

TECHNICAL INSIGHT

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Electric Clutch Release Actuator with Torque Sensor Concept

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

To im and n

To improve shift quality and maintenance cycle

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



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] |