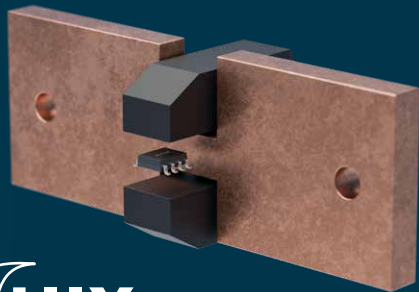


REDEFINING HALL-BASED CURRENT SENSING PRECISION

Melexis TruFlux™ technology overcomes traditional current sensing trade-offs in EV and BESS applications. By pairing a standard core with the MLX91230 sensor and running on-chip hysteresis compensation and linearization algorithms, it delivers Fluxgate-level precision with intrinsic galvanic isolation at a significantly lower cost.

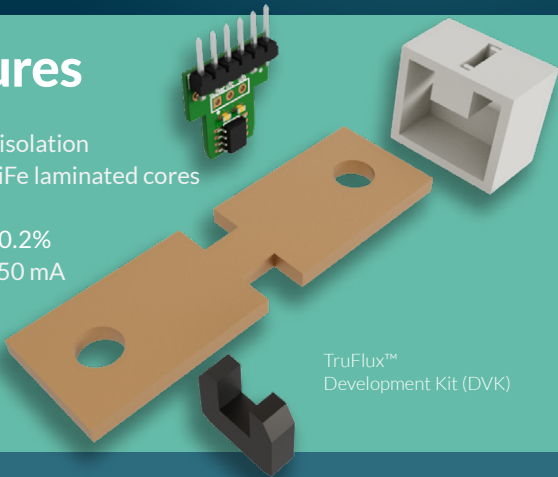


TRUFLUX

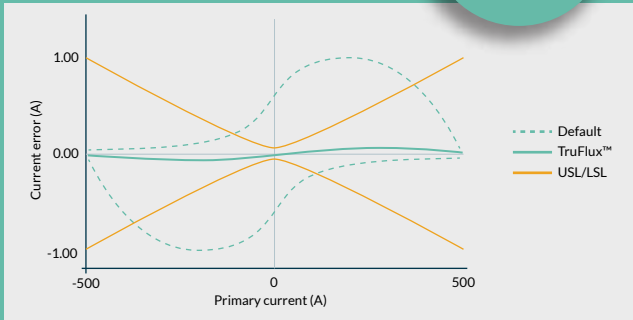


Key features

- ✓ Intrinsic galvanic isolation
- ✓ Enable low cost SiFe laminated cores
- ✓ Easy calibration
- ✓ High accuracy $<\pm 0.2\%$
- ✓ Low offset drift $<50\text{ mA}$

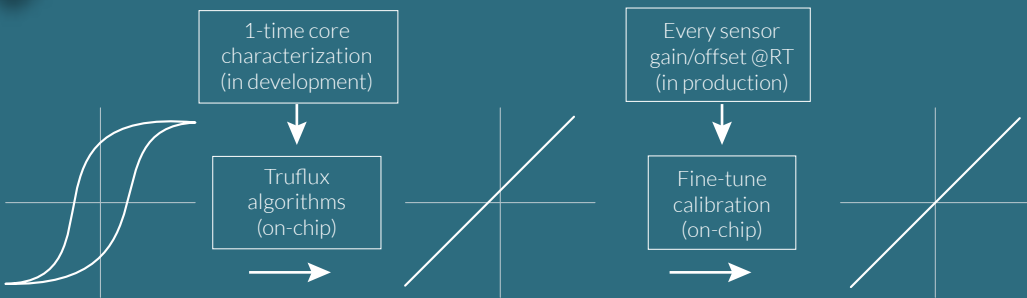


TruFlux™ Development Kit (DVK)



Simple integration

Beyond on-chip algorithms, TruFlux™ automates parameter extraction from a single core characterization during development, eliminating the need for deep magnetics expertise.



Technology comparison

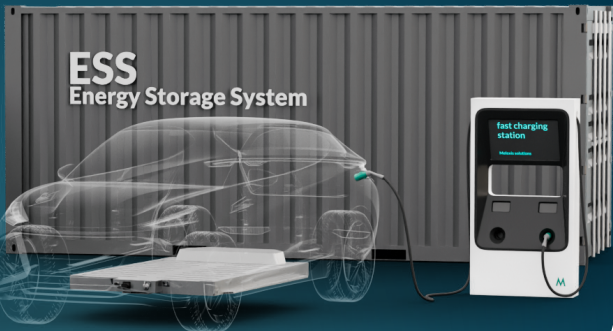
Truflux™ fills the critical gap for high-accuracy isolated sensing.

	Shunt + Iso Amp	Traditional Hall	Fluxgate sensor	Melexis TruFlux™
Intrinsic isolation	No (requires Iso Amp)	Yes	Yes	Yes
Accuracy (3-sigma)	High	Moderate	Very High	0.2% $\pm 50\text{mA}^*$ 0.5% $\pm 150\text{mA}^{**}$
System cost	Medium	Low	High	Low
Circuit footprint	Compact	Mid-sized	Bulky	Compact

*: room temperature
**: full temperature range

Applications

- Battery Terminal Sensor (12V/24V)
- Battery management system (48V/HV)
- Enabling Battery State of Charge (SoC), State of Health (SoH) and State of Function (SoF)
- Smart Battery Disconnect Unit, Junction Box or Power Relay Assembly
- Smart Pyrofuses
- Smart HV relays or contactors
- HV DC FastCharge current sensing
- Zone controller



melexis.com/truflux