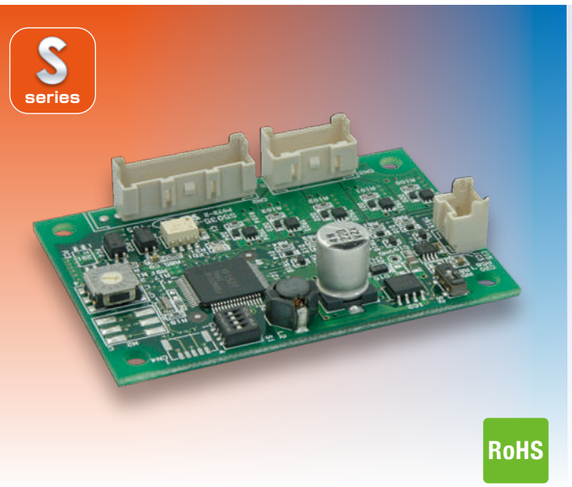
5 Phase Stepping Motor Driver

MC-S5035

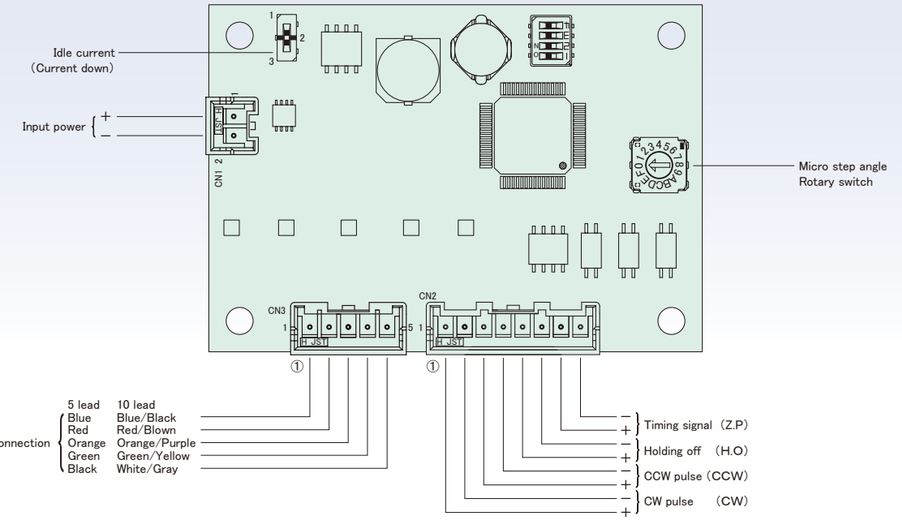


FEATURE

- More low-priced and compact size micro step driver.
- Maximum resolution is 1/250 (125,000 pulse per rotation).
- Low vibration drive(Full or Half step).
- Optical-isolator input.
- Automatic current reduction.
- Easy setting(resolution & current).

※Optional Parts ; Wire assembled conector ▶Page 54

NAME AND FUNCTION



SPECIFICATION

Name	5 phase stepping motor driver
Model	MC−S05035
Driving method	Micro step
Input power	DC24V ±5%　0.8A Max.
Drive current	0.35A/phase
Division	2 series : 1, 2, 4, 5, 8, 10, 16, 20, 25, 40, 50, 80, 100, 125, 200, 250 3 series : 1, 2, 3, 6, 12, 18, 24, 32, 36, 48, 60, 72, 120, 160, 180, 240
Maximum frequency	500 kpps
Input signal	Optical-isolator input　[1]:3～5V, [0]:−3～0.5V Input resistance　CW, CCW:220Ω　H.O:220Ω
Output signal (Z.P)	Optical-isolator open corrector output Condition ; DC30V or less, 50mA or less
Function	Pulse input mode selector , Micro step angle select , Automatic current reduction
Operating temperature range	0～40℃
Operating humidity range	0～85%
Weight	16.4g

DIMENSIONS (unit:mm)

SETTING MICROSTEP RESOLUTION

Resolution for 2 series :　When DIP Switch SW2 is OFF.

SW No.	0	1	2	3	4	5	6	7	8	9
Division	1	2	4	5	8	10	20	40	80	16

A	B	C	D	E	F
25	50	100	125	200	250

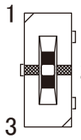
$$\text{Micro Step Angle} = \frac{\text{Base Step Angle}}{\text{Division}}$$

Resolution for 3 series :　When DIP Switch SW2 is ON.

SW No.	0	1	2	3	4	5	6	7	8	9
Division	1	2	3	6	12	18	24	32	36	48

A	B	C	D	E	F
60	72	120	160	180	240

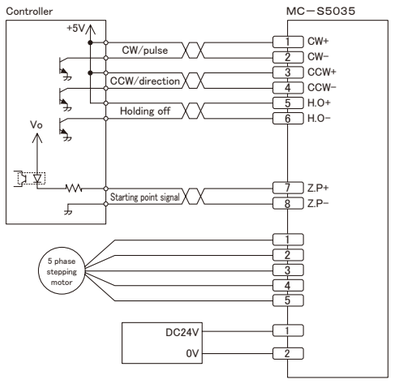
SETTING IDLE CURRENT (CURRENT DOWN)



↑ 25% (Position 1)
▪ 75% (Position 2, Center)
↓ 45% (Position 3)

※Figures are of ratios to the drive current.

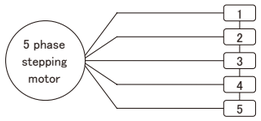
SAMPLE WIRING DIAGRAM



MOTOR

- 5/10 lead 5-Phase stepping motors such as Tamagawa-seiki or Oriental-motor.

See table below for the pin no. of the connector and color of motor leads.



Connector No.	5 lead	10 lead
1	Blue	Blue/Black
2	Red	Red/Blown
3	Orange	Orange/Purple
4	Green	Green/Yellow
5	Black	White/Gray

DIP SW FUNCTION

No.	Mode	ON	OFF
1	Pulse mode (CK)	One pulse	Two pulse
2	Drive current selector (2・3)	3 series	2 series
3	Internal function confirmation (OP)	Turning off when using	
4	Idle current reduction (CD)	Not active	Actived

INPUT CIRCUIT