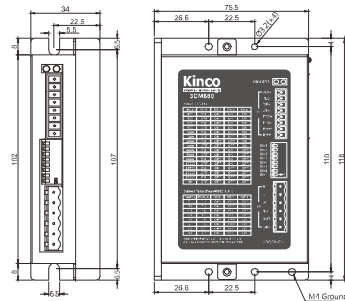


Stepper Driver 3CM880



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 driver, RUN LED blinking in green, 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		
Automatic half-current	SW5=ON		Motor running @80RPM Set SW5=ON to enable automatic half-current. Phase current will reduce to half of the set value after motor stops for 1.5s

- 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.

Technical Specifications

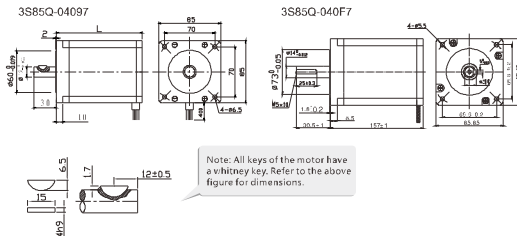
Input voltage	24 ~ 70VDC	
Overvoltage protection	85VDC	
Undervoltage protection	15VDC	
Overheat protection	80°C(Temperature of thermistor)	
Phase current(Peak)	2.4/3.2/4.4/8/5.6/6.4/7.2/8, 8 settable values in total. (Unit: A)	
Subdivision	400~25600 Pulse/rev , 15 subdivision levels in total	
Adaptable motor	3-phase hybrid stepper motor	
Input signal	PLS , DIR , FREE , 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)	0.253kg	
Dimensions	118×75.5×34 mm (Toothed heat sink)	
Ingress protection	IP20	

Subdivision setting (Unit:PULSE/REV)				Current setting (Unit: A)				RMS	Peak
SW1	SW2	SW3	SW4=ON SW4=OFF	SW6	SW7	SW8			
ON	ON	ON	400	4000	ON	ON	ON	5.7	8
OFF	ON	ON	500	5000	OFF	ON	ON	5.1	7.2
ON	OFF	ON	600	6000	ON	OFF	ON	4.5	6.4
OFF	OFF	ON	800	10000	OFF	OFF	ON	4	5.6
ON	ON	OFF	1000	12800	ON	ON	OFF	3.4	4.8
OFF	ON	OFF	1200	20000	OFF	ON	OFF	2.8	4
ON	OFF	OFF	2000	25600	ON	OFF	OFF	2.3	3.2
OFF	OFF	OFF	3000	NA	OFF	OFF	OFF	1.7	2.4

Three-phase stepper motor/85 series



Dimensions (Unit : mm)



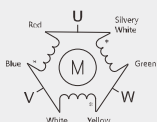
Specification

Technical Specifications	3S85Q-04097	3S85Q-040F7
Step angle	1.2°	1.2°
Phase current (A)	5.8	4
Holding torque (Nm)	4.0	7.5
Damping torque (Nm)	0.12	0.36
Winding resistance (Ω)	1.1±10%	1.78±10%
Winding inductance (mH)	4.6±20%	17.1±20%
Motor inertia (kg.cm ²)	2.32	0.44
Motor length L (mm)	97	157±1
Shaft diameter (mm)	12	14
Number of lead wires	6	3
Insulation class	B	B
Withstand voltage level	600VAC 1S 5mA	1800VAC 1S 5mA
Max. axial load (N)	60	60
Max. radial load (N)	220	220
Operating temperature	-20°C ~ +50°C	-30°C ~ +30°C
Surface temperature rise	Max.80°C (Working with rated phase current)	
Insulation impedance	Minimum 100MΩ, 500V DC	
Weight (kg)	2.7	5.3
Startup freq. with no load(Hz)*	1.4K	2.0K

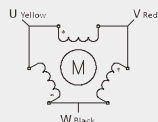
Note: The startup freq. is tested under condition of 2000 steps/round, only for reference.

Motor cable

3S85Q-04097
Three-phase 6-wire motor



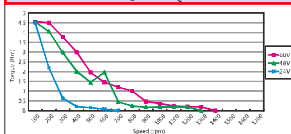
3S85Q-040F7



Note : AVG 1S # ULL1332 , Length: 400

Torque-frequency curve

3CM880 @ 3S85Q-04097



3M2280N @ 3S85Q-040F7 (4 subdivisions)

