



## Features

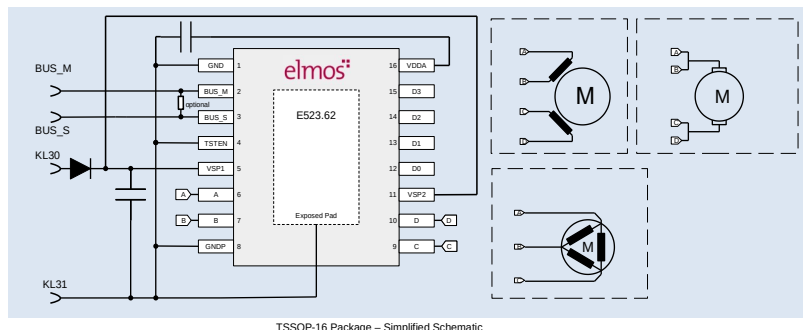
- Control and drive of three phase brushless motor (BLDC), two phase bipolar stepper motor or up to two conventional DC motors
- Integrated four half bridge drivers with a maximum phase current of 600mA per phase.
- Integrated measurement system for motor current and voltage (phase and supply)
- Monitor and diagnosis features:
  - Under/over-voltage, over-current, over-temperature
  - Drain source voltage monitoring to detect over load
- Smart supply block for 12V automotive boardnet
  - Configurable low supply voltage (<7V) operation
  - 30µA deep sleep mode current (25°C typ.)
- Area and power optimized 32bit ARM® Cortex®-M23
  - 64 KByte Flash memory, 4KByte SRAM, 512 Byte EEPROM
  - 32 KByte SysROM for LIN protocol and bootloader
- Serial interface for fast end-of-line programming
- Support of external sensor by
  - 5V/3mA voltage supply
  - Data interfaces (analog/digital GPIOs)
- LIN 2.2 autobaud interface and auto-addressing (compliant to ISO17987 and SAE-J2602-2), LIN sleep mode capability, LIN 2.2 SNPD
- Operating range of -40°C to 150°C junction temperature
- Developed according ISO 26262, supports safety requirements with ASIL B

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## Applications

- Water valves
- Small and medium Fans
- HVAC flaps and other small actuators

## Typical Operating Circuit



## General Description

E523.62 is a highly integrated motor controller for 12V automotive applications. The device combines a 32bit ARM® Cortex®-M23 microcontroller and a high-voltage analog motor driver in a small footprint package.

This device drives a three phase brushless motor(BLDC), a two phase stepper motor or up to two conventional DC motors.

The combination of a microcontroller and an integrated power stage provides a cost optimized system for low to medium power actuator and fan applications.

The integrated measurement system provides all input signals to realize a sensorless close loop commutation and provides a complete set of monitoring and diagnostic features.

For outstanding absolute positioning requirements external sensors are supported by providing supply voltage and various data interfaces (analog/digital GPIOs).

A serial interface supports fast end-of-line Flash firmware programming. The LIN 2.2 interface with autobaud and auto-addressing functionality enables the integration into existing LIN bus systems.

## Ordering Information

Product ID	Package	Junction Temp. Range
E52362A69B	TSSOP16-EP	-40°C to +150°C

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