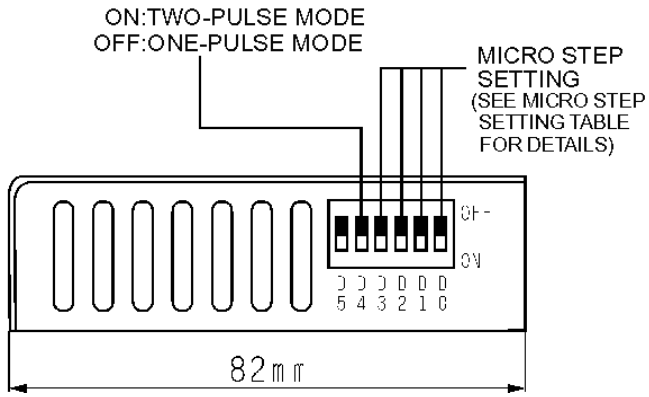
Q2HB44MC Q2HB44MD

Q2HB44MC (D) is constant angle constant torque microstepping drives. This type drive supplies regulated phase current for supply voltages between 12-40V. It is designed for use with the 2-phase hybrid step motor of all kinds with a 42-86mm outside diameter, 6 or 8 lead and 4A current max. It is widely used in small numerical control equipment with high resolution such as carving machine, laser labeling, laser inner carving machine etc.

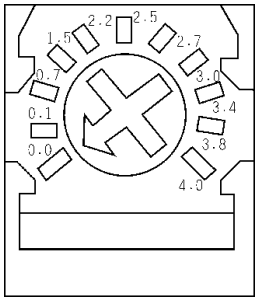
Features

- High reliability, Low price
- 12/8 channels constant angle constant torque micro step, highest micro steps: 200
- Unique control circuitry
- Highest response frequency: 200Kpps
- Winding current will be reduced by 50% when no step pulse command is received for 0.1 second.
- Bipolar constant current chopping mode
- Optically isolated signals I/O
- Driving current is continually adjustable from 0.5A/phase to 4A/phase
- Single power supply (12-40Vdc)

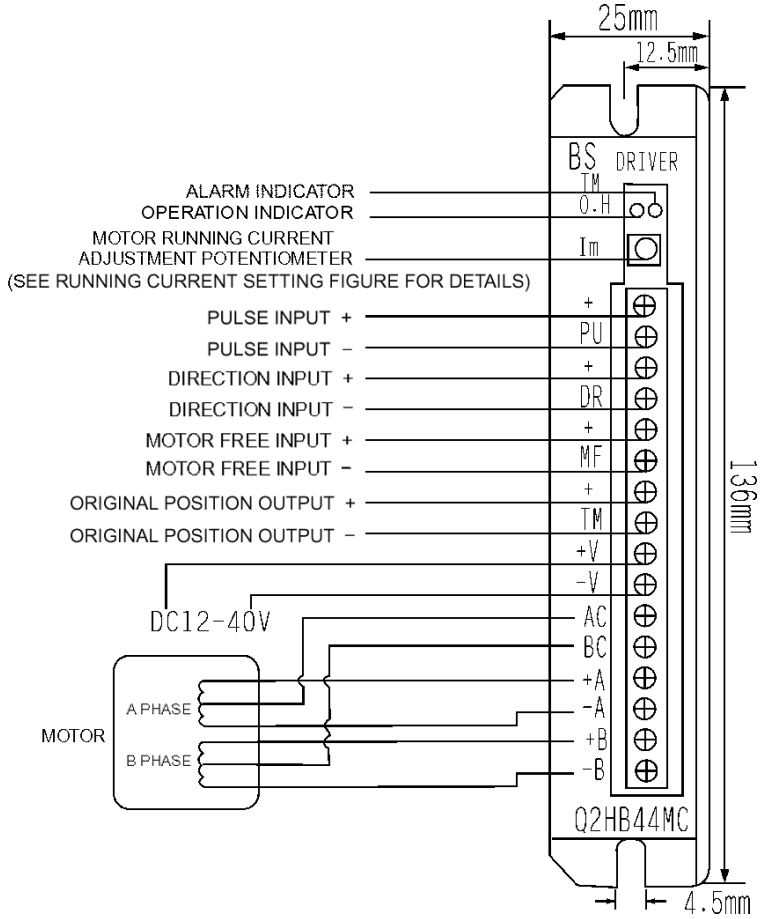
FUNCTION DIP SWITCHES



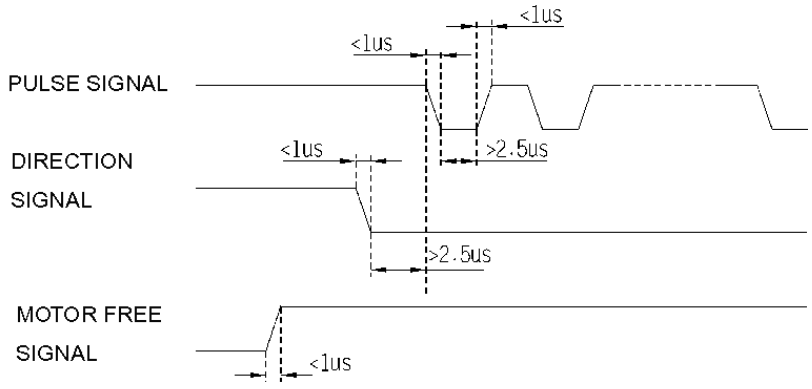
RUNNING CURRENT SETTING



FUNCTIONAL DESCRIPTION



Input signal oscillogram



Note

1. Do not connect the power reversely, the input voltage should not over 40Vdc.
2. The voltage of the input control signal is 5V, a series resistance is necessary to limit the current when the voltage level is over 5V.

3. When the temperature of drive is over 70C the overheat indicator will light, the drive will stop working until the temperature falls down to 50C. A radiator is needed when the overheat protection occurs.
4. Because this type driver adopts a special control circuit, the motor must be 6 or 8 lead motor.

Q2HB44MC micro step setting table

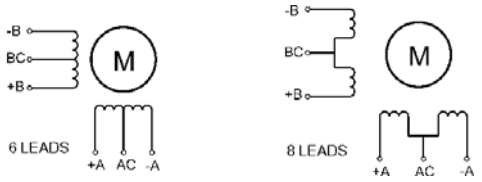
Micro step	1	2	4	8	16	32	64	128
D0	ON	OFF	ON	OFF	ON	OFF	ON	OFF
D1	ON	ON	OFF	OFF	ON	ON	OFF	OFF
D2	ON	ON	ON	ON	OFF	OFF	OFF	OFF
D3	NO USE							
D4	ON=Two-Pulse Mode: PU = CW Pulse; DR = CCW Pulse							
	OFF=One-Pulse Mode：PU = Pulse; DR = Direction							

Q2HB44MD micro step setting table

Micro step	1	2	4	5	8	10	20	25	40	50	100	200	200	200	200	200
D0	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
D1	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
D2	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF
D3	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
D4	ON=Two-Pulse Mode: PU = CW Pulse; DR = CCW Pulse															
	OFF=One-Pulse Mode：PU = Pulse; DR = Direction															

Q2HB44MC signals table

Mark symbol	Function	Note
TM	Running indicator light	When the TM is enabled the green LBD will light.
O.H	Failure indicator light	The red LBD will light when overheat protection effects.
Im	Potentiometer for setting the winding current	Adjust the motor's phase current. Decrease with the CCW rotation，increase with CW rotation。
+	Anode of optical isolated inputs	Connected to +5V power. Driven voltage: +5V-+24V, a R is needed when the voltage is over 5V, please refer to page 5 input signals for details.
PU	D4=OFF, PU: step pulse	Each negative pulse edge triggers one motor step. Input resistance is 220Ω.Requiring: low voltage level 0-0.5V, high voltage level 4-5V. pulse width >2.5μs
	D4=ON, PU: CW step pulse	

+	Anode of optical isolated inputs	Connected to +5V power supply. Driven voltage : +5V-+24V, a R is needed when the voltage over 5V, please refer to page 4 output signals for details
DR	D4=OFF, DR: step pulse	Used to change the motor's running direction. Input resistance is 430 Ω.Requiring: low voltage level 0-0.5V, high voltage level 4-5V. pulse width >2.5 μs
	D4=ON, DR: CCW step pulse	
+	Anode of optical isolated inputs	Connected to +5V power supply. Driven voltage: +5V-+24V, a R is needed when the voltage is over 5V, please refer to page 5 input signals for details.
MF	Motor free signal	The current of the winding is cut off. The driver stops working , the motor is in a free status.
+	Anode of origin's optical isolated output	Enabled when the energized motor's windings are on the origin (B,-A energized); optical isolated outputs (high voltage level).
TM	Cathode of origin's optical isolated output	Connect + to the resistance to limit the current of output signals, TM to the ground of outputs, maximum driving current 50mA, highest voltage 50V
+V	Anode of power	DC12-40V
-V	Cathode of power	
AC,BC	Motor's connection	
+A,-A		
+B,-B		