

eCoupling Plus

Electromagnetically actuated multi-mode eCoupling disconnects power flow in HEV and BEV applications with an added one-way overrun feature.



Features and Specifications

- Enables added power flow options for hybridization & EV
- Up to Four Function Modes: Free/Free, Lock/Lock, Lock One Way Clockwise, Lock One Way Counterclockwise
- Low Power Input (3A actuation / 1A steady state)
- Electromechanical actuation eliminates need for high pressure oil actuation reducing energy consumption
- Improved CO₂ reduction by reducing parasitic drag associated with traditional friction clutches
- Rapid actuation

Competitive advantage/differentiators

- 3+ Functional modes combined in one unit, saving space and cost
- On axis packaging
- Can be scaled to accommodate various torque ranges and packaging space requirements

Applications/benefits

- Connecting power flow within Hybrid or EV single or multi speed powertrains: Actuation of planetary or layshaft gear systems, disconnection of power flow to axles
- Allows for lock-lock while at the same time a smooth transition to one way function for speed overrun or coasting conditions all in the same mechanism

SOP

Ideation

Discovery

Concept

Development

Serial Preparation

in Production