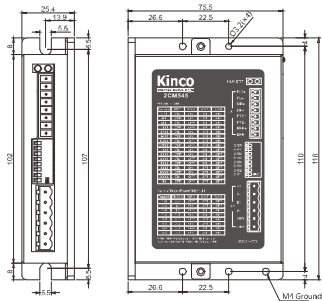


Stepper Driver 2CM545



- Support parameter self-adaptive function, generate optimal parameters according to motor type, ensure motor run at optimal performance;
- Phase memory function;
- Automatic half-current function, selected by DIP switches;
- Test running function, selected by DIP switches;
- Over voltage protection, over current protection functions;
- Micro-step filter function can smooth input pulse to reduce transient motion of motor, make sure motor run more smoothly;
- Opto-isolation ERR signal output with max. current of 100mA;
- Opto-isolation 5-24V pulse input, responding frequency up 400KHz;
- 15 subdivision levels and 8 current levels are selectable by DIP switches;
- Pulse type is selectable by DIP switches: PUL+DIR&CW/CCW.

Mechanical Dimensions (Unit : mm)



Function of DIP switches

Function	DIP setting	Description	
PLS+DIR	SW6,SW7=ON; Others=OFF	Set DIP switches according to functions required when power off. Power on in green, RUN LED blinking in driver, ERR LED is red. It means settings take effect. Then power off driver, reset subdivision and current for normal use.	
CW/CCW	SW7,SW8=ON; Others=OFF		
Micro-step smooth & dynamic filter disable	SW5,SW6=ON; Others=OFF		
Micro-step smooth filter enable	SW5,SW7=ON; Others=OFF		
Micro-step dynamic filter enable	SW5,SW8=ON; Others=OFF		
Test motor parameter upon power on disable	SW6,SW7,SW8=ON; Others=OFF		
Test motor parameter upon power on enable	SW5,SW6,SW7=ON; Others=OFF		
Test running	SW6,SW8=ON; Others=OFF		Motor running @80RPM
Automatic half-current	SW5=ON		Set SW5=ON to enable automatic half-current. Phase current will reduce to half of the set value after motor stops for 1.5s

Technical Specifications

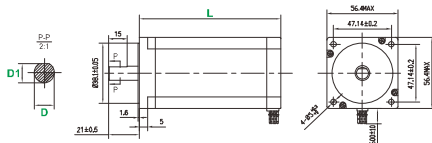
Input voltage	24 ~ 50VDC	
Overvoltage protection	85VDC	
Undervoltage protection	15VDC	
Overheat protection	85°C(Temperature of thermistor)	
Phase current(Peak)	1/1.5/2/2.5/3/3.5/4/4.5, 8 settable values in total. (Unit: A)	
Subdivision	200~25600 Pulse/rev , 15 subdivision levels in total	
Adaptable motor	57 series 2-phase hybrid stepper motor PLS (CW) , DIR(CCW) , FREE ,	
Input signal	Input voltage : 5 ~ 24VDC , Input current : 8mA@5VDC , 12mA@24VDC	
Control mode	Pulse control : PLS+DIR , CW/CCW	
Output signal	ERR, open collector output, maximum current:100mA	
Operation indicator	Combination of RUN and ERR LED indicates different status	
Protection circuit	Over voltage, under voltage, over current, over heat	
Cooling method	Nature air cooling	
Environment	Operation environment	Avoid environment with great amount of metallic powder, oil mist, or erosive gases
	Operation humidity	<85% RH(Non-condensing or water drops)
	Operation temperature	0°C ~ +40°C
	Storage temperature	-20°C ~ +70°C
	Weight(Net)	0.25kg
Dimensions	118×75.5×25.4 mm (Toothless heat sink)	
Ingress protection	IP20	

Subdivision setting (Unit:PULSE/REV)					Current setting (Unit: A)				
SW1	SW2	SW3	SW4=ON	SW4=OFF	SW6	SW7	SW8	RMS	Peak
ON	ON	ON	200	1000	ON	ON	ON	3.2	4.5
OFF	ON	ON	400	2000	OFF	ON	ON	2.8	4
ON	OFF	ON	800	4000	ON	OFF	ON	2.5	3.5
OFF	OFF	ON	1600	5000	OFF	OFF	ON	2.1	3
ON	ON	OFF	3200	8000	ON	ON	OFF	1.8	2.5
OFF	ON	OFF	6400	10000	OFF	ON	OFF	1.4	2
ON	OFF	OFF	12800	20000	ON	OFF	OFF	1.1	1.5
OFF	OFF	OFF	25600	NA	OFF	OFF	OFF	0.7	1

Two-phase stepper motor/57 series



Dimensions (Unit : mm)



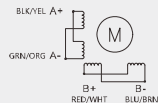
Model	L	D	D1
2S57Q-2582	112	Ø8.0	7.5±0.1
2S57Q-2280	80	Ø8.0	7.5±0.1
2S57Q-1376	76	Ø6.35	5.8±0.1
2S57Q-0956	56	Ø6.35	5.8±0.1
2S57Q-0541	41	Ø6.35	5.8±0.1

Specification

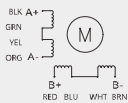
Technical Specifications		2S57Q-2582	2S57Q-2280	2S57Q-1376	2S57Q-0956	2S57Q-0541
Step angle		1.8°	1.8°	1.8°	1.8°	1.8°
Phase current (A)	Series	2.9	2.8	1.96	1.96	0.70
	Parallel	6	5.6	3.92	3.92	1.50
Holding torque (Nm)		2.5	2.2	1.3	0.9	0.5
Damping torque (Nm)		0.12	0.07	0.068	0.04	0.022
Winding resistance (Ω)		1±10%	0.8±10%	1±10%	0.8±10%	3.6±10%
Winding inductance (mH)		1.8±20%	1.8±20%	2.1±20%	1.2±20%	4.1±20%
Motor inertia (kg·cm ²)		0.8	0.53	0.48	0.3	0.135
Motor length L (mm)		112	80	76	56	41
Shaft diameter (mm)		8	8	6.35	6.35	6.35
Number of lead wires		8				
Insulation class		B				
Withstand voltage level		500VAC for 1minute				
Max. axial load (N)		15N				
Max. radial load (N)		75N (20mm from the flange)				
Operating temperature		-20°C ~ +50°C				
Surface temperature rise		Max.80°C (Both phases connected with rated current)				
Insulation impedance		Minimum 100MΩ, 500V DC				
Weight (kg)		1.7	1.1	1	0.7	0.45

Motor cable

Parallel connection of 8-wire motor



Series connection of 8-wire motor



Note : AWG 22# UL1007 , Length:600.

Two-phase stepper motor/57 series

Torque-frequency curve

