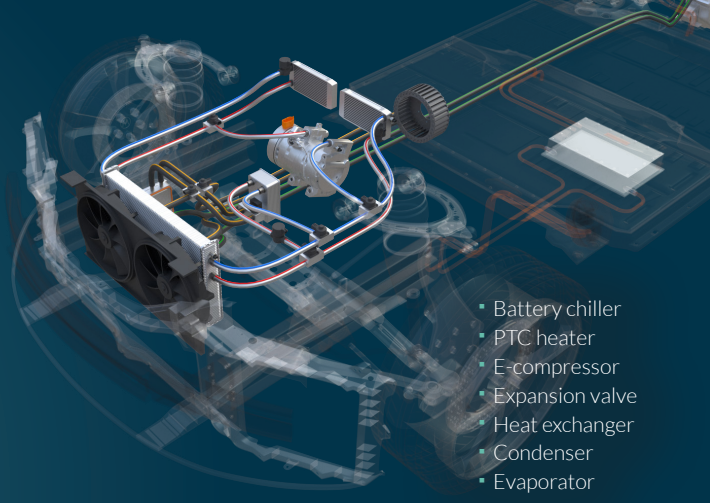
Smart BEV thermal management

Melexis IC-solutions optimize EV thermal management, increase range, shorten charging time and boosting in-car comfort.

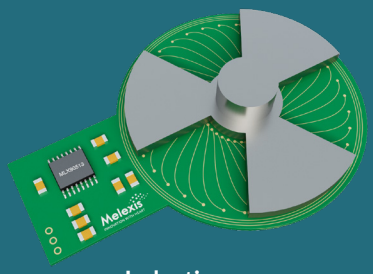


- Battery chiller
- PTC heater
- E-compressor
- Expansion valve
- Heat exchanger
- Condenser
- Evaporator

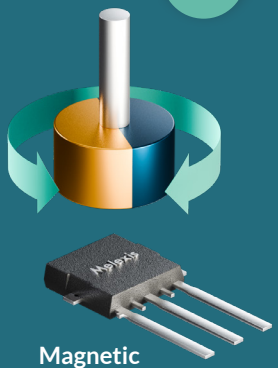
Position sensor ICs

Technology choice

- Magnetic and/or inductive
- Integrated sense & drive solution
- IC position flexibility



Inductive

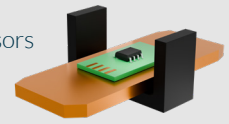


Magnetic

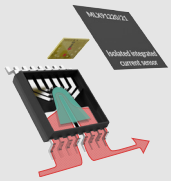
Current sensor ICs

Technology choice

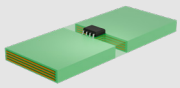
- High accuracy with ease of integration
- Fully integrated and isolated current sensors
- Factory calibration



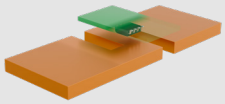
IMC-Hall® (<2kA)



Integrated



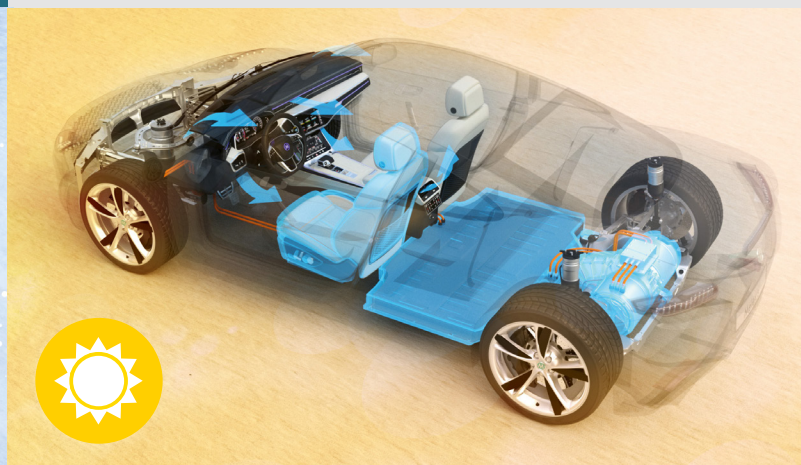
Power PCB



Busbar

Coreless (<300A)





Motor driver ICs

Technology choice

- Smallest footprint
- Wide portfolio for best-fit choice
  - driver and pre-driver
  - embedded or state machine
- Robust operation with low acoustic

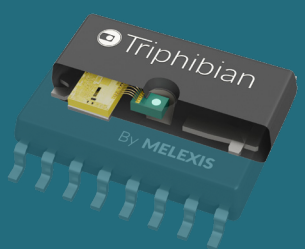


Thermal valve

Pressure sensor ICs

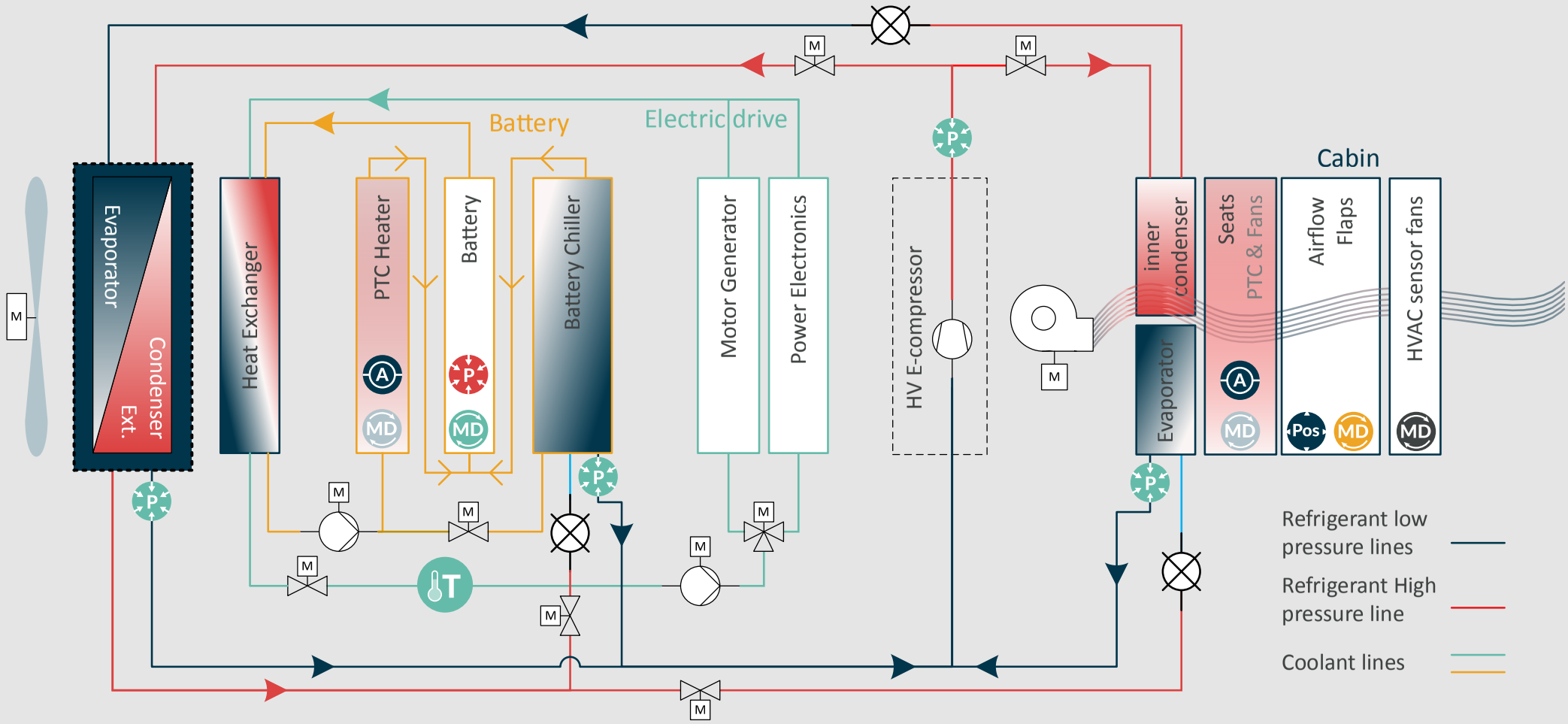
Technology choice

- Triphibian® technology and sensor interfaces
- Accuracy over lifetime
- Miniaturized sensor factory calibrated 2-70 bar



www.melexis.com/
bev-thermal-management

Melexis



PRESSURE SENSOR

MEMS Triphibian

MLX90830 (analog)
MLX90834 (SENT)
MLX90833 (LIN)

TEMPERATURE SENSOR

Single pixel FIR

MLX90614
MLX90637

CURRENT SENSOR

Current monitoring

MLX91220/24 (Integrated 5V)
MLX91221/25 (Integrated 3.3V)

MOTOR DRIVER

Motor control

MLX81350/52/54 (< 10 W)
MLX81340/44/46 (< 2k W)
MLX81339 (< 40 W flash)
MLX80339 (< 40 W code-free)

POSITION SENSOR

LATCH & SWITCH

Motor applications

MLX90395/96 (Magneto)
MLX90427 (Embed SFI)
MLX90381 (Resolver)

MLX92253 (4-wire)
MLX92211 (3-wire)
MLX92221 (2-wire)