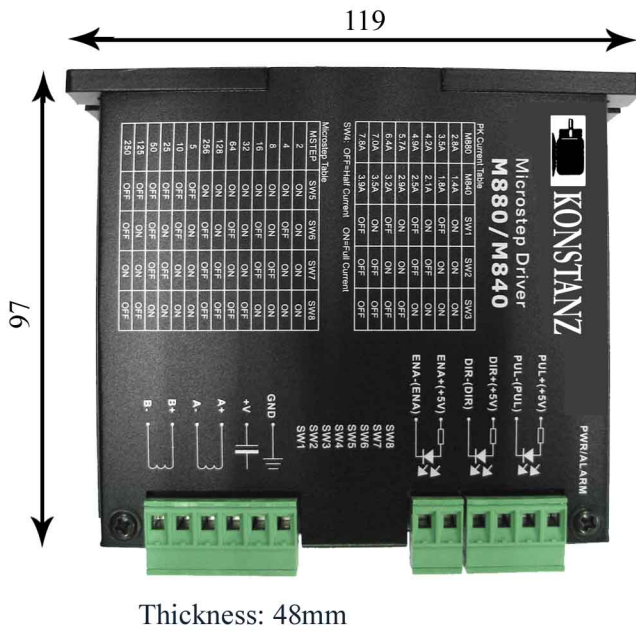


# M880/M840 - Konstanz 2 Phase Drive



- High performance, low cost
- Supply voltage to +90VDC, current to 7.8A for M880; 3.9A for M840.
- Inaudible 20kHz chopping frequency
- TTL compatible and optically isolated input signals
- Automatic idle-current reduction
- Mixed-decay current control for less motor heating
- 14 selectable resolutions in decimal and binary
- Microstep resolutions up to 51,200 steps/rev
- Suitable for 4,6,8 lead motors
- Over-current, over-voltage and short-circuit protection
- Small size (115 x 97 x 48mm for M880, 115 x 97 x 31mm for M840)

## Introduction

M880/M840 is a high performance microstepping driver based on the most advanced technology in the world today. It is suitable for driving any 2-phase and 4-phase hybrid step motors(current 7.8A/3.9A). By using advanced bipolar constant-current chopping technique, it can output more speed and power from the same motor, compared with traditional technologies such as L/R drivers. Its patented current control technology allows coil currents to be accurately control, with much less current ripple and motor heating than other drivers in the market.

## Application

Suitable for a wide range of stepping motors of size Nema 17, 23 and 34, and usable for various kinds of machines, such as X-Y tables, labeling machines, laser cutters, engraving machines, and pick-place devices, particularly useful in applications with low noise, low vibration, high speed and high precision requirements.

## Microstep Resolution Selection

Microstep resolution is set by SW5, 6, 7, 8 of the DIP switch as shown in the following table:

Microstep	Step/rev.(for 1.8°/motor)	SW5	SW6	SW7	SW8
2	400	ON	ON	ON	ON
4	800	ON	OFF	ON	ON
8	1600	ON	ON	OFF	ON
16	3200	ON	OFF	OFF	ON
32	3400	ON	ON	ON	OFF
64	12800	ON	OFF	ON	OFF
128	25600	ON	ON	OFF	OFF
256	51200	ON	OFF	OFF	OFF
5	1000	OFF	ON	ON	ON
10	2000	OFF	OFF	ON	ON
25	5000	OFF	ON	OFF	ON
50	10000	OFF	OFF	OFF	ON
125	25000	OFF	ON	ON	OFF
250	50000	OFF	OFF	ON	OFF

# Electric Specifications (Tj = 25 )

Parameters	M880			Remark
	Min	Typical	Max	
Peak Output Current	2.8A/1.4A	By user	7.8A/3.9A	By DIP switch
Supply voltage (DC)	+24V	+68V	+90V	
Logic signal current	10mA	12mA	18mA	
Pulse input frequency	0	By user	300KHz	
Isolation resistance	500M ohms			

## Control Signal Connector P1-pins

Pin. No.	Signal	Functions
1	PUI+ (+5V)	Pulse signal: in single pulse(pulse/direction) mode, this input represents pulse signal, effective for each upward – rising edge; in double pulse mode (pulse/pulse) this input represents clockwise pulse. For reliable response, pulse width should be longer than 3μs.
2	PUL- (pulse)	
3	DIR+ (+5V)	Direction signal: in single-pulse mode, this signal has low/high voltage levels, representing two directions of motor rotation; in double-pulse mode (set by inside jumper JMPI), this signal is counter-clock pulse, effective on each rising edge. For reliable motion response, direction signal should be sent to driver 5μs before the first pulse of a motion direction reversal.
4	DIR- (DIR)	
5	ENA+ (+5V)	Enable signal: this signal is used for enable/disable, high level for enabling driver and low level for disabling driver. Usually left unconnected(enabled).
6	ENA- (ENA)	

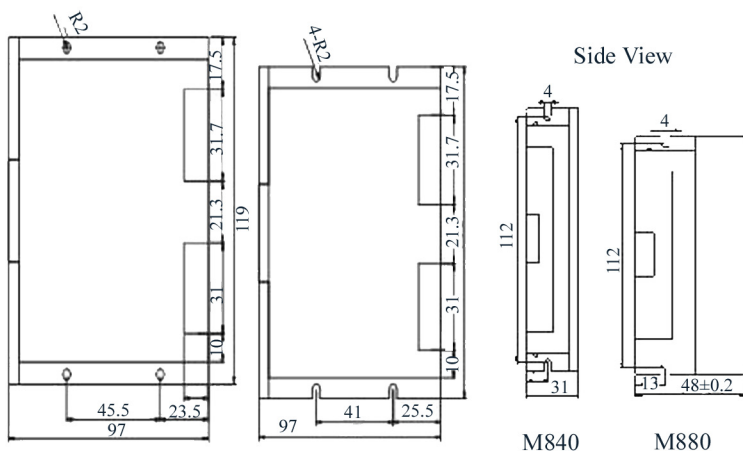
## Current Setting

The first three bits (SW1, 2, 3) of the switches are used to set the current (dynamic) during motor motion, details as below:

Current for M840	Current for M880	SW1	SW2	SW3
1.4A	2.8A	ON	ON	ON
1.8A	3.5A	OFF	ON	ON
2.1A	4.2A	ON	OFF	ON
2.5A	4.9A	OFF	OFF	ON
2.9A	5.7A	ON	ON	OFF
3.2A	6.4A	OFF	ON	OFF
3.5A	7.0A	ON	OFF	OFF
3.9A	7.8A	OFF	OFF	OFF

Noted that due to motor inductance the actual current in the coil may be smaller the dynamic current settings, particularly at higher speeds.

## External Size



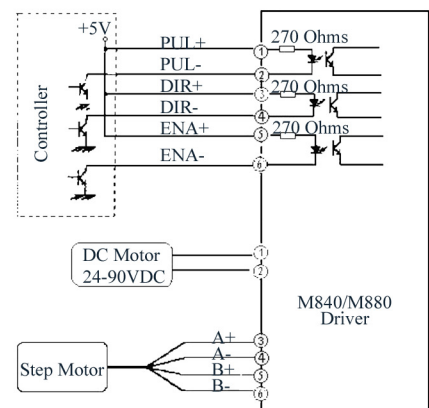
M880 Front View

M840 Front View

M840

M880

## Wiring Diagram



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