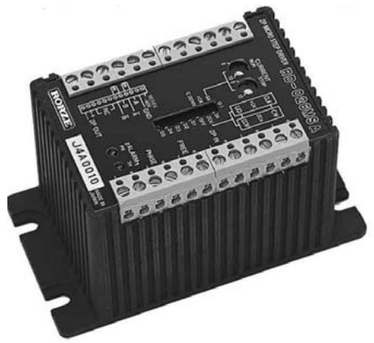
High power
Lower heat generation
Lower vibration
Pulse input

2-PH Selectable Microstepping Motor Driver

RD-026MSA

80,000 steps/rev.



Features

- High power (6A/Phase max.)
- Lower heat generation with the new circuit system
- Lower vibration
- Selectable microstep (22 selections)
- Photo-Isolated inputs and outputs
- Selectable clock – 1clk. or 2clk. Input
- Auto. current down (Adjustable stop current)

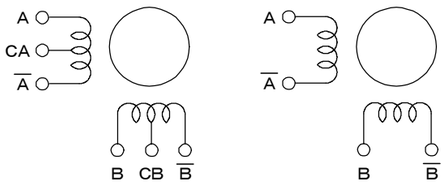
Specifications

Supply voltage	18 to 40VDC (including ripple)
Supply current	Approx. 1.2times rated coil current per phase (max.)
Motor current	0.5 to 6A/phase
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 80% of the run current after about 0.3 seconds of inactivity according to Stop Current setting
Response frequency	500kpps max.
Protective circuitry	Overheating (Auto. return) Over current, low and high voltage protection (Latch circuit)
Outside dimensions	63(H)×56(W)×105(D)mm
Weight	approx. 580g

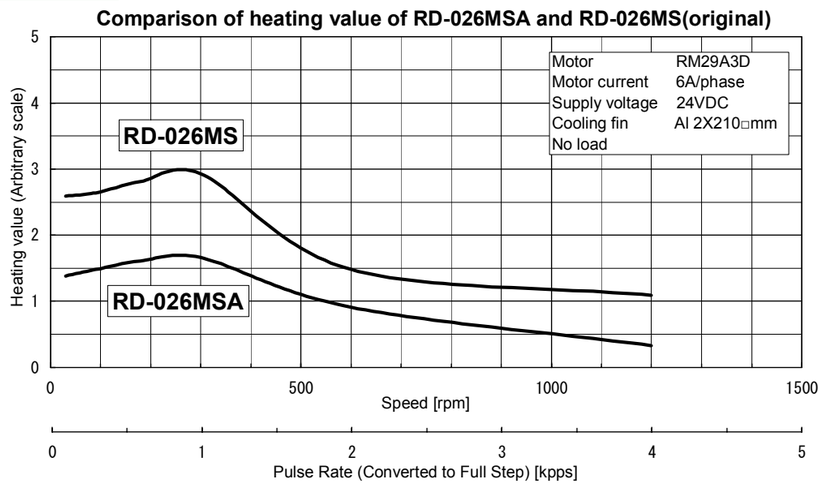
Suitable motors

Manufacturer	Model No.
RORZE Co.	RM2000 series, Hi-step
OTHER	HB type (PM type) 2-ph stepping motor (4 or 6 lead wires)

Motor Wiring



Temperature Chart



Functions

Clock inputs (CW/CLK, CCW/UD)

In case of using Two Clock Input (2CK)

CW+/- Motor rotates in CW direction with a pulse current of 8 to 20mA from CW+ to CW- terminal.

CCW+/- Motor rotates in CCW direction with a pulse current of 8 to 20mA from CCW+ to CCW- terminal.

In case of using One Clock Input (1CK)

CLK+/- & UD+/-

Motor rotates in CW direction with a pulse current of 8 to 20mA from CLK+ to CLK- terminal and UD input off.
Motor rotates in CCW direction with a pulse current of 8 to 20mA from CLK+ to CLK- terminal and UD input turned ON.

Full Step Input (2P IN +/-)

Motor rotates in full step mode with a pulse current of 2 to 10mA (approx. 3.8mA at 5VDC) from "2P IN +" to "2P IN –".

Free Input (FREE +/-)

All of motor wires are shorted to GND for approx. 1 sec. and they become open state and then motor shaft will become free with a pulse current of 2 to 10mA (approx. 3.8mA at 5VDC) 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.

Alarm Output (ALARM +/-)

ALARM output will be turned ON when any of overheating protection circuit, over voltage, over current, or low power supply voltage protection circuit is in operation.

2P Output (2P OUT +/-)

In case that the setting of microstep resolution(M) is except 1, 2.5, 5, 6.25, 12.5, 25, this outputs pulses equivalent to full step.

TH ALARM LED

This will light when the overheating protection circuit is in operation.

PW ALARM LED

This will light when any of over voltage, over current or low power supply voltage protection circuit is in operation.

Run Current Adjustment Trimmer

Trimmer to adjust the drive current.

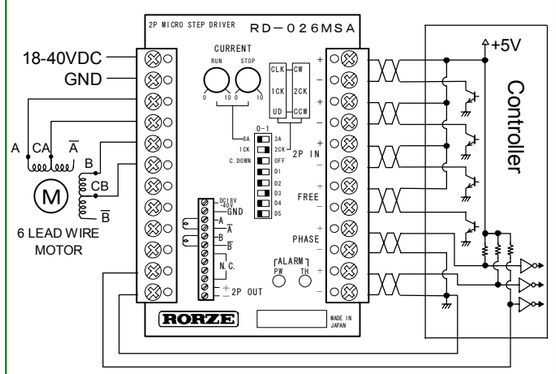
Stop Current Adjustment Trimmer

Trimmer to set the stop current to any value between 0 to 80% of the run current.

Dip Switches

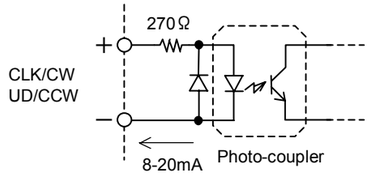
1) Select Current Range (6A/3A)
2) Select Clock Input (1CK/2CK)
3) Select Auto. Current Down
4) Select Microstep Resolution

Wiring Diagram

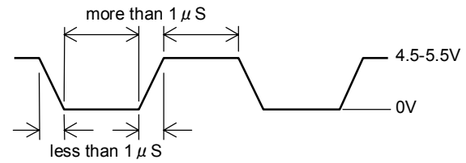


Circuits

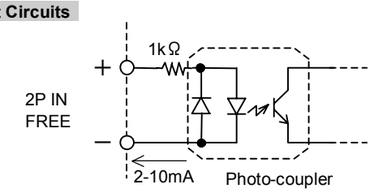
Clock Inputs (CW/CLK, CCW/UD)



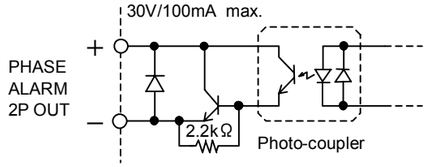
Clock Pulse Specification



Input Circuits

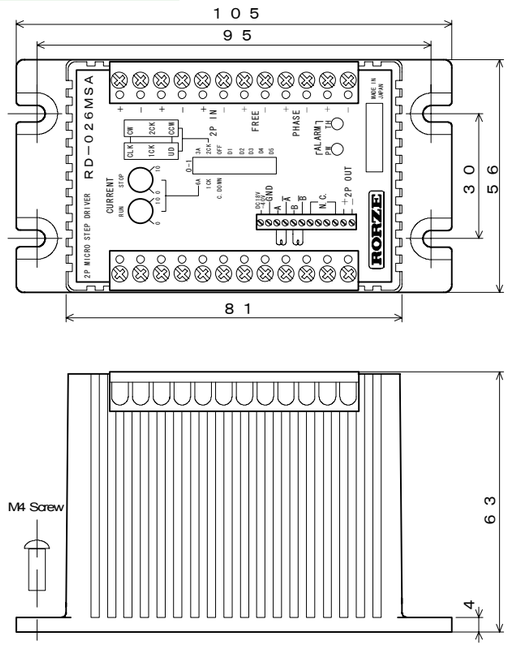


Output Circuits



Dimensions

(mm)



RD-026MSA