Engine Chassis Transmission **E-Mobility** 

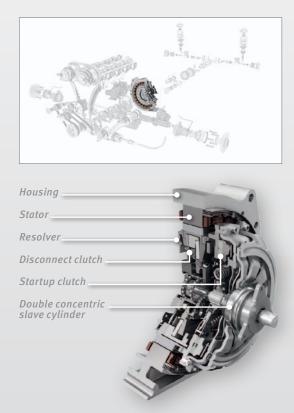


# **48-Volt Hybrid Module**

### **EFFICIENT FUTURE MOBILITY**



## Innovative Solutions for Entry-level Hybridization with 48-volt Systems



#### Description

- Hybrid module for the electrification of vehicles with manual transmissions
- 48 V/12 kW electric motor
- Integrated automated disconnect and startup clutch

#### **Functional advantages**

- P2 functionality (e-creeping, boosting, recuperation in all gears)
- High comfort when restarting the engine due to impulse clutch
- All starts are possible using the disconnect clutch

#### **Product benefits**

- No changes to the transmission required
- No additional engine start system required
- No water cooling necessary
- Attractive fuel saving to cost ratio

#### Benefits of 48-V systems vs. high-voltage systems

- Eliminates the requirement for high-voltage safety measures
- Reduced outlay in combination with additional 48-V systems

#### Integration/installation

• Can be mounted as a unit between the internal combustion engine and the transmission