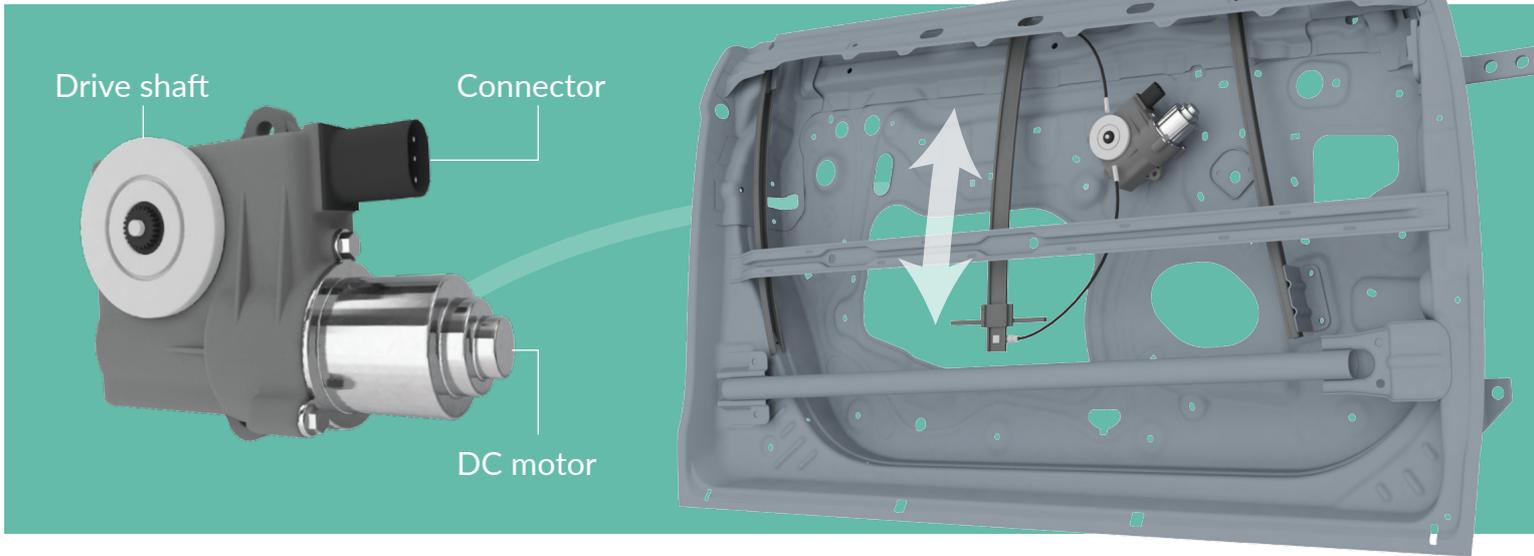


AUTOMOTIVE WINDOW LIFTER

Windows regulators are a standard feature on most vehicles sold today. They enable convenience features like automatically raising or lowering the window (“one-touch” operation) thus allowing the driver to maintain focus on controlling the vehicle. To allow safe operation they also provide anti-pinch and obstruction detection. Although

traditionally driven by a DC brushed motor, many applications are moving to brushless DC motors to reduce weight, space, and noise while increasing the reliability of the window actuator.



Melexis solutions for window lift applications

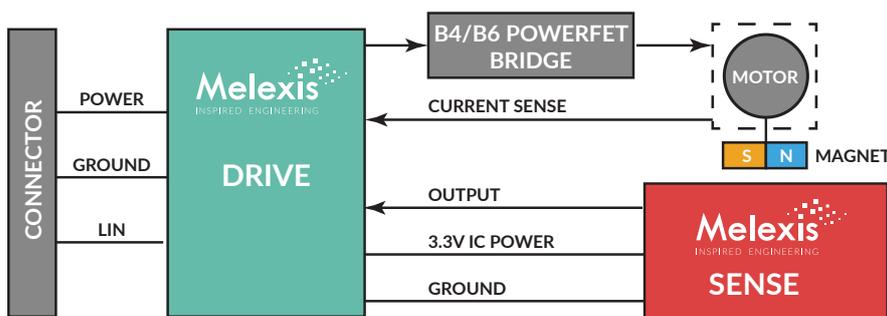
Melexis offers a variety of solution kits for DC and BLDC motors. They cover low- and high-end window lifter and sun roof motors.

For the actuation Melexis suggests the MLX81344 (high-end/BLDC) or MLX81160 (low-end/DC). They are

single-chip LIN pre-drivers in a small QFN (5x5 or 4x4) package.

For the motor control, Melexis suggest either resolvers (BLDC) for the positioning or latches (DC) for motor indexing.

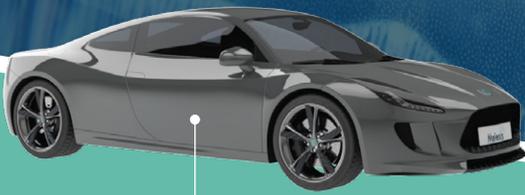
Block diagram



Key features

- One or two chip solution
- Integrated regulator for 12V battery operation
- Integrated LIN transceiver
- Optional PWM control
- Position feedback via relative position with Hall latches





AUTOMOTIVE WINDOW LIFTER

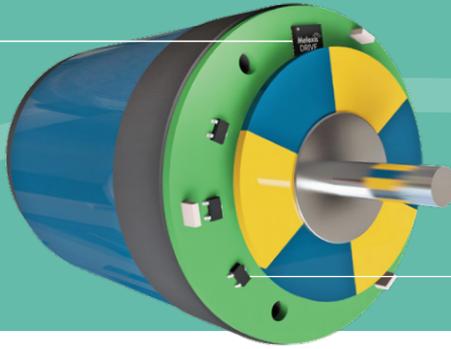
Application Products

Selected Drive products

- MLX81344
- MLX81160



DC & BLDC motor



Selected Sense products

Latches (Speed, pulse and direction)

- MLX92212
- MLX92251 / MLX92255
- MLX92351 / MLX92352

Resolver (Sine, Cosine)

- MLX90380
- MLX90381

Melexis Drive

MLX81344 - BLDC

- For 12 and 24 V applications
- LIN interface
- 90 KB memory (64 KB Flash, 26 KB ROM)
- 12x multi-function IOs
- 3 pre drivers (<60nC FET)
- Diagnostic
- Current Sense
- Package QFN-24 (4x4mm) or QFN-32 (5x5mm)

MLX81160 - DC relay

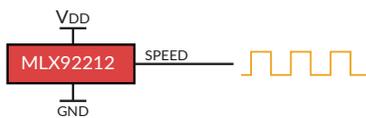
- For 12V and 24V applications
- LIN interface
- 48 KB memory (32 KB Flash, 16 KB ROM)
- 12x multi-function IOs
- 6 drivers for external relay
- Diagnostic
- Current Sense
- Package QFN-24 (4x4 mm)



Melexis Sense

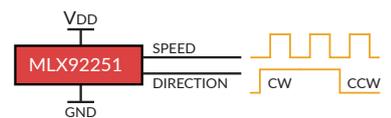
MLX92212

- Speed Output
- 2.5V - 5.5V
- TSOT-3 Package



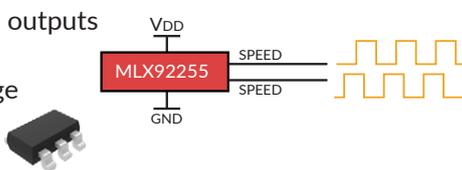
MLX92251

- Speed & direction outputs
- 2.7V-24V
- TSOT-5 Package



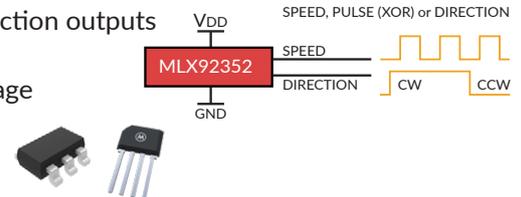
MLX92255

- Speed & speed outputs
- 2.5V - 5.5V
- TSOT-5 Package



MLX92352

- Speed, pulse or direction outputs
- 2.7V-60V
- TSOT-5 or VA Package
- Pitch independent



More about our products and solutions

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