Introduction

The Bourns® Rotary Gearbox Park Position Sensor senses the rotary or linear displacement of the park lever in an automatic gearbox application. When the park position is selected in the gearbox, the park engagement pin shifts to lock the transmission. The feedback from this sensor works in conjunction with the TCU to ensure that the park lever is released only if the brake pedal is depressed. This prevents a vehicle from lurching forward if started in gear.

The sensor may be placed internally or external to the gearbox depending on the available space.

The signal may be used to decouple the torque converter to save fuel and/or to trigger the engagement of the Electro-Mechanical Park Brake (EMPB).

Features

- Non-contacting sensor technology
- MR or HE technology
- Sensor can be placed outside of the gearbox
- Linear option also available
- Electronic calibration

Applications

- Park lever position detection
- Electric park brake

Rotary Gearbox Park Position Sensor - 1D Rotary Sensor

<table>
<thead>
<tr>
<th>Vout/Vdd [%]</th>
<th>MR</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.0</td>
<td>Clamping High</td>
</tr>
<tr>
<td>90.0</td>
<td>Diagnostic Band (High)</td>
</tr>
<tr>
<td>10.0</td>
<td>Clamping Low</td>
</tr>
<tr>
<td></td>
<td>Diagnostic Band (Low)</td>
</tr>
</tbody>
</table>

Total Range: 60 °
Measurement Range (MR): 40 °
Air Gap Magnet Sensor: 1–8 mm typical
Operating Temperature: -40 to +125 °C
Protection Degree: TBD*
Linearity: ± 3 % full scale MR
Resolution: < 0.3 % MR
Supply Voltage: 5 ± 0.25 V
Supply Current: < 20 mA
Output Modes: Analogue, PWM

* Application Specific

For higher temperature range or improved accuracy applications, please contact Bourns engineering.

Typical Parameters

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