



# STEPPER MOTOR DRIVER

## SEA2M68-R

### Features

- RS485 Modbus RTU bus protocol is adopted, and up to 64 drives can be attached
- Built in single axis controller and driver function, supporting position control, speed control and multi segment position control modes
- Users can set parameters such as subdivision, running current, locking current and acceleration/ deceleration time of stepping motor through the bus
- 16 selections of uniform angle and constant torque subdivisions, the max resolution up to 40000 steps/rev
- 2-way photoelectric isolation programmable high-speed differential input interface, 1-way photoelectric isolation output interface, compatible with common cathode and common anode wiring mode
- Adoption of 4-wires-control circuit greatly reduces noise and increases the rotation stability
- The max response frequency up to 200KHz
- 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
- Current range: 2.8A ~ 6.5A
- Single power input, voltage range: DC24 ~ 80V ( The optimal voltage is DC70V )
- Error protection: ①Low supply voltage ②High supply voltage ③Phase open Circuit ④Phase overheating
- Size: 117×75.7×40.6 (mm) , Net weight: 0.27kg



### Description

SEA2M68-R is RS485 Modbus RTU bus type stepping driver, which adds bus communication and single axis controller functions on the basis of stepping driver. The bus driver can completely replace the driver controlled by the traditional pulse direction in function. The driver has a built-in bus communication function. Modbus RTU bus communication is used. Users can control 64 drivers at the same time. At the same time, the bus driver has rich input/output interfaces to complete the position control, speed control, return to the original point and other single axis motion control functions. Compared with the traditional driver, This bus driver is particularly suitable for the application in the environment of multiple sets, long distance and strong interference. The input voltage of the bus driver is DC24V ~ 80V ( The optimal input voltage is DC70V ). The bus driver is powered by a single power supply. Adapt to 2-phase hybrid stepping motor with outer diameter of 85mm and phase current below 6.5A. The bus driver uses load based current control technology internally, which can effectively extend the service life of the stepping motor and reduce heat generation. The driver has built-in position arrival signal and alarm signal output, which is convenient for the controller to monitor and control.

### Communication address bit setting table

Add	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
D1	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
D2	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON
D3	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF
D4	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON
D5	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
D6	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

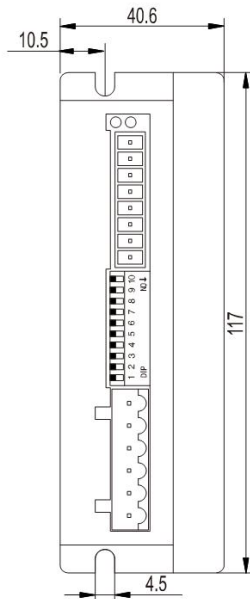
Add	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
D1	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
D2	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
D3	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON
D4	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF
D5	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
D6	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Add	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
D1	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
D2	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
D3	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
D4	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
D5	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
D6	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

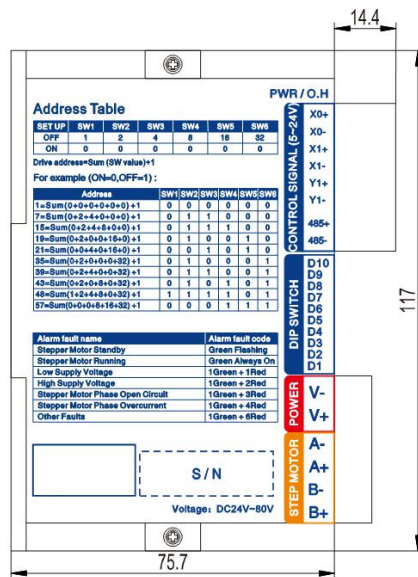
# SEA2M68-R

## Dimensions

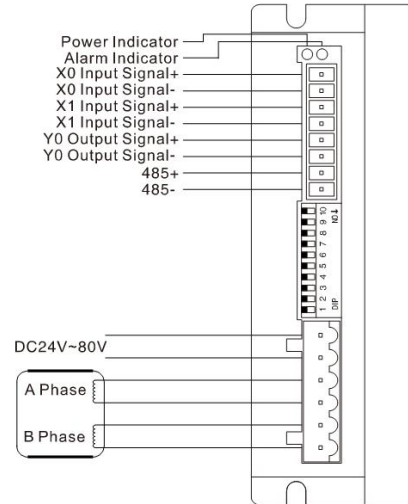
Side installation drawing



Front installation drawing



## Wiring diagram



## Pin Function Description

Mark	Function	Instruction
POWER	Power indicator	When the power is on, the indicator light flashes; When receiving pulse signal, the indicator light is always on.
O.H	Fault indicator	The red indicator lamp flashes when the power supply voltage of the closed-loop stepping driver is low, the power supply voltage is high, the phase is open, the phase is overcurrent, and the encoder is in fault.
X0+	Input signal photoelectric isolation positive	Input signal, output voltage range+3.3V~+28V, maximum current 15mA, Users can configure corresponding port functions through the bus.
X0-	Input signal photoelectric isolation negative	
X1+	Input signal photoelectric isolation positive	
X1-	Input signal photoelectric isolation negative	
Y0+	Output signal photoelectric isolation positive	Output signal, output voltage range+3.3V~+28V, maximum current 15mA, Users can configure corresponding port functions through the bus.
Y0-	Output signal photoelectric isolation negative	
485+	RS-485+	485 bus data positive
485-	RS-485-	485 bus data negative
+V	Power+	DC24~80V ( The optimal voltage is DC70V )
-V	Power-	
+A, -A +B, -B	Connect to the closed loop stepper motor	Please refer to the closed loop stepper motor connections.