

AH(D)21 Series digital AC servo control system

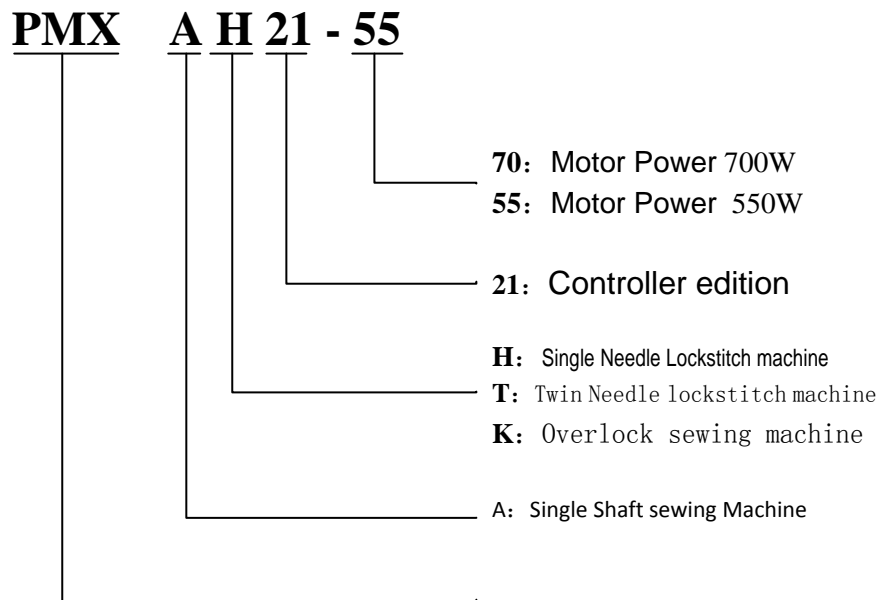


AH21-55

AH (D) 21 (eSAVE)

PMX AH (D) 21 digital AC servo control system is used for driving control for industrial lockstitch sewing machine, it can have stepless control for sewing speed, to complete automatic sewing tasks (high speed sewing and up/correction precise needle positioning) in cooperation with lockstitch sewing machine. Sewing equipments with servo controller can be time-saving, labor-saving, highly efficient and energy conserving. It is a good substitute for Clutch Motor and Electric Motor.

1、 Model declaration (For model AH21-55)



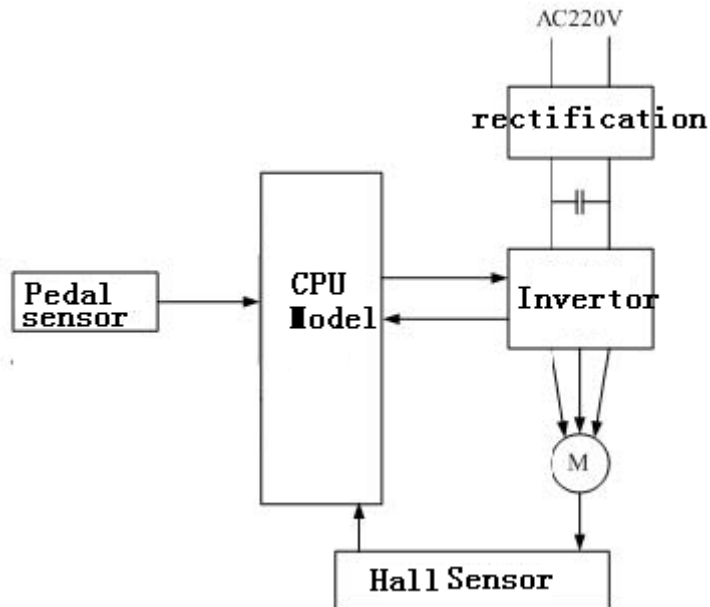
PowerMax Product **Declaration**

Product Series' Model:

- AH21-55 Belt Driven Digital AC Servo Motor
- AHD21-55 Direct Driven Digital AC Servo Motor;
- AT21-55 Belt Driven middle Speed High torque Digital AC Servo Motor;

AT21-70 Belt Driven low speed High torque Digital AC Servo Motor;

2、 System schematic diagram




3、 Table of functions and features:

Controller type	AH21-55	AT21-55	AHD21-55	AT21-70
Motor Type	PMSM	PMSM	PMSM	PMSM
Voltage Range	AC 220±20% V 50/60HZ	AC 220±20% V 50/60HZ	AC 220±20% V 50/60HZ	AC 220±20% V 50/60HZ
Output Power	550W	550W	550W	700W
Max. Speed	5000rpm	5000rpm	5000rpm	2500rpm
Max. Torque	3Nm	3Nm	3Nm	7.5Nm
Speed Control	★	★	★	★
Speed Set	★	★	★	★
Error Report	★	★	★	★
Direction Set	★	★	★	★
Overload Protection	★	★	★	★
Stop to Position	★	★	★	★
Weight	7Kg	7Kg	7Kg	8.5Kg
Dimension	Controller: 220X160X80mm Motor: 80X80X150mm	Controller: 220X160X80mm Motor: 80X80X150mm	Controller: 220X160X80mm Motor: 80X80X150mm	Controller: 220X160X80mm Motor: 90X90X170mm

Annotation: PMSM——Permanent magnet synchronous motor

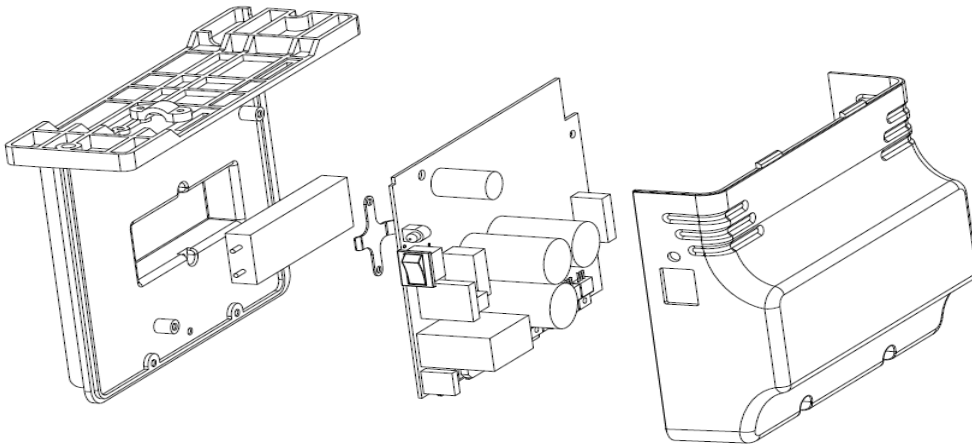
4、 Controller feature:

 Low inertia PMSM servo motor, precise torque control makes it applicable for thin/medium material lockstitch sewing machine;

- ☞ Easy control. Stepless control by the pedal.
- ☞ Motor rotation direction can set by one switch, make it has more application.
- ☞ Low noise, low vibration and high efficiency.
- ☞ Hardware and software over current protection, hardware and software over-voltage / under-voltage protection to make the controller more reliable.
- ☞ Easy installation and adjustment; unique digital analog signal logic, timely and reliable pedal action judgment.
- ☞ Switching mode power supply enables wider range of applicable voltage.
- ☞ Applicable for high speed lockstitch, interlock sewing machine and overlock sewing machine etc.
- ☞ Auto needle positioning, more efficiency.
- ☞ High efficiency and more energy saving:

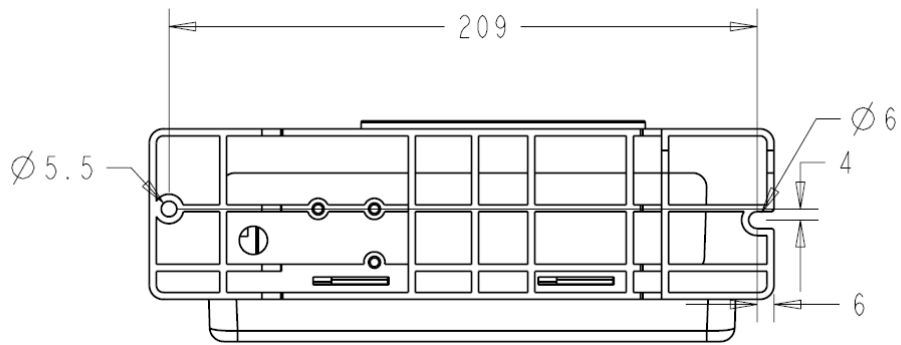
Motor types	Output (W)	Efficiency	Input (W)	Working Time	Stop Time	Annual Cost (RMB/KWh)		
						Peak 0.9	Low 0.7	Avg. 0.8
Clutch Motor	550	65%	846	340	3452	3107	2417	2762
EC Motor	550	70%	786	340	3206	2885	2244	2565
VF Motor	550	70%	786	340	2244	2020	1571	1795
AC Servo Motor	550	80%	700	340	1428	1285	1000	1142

5、 Figure of system parts:

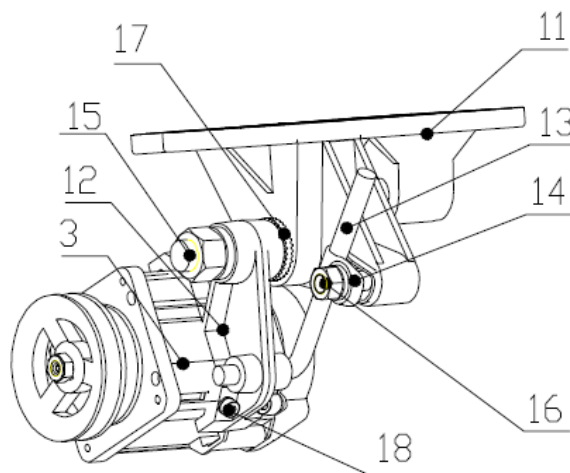


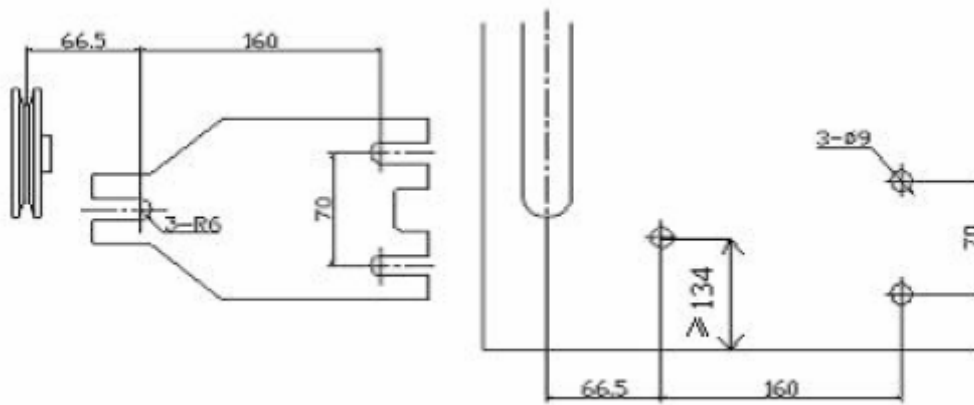
6、Hoisting size:

6.1 The Controller hoisting size

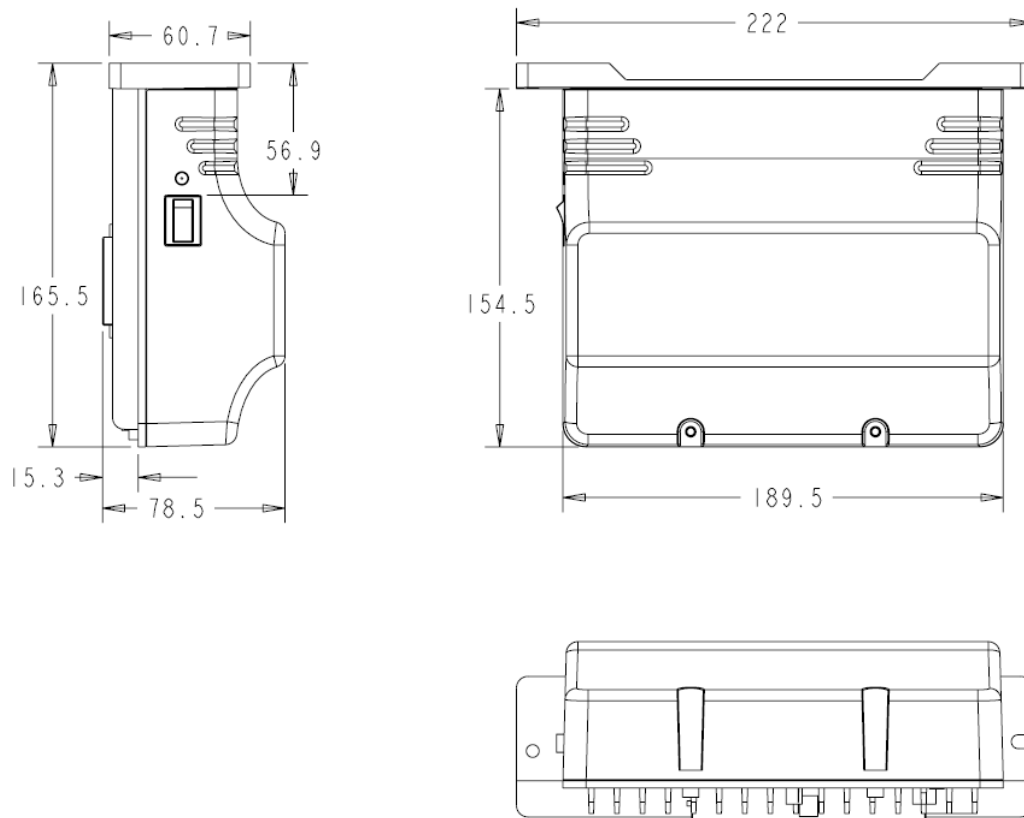


6.2 The Motor hoisting size:





7、 AH21 controller dimensions:



8、 The Optional parts mounted on machine head

 **Synchronizer sensor interconnection cable:**

2MUF09C1100—AH21 Synchronizer sensor interconnection cable



👉 The synchronizer sensor:

1) Applied to the **Juki** type sewing machine's synchronizer:

2MU04C6504—Internal synchronizer of **HANDY2** for **Juki** type.

Annotation: Need to connect with 2MUF09C1100—AH21 Synchronizer sensor interconnection cable.



2) Applied to the **Brother** type sewing machine's synchronizer:

2MU04C6505—Internal synchronizer of **HANDY2** for **Brother** type

Annotation: Need to connect with 2MUF09C1100—AH21 Synchronizer sensor interconnection cable.



3) Applied to the **Typical** type sewing machine's synchronizer.:

2MU04C6508—Internal synchronizer of **HANDY2** for **Xian Typical** type.

Annotation: Need to connect with 2MUF09C1100—AH21 Synchronizer sensor interconnection cable.



4) Applied to Mitsubishi type sewing machine's synchronizer:

2MU04C6512—Internal synchronizer of HANDY2 for Mitsubishi type.

Annotation: Need to connect with 2MUF09C1100—AH21 Synchronizer sensor interconnection cable.



5) The external synchronizer:

2MU04C6509—The external synchronizer (With Internal connector)

Annotation: Need to connect with 2MUF09C1100—AH21 Synchronizer sensor interconnection cable.



2MU04C7600—The external synchronizer (Without Internal connector)

Annotation: Need to connect with 2MUF09C1100—AH21 Synchronizer sensor interconnection cable.



Updating record:

1. 2.0 issuing version;——20090617.