HIGH CURRENT 30A

DC MOTOR DRIVER

This driver uses two high current half bridge Infineon BTS 7960 chip for motor drive applications. Interfacing to a microcontroller or Arduino is made easy using this driver which features current sensing, slew rate adjustment and protection against over-temperature, overvoltage, under-voltage, Over-current and short circuit.

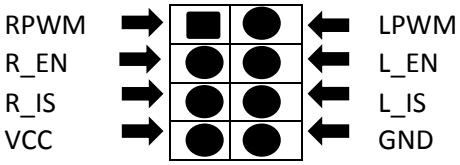
This small size driver provides a cost optimized solution for protected high current PWM motor drives.

Feature

- Operating Voltage 5 to 27V (B+)
- Control motor speed by PWM up to 25 kHz.
- Motor forward and backward motion control
- Switched mode current limitation for reduced power dissipation.
- Current limitation level of 30 A Current sense capability
- Over-temperature shut down Over-voltage lock out.
- Large size heat sink is mounted to driver.

- Size: 4*5*1.2 cm.
- Weight: 66 gm.

How to connect to Microcontroller (Arduino)



1	RPWM	Forward level or PWM signal input, active HIGH
2	LPWM	Reverse level or PWM signal input, active HIGH
3	R_EN	Forward drive enable input, HIGH enable, LOW Close
4	L_EN	Reverse drive enable input, HIGH enable, LOW Close
5	R_IS	Forward drive – side current alarm output
6	L_IS	Reverse drive – side current alarm output
7	VCC	5V power input from Arduino board.
8	GND	Ground.

- 5V power supply from Arduino , GND connected Arduino GND
- R_EN and L_EN shorted and connected to 5V level, the driver to work.
- L_PWM, input PWM signal or high motor forward.
- R_PWM, input PWM signal or high motor revers.

Arduino Code

```
/*
IBT-2 Motor Control Board driven by Arduino.

Speed and direction are separated in two functions.

Connection to the IBT-2 board:
IBT-2 pin 1 (RPWM) to Arduino pin 5(PWM)
IBT-2 pin 2 (LPWM) to Arduino pin 6(PWM)
IBT-2 pins 3 (R_EN), 4 (L_EN), 7 (VCC) to Arduino 5V pin
IBT-2 pin 8 (GND) to Arduino GND
IBT-2 pins 5 (R_IS) and 6 (L_IS) not connected
*/

int RPWM_Output = 5; // Arduino PWM output pin 5; connect to IBT-2 pin 1 (RPWM)
int LPWM_Output = 6; // Arduino PWM output pin 6; connect to IBT-2 pin 2 (LPWM)
int reversePWM;
int forwardPWM;

void setup()
{
  pinMode(RPWM_Output, OUTPUT);
  pinMode(LPWM_Output, OUTPUT);
}

void loop()
{
```

```
// reverse rotation
for ( reversePWM=0;reversePWM<255;reversePWM++)
{

   analogWrite(LPWM_Output, 0);
   analogWrite(RPWM_Output, reversePWM);
}
delay(200);
   // forward rotation
for ( forwardPWM=0;forwardPWM<255;forwardPWM++)
{
   analogWrite(LPWM_Output, forwardPWM);
   analogWrite(RPWM_Output, 0);
}
delay(200);
}
```