

两相步进电机驱动器  
2-Phase stepper motor driver

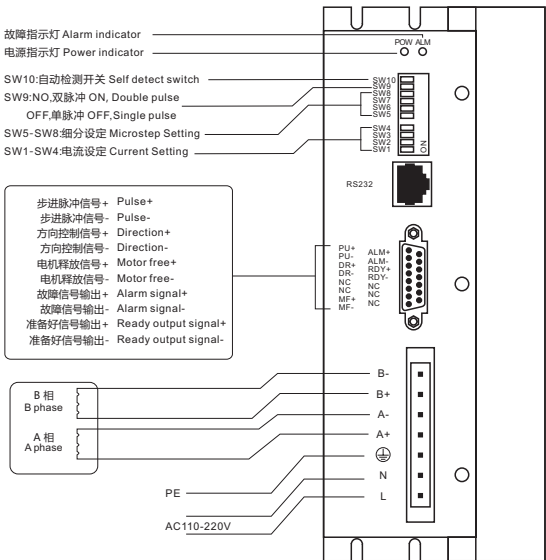
JB2722M

特点 (Features)

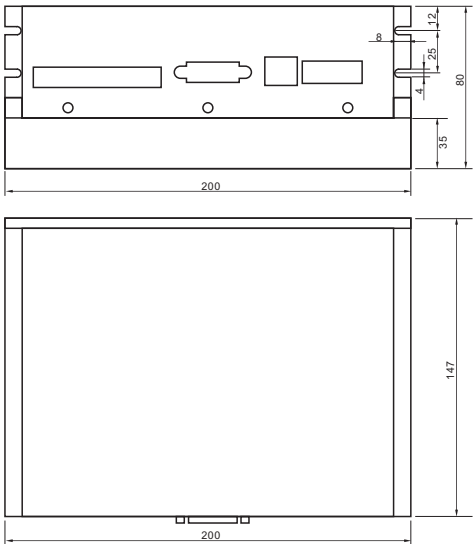
- 设有16档细分, 最高40000脉冲/转
- 最高响应频率200KHz
- 脉冲停止超过100ms时, 线圈电流自动减半
- 电流1.2~7.0A, 16档可调
- 电压范围: AC110~220V
- 信号+5~+24V 均可驱动, 高于+5V无需外接限流电阻
- 相位记忆功能(注: 输入停止超过3秒后, 驱动器自动记忆当时电机相位, 重新上电或MF信号由低电平变为高电平时, 驱动器自动恢复电机相位)。
- 适配7A以下86~130系列4/6/8线两相步进电机
- With 16 channels of microstep, the maximum is up to 40000 pulse/R
- Upmost response frequency amounts to 200KHz
- When the pulse stops over 100ms, the phase current is automatically halved
- Driving current is continuously adjustable from 1.2A/phase to 7.0A/phase through 16 channels
- Voltage range: AC110-220V
- It can connect +5V - +24V, no extra resistor is needed when it is over +5V
- Phase memory function (Note: Once the input stops over 3 seconds, the driver will automatically memorize the motor phase at that time, when the power is repowered or MF signals change from low level to high level, the driver automatically restores the motor phase)
- Suitable for 86-130mm series 4/6/8 leads 2phase stepper motor whose current is below 7A



驱动器接线示意图 (Wiring example)



安装尺寸示意图 (Dimension example) Unit:mm



细分设定表 (Microstep setting List)

驱动器细分由SW5-SW8端子设定, 共16档, SW9-SW10为功能设定。附表: 脉冲/转  
The microsteps of the driver are set by SW5-SW8 terminal with the following 16 channels. The SW9-SW10 are for function setting. Details are as below: Pulse/R

脉冲/转 Pulse/R	200	400	800	1000	1600	2000	3200	4000	5000	6400	8000	10000	12800	20000	25600	40000
SW5	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SW6	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW7	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW8	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
SW9	ON,双脉冲: PU为正向步进脉冲信号, DR为反向步进脉冲信号 ON, Double pulse: PU is clockwise pulse signal, DR is counterclockwise pulse signal  OFF, 单脉冲: PU为步进脉冲信号, DR为方向控制信号 OFF, single pulse: PU is step pulse signal, DR is direction signal															
SW10	自动检测开关 (OFF时接收外部脉冲, ON时驱动器内部以30转/分的速度运行) Self detect switch (OFF: accept external pulse signal, ON: the driver is running at 30R/M internal)															

注: 可根据客户要求定制细分数  
Note: The microsteps can be customized according to customers' requirement.

● 电流设定(Current setting)

驱动器工作电流由SW1-SW4端子设定，运行电流为正常工作输出电流(电流值为有效值)  
The working current of the driver is set by SW1-SW4 terminal, the operating current is the normal output current(The current value is an effective value)

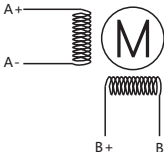
Im (A)	1.2	1.5	2.0	2.3	2.5	3.0	3.2	3.6	4.0	4.5	5.0	5.3	5.8	6.2	6.5	7.0
SW1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON
SW2	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON
SW3	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON
SW4	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON

● 端口说明 (Port Description)

①控制信号端口(Control signal port)

符号 Mark	名称 Name	说明 Description
PU+	步进脉冲信号+ Step pulse signal+	接+5V供电电源，+5V~+24V均可驱动，高于+5V无需外接限流电阻 It can connect +5V~+24V, no extra resistor is needed when it is over +5V
PU-	SW9=OFF, PU 为步进脉冲信号 SW9=OFF, PU is pulse signal	下降沿有效，每当脉冲由高变低时电机走一步，输入电阻220Ω，要求：低电平0-0.5V，高电平4-5V，脉冲宽度>2.5μs Effects on falling edge, the motor goes one step as the pulse input change from "high" to "low". Input resistance is 220Ω. Requirement: low voltage:0-0.5V, high voltage:4-5V, pulse width >2.5μs
	SW9=ON, PU为正向步进脉冲信号 SW9=ON, PU is clockwise pulse signal	
DR+	方向控制信号+ Direction control signal+	接+5V供电电源，+5V~+24V均可驱动，高于+5V无需外接限流电阻 It can connect +5V~+24V, no extra resistor is needed when it is over +5V
DR-	SW9=OFF, DR为方向控制信号 SW9=OFF, DR is direction control signal	用于改变电机转向。输入电阻 220Ω，要求：低电平0-0.5V，高电平4-5V，脉冲宽度>2.5μs Change motor's direction of rotation. Input resistance is 220Ω. Requirement: low voltage:0-0.5V, high voltage:4-5V, pulse width >2.5μs
	SW9=ON, DR为反向步进脉冲信号 SW9=ON, DR is counterclockwise pulse signal	
MF+	电机释放信号+ Motor Free signal+	接+5V供电电源，+5V~+24V均可驱动，高于+5V无需外接限流电阻 It can connect +5V~+24V, no extra resistor is needed when it is over +5V
MF-	电机释放信号- Motor Free signal-	有效（低电平）时关断电机接线电流，驱动器停止工作，电机处于自由状态 Once effects, it will cut off the motor current, the driver stops working and sets the motor free
ALM+	驱动器故障输出信号光电隔离正端 Opto-isolated positive of driver fault output signal	驱动器出现过流、过热故障时，驱动器输出故障信号，该信号有效（低电平） The driver is overcurrent or overheat, it will output fault signal and the signal is valid(low voltage)
ALM-	驱动器故障输出信号光电隔离负端 Opto-isolated negative of driver fault output signal	
RDY+	驱动器准备好输出信号光电隔离正端 Opto-isolated positive of driver ready output signal	驱动器状态正常，准备就绪接受控制信号，该信号有效（低电平） The driver is at normal state, and ready to accept control signal from controller and the signal is valid(low voltage)
RDY-	驱动器准备好输出信号光电隔离负端 Opto-isolated negative of driver ready output signal	
NC	空端子 NC	功能保留 NC

②电机和电源输入端口(Motor and power input port)

符号 Mark	名称 Name	说明 Description
L,N	电源 Power supply	AC110~220V
PE	地线 Ground wire	大地（内接驱动器外壳）Ground
A+	电机接线 Motor connection	
A-		
B+		
B-		

● 注意(Caution)

- 1.输入电压不能超过AC220V；

2.输入控制信号电平为+5V~+24V范围，高于+5V时无需外接限流电阻；

3.输入脉冲信号下降沿有效；

4.驱动器温度超过75度时驱动器停止工作，故障指示灯ALM亮，直到驱动器温度降到50度时，驱动器需要重新上电才能恢复工作。出现过热保护请加装散热器；

5.过流（负载短路）故障指示灯ALM亮，请检查电机接线及其他短路故障，排除后需要重新上电恢复；

6.无电机故障指示灯ALM亮，请检查电机接线，排除后需要重新上电恢复；
1. The input voltage can not exceed AC220V.

2. Input control signal ranges from +5V to+24V, no current-limiting resistor is needed when it is over+5V.

3. The input pulse signal effects on falling edge

4. ALM lights and the driver stops working when the driver temperature is over 75℃. Until the temperature falls to 50℃, it will restart to work after powered-up.  
The heat sink is needed when overheat occurs

5. ALM lights if it is short circuit, please check motor connection and eliminate other short-circuit fault, and then repower up to restore

6. ALM lights if the motor does not connect well with the driver, please check motor connection and repower up to restore