



**WITTENSTEIN**

# **WITTENSTEIN Electromobility**

The Pole Position in Electric Drives

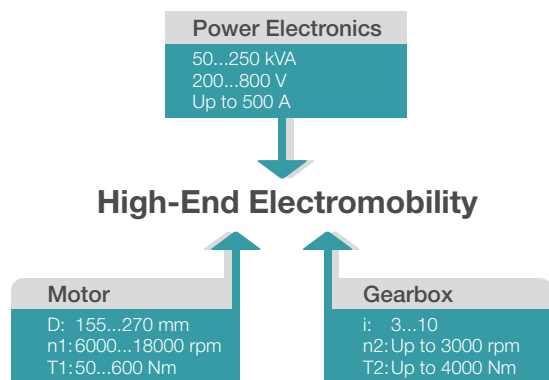
Efficient  
Compact  
Reliable





## Optimally matched drives from a single source

Electromobility is much more than simply operating a specific means of locomotion with electricity from a battery or a power socket. It is easy to understand why the “e” in “eMobility” – a buzzword enjoying unbroken popularity – is used to mean not just electric but also ecological, economical and efficient. The logical conclusion: electric cars, hybrid vehicles and ultimately all transport means in tomorrow’s world will need to be designed with intelligent drive systems that are “e” in every sense of the letter – solutions in which the motor, gearhead and electronics are optimally harmonised to achieve maximum efficiency and hence the maximum possible range.



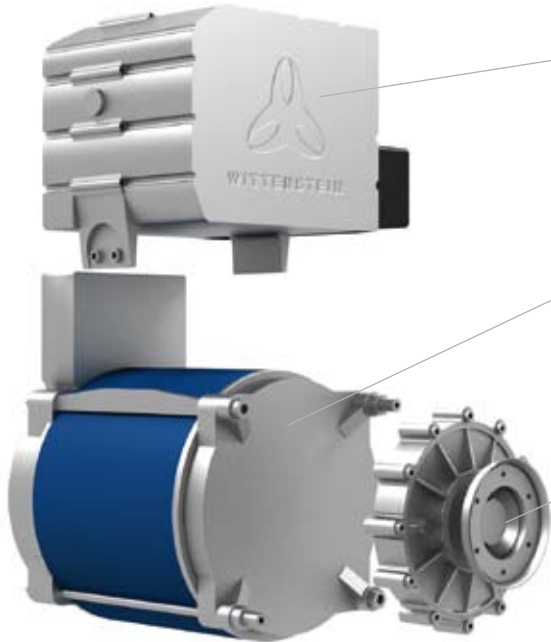
WITTENSTEIN’s individually developed electronic drive concepts master this complex interaction, allowing not only standard products but above all custom-tailored high-end models to be created from a small number of basic modules along the entire value chain.

### Unique safety concept

WITTENSTEIN is rightly proud of its unique safety concept that guarantees maximum safety for the electric drives in electric or hybrid vehicles and meets users’ demands for a “safe state” to be established in defined operating situations. The following are just a few of the parameters monitored by the „intelligent“ electronics:

- High battery voltage
- Auxiliary voltage
- Overcurrent on the motor
- Short-circuit at the motor terminals
- Earth fault
- Position, motor current and temperature sensors
- Temperature measurements in the motor and output stage

The response to these various monitoring functions depends to a large extent on the drive train selected by the customer and can be adapted to take account of actual conditions and safety requirements.



## Power Electronics

High power density  
Compact design  
Intelligent monitoring

## Motor

High power / weight ratio  
Very good efficiency  
High force / torque density

## Gearbox

High power density because the load is distributed between five case hardened planets  
High power / weight ratio thanks to the use of lightweight materials  
Customized design



**Efficient – Compact – Reliable**



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WITTENSTEIN AG · Walter-Wittenstein-Straße 1 · 97999 Igersheim · Germany

[www.wittenstein.de](http://www.wittenstein.de)

