

- This driver is a 5-phase micro-step driver which is compatible with all models of our stepper motor stages.
- Driving object motor is high speed type stepping motor of 2.8A/phase.
- 16 ways of step angles can be set, and 250 divisions, 125,000 pulses per rotation at maximum are possible.
- Due to the microstep system, step driving is low in vibrations and noise.
- High torque type driver of 100V – 115V AC input.

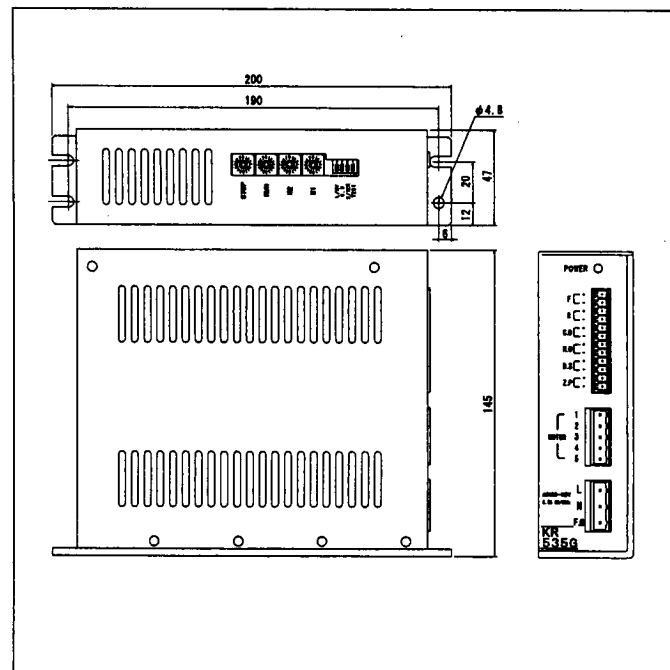
Specifications

Power Requirement	100~115V AC 6.5A 50/60Hz
Drive Current	1.0~2.8 A/phase (16 ways)
Motor Drive Mode	Micro-step drive
Number of Divisions	16 ways (1~250)
Operating Temperature Range	0~40°C
Weight	1.1kg

■ Connecting Terminal

Name	Functional description	
F+	1-clock selection: Drive pulse	
F-	2-clock selection: CW pulses	
R+	1-clock selection: Direction	
R-	2-clock selection: CCW pulses	
C.D+	Current down	
C.D-	[1]-Current down OFF	
H.O+	Motor current OFF signal	
H.O-	[1]-Motor current OFF	
D.S+	Division select	
D.S-	[0]-M1, [1]-M2	
Z.P+	On when at the origin	
Z.P-		
1	Motor Leads	Blue
2		Red
3		Orange
4		Green
5		Black
AC	AC100-115V	
AC		
F.G	Ground connection terminal	

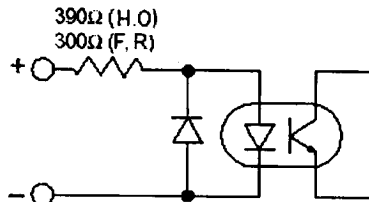
■ External Dimensions



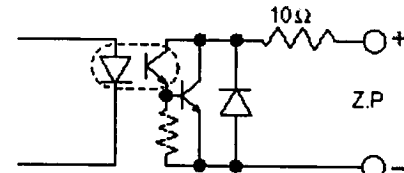
Input Pulse Specifications

- Pulse Width 0.5 μ s Min
- Interval Between Pulse 0.5 μ s Min
- Rise / Fall Time 1 μ s Max
- Maximum Frequency 500kpps
- Pulse Voltage [1] 4~8V
[0] -8V~0.5V
- Internal Resistance 300 Ω (F,R)
390 Ω (H.O)

Input Signal Circuit



Output Signal Circuit



Description of function selector switch

No.	Display by Nameplate	Function	ON	OFF
5	OP	Low vibration mode	Low vibration drive	Usual operation
4	L/HV	Drive voltage *3	High speed, high torque	Usual operation
3	C.D	Current down *2	Disabled	Enabled
2	2/1CK	Clock regime	1-clock	2-clock
1	TEST	Self test *1	60pps	Usual operation

- *1 : Rotates at speed of approx. 60pps of the setting of the number of divisions. Only the CW rotation will vary depending on the R in 1-clock selection. (CCW rotation when R is set to [0])
- *2 : The current down function decreases the current flowing to the motor when the motor is stopped to reduce motor heating. The current decreases in approx. 150ms after the last pulse input. Since the holding torque also decreases with decreasing current, change the current down setting to a proper value if there is a possibility of displacement.
- *3 : Please be aware that the heating of the motor, etc., increases when used at a high speed and high torque.

Micro-step regime setting



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

$$\text{Micro step angle of one pulse} = \frac{\text{Basic step angle}}{\text{Number of divisions}}$$

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

Drive current setting

Set the motor driving current by selecting the RUN rotary digital SW position as shown in the table below.

RUN



SW No.	0	1	2	3	4	5	6	7	8	9
Current (A)	1.0	1.15	1.3	1.45	1.6	1.75	1.9	2.05	2.2	2.35

A	B	C	D	E	F
2.5	2.65	2.8	2.95	3.1	3.25

Holding current setting

Set the motor holding current by selecting the STOP rotary digital SW position as shown in the table below. The current down setting should be a percentage of the RUN setting (drive current).

STOP



SW No.	0	1	2	3	4	5	6	7	8	9
Reduction (%)	25	30	35	40	45	50	55	60	65	70

A	B	C	D	E	F
75	80	85	90	95	100