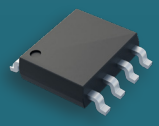
Motor Driving and Positioning

MLX80339

The MLX80339 is a code-free 3-phase BLDC motor controller for sensorless fans and pumps up to 40W. Its pre-validated logic and intuitive interface enable rapid deployment without the need for software development.



Key features



- Operating range:
  - Motor current < 2 A
  - Supply voltage range from 5.5 V to 26 V
  - Junction temperature from -40 °C to 150 °C
- Integrated motor bridge driver
  - 350 mOhm per phase (HS+LS+Shunt)
  - Programmable peak current limit up to 3 A
  - Up to 20W motors at 12V, 40W at 24V
- Control interface: PWM, UART, I2C
- Motor control logic
  - Sensorless FOC drive for BLDC fans/pumps
  - Configurable motor parameter
- Protections & Diagnostics
- Package RoHS compliant SO8-ep (6x5 mm²)

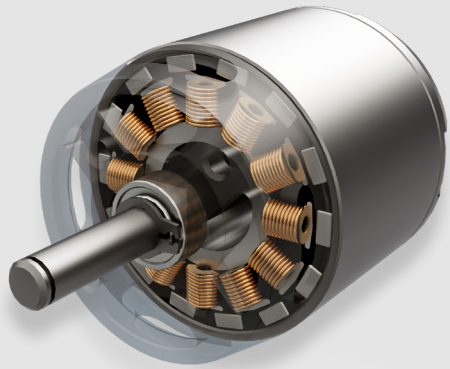
MOTOR START-TO-RUN by Melexis

<Code Free>

3-phase fan driver

Sensorless speed control:
- from 1 RPM and up to 100k RPM motors
- silent & efficient FOC (Field-Oriented-Control)
- configurable FOC current & speed parameters
- overmodulation option for maximum speed and power

ECU communication options:
- legacy PWM/FG interface for existing solutions
- digital I2C or UART interface for smarter control



Codefree

Accelerate development with our Code-free Start-to-Run ecosystem. Paired with the Melexis Compact Master (MCM) and evaluation kit, the MLX80339 eliminates complex software coding so you can configure and spin your motor in under 15 minutes.

Applications

3-phase fan and pump motors
- server cooling fans
- bldc residential fans, ceiling fans
- bldc air purifiers and humidifier fans
- bldc washer and dishwashers pumps
- bldc cordless garden and power tools
- bldc 3-phase seat fans
- bldc small automotive fans and blowers



melexis.com/
MLX80339

V2/11-2026
The datasheet prevails

Melexis
INNOVATION WITH HEART