



## 系列智能型变频电动机

SERIES SMART FREQUENCY CONVERTER MOTOR





## 智能电机概述 SMART MOTOR GENERALIZATION

今天，许多的生产设备都要求速度可调的电动机来驱动，以确保传动装置性能的优化，采用正确的速度调节方式可以显著地节约能源的消耗，改善传动装置的特性。JM-A型智能电机是我公司开发出来的新型机电一体化产品，其特点是将传统的变频器和变频电机集成一体，控制器和电动机的参数整体最优化设计，由于系统采用模块化设计，可以根据使用场合进行组合，如，对于调速范围不宽的场合，可以使用自扇冷式电动机与控制器组合，以降低成本。对于，调速范围要求较宽广的场合，则可以采用带独立冷却风机的变频电机与控制器组合的系统，适用于多种领域，使用极其灵活。系统具有良好的节能，节材效果，使用方便，同时，控制器具有多种保护功能，可靠性高。

智能电机具有异步电动机的结构简单、可靠性好的优点，又具备很好的调速特性，控制简单，只需接入电源和控制信号，就可满足大多数系统控制要求，具备通讯功能，可方便与控制系统、集散系统联接，实现计算机驱动系统控制和工厂车间集中控制。可将起、停、转速、正反转等信号下达给电动机，电动机可将运行状态上传给监控系统，实现方便的系统智能控制。是理想的运动驱动单元。

本系列电机机座号范围为H71~112，电动机的基准设计是4P，50Hz，根据用户需要，也可以设计成其他极数和基准频率。系统的输入为单相220V电源（50Hz）或单相230V（60Hz）。



Nowadays, lots of manufacturing equipments need to be driven by motors whose speed can be adjusted to optimize the performance of the transmission devices. To properly adjust the speed can significantly save energy consumption to improve the performance of the transmission devices. JM-A type smart motor is our newly developed mechanical-electrical integrated product. Its feature is that it integrates traditional inverter and inverter motor and has the most optimized design of the controller and motor. As the system is modularized, it can be re-combined according to the application. For example, for the application which needs to adjust the speed in a small range, we can use self-fan-cooled motor combining with controller to save cost. For the application which needs to adjust the speed in a wide range, we can use inverter motor with forced ventilator combining with controller. It suits for various fields and its use is very flexible. The system has very good energy-saving and material-saving effect. It is very convenient to use. The controller has different kinds of protection function and has a very high reliability.

Smart motor has the advantages of induction motor such as with simple structure and high reliability and also it has the feature of controlling the speed. It is easy to operate. With the input of the power and control signal it can meet the control demands of most systems. It has also the function of communication and is easy to be connected with controlling system and terminal system to obtain the control by computer drive system and workshop. To send the signals like start, stop, speed, clockwise and counter-clockwise turn to motor, and the motor can pass on the running status to the controlling system to obtain the convenient and smart system control. It is ideal drive unit.

This series motor is available from frame size H71 to H112. The basic design is 4P, 50HZ. On request of customer, it can also be designed for other pole numbers and frequency. The input power is 1-phase 220V, 230V, 50Hz or 115V, 230V, 60Hz. It is currently the ideal energy-saving product.

## 主要技术参数 MAIN TECHNICAL DATA

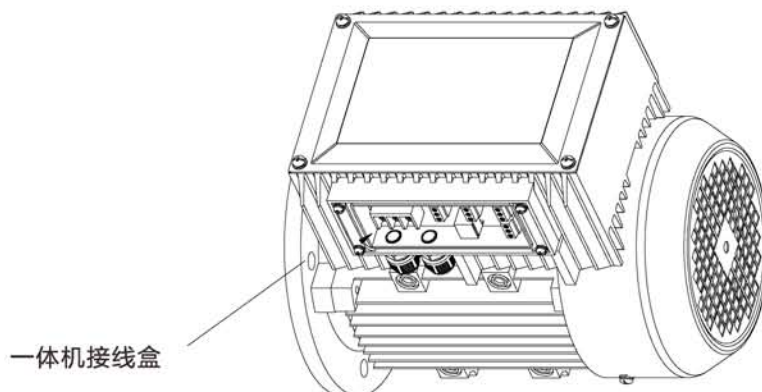
型号 Type	JM-A								
额定功率 Rated Power kW	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4
机座号 Frame Size	71		80		90		100		112
输入电压 Input Volt V	单相(single-phase) 220V/50Hz, 单相(single-phase)230V /60Hz								
输入电流 nput Current A	2.0	3.0	4.4	5.7	8.3	11.0	16.0	21.0	28.0
额定转矩 Rated Torque N.m	1.6	2.3	3.5	4.8	7.0	9.6	14.0	19.1	25.5
转速范围 Speed Range	30r/min ~ 3600r/min								
恒转矩转速范围 Speed Range Under Constant Torque(注)	450r/min~1500r/min								
恒功率转速范围 Speed Range Under Constant Power	1500r/min~3600r/min								
防护等级 IP degree	IP 55								
注：如系统要求在更低转速下恒转矩运行，考虑到电动机的温升，订货时则宜选择带独立风机的变频电机与控制器集成的系统。恒转矩转速范围可达30r/min。 Remarks: If the system is requested to run at lower speed under constant torque, it is more suitable to order the inverter motor with forced vent integrated with controller. The speed can reach 30r/min under constant torque.									

## 主要技术参数 MAIN TECHNICAL DATA

转速给定输入方式 Speed Set Input Means	5K电位器；0-5VDC；0-10VDC；5V PWM（分离），RS485（分离） 5K potentiometer, 0-5VDC；0-10VDC；5V PWM（Separate），RS485（Separate）
转速给定分辨率 Speed Set Differentiate Rate	3r/min
逻辑控制输入 Logic Control Input	启动/停止 Start/Stop；正/反转 Clockwise/Counter-clockwise turn
输出信号 Output Signal	工作频率（5V方波）输出；RS485；"正常"信号 Working Frequency Output (5V square wave)；RS485；"Normal" Signal
保护功能 Protection Function	过电流保护，再生过电压保护，电机过温保护，控制器过温保护 Over-current Protection, Regenerative Over-volt Protection, Motor Over-temperature Protection, Controller Over-temperature Protection
工作环境 Working Ambient	-10℃ ~ +40℃，90%RH以下（不结露） less than 90%RH (no dew)
存储温度 Storage Temperature	-20℃ ~ +65℃



## 端子说明



电源：单相220VAC

电机运行指令：短接GND与RUN，或者短接GND与REV（反转）

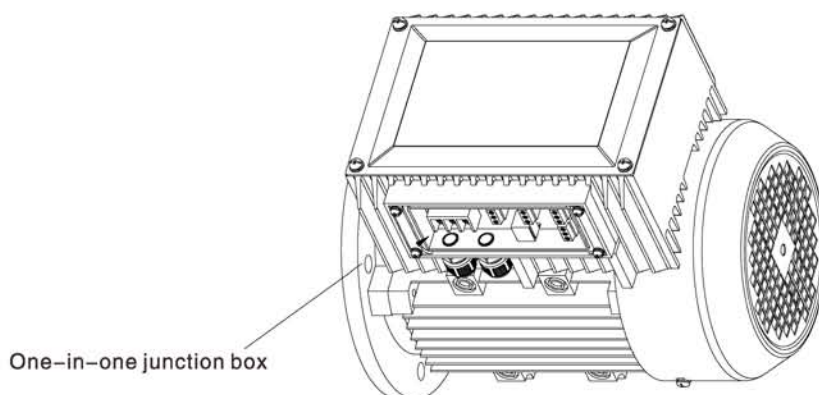
电机转速控制：连接2K电位器至GND、VF、10V，  
电位器移动点位接VF。

485通讯端子为A、B端子

外接人机器作键盘为KEYBOARD网线水晶头端子

模拟量输出端子：GND、FO

## TERMINAL SPECIFICATION



Power supply: single-phase 220VAC

Motor operation instructions: short GND and RUN, or short GND and REV (inversion)

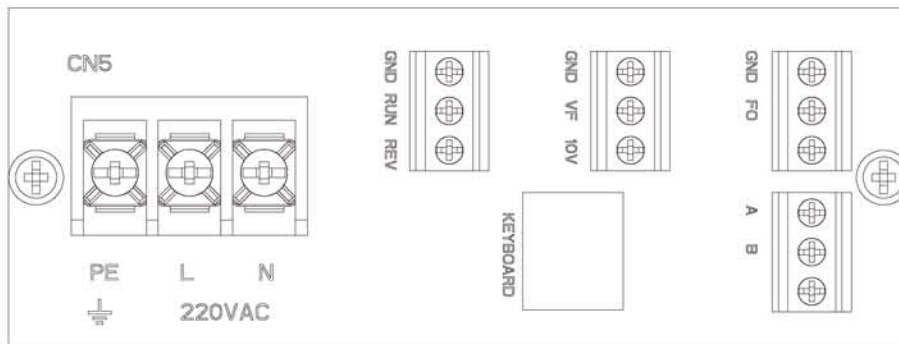
Motor speed control: connect 2K potentiometer to GND, VF, 10V,  
and move the potentiometer point to point to connect VF.

485 communication terminals are A and B terminals

External machine as keyboard for KEYBOARD net wire crystal head terminal

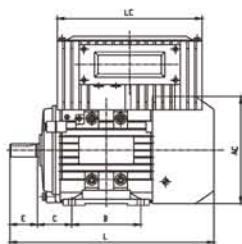
Analog output terminals: GND, FO

## 端子接线图 TERMINAL CONNECTION DIAGRAM

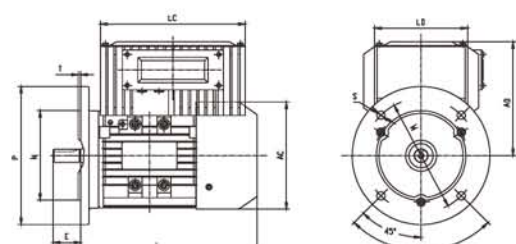


## 安装及外形尺寸 MOUNTING AND OVERALL DIMENSIONS

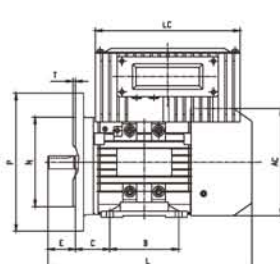
**B3**



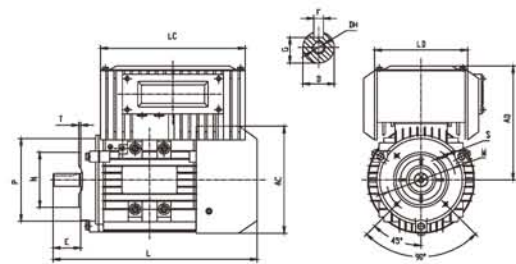
**B5**



**B35**



**B14**



TYPE	H	A	AB	B	C	E	L	AC	F	G	D	K	DH	AD	LD	LC	M	N	P	S	T
71	71	112	150	90	45	30	255	145	5	11	14	7	M5X12	155	120	190	130	110	160	10	3.5
80	80	125	165	100	50	40	295	185	6	15.5	19	10	M6X12	170	135	210	165	130	200	12	3.5
90S	90	140	180	100	56	50	320	215	8	20	24	10	M8X19	175	135	210	165	130	200	12	3.5
90L	90	140	180	125	56	50	345	215	8	20	24	10	M8X19	175	135	210	165	130	200	12	3.5
100	100	160	205	140	63	60	385	225	8	24	28	12	M10X22	190	150	230	215	180	250	15	4
112	112	190	230	140	70	60	400	225	8	24	28	12	M10X22	210	150	230	215	180	250	15	4