



WHEEL-END DISCONNECT

Battery Electric Vehicles

A 2-position wheel-end disconnect to reduce drivetrain losses and increase vehicle range. The device can be activated at cruising speeds when only 2WD is required to mechanically disconnect the e-motor and axle shaft from the wheel hub. The wheel-end disconnect has zero drag in 2WD. Additionally, the device can be actuated quickly to provide 4WD during a loss of traction or to restore full vehicle torque on-demand.

The disconnect contains a bi-stable actuator with on-board position sensing to verify spline engagement and disengagement using PWM or SENT protocol. Optional on-board speed sensing is available to facilitate half-shaft to wheel hub speed synchronization. The actuator is only powered momentarily during actuation, with zero current draw while holding in 2WD or 4WD.

Change of State: Current is supplied to device, the actuator changes states and translates clutch ring to couple or de-couple the half-shaft and wheel hub. The position sensor verifies the engagement or disengagement of the system, and then the power is turned off while the system holds the desired state.

*Technical Data:

Nominal Torque Rating: Up to >3000Nm

Resistance: $0.93 \pm 1.05 \Omega$ @ 20°C

Inductance: 6mH

Operating Current: (+) or (-) 7A, 0A hold

Preferred PWM Frequency: 1000Hz Min

Response Time: <50ms

Sealing: Knuckle PIP Face Seal
Half-Shaft Dynamic Seal

Lubrication: Grease

*Operating Limits

Voltage: 10.5-16VDC

Ambient Temp: -20°C to 125°C

*Survivable Limits:

Ambient Temp: -40°C to 125°C

*Contact Husco engineering for customized performance, sensing, mounting, or connectors.

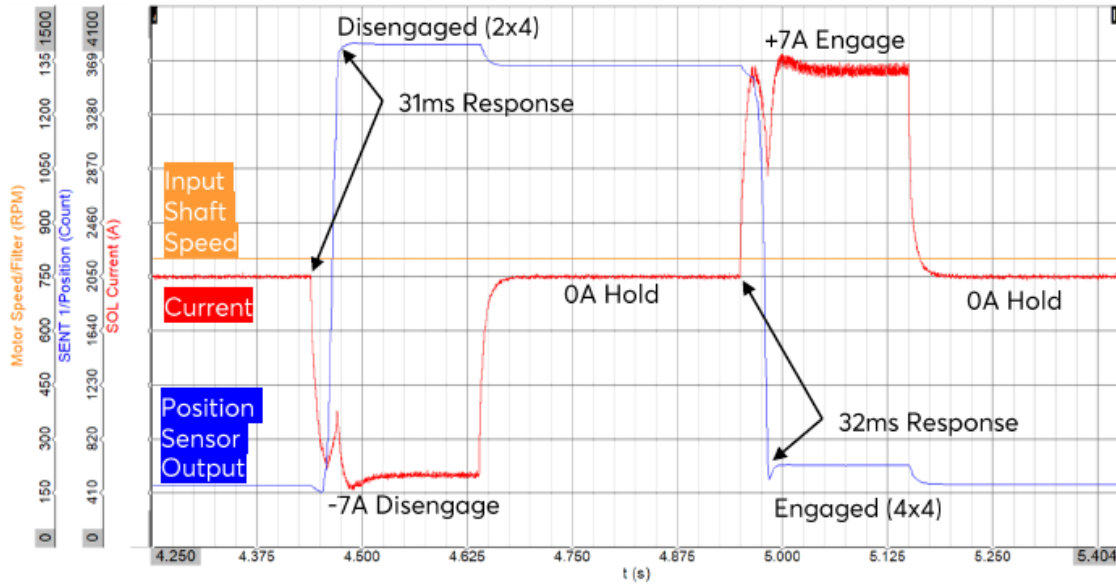


Husco's Automotive team specializes in collaborative development of customized performance solutions. Contact the engineering team for your custom solution.

inquiries@huscoauto.com | (262) 513-4200 | Husco.com

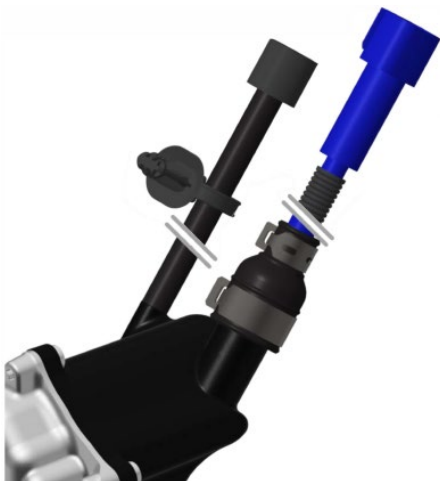


Performance Curve



Common Variants

Wiring Harness with Wire Seal and Remote Vent with Jiggle Cap



Molded Connector with ePTFE Vent on Housing



Husco's Automotive team specializes in collaborative development of customized performance solutions. Contact the engineering team for your custom solution.

inquiries@huscoauto.com | (262) 513-4200 | Husco.com