



I N T R O D U C I N G

# Dual-Stage PK Spring-Applied Brakes

For E-mobility Applications



## Smooth, two-step brake engagement prevents harsh dynamic E-stop braking

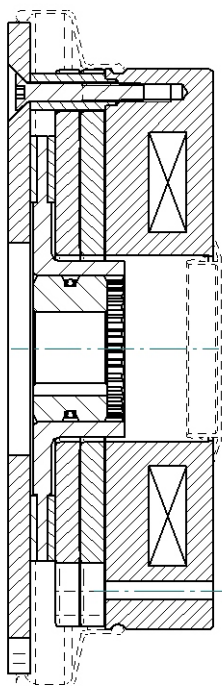
- Same mounting PCD, shaft connection, and torque range as standard PK single armature spring applied brake
- Dual-function, parking and emergency braking functionality
- Available with embedded control unit
- Enhanced dual-voltage coil controlled via PWM (Pulse Width Modulation) provides long service life with reduced power consumption

Special friction material, designed for E-mobility applications, provides proven efficiency based on extensive prototype life-cycle testing. The select material offers the perfect balance between static torque for parking and dynamic torque for high energy service and emergency stopping over its service life.

### FLEXIBLE CONTROLLER COMPATIBILITY

The Dual-Stage PK brakes are compatible with most popular controllers. However, the following Warner Electric controllers are recommended for optimum performance...

- **Standard ON/OFF controller**
  - The brake will engage in 2 steps separated by 0.2s to 1s (depending on the voltage suppressor implemented)
  - 1st step provides 20-70% of the nominal brake torque (depending on the application and the customer need)
  - 2nd step provides the remaining % to reach the nominal torque
- **Advanced controller**
  - The 2 torque stages can be controlled through the controller independently
  - A reduced current allows the engagement of the first armature only, thus providing the first torque step.
  - By fully cutting the power, the nominal torque (stage 1 + 2) is achieved



## DUAL-STAGE PK BRAKE DESIGN

### FEATURES

- One-piece design for easy assembly
- High torque in reduced diameter
- Smooth braking
- Two independent braking stages via controller
- Available with standalone and bespoke control unit
- Dual-voltage coil for power consumption reduction and longer battery life
- Overall lower maintenance costs
- Highly efficient friction material selected for the E-mobility applications

