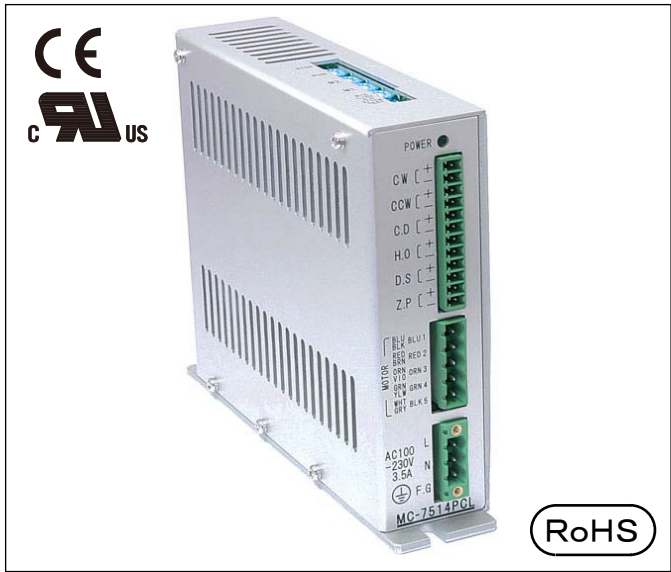


5 PHASE STEPPING MOTOR DRIVER

MC-7514PCL  
MC-7514PCL-3



UL standard recognition  
CE marking  
SEMI-F47

FEATURES

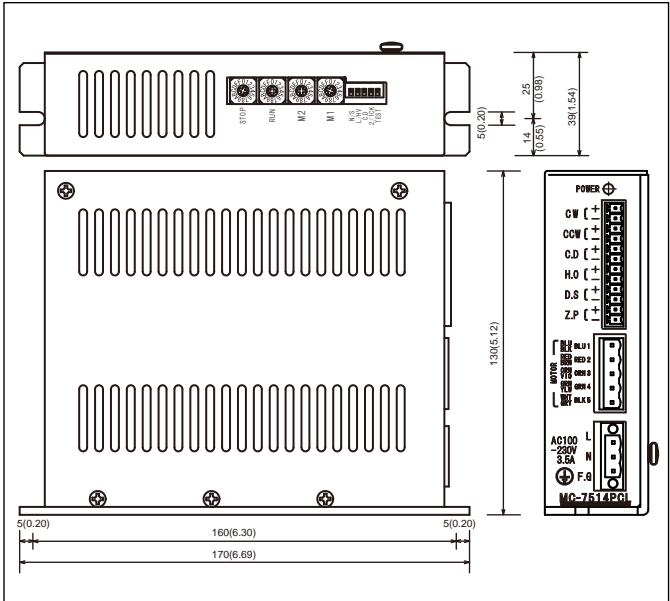
- It is 5 Phase-stepping motor driver of the AC100-230V input.
- Maximum resolution is 1/250 (125,000 pulse per rotation).
- Low vibration drive (Full or Half step).
- I/O uses the connector.
- Applies to a wide motor to 0.5A/phase-1.4A/phase.

SPECIFICATION

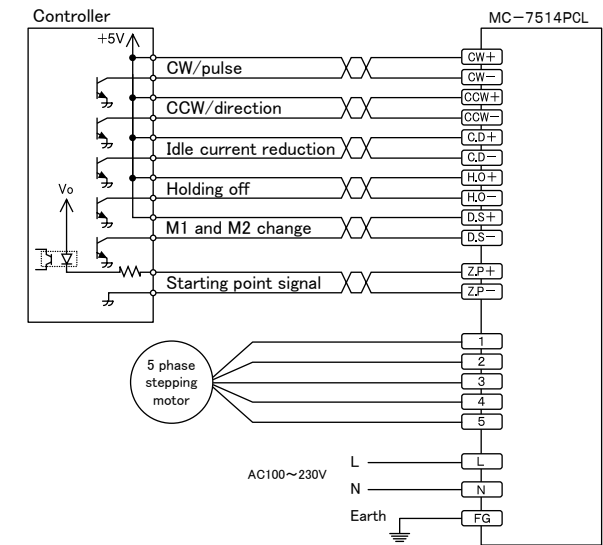
Name	5 phase stepping motor driver	
Model	MC-7514PCL , MC-7514PCL-3	
Driving method	Micro step	
Input power	AC100~230V±10% 50/60Hz 2A Max.	
Drive current	0.5A~1.4A/phase	
Division	MC-7514PCL	1, 2, 4, 5, 8, 10, 16, 20, 25, 40, 50, 80, 100, 125, 200, 250
	MC-7514PCL-3	1, 2, 3, 6, 12, 18, 24, 32, 36, 48, 60, 72, 120, 160, 180, 240
Maximum frequency	500kpps	
Input signal	Optical-isolator input [1] : 4~8V , [0] : -8~0.5V Input resistance CW, CCW : 300Ω C.D, H.O, D.S : 390Ω	
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 , Driving voltage select Initial sysytem check	
Cooling	Natural convection air cooling method	
Insulation resistance	The value is 50MΩ or more,that measured by DC500V Megger Between the AC input and the case.	
Withstand voltage	It is not abobe even if AC1500V is impressed between the AC input and the case for one minute.	
Operating temperature range	0~40℃	
Operating humidity range	0~85%	
Weight	750g	

DIMENSIONS (unit ; mm)

The size does not contain the projection thing such as the screws.



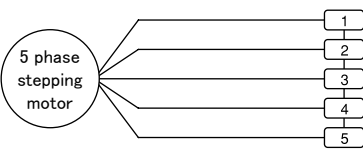
SAMPLE WIRING DIAGRAM



MOTOR

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

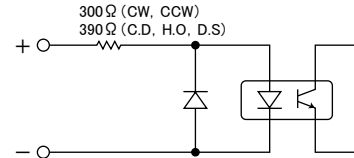
Motor connection



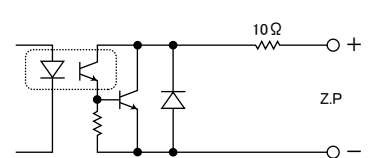
Connector No.	5 lead	10 lead
1	Blue	Blue/Black
2	Red	Red/Blown
3	Orange	Orange/Purple
4	Green	Green/Yellow
5	Black	White/Gray

Note : Please use the wire rod of AWG20(0.5mmsq) or more for connecting the motor.

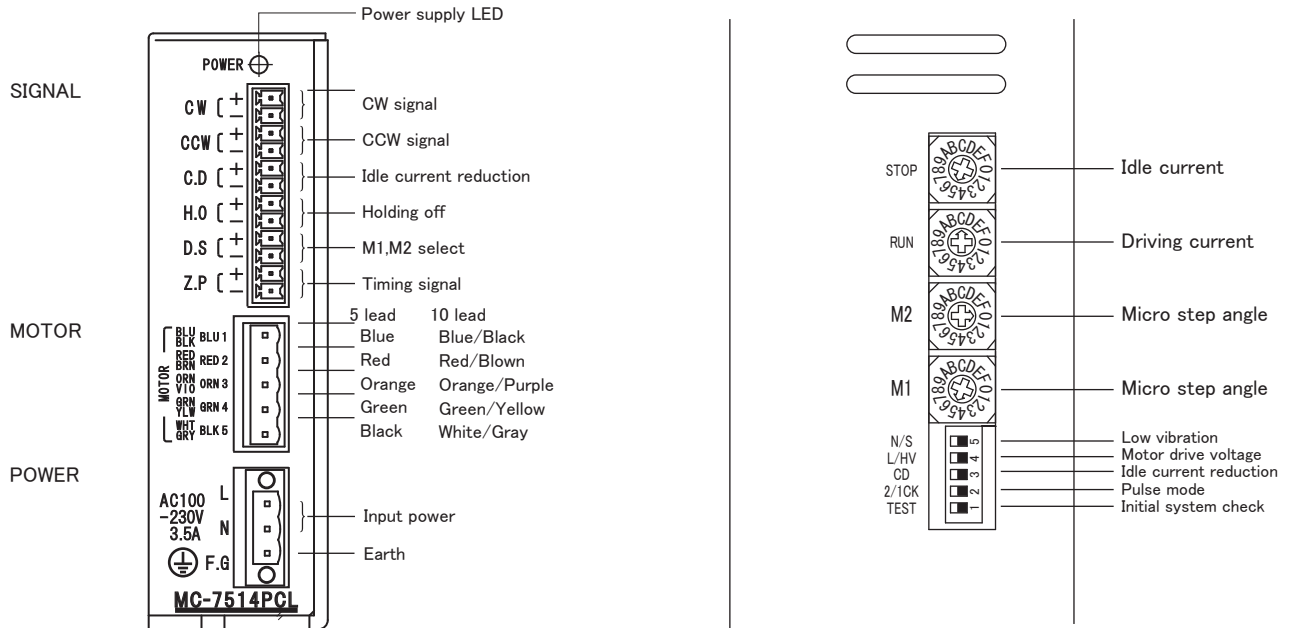
INPUT CIRCUIT



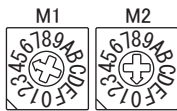
OUTPUT CIRCUIT



## NAME AND FUNCTION



## SETTING MICROSTEP RESOLUTION



MC-7514PCL

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					

One micro step = 0.72 degree ÷ Division

- M1: Use only when one microstep resolution is used.  
M2: Use if a different microstep resolution from M1 is desired for return travel.
- When input to D.S is [0] then M1 is selected, and D.S is [1] then M2 is selected.

MC-7514PCL-3

SW No.	0	1	2	3	4	5	6	7	8	9
Division	1 ※1	2 ※1	3	6	12	18	24	32	36	48
A	B	C	D	E	F					
60	72	120	160	180	240					

72 divided steps → 0.01 degree

※1: Does not drive at the low vibration in this case.

## SETTING DRIVE CURRENT

The desired drive current is obtained by setting RUN SW as follows.



SW No.	0	1	2	3	4	5	6	7	8	9
Current(A)	0.5	0.58	0.66	0.75	0.81	0.88	0.96	1.03	1.1	1.15
A	B	C	D	E	F					
1.25	1.32	1.4	1.47	1.53	1.6					

Example ; Drive current = 1.4A/phase . RUN SW = C

## SETTING IDLE CURRENT

Idle current is established by setting STOP SW as follows.



SW No.	0	1	2	3	4	5	6	7	8	9
Current(%)	27	31	36	40	45	50	54	58	62	66
A	B	C	D	E	F					
70	74	78	82	86	90					

Example ; Idle current = 0.7A/phase . STOP SW = 5 at RUN SW = C

## DIP SW FUNCTIONS



No.	Indication	Mode	ON	OFF
1	TEST	Initial system check	Rotating (60pps).	Always set to off
2	2/1CK	Pulse mode	One pulse	Two pulse
3	C.D	Idle current reduction	Not active	Activated
4	L/HV	Motor drive voltage	※ High speed and high torque	Standard
5	N/S	Low vibration	Low vibration drive	Standard drive

※ Please note heat of the motor when driving by high speed and a high torque.