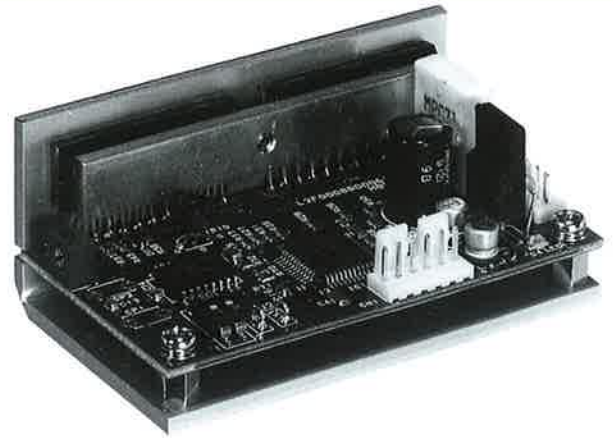


## Five-phase stepping motor driver

# KR-5M-SS



### Features

- Driver for five-phase stepping motor using a single 24 V DC power supply input.
- Incorporates a number of powerful functions despite its compact size, including automatic current reduction circuits to minimize motor heat generation.
- Compact size makes it ideal for incorporation into other equipment.
- New lower price.

### Specifications

Model	KR-5M-SS
Input power supply	DC24 ~ 40V 3A Max
Drive current	0 to about 0.9 A/phase Max
Drive system	Bipolar pentagon drive system FULL step 0.72° HALF step 0.36°
Operating temperature range	0 ~ 40°C
Weight	Approx. 100g

### Wire connection chart

CN1

Pin No.	Details	Signal	Pin No.	Function details
1	Input signal	H.O-	1	"Motor excitation off" control signal
2		H.O+	2	Motor excitation off for "1"
3		R-	3	Reverse signal input for clock 2
4		R+	4	Rotation-direction input for clock 1
5		F-	5	Normal rotation for "1", reverse rotation for "0"
6		F+	6	Normal signal input for clock 2 Pulse input for clock 1

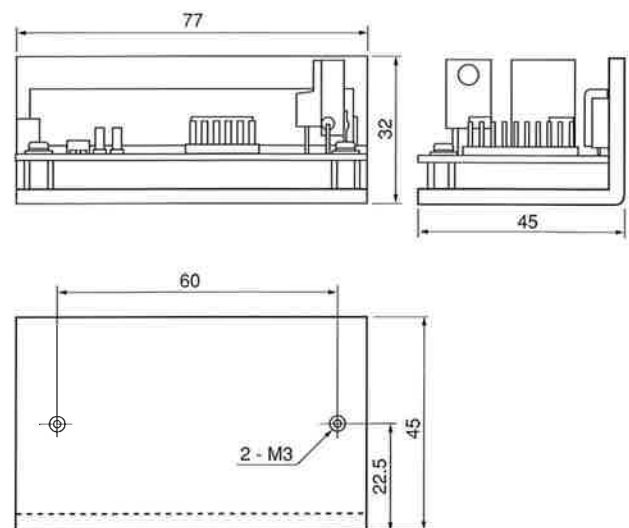
CN2

Compatible connector: 60-8263-3068-15-000 Kyocera Elco

Pin No.	Details	Signal	Pin No.	Function details	
1	Motor lead wire connections		1	Black	
2			2	Green	
3			3	Orange	
4			4	Red	
5			5	Blue	
6	Power supply	GND	6	Drive power Supply: 0V	
7			7		
8		+V	8		Drive power Supply: DC20 ~ 40V
9			9		
10		+5V	10	Maximum supply of 30 mA	

Compatible connector: 60-8263-3108-15-000 Kyocera Elco

### External dimensions (Unit: mm)

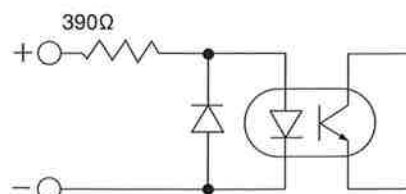


Dimensions do not include protruding items such as screws.

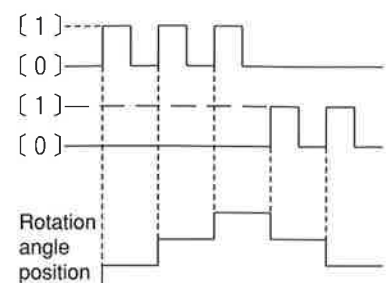
### Input pulse characteristics

- Pulse width 5  $\mu$ s Min
- Pulse interval 5  $\mu$ s Min
- Rise/fall time 1  $\mu$ s Max
- Max pulse frequency 70K pps
- Pulse voltage [1] 4V ~ 8V  
[0] 0.5V ~ -8V
- Internal resistance 390  $\Omega$

### Signal input circuit



### Input time chart

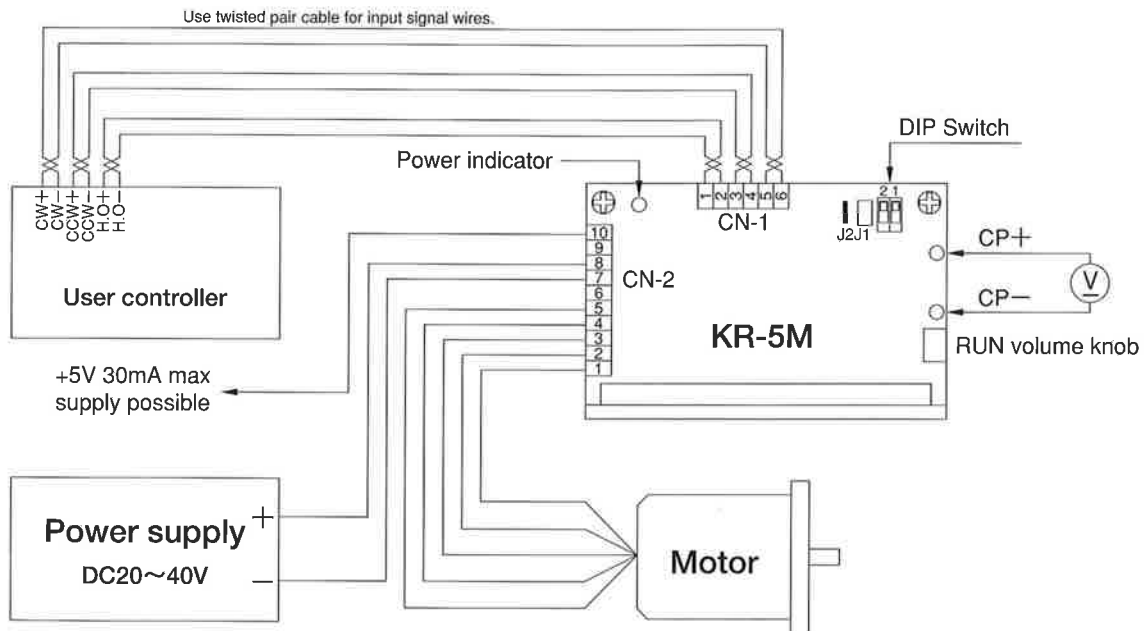


## Explanation of function selector switch



No.	Function	ON	OFF
1	Step angle	0.72° /pulse	0.36° /pulse
2	Clock system	Clock 1	Clock 2

## Wire connection diagram



Note 1: The numbers on CN1 and CN2 should be those shown in the diagram or on the connectors. Do not use the numbers on the printed circuit board.

Note 2: Pins 6 to 7 and 8 to 9 are connected internally on CN2.

## Drive current settings

Connect a voltmeter across CP1+ and CP2- on the board, and turn the RUN volume knob to set the voltage determined as follows.

Check pin voltage (V) = Set current x 4

Set to 0.35 A/phase when shipped

- (1) Turn the RUN volume knob fully counterclockwise before switching on the power.
- (2) Apply a normal or reverse signal with a frequency of at least 10 pps and turn the RUN volume knob slowly to set the calculated voltage value.

Note that the motor will turn when the signal is applied.

- (3) The current setting for automatic current reduction is fixed at approximately 60% of the rated current.
- (4) The motor shaft will be free, both when rotating or when stopped, as long as H.O. is set to "1".