

SEA2M46M



Features

- High performance, low noise, affordable price, high speed and torque, excellent stability
- Single / dual pulse input
- 16 selections of uniform angle and constant torque subdivisions, the max resolution up to 40000 steps/rev
- Adoption of 4-wires-control circuit greatly reduces noise and increases the rotation stability
- The max response frequency up to 300KHz
- Once the pulse stops for more than 100ms, the coil current will be halved automatically, to prevent the overheating
- Bipolar constant current chopper control improves the output speed and power of the motor
- Photoelectric-isolated signal I / O
- Current range: 0.1A~4.5A
- Single power input, voltage range: AC16~60V (the optimal voltage is AC40V)
- Signal source voltage: DC3.3~28V
- Error protection: ① Open phase protection ② Overheating ③ Overcurrent ④ Low voltage
- Size: 117mm×75.7mm×33mm, Net weight: 0.27kg

Description

SEA2M46M is a microstep motor driver with uniform angle and constant torque subdivisions, voltage range is AC16V~60V (the optimal voltage is AC40V) , single power supply. It matches 2 phase hybrid stepper motors which rated current under 4.5A, external diameter 56mm~60mm, and outlets 4, 6 or 8outlets.

Bipolar constant current chopper control makes the motor run smoothly with lower noise and higher stability; The increase of the voltage greatly improves the drive capability and speed. The coil current will be halved automatically once the pulse stops for more than 100ms, it reduces the heat of driver by 50%, reduces the heat of motor as well. Users can choose low speed high subdivision which up to 40000 steps / rev, it improves the precision, reduces the vibration and noise.

Applications

Carpentry engraving machine, Laser engraving machine, Labelling machine, Die bonder, Inkjet printer, Embroiderer, Dispenser, BGA repair machine, Laminating machine Wire-stripping machine, Winding machine, Hot-press machine, PCB drilling machine, Non-standard equipment, XYZ gauge, Connctors assemble machine, Medical equipments, Semiconductor Equipment, Blast furnace, etc.

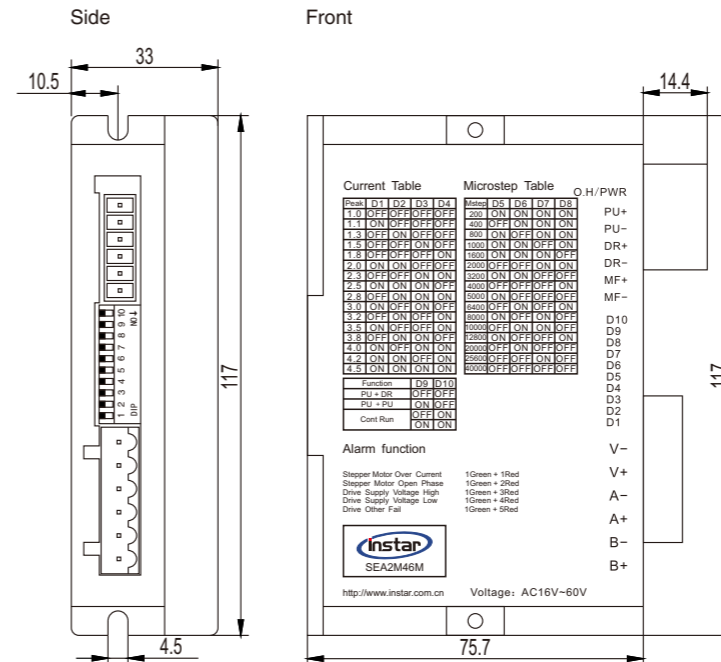
Running Current Setting

Im (A)	1.0	1.1	1.3	1.5	1.8	2.0	2.3	2.5	2.8	3.0	3.2	3.5	3.8	4.0	4.2	4.5
D1	OFF	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	ON	ON
D2	OFF	OFF	ON	OFF	OFF	ON	OFF	ON	ON	OFF	ON	OFF	ON	OFF	ON	ON
D3	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF	ON
D4	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	ON	ON	OFF	ON	ON	ON

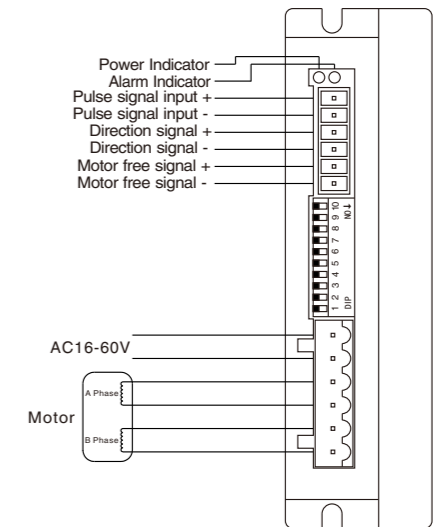
Microstep Setting List

Pulse/rev	200	400	800	1000	1600	2000	3200	4000	5000	6400	8000	10000	12800	20000	25600	40000
D5	ON	OFF	ON	ON	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
D6	ON	ON	OFF	ON	ON	OFF	ON	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
D7	ON	ON	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
D8	ON	ON	ON	ON	OFF	ON	OFF	ON	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
D9	ON: Double Pulse, PU is Clockwise pulse, DR is Counter Clockwise stepper pulse signal. OFF: Single Pulse, PU is pulse signal, DR is Direction control stepper signal.															
D10	Self detect switch (OFF: accept external pulse signal; ON: driver internal send 7.5kHz pulse, rotate speed can be controlled by D5~D8.															

Installation dimensions



Driver Connection



Pin Functions

Mark	Function	Instruction
POWER	Power indicator	Power on, the green indicator normally on.
O.H	Fault indicator	Overcurrent, phase open circuit, overvoltage, low voltage, the red indicator flashes.
MF-	Motor free signal	When the low electrical level is valid, it cuts off the motor current, the driver stops working and motor will be in a free state.
MF+	Input signal positive side	Connects +3.3V~+28V pulse signal power.
DR-	Direction control signal	For changing the direction,input resistance is 220 Ω. Requires: low level +0V~+0.5V, high level+4V~+5V, pulse width >2.5 μs
DR+	Input signal positive side	Connects +3.3V~+28V pulse signal power.
PU-	Pulse signal	When the falling edge is valid, the motor moves a step as the pulse become lower, input resistance is 220Ω. Requires: low level +0V~+0.5V, high level +4V~+5V, pulse width >2.5 μs.
PU+	Input signal positive side	Connects +3.3V~+28V pulse signal power.
+V	Power+	AC16~60V (the optimal voltage is AC40V)
-V	Power-	
-B, +B	Connect to the motor	Please refer to the motor connections.
-A, +A		

Alarm functions

- 1 Green 1 Red Alternately flashes. Overcurrent;
- 1 Green 2 Red Alternately flashes. Phase open circuit;
- 1 Green 3 Red Alternately flashes. Overvoltage;
- 1 Green 4 Red Alternately flashes. Low voltage;
- 1 Green 5 Red Alternately flashes. Other faults;

The driver will lose self-locking function when the above alarms start,please clear faults and re-up electricity,the driver goes back to normal when the power green indicator normally on.

▲Attention: The driver can't be protective when connects the wire inversely or wrong,please confirm the connections before electrify it,otherwise the fuse inside may be burnout.