EVERY CONNECTION COUNTS

SMATER SENSORS FOR SMARTER VEHICLES

Speed Sensor
The speed sensor generates a pulse, which is triggered by the approaching tooth of the rotating target gear wheel. The target must be placed at a distance ‘X’ from the sensor face. Direction of rotation can also be detected.
TECHNICAL DATA

Industry
Passenger Car

Application
Transmission

Functions
Measuring gear speed, travel and angle position

Technology
Hall (with integrated magnet)

Features
• Triggered by ferromagnetic gear wheel
• Current interface with direction detection
• Sealed connector interface
• Diagnostics ability due to two-wire interface
• IP6K9
• Temperature range –40°C up to 150°C

OPERATING CHARACTERISTICS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Parameter</th>
<th>Unit</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>Vsup</td>
<td>V</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Supply current</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low state</td>
<td>Isup(low)</td>
<td>mA</td>
<td>5</td>
<td>8.5</td>
</tr>
<tr>
<td>High state</td>
<td>Isup(high)</td>
<td>mA</td>
<td>12</td>
<td>16.5</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>Ta</td>
<td>°C</td>
<td>–40</td>
<td>150</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Unit</th>
<th>Min</th>
<th>Nom</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse width</td>
<td>Plength (fwd)</td>
<td>µs</td>
<td>38</td>
<td>45</td>
<td>52</td>
</tr>
<tr>
<td>Plength (Rev)</td>
<td>µs</td>
<td>76</td>
<td>90</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>Plength (speed only)</td>
<td>µs</td>
<td>153</td>
<td>180</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>Air gap</td>
<td>X</td>
<td>mm</td>
<td>0.5mm</td>
<td>1mm</td>
<td>1.5mm</td>
</tr>
</tbody>
</table>

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