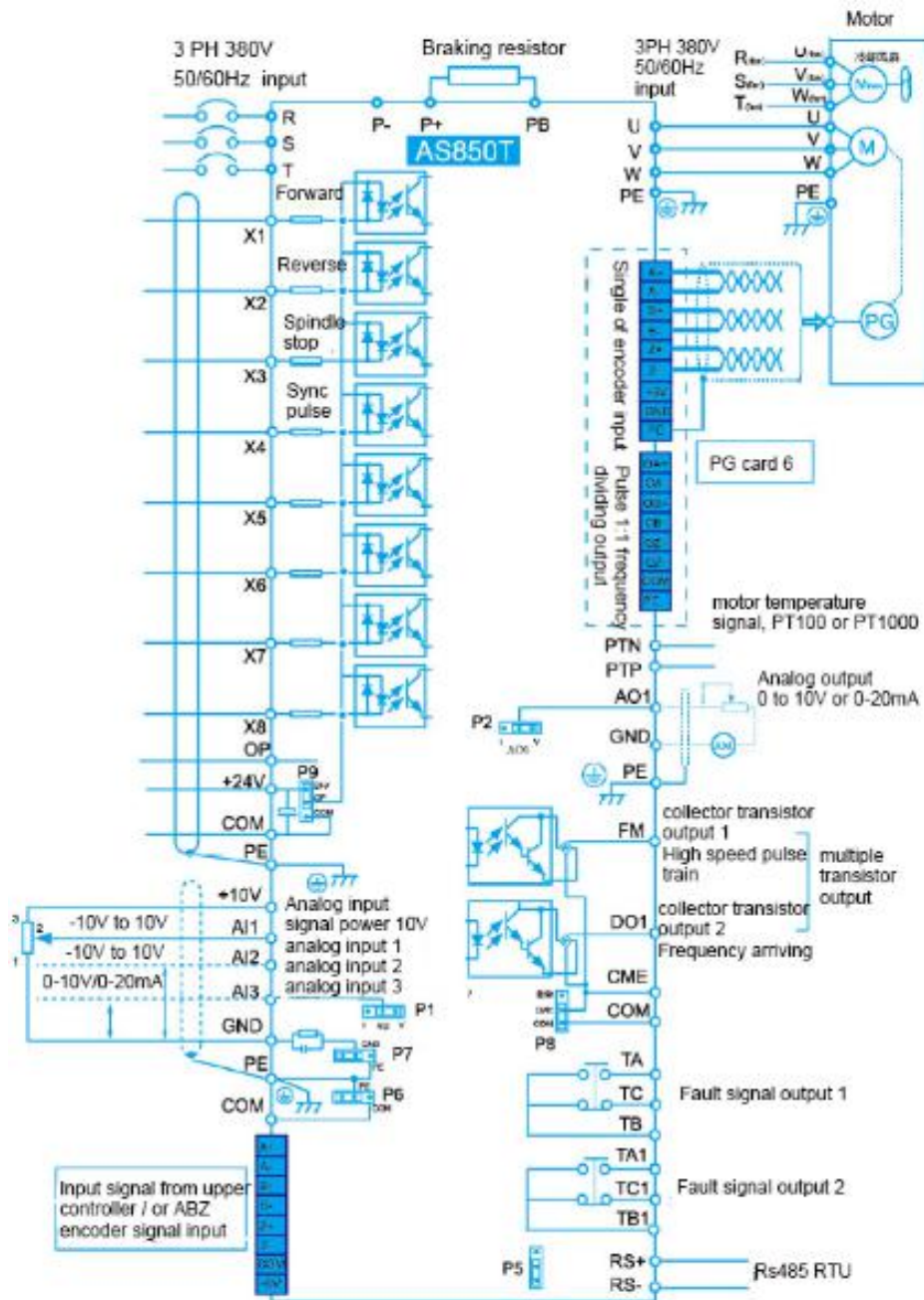


Model	G	H	A	B	C	Screw H	Model
AS850-4T2.2GB~5.5GB	100	240	135	250	180	M5	Fig 1
AS850-4T7.5GB~11GB	140	325	200	340	185	M5	Fig 1
AS850-4T15GB	120	290	160	300	187	M5	Fig 2
AS850-4T18.5GB~30GB	200	435	270	450	245	M6	Fig 2
AS850-4T37GB~45GB	220	500	300	520	265	M6	Fig 2
AS850-4T55GB~75GB	280	560	350	580	275	M8	Fig 2



## Wiring diagram

1. 8 digital input,
2. built in Can bus, built in PG card, Modbus card
3. 3 analog input, 2 collector output, 2 relay output, 1 analog output. PT100 temperature sensor connection

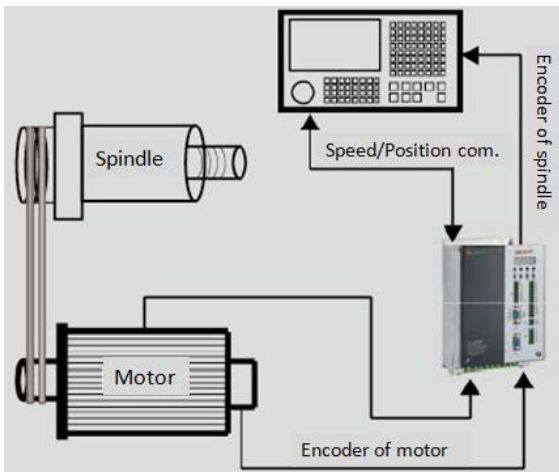


## Application Illustrates

### Application A of CNC filed.

**Application features:** belt transmission, suits for all CNC system

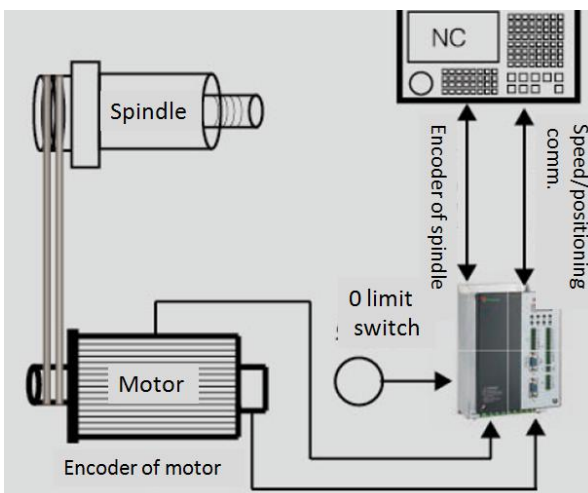
**Function features:** speed control for spindle, torque switchover under low speed, fast for acceleration and delectation, energy saving up to 80% when driving no load.



### Application B For CNC Machine

**Application features:** synchronous transmission, not request 0 limit switch when drive ratio is 1:1 for C axis of CNC machine.

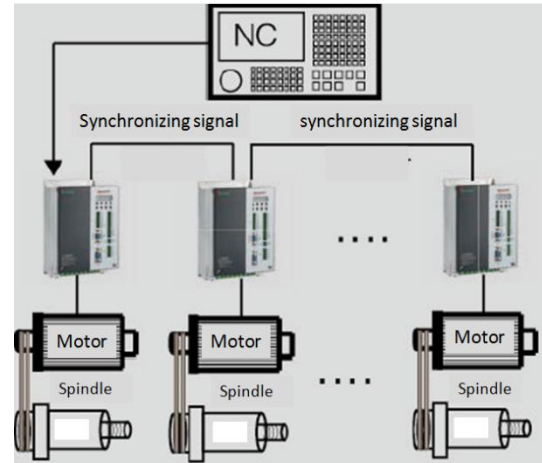
**Function features:** speed control for spindle, torque switchover under low speed, fast for acceleration and delectation, energy saving up to 80% when driving no load.



### Application Of Synchronous Of Multiple Spindle

**Application features:** suits for application which there are multiple spindles in one CNC machine, drove by difference motor.

**Function features:** To realized synchronous speed or synchronous position of multiple spindle.



### Application of CNC CNC milling machine

**Application features:** it can make 1:1 driving ratio for all CNC system.

**Function features:** speed/position control of spindle, pulse/ position control, accuracy stop, rigid tapping

