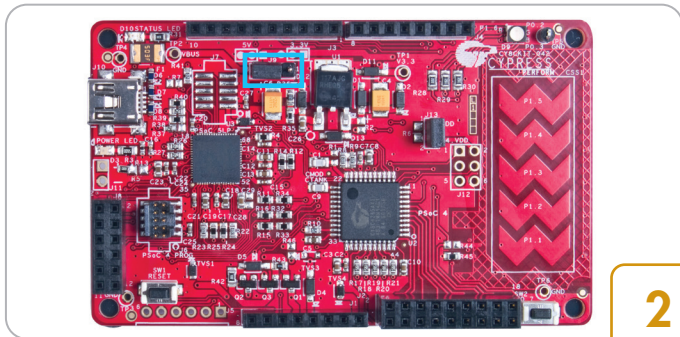


CY8CKIT-037 PSoC[®]4 MOTOR CONTROL



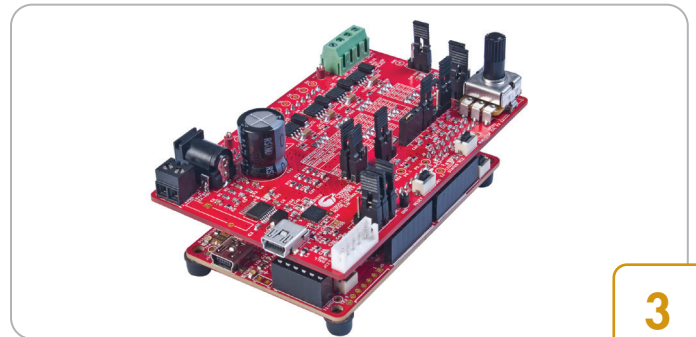
1

KIT CONTENTS: CY8CKIT-037 Motor Control Evaluation Board, USB Standard-A to Mini-B cable, Configuration Jumpers, Fuse, BLDC motor (BLY172S-24V-4000) with sinusoidal back electromotive force, 24-V/2.1-A AC-DC Adapter, Screwdriver, Quick Start Guide



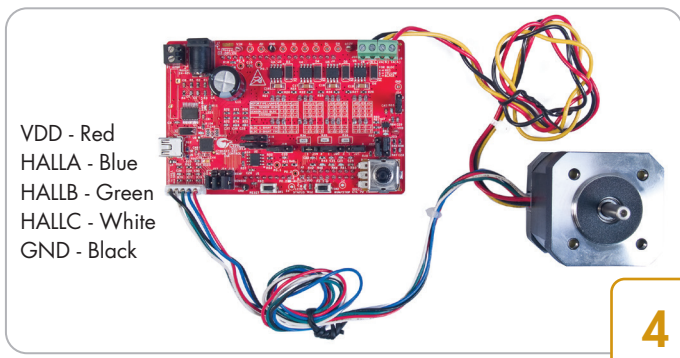
2

- The CY8CKIT-037 EVK board is intended to be used with the CY8CKIT-042 PSoC[®] 4 Pioneer Kit
- Set VDD to 5 V with J9 on CY8CKIT-042 Kit



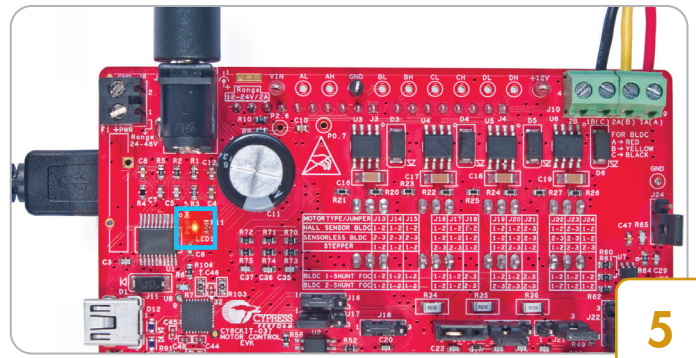
3

- Connect the CY8CKIT-037 EVK board to the CY8CKIT-042 board through connectors J1, J2, J3, and J4



4

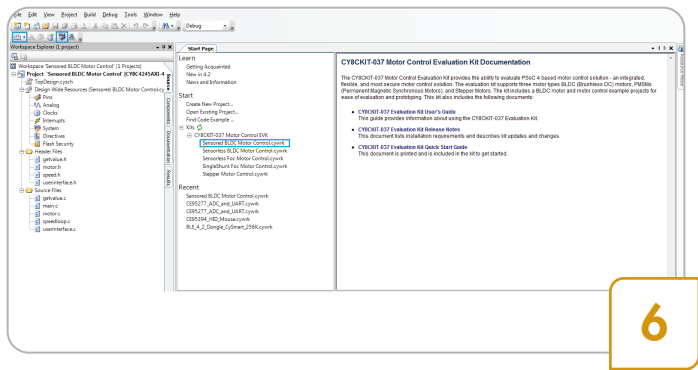
- Connect the Hall Sensor connector to J12 on CY8CKIT-037
- Confirm that Jumper J13-24 are as per "HALL SENSOR BLDC" motor type as printed on the EVK board
- Connect the motor windings to J9 and J10 using the screwdriver
- For the motor provided with the kit, the color coding of motor windings is: A > Red, B > Yellow, C > Black



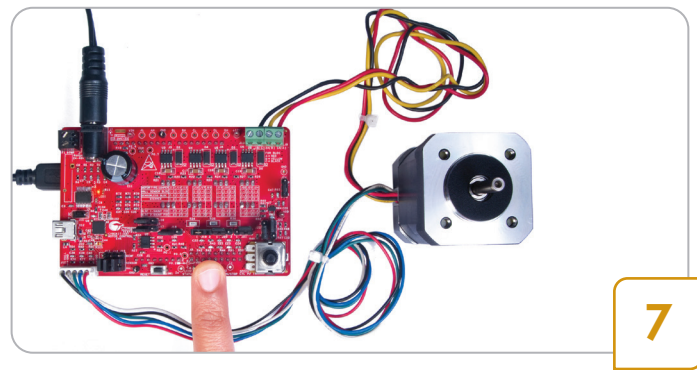
5

- Connect the power adapter provided with the kit to CY8CKIT-037 at connector J7; connect the other end of the adapter to any 100~240 V AC power socket
- Red LED indicates power ON. If not glowing, then fix the fuse F2 correctly on the bottom side
- Connect the USB cable provided with the kit to CY8CKIT-042 at connector J10; connect the other end of the USB cable to your PC

CY8CKIT-037 PSoC[®]4 MOTOR CONTROL



6



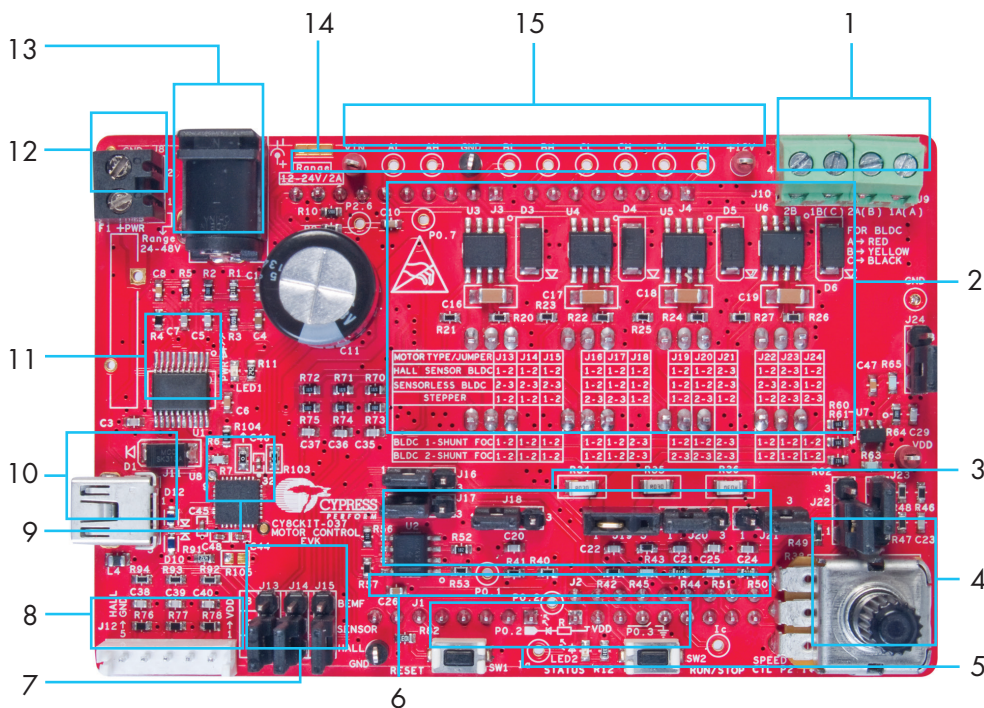
7

- Download the **CY8CKIT-037** Complete setup from www.cypress.com/CY8CKIT-037 and install it on your PC
- Launch PSoC Creator[™]
- On the PSoC Creator Start Page, click **Sensored BLDC Motor Control.cywrk** under Kits > CY8CKIT-037 Motor Control EVK
- Select a location to save the code example and click OK.
- Sensored BLDC Motor Control Project will open in the Workspace Explorer
- Click the Program button on the Build/Program toolbar to program the PSoC device

- Press the switch SW1 to reset the EVK board. LED2 stops blinking after reset
- Press the switch SW2 to start the BLDC motor
- Vary the position of the potentiometer R38 to change the motor speed
- Press SW2 to stop the motor

Caution: Do not remove jumpers while the kit is powered

CY8CKIT-037 Motor Control EVK Board Details



- 1 Motor Winding Connector
- 2 PWM Driver for Dual H-Bridge Circuit
- 3 Current Chopper and Processing Circuit
- 4 Potentiometer to Change Motor Speed
- 5 Reset Button, Status LED and Run/Stop Button
- 6 Arduino[™] Connectors to CY8CKIT-042
- 7 Hall and BEMF Selection Jumpers
- 8 Hall Sensor Interface Connector
- 9 USB Serial Chip
- 10 USB Connector to PC
- 11 12 V DC/DC Switching Regulator
- 12 24-48 V DC Power Supply Connector
- 13 12-24 V/2 A Power Jack
- 14 Arduino Connectors to CY8CKIT-042
- 15 Test Points

For the latest information on motor control products, visit www.cypress.com/CY8CKIT-037