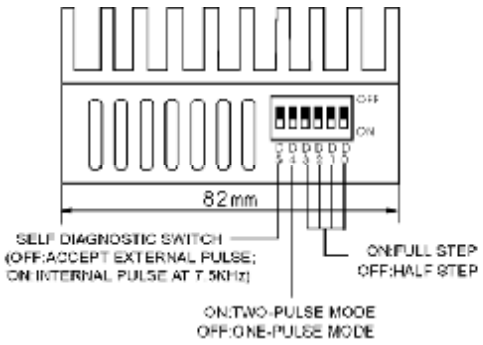
Q2HB68

Q2HB68 Full/Half drive supplies regulated phase current for supply voltages between 24 and 80Vdc. It is designed for use with the 2-phase hybrid stepper of all kinds with a 57-86mm outside diameter, 6,8 lead and 6A current max. It is widely used in small numerical control equipment such as carving machine, peeling machine and so on.

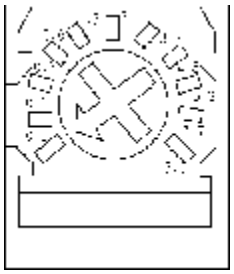
Features

- High reliability, Low price
- Highest response frequency: 50Kpps
- 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 6A/phase
- Single power supply (24-80Vdc)

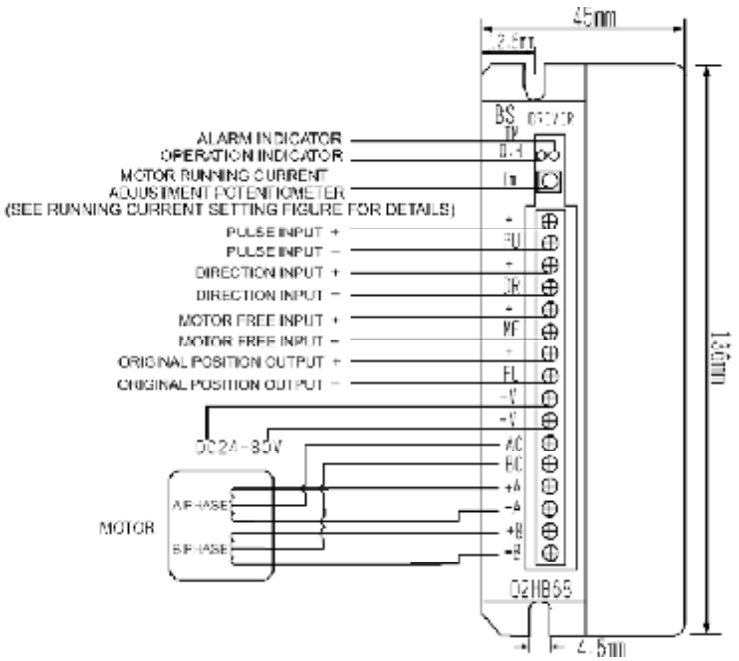
FUNCTION DIP SWITCHES



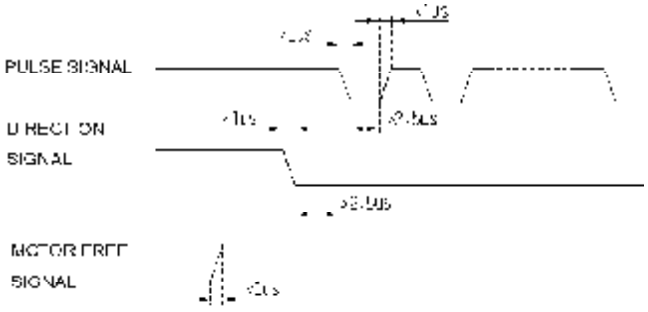
RUNNING CURRENT SETTING



Drive's diagram



Input signal oscillogram



Note:

1. Do not connect the power reversely, the input voltage should not over 40Vdc.
2. The input control signal's voltage 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.

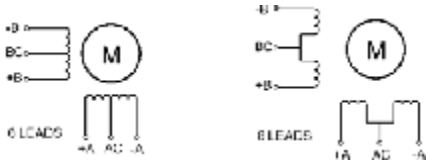
4. Because this type driver adopts a special control circuitry, the motor must be 6 or 8 lead motor.

DIP switch specification

Micro step	1(Full step)	2(Half step)
D0	ON	OFF
D4	ON, double pulse:	
	OFF, single pulse: PU=step pulse signal, DR=direction signal	
D5	Self checking switch (OFF: receive the outside pulse, ON: inner 7.5kHz pulse	

Q2HB68 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 phase current of the motor. Decrease with CCW rotation, Increase with CW rotation.
+	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.
PU	D4=OFF, PU: step pulse signal. D4=ON, PU: CW step pulse signal.	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 >10μs
+	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 4 output signals for details
DR	D4=OFF, DR: step pulse signal. D4=ON, DR: CCW step pulse signal.	Used to change the motor's running direction. Input resistance is 430Ω.Requiring: low voltage level 0-0.5V, high voltage level 4-5V. pulse width >200μs
+	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 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 optical isolated overheat protection	When the drive's temperature is over 70C, the current will be cut off automatically and enable FL. When the driver's temperature falls down to 50C, the driver will rework automatically and clear FL
FL	Cathode of optical isolated overheat protection outputs	Connect "+" to output signal through the serial resistance to limit the current. Connect FL to the ground. The maximum driving current is

		50mA and the maximum voltage is 50V.
+V	Anode of power	DC24-80V
-V	Cathode of power	
AC,BC	Motor’s connection	
+A,-A		
+B,-B		