

TECHNICAL INSIGHT

A PUBLICATION OF NSK EUROPE

Electric Clutch Release Actuator with Torque Sensor Concept

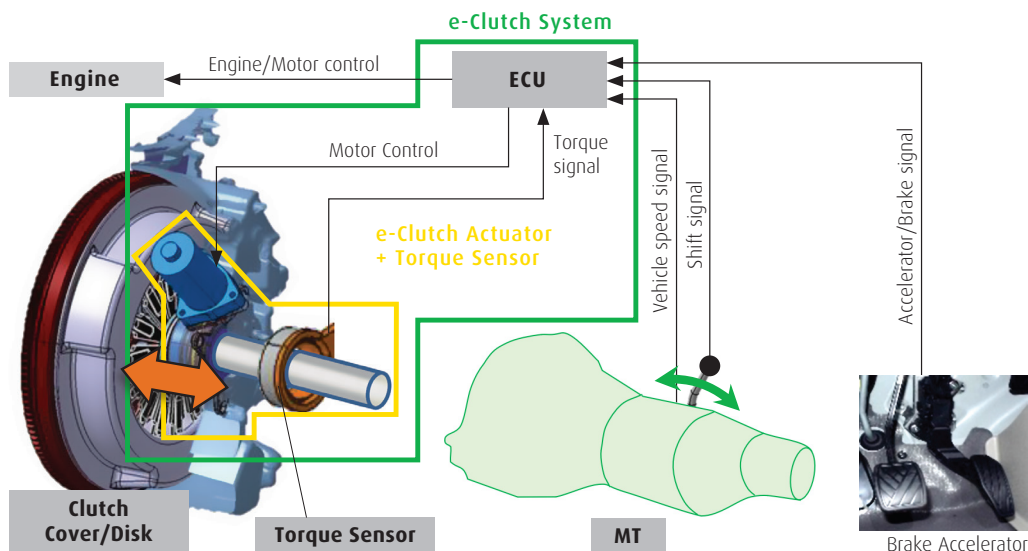
Clutch control can be optimised by using real time measured torque information



To improve shift quality and maintenance cycle

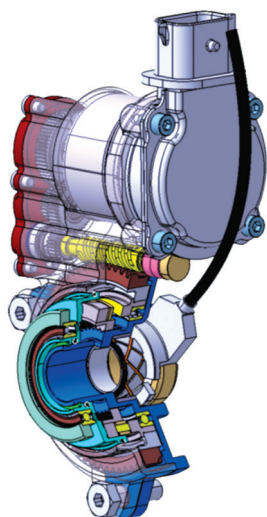
General Description and Features of the Product (Structure and Operating Principles)

Target System

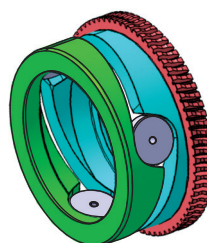


Key 1: Electric Clutch Release Actuator

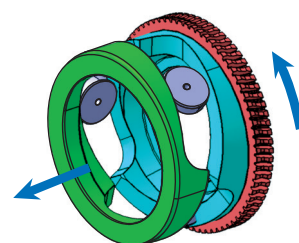
- › Actuation principle
Converts rotary motion to linear motion using cam actuation



- › Original position



- › Actuation position



Key 2: Magnetostrictive Torque Sensor

› Principle of measurement

Detects stress by magnetostrictive effect which is then converted to torque



Features

1. Measurable from 0 rpm
2. Non-contact type sensing
3. Compact and light (30g)
4. Quick response (8msec)

e-Clutch Actuator Spec. example	
Release load	0 to 850 [N]
Stroke	7 [mm]
Weight	1.8 [kg]
Stroke speed (in 5mm)	0.1 [s]
Temperature	-40 to 120 [°C]