

Pulse input

Lower vibration

Lower heat generation

2-PH Selectable Microstepping Motor Driver

RD-024MB

80,000 steps/rev. (max.) 12 to 50VDC



Features

- High speed rotation is available with the maximum power of 50VDC
- Lower heat generation with the new circuit system
- Lower vibration with high resolution microstep
- Photo-Isolated inputs and outputs
- Selectable clock – 1clk. or 2clk. Input
- Auto. current down (Adjustable stop current)

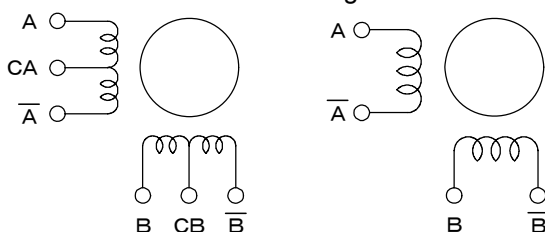
Specifications

Supply voltage	12 to 50VDC (including ripple)
Supply current	Approx. 1.2 times rated coil current of motor (max.)
Motor current	0.4 to 4A/phase (0.4 to 3.0A : Increase by 0.1A) (3.0 to 4.0A : Increase by 0.2A)
Drive method	Bipolar, constant current chopper method
Microstep resolution	Up to 400 microsteps/step Selections: 1,2,4,8,16,32,64, 2.5,5,10,20,40,80,160,320, 6.25,12.5,25,50,100,200,400
Auto. current down	0 to 100% of the run current after about 0.3 seconds of inactivity according to Stop Current setting
Response frequency	500kpps max.
Protective circuitry	Over current, low voltage, and motor disconnection protection
Temperature range for operation	0 to +50°C (Dissipate heat to keep the driver's maximum case temperature below 65°C)
Humidity range for operation	Less than 85%RH (with no condensation)
Outside dimensions	22.6(H) × 105(W) × 65.6(D)mm
Weight	approx. 100g

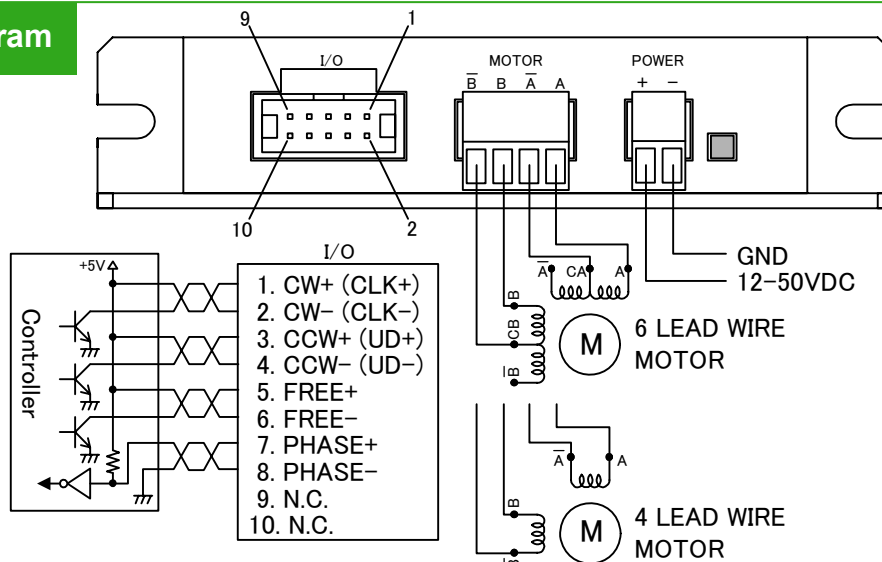
Suitable Motors

Manufacturer	Model No.
RORZE Co.	RM2B42**, RM26** RM2C5648
OTHER	HB type (PM type) 2-ph stepping motor (4 or 6 lead wires)

Motor Wiring



Wiring Diagram



Functions

Clock inputs (CW/CLK, CCW/UD)

In case of using Two Clock Input (2CK)

CW+/- Motor rotates one step in CW direction with a pulse current from CW+ to CW- terminal.

CCW+/- Motor rotates one step in CCW direction with a pulse current from CCW+ to CCW- terminal.

In case of using One Clock Input (1CK)

CLK+/- & UD+/-

Motor rotates one step in CW direction with a pulse current from CLK+ to CLK- terminal and UD input off.

Motor rotates one step in CCW direction with a pulse current from CLK+ to CLK- terminal and UD input turned ON.

Free Input (FREE +/-)

The excitation current of motor will become 0 and a motor can be rotated by hand with a pulse current from "FREE+" to "FREE-".

Phase Output (PHASE +/-)

PHASE output is turned ON at the phase home. One pulse is put out every time the motor moves 7.2° in case of 1.8° motor.

POWER LED

This will light whenever the voltage is supplying.

Run Current Adjustment Rotary Switch

Rotary Switch to adjust the drive current.

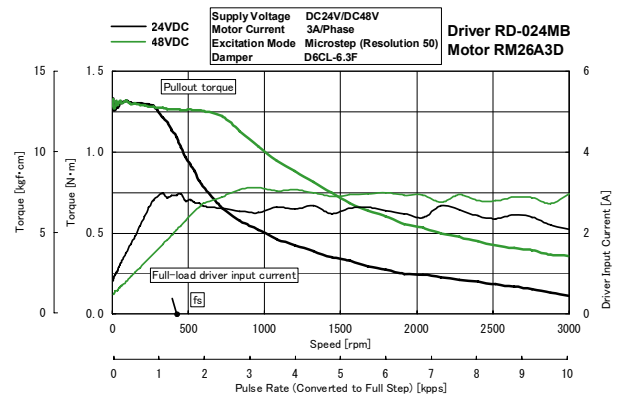
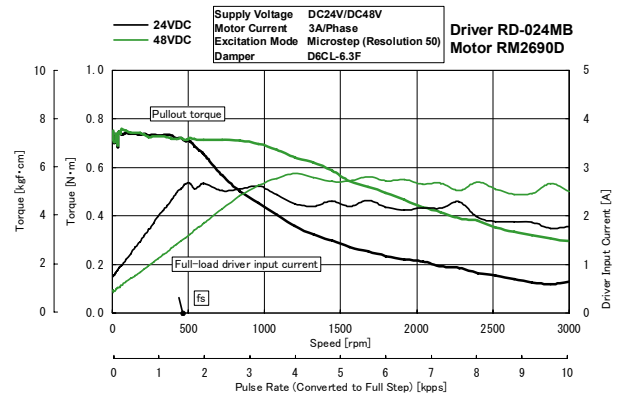
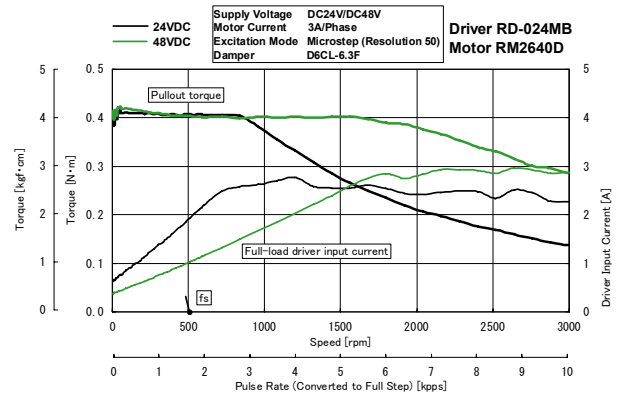
Stop Current Adjustment Trimmer

Trimmer to set the stop current to any value between 0 to 100% of the run current.

Dip Switches

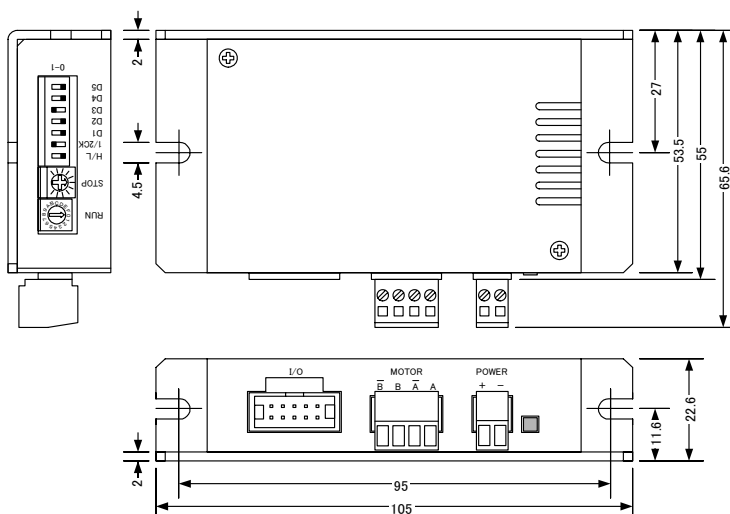
- 1) Select Current Range (H/L)
- 2) Select Clock Input (1CK/2CK)
- 3) Select Microstep Resolution (D1-D5)

Torque Chart



Dimensions

(mm)



Option

No sockets for I/O ports will be provided with the driver.

Use the OMRON MIL connector (10 pins) for the connection.

Flat cables with socket are available as an option.

Flat cables with socket

Model	Length
RCC-10P50L	50cm
RCC-10P100L	100cm
RCC-10P200L	200cm
RCC-10P300L	300cm

