

# AXMC18870



## 3.6A Brushed DC Motor Driver (PWM Control)

Preliminary Datasheet — Jan 2022

### Description

AXMC18870 is a brushed-DC motor driver for printers, appliances, industrial equipment, and other small machines. Two logic inputs control the H-bridge driver, which consists of 4 N-channel MOSFETs that can control motors bidirectionally with up to 3.6A peak current. The inputs can be pulse width modulated (PWM) to control motor speed, using a choice of current-decay modes. Setting both inputs low enters a low-power sleep mode. AXMC18870 features integrated current regulation, based on the analog input VREF and the voltage on the ISEN pin, which is proportional to motor current through an external sense resistor. The ability to limit current to a known level can significantly reduce the system power requirements and bulk capacitance needed to maintain stable voltage, especially for motor startup and stall conditions. The device is fully protected from faults and short circuits, including under-voltage (UVLO), over-current (OCP), and over-temperature (TSD). When the fault condition is removed, the device automatically resumes normal operation.

### Features

- H-Bridge Motor Driver
  - Drives One DC Motor, One Winding of a Stepper Motor, or Other Loads.
- Wide 6.5V to 35V Operating Voltage
- 565mΩ Typical Rds(on) (HS + LS)
- 3.6A Peak Current Drive
- PWM Control Interface
- Integrated Current Regulation
- Low-Power Sleep Mode
- Small Package and Footprint
  - 8-Pin eSOP With Thermal PAD
  - 4.9mm × 6.0mm
- Integrated Protection Features
  - VM Undervoltage Lockout (UVLO)
  - Overcurrent Protection (OCP)
  - Thermal Shutdown (TSD)
  - Automatic Fault Recovery

### Applications

- Printers
- Appliances
- Industrial Equipment
- Other Mechatronic Applications

Figure 1 Simplified Schematic

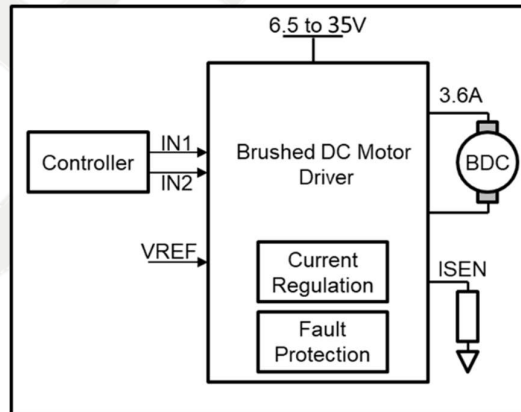


Figure 2 H-Bridge States

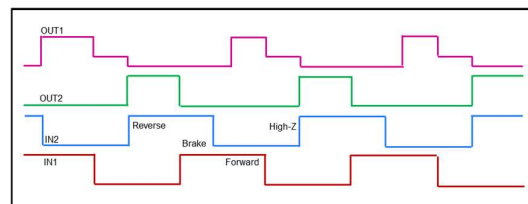


Table 1 Device Summary

Order code	Package	Packing
AXMC18870	eSOP8	Reel

